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SEPA Environmental Checklist (WAC 197-11-960)

Kittitas County Transfer Station and Maintenance Facility Relocation Project

Version 4

March 2020

Kittitas County, Washington

Kittitas County Transfer Station and Maintenance Facility Relocation Project

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A. Background

1. Name of proposed project, if applicable:

Kittitas County Transfer Station and Maintenance Facility Relocation Project

2. Name of applicant:

Kittitas County

3. Address and phone number of applicant and contact person:

Patti Johnson, Director
Kittitas County Solid Waste
925 S. Industrial Way
Ellensburg, WA 98926
(509) 962-7070

4. Date checklist prepared:

February 2020

5. Agency requesting checklist:

City of Ellensburg

6. Proposed timing or schedule (including phasing, if applicable):

Construction of a new Ellensburg Transfer Station and Public Works Maintenance Facility at US Highway 97 (US 97) is scheduled to begin in 2021 and be completed with facilities operational in 2022. The existing Kittitas County Ellensburg Transfer Station at 1001 Industrial Way and the existing Public Works Department Lower County Maintenance Facility at 505 W. 14th Street, Ellensburg, will maintain operational until the new facilities are operational.

The general construction activities and schedule for the Transfer Station are planned as follows:

- Begin grading activities and prepare the site for construction — April 2021
- Prepare the stormwater and drainage facilities — June - August 2021
- Pave the impervious surfaces — October - November 2021
- Construct the buildings — July - December 2021
- Obtain an operating permit and begin operations — January 2022

The general construction activities for the Maintenance Facility are planned as follows:

- Begin grading activities and prepare the site for construction — March 2023
- Prepare the stormwater and drainage facilities — May - July 2023
- Pave the impervious surfaces — August - October 2023
- Construct the buildings — November - April 2023
- Begin operations — May 2024

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

The site is designed for 30 years based on population projections.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

Draft Phase I Environmental Site Assessment (Alta, 2018)
Wetland Delineation Report (Jacobs, 2018)
Cultural Resources Assessment (Jacobs, 2018)
Lands Survey (Cruse & Associates, 2019)
Revised Wetland Delineation Report (Jacobs, 2019)
Critical Areas Report (Jacobs, 2019)
Transportation Analysis Memorandum (Jacobs, 2019)
Geotechnical Survey (Jacobs, 2019)

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

The project site is currently in a pre-Application review by the City of Ellensburg for a Solid Waste Transfer Station and Public Works Maintenance Facility. A conditional use permit and variance will be required to develop the property. An easement will be established on the southern boundary of the property to accommodate a future Minor Collector. A short plat will be submitted to divide and sell the northern portion of the property to Kittitas County Public Works Department. No other proposed projects are under review for this site.

10. List any government approvals or permits that will be needed for your proposal, if known.

Table 1. Permits and Approvals for the Kittitas Transfer Station and Maintenance Facility

Permit/Approval Type	Agency
Federal and State Permits and Approvals	
Nationwide Section 404 Permit for compliance with the Clean Water Act (CWA)	US Army Corps of Engineers (USACE)
Compliance with Section 7 of the Endangered Species Act	US Fish and Wildlife Service via US Army Corps of Engineers
Cultural Resources Assessment for compliance with Section 106 of the National Historic Preservation Act	USACE and Washington State Department of Archaeology and Historic Preservation
Section 401 Certification for compliance with the CWA	Washington State Department of Ecology (Ecology)
National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit and Coverage	Ecology/ US Environmental Protection Agency (EPA)
Notice of Construction (for Compost Facility Air Permit)	Ecology
Local Permits and Approvals	
Solid Waste Facility Permit	Kittitas County Department of Health
State Environmental Policy Act (SEPA)	City of Ellensburg
Pre-Application and Design Review	City of Ellensburg
Conditional Use Permit and Variance	City of Ellensburg
Critical Areas Report (includes Floodplain Permit)	City of Ellensburg
Right-of-Way Use Permit	City of Ellensburg
Site Development Permit	City of Ellensburg

Building Permits	City of Ellensburg
Right-of Way Work Permit (City Light Electric, cable, etc.)	Washington State Department of Transportation

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

Kittitas County proposes to relocate the existing Ellensburg Transfer Station at 1001 Industrial Way, Ellensburg, and the existing Lower County Public Works Maintenance Facility at 505 W. 14th Street, Ellensburg, to parcel 611033 in northwest Ellensburg (Figure 1). This 50.58-acre site is zoned Light Industrial. The Ellensburg Land Use Code does not currently have a conditional use for a "solid waste handling facility." The local land use permitting process will require a conditional use permit and variance for the Transfer Station. The Maintenance Facility is an allowed use in the Light Industrial zoning district.

The relocated transfer station will serve both county residents and commercial haulers. The existing facility handles solid waste, recyclables, and household hazardous waste (also referred to as moderate risk waste, or MRW) and produces compost from yard waste. The entire existing facility and composting site is located adjacent to Wilson Creek within the 100-year floodplain. Topographically, the existing site is at a low elevation relative to the surrounding floodplain. During spring thaw and heavy rain events, the existing facility is often flooded, impacting access roads, unloading areas, and operational areas. In addition to the customer access and operational challenges associated with frequent seasonal flooding, the existing facility is also space constrained. The small size of the facility results in long customer queuing times and potentially unsafe conditions within the small unloading and processing areas. The projected population growth and solid waste management needs of Kittitas County, combined with existing facility challenges and limitations, requires construction of a new solid waste transfer station at a new location.

A new location for the transfer station was chosen by an extensive site screening and selection process. Over 60 sites were chosen using initial siting criteria. After a primary and secondary site screening process, 11 sites were reviewed by representatives from the City and County. Using updated City/County zoning, land-use discussion, and urban growth area information, the list was further refined to three potential sites for community input. The site selected is identified as Site 33, US 97/Old Highway 10. It was recently purchased by Kittitas County to begin the permitting and master planning process. The relocation of the public works facility was decided after the site chosen at the airport was determined not feasible. The new Transfer Station will be designed to address existing facility limitations and support a growing community.

The conceptual design for the entire property contains approximately 23.04 acres of impervious surface. This includes 5,000 linear feet of roadway. There will be approximately 51,000 square feet (ft^2) of stormwater ponds, and 12 stand-alone buildings. Structural fill will be obtained from locally sourced quarries. Stormwater will be collected and conveyed with a series of drainage swales, channels, and culverts to onsite stormwater ponds.

The property will include the key site features shown in Table 2. The 11.03-acre Maintenance Facility will house County road maintenance equipment and personnel. The existing Lower County Public Works Maintenance Facility is routinely flooded and too small. Storage of winter sand and aggregate materials will occur onsite. Routine equipment maintenance will be performed at the location. The County has future plans for a fueling facility, but construction of an underground storage tank is not planned at this time.

Table 2. Key Transfer Station and Maintenance Facility Site Features

Site Feature	Approximate Dimensions	Purposes
Transfer Station		
Main Entrance/Exit and Scales (Figure 9)	12- x 30-ft Scalehouse building Four truck scales Parking	Designed for two-way transaction as customers enter and exit
Transfer Building (Figures 4 to 6)	100- x 210-ft building including tipping floor, load-out port Backing apron 13 unloading stalls (100- x 50-ft) Potential future building expansion area	Waste receiving, storage, and handling Tire and white good loading area Operating Contractor offices
Composting Area (Figure 7)	50- x 75-ft Equipment Storage building 50- x 30-ft Office building 540- x 240-ft uncovered feedstock receiving, grinding, mixing, screening, and biofilter area Eight 25- x 55-ft aerated static pile composting systems constructed of ecology blocks 16 18-ft-wide x 7-ft-high windrows Parking Three lined contact water ponds Finished product storage and sales area	Built in phases based on in-coming material Back-in access; feedstock is handled and amended Curing feedstock in windrows Contact water collection for grinding and curing
Moderate Risk Waste Building (Figure 9)	30- x 50-ft building MRW covered drive-through drop-off	Drop-off area MRW material collection and storage
Administration Building (Figure 9)	60- x 30-ft building Parking	Administrative offices in mix of office and cubicles Reception Conference room Storage
Recycling Drop-off Area (Figure 8)	15 roll-off containers Drive-through lanes and bypass lane Two Americans with Disabilities Act (ADA) elevated platforms	Serves residential recycling customer traffic in vehicles Includes ADA platform for self-service
Container Storage Area (Figure 2)	2.43 acres	Reserved for use by a private hauler to laydown containers
Stormwater Ponds (Figure 2)	Sitewide stormwater ponds	Capture runoff from entire site
Public Works Maintenance Facility		
Public Works Maintenance Facility (Figure 2)	84- x 64-ft sand and salt storage 164- x 58-ft large equipment storage sheds (2) 232- x 38-ft pickup truck storage 30- x 40-ft deicing storage pad	Serves Public Works Department, not the public Includes paved storage yard and worker parking Future area available for potential waste hauler container storage
Public Works Maintenance and Administration Building (Figure 10)	180- x 80-ft building Six bays Parking	Vehicle wash bay and mechanical room Crew room and mud room Conference room

Note:
ft = foot/feet

Local offsite utilities will be extended to the site. City water and sewer will be extended from an existing point of connection approximately 1,100 feet south of the proposed entrance on US 97. Power will be connected to

from the existing overhead electrical lines on the west side of US 97. Overhead power will be brought onsite with a single new pole and then transitioned to buried electrical power onsite. The Maintenance Facility will connect to an existing pole at the northwest corner of the site (on the east side of US 97).

The Maintenance Facility will be accessed from US 97. The Transfer Station entry and exit for both residential and commercial (truck) traffic will come off US 97 on the proposed Minor Collector road located at the southeast corner of the property. Vehicle traffic flows are segregated for efficiency and safety.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The proposed Kittitas Transfer Station and Lower County Maintenance Facility relocation area is known as "Site 33, US 97/Old Highway 10" or Tax Map No. 18-18-28030008, Assessor's tax parcel ID 611033, owned by Kittitas County Solid Waste (see Figure 1 Vicinity Map). The site covers approximately 50 acres in the northwestern portion of Ellensburg, in Kittitas County, Washington, bounded to the west by US 97, to the north by the Burlington Northern railroad and Old Highway 10, and to the east and south by private, undeveloped properties. The project survey area is within the U.S. Geological Survey 7.5-minute Ellensburg North quadrangle in Section 28, Township 18 North, Range 18 East; Willamette Meridian (latitude 47.016181°, longitude -120.590401°) within the Upper Yakima watershed unit (Hydrologic Unit Code 17030001).

B. Environmental Elements

1. Earth

a. General description of the site:

The project area is approximately 3 kilometers (1.9 miles) northwest of the City of Ellensburg on generally flat terrain. The parcel slopes gradually toward the southeastern corner and is bisected by multiple interconnecting excavated irrigation ditches or ditch segments. Livestock trampling has compacted and rutted the surface of the entire parcel. At the time of the site visit, shallow, segmented flow was present in one large north-south flowing ditch, D1 (see Figure 3, Wetlands and Floodplains Map). Stormwater appears to flow offsite from this ditch to an excavated ditch just south of and perpendicular to the southern site boundary.

b. What is the steepest slope on the site (approximate percent slope)?

Elevations ranges from 1,554 feet above mean sea level in the northernmost corner of the site to approximately 1,540 feet in the southeastern corner of the site. The slope of the site is no more than 2 percent.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

A total of seven soil series are mapped within the survey area:

1) Cleman very fine sandy loam, 0 to 2 percent slopes
2) Nanum ashy loam, 0 to 2 percent slopes
3) Woldale clay loam, 0 to 2 percent slopes
4) Zillah silt loam, 0 to 2 percent slopes
5) Brickmill gravelly ashy loam, 0 to 2 percent slopes

6) Mitta ashy silt loam, 0 to 2 percent slopes
7) Nack-Opnish complex, 0 to 2 percent slopes

More detail is provided in the Revised Wetland Delineation Report (Appendix B of Attachment 1, the Critical Areas Report).

The Farmland Classification from the Natural Resources Conservation Service indicates the Cleman, Nanum, Woldale, Brickmill, Mitta, and Nack-Opnish are prime farmland if irrigated. Woldate is prime farmland if irrigated and drained. The project will retain these soils onsite. The site has a current and future land use designation of Light Industrial.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

There is no surface indication of unstable soils.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

Of the 50.58-acre parcel, approximately 23.04 acres will become impervious surface, including 5,000 linear feet of roadway. The Transfer Building (Figures 4 to 6) will require the placement of approximately 15 feet (or 136,000 ft^2) of structural fill to create an embankment above existing grade condition. The Transfer Station site will include construction of approximately 51,000 ft^2 of excavated stormwater ponds and 13,000 ft^2 of containment contact water ponds in the composting area (Figure 2).

The Maintenance Facility will require approximately 450 cubic yards of excavation for building footings and foundations and 130,000 ft^2 of site fine grading to achieve paving for building, parking lots, ancillary structures, and site drainage.

Site preparation activities will include the excavation of existing soil material and placement of structural fill material utilizing typical earthmoving equipment that may include hydraulic excavators, scrapers, dump trucks, and compactors. Approximately 40,000 to 50,000 cubic yards of material will be excavated and placed. Most onsite excavated materials will be left onsite for fill material. Structural engineering fill, gravel base course, and asphalt will be imported from permitted sources.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Potential erosion concerns are minimal due to the low slope of the land. Erosion will be minimized by implementing best management practices (BMPs).

No cumulative impacts to soils or erosion are expected from the proposed project because construction will comply with applicable temporary erosion and sedimentation control provisions of the Ellensburg City Code and an NPDES Construction Stormwater General Permit Surface Water Pollution Prevention Plan.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Approximately 46 percent of the site (23.04 acres impervious of 50.58-acre parcel) will be covered with impervious surfaces after project construction. The impervious surfaces will consistent of an asphalt total of approximately 934,408 ft^2 (21.45 acres) and buildings totaling approximately 69,214 ft^2 (1.59 acres). Estimated square footage of site features are detailed below.

Transfer Station:

- Scalehouse Building – 360 ft^2
- Transfer Building – 21,000 ft^2
- Office Building – 1,500 ft^2
- Equipment Storage – 3,750 ft^2
- Moderate Risk Waste – 1,500 ft^2

- Administrative Office – 1,800 ft^2

Maintenance Facility:

- Maintenance and Administration Building – 14,400 ft^2
- Large Equipment Storage Sheds – 19,024 ft^2 (9,512 ft^2 each)
- Pickup Truck Storage – 8,816 ft^2
- Salt and Sand Storage – 5,376 ft^2
- Deicing Storage Pad – 1,200 ft^2

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Construction

During construction, erosion control BMPs required by the City Code and the *Stormwater Management Manual for Eastern Washington* (Ecology, 2019) will be employed. The BMPs include use of mulch, silt barriers, containment systems, interim stormwater controls, cover measures (straw or plastic), and stream bypasses, as well as reseeding of areas temporarily disturbed by construction.

Operation

Approved plantings and seeding will be installed during construction to ensure bare areas are revegetated and to limit the potential for erosion. Landscaping will comply with City of Ellensburg standards to control erosion during facility operation.

2. Air

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Construction

Temporary air quality impacts during construction will include construction machinery exhaust emissions, primarily from particulate matter less than 10 micrometers and 2.5 micrometers in aerodynamic diameter (PM_{10} and $PM_{2.5}$, respectively), and from small amounts of carbon monoxide (CO) and oxides of nitrogen. The sources of particulate matter might be fugitive dust from clearing, excavation activities, uncovered fill stockpiles, diesel smoke, or any combination of these sources.

Some construction activities may cause odors. Paving operations use tar and asphalt. The construction contractor must comply with Ecology Central Region Clean Air Agency regulations requiring the control of odorous emissions to prevent interference with adjacent uses. These types of odors will be short-term and unlikely to impact adjacent uses.

Operation of Solid Waste Transfer Station

Emissions during operation of the solid waste Transfer Station will result from the combustion of fossil fuels from solid waste collection vehicles, transfer vehicles, and self-haul vehicles transferring waste and recyclables to and from the facility.

Operation of Composting Facility

The uncovered feedstock receiving, grinding, and mixing area is designed for back-in access to an asphalt pad. A small front-end loader handles the material fed into the existing electric grinder that grinds feedstock and amendment as needed. The eight discrete outdoor aerated static pile composting systems will be organized in two identical groups of four with an associated biofilter odor treatment system. The

area is designed for a material residence time of 4 weeks. The aeration zones will run independently of each other and consist of the following components:

- On-grade, high-density polyethylene aeration laterals situated below each composting pile (two per aeration zone)
- Above-grade header pipe that distributes air to and from the aeration laterals (one per aeration zone)
- A common process air duct that provides the connection between the individual aeration zone headers and the fan equipment
- Centrifugal fans (one per group of four aeration zones) and associated dampers that allow airflow to each zone to be controlled
- An organic media biofilter that will treat process air collected from the composting piles

Feedstocks will be cured in windrows with an 8-week residence time on an outdoor pad. Windrows are up to 18 feet wide, 7 feet high, and 115 feet long. A screening area will be between the curing windrows. Amendment storage and finished product screening will occur on a storage pad designed for up to eight rectangular finished product piles that are up to 13 feet high, 55 feet wide, and 75 feet long.

Emissions that may result from composting include inorganic sulfur (such as hydrogen sulfide), ammonia, organic sulfur (such as methyl mercaptan, dimethylsulfide, and dimethyldisulfide), fatty acids (such as acetic acid, propionic acid, and butyric acid), amines (such as cadaverine and putresine), and terpenes. Some of these compounds have a detectable odor at low concentrations. Odors are prevented by maximizing aerobic composting according to the Operations Plan for Kittitas County Compost Facility (Kittitas County, 2014).

The current compost facility at the Ellensburg Transfer Station processes almost 3,000 tons of yard waste per year and is permitted to compost 6,000 tons per year. It does not accept post-consumer food waste or biosolids and will not do so in the relocated facility. The existing air permit assumes that if odor is controlled within the property line, air emission rates are acceptable. The nearest house is approximately 900 feet from the property boundary and the nearest residentially zoned neighborhood is approximately 1,300 feet. The currently operating Ellensburg Compost Facility does not experience any public odor complaints.

Operation of Public Works Maintenance Facility

Emissions during operation of the Maintenance Facility will result from the combustion of fossil fuels from public works vehicles, road maintenance vehicles, and other heavy equipment moving to and from the facility.

Greenhouse Gas

Ecology's warehouse designation is the closest designation to a solid waste transfer facility in Ecology's greenhouse gas (GHG) screening tool. Warehouse facilities less than 119,000 ft^2 in area are expected to be under the average 10,000 metric tons of carbon dioxide (CO_2) that would require disclosure.

The Transfer Station and Maintenance Facility's potential contribution to global climate change will be through emission of GHGs, primarily CO_2. The net annual change in CO_2 emissions due to construction or operation of the proposed Transfer Station has not been quantified since the facility will process solid waste and deploy facility equipment that will continue to be produced and processed at another facility or location if not relocated. Therefore, there will be no discernible impact to the climate from construction and operation of the Transfer Station.

b. Are there any offsite sources of emissions or odor that may affect your proposal? If so, generally describe.

No offsite sources of emissions or odor have been identified that may affect this proposal.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

During construction, BMPs for project impacts to air quality, odor, and GHG emissions could include, but would not be limited to the following:

- Spraying water, when necessary, during construction operations to reduce emissions of fugitive dust
- Covering dirt, gravel, and debris piles as needed to reduce fugitive dust and wind-blown debris
- Covering open-bodied trucks, wetting materials in trucks, or providing adequate freeboard (space from the top of the material to the top of the truck) to reduce fugitive dust emissions
- Turning off construction equipment when not in use to minimize idling and reduce GHG emissions
- Replanting all vegetation temporarily disturbed by construction activities with native vegetation within 1 year or growing season after construction was complete

3. Water

a. Surface Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Surface Water Bodies

There are no streams or lakes in the project area (Figure 2).

Nonwetland Waters

A system of excavated irrigation ditches (nonwetland waters) is located on the project site and one irrigated ditch is located just south of the project area. The field investigation delineated 11,836 lineal feet of ditches within the survey area (Appendix B of Attachment 1). Ditch 1 is likely considered jurisdictional because of the perennial flow. Ditches 2 and 4 are potentially jurisdictional because they intersect another jurisdictional feature (wetlands W2 and W3, respectively, are presumed jurisdictional wetlands).

Final determination is by the agencies. A full explanation of the initial USACE jurisdictional determination is provided in Attachment 1, the Critical Areas Report. General characteristics of these ditches are summarized in Table 3.

Table 3. Nonwetland Waters Summary

Nonwetland Waters #	Length (ft)	Average Width (ft)	Flow Regime	Potential Jurisdiction Notes
D1	2170.0	15	perennial	Likely jurisdictional due to perennial flow
D2	473.0	6	intermittent	Potentially jurisdictional as it intersects Wetland W2
D3	1705.0	3	intermittent	Presumed not jurisdictional as it does not flow to a WOUS
D4	340.0	4	intermittent	Potentially jurisdictional as it intersects Wetland W3
D5	1096.0	10	intermittent	Presumed not jurisdictional as it does not flow to a WOUS
D6	760.0	2.5	intermittent	Presumed not jurisdictional as it does not flow to a WOUS
D7	1044.0	3	intermittent	Presumed not jurisdictional as it does not flow to a WOUS
D8	1185.0	2.5	intermittent	Presumed not jurisdictional as it does not flow to a WOUS
D9	415.0	2	intermittent	Presumed not jurisdictional as it does not flow to a WOUS
D10	825.0	1.5	intermittent	Presumed not jurisdictional as it does not flow to a WOUS
D11	420.0	2	intermittent	Presumed not jurisdictional as it does not flow to a WOUS
D12 (partially offsite)	1,427	6	intermittent	Likely jurisdictional as it intersects and drains Ditch D1 and is adjacent to Wetland W1

Note:
WOUS = water of the United States

Wetlands

Three wetlands were identified in the project area. Table 4 summarizes the size, rating, and classification of each wetland in the project area.

Table 4. Summary of Wetlands in Project Area

Wetland Name	Delineated Area (acres)	Cowardin/ Hydrogeomorphic Classifications	Score[a]	Classification[b]	Buffer Width (Ft)	Jurisdictional Determination
Wetland 1 (W1)	1.44	PEM/Slope	14	Category IV	50	Presumed jurisdictional as it is contiguous with ditch D1, which is presumed jurisdictional
Wetland 2 (W2)	0.259	PEM/Slope	14	Category IV	50	Potentially jurisdictional as it is contiguous with ditch D2, which is potentially jurisdictional
Wetland 3 (W3)	0.374	PEM/Slope	14	Category IV	50	Potentially jurisdictional as it is contiguous with ditch D4, which is potentially jurisdictional

[a] Scoring is from the Wetland Rating System for Eastern Washington 2014 Update.
[b] Classification is from the Ellensburg City Code 15.620.010 Wetlands Rating.
Note:
PEM = palustrine emergent (wetland)

2) **Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

Work adjacent to (within 200 feet) of the wetlands will include the following construction (see Figure 2):

- Roadway access to the Department of Public Works (DPW's) Maintenance Facility site located north/adjacent and northeast of wetland W3. A fence will be constructed on the north and northwest perimeter of the W3 buffer.
- Roadways/transfer trailer parking area at the transfer station site on the eastern side /adjacent to wetlands W1, W2, and W3.
- Grading for a future roll-off storage area will occur south/adjacent to wetland W2.
- Minor collector roadway construction will occur on the southern side/adjacent to wetland W1.

Perimeter fencing of wetland and buffer boundaries within the transfer station site will not be constructed. However, these boundaries will be marked with temporary construction fencing to make sure all transfer station construction occurs outside of the wetland and buffer boundary.

3) **Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

The current design will not fill any surface waters or wetlands.

4) **Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.**

The current design does not propose surface water withdrawal or diversion.

5) **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

Yes, see Figure 3. The project will relocate the floodplain to the northeast boundary of the parcel.

6) **Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

No, discharges of waste materials to surface waters will not occur.

b. Groundwater:

1) **Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.**

No, groundwater will not be withdrawn from a well for use at the Transfer Station or Maintenance Facility.

2) **Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals…; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

The current design does not utilize septic tanks.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including stormwater) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Stormwater runoff is the only source of water runoff expected at the site. Stormwater will be collected in a series of swales and retention basins strategically located throughout the site for eventual discharge into surface waters via the irrigation ditch in the southeast corner of the parcel. The existing D1 Ditch transecting the property will be filled in except for the southernmost portion that will remain open near Wetland 1. The stormwater that flows in this ditch in the northwest corner will be diverted to a new perimeter ditch that will follow the property boundaries in the north and the east before it leaves the property in the southeast corner.

Transfer Station

Stormwater collected at the active compost area will be used to moisten compost piles as needed. The contact water from the Transfer Station's loadout tunnel will be managed as leachate. Leachate and condensate will be drained continuously from the compost aeration system via gravity and piped to one of two leachate manholes or "water traps." The leachate manholes will be equipped with electric pumps and float level sensors to transfer liquid that collects in the manhole to the retention pond located near the active compost area, after which the liquid will be hauled offsite for proper disposal. Operation and maintenance of the stormwater ponds will be outlined in subsequent phases of design.

Maintenance Facility

The Maintenance Facility will have stormwater ponds for collecting runoff in this area (Figure 2). The salt and sand area is not exposed to stormwater. The deicing area is also covered and in an enclosed area.

Any future fueling station (bulk storage container) would store, manage, and monitor fuel in accordance with regulatory requirements including 40 *Code of Federal Regulations* (CFR) 112 and Washington Administrative Code (WAC) 173-180-320.

2) Could waste materials enter ground or surface waters? If so, generally describe.

There is a possibility that small amounts of waste materials (i.e., small amounts of petroleum products, sediments, or concrete materials) could occur from construction and operation activity. Spill prevention BMPs will be followed during construction to avoid such spills.

Anti-icing materials and herbicides at the Maintenance Facility will be stored in an impervious containment pad (bermed and paved) in accordance with the BMP for Storage of Solid Raw Materials in the *Stormwater Management Manual for Eastern Washington* (Chapter 8) (Ecology, 2019). This will prevent any discharge to ground or surface water.

Should a fueling station be proposed in the future, it will be constructed in compliance with regulations, including those that prevent spills or leaks from reaching surface or groundwater such as 40 CFR 112 and WAC 173-303-145.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

The site has a southeast gradient of 0 to 2 percent. Grading will mirror this gradient to maximize gravity flow of stormwater to the retention ponds and irrigation ditch.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

The construction contractor will implement both a stormwater pollution and prevention plan and a temporary erosion and sediment control plan, in accordance with an NPDES General Construction Stormwater Permit, and a spill prevention control and countermeasure (SPCC) plan to minimize the risk of contaminants accidentally reaching wetlands or the groundwater table. These approved plans will include a list of BMPs that will be in place before construction begins, along with erosion control measures (silt fences, check dams, silt/sediment basins and traps) and plans for revegetation and erosion control through grading.

Stormwater will be contained onsite via infiltration ponds except for stormwater flows that enter the site in Ditch D1 in the northwest corner and will be diverted around the site in the new perimeter ditch. Design of stormwater treatment and flow control to address post-construction requirements for new development will be done in accordance with the *Stormwater Management Manual for Eastern Washington* (Ecology, 2019).

An operations and maintenance (O&M) plan for the Transfer Facility and the Compost Facility will be submitted to the City for review and retainage. The O&M plan will address the long-term maintenance of the stormwater facilities (ponds, swales) that will be constructed onsite to deal with the flow control and treatment requirements of Core Element 5 in the *Stormwater Management Manual for Eastern Washington* (Ecology, 2019).

The Maintenance Facility will have a SPCC plan to prevent and control any potential spills, including those from a future fueling station. Fuel tanks will be contained and stored in compliance with 40 CFR, Chapter D, Part 112 for Oil Pollution Prevention.

4. Plants

a. Check the types of vegetation found on the site:

_____ Deciduous tree: alder, maple, aspen, other
_____ Evergreen tree: fir, cedar, pine, other
X Shrubs
X Grass
X Pasture
_____ Crop or grain
_____ Orchards, vineyards or other permanent crops.
X Wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
_____ Water plants: water lily, eelgrass, milfoil, other
_____ Other types of vegetation

Vegetation on the site is heavily grazed pasture grasses. Natural vegetation is confined to some wetter areas and includes native sedges, rushes, and forbs. The large central ditch (D1) is vegetated throughout much of its length with a mix of native and non-native wetland plant species including grasses, sedges, rushes, willow dock, and watercress. A full description of the site vegetation and presence of wetlands is described in the Revised Wetland Delineation Report (Appendix B of Attachment 1) and the Critical Areas Report itself (Attachment 1).

b. What kind and amount of vegetation will be removed or altered?

The project will result in the removal of plants listed above. The estimated total footprint is 25 acres.

c. List threatened and endangered species known to be on or near the site.

None, based on the Washington State Priorities Species and Habitats and the U.S. Fish and Wildlife Service Information for Planning and Consultation.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Vegetation temporarily disturbed by construction activities will be replaced with native vegetation within 1 year of the growing season after construction is complete.

More details including the revegetation/landscaping plan to meet City of Ellensburg design criteria will be determined during the final design.

e. List all noxious weeds and invasive species known to be on or near the site.

Tansy ragweed (*Senecio jacobaea*)

5. Animals

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

Examples include:

birds: hawk, heron, eagle, songbirds, other _____

mammals: deer, bear, elk, beaver, other _____

fish: bass, salmon, trout, herring, shellfish, other _____

No animals were observed during the site visit in October 2018. Hawks, songbirds, and deer are known to cross the site. There is suitable nesting habitat for birds, subject to the Migratory Bird Treaty Act, within and adjacent to the project area.

b. List any threatened and endangered species known to be on or near the site.

Results of the database searches identified six special-status species as having the potential to occur on or adjacent to the site (USFWS, 2018, in the Critical Areas Report [Attachment 1]). No designated or proposed critical habitat was identified within the survey area. No state or federally listed special-status species were observed during the field evaluation. No suitable habitat to support any listed species was observed onsite.

c. Is the site part of a migration route? If so, explain.

Yes, bird migration follows the nearby Yakima River, located approximately 0.5 mile from the site

d. Proposed measures to preserve or enhance wildlife, if any:

Proposed measures to reduce impacts to wildlife include lighting design that is pointed down to avoid attraction from birds and movement-sensitive building lighting to reduce lighting attractants. Integrated pest management will be implemented as part of the Operations Plan (Kittitas County, 2014). Experience with other transfer buildings has shown that the installation of netting in the rafters prevents nesting.

The Transfer Station site will be enclosed by a 6-foot chain-link perimeter fence with barbed wire to prevent scavenging pests and vandalism.

Where feasible, utilities will be buried to reduce migratory bird injury and the creation of predator bird roosts or nests.

e. List any invasive animal species known to be on or near the site.

None.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Construction will require electricity and diesel fuel. A small diesel generator will be installed at the Scalehouse to keep the scale wiring system operational during power outages.

During operation of both sites, electricity will be brought to the site via underground conduits. Electrical power will be used in the 11 proposed buildings for lighting and electrical equipment. In addition, building heat will be generated via electricity.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No, the potential use of solar energy by adjacent properties will not be affected.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

The Transfer Building will utilize natural light and LED lights. The Scalehouse and Administration Buildings will utilize efficient heating, ventilation, and air-conditioning systems. There are no proposed energy conservation features for the Maintenance Facility.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

1) Describe any known or possible contamination at the site from present or past uses.

A draft *Phase I Environmental Site Assessment Report* was published on June 26, 2018, by Alta Science & Engineering Inc. (Attachment 2). The federal and state database listings identified the following nearby sites:

- F2M LLC Elkhorn Pit located at 1831 Highway 97 (gravel mining) and Ellensburg Cement Products LO PRO 1 located at 2121 Highway 97 (cement and construction company and gravel mining operation). Gravel mining operation may have influenced how shallow groundwater behaves within the regional area.
- Pilot Travel Center 389 located southwest of the subject property. This facility has leaking underground storage tanks downgradient from the site.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

There are no known hazardous chemicals or conditions that would affect the project development and design.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

Deicing/anti-icing chemicals, paint, herbicides, and fuel will be stored and used at the project site.

Moderate risk waste will be temporarily stored and transported from the Transfer Station.

4) Describe special emergency services that might be required.

No special emergency services will be required.

5) Proposed measures to reduce or control environmental health hazards, if any:

Kittitas County Solid Waste has plans in place to reduce or control potential environmental health hazards at the Transfer Station. The primary document is the 2017 Solid Waste Facility Operating Plan: Ellensburg Transfer Station (Waste Management, 2017), which will be updated before operations begin.

Other methods include project design features that avoid or minimize impacts from hazards or hazardous materials. For example, self-haul customers are separated from commercial traffic. Commercial truck radii are designed to avoid dangerous backing-up scenarios. The SPCC plan will include engineered and operational methods for preventing, containing, and controlling potential release and provisions for a quick and safe cleanup. The SPCC plan also complies with the requirements of the International Building Code and Uniform Fire Code.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

The daytime and nighttime sound levels in the project vicinity come from US 97 traffic, local vehicular traffic, and adjacent cement and gravel operations.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Construction

Construction activities will result in temporary noise increases within and adjacent to the project area. The short-term noise and vibration impacts will be generated primarily by heavy machinery (e.g., trucks, cranes, excavators, backhoes) and vehicle traffic (e.g., hauling construction material, backfilling, pile-driving). Typical construction activities will occur during daytime hours between 7:00 a.m. and 10:00 p.m. Construction will likely be confined to normal working hours, which are exempt from the permissible state and local sound level limits.

Transfer Station Operation

Noise will be generated primarily by heavy equipment (e.g., trucks, front-loaders, grinders) and vehicle traffic. The Transfer Station will retain its regular hours open to the public Monday through Saturday, 8:00 a.m. to 4:00 p.m. (8 hours/day, 7 days/week).

Public Works Maintenance Facility Operation

Noise will be generated primarily by summer and winter equipment and workers' vehicles. Winter hours are 7:00 a.m. to 3:30 p.m. Summer hours are 6:00 a.m. to 4:30 p.m. Asphalt loads are delivered every day for the month of July (31 days), typically midmorning. Anti-icer and herbicides will be delivered once a week for 3 months (12 days), typically midmorning. The public works facility is not visited by the public.

3) Proposed measures to reduce or control noise impacts, if any:

Construction

Because construction noise levels will be variable and short-term, contractors will implement the following measures to minimize noise from construction activities:

- Operate equipment during approved hours as required by local permits.
- Minimize idling time of heavy equipment and vehicles.
- Ensure adequacy of mufflers on all engines (vehicle and generators).

Operation

None planned. The Transfer Building is enclosed, minimizing the noise associated with trash transfer. Heavy equipment will be limited to regular hours of operation.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The current site is zoned Light Industrial and is used for grazing seasonally The adjacent properties are railroad (Light Industrial) to the north, general commercial (community mixed use) to the east and south, and industrial to the west. The proposed use of the site will not affect the land uses of adjacent properties.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

The site has been used for grazing, but it is zoned Light Industrial. There has been no conversion of tax status.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

Not applicable.

c. Describe any structures on the site.

There are no habitable structures currently on the site. There are some ditches, culverts, and water control structures.

d. Will any structures be demolished? If so, what?

Not applicable. There are no structures onsite other than those mentioned under (c) above.

e. What is the current zoning classification of the site?

Light Industrial

f. What is the current comprehensive plan designation of the site?

Light Industrial

g. If applicable, what is the current shoreline master program designation of the site?

Not applicable.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

The preliminary jurisdictional determination found that the three delineated wetlands (W1, W2, W3) and four ditches (D1, D2, D4, and D12) are potentially jurisdictional as waters of the state and therefore are defined as critical areas by the City of Ellensburg.

i. Approximately how many people would reside or work in the completed project?

There are no residential units associated with the project. The facility is designed to contain office space, the scalehouse, materials sorting area, vehicle storage, materials storage, and composting facility for approximately 10 fulltime workers and 20 fulltime workers at the Maintenance Facility. During the summer, approximately nine workers from the Cle Elum Upper County Maintenance Facility will work at the Ellensburg Lower County Facility.

j. Approximately how many people would the completed project displace?

None. The land is currently used for seasonal grazing.

k. Proposed measures to avoid or reduce displacement impacts, if any:

Not applicable.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The proposal is compatible with existing and projected land uses and plans. A conditional use permit may have requirements that will be incorporated into the project.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

Not applicable.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

Zero.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

Zero.

c. Proposed measures to reduce or control housing impacts, if any:

Not applicable.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The Transfer Station is proposed to be approximately 35 to 50 feet high above approximately 15 feet of fill (Figures 5 and 6). The building materials for the offices consist of a pre-engineered, rigid-frame system with metal-panel siding over steel framing. The tipping floor area superstructure will be covered by a pre-engineered, rigid-frame system and metal roof. Pre-engineered metal buildings come with inherent limitations on irregular features; however, some changes in building envelope plane and many changes in color or pattern of envelope finishes are possible. During design, Jacobs expects to incorporate at least three of the following options from ECC 15.530.030(c):

(3) repeating distinctive window patterns
(5) use of vertical piers
(6) changes of roofline per subsection F
(7) changing materials and/or color with a change in building plane
(8) Providing lighting fixtures, trellis, tree, or other landscape feature within each interval

b. What views in the immediate vicinity would be altered or obstructed?

There are no historic properties within or around 0.5 mile of the site. The Transfer Station will alter views of some undeveloped pasture looking north and east, tent/tunnel structures (covered hay piles) looking west, and some highway commercial or industrial structures looking south.

c. Proposed measures to reduce or control aesthetic impacts, if any:

None.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

During construction, there will be exterior safety lighting around structures/buildings. There will be no construction after 10:00 p.m. Daytime glare may occur from sunlight shining on windows or other reflective surfaces. This will not be a concern for US 97 drivers as the buildings will be at least 100 feet from the roadway.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No, light or glare from the relocated Transfer Station will not be a safety hazard or interfere with views. Exterior light and glare added as part of this project will be limited through lighting placement and design.

c. What existing off-site sources of light or glare may affect your proposal?

The only offsite light sources come from the highway.

d. Proposed measures to reduce or control light and glare impacts, if any:

Using appropriate shielding systems, downward-facing lights, and motion-control lights for exterior lighting features to reduce offsite light pollution. The City's code, Chapter 15.580 for the Outdoor Lighting Standards, will be followed.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

None.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Not applicable.

13. Historic and Cultural Preservation

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.

No.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

Jacobs conducted a 55-acre pedestrian survey of the project area in October 2018 (Attachment 3). No archaeological artifacts, features, or sites were identified during surface and subsurface inventories. Similarly, no archaeological deposits were observed in the shovel test pits such as buried anthropogenic soils or paleosols.

The project location has never been previously surveyed; there was one cultural resources survey conducted in 2006 within 0.5 mile of the parcel. No cultural resources were recorded.

On April 23, 2019, the Department of Archaeology and Historic Preservation (DAHP) concurred with a finding of no effect (Attachment 3).

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

Jacobs conducted a cultural resources pedestrian survey in October 2018 and documented survey findings in an assessment report (Attachment 3). Consultation with DAHP was initiated and DAHP subsequently concurred with a finding of no effect (Attachment 3).

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

In the event that archaeological materials are discovered during construction, the contractor is required to halt excavations in the vicinity of the find, have a professional archaeologist assess the significance of the archaeological deposits discovered during construction, and contact Kittitas County and Washington DAHP. If human skeletal remains are discovered, the Kittitas County Sheriff and DAHP must be notified immediately.

14. Transportation

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

The project survey area is bound to the west by US 97, to the north by the Burlington Northern railroad and Old Highway 10, and to the east and south by private, undeveloped properties. The public will access the site via US 97.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

The site is not currently served by public transportation. The nearest transit stop is the West Interchange/Love's approximately 1.5 miles away.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

There is currently no parking at the site. The proposed project will contain approximately 15 parking spaces associated with the Transfer Station Administration Building and Office Building and 30 personal vehicle parking spaces associated with the Maintenance Facility.

The final number of parking spaces will be determined during the final design and facility occupancy classification. All parking spaces, ingress/egress, and loading areas will be hard surfaced.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

The site will require one or two access points from US 97 that will be publicly accessible during operating hours. One access point will serve the Maintenance Facility. The other access point will be for a new Minor Collector that will provide access to the Transfer Station.

The project will trigger half-street improvements along State Route 97 frontage per City and Washington State Department of Transportation regulations. The interior/connector road (Minor Collector) will also need half-street improvements. Street improvements include concrete curb/gutter, sidewalks, street lighting, permanent signage, asphalt, asphalt markings, gravel base, storm drainage, and other items associated with minimum public improvements consistent with Public Works Development Standards. The County may be granted a deferral of said frontage improvements per the City's second Pre-Application Report (P19-106).

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and non-passenger vehicles). What data or transportation models were used to make these estimates?

The trip generation for vehicles accessing the Transfer Station facility was estimated using recent and historical data from the existing Ellensburg Transfer Station. Approximately 808 daily weekday trips are expected to be generated by the proposed facility. Though the facility is planned to be closed daily at 4:00 p.m., it is estimated that the facility will generate 88 new trips per hour from 3:00 to 4:00 p.m. (see Table 2 of the Transportation Analysis Memorandum [Jacobs, 2019]). Of these 88 trips, 6 will be truck trips per the *Kittitas County Transfer Station Basis of Design Report* (CH2M, December 2016).

The trip generation for vehicles accessing the Maintenance Facility was estimated at 27 employee vehicle trips during the evening peak hour using the land use category of "office," which is more conservative than the generation rate for a "maintenance facility" (Institute of Transportation Engineers, *Trip Generation Manual*, 10th Edition, 2017). Approximately 229 daily trips are expected to be generated by the Maintenance Facility.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No.

h. Proposed measures to reduce or control transportation impacts, if any:

Based on the site access analysis, the 95th percentile queue length at the weigh station is contained within the site and will not result in spillback onto the Minor Collector road or US 97. For more detail about traffic impacts offsite, a Transportation Analysis Memorandum (Jacobs, 2019) was submitted to the City of Ellensburg Public Works and Utilities Department in November 2019. The memorandum contains the traffic impact fee calculation.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

No.

b. Proposed measures to reduce or control direct impacts on public services, if any.

None.

16. Utilities

a. Circle utilities currently available at the site:

Electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system,

other _____

All utilities will need to be brought to the site.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Electricity, natural gas, water, cable, and sanitary sewer may be brought to the site via buried pipe or conduit and will comply with City and regulatory requirements.

During site preparation, the necessary trenches will be dug to bury the utilities and actions will be coordinated among providers.

C. Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____

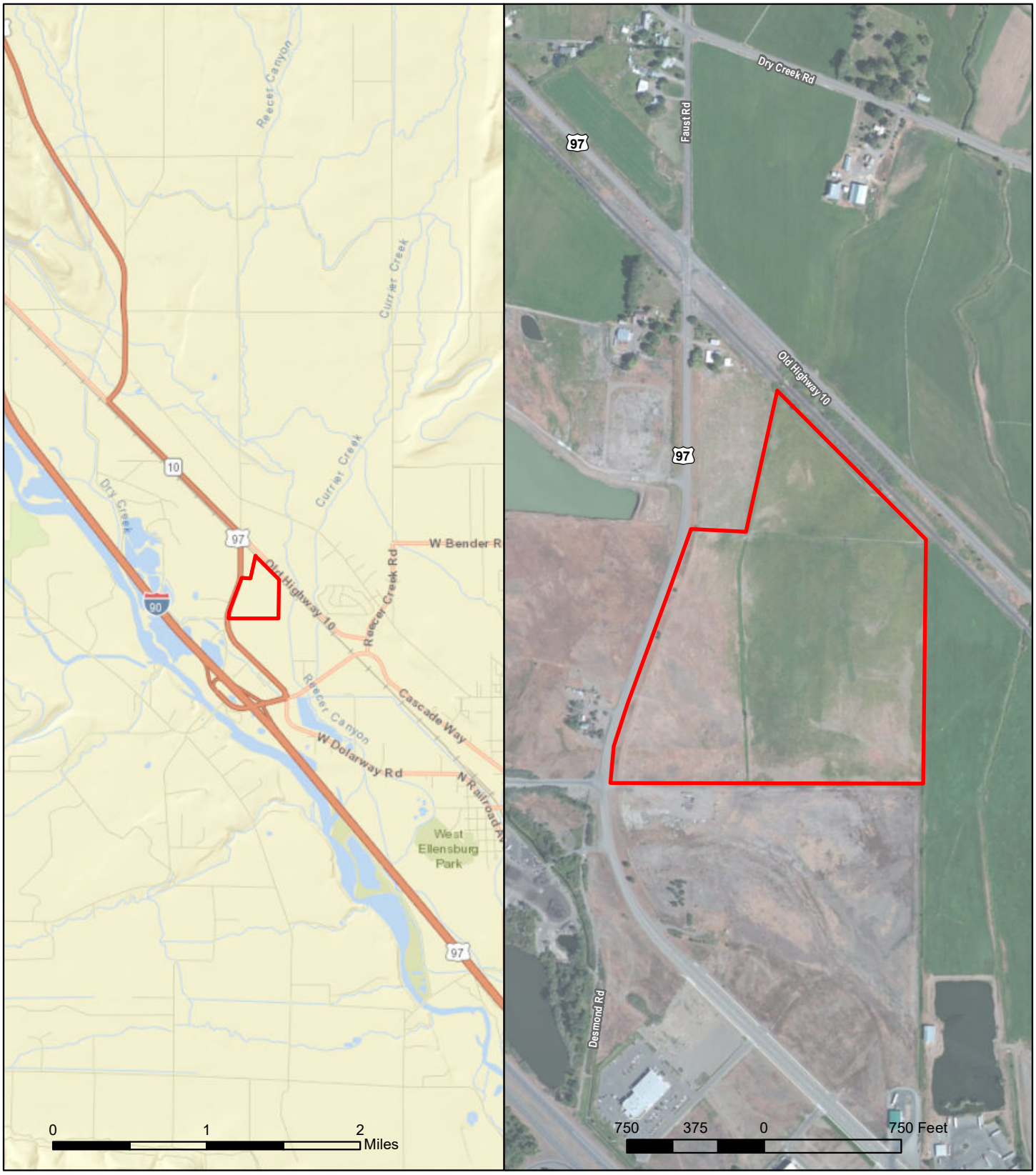
Name of signee: _____

Position and Agency/Organization: _____

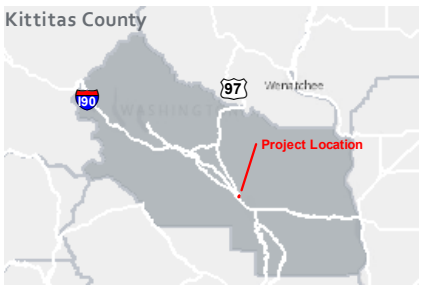
Date Submitted: _____

Figures

Figures



Locator Map



Legend

Project Area

Figure 1
Kittitas County
Transfer Station Siting
VICINITY MAP
Kittitas County, Washington

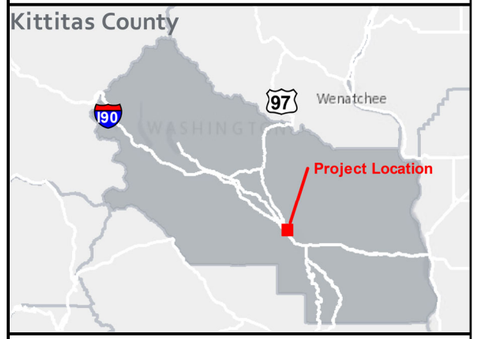
Document Path: \\brooksidefiles\GIS_SHARE\ENBG\oo_Proj\K\Kittitas_County_WA\Maps\o8_Site_Vicinity.mxd

US 97 / OLD HIGHWAY 10 SITE

NOTES:

1. FINAL COLLECTOR ROAD LOCATION IN VICINITY OF EXISTING WETLAND TO BE DETERMINED IN FINAL DESIGN.

VICINITY MAP



LEGEND

- TRAFFIC FLOW
- COMMERCIAL ROUTE
- SELF-HAUL ROUTE
- COMPOSTING ROUTE
- TRANSFER TRAILER ROUTE
- PROPERTY BOUNDARY
- 1555 EXISTING GROUND CONTOURS (1-FT INTERVAL)
- EXISTING FEMA 100-YEAR FLOODPLAIN
- NEW FLOODPLAIN CHANNEL
- PARCEL BOUNDARY
- SITE FENCING AND GATES
- W WATER MAIN
- SS SEWER MAIN
- ELECTRICAL (BURIED)
- GAS MAIN (BY OTHERS)
- DRAINAGE CHANNEL OR SWALE
- DRAINAGE FLOW DIRECTION
- DELINEATED WETLAND
- 50-FT BUFFER, WETLAND
- BUFFER AVERAGE AREA

N

0 100' 200' 300'

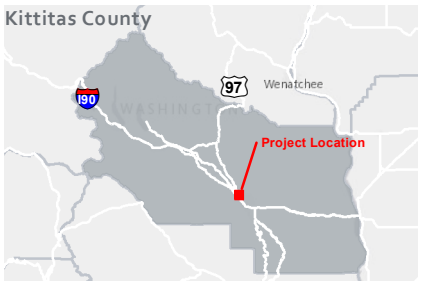
1" = 100'

FIGURE 2
TRANSFER STATION SITE PLAN
KITTITAS COUNTY TRANSFER STATION
KITTITAS COUNTY, WASHINGTON

JACOBS

FILENAME: Kittitas_DraftSitePlan_R18.dgn PLOT DATE: 3/13/2020 PLOT TIME: 4:17:20 PM

Locator Map



Legend

- Culvert
- Water Control Structure
- Ditch
- 50 ft buffer
- Wetland
- Site Boundary
- Study Area Boundary
- FEMA 100 yr Floodplain

Figure 3
Kittitas County Transfer Station Siting
WETLAND OVERVIEW

Kittitas County, Washington

0 250 500 Feet

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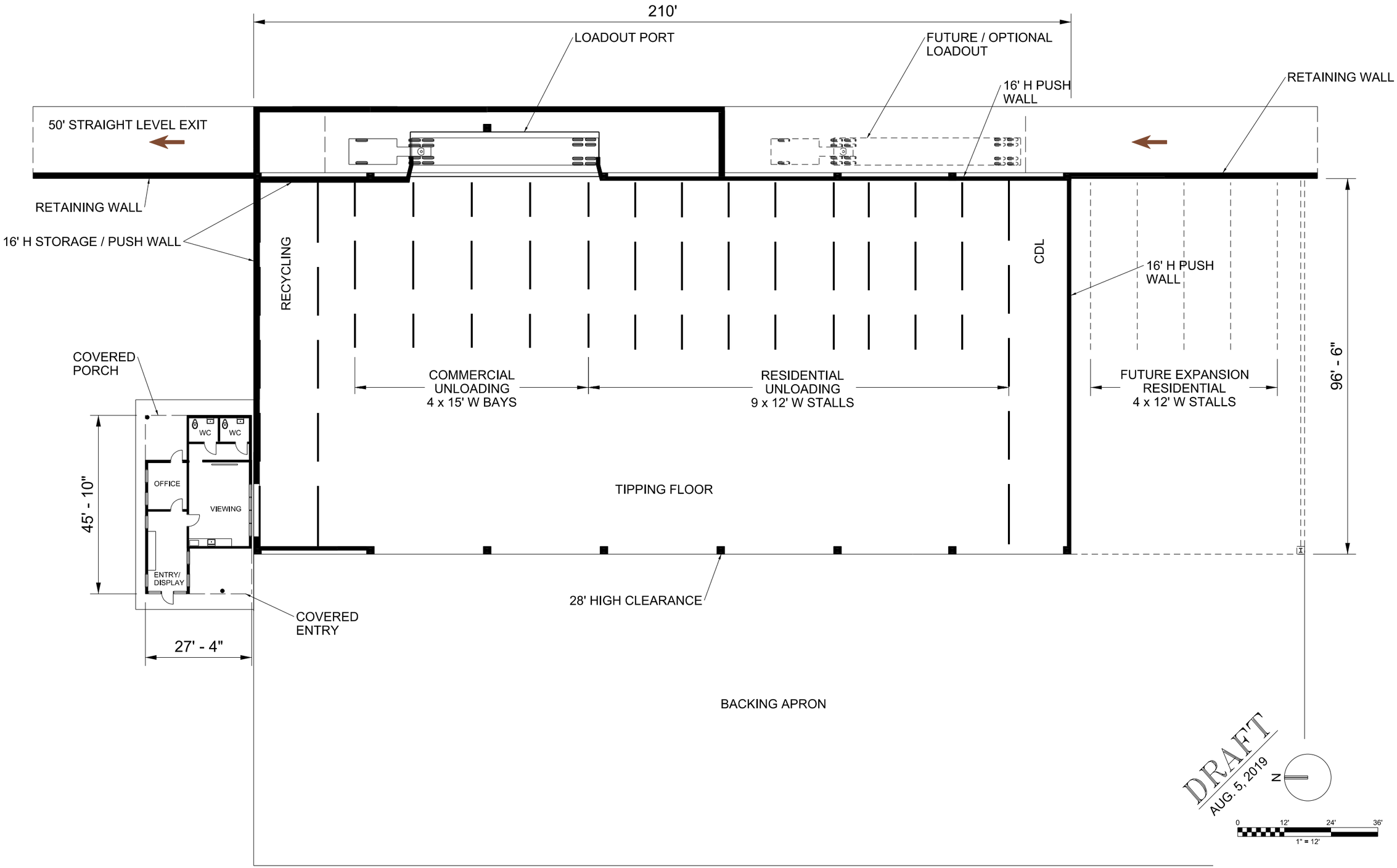
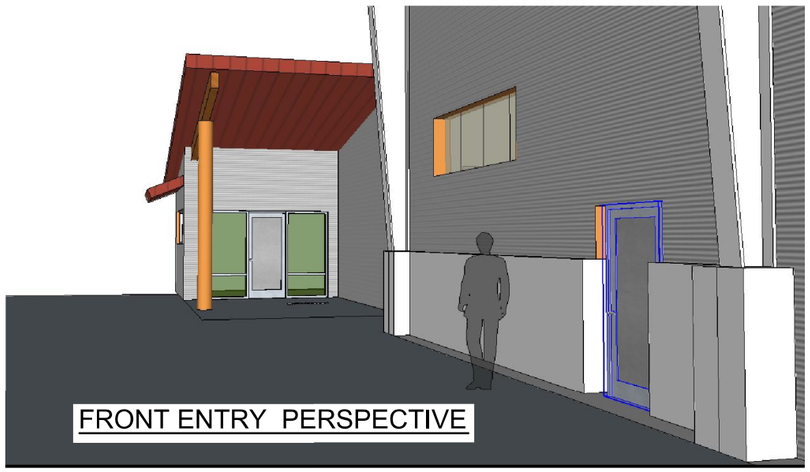


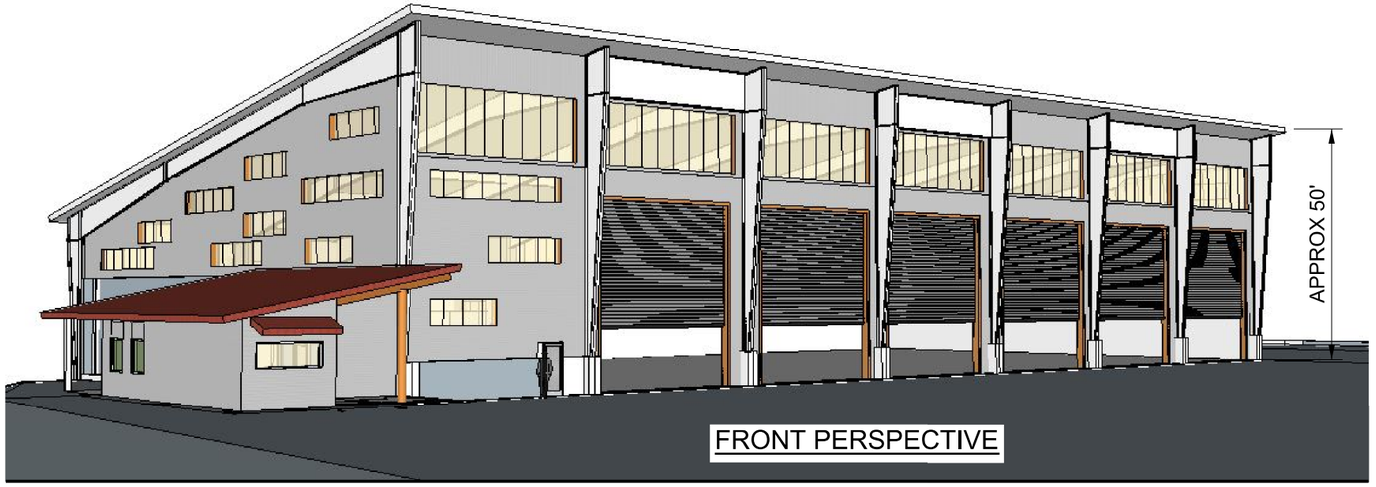
FIGURE 4
TRANSFER BUILDING PLAN
KITTITAS COUNTY TRANSFER STATION
KITTITAS COUNTY, WASHINGTON

JACOBS

FRONT ELEVATION



FRONT ENTRY PERSPECTIVE



FRONT PERSPECTIVE

FRONT PERSPECTIVE

DRAFT

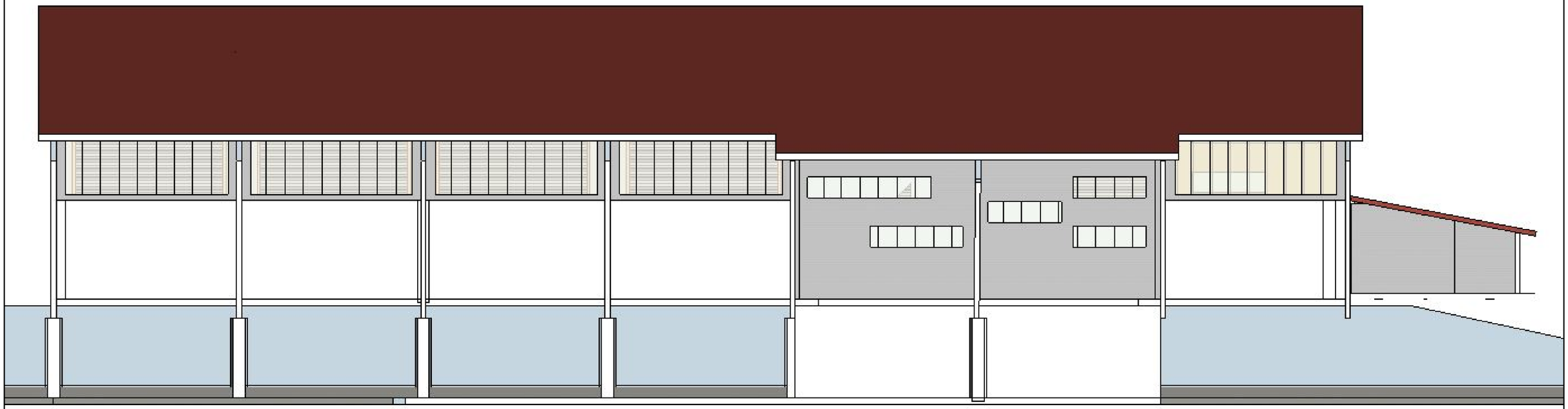
AUG. 5, 2019

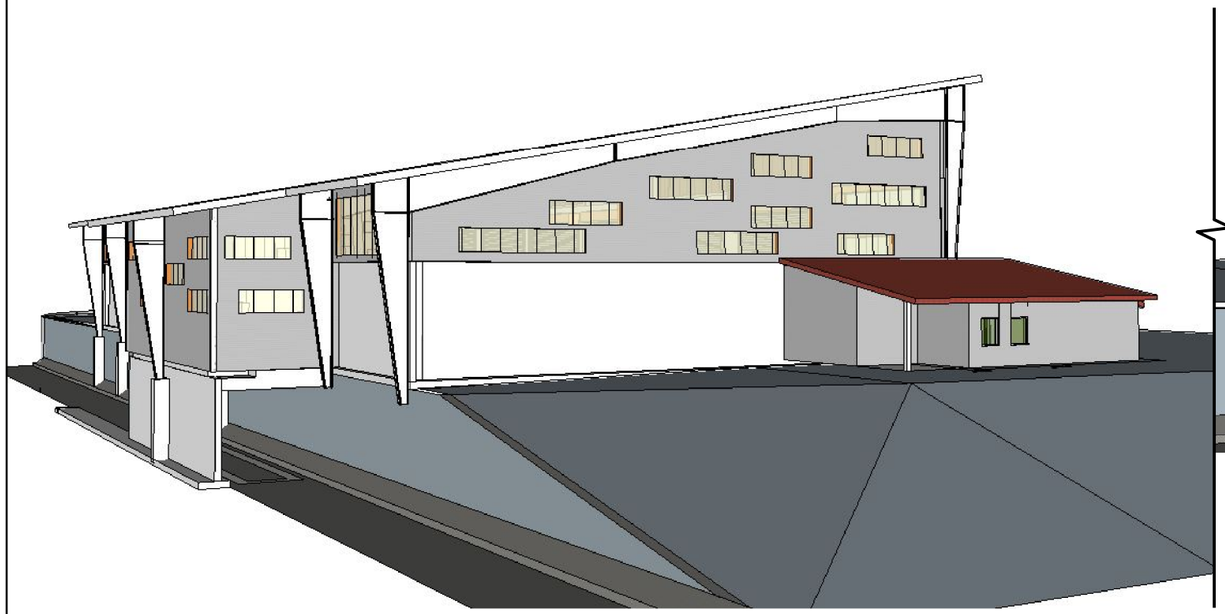
FIGURE 5
TRANSFER BUILDING ELEVATIONS (1 OF 2)
KITTITAS COUNTY TRANSFER STATION
KITTITAS COUNTY, WASHINGTON

JACOBS

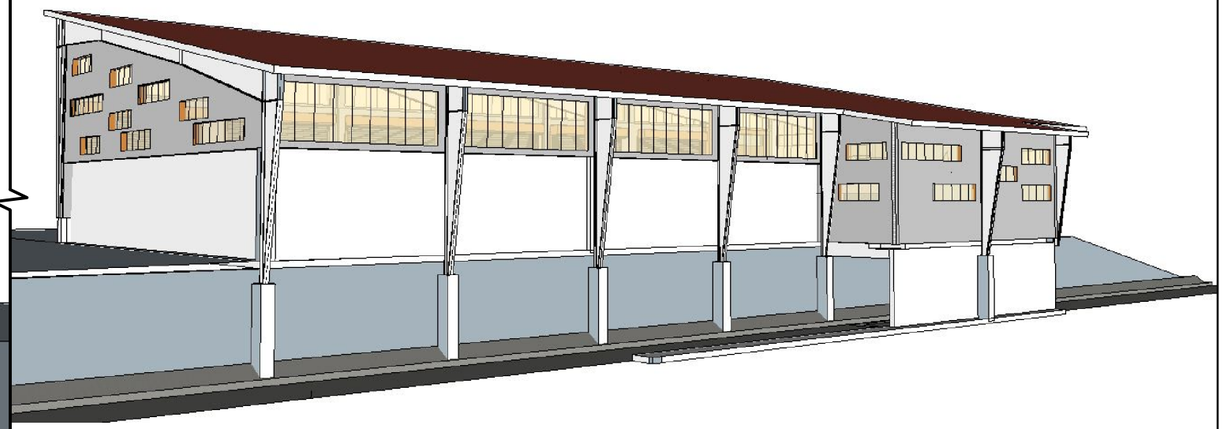
FILENAME: Fig05-Kittitas_transfer bldg elev1.dgn PLOT DATE: 8/5/2019 PLOT TIME: 11:43:55 AM

BACK ELEVATION





BACK PERSPECTIVE



BACK PERSPECTIVE

DRAFT

AUG. 5, 2019

FIGURE 6
TRANSFER BUILDING ELEVATIONS (2 OF 2)
KITTITAS COUNTY TRANSFER STATION
KITTITAS COUNTY, WASHINGTON

JACOBS

681'

223'

385'

PARKING

OFFICE

EQUIPMENT STORAGE BLDG

CUSTOMER UNLOADING AND CHIPPING AREA

STORMWATER POND

239'

WINDROW CURING 16 PILES

PRODUCT SALES

FINISHED PRODUCT STORAGE PILE

SCREENING AREA

18'

WINDROW CURING PILE

115'

55'

75'

EQUIP. PARKING

EQUIP. PARKING

EQUIP. PARKING

EQUIP. PARKING

GRINDER

320'

ASP BUNKERS
8 x 25' W BAYS

55'

BIOFILTER

60'

165'

242'

200'

FINISHED PRODUCT STORAGE 8 PILES

STORMWATER PONDS

DRAFT
AUG. 5, 2019

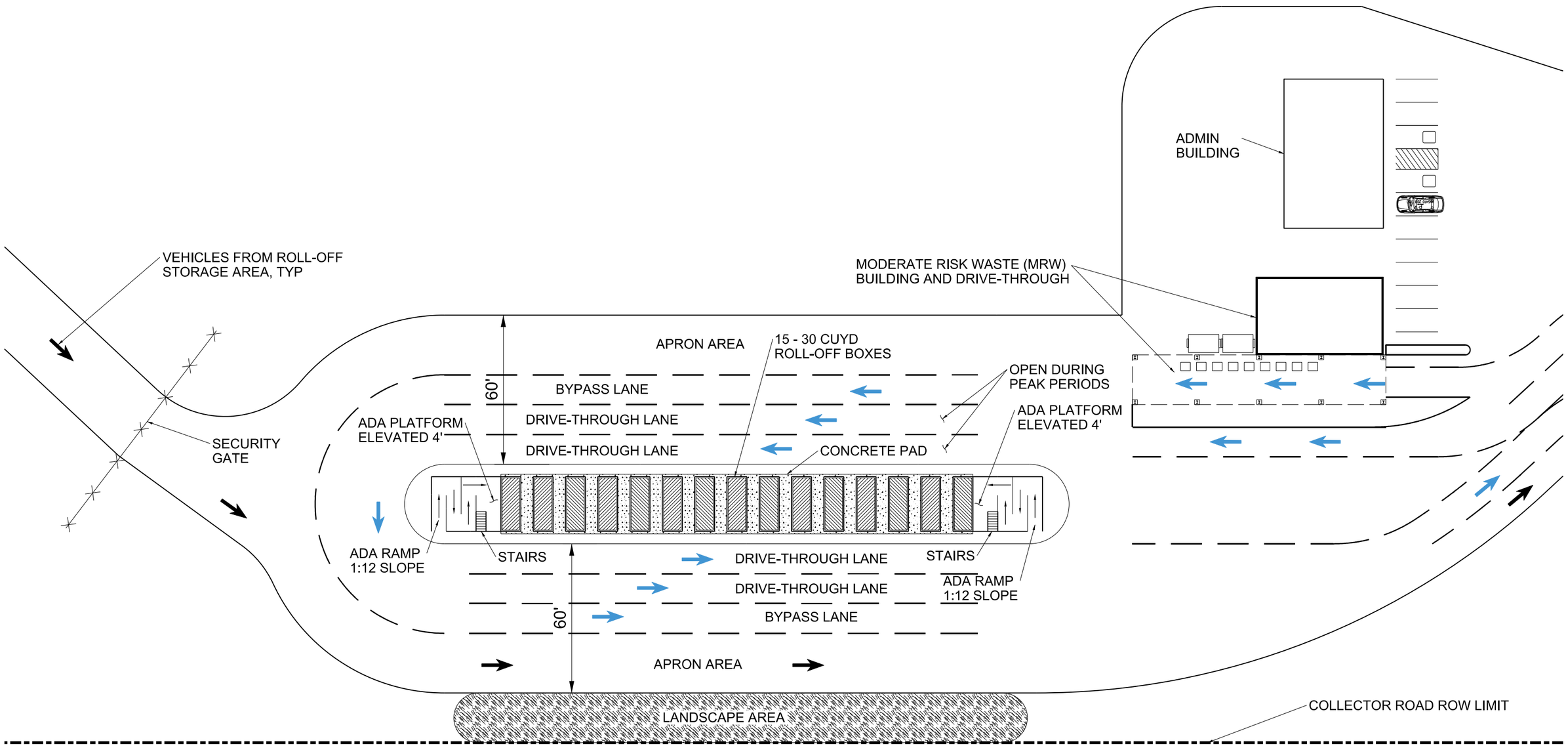
N

0 30' 60' 90'
1" = 30'

FIGURE 7
COMPOSTING AREA PLAN
KITTITAS COUNTY TRANSFER STATION
KITTITAS COUNTY, WASHINGTON

JACOBS

FILENAME: Fig07-Kittitas_composting plan.dgn PLOT DATE: 8/5/2019 PLOT TIME: 1:28:49 PM



N

0 20' 40' 60'

1" = 20'

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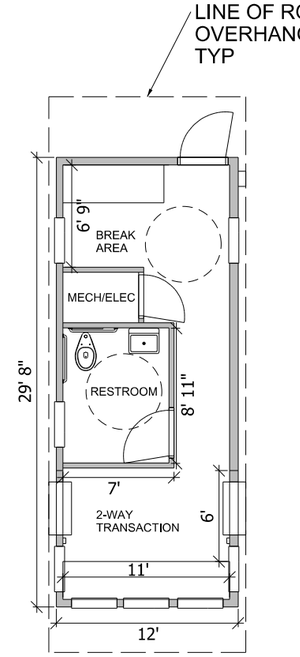
AUG. 5, 2019

FIGURE 8
RECYCLING DROP-OFF PLAN
KITTITAS COUNTY TRANSFER STATION
KITTITAS COUNTY, WASHINGTON

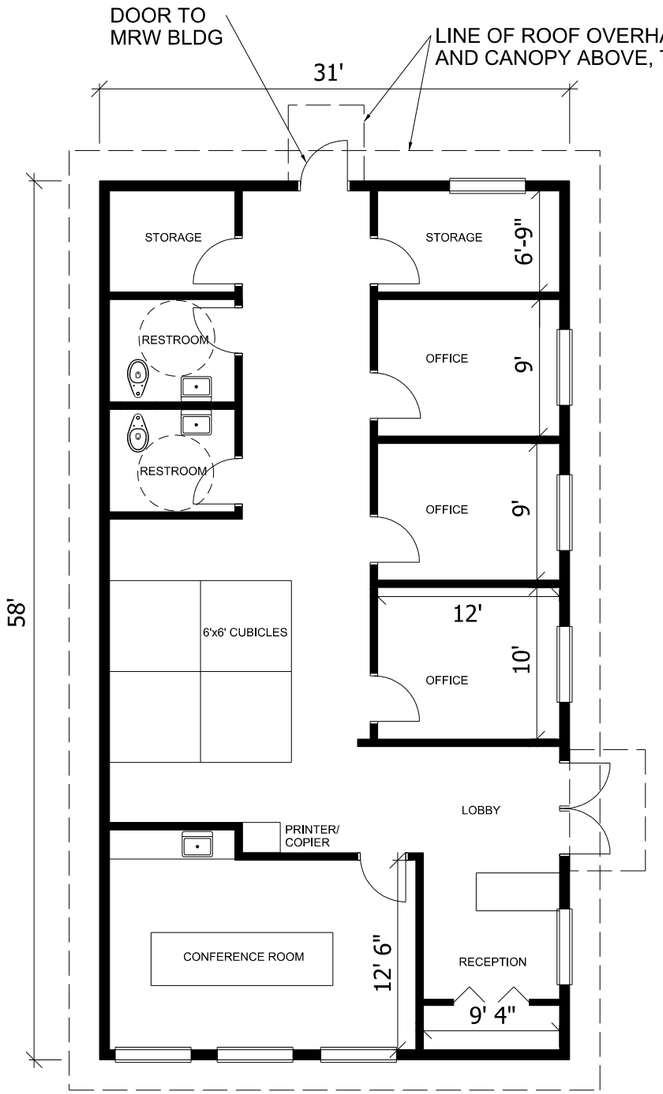
JACOBS

FILENAME: Fig08-Kittitas_recycling drop-off plan.dgn PLOT DATE: 8/5/2019 PLOT TIME: 1:18:41 PM



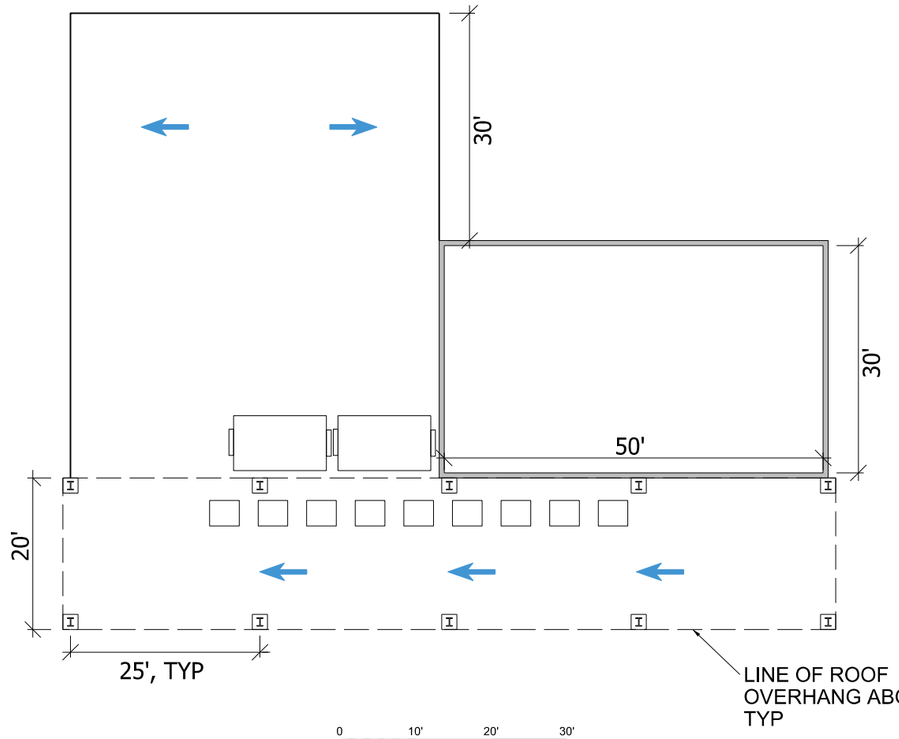
0 5' 10' 15'
1" = 5'

SCALEHOUSE BLDG
1"= 5'



0 5' 10' 15'
1" = 5'

ADMINISTRATION BLDG
1"= 5'



0 10' 20' 30'
1" = 10'

MODERATE RISK WASTE (MRW) BLDG
1"= 10'

DRAFT
AUG. 5, 2019

FIGURE 9
SCALEHOUSE, ADMINISTRATION, AND MRW BUILDING PLANS
KITTITAS COUNTY TRANSFER STATION
KITTITAS COUNTY, WASHINGTON

JACOBS

Upper County Maintenance Facility (© KPG 2018. MODIFIED BY JACOBS)

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AUG. 5, 2019

NOTE:
LOWER COUNTY (US 97) MAINTENANCE FACILITY WILL HAVE SIX (6) VEHICLE BAYS.

FIGURE 10
DEPARTMENT OF PUBLIC WORKS
MAINTENANCE BUILDING ELEVATION
KITTITAS COUNTY TRANSFER STATION
KITTITAS COUNTY, WASHINGTON

JACOBS

FILENAME: Figure 10_Kittitas DPW.dgn PLOT DATE: 8/5/2019 PLOT TIME: 11:50:24 AM

Attachment 1
Critical Areas Report

Kittitas County Transfer Station and Maintenance Facility Relocation Project, Ellensburg, Kittitas County, Washington

Critical Areas Report

Draft

September 2019

Kittitas Solid Waste

Kittitas County Transfer Station and Maintenance Facility Relocation Project, Ellensburg, Kittitas County, Washington

Project No:	684127CH.05.05
Document Title:	Critical Areas Report
Document No.:	GES0829191707PDX
Revision:	Draft
Date:	September 2019
Client Name:	Kittitas County Solid Waste
Project Manager:	Tom Parker
Author:	Peggy O'Neill, M.S.

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Appendixes

Tables

Acronyms and Abbreviations

BMPs	best management practices
cfs	cubic feet per second
CY	cubic yards
FAC	facultative
FACU	facultative upland
FACW	facultative wetland
FEMA	Federal Emergency Management Agency
FIRM	flood insurance rate map
ft	feet
GHG	greenhouse gas
HGM	hydrogeomorphic classification method
HUC	hydrologic unit code
IPac	Information for Planning and Consultation
LOMR	letter of map revision
KCC	Kittitas County Code
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	national pollutant discharge elimination system
NRCA	Natural Resources Conservation Areas
OBL	obligate
OHWM	ordinary high water mark
PEM	palustrine emergent (wetland)
PHS	Priority Habitat and Species
SFHA	special flood hazard area
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
WDFW	Washington Department of Fish and Wildlife
WDOE	Washington Department of Ecology
WNHP	Washington Natural Heritage Program
WDNR	Washington Department of Natural Resources
WOUS	water of the United States

1. Introduction

This report presents the findings of the critical areas investigation conducted for Kittitas County Solid Waste Department at the proposed Kittitas County Transfer Station (hereafter referred to as the project) site in Ellensburg, Kittitas County, Washington as required by Ellensburg City Code (ECC 15.61.100). The proposed project site is located in the northwestern portion of the city of Ellensburg. Current use of the site is livestock grazing.

1.1 Project Information

1.1.1 Applicant Information

Patti Johnson, Director Kittitas County Solid Waste
925 S Industrial Way
Ellensburg, WA 98926
(509) 962-7070

1.1.2 Project Description

Kittitas County proposes to relocate its solid waste transfer station and Public Works Maintenance Facility to a new location. The projected population growth and solid waste management needs of Kittitas County combined with frequent flooding events and limitations to its existing facilities requires construction of both new facilities.

The new transfer station facility will include a transfer building, composting area, moderate-risk waste building, and recycling drop-off area as well as various administrative, parking, and other required elements. The new maintenance facility will include an administrative building, large equipment and vehicle storage, wash and maintenance bays, and salt, sand and de-icing chemical storage.

1.1.3 Project Location

The project is located in northwestern portion of the city of Ellensburg, in Kittitas County, Washington (Appendix A: Figure 1). The project survey area is bound to the west by state highway 97, to the north by the Burlington Northern railroad and Old Highway 10 and to the east and south by private, undeveloped properties. The Interstate 90 corridor is approximately 0.3 mile southwest of the survey area. The project survey area is within the U.S. Geological Survey (USGS) 7.5-minute Ellensburg North quadrangle in Section 28, Township 18 North, Range 18 East (USGS, 2018); Willamette Meridian (latitude 47.016181°, longitude -120.590401°) within the Upper Yakima watershed unit (Hydrologic Unit Code 17030001).

1.2 Permits Requested

Permits are requested for floodplain development and for impacts to wetland buffers located in critical areas.

1.3 Investigator Information

The critical areas investigation was conduction by Jacobs senior environmental biologist Peggy O'Neill, M.S., PWS. Ms. O'Neill has over 20 years' experience conducting environmental surveys and investigations in the Pacific Northwest. Field work for this investigation was conducted on October 25 and 26, 2018.

2. Methods

The investigation was limited to the survey area (approximately 51 acres) that corresponds with Tax Map No. 18-18-28030008, parcel ID 611033. The following subsections describe the procedures and methods used to determine, map, and evaluate critical area resources within the survey area. Site-specific information reviewed during the pre-field investigation and collected during, or produced from, the field survey is provided in the appendixes. The following appendixes are provided:

- Appendix A, Figures
- Appendix B, Revised Wetland Delineation Report
- Appendix C, Site Plan

2.1 Pre-field Investigation

General information on climate, vegetation, soils, hydrology, and existing wetlands was reviewed before the field survey. Data and information sources included the following:

- Wetland Delineation Report: Kittitas County Waste Transfer Station (Jacobs, 2019b)
- Critical Aquifer Recharge Areas Map (Kittitas County, 2014c)
- Washington Priority Habitat and Species (PHS), (WDFW, 2018)
- Fish and Wildlife Habitat Conservation Areas Map (Kittitas County, 2014b)
- Washington Natural Areas Map (WDNR, 2019b)
- WNHP Historic Rare Plant Element Occurrences (WDNR, 2019c)
- Floodplain Mapping (FEMA, 2018)
- Information for Planning and Consultation (IPaC) (USFWS, 2018).
- Geologically Hazardous Areas Map (Kittitas County, 2014a)
- U.S. Geological Survey Topographic Map, North Ellensburg, Washington Quadrangle (USGS, 1983)

2.2 Field Survey

2.2.1 Method for Delineating Wetlands

The survey method for identifying wetlands followed the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (USACE, 2008). These methods use three criteria (vegetation, soils, and hydrology) to determine the presence of wetlands.

At each delineation sample point, the three required criteria were evaluated. Data collection included:

- Plant species were identified, and percent cover was visually estimated and recorded. Dominant species included the most abundant species whose cumulative cover accounted for at least 50 percent of the total cover, as well as any species that accounted for at least 20 percent of the total vegetative cover. The wetland indicator status for plant species was determined using the National Wetland Plant List (Lichvar et al., 2016).
- Soil characterization was determined from direct observation of soils between 0 and 18 inches below ground surface.
- Wetland hydrology was determined from direct observation of soil saturation and inundation or other indicators.

Additional soil pits were dug throughout the site to document hydric/nonhydric soil conditions and provide additional detail for wetland boundary mapping. Aquatic resources within the survey area were mapped using a Trimble GeoXH global positioning system with submeter accuracy.

2.2.2 Method for Delineating Waters

Within nontidal waters, in the absence of adjacent wetlands, the extent of USACE jurisdiction is defined by the ordinary high water mark (OHWM). In 33 *Code of Federal Regulations* 328.3, the OHWM is defined as the "line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, or the presence of litter and debris" (Environmental Laboratory, 1987). Generally, USACE considers the OHWM to be the elevation to which water flows at a 2-year frequency (for example, 50 years out of 100 years). Typically, OHWM is indicated by the presence of a defined streambed with bank shelving but may also include flow lines; sediment deposition or scour; and mineral staining, salt deposits, or deep or surficial cracking.

Any delineation of nontidal stream boundaries identified is consistent with OHWM Regulatory Guidance Letter No. 05-05 (USACE, 2005). Additionally, *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Arid West Region of the United States* (USACE, 2008) was used.

Within the survey area, OHWM indicators were identified and mapped in the field. OHWM indicators were recorded, and the average width and depth of OHWM channels were documented. Measured field data were compared with aerial photographs to refine and adjust OHWM boundaries. Photographs of the channel are provided in Appendix B as attachments to the wetland delineation report.

2.2.3 Method for Conducting Wetland Functional Assessments

Wetland Functional Assessments were conducted according to the *Washington State Wetland Rating System for Eastern Washington. 2014 Update* (WDOE, 2014). All on site wetlands were rated as "Slope" wetlands according to this methodology.

2.2.4 Method for Evaluating Special Status Species

The USFWS and NMFS species lists were accessed on their websites on March 29, 2018 (USFWS, 2018; NOAA, 2019). The Washington Natural Heritage Program *List of Animal Species with Ranks* (WDNR, 2017) was consulted for state species listings.

A field review of the project site was conducted to determine if potential habitat is present on site to support any of the listed species. The field survey also assessed the site to determine if suitable nesting habitat for birds subject to the Migratory Bird Treaty Act is present within or adjacent to the work area.

3. Results

3.1 Critical Areas

"Critical areas" include the following areas and ecosystems: wetlands; areas with a critical recharging effect on aquifers used for potable water; fish and wildlife habitat conservation areas; frequently flooded areas; and geologically hazardous areas (ECC 15.600).

3.1.1 Wetlands, Waters, and Buffers

A field delineation of the entire survey area identified 2.07 acres of palustrine emergent (PEM) wetlands, and 11,836 linear feet of excavated watercourses constructed for the purpose of agricultural irrigation. A summary of the delineated aquatic resources is presented in Table 1 and in the following sections. The complete wetland delineation report is provided in Appendix B. Three wetlands (2.07 acres) were delineated within the survey area.

Table 1. Delineated Aquatic Resources

Feature ID	Classification (Cowardin et al., 1979)	Latitude/ Longitude	Size (acres)	Size (linear feet)
Wetlands (3)				
Wetland-1	PEM	47.01443°/ -120.5926°	1.44	
Wetland-2	PEM	47.0160°/ -120.5929°	0.26	
Wetland-3	PEM	47.0169°/ -120.5924°	0.37	
	TOTAL Wetlands		**2.07**	
Nonwetland Waters (12)				
Ditch D1	Perennial	47.0164°/ -120.5913°	0.75	2,170
Ditch D2	Intermittent	47.0163°/ -120.5922°	0.07	473
Ditch D3	Intermittent	47.0161°/ -120.5931°	0.12	1,705
Ditch D4	Intermittent	47.0175°/ -120.5918°	0.03	340
Ditch D5	Intermittent	47.0177°/ -120.5894°	0.25	1,096
Ditch D6	Intermittent	47.0191°/ -120.5894°	0.04	760
Ditch D7	Intermittent	47.0189°/ -120.5892°	0.07	1,044
Ditch D8	Intermittent	47.0164°/ -120.5873°	0.07	1,185
Ditch D9	Intermittent	47.0158°/ -120.5878°	0.02	415
Ditch D10	Intermittent	47.01666°/ -120.5896°	0.03	825
Ditch D11	Intermittent	47.0168°/ -120.5920°	0.02	420
Ditch D12 (partially offsite)	Intermittent	47.0140°/ -120.5908°	0.20	1,403
	Total Nonwetland Waters	**Perennial**	**0.75**	**2,170 feet**
		Intermittent	**0.92**	**9,666 feet**

3.1.1.1 Wetlands

Three wetlands (2.07 acres) were delineated within the survey area. Each wetland resource is described in the following subsections and summarized in Table 1. An aquatic resource delineation map (Appendix A; Figure 2) is provided in Appendix A. Site photographs, field datasheets, wetland rating

forms, and a list of plant species observed are provided in Appendix B as attachments to the wetland delineation report. A preliminary determination of potential jurisdictional status is provided in Table 2. In addition to the three delineated wetlands, ten additional areas were investigated as potential wetlands and were determined to not meet wetland criteria. These are identified on the wetland delineation map as possible wetland areas (PW1, PW2, etc.).

Wetland-W1, Palustrine Emergent Wetland (1.44 acres)

Wetland W1 (1.44 acres) is a PEM (Cowardin classification)/Slope (Hydrogeomorphic Classification (HGM)) (USDA-NRCS, 2008). wetland located in the southwestern portion of the survey area. Vegetation is comprised of heavily grazed planted grasses including creeping bentgrass (*Agrostis stolonifera*) (FACW) and Kentucky bluegrass (*Poa pratensis*) (FAC), willow dock (*Rumex salicifolius*) (FACW), celery leaved buttercup (*Ranunculus sceleratus*)(OBL), and common rush (*Juncus effusus*) (FACW). Soils sampled are a very dark gray (10YR 3/1) silty clay from 0 to 8 inches with 5 percent redoximorphic features (5.5YR 4/6). From 8 to 18 inches, soils continue as a very dark grayish-brown (10YR 3/2) clayey silt loam with up to 10 percent redoximorphic features (7.5YR 4/6). Soils within Wetland W1 meets hydric soil indicator F6: Redox Dark Surface. Soil saturation was observed between eight and ten inches.

Adjacent upland areas are dominated by pasture grasses, predominantly Idaho fescue (*Festuca idahoensis*) (FACU) and Kentucky bluegrass (FAC). Soils do not meet the hydric soil indicator for F6 Redox Dark Surface because they do not contain at least 4 inches of redox within the top 12 inches of soil profile. Upland soils were very dark grayish-brown (10YR 3/2) and typically lacking redoximorphic features. Wetland hydrology was not observed at the adjacent upland data points. Soils were not saturated in the upper 18 inches.

Wetland 1 is a Category IV wetland, requiring a 50-foot buffer (wetland rating forms are provided in Appendix B as attachments to the wetland delineation report).

Wetland-W2, Palustrine Emergent Wetland (0.26 acres)

Wetland W2 is a PEM (Cowardin)/Slope (HGM) wetland (0.26 acre) located in the north-central portion of the survey area. Vegetation is dominated and comprised of heavily grazed planted facultative species including creeping bentgrass (FACW), Kentucky bluegrass (FAC), willow dock (FACW), watercress (*Nasturtium officinale*) (OBL), and common rush (FACW). Soils sampled are a very dark gray (10YR 3/1) cobbly silt loam from 0 to 8 inches with no redoximorphic features. From 8 to 18 inches, soils continue as a very dark gray (10YR 3/1) gravelly silty clay with 5 percent redoximorphic features (7.5YR 4/6). Soils within Wetland W2 meets hydric soil indicator F6: Redox Dark Surface. Soils were saturated below six inches.

Adjacent upland areas are dominated by pasture grasses, predominantly Idaho fescue (FACU) and Kentucky bluegrass (FAC). Soils do not meet the hydric soil indicator for F6 Redox Dark Surface because they do not contain at least 4 inches of redox within the top 12 inches of soil profile. Upland soils were very dark grayish-brown (10YR 3/2) with no redoximorphic features typically observed. Wetland hydrology was not observed at the adjacent upland data points. No soil saturation was observed in the upper 18 inches.

Wetland 2 is a Category IV wetland, requiring a 50-foot buffer (wetland rating forms are provided in Appendix B as attachments to the wetland delineation report).

Wetland-W3, Palustrine Emergent Wetland (0.37 acre)

Wetland-W3 is a PEM (Cowardin)/Slope (HGM) wetland (0.37 acre) located in the north-central portion of the survey area. Vegetation is dominated by comprised of heavily grazed planted grasses including creeping bentgrass (FACW) and Kentucky bluegrass (FAC), willow dock (FACW), watercress (OBL), and celery-leaved buttercup (OBL). Soils sampled are a very dark gray (10YR 3/1) cobbly silt loam from 0 to 6 inches with no redoximorphic features. From 6 to 18 inches, soils continue as a very dark gray (10YR 3/1) gravelly silty clay with 5 percent redoximorphic features (7.5YR 4/6). Soils within Wetland W3 meets hydric soil indicator F6: Redox Dark Surface. Soils were saturated at eight inches.

Adjacent upland areas are dominated by pasture grasses, predominantly Idaho fescue (FACU) and Kentucky bluegrass (FAC). Soils do not meet the hydric soil indicator for F6 Redox Dark Surface because they do not contain at least 4 inches of redox within the top 12 inches of soil profile. Upland soils were very dark grayish-brown (10YR 3/2) with no redoximorphic features typically observed. Wetland hydrology was not observed at the adjacent upland data points. No soil saturation was observed in the upper 18 inches.

Wetland 3 is a Category IV wetland, requiring a 50-foot buffer.

Table 2. Wetlands: Preliminary Jurisdictional Determination

Wetland ID	Bordering, Contiguous with, or Neighboring a WOUS[a]	Within 100 feet of the OHWM[b] of a WOUS	Within the 100-Year Floodplain and Within 1,500 Feet of a WOUS	Potential Jurisdiction Notes
Wetland W1	Yes	Yes	No	Likely jurisdictional as it is contiguous with ditch D1, which is presumed jurisdictional
Wetland W2	Yes	Yes	No	Potentially jurisdictional as it is contiguous with ditch D2, which is potentially jurisdictional
Wetland W3	Yes	Yes	No	Potentially jurisdictional as it is contiguous with ditch D4, which is potentially jurisdictional

[a] WOUS – water of the United States

[b] OHWM – ordinary high water mark

3.1.1.2 Nonwetland Waters

A system of excavated irrigation ditches (nonwetland waters) is present on the project site. The field investigation delineated twelve ditches (11,836 lineal feet) within the survey area. A water control structure at the northern end of the site regulates flow into the ditches for irrigation purposes. The ditches also carry flow in response to precipitation events. All ditches show evidence of trampling by livestock.

Each nonwetland water is a constructed watercourse for the purpose of agricultural irrigation and is described in the following subsections and summarized in Table 1. An aquatic resource delineation map (Appendix A: Figure 2) is provided in Appendix A. Site photographs and watercourse or ditch characterization field data forms are provided in Appendix B as attachments to the wetland delineation report. Preliminary determinations of potential jurisdictional status are provided in Table 3.

Ditch D1

Ditch D1 is an excavated ditch that traverses the site from north to south. Clear bed and banks are present. Ditch D1 averages 15 feet across at top of bank. Depth from top of bank to substrate averages 3 to 4 feet. Ditch substrate consists of silty clay with some gravels. The ditch drains to offsite to ditch D12, appearing to eventually reach the Yakima River. Flow was present to a depth of 6 to 8 inches with areas of ponding 1 to 1.5 feet deep. Ponding occurs up and downstream at the locations of two culvert crossings, a ford crossing, and areas of dense vegetation. Flow is assumed to be perennial due to the amount of flow present during the field visit in late October following a dryer than normal summer and no measurable precipitation in the month prior to the field visit.

Ditch D2

Ditch D2 is an excavated ditch that traverses the site east to west. D2 connects ditches D1 and D3. No flow was present in the ditch at the time of the field visit. Direction of flow is not clear, though based on elevation (GoogleEarth Pro, 2018), it appears to convey water east to west, from ditch D1 to ditch D3. Evidence of flow included scour marks and a predominantly unvegetated bottom. Flow is assumed to be

intermittent in response to precipitation events or irrigation. Substrate is silty clay. Clear bed and shallow banks were observed. Ditch D2 averages 6 feet across at top of bank and an average 0.5 feet from top of bank to substrate. Ditch D2 bisects wetland W2. Adjacent upland vegetation consists of planted pasture grasses.

Ditch D3

Ditch D3 generally follows the western boundary of the site, with a short east-west segment at the northern end. The east-west portion of the ditch is lined with concrete which continues a short way into the north-south segment. Ditch D3 is connected to ditch D5 via a culvert that crosses over ditch D1. No flow was present at the time of the field visit; however, direction of flow appears to be to the west from the culvert at ditch D1 and then south along the western site boundary. Substrate is silty clay. Evidence of flow includes scour marks, lack of vegetation, and presence of clear bed and banks. Ditch D3 averages 3 feet across at top of bank and an average 0.5 feet from top of bank to substrate. Adjacent upland vegetation consists of planted pasture grasses.

Ditch D4

Ditch D4 traverses the site diagonally from the intersection of ditches D1 and D3 southwest to the northern end of wetland W3. No flow was present at the time of the field visit. Direction of flow appears to be northeast to southwest. Flow from this ditch may provide some hydrological support for wetland W3. Substrate is silty clay. Scattered vegetation in the ditch include small clumps of grasses and watercress. Evidence of flow includes scour marks and presence of clear bed and shallow banks. Ditch D4 averages 4 feet across at top of bank and an average 0.75 feet from top of bank to substrate. Adjacent upland vegetation consists of planted pasture grasses.

Ditch D5

Ditch D5 traverses the site east to west, beginning at the eastern site boundary and flowing due west to its connection with ditch D3 via a culvert over ditch. At the eastern end ditch D5 is connected with ditch D7 from the north and ditch D8 to the south. Ditch D5 consists of two parallel channels separated by a low vegetated berm. No flow was observed at the time of the field visit, however shallow standing water was present in places. Direction of flow appears to be east to west. Evidence of flow includes scour mark, lack of vegetation, and presence of clear bed and banks in both channels. The substrate consists of silty clay. Including both channels ditch D5 averages 10 feet across at top of bank with the center berm 2 to 3 feet wide. Channel depth averages 1.5 feet from top of bank to substrate. Adjacent upland vegetation consists of planted pasture grasses.

Ditch D6

Ditch D6 traverses the site from southeast to northwest along the northern site boundary. No flow was present at the time of the field visit. Evidence of flow includes scour marks, lack of vegetation, and presence of clear bed and shallow banks. Direction of flow appears to be southwest to northeast with ditch D6 draining into the northernmost segment of ditch D1. No surface connection was observed between ditch D6 and ditch D7 immediately southeast of D6. Ditch D6 averages 2.5 feet across at top of bank. Channel depth averages 0.5 feet. Substrate is silty clay. Adjacent vegetation consists of pasture grasses to the southwest and a thicket of shrubs with some trees offsite to the northeast.

Ditch D7

Ditch D7 traverses the site from northwest to southeast. No flow was present at the time of the field investigation. The western portion of ditch D7 runs parallel to and a short distance away from ditch D6. Evidence of flow includes scour marks and presence of bed and shallow banks. The channel is mostly devoid of vegetation. This segment of ditch D7 averages 3 feet across at top of bank and 0.5 feet from top of bank to substrate. Substrate is silty clay. Flow in this segment appears to be southeast to northwest, originating at a water control structure that connects the western and eastern segments of ditch D7. Adjacent upland vegetation is planted pasture grasses.

The eastern segment of ditch D7 originates at the water control structure and appears to flow northwest to southeast. This segment of the channel is lined in concrete and averages 3 feet across at top of bank and 1.25 feet from top of bank to substrate. Adjacent upland vegetation consists of pasture grasses to the southwest and unmaintained grasses and forbs offsite to the northeast.

Ditch D8

Ditch D8 traverses the site from north to south along the eastern boundary of the site. Ditch D8 is a continuation of ditch D7 south of its intersection with ditch D5. No flow was present at the time of the field investigation, however shallow standing water was observed in some places. Direction of flow appears to be north to south. Substrate is silty clay. Scattered vegetation in the ditch include small clumps of grasses and watercress. Evidence of flow includes scour marks and presence of clear bed and shallow banks. Ditch D8 averages 2.5 feet across at top of bank and an average 0.75 feet from top of bank to substrate. Adjacent upland vegetation consists of planted pasture grasses.

Ditch D9

Ditch D9 extends diagonally from ditch D8 to the southwest site. No flow was present at the time of the field investigation. Direction of flow appears to be northeast to southwest. Substrate is silty clay. Scattered vegetation in the ditch include small clumps of grasses. Evidence of flow includes scour marks and presence of clear bed and shallow banks. Ditch D9 averages 2 feet across at top of bank and an average 0.5 feet from top of bank to substrate. Adjacent upland vegetation is planted pasture grasses.

Ditch D10

Ditch D10 extends due south from ditch D5. No flow was present at the time of the field investigation. Direction of flow appears to be north to south. Substrate is silty clay. Scattered vegetation in the ditch include small clumps of grasses. Evidence of flow includes scour marks and presence of clear bed and shallow banks. Ditch D10 averages 1.5 feet across at top of bank and an average 0.3 feet from top of bank to substrate. Adjacent upland vegetation is planted pasture grasses.

Ditch D11

Ditch D11 extends slightly northwest to southeast from ditch D4 to ditch D2. No flow was present at the time of the field investigation. Direction of flow appears to be north to south. Substrate is silty clay. Scattered vegetation in the ditch include small clumps of grasses and occasional rushes. Evidence of flow includes scour marks and presence of clear bed and shallow banks. Ditch D11 averages 2 feet across at top of bank and an average 0.5 feet from top of bank to substrate. Adjacent upland vegetation is planted pasture grasses.

Ditch D12

Ditch D12 is located just south of and parallel to the southern boundary of the site. Description of this ditch is based on offsite observation. Ditch D12 averages 6 to 8 feet across at top of bank and is an average 2 feet from top of bank to substrate. The ditch begins approximately 300 feet east of Old Highway 10 and flows east to the eastern end of the project site boundary, then turns south where is continues for an indeterminant distance. Flow was present in the ditch at the time of the field visit.

Table 3. Nonwetland Waters: Preliminary Jurisdictional Determinations

Nonwetland Waters #	Length (ft)	Average Width (ft)	Flow Regime	OHWM?	Relocates or Excavated in a Tributary?	Drains Wetlands?	Intersects a Regulated Feature?	Flows to WOUS[a]?	Potential Jurisdiction Notes
D1	2170.0	15	perennial	Yes	No	unknown	Yes	No	Likely jurisdictional due to perennial flow
D2	473.0	6	intermittent	Yes	No	unknown	Yes	No	Potentially jurisdictional as it intersects Wetland W2
D3	1705.0	3	intermittent	Yes	No	unknown	No	No	Presumed not jurisdictional as it does not flow to a WOUS
D4	340.0	4	intermittent	Yes	No	No	Yes	No	Potentially jurisdictional as it intersects Wetland W3
D5	1096.0	10	intermittent	Yes	No	No	No	No	Presumed not jurisdictional as it does not flow to a WOUS
D6	760.0	2.5	intermittent	Yes	No	No	No	No	Presumed not jurisdictional as it does not flow to a WOUS
D7	1044.0	3	intermittent	Yes	No	No	No	No	Presumed not jurisdictional as it does not flow to a WOUS
D8	1185.0	2.5	intermittent	Yes	No	No	No	No	Presumed not jurisdictional as it does not flow to a WOUS
D9	415.0	2	intermittent	Yes	No	No	No	No	Presumed not jurisdictional as it does not flow to a WOUS
D10	825.0	1.5	intermittent	Yes	No	No	No	No	Presumed not jurisdictional as it does not flow to a WOUS
D11	420.0	2	intermittent	Yes	No	No	No	No	Presumed not jurisdictional as it does not flow to a WOUS
D12 (partially offsite)	1,427	6	intermittent	Yes	No	No	Yes	Unknown	Likely jurisdictional as it intersects and drains Ditch D1 and is adjacent to wetland W1

3.1.2 Critical Aquifer Recharge Areas

According to the Kittitas County Critical Aquifer Recharge Area Map the project site is located within an area identified as a high aquifer susceptibility area (Kittitas County, 2014c) (Appendix A: Figure 3). However, according to the city of Ellensburg Draft Critical Areas Revisions (15.660.030) the city does not believe there are any critical aquifer recharge areas within the city limits relating to public drinking supplies.

3.1.3 Fish and Wildlife Habitat Conservations Areas

According to ECC 15.650.010 fish and wildlife habitat conservation area includes seven categories or definitions. The categories are defined below with a description of observed onsite habitat within the Project area relative to each category.

> *1. Areas with which state or federally designated endangered, threatened, and sensitive species have a primary association.*

Habitat present on site includes managed pasture and emergent wetlands. The site is entirely comprised of managed pasture. A total of 2.07 acres of emergent wetland is present in three locations. The site is bisected by a series of interconnecting irrigation ditches. All habitat on site is degraded from activities associated with historic agricultural use of the site and is unlikely to provide suitable habitat for any state or federally designated endangered, threatened, or sensitive terrestrial or aquatic species. A list of potentially occurring state or federal listed species is provided in Table 4.

> *2. State priority habitats and areas associated with state priority species. Priority habitats and species are considered to be priorities for conservation and management. Priority species require protective measures for their perpetuation due to their population status, sensitivity to habitat alteration, and/or recreational, commercial, or tribal importance. Priority habitats are those habitat types or elements with unique or significant value to a diverse assemblage of species. A priority habitat may consist of a unique vegetation type or dominant plant species, a described successional stage, or a specific structural element. Priority habitats and species are identified by the State Department of Fish and Wildlife.*

WDFW identifies one priority habitat on the project site (WDFW, 2018) (Appendix A: Figure 4). WDFW identifies wetlands in the southwestern portion of the site. The WDFW-mapped wetland roughly corresponds with the delineated wetland W1 described in section 3.1.1.1 above. No other state priority habitats or state priority species are identified. No Fish and Wildlife Habitat Conservation areas are identified within or immediately adjacent to the study area (Appendix A: Figures 5a and 5b).

> *3. Naturally occurring ponds under 20 acres. Naturally occurring ponds are those ponds under 20 acres and their submerged aquatic beds that provide fish or wildlife habitat, including those artificial ponds intentionally created from dry areas in order to mitigate impacts to ponds.*

No ponds are present on the project site.

> 4*. Waters of the state. Waters of the state include lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington, as classified in WAC 222-16-031 (or WAC 222-16-030 depending on classification used).*

Seven potentially jurisdictional waters of the state are present on the project site. They include three wetlands (wetlands W1, W2, and W3) and four ditches (ditches D1, D2, D4, and D12) with hydrological connections to other potentially jurisdictional features. Waters of the state are described in Section 3.1.1 above.

> 5. *Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity.*

No lakes, streams, or rivers are present within the project boundaries.

> *6. State natural area preserves and natural resource conservation areas. Natural area preserves and natural resource conservation areas are defined, established, and managed by the Washington State Department of Natural Resources.*

No state natural area preserves or natural resource conservation areas (NRCA) are identified with Kittitas County. (Appendix A: Figure 6) (WDNR, 2019a; WDNR 2019b). Natural Area Preserves protect the best

remaining examples of many ecological communities including rare plant and animal habitat. The preserve system presently includes more than 38,290 acres in 56 sites throughout the state. Natural Resource Conservation Areas (NRCAs) protect outstanding examples of native ecosystems, habitat for endangered, threatened and sensitive plants and animals, and scenic landscapes. More than 118,700 acres are conserved in 36 Washington state NRCAs.

> 7. *Areas of rare plant species and high-quality ecosystems as identified by the Washington State Department of Natural Resources through the Natural Heritage Program.*

No rare plant species element occurrences or high quality ecosystems are mapped on or in the vicinity of the project site (Appendix A: Figures 7a and 7b) (WDNR, 2019c). The field survey identified no suitable habitat to support rare plant species.

3.1.3.1 Federal Species and Protected Habitat

Results of the USFWS database searches identified six special-status species as having the potential to occur on or adjacent to the project site (USFWS, 2018). No designated or proposed critical habitat (USFWS, 2018a) was identified within the survey area. A list of the potentially occurring special-status species is presented in in Table 4.

Table 4. Special-status Species Potentially Occurring in Kittitas County

Common Name	Scientific Name	Federal Status[a]	Ciritical Habitat Identified[a]	State Status[b]	Potential Suitable Habitat Present on Site
Mammals					
Canada lynx	*Lynx canadensis*	T	No	E	No
Gray wolf	*Canis lupus*	E	No	E	No
North American Wolverine	*Gulo gulo luscus*	PT	No	C	No
Birds					
Marbeled murrelet	*Brachyramphus marmoratus*	T	No	E	No
Yellow-billed cuckoo	*Coccyzus americanus*	T	No	C	No
Fishes					
Bull trout	*Salvelinus confluentus*	T	No	C	No

[a] Source: USFWS, 2018
E = Endangered
T = Threatened
PT = Proposed Threatened
[b] WNHP, 2017
E = Endangered
C = Candidate

A field review of the project site was conducted on October 25 and 26, 2018, by Peggy O'Neill, senior Jacobs biologist. No federally listed special-status species were observed during the field evaluation. No suitable habitat to support any listed species was observed on site. Given species habitat and range requirements, and existing habitat observed onsite, suitable nesting habitat for birds subject to the Migratory Bird Treaty Act is present within and adjacent to the work area.

3.1.3.2 State Species and Protected Habitat

No state listed endangered species are identified as occurring on or in the vicinity of the project site (WDFW, 2019) (Appendix A: Figure 4). No state listed special-status species were observed during the field evaluation. No suitable habitat to support any listed species was observed on site.

3.1.4 Frequently Flooded Areas

The project site is located on FEMA Flood Insurance Rate Map (FIRM) No. 5300950439B, which was revised to reflect a Letter of Map Revision (LOMR) effective August 17, 2018 (Appendix A: Figure 8). Within the boundaries of Parcel No. 611033, there are three zones delineated on the FIRM: the first zone includes two ditches, D1 and D12, which are delineated as Zone A1, while the second zone is delineated as Zone B and represents an area immediately surrounding Zone A1. The third zone delineated is Zone C, which represents the area between the D1 and Reecer Creek. Zone A1 is defined as an area of the 100-year flood, and base flood elevations and flood hazard factors have been determined, while the second zone, Zone B, is defined as an area between the limits of the 100-year flood and the 500-year flood. Zone C is defined as an area of minimal flooding. Per Kittitas County Code (KCC) 14.08.020, Zone A1 is considered a special flood hazard area (SFHA), while Zone B and Zone C are not.

3.1.5 Geologically Hazardous Areas

The project site is not located in an identified geologically hazardous area (Kittitas County, 2014a).

3.2 Statement of Accuracy

Information presented in this report is accurate to the best of my knowledge and represents the expertise and best professional judgement of the preparers

3.3 Cumulative Impacts Analysis

This analysis addresses actions in the recent past, the present, and the reasonably foreseeable future that could combine with the proposed action to cause a measurable impact. If measurable cumulative effects are identified, then and evaluation of whether those effects would be significant is made. The geographic resources study area is the Currier Creek sub-basin (HUC 170300010510) of the Upper Yakima watershed unit (Hydrologic Unit Code 17030001).

Actions in the recent past in the vicinity of the proposed project include the following:

- Road construction: Interstate 90, Washington Highway 97, Old Highway 10, West University Way
- Agricultural activities including tilling, planting, and long-term grazing
- Construction of a network of irrigation canals
- Commercial development: light industrial, hotels, restaurants, service station, etc.
- Residential development
- Gravel quarry

Reasonably foreseeable future actions in the vicinity of the proposed project include the following:

- Planned residential developments north, east, and northeast of the site
- Commercial and light industrial development on US 97
- Construction of connector roads

3.3.1 Wetlands, Waters, and Buffers

Wetlands, waters, and their buffers contribute critical functions to watershed health, including water quality improvement, filtration, flood attenuation, groundwater recharge and discharge, and fish and wildlife habitats. Impacts to wetlands, waters, and buffers have occurred as a result of human activities over the past century and half associated with the arrival of euro-American settlers. Agricultural practices including tilling, draining through tiles or channels, or by removing the wetland vegetation and planting

upland vegetation have resulted in loss or degradation of wetland habitat. Livestock grazing in streams and wetlands has affected the physical structure of wetlands. Diversion of water for agricultural use has resulted in less available water to support wetlands. Soil disruption from tilling and grazing has resulted in downstream transport of sediment. Fragmentation of wetland habitat has also occurred as a result of road construction, residential and commercial development, resulting in a reduction of total area of wetlands and elimination of connections between wetlands and other habitats (Sheldon, et al., 2005).

Wetlands, waters, and their buffers identified on the Project site are considered highly degraded as a result of long-term agricultural use. Impacts include site modifications associated predominantly with agricultural use including removal of natural historically occurring vegetation, planting with agricultural crops, use of the site for grazing, construction of an interconnecting network of ditches for draining and/or irrigation purposes, and fill and relocation of an historical stream channel that meandered through the site. Other activities that have impacted the natural resources include construction of roads west and north of the site (state highway 97 and Old Highway 10), and construction of a rail line north of the site (Burlington Northern railroad), effectively disconnecting the resources from their historic counterparts.

The proposed Project will avoid all impacts to onsite wetlands and to nearly all of the wetland buffers. Implementation of the Project would have no direct adverse effects on wetlands during construction and operation of the Project, as the Project has been designed to avoid impacts to all wetlands identified on site. As a result of the project, direct buffer impacts would occur (12,836 square feet (0.29 acres); approximately 15 percent of the wetland W1 buffer). Project impacts to the wetland W1 buffer are self-mitigating, in that mitigation for impacts to this buffer will be performed on-site as replacement of the functions and values by delineating, protecting, and enhancing in an equal amount (1:1) of buffer immediately adjacent to and contiguous with the existing buffer. (Figure 9a). Direct ditch impacts would occur to (3,767 linear feet (1.05 acres) as a result of the project. Project impacts to potentially jurisdictional ditches are self-mitigating, in that mitigation for impacts to these ditches will be performed on-site as replacement of the functions and values and flow volumes in part at 1:0.6 in the creation of a 2,364-foot diversion ditch with additional compensation provided through enhancement planting along the length of the new ditch providing significant functional uplift compared to the existing highly degraded ditches. Therefore, there would be no net loss of either wetlands, waters, or wetland buffers as a result of the Project.

Wetlands on the Project site are highly degraded from past and current agricultural use. As a result of the Project, agricultural use of the wetlands will cease and the wetlands will be protected from further degradation and from activities associated with the proposed adjacent developments. Therefore, based on the proposed mitigation activities, implementation of Project in combination with the cumulative projects would generate no cumulative impacts on wetlands, waters, or buffers.

3.3.2 Fish and Wildlife Habitat Conservations Areas

The WDFW and the Washington State Department of Natural Resource's Natural Heritage Program (WNHP) compile and map fish and wildlife habitats throughout the state. Priority habitats are habitat types or elements with unique or significant value to a large number of species. A Priority Habitat may consist of a unique vegetation type (such as shrub-steppe), dominant plant species (such as juniper savannah), or a specific habitat feature (such as cliffs). WDFW identifies freshwater wetlands as a Priority Habitat.

Historical impacts to fish and wildlife habitat have occurred as a result of human activities and alterations over the past century and half associated with the arrival of euro-American settlers in the region. Habitat loss has occurred through conversion, fragmentation, or the increase in isolation and decrease in the size of habitat areas, and degradation of natural habitats (Kittitas County, 2014d). Habitat conversion, fragmentation, and degradation have resulted in the loss of more than half of the highest priority functioning habitats in Washington state. Invasive alien plant and animal species area displacing native species, profoundly altering natural systems. Other impacts to fish and wildlife and their habitat have resulted from introduction of disease and pathogens and reduction and degradation of natural water sources (Sheldon, et al., 2005).

WDFW identifies a wetland area in the southwestern portion of the site as a priority habitat. Two other wetland areas were identified on site part of a wetland delineation conducted for the Project and would also be considered priority habitats. All three wetlands are highly degraded as a result of grazing activities. The wetlands have been impacted by removal of native vegetation and planting with non-native pasture grasses. Vegetation and soils have been trampled and compacted by grazing cattle. Hydrology has been altered by construction of irrigation ditches through and/or adjacent to the wetlands.

The proposed Project area provides negligible habitat value for wildlife and will avoid all impacts to the wetlands on the site. Therefore, the Project would result in no net loss of wetland habitat and overall loss of potential wildlife habitat would be negligible.

Therefore, implementation of the Project in combination with the cumulative projects would generate no cumulative impacts on fish and wildlife habitat or species.

3.3.3 Frequently Flooded Areas

The Proposed Action would not adversely affect the functions and values of the 100-year floodplain in the long term. The proposed project diverts D1 ditch around the perimeter of the site and fill will be placed within the existing regulatory SFHA as part of the proposed design. Ditch D12 is directly downstream and receives the majority of its flow from ditch D1. Flow to D12 will be rerouted as a result of the diversion of ditch D1. Compensatory storage mitigation will be provided for both ditches in the diversion ditch. The compensatory storage mitigation will provide equal or greater conveyance and floodplain storage volume to offset any impacts due to the diversion of ditches D1 and D12. Structures that may be located in the regulatory SFHA will have a lowest floor elevated to 1 foot or more above base flood elevation to meet local floodplain regulations. The proposed project will be designed to comply with federal and local floodplain regulations.

The current conceptual design includes a limited amount of fill within a SFHA with the proposed Project design diverting and building over most of ditch D1. Ditch D12 would be filled in conjunction with the county-required construction of a collector road along the southern site boundary. The floodplain function of both ditches would be maintained by relocating ditch D1 approximately 1,000 feet to the east to follow the eastern perimeter of the site. The relocated ditch would divert flow from ditches D1 and D12 and rejoin the existing downstream ditch at the southeastern corner of the site.

A floodplain and hydraulic analysis was conducted for the project that analyzed the conveyance through D1 and approximated the volume of proposed fill in the SFHA (Jacobs, 2019). The analysis concluded that flow through ditch D1 on the site has a 100-year peak discharge of approximately 16 cfs, and up- and downstream channel cross-sectional area of approximately 10.3 square feet. The proposed mitigation is providing compensatory storage mitigation in the form of a perimeter ditch (Figure 9b). The perimeter ditch will rejoin the downstream ditch at the southeastern corner of the site. The compensatory storage mitigation will provide equal or greater conveyance and storage volume to offset any impacts due to proposed fill in the floodplain.

Therefore, implementation of the Project in combination with mitigation measures (relocation of ditches with equal water storage and capacity), and the adjacent proposed projects which would be required under Ellensburg City Code to provide similar mitigation for floodplain impacts would generate no cumulative impacts to frequently flooded areas.

4. Mitigation Sequencing

4.1 Avoidance

The applicant shall avoid all impacts that degrade the functions and values of a critical area or areas when possible. Unless otherwise provided in this chapter, if alteration to the critical area is unavoidable, all adverse impacts to or from critical areas and buffers resulting from a development proposal or alteration shall be mitigated using the best available science in accordance with an approved critical area report and SEPA documents, so as to result in no net loss of critical area functions and values.

The project was designed to avoid impacts to wetlands and waters and their buffers to the maximum extent possible and still meet the project objectives. Impacts to Wetlands W1, W2, and W3 are entirely avoided. All onsite Project facilities were located to avoid impacts to all wetlands and their buffers. Prior to these adjustments, the construction of a City-required collector road along the southern site boundary would have directly impacted a portion of wetland W1. However, the Project has reached an agreement with the owner of the Triple L property south of the project site to purchase a portion of the property in order to locate the road outside of the wetland, thus avoiding wetland impacts.

4.2 Minimization

Minimize impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts.

Impacts to wetland buffers have been minimized to the maximum extent possible. The project avoids all impacts to the Wetland W2 and W3 buffers. The project will permanently impact 12,836 square feet (0.29 acre) (approximately 15 percent of the Wetland W1 buffer) as a result of City-required collector road. As noted above the Project will purchase a portion of an adjacent parcel to avoids impacts to the wetland W1. Impact to the wetland W1 buffer were minimized by locating the road as far south as practicable.

In addition, during construction all appropriate best management practices (BMPs) will be implemented including, but not limited to erosion control BMPs required by the City Code and the *Stormwater Management Manual for Eastern Washington* (Ecology, 2019). The BMPs include use of mulch, silt barriers, containment systems, interim stormwater controls, cover measures (straw or plastic), and stream bypasses, as well as reseeding of areas temporarily disturbed by construction.

During construction, BMPs for project impacts to air quality, odor, and GHG emissions could include, but would not be limited to the following:

- Spraying water, when necessary, during construction operations to reduce emissions of fugitive dust.
- Covering dirt, gravel, and debris piles as needed to reduce fugitive dust and wind-blown debris.
- Covering open-bodied trucks, wetting materials in trucks, or providing adequate freeboard (space from the top of the material to the top of the truck) to reduce fugitive dust emissions.
- Turning off construction equipment when not in use to minimize idling and reduce GHG emissions.
- Replanting all vegetation temporarily disturbed by construction activities with native vegetation within 1 year or growing season after construction was complete.

4.3 Mitigation

Mitigation for impacts to critical areas, including floodplains, wetlands and their buffers is required according to Ellensburg City Code (ECC 15.610.060). According to the code, buffer width may be reduced provided the applicant mitigates for the proposed buffer to result in no net loss of buffer functions per best available science.

Compensatory mitigation for impacts to waters of the U.S. is required under the Clean Water Act. EPA's Section 404 rules allow compensatory mitigation to be carried out by one of four methods: 1) the restoration of a previously-existing wetland or other aquatic site, 2) the enhancement of an existing aquatic site's functions, 3), the establishment (i.e., creation) of a new aquatic site, or 4) the preservation of an existing aquatic site (EPA, 2008).

Mitigation for impacts to the floodplain is required under Kittitas County Code (KCC). According to KCC 14.08.315, filling, grading, or other activity that reduces storage in the floodplain is allowable, granted effective floodplain compensatory storage volume (herein referred to as compensatory storage) is preserved and there are no up- or downstream floodplain impacts.

4.3.1 Wetland Buffer

The project will result in permanent impacts to 12,836 square feet (0.29 acre) of the wetland W1 buffer. Mitigation for loss of 12,836 square feet (0.29 acre) of buffer will be accomplished through buffer averaging, that is, by delineating, protecting, and enhancing an equal amount of buffer adjacent to the existing wetlands W1 buffer at a 1:1 ratio (Figure 9a). Table 5 provides a summary of the wetland buffer impacts and proposes mitigation.

Table 5. Summary of Wetland Buffer Impacts and Proposed Mitigation

ID	Impact Area (sf)	Impact Area (acres)	Replacement Ratio	Mitigation Area (acres)
W1 Buffer	12,836	0.29	1:1	0.29
Totals	**12,836**	**0.29**		**0.29**

4.3.2 Nonwetland Waters

The project would result in permanent impacts to 3,767 linear feet of nonwetland waters. Table 6 identifies impacts to all or portions of four potentially jurisdictional ditches associated with the project – ditches D1, D2, D4, and D12, and proposed mitigation.

Table 6. Summary of Impacts to Nonwetland Waters and Proposed Mitigation

ID	Length (ft)	Area (acres)	Mitigation
D1	2,000	0.7	Function replacement with 2,364 linear feet of new perimeter ditch with enhancement plantings along the length of the new ditch.
D2	288	0.04	
D4	76	0.01	
D12 (partially offsite)	1,427	0.2	
Totals	**3,767**	**0.95**	

The proposed project diverts D1 ditch around the perimeter of the site and fill will be placed within the existing ditch D1 as part of the proposed design. The Project will also fill portions of ditched D2 and D4 as a result of the proposed Project design and all of ditch D12 as a result of the City-required collector road along the southern site boundary. Project impacts to potentially jurisdictional ditches are self-mitigating, in that mitigation for impacts to these ditches will be performed on-site as replacement of the functions and values in part at 1:0.6 in the 2,364 linear foot created diversion ditch. Additional compensation will be provided through enhancement plantings along the length of the new ditch, thereby providing significant functional enhancement compared with the existing highly degraded ditches. (This proposed mitigation for impacts to nonwetland waters will be further developed and refined in coordination with the Corps during preparation of the Section 404 permit application). As such, the compensatory mitigation will offset any impacts due to the diversion of D1 ditch and fill of ditches D2, D4, and D12.

4.3.3 Frequently Flooded Areas

Ditches D1 and D12 are coincident with the 100-year floodplain. The proposed Project diverts flow from ditches D1 and D12 into a proposed new ditch to be constructed around the northern and eastern perimeter of the site (Figure 9b). Fill will be placed within the existing regulatory SFHA (ditches D1 and D12) as part of the proposed design. The compensatory storage mitigation provided by the diversion ditch will provide equal or greater conveyance and floodplain storage volume to offset any impacts due to the fill of ditches D1 and D12.

Table 7. Summary of Impacts to 100-Year Floodplain and Proposed Mitigation

ID	Length (ft)	Width (ft)	Area (acres)	Depth (ft)	Volume at OHWM (cy)	Mitigation	Mitigation Ditch Volume (CY)
D1	2000	15	0.7	varies	770	1:1 volume replacement with perimeter ditch	
D12 (partially offsite)	1,427	6	0.2	varies	295		
Totals	**3,767**		**0.95**		**1,105**		**1,065**

The compensatory storage requirement is to ensure that flow attenuation remains the same during a base flood event, thus mitigating any downstream floodplain impacts. By examining the length of the existing ditches D1 and D12 and the proposed diversion ditch as well as their respective cross-sectional areas, Jacobs can approximate the net change to compensatory storage.

The length of D1 ditch impacted by the diversion is approximately 2,000 feet. Using the average cross-sectional area of the ditch (10.36 square feet), the approximate amount of compensatory storage lost is 770 cubic yards. The length of D12 ditch is about 1,000 linear feet; cross sectional area of the 100-year flow is about 10 square feet to the east and tapers down to 5 square feet to the west (near the intersection with D1). Therefore, the average volume of the 100-year floodplain in D12 is approximately 295 cubic yards. The combined amount of compensatory storage lost for both ditches D1 and D12 is approximately 1,065 cubic yards.

Comparatively, the length of the diversion ditch is approximately 2,364 linear feet and with a cross-sectional area of 12.50 square feet, the compensatory storage volume added is approximately 1,060 cubic yards. Modifications to dimensions of the diversion ditch during project design will ensure that the compensatory storage mitigation meets or exceeds the volume lost. The proposed diversion ditch will maintain hydraulic connectivity of the floodplain up- and downstream of the site. Because the proposed design is expected to provide the same or greater conveyance and compensatory storage, no up- or downstream impacts to base flood elevations are expected as a result of this project.

5. Proposed Mitigation

5.1 Environmental Goals and Objectives

The goal of the proposed mitigation is for the project to be self-mitigating by replacing lost functions of waters of the state/U.S., the 100-year floodplain, and wetland buffers that will be permanently impacted as a result of Project activities. Objectives of the mitigation area as follows:

- Mitigate for impacts to presumed jurisdictional ditches D1, D2, D4, and D12 by diverting flow from the existing ditch D1 into a newly excavated ditch that will follow the northern and eastern perimeter of the site, reconnecting with the existing drainage at the southeast corner of the site, and provide upgraded function with enhancement plantings along the length of the ditch.
- Mitigate for impacts to the 100-year floodplain (ditches D1 and D12) by diverting flow into the newly excavated ditch that will follow the northern and eastern perimeter of the site, reconnecting with the existing drainage at the southeast corner of the site.
- Mitigate for impacts to 12,836 square feet of the buffer to wetland W1 through buffer averaging and enhancement with an area equal to the impact area immediately adjacent to the existing buffer.

5.2 Performance Standards

The proposed mitigation for impacts to the ditches and wetland buffer are is designed to provide replacement of lost functions and values of these features associated with project activities. Performance standards are as follows:

- 1:0.6 replacement of 3,767 linear feet of ditches D1, D2, D4, and D12, through construction of 2,364 linear feet of a new ditch along the northern and eastern perimeter of the site and establishment of riparian enhancement plantings along the length of the new ditch.
- 1:1 replacement or better of 1,105 cubic yards of flow volume in ditches D1, and D12 through construction of the new ditch along the northern and eastern perimeter of the site with a flow volume capacity to meet or exceed the total impacted flow volume.
- 1:1 replacement of 12,836 square feet (0.29 acre) of impacted wetland W1 buffer through buffer averaging.

5.3 Detailed Construction Plans

5.3.1 Construction Methods

5.3.1.1 Construction Sequence, Timing, and Duration

Construction of the Kittitas County Transfer Station at US 97 is planned to commence in 2021 and be completed with facilities operational in 2022. The existing Kittitas County Transfer Station at 1001 Industrial Way would maintain operations during construction of the new transfer station until the relocated transfer station is operational.

The general construction activities consist of:

- Begin grading activities and prepare the site for construction. April 2021
- Prepare the stormwater and draining facilities. June – August 2021
- Pave the impervious surfaces. October - November 2021
- Construct the buildings. July - December 2021
- Obtain an Operating Permit. January 2022

The Public Works Maintenance Facility will continue to operate at 505 W 14th Street, Ellensburg until generation construction activities are planned as follows:

- Begin grading activities and prepare the site for construction — March 2023
- Prepare the stormwater and drainage facilities — May - July 2023
- Pave the impervious surfaces — August - October 2023
- Construct the buildings — November - April 2023
- Begin operations — May 2024

5.3.1.2 Grading and Excavation Specifications

Of the 50-acre parcel, the conceptual design covers approximately 23-acre area of impervious surface with 5,000 feet of roadway, 851,000 square feet of stormwater ponds, and 12 stand-alone buildings. The Transfer Building will require structural fill 15 feet above surface ground level. The Maintenance Facility will require approximately 450 cubic yards of excavation for building footings and foundations and 130,000 ft^2 of site fine grading to achieve paving for building, parking lots, ancillary structures, and site drainage. The stormwater infrastructure includes excavated stormwater catchment ponds, drainage channels, and a relocated floodplain ditch.

5.3.1.3 Erosion and Sediment Control Specifications

Best Management Practices would be implemented to minimize erosion. Construction would comply with applicable temporary erosion and sedimentation control provisions of the Ellensburg City Code, an NPDES Construction Stormwater General Permit Surface Water Pollution Prevention Plan, and the Stormwater Management Manual for Eastern Washington.

5.3.2 Planting Plan

Areas of temporary disturbance associated with construction of the perimeter ditch will be seeded immediately following construction with an appropriate seed mix.

5.4 Mitigation Monitoring Plan

5.4.1 Monitoring Plan

No long term monitoring is proposed. Project actions are self-mitigating.

5.4.2 Cost Estimate

Ditch excavation, which includes all work associated with excavation (such as compaction, stockpiling, and disposal) is $36/cubic yards for quantities over 200 cubic yards. The proposed diversion ditch will be approximately 1,100 cubic yards, so cost for excavation would be approximately $40,000. In addition, potential soil amendments may include tilling 3 inches of compost into existing soils to promote plant growth. The perimeter of the ditch is about 11.2 feet and the length is 2,300 linear feet, so a 3-inch-thick layer is about 240 cubic yards of compost. At $66/cubic yards, that would be an additional $16,000, including seeding. Total estimate cost is approximately $56,000 for labor and materials, as shown in Table 8.

Table 8. Summary of Mitigation Cost Estimate

Task	Length (ft)	Width (ft)	Depth (ft)	Volume (cy)	Approximate Cost ($ per cy)[c]	Total Cost ($ per cy)
Ditch Excavation[a]				1,100	36	39,600
Soil Amendment[b]	2,300	11.2	0.25	239	66	15,742
Total						$55,342

[a] Includes excavation, compaction, stockpiling, disposal, and other associated work.

[b] Includes tilling, soil amendments, seeding, etc.

[c] Includes cost of labor.

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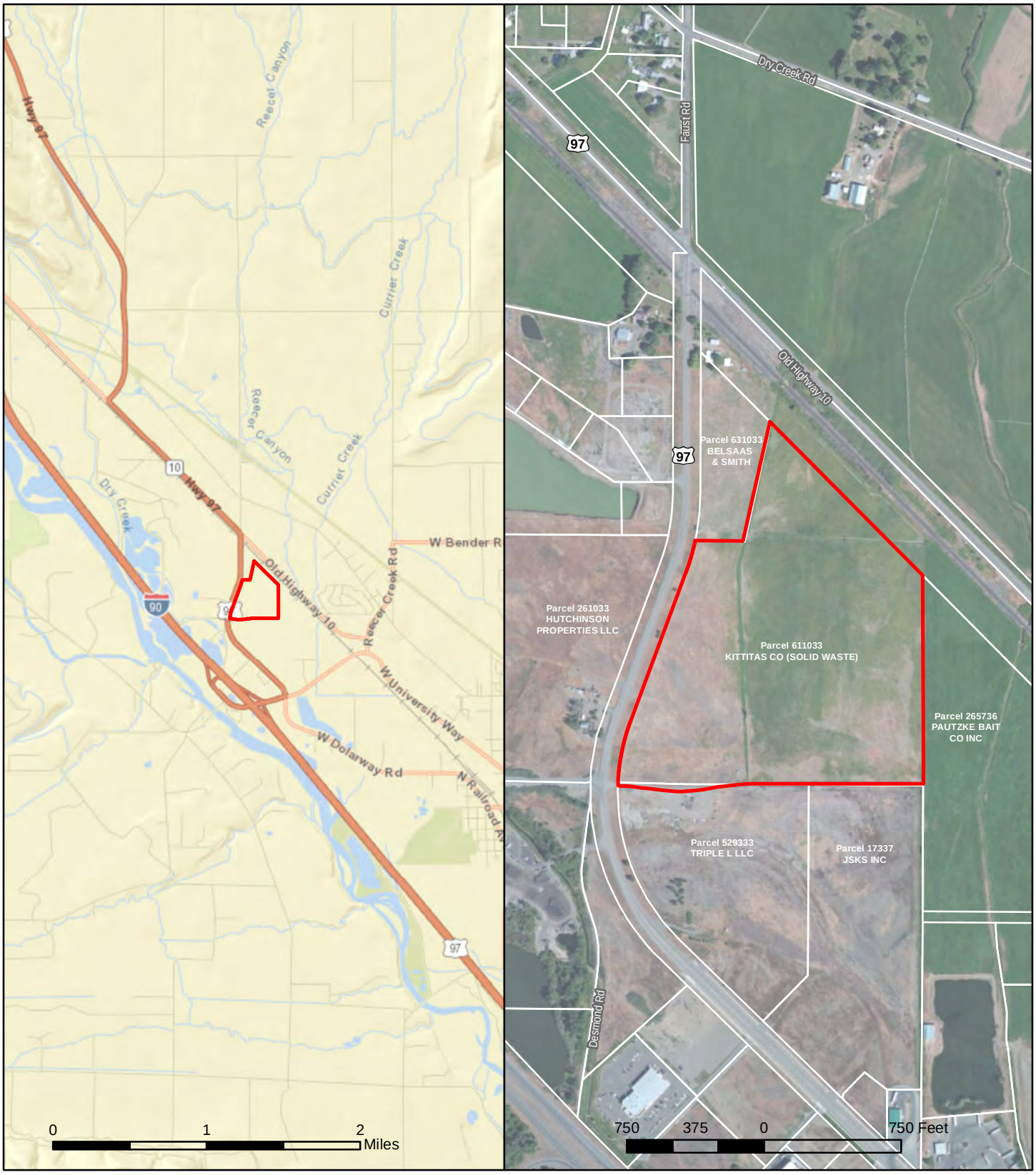
Appendix A
Figures



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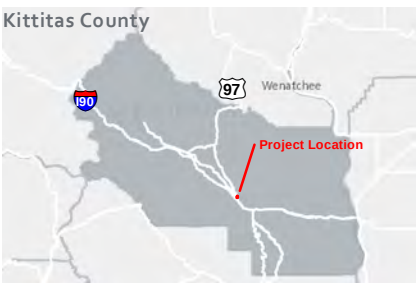

Legend

Site Boundary

Figure 1
Kittitas County Transfer Station and Maintenance Facility Relocation Project
SITE LOCATION

JACOBS

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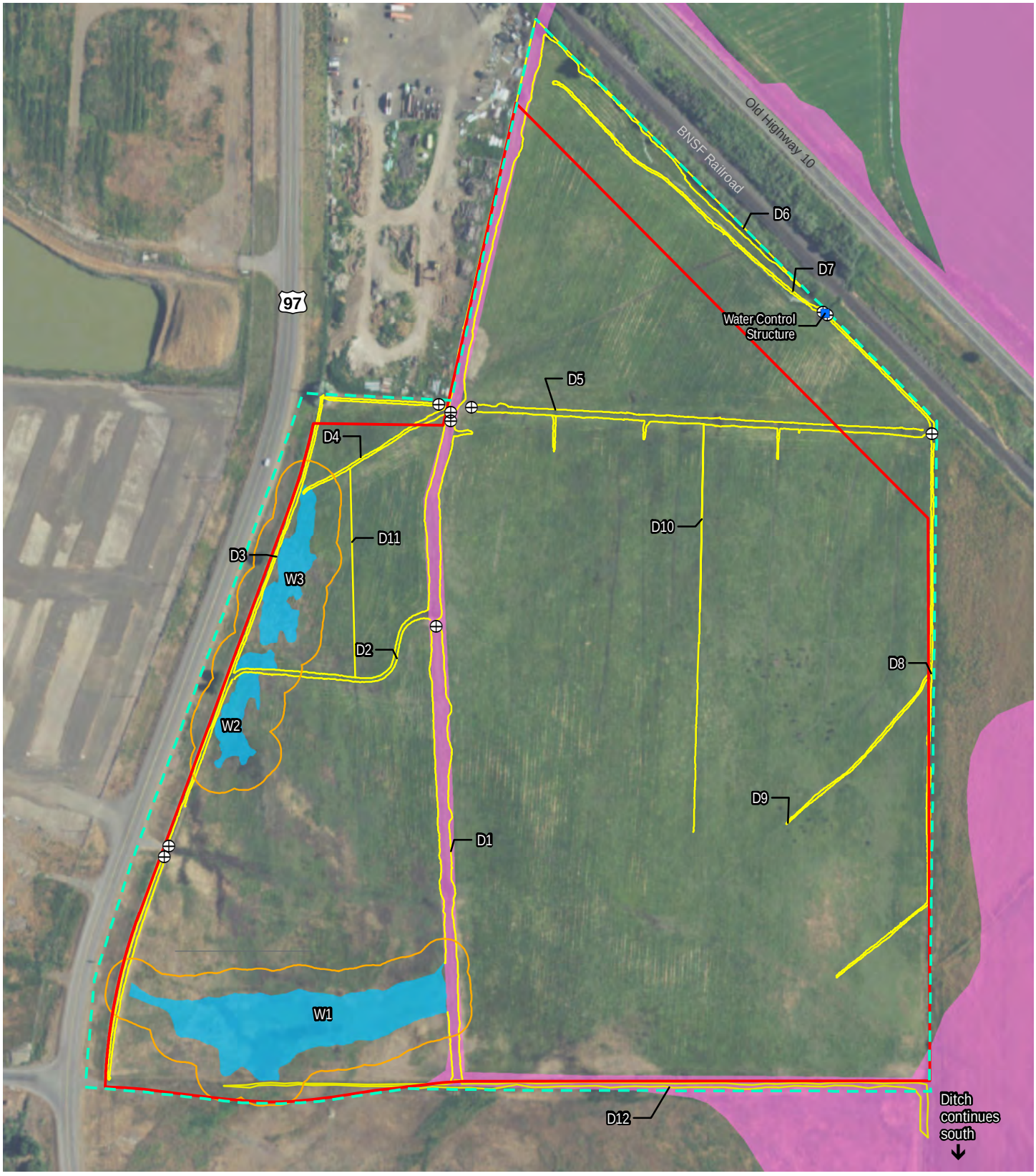

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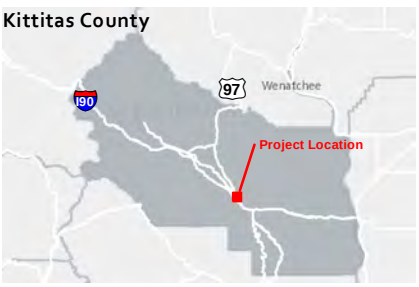


Legend

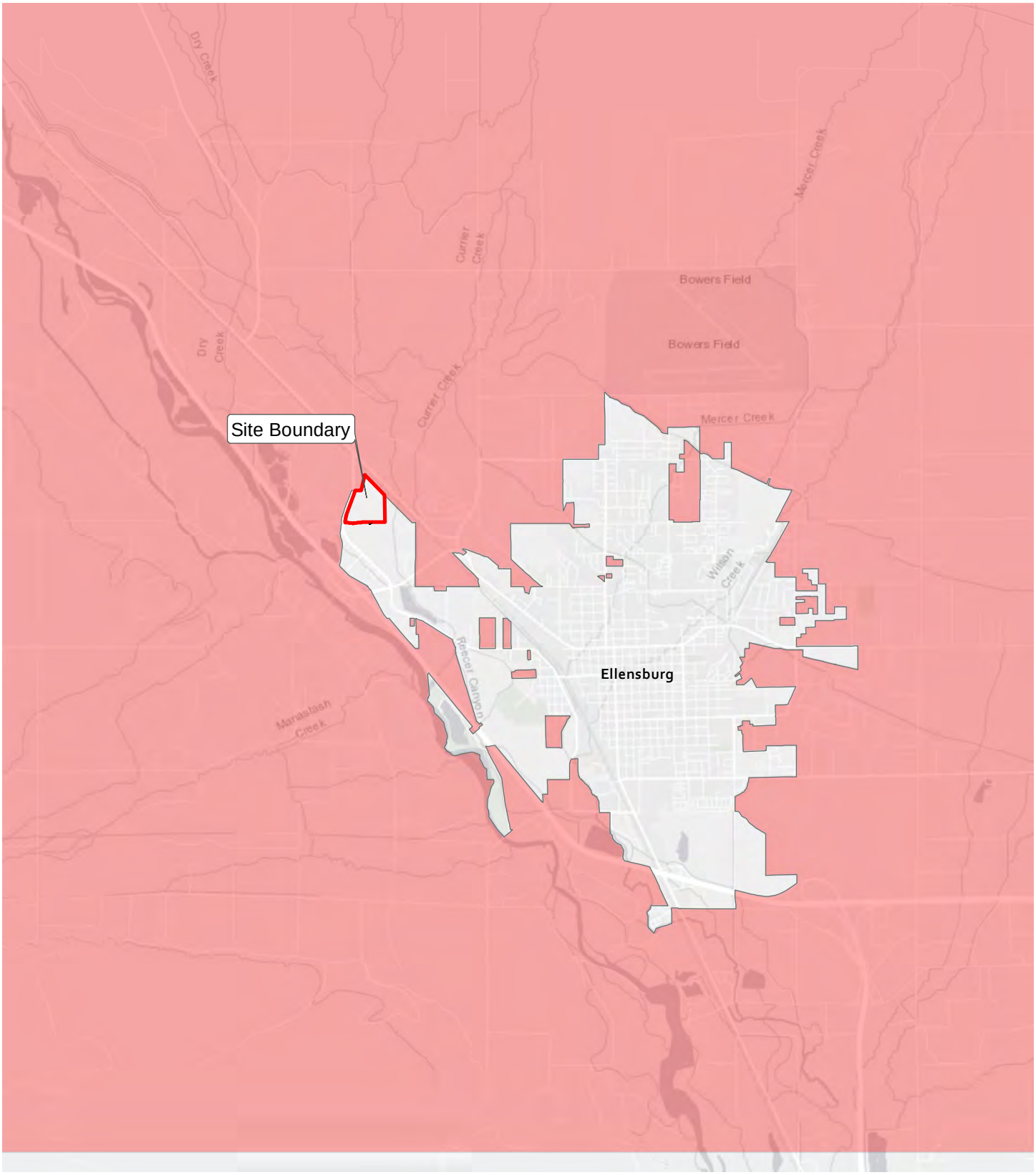
- Culvert
- Water Control Structure
- Ditch
- 50 ft buffer
- Wetland
- Site Boundary
- Study Area Boundary
- FEMA 100 yr Floodplain

0 250 500 Feet

Figure 2
Kittitas County Transfer Station and Maintenance Facility Relocation Project
WETLAND OVERVIEW

JACOBS

Document Path: \\brooksidefiles\GIS_SHARE\ENBG\oo_Proj\K\Kittitas_County_WA\Maps\Report\14_Wetland_Overview_SEPA.mxd



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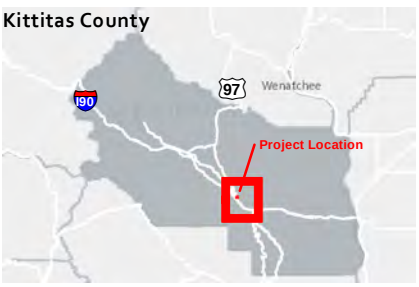

Legend

- Aquifer Susceptibility - High
- Site Boundary
- City Boundaries

0 0.25 0.5 1 1.5 2 Miles

Figure 3

Kittitas County Transfer Station and Maintenance Facility Relocation Project

CRITICAL AQUIFER RECHARGE AREAS

JACOBS

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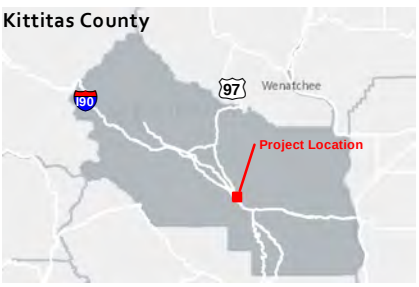

Legend

- Priority Habitats and Species
- Study Area Boundary
- Site Boundary

0 250 500 Feet

Figure 4

Kittitas County Transfer Station and Maintenance Facility Relocation Project

PRIORITY HABITATS

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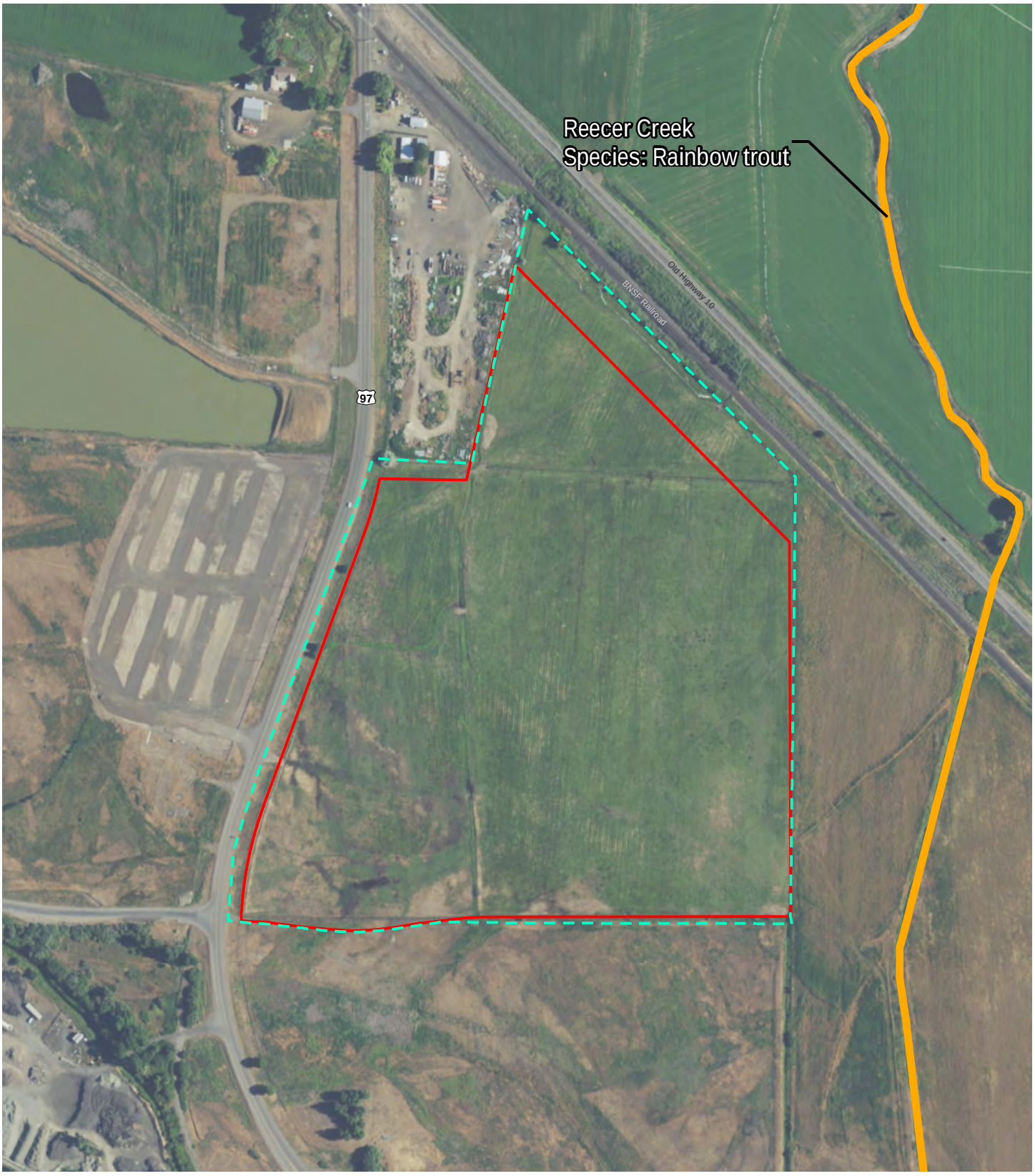

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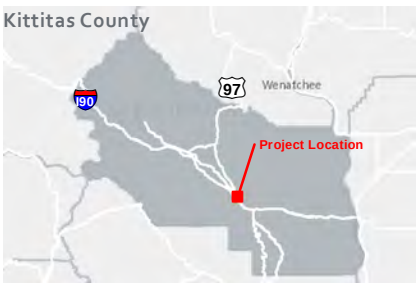


Legend

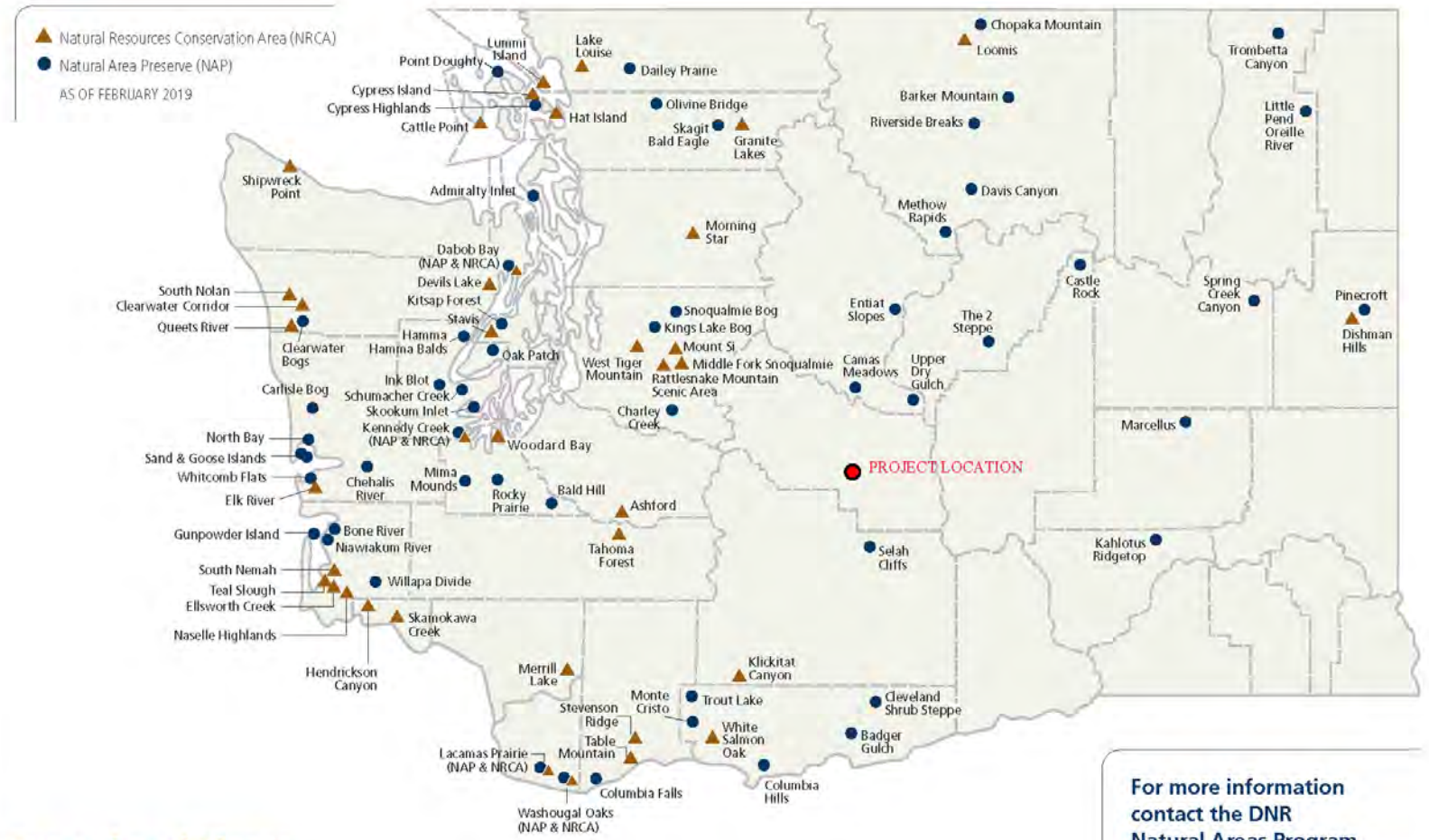
- Fish Distribution (StreamNet)
- Site Boundary
- Study Area Boundary

0 250 500 Feet

Figure 5
Kittitas County Transfer Station and Maintenance Facility Relocation Project
FISH DISTRIBUTION

JACOBS

Document Path: \\brooksidefiles\GIS_SHARE\ENBG\oo_Proj\K\Kittitas_County_WA\Maps\Report\18_FishDistribution.mxd

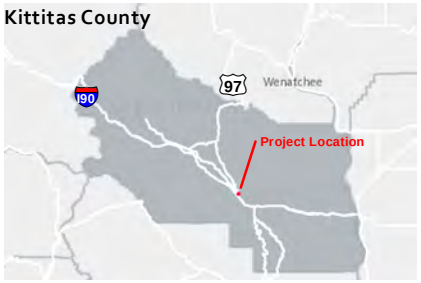


Exceptional Places

Quality examples of Washington's native grasslands, woodlands, marshes and more are protected in natural areas managed by the Department of Natural Resources (DNR). These special sites offer opportunities for research and education. Some have interpretive or recreation trails. Others require DNR permission to visit because features are sensitive to human disturbance.

For more information
contact the DNR
Natural Areas Program
PO Box 47014
Olympia, WA 98504-7014
360-902-1600
TRS: 711
dnr.wa.gov

Locator Map



Legend

- Natural Resources Conservation Areas (NRCA)
- Natural Area Preserve (NAP)

Figure 6
Kittitas County Transfer Station and Maintenance Facility Relocation Project

WASHINGTON NATURAL AREAS

JACOBS

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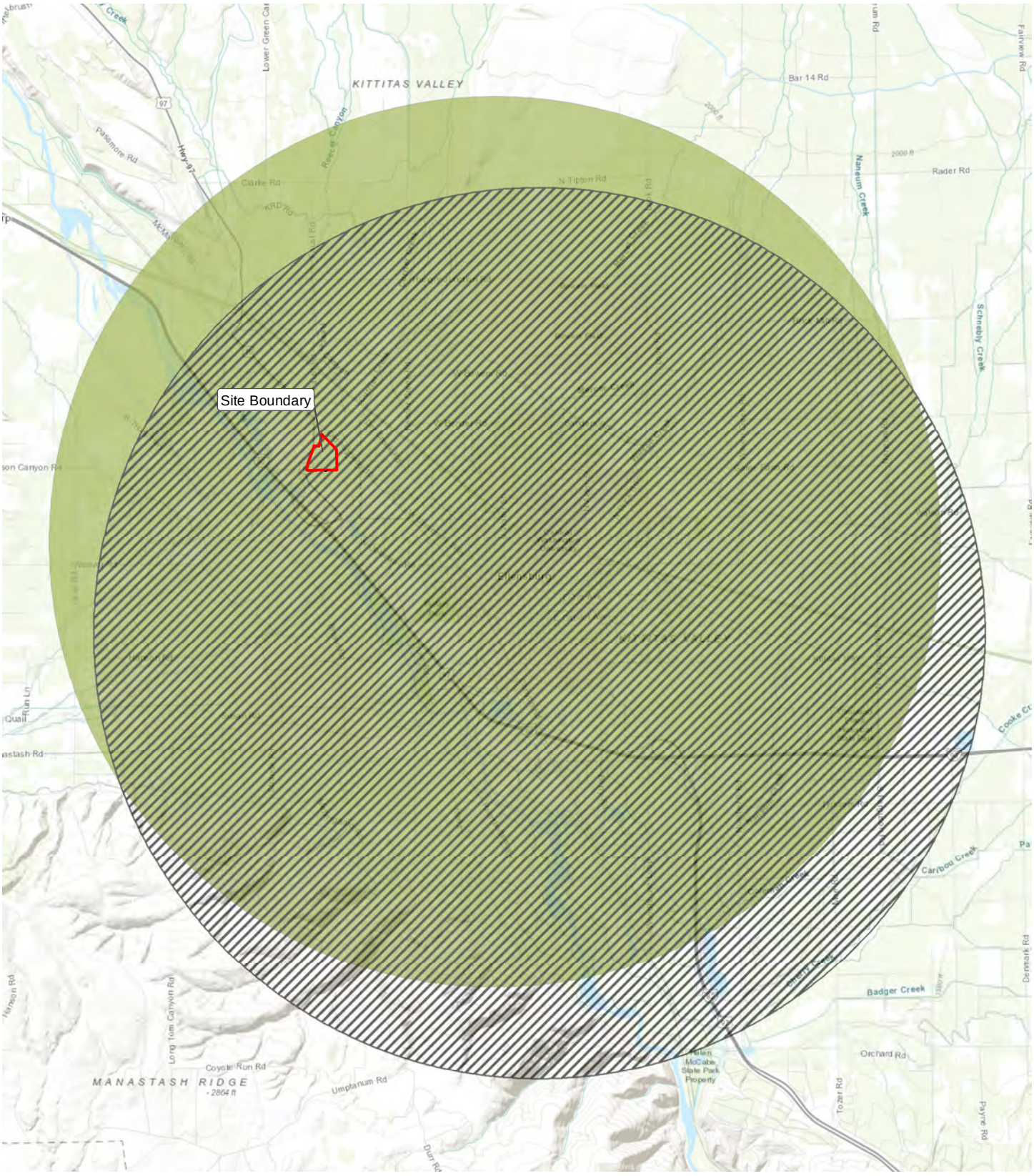

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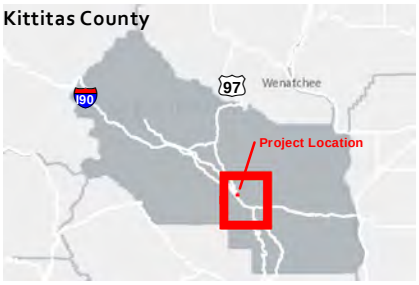

Legend

- Site Boundary
- *Hackelia hispida var. disjuncta* sagebrush stickweed
- *Heterotheca oreona* Oregon goldenaster

0 0.5 1 2 3 4 Miles

Figure 7

Kittitas County Transfer Station and Maintenance Facility Relocation Project

WNHP HISTORIC RARE PLANT ELEMENT OCCURENCES

JACOBS

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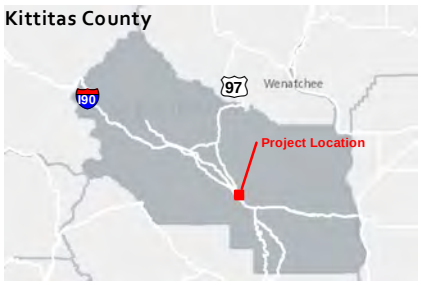

Legend

- Site Boundary
- Study Area Boundary
- FEMA 100 yr Floodplain

0 250 500 Feet

Figure 8
Kittitas County Transfer Station and Maintenance Facility Relocation Project
FEMA OVERVIEW

JACOBS

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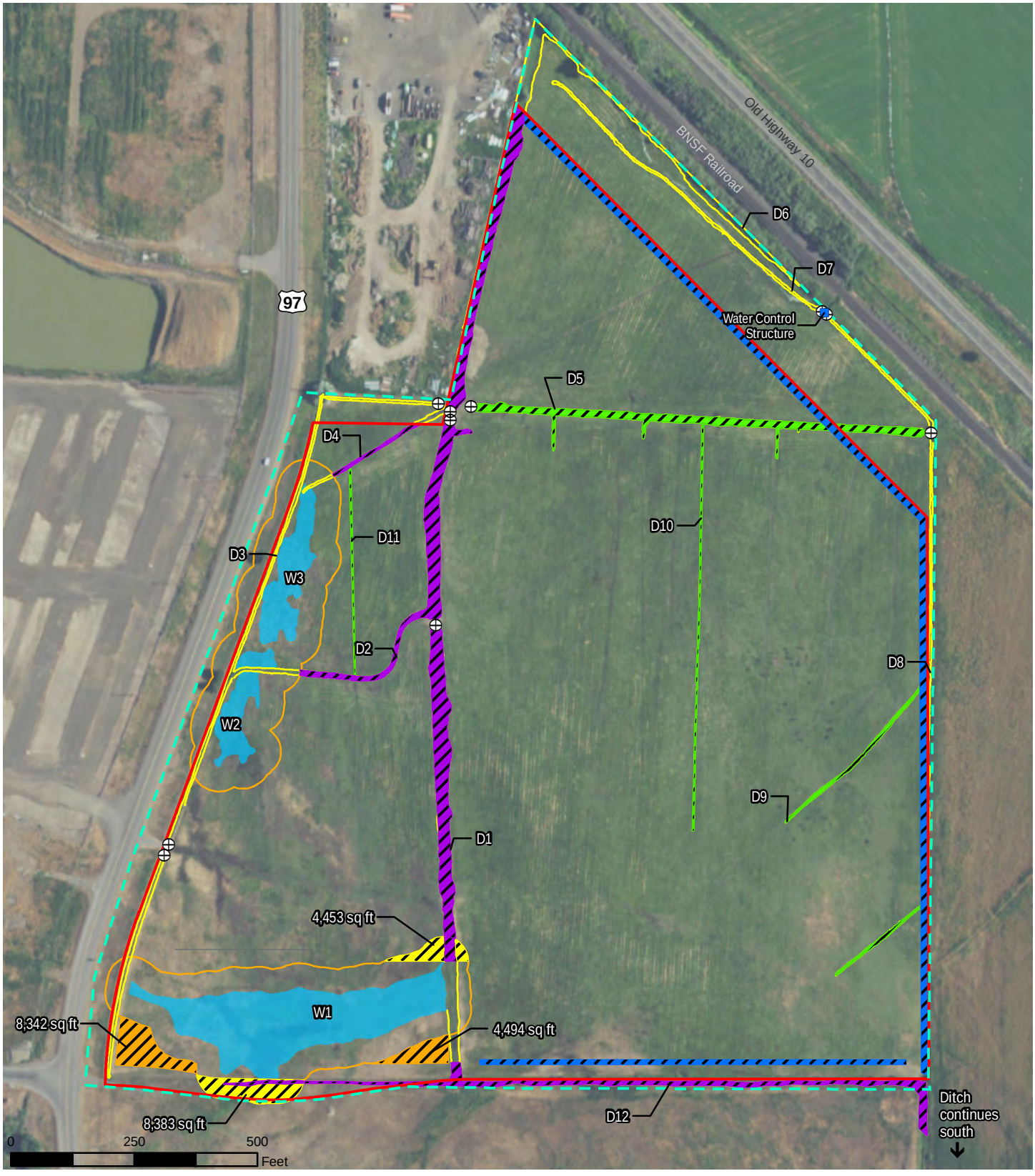

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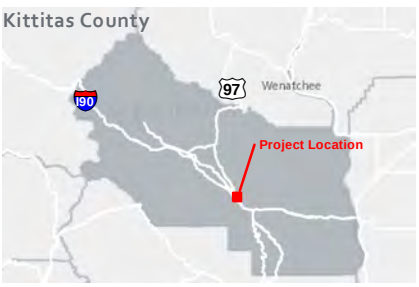

Legend

- Culvert
- Water Control Structure
- Ditch
- 50 ft buffer
- Wetland
- Site Boundary
- Study Area Boundary
- Permanent Impacts to Existing Irrigation Ditches
- Permanent Impacts to Presumed Juristictional Ditches
- Permanent Impacts to Wetland Buffer
- Proposed Mitigation for Impacts to Presumed Jurisdictional Ditches
- Proposed Mitigation for Impacts to Wetland Buffer

Figure 9a

Kittitas County Transfer Station and Maintenance Facility Relocation Project

PROJECT IMPACTS AND MITIGATION -Wetland Buffers and Water of the U.S.

JACOBS

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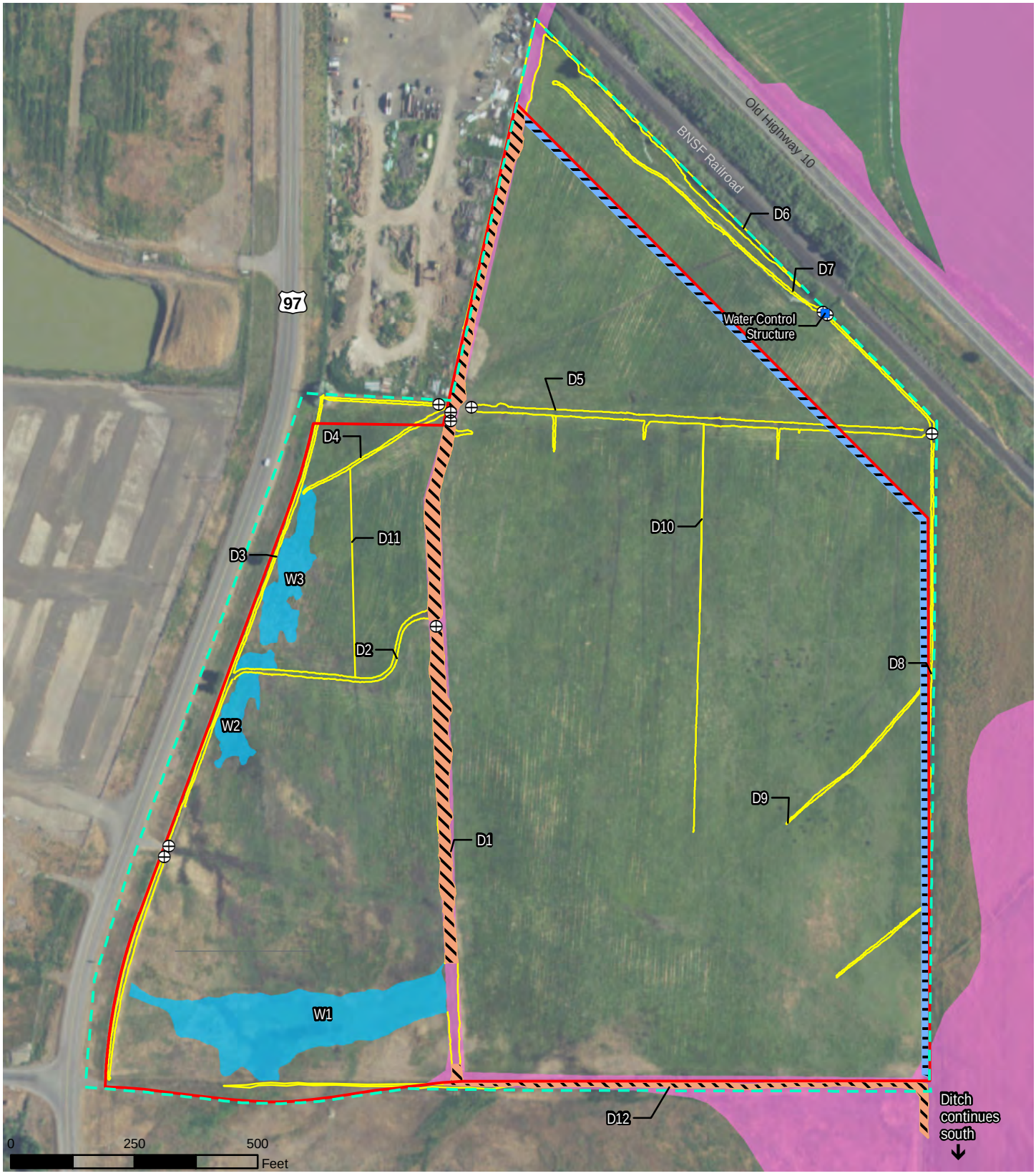

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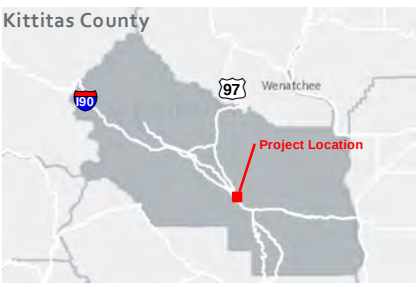

Legend

- Culvert
- Water Control Structure
- Ditch
- Wetland
- FEMA 100 yr Floodplain
- Site Boundary
- Study Area Boundary
- Mitigation for Impacts to 100 -Year Floodplain
- Permanent Impacts to 100-Year Floodplain

Figure 9b

Kittitas County Transfer Station and Maintenance Facility Relocation Project

PROJECT IMPACTS AND MITIGATION - 100-YEAR FLOODPLAIN

JACOBS

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Appendix B
Wetland Delineation Report

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Kittitas County Transfer Station and Maintenance Facility Relocation Project, Ellensburg, Kittitas County, Washington

Wetland Delineation Report

Revised August 2019

Kittitas County Solid Waste

Kittitas County Transfer Station and Maintenance Facility Relocation Project, Ellensburg, Kittitas County, Washington

Project No:	684127CH.03.01
Document Title:	**Wetland Delineation Report**
Document No.:	GES0829191707PDX
Revision:	Draft
Date:	August 2019
Client Name:	Kittitas County Solid Waste
Project Manager:	Tom Parker
Author:	Peggy O'Neill, M.S.

Jacobs Engineering Group Inc.

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Portland, OR 97201
United States
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www.jacobs.com

Contents

Acronyms and Abbreviations

Ecology	Washington Department of Ecology
EPA	Environmental Protection Agency
FAC	facultative
FACU	facultative upland
FACW	facultative wetland
HGM	hydrogeomorphic [method]
HUC	hydrologic unit [code]
Jacobs	Engineering Group Inc.
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
NWS	National Wetland Service
OBL	obligate
OHWM	ordinary high water mark
PEM	palustrine emergent
project	Kittitas County Transfer Station and Maintenance Facility Relocation Project
PWS	Professional Wetland Scientist
U.S.	United States
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOUS	water of the United States
WRIA	Water Resource Inventory Area

1. Introduction

1.1 Background

This report presents the findings of the wetland delineation conducted for Kittitas Solid Waste at the proposed Kittitas County Transfer Station and Maintenance Facility Relocation Project (hereafter referred to as the project) site in Ellensburg, Kittitas County, Washington. The proposed project site is located in the northwestern portion of the city of Ellensburg. Current use of the site is livestock grazing.

Kittitas County proposes to relocate its solid waste transfer station and Public Works maintenance facility to a new location. The projected population growth and solid waste management needs of Kittitas County, combined with frequent flooding events and limitations to its existing facilities, warrant construction of both new facilities. The new transfer station facility will include a transfer building, composting area, moderate-risk waste building, and recycling drop-off area as well as various administrative, parking, and other required elements. The new maintenance facility will include an administrative building, large equipment and vehicle storage, wash and maintenance bays, and salt, sand and de-icing chemical storage.

The wetland delineation survey area is composed of 56.49 acres including the 50-acre project area. The landscape surrounding the project is predominantly in agriculture.

This report identifies and describes aquatic resources in the survey area in support of Clean Water Act Sections 401 and 404 permitting. This report facilitates the following efforts:

1) Avoiding or minimizing impacts to aquatic resources during the design process
2) Documenting aquatic resource boundary determinations for review by regulatory authorities
3) Providing early indications of known sensitive species and historic/cultural properties within the survey area

The delineation results and conclusions presented in this report are considered preliminary, pending verification by the United States (U.S.) Army Corps of Engineers (USACE) Regulatory Branch.

1.2 Location

The project is located in the northwestern portion of the City of Ellensburg, in Kittitas County, Washington (Figure 1 in Appendix A). The project survey area is bounded to the west by State Highway 97 (US 97), to the north by the Burlington Northern railroad and Old Highway 10, and to the east and south by private, undeveloped properties. The Interstate 90 corridor is approximately 0.3 mile southwest of the survey area. The project survey area is within the U.S. Geological Survey (USGS) 7.5-minute Ellensburg North quadrangle in Section 28, Township 18 North, Range 18 East; Willamette Meridian (latitude 47.016181°, longitude -120.590401°) within the Upper Yakima watershed unit (Hydrologic Unit Code 17030001).

The survey area is in northwest Ellensburg and can be accessed from northbound Interstate 90 as follows:

- From Yakima, drive north on Interstate 90 for approximately 36 miles.
- Take exit 106 to West University Way (US 97).
- Turn right on West University Way (US 97).
- Continue about 0.1 mile on West University Way.
- At the roundabout, take the third right, continuing on US 97.
- Continue 0.7 mile north to a farm access road and gate at the southwestern end of the project site.

1.3 Delineators

The wetland delineation was conducted by Jacobs Engineering Group Inc. (Jacobs) wetland scientist Peggy O'Neill, PWS, on October 25 and 26, 2018. At the request of Lori White/Washington Department of Ecology (Ecology), additional field data were collected by Jacobs wetland scientist Jennifer Bader on May 7, 2019.

2. Methods

The delineation was limited to the survey area (56.49 acres) that corresponds with Tax Map No. 18-18-28030008, parcel ID 611033. The following subsections describe the field sampling procedures and methods used to determine and map aquatic resources within the survey area. Site-specific information reviewed during the prefield investigation and collected during, or produced from, the field survey is provided in the appendixes. The following appendixes are provided:

- Appendix A, Figures
- Appendix B, Site Photographs
- Appendix C, Field Data Sheets
- Appendix D, Wetland Rating Forms
- Appendix E, Sensitive Species Data Search Results
- Appendix F, Plant Species Observed List

2.1 Prefield Investigation

General information on climate, vegetation, soils, hydrology, and existing wetlands was reviewed before the field survey. Data sources included USGS topographic maps; National Wetlands Inventory (NWI) (USFWS, 2018b) and National Hydrography Dataset maps (USGS, 2018); regional and local precipitation records; Web Soil Survey (USDA-NRCS, 2018); and Google Earth satellite imagery from 1990 to 2018 (Google Earth Pro, 2018).

2.2 Field Survey

2.2.1 Method for Delineating Wetlands

The survey method for identifying wetlands followed the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (USACE, 2008a). These methods use three criteria (vegetation, soils, and hydrology) to determine the presence of wetlands.

At each delineation sample point, the three required criteria were evaluated. Data collection included the following steps:

1) Plant species were identified, and percent cover was visually estimated and recorded. Dominant species included the most abundant species whose cumulative cover accounted for at least 50 percent of the total cover, as well as any species that accounted for at least 20 percent of the total vegetative cover. The wetland indicator status for plant species was determined using the National Wetland Plant List (Lichvar et al., 2016).
2) Soil characterization was determined from direct observation of soils between 0 and 18 inches below ground surface.
3) Wetland hydrology was determined from direct observation of soil saturation and inundation or other indicators. Onsite photographs are provided in Appendix B.

Additional soil pits were dug throughout the site to document hydric/nonhydric soil conditions and provide additional detail for wetland boundary mapping. Aquatic resources within the survey area were mapped using a Trimble GeoXH global positioning system with submeter accuracy.

2.2.2 Method for Delineating Nontidal Stream Boundaries

Within nontidal waters, in the absence of adjacent wetlands, the extent of USACE jurisdiction is defined by the ordinary high water mark (OHWM). In 33 *Code of Federal Regulations* 328.3, the OHWM is defined as the “line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of

soil, destruction of terrestrial vegetation, or the presence of litter and debris" (Environmental Laboratory, 1987). Generally, USACE considers the OHWM to be the elevation to which water flows at a 2-year frequency (for example, 50 years out of 100 years). Typically, OHWM is indicated by the presence of a defined streambed with bank shelving but may also include flow lines; sediment deposition or scour; and mineral staining, salt deposits, or deep or surficial cracking.

Any delineation of nontidal stream boundaries identified is consistent with OHWM Regulatory Guidance Letter No. 05-05 (USACE, 2005). Additionally, *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Arid West Region of the United States* (USACE, 2008b) was used.

Within the survey area, OHWM indicators were identified and mapped in the field. OHWM indicators were recorded, and the average width and depth of OHWM channels were documented. Measured field data were compared with aerial photographs to refine and adjust OHWM boundaries. Photographs of the channel are provided in Appendix B.

2.2.3 Method for Conducting Wetland Functional Assessments

Wetland Functional Assessments were conducted according to the *Washington State Wetland Rating System for Eastern Washington. 2014 Update* (Ecology, 2014). All onsite wetlands were rated as "Slope" wetlands according to this methodology.

2.2.4 Information Sources

Before conducting the field investigation, the following documents were reviewed:

- Wetlands Mapper (USFWS, 2018b) (Figure 2)
- National Hydrography Dataset (USGS, 2018) (Figure 3)
- Web Soil Survey (USDA-NRCS, 2018b) (Figure 4)
- U.S. Geological Survey Topographic Map, North Ellensburg, Washington Quadrangle (USGS, 1983) (Figure 5)
- Color Aerial Photography (GoogleEarth Pro, 2018)
- National Weather Service Preliminary Monthly Climate Data (NOAA-NWS, 2018)
- Monthly Precipitation Data (Office of Washington Climatologist, 2018)
- WETS Table: Cle Elum, Washington Station (USDA-NRCS, 2018a)

3. Existing Conditions and Results

3.1 Existing Conditions

3.1.1 Landscape Setting

Kittitas County is situated in central Washington on the eastern slopes of the Cascade Mountains between the Cascade Crest and the Columbia River in the Columbia River basin. The County encompasses 2,300 square miles within three major basins or Water Resource Inventory Areas (WRIAs):

- Upper Yakima (WRIA 39)
- Alkali – Squilchuck (WRIA 40)
- Naches (WRIA 38)

The greater Ellensburg area is location in the Upper Yakima WRIA 39.

The project survey area is within the Pleistocene Lake Basins Ecoregion (Level IV) within the Columbia Plateau (Level III) Ecoregion. The Pleistocene Lake Basins ecoregion is a nearly level to undulating lake plain that once contained vast Pleistocene lakes that were created by flood waters from glacial lakes Missoula and Columbia. Lake Lewis formed from the damming of the Columbia River at Wallula Gap on the southern Washington border, and covered 4,825 square kilometers (3,000 square miles) of the Quincy and Pasco basins and Walla Walla and Yakima River valleys. The Kittitas Valley, where Ellensburg is located, has been included in this subregion even though it was not part of glacial Lake Lewis because of its position within the Yakima Folds subregion and because it has a similar lacustrine history, climate, soil, and land use capability.

The lake basins are in the driest areas of the rain shadow of the Cascade Range, receiving 15.2 to 30.5 centimeters (6 to 12 inches) of precipitation per year. Where present, native vegetation consists of needle-and-thread (*Hesperostipa comata*), Indian ricegrass (*Achnatherum hymenoides*), bluebunch wheatgrass (*Pseudoroegneria spicate*), Sandberg bluegrass (*Poa secunda*), and basin big sagebrush (*Artemisia tridentata*). Non-native cheatgrass (*Bromus tectorum*) covers broad areas. The native sagebrush hydrology and plant assemblages have been degraded by disturbance from large irrigation projects that provide Columbia and Yakima River water via a system of pumps and canals.

3.1.2 Topography

The site is flat, sloping down gradually toward the southeastern corner. Elevation ranges from 1,554 feet above mean sea level in the northernmost corner of the site to approximately 1,540 feet in the southeastern corner of the site. The site is bisected by multiple interconnecting excavated ditches or ditch segments. Precipitation collects in microtopography along the northern plowed boundary of the site. At the time of the site visit, shallow flow was present in one ditch, the large north-south flowing ditch, D1. Stormwater appears to flow offsite from this ditch to an excavated ditch just south of and perpendicular to the southern site boundary.

3.1.3 Plant Communities

Vegetation on the site is characterized as heavily grazed pasture grasses in upland areas with natural vegetation confined to wetter areas and ditches (native sedges (*Carex* sp.), rushes (*Juncus* sp.), and forbs). The large central ditch (D1) is densely vegetated throughout much of its length with a mix of native and non-native wetland plant species including grasses, sedges, rushes, willow dock (*Rumex salicifolius*), and watercress (*Nasturtium officinale*).

3.1.4 Soils

Seven soil series are mapped within the survey area:

- Cleman very fine sandy loam, 0 to 2 percent slopes
- Nanum ashy loam, 0 to 2 percent slopes
- Woldale clay loam, 0 to 2 percent slopes
- Zillah silt loam, 0 to 2 percent slopes
- Brickmill gravelly ashy loam, 0 to 2 percent slopes
- Mitta ashy silt loam, 0 to 2 percent slopes
- Nack-Opnish complex, 0 to 2 percent slopes

Mapped soil series are presented on Figure 4 and summarized in Table 1.

Table 1. Soil Map Units Identified in the Survey Area

Soil Map Unit	Map Unit Name	Hydric Soil Designation	Description
424	Cleman very fine sandy loam, 0 to 2 percent slopes	Nonhydric	The Cleman series consists of very deep, well drained soils formed in alluvium. Cleman soils are on alluvial fans and flood plains. Slopes are 0 to 15 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 50 degrees F. Typical soil profile: • 0 to 10 inches; grayish brown (10YR 5/2) very fine sandy loam, dark brown (10YR 3/3) • 10 to 25 inches; brown (10YR 5/3) fine sandy loam, dark brown (10YR 3/3) Cleman soils are well drained; very slow to medium runoff; moderately rapid permeability. These soils range from no flooding to rare flooding. These soils are used mainly for irrigated orchard, hay and pasture production, and some livestock grazing and dryland cropland. Native vegetation is bluebunch, wheatgrass and Wyoming big sagebrush...
480	Nanum ashy loam, 0 to 2 percent slopes	Nonhydric	The Nanum series consists of very deep, somewhat poorly drained soils that formed in alluvium with an influence of volcanic ash in the surface. Nanum soils are on alluvial fans and terraces. Slopes are 0 to 5 percent. The mean annual precipitation is about 10 inches and the mean annual air temperature is about 49 degrees F. Typical soil profile: • 0 to 8 inches; dark gray (10YR 4/1) ashy loam, black (10YR 2/1) • 8 to 15 inches; dark grayish brown (10YR 4/2) ashy loam, black (10YR 2/1) • 15 to 21 inches; grayish brown (10YR 5/2) ashy clay loam, very dark grayish brown (10YR 3/2). Nanum soils are somewhat poorly drained; slow runoff; moderately slow permeability. This soil is irrigated and drained. This soil has an irrigation-induced water table with its uppermost limit occurring sometime between the mid-May to mid-October growing season. This soil typically is not subject to flooding although some areas may have occasional flooding for brief periods from January to April. These soils are used for irrigated cropland production and livestock grazing. When irrigated, hay, oats, wheat, corn, potatoes, and peas are among the crops grown.
580	Woldale clay loam, 0 to 2 percent slopes	Nonhydric	The Woldale series consists of very deep, somewhat poorly drained soils formed in alluvium. Woldale soils are in depressional and low lying areas on piedmont slopes grading from mountain foot slopes to basin floors. Slopes are 0 to 5 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 49 degrees F.

Table 1. Soil Map Units Identified in the Survey Area

Soil Map Unit	Map Unit Name	Hydric Soil Designation	Description
			Typical soil profile: • 0 to 5 inches; dark grayish brown (10YR 4/2) clay loam, black (10YR 2/1) • 5 to 16 inches; very dark gray (10YR 3/1) clay, black (10YR 2/1) • 16 to 31 inches; variegated grayish brown (2.5Y 5/2) and grayish brown (10YR 5/2) clay, dark grayish brown (2.5Y 4/2). Woldale soils are somewhat poorly drained; slow runoff or ponded; slow permeability. This soil has an irrigation induced water table with its uppermost limit occurring sometime between the mid-May to mid-October growing season. This soil is used for cropland when drained and irrigated. Crops commonly grown are corn, wheat, hay, and pasture. In natural conditions the soil is used for the production of native pasture. Native vegetation consists of water-tolerant grasses.
598	Zillah silt loam, 0 to 2 percent slopes	Hydric	The Zillah series consists of very deep, poorly drained soils that formed in alluvium. These soils are on flood plains. Slopes are 0 to 5 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 49 degrees F. Typical soil profile: • 0 to 2 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) • 2 to 19 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) Zillah soils are poorly drained; very slow runoff or ponded; moderate permeability. Zillah soils are subject to frequent or occasional flooding for long periods from January to March unless protected. This soil has an irrigation induced water table with its uppermost limit occurring at some time between April and November. These soils are used for pasture, hay, and wildlife habitat. Some areas have been drained and are used for irrigated crops. Native vegetation is willows, cottonwood, sedges, and annuals.
601	Brickmill gravelly ashy loam, 0 to 2 percent slopes	Nonhydric	The Brickmill series consists of very deep, moderately well drained soils formed in old alluvium with an influence of volcanic ash in the upper part. Brickmill soils are on piedmont slopes grading from mountain footslopes to basin floors. Slopes are 0 to 5 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 49 degrees F. Typical soil profile: • 0 to 5 inches; very dark grayish brown (10YR 3/2) gravelly ashy loam, very dark brown (10YR 2/2) • 5 to 12 inches; very dark grayish brown (10YR 3/2) gravelly ashy loam, very dark brown (10YR 2/2) • 12 to 28 inches; brown (10YR 5/3) very gravelly ashy sandy loam, brown (10YR 4/3) Brickmill soils are moderately well drained; slow runoff; permeability is moderate above the lithologic discontinuity, and rapid to very rapid below. This soil has an irrigation induced water table at 30 to 40 inches with its uppermost limit occurring at some time between during the mid-May to mid-October growing season. These soils are used for pasture, limited cropland, and wildlife habitat. Native vegetation is bluebunch wheatgrass, Sandberg bluegrass, and big sagebrush.
621	Mitta ashy silt loam, flooded, 0 to 2 percent slopes	Nonhydric	The Mitta series consists of very deep, moderately well drained soils that formed in alluvium mixed with volcanic ash in the upper part. Mitta soils are on flood plains, fan aprons, fan skirts and inset fans. Slopes are 0 to 2

Table 1. Soil Map Units Identified in the Survey Area

Soil Map Unit	Map Unit Name	Hydric Soil Designation	Description
			percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 49 degrees F. Typical soil profile: • 0 to 6 inches; dark gray (10YR 4/1) ashy silt loam, black (10YR 2/1) • 6 to 15 inches; dark gray (10YR 4/1) ashy silt loam, black (10YR 2/1) • 15 to 24 inches; dark gray (10YR 4/1) ashy silt loam, black (10YR 2/1) Mitta soils are moderately well drained; slow runoff; moderately slow permeability. This soil is irrigated and drained. This soil has an irrigation-induced water table at 30 to 60 inches during the mid-May to mid-October growing season. These soils are used for irrigated crop production and livestock grazing. When irrigated, hay, oats, wheat, corn, potatoes, and peas are among the crops grown.
795	Nack-Opnish complex, 0 to 2 percent slopes	Nonhydric	The Nack series consists of very deep, somewhat poorly drained soils formed in alluvium over flood deposits with an influence of volcanic ash in the surface. These soils are on alluvial fans. Slopes are 0 to 5 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 49 degrees F. Typical soil profile: • 0 to 6 inches; brown (10YR 4/3) ashy loam, very dark grayish brown (10YR 3/2) • 6 to 12 inches; brown (10YR 4/3) clay loam, very dark grayish brown (10YR 3/2) • 12 to 15 inches; brown (10YR 5/3) clay loam, very dark grayish brown (10YR 3/2) • 15 to 39 inches; dark yellowish brown (10YR 4/4) extremely gravelly sandy clay; dark brown (10YR 3/3) Nack soils are somewhat poorly drained; slow runoff; moderately slow permeability. This soil has an irrigation-induced water table with its uppermost limit occurring sometime between the mid-May to mid-October growing season. These soils are used for irrigated crop production and livestock grazing. Native vegetation is greasewood and saltgrass. When irrigated, hay, oats, wheat, corn, potatoes, and peas are among the crops grown. The Opnish series consists of very deep, moderately well drained soils formed in alluvium with an influence of volcanic ash in the surface. These soils are on alluvial fans. Slopes are 0 to 2 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 49 degrees F. Typical soil profile: • 0 to 8 inches; dark gray (10YR 4/1) ashy loam, very dark brown (10YR 2/2) • 8 to 13 inches; dark gray (10YR 4/1) ashy clay loam; very dark brown (10YR 2/2) • 13 to 19 inches; dark grayish brown (10YR 4/2) clay loam, very dark gray (10YR 3/1 Opnish soils are moderately well drained; slow runoff; moderately slow permeability. This soil has an irrigation-induced water table with its uppermost limit occurring at some time between the mid-May to mid-October growing season.

Table 1. Soil Map Units Identified in the Survey Area

Soil Map Unit	Map Unit Name	Hydric Soil Designation	Description
			This soil is used for irrigated crop production and livestock grazing. Native vegetation is greasewood and saltgrass. When irrigated, hay, oats, wheat, corn, potatoes, and peas are among the crops grown.

3.1.5 Hydrology

Annual precipitation in the region averages approximately 22.47 inches (Office of Washington State Climatologist, 2018). Precipitation data were reviewed for the nearest weather station, located at Station 452505, Ellensburg, Washington. Precipitation for the water year beginning October 2017 through September 2018 was 7.63 inches (Table 2a) and precipitation for the water year May 2018 through April 2019 was 8.41 inches (Table 2b). These levels are considerably below the normal range (19.71 to 25.23 inches) for these time periods in this area.

Table 2a. Monthly Precipitation Data Prior to October 2018 Field Survey

Station 452505 Ellensburg, WA

Date	Actual Precipitation[a] (inches)	Normal Range[b,c] (inches)	Outside Normal Range (inches)
October 2017	1.14	0.72 – 2.14	---
November 2017	1.83	2.61 – 4.67	- 0.78
December 2017	0.73	3.07 – 5.02	- 2.34
January 2018	0.95	2.25 – 4.51	- 1.3
February 2018	0.35	1.56 – 3.18	-1.21
March 2018	0.65	1.14 – 2.02	- 0.49
April 2018	0.77	0.78 – 1.36	- 0.01
May 2018	0.59	0.57 – 1.12	---
June 2018	0.61	0.57 – 1.17	---
July 2018	0.00	0.2 – 0.55	- 0.2
August 2018	0.00	0.2 – 0.68	- 0.2
September 2018	0.01	0.31 – 1.08	-0.3
Total	**7.63**	**19.71 – 25.23**	**-12.08**

[a] Source: Office of Washington State Climatologist, 2017.

[b] Source: USDA-NRCS, 2018a.

[c] "Normal Range" is the range within which precipitation for the given period has a 70 percent chance of occurring.

Table 2b. Monthly Precipitation Data Prior to May 2019 Field Survey

Station 452505 Ellensburg, WA

Date	Actual Precipitation[a] (inches)	Normal Range[b, c] (inches)	Outside Normal Range (inches)
May 2018	0.59	0.57 – 1.12	---
June 2018	0.61	0.57 – 1.17	---
July 2018	0.00	0.2 – 0.55	- 0.2
August 2018	0.00	0.2 – 0.68	- 0.2
September 2018	0.01	0.31 – 1.08	-0.3
October 2018	1.44	0.72 – 2.14	---
November 2018	0.37	2.61 – 4.67	-2.24
December 2018	1.17	3.07 – 5.32	-1.90
January 2019	1.03	2.25 – 4.51	-1.22
February 2019	1.90	1.56 – 3.18	---
March 2019	0.41	1.14 – 2.02	-0.73
April 2019	0.88	0.78 – 1.36	---
Total	**8.41**	**19.71 – 25.23**	**-11.30**

[a] Source: Office of Washington State Climatologist, 2017.

[b] Source: USDA-NRCS, 2018a.

[c] "Normal Range" is the range within which precipitation for the given period has a 70 percent chance of occurring.

Daily precipitation data for the 4-week period preceding the October 2018 field investigation were also reviewed. Table 3a presents the daily precipitation recorded at the *ELLENSBURG, WA, US USC00452505* recording station. No measurable precipitation was recorded for that period.

Table 3a. Daily Precipitation Data Four Weeks Prior to October 2018 Field Survey[a]

Ellensburg, WA, US USC00452505

Date	Precipitation (inch)
9/27/2018	0.0
9/28/2018	0.0
9/29/2018	0.0
9/30/2018	0.0
10/1/2018	0.0
10/2/2018	0.0
10/3/2018	0.0

Table 3a. Daily Precipitation Data Four Weeks Prior to October 2018 Field Survey[a]

Ellensburg, WA, US USC00452505

Date	Precipitation (inch)
10/4/2018	0.0
10/5/2018	0.0
10/6/2018	0.0
10/7/2018	0.0
10/8/2018	0.0
10/9/2018	0.0
10/10/2018	0.0
10/11/2018	0.0
10/12/2018	0.0
10/13/2018	0.0
10/14/2018	0.0
10/15/2018	0.0
10/16/2018	0.0
10/17/2018	0.0
10/18/2018	0.0
10/19/2018	0.0
10/20/2018	0.0
10/21/2018	0.0
10/22/2018	0.0
10/23/2018	0.0
10/24/2018	0.0
Total:	**0.0**

[a] Source: National Climate Data Center (NOAA, 2018).

Daily precipitation data for the 4-week period preceding the May 2019 field investigation were also reviewed. Table 3b presents the daily precipitation recorded at the *ELLENSBURG, WA, US USC00452505* recording station. No measurable precipitation was recorded for that period.

Table 3b. Daily Precipitation Data Four Weeks Prior to May 2019 Field Survey[a]

Ellensburg, WA, US USC00452505

Date	Precipitation (inch)
4/9/2019	0.18
4/10/2019	T
4/11/2019	0.0
4/12/2019	0.02
4/13/2019	0.0

Table 3b. Daily Precipitation Data Four Weeks Prior to May 2019 Field Survey[a]

Ellensburg, WA, US USC00452505

Date	Precipitation (inch)
4/14/2019	0.01
4/15/2019	0.0
4/16/2019	0.0
4/17/2019	0.0
4/18/2019	0.0
4/19/2019	0.0
4/20/2019	0.0
4/21/2019	0.02
4/22/2019	0.0
4/23/2019	0.0
4/24/2019	0.0
4/25/2019	0.0
4/26/2019	0.0
4/27/2019	0.0
4/28/2019	0.0
4/29/2019	0.0
4/30/2019	0.0
5/1/2019	0.0
5/2/2019	0.0
5/3/2019	0.0
5/4/2019	0.0
5/5/2019	0.0
5/6/2019	0.0
Total:	**0.23**

[a] Source: National Climate Data Center (NOAA, 2018)

Hydrologic conditions on the site consisted of soils saturated to the surface throughout most of the wetland areas, and in and adjacent to most of the ditches. The wetlands areas appear to derive water primarily from groundwater, along with upland runoff and direct precipitation.

3.1.6 Existing Wetland Mapping

The survey area is in the Upper Yakima watershed (Hydrologic Unit Code 17030001), Currier Creek sub-watershed (hydrologic unit [HUC] 170300010510). The National Hydrography Dataset indicates no water features on or immediately adjacent to the site (USGS, 2018) (Figure 3). The NWI identifies one wetland feature within the survey area in the southwestern portion of the site (USFWS, 2018b). This mapped wetland is part of a larger wetland complex, extending offsite to the west. The NWI mapped feature is identified PEM1C (palustrine emergent, persistent, seasonal).

3.1.7 Sensitive Plant, Fish, and Wildlife

According to USACE 2016 guidance, delineation reports should include preliminary information on known sensitive species or cultural resources that occur within the survey area (USACE, 2016). A database review was conducted of the USFWS Information for Planning and Consultation website (USFWS, 2018a) to identify federal special-status wildlife and plant species that are known or have the potential to occur in or near the survey area.

3.2 Findings

A field delineation of the entire survey area identified 2.07 acres of palustrine emergent (PEM) wetlands, and 10,433 linear feet of excavated ditches (nonwetland waters). The delineated aquatic resources are described in Section 4.2, summarized in Table 4, and mapped on Figures 6a to 6c.

Table 4. Delineated Aquatic Resources

Feature ID	Classification (Cowardin et al., 1979)	Latitude/ Longitude	Size (acres)	Size (linear feet)
Wetlands (3)				
Wetland-1	PEM	47.01443°/ -120.5926°	1.44	
Wetland-2	PEM	47.0160°/ -120.5929°	0.26	
Wetland-3	PEM	47.0169°/ -120.5924°	0.37	
	TOTAL Wetlands		**2.07**	
Nonwetland Waters (12)				
Ditch D1	Perennial	47.0164°/ -120.5913°	0.75	2,170
Ditch D2	Intermittent	47.0163°/ -120.5922°	0.07	473
Ditch D3	Intermittent	47.0161°/ -120.5931°	0.12	1,705
Ditch D4	Intermittent	47.0175°/ -120.5918°	0.03	340
Ditch D5	Intermittent	47.0177°/ -120.5894°	0.25	1,096
Ditch D6	Intermittent	47.0191°/ -120.5894°	0.04	760
Ditch D7	Intermittent	47.0189°/ -120.5892°	0.07	1,044
Ditch D8	Intermittent	47.0164°/ -120.5873°	0.07	1,185
Ditch D9	Intermittent	47.0158°/ -120.5878°	0.02	415
Ditch D10	Intermittent	47.01666°/ -120.5896°	0.03	825
Ditch D11	Intermittent	47.0168°/ -120.5920°	0.02	420
Ditch D12 (partially offsite)	Intermittent	47.0140°/ -120.5908°	0.20	1,427
	TOTAL Nonwetland Waters	**Perennial**	**0.75**	**2,170 feet**
		Intermittent	**0.92**	**9,690 feet**

3.2.1 Wetlands

Three wetlands (2.074 acres) were delineated within the survey area. Each wetland resource summarized in Table 4 is described in the following subsections. An aquatic resource delineation map

(Figures 6a to 6c) is provided in Appendix A and site photographs are provided in Appendix B. A list of plant species observed during the survey is provided in Appendix F. Field data sheets collected within and adjacent to the wetland areas are provided in Appendix C. A preliminary jurisdictional determination is provided in Table 5. In addition to the three delineated wetlands, ten additional areas were investigated as potential wetlands and were determined to not meet wetland criteria. These were documented with photos and field data sheets (also provided in Appendix B and Appendix C, respectively). Wetland Rating Forms are provided in Appendix D.

Wetland-W1, Palustrine Emergent Wetland (1.44 acres)

Wetland W1 (1.44 acres) is a PEM (Cowardin)/Slope (hydrogeomorphic [HGM]) wetland located in the southwestern portion of the survey area. Vegetation is comprised of heavily grazed planted grasses including creeping bentgrass (*Agrostis stolonifera*) (FACW) and Kentucky bluegrass (*Poa pratensis*) (FAC), willow dock (*Rumex salicifolius*) (FACW), celery leaved buttercup (*Ranunculus sceleratus*) (OBL), and common rush (*Juncus effusus*) (FACW). Soils sampled are a very dark gray (10YR 3/1) silty clay from 0 to 8 inches with 5 percent redoximorphic features (5.5YR 4/6). From 8 to 18 inches, soils continue as a very dark grayish-brown (10YR 3/2) clayey silt loam with up to 10 percent redoximorphic features (7.5YR 4/6). Soils within Wetland W1 meets hydric soil indicator F6: Redox Dark Surface. Soil saturation was observed between eight and ten inches.

Adjacent upland areas are dominated by pasture grasses, predominantly Idaho fescue (*Festuca idahoensis*) (FACU) and Kentucky bluegrass (FAC). Soils do not meet the hydric soil indicator for F6 Redox Dark Surface because they do not contain at least 4 inches of redox within the top 12 inches of soil profile. Upland soils were very dark grayish-brown (10YR 3/2) with no redoximorphic features typically observed. Wetland hydrology was not observed at the adjacent upland data points. Soils were not saturated in the upper 18 inches.

Wetland 1 is a Category IV wetland, requiring a 50-foot buffer (Appendix D).

Wetland-W2, Palustrine Emergent Wetland (0.26 acres)

Wetland W2 is a PEM (Cowardin)/Slope (HGM) wetland (0.26 acre) located in the north-central portion of the survey area. Vegetation is dominated and comprised of heavily grazed planted facultative species including creeping bentgrass (FACW), Kentucky bluegrass (FAC), willow dock (FACW), watercress (*Nasturtium officinale*) (OBL), and common rush (FACW). Soils sampled are a very dark gray (10YR 3/1) cobbly silt loam from 0 to 8 inches with no redoximorphic features. From 8 to 18 inches, soils continue as a very dark gray (10YR 3/1) gravelly silty clay with 5 percent redoximorphic features (7.5YR 4/6). Soils within Wetland W2 meets hydric soil indicator F6: Redox Dark Surface. Soils were saturated below six inches.

Adjacent upland areas are dominated by pasture grasses, predominantly Idaho fescue (FACU) and Kentucky bluegrass (FAC). Soils do not meet the hydric soil indicator for F6 Redox Dark Surface because they do not contain at least 4 inches of redox within the top 12 inches of soil profile. Upland soils were very dark grayish-brown (10YR 3/2) with no redoximorphic features typically observed. Wetland hydrology was not observed at the adjacent upland data points. No soil saturation was observed in the upper 18 inches.

Wetland 2 is a Category IV wetland, requiring a 50-foot buffer (Appendix D).

Wetland-W3, Palustrine Emergent Wetland (0.37 acres)

Wetland-W3 is a PEM (Cowardin)/Slope (HGM) wetland (0.37 acre) located in the north-central portion of the survey area. Vegetation is dominated by comprised of heavily grazed planted grasses including creeping bentgrass (FACW) and Kentucky bluegrass (FAC), willow dock (FACW), watercress (OBL), and celery-leaved buttercup (OBL). Soils sampled are a very dark gray (10YR 3/1) cobbly silt loam from 0 to 6 inches with no redoximorphic features. From 6 to 18 inches, soils continue as a very dark gray (10YR 3/1) gravelly silty clay with 5 percent redoximorphic features (7.5YR 4/6). Soils within Wetland W3 meets hydric soil indicator F6: Redox Dark Surface. Soils were saturated at 8 inches.

Adjacent upland areas are dominated by pasture grasses, predominantly Idaho fescue (FACU) and Kentucky bluegrass (FAC). Soils do not meet the hydric soil indicator for F6 Redox Dark Surface because they do not contain at least 4 inches of redox within the top 12 inches of soil profile. Upland soils were very dark grayish-brown (10YR 3/2) with no redoximorphic features typically observed. Wetland hydrology was not observed at the adjacent upland data points. No soil saturation was observed in the upper 18 inches.

Wetland 3 is a Category IV wetland, requiring a 50-foot buffer (Appendix D).

Table 5. Wetlands: Preliminary Jurisdictional Determination

Wetland ID	Bordering, Contiguous with, or Neighboring a WOUS	Within 100 feet of the OHWM of a WOUS	Within the 100-Year Floodplain and Within 1,500 Feet of a WOUS	Potential Jurisdiction Notes
Wetland-W1	Yes	Yes	No	Presumed jurisdictional as it is contiguous with ditch D1, which is presumed jurisdictional
Wetland-W2	Yes	Yes	No	Potentially jurisdictional as it is contiguous with ditch D2, which is potentially jurisdictional.
Wetland-W3	Yes	Yes	No	Potentially jurisdictional as it is contiguous with ditch D4, which is potentially jurisdictional.

3.2.2 Nonwetland Waters

A system of interconnected excavated ditches (nonwetland waters) is present on the project site. The field investigation identified and delineated eleven ditches (10,433 lineal feet) within the survey area. A water control structure at the northern end of the site appears to regulate flow to the ditches from offsite, presumable for irrigation purposes. The ditches are also presumed to carry flow in response to precipitation events. All ditches show evidence of trampling by livestock.

Each ditch is described in the following subsections and summarized in Table 4. Aquatic resource delineation maps (Figures 6a to 6c) are provided in Appendix A; photographs are provided in Appendix B; watercourse or ditch characterization field data forms are provided in Appendix C. Preliminary jurisdictional determinations are provided in Table 6.

Ditch D1

Ditch D1 is an excavated ditch that traverses the site from north to south (Appendix B2, Photos 1-4 and 17-20; Appendix C2, Data Form D1). The ditch is approximately 80 percent vegetated with vegetation dominated by watercress (*Nasturtium officinale*) and willow dock (*Rumex salicifolius*). Flow was present to a depth of 6 to 8 inches with areas of ponding 1 to 1.5 feet deep. Ponding occurs up and downstream at the locations of two culvert crossings, a ford crossing, and areas of dense vegetation. Flow is assumed to be perennial due to the amount of flow present during the field visit in late October following a drier-than-normal summer and no measurable precipitation in the month prior to the field visit.

Clear bed and banks are present. Ditch D1 averages 15 feet across at top of bank. Depth from top of bank to substrate averages 3 to 4 feet. Ditch substrate consists of silty clay with some gravels. The ditch drains to another ditch offsite, appearing to eventually reach the Yakima River. Adjacent upland vegetation consists of planted pasture grasses.

Ditch D2

Ditch D2 is an excavated ditch that traverses the site east to west. D2 connects ditches D1 and D3 (Appendix B2, Photo 7; Appendix C2, Data Form D2). No flow was present in the ditch at the time of the

field visit. Direction of flow is not clear, though based on elevation (GoogleEarth Pro, 2018), it appears to convey water east to west, from ditch D1 to ditch D3. Evidence of flow included scour marks and a predominantly unvegetated bottom. Flow is assumed to be intermittent in response to precipitation events or irrigation. Substrate is silty clay. Clear bed and shallow banks were observed. Ditch D2 averages 6 feet across at top of bank and an average 0.5 feet from top of bank to substrate. Ditch D2 bisects wetland W2. Adjacent upland vegetation consists of planted pasture grasses.

Ditch D3

Ditch D3 generally follows the western boundary of the site, with a short east-west segment at the northern end (Appendix B2, Photos 8-13; Appendix C2, Data Form D3). The east-west portion of the ditch is lined with concrete which continues a short way into the north-south segment. Ditch D3 is connected to ditch D5 via a culvert the crosses over ditch D1. No flow was present at the time of the field visit; however direction of flow appears to be to the west from the culvert at ditch D1 and then south along the western site boundary. Substrate is silty clay. Evidence of flow includes scour marks, lack of vegetation, and presence of clear bed and banks. Ditch D3 averages 3 feet across at top of bank and an average 0.5 feet from top of bank to substrate. Adjacent upland vegetation consists of planted pasture grasses.

Ditch D4

Ditch D4 traverses the site diagonally from the intersection of ditches D1 and D3 southwest to the northern end of wetland W3 (Appendix B2, Photo 15; Appendix C2, Data Form D4). No flow was present at the time of the field visit. Direction of flow appears to be northeast to southwest. Flow from this ditch may provide some hydrological support for wetland W3. Substrate is silty clay. Scattered vegetation in the ditch include small clumps of grasses and watercress. Evidence of flow includes scour marks and presence of clear bed and shallow banks. Ditch D4 averages 4 feet across at top of bank and an average 0.75 foot from top of bank to substrate. Adjacent upland vegetation consists of planted pasture grasses.

Ditch D5

Ditch D5 traverses the site east to west, beginning at the eastern site boundary and flowing due west to its connection with ditch D3 via a culvert over ditch D1 (Appendix B2, Photo 16; Appendix C2, Data Form D5). At the eastern end ditch D5 is connected with ditch D7 from the north and ditch D8 to the south. Ditch D5 consists of two parallel channels separated by a low vegetated berm. No flow was observed at the time of the field visit, however shallow standing water was present in places. Direction of flow appears to be east to west. Evidence of flow includes scour mark, lack of vegetation, and presence of clear bed and banks in both channels. The substrate consists of silty clay. Including both channels ditch D5 averages 10 feet across at top of bank with the center berm 2 to 3 feet wide. Channel depth averages 1.5 feet from top of bank to substrate. Adjacent upland vegetation consists of planted pasture grasses.

Ditch D6

Ditch D6 traverses the site from southeast to northwest along the northern site boundary (Appendix B2, Photo 21; Appendix C2, Data Form D6). No flow was present at the time of the field visit. Evidence of flow includes scour marks, lack of vegetation, and presence of clear bed and shallow banks. Direction of flow appears to be southwest to northeast with ditch D6 draining into the northernmost segment of ditch D1. No surface connection was observed between ditch D6 and ditch D7 immediately southeast of D6. Ditch D6 averages 2.5 feet across at top of bank. Channel depth averages 0.5 feet. Substrate is silty clay. Adjacent vegetation consists of pasture grasses to the southwest and a thicket of shrubs with some trees offsite to the northeast.

Ditch D7

Ditch D7 traverses the site from northwest to southeast (Appendix B2, Photos 22-24; Appendix C2, Data Form D7). No flow was present at the time of the field investigation. The western portion of ditch D7 runs parallel to and a short distance away from ditch D6. Evidence of flow includes scour marks and presence of bed and shallow banks. The channel is mostly devoid of vegetation. This segment of ditch D7 averages

3 feet across at top of bank and 0.5 feet from top of bank to substrate. Substrate is silty clay. Flow in this segment appears to be southeast to northwest, originating at a water control structure that connects the western and eastern segments of ditch D7. Adjacent upland vegetation is planted pasture grasses.

The eastern segment of ditch D7 originates at the water control structure and appears to flow northwest to southeast. This segment of the channel is lined in concrete and averages 3 feet across at top of bank and 1.25 feet from top of bank to substrate. Adjacent upland vegetation consists of pasture grasses to the southwest and unmaintained grasses and forbs offsite to the northeast.

Ditch D8

Ditch D8 traverses the site from north to south along the eastern boundary of the site (Appendix B2, Photo 25; Appendix C2, Data Form D8). Ditch D8 is a continuation of ditch D7 south of its intersection with ditch D5. No flow was present at the time of the field investigation, however shallow standing water was observed in some places. Direction of flow appears to be north to south. Substrate is silty clay. Scattered vegetation in the ditch include small clumps of grasses and watercress. Evidence of flow includes scour marks and presence of clear bed and shallow banks. Ditch D8 averages 2.5 feet across at top of bank and an average 0.75 foot from top of bank to substrate. Adjacent upland vegetation consists of planted pasture grasses.

Ditch D9

Ditch D9 extends diagonally from ditch D8 to the southwest site (Appendix B2, Photo 26; Appendix C2, Data Form D9). No flow was present at the time of the field investigation. Direction of flow appears to be northeast to southwest. Substrate is silty clay. Scattered vegetation in the ditch include small clumps of grasses. Evidence of flow includes scour marks and presence of clear bed and shallow banks. Ditch D9 averages 2 feet across at top of bank and an average 0.5 feet from top of bank to substrate. Adjacent upland vegetation is planted pasture grasses.

Ditch D10

Ditch D10 extends due south from ditch D5 (No photo; Appendix C2, Data Form D10). No flow was present at the time of the field investigation. Direction of flow appears to be north to south. Substrate is silty clay. Scattered vegetation in the ditch include small clumps of grasses. Evidence of flow includes scour marks and presence of clear bed and shallow banks. Ditch D10 averages 1.5 feet across at top of bank and an average 0.3 feet from top of bank to substrate. Adjacent upland vegetation is planted pasture grasses.

Ditch D11

Ditch D11 extends slightly northwest to southeast from ditch D4 to ditch D2 (No photo; Appendix C2, Data Form D11). No flow was present at the time of the field investigation. Direction of flow appears to be north to south. Substrate is silty clay. Scattered vegetation in the ditch include small clumps of grasses and occasional rushes. Evidence of flow includes scour marks and presence of clear bed and shallow banks. Ditch D11 averages 2 feet across at top of bank and an average 0.5 feet from top of bank to substrate. Adjacent upland vegetation is planted pasture grasses.

Ditch D12 (partially offsite)

Ditch D12 is located just south of and parallel to the southern boundary of the site. Description of this ditch is based on offsite observation. Ditch D12 averages 6 feet across at top of bank and is an average 2 feet from top of bank to substrate. The ditch begins approximately 300 feet east of Old Highway 10 and flows east to the eastern end of the project site boundary, then turns south where it continues for an indeterminant distance. Flow was present in the ditch at the time of the field visit.

Table 6. Nonwetland Waters: Preliminary Jurisdictional Determinations

Nonwetland Waters ID #	Length (feet)	Average Width (feet)	Flow Regime	OHWM?	Relocates or Excavated in a Tributary?	Drains Wetlands?	Intersects a Regulated Feature?	Flows to WOUS?	Potential Jurisdiction Notes
D1	2170.0	15	perennial	Yes	No	**Yes**	**Yes**	**Yes**	Presumed jurisdictional due to perennial flow
D2	473.0	6	intermittent	Yes	No	**Yes**	**Yes**	No	Potentially jurisdictional as it intersects and potentially drains Wetland W2
D3	1705.0	3	intermittent	Yes	No	No	No	No	Presumed not jurisdictional as it does not flow to a WOUS
D4	340.0	4	intermittent	Yes	No	No	**Yes**	No	Potentially jurisdictional as it intersects and potentially drains Wetland W3
D5	1096.0	10	intermittent	Yes	No	No	No	No	Presumed not jurisdictional as it does not flow to a WOUS
D6	760.0	2.5	intermittent	Yes	No	No	No	No	Presumed not jurisdictional as it does not flow to a WOUS
D7	1044.0	3	intermittent	Yes	No	No	No	No	Presumed not jurisdictional as it does not flow to a WOUS
D8	1185.0	2.5	intermittent	Yes	No	No	No	No	Presumed not jurisdictional as it does not flow to a WOUS
D9	415.0	2	intermittent	Yes	No	No	No	No	Presumed not jurisdictional as it does not flow to a WOUS
D10	825.0	1.5	intermittent	Yes	No	No	No	No	Presumed not jurisdictional as it does not flow to a WOUS
D11	420.0	2	intermittent	Yes	No	No	No	No	Presumed not jurisdictional as it does not flow to a WOUS
D12 (partially offsite)	1,427	6	intermittent	Yes	No	No	**Yes**	Unknown	Potentially jurisdictional as it intersects and drains Ditch D and appears to also intersect wetlands W1

3.2.3 Sensitive Plant, Fish, Wildlife, and Cultural/Historic Properties

Results of the database searches identified six special-status species as having the potential to occur on or adjacent to the site (USFWS, 2018a; Appendix E). No designated or proposed critical habitat (USFWS, 2018a) was identified within the survey area. No state or federally listed special-status species were observed during the field evaluation. No suitable habitat to support any listed species was observed onsite. Given species habitat and range requirements, and suitable habitat observed onsite, suitable nesting habitat for birds subject to the Migratory Bird Treaty Act is present within and adjacent to the work area.

A cultural resources assessment was conducted October 24 – 26, 2018 and will be documented and provided for agency review under separate cover as part of the permit application process for the project, as necessary.

4. Conclusions

Brief summary of total area and types of wetlands and other regulated waters:

The wetland delineation identifies three wetland features (2.07 acres), eleven nonwetland waters (constructed ditches) in the study area (10,433 linear feet; 1.47 acres), and one constructed ditch offsite immediately south of the study area (1,427 linear feet; 0.2 acre). The wetlands and nonwetland waters identified in this report are potentially subject to federal and/or state jurisdiction. Jurisdictional determinations, including the potential applicability of jurisdictional exemptions, are made on a case-by-case basis by the regulatory agencies. Wetland W1, W2, and W3 are presumed jurisdictional under local and federal regulations. Ditches D1, D2, D4, and the offsite ditch D12 are presumed jurisdictional under federal regulations (EPA, 2015). They are presumed not jurisdictional under local regulations as the city of Ellensburg does not take jurisdiction over ditches (Ellensburg City Code 15.130.230)(City of Ellensburg, 2019). The determinations in this report are preliminary and are advisory only. Final determinations are made by the regulatory agencies. Table 7 summarizes potential federal, state, and local jurisdiction.

Table 7. Summary of Potential Federal, State, and Local Jurisdiction

Feature ID	Federal	State	City of Ellensburg
Wetlands (3)			
Wetland-1	Yes	Yes	Yes
Wetland-2	Yes	Yes	Yes
Wetland-3	Yes	Yes	Yes
Nonwetland Waters (12)			
Ditch D1	Yes	No	No
Ditch D2	Yes	No	No
Ditch D3	No	No	No
Ditch D4	Yes	No	No
Ditch D5	No	No	No
Ditch D6	No	No	No
Ditch D7	No	No	No
Ditch D8	No	No	No
Ditch D9	No	No	No
Ditch D10	No	No	No
Ditch D11	No	No	No
Ditch D12 (partially offsite)	Yes	No	No

Statement regarding the need for permits

Wetlands are regulated by the USACE under Section 404 of the Clean Water Act. If any fill is to be placed in the wetland, the USACE must be notified and the appropriate permits obtained. If any proposed wetland alteration requires a federal permit, Washington Department of Ecology Individual 401 Water Quality Certification and Coastal Zone Management Consistency determination would also be required. In 2015, the Environmental Protection Agency (EPA) and the USACE published a final rule (2015 Clean Water Rule) defining the scope of waters protected under the Clean Water Act (USACE and EPA, 2015). The Rule currently applies in 22 states, including Washington. The Clean Water Rule clearly defines three jurisdictional categories of wetlands: 1) waters that are jurisdictional in all cases, 2) waters that are jurisdictional by definition, and 3) waters subject to specific analysis to determine whether they are jurisdictional.

Waters that are jurisdictional by rule include “adjacent” waters, including wetlands. Adjacent waters include 1) wetlands or waters bordering, contiguous with, or neighboring a water of the U.S., 2) waters for which any portion is within 100 feet of the OHWM of a water of the U.S. and 3) wetlands or waters within the 100-year floodplain, and within 1,500 feet of the OHWM of a water of the U.S. Most ditches are excluded from regulation under this rule. Excluded ditches include 1) ditches with ephemeral flow and not a relocated tributary or excavated in a relocated tributary, 2) ditches with intermittent flow and not a relocated tributary or excavated in a relocated tributary, and does not drain wetland, and 3) ditches that do not flow to traditionally navigable waters. Regulated ditches must meet the definition of a tributary (e.g., bed and bank, OHWM, and connection). Regulated ditches include 1) ditches with perennial flow, 2) ditches with intermittent flow that are in a relocated tributary or drain wetlands, 3) ditches, regardless of flow, that are excavated in or relocate a tributary, and 4) intermittently flowing ditches that intersect regulated features or drain wetlands.

Ecology regulates isolated wetlands under the State Clean Water Act (RCW 90.48). If any alteration of isolated wetlands is proposed, Ecology must be notified to coordinate their regulatory review. Federally permitted actions that could affect endangered species may also require a biological assessment study and consultation with the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service. These requirements are applicable to all wetlands on the project site.

Disclaimer

This report documents the investigation, best professional judgment, and conclusions of the investigator. It is correct and complete to the best of the preparer’s knowledge. It should be considered a preliminary determination of potentially jurisdictional wetlands and other waters and used at one’s own risk unless it has been reviewed and approved in writing by the City of Ellensburg, Washington, and accepted by the USACE.

5. References

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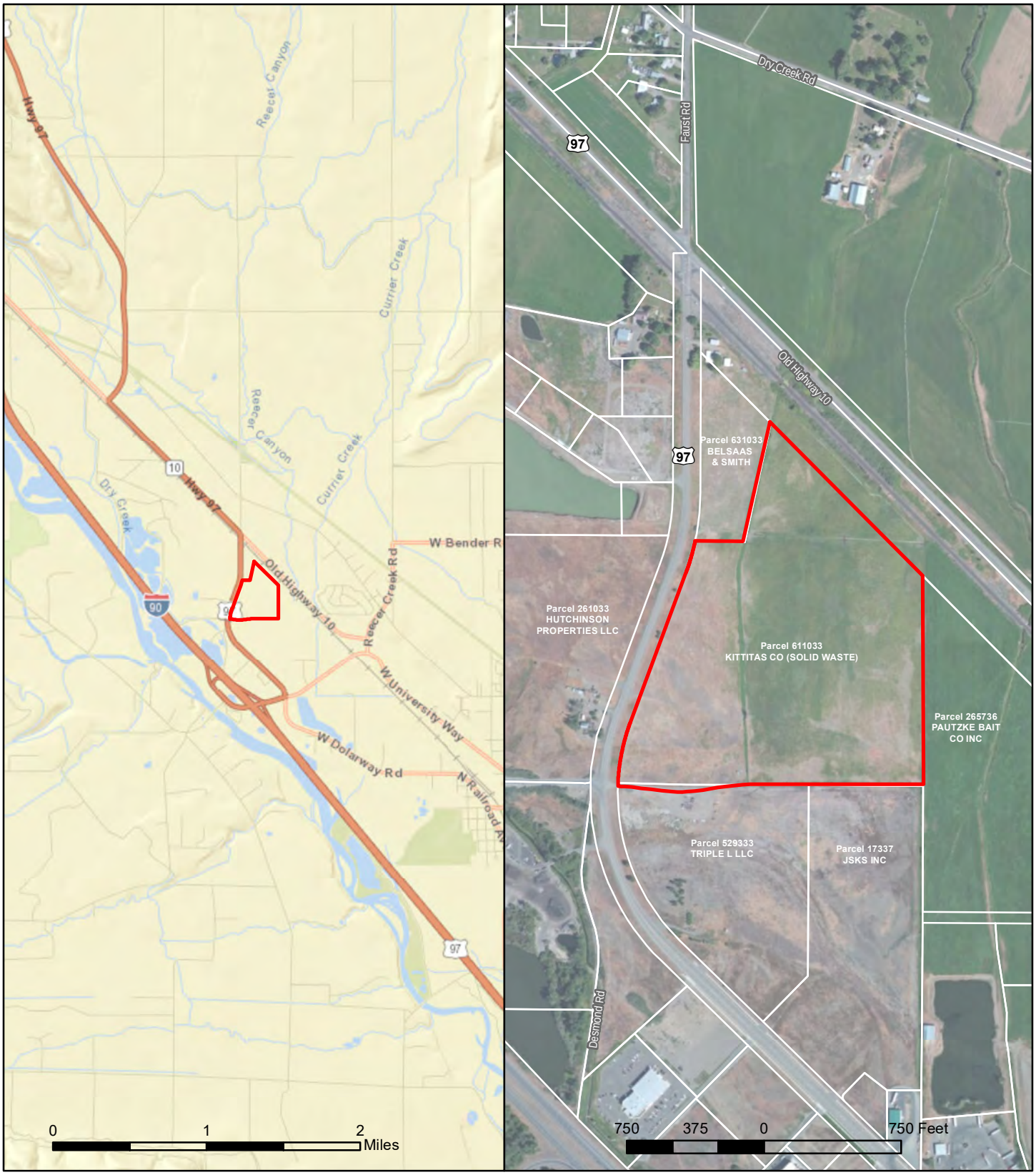
Appendix A
Figures

Figures



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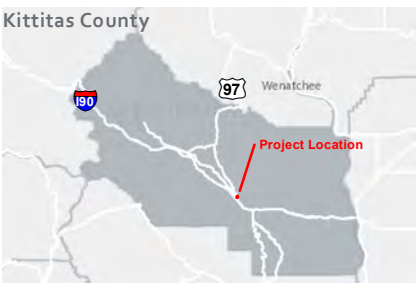

Legend

Site Boundary

Figure 1
Kittitas County Transfer Station and Maintenance Facility Relocation Project
SITE LOCATION

JACOBS

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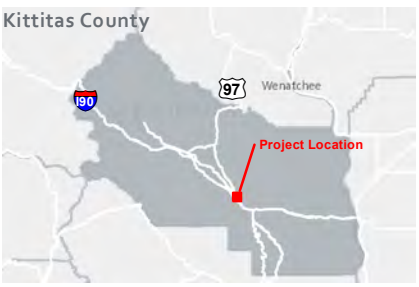

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NWI Wetlandd Type

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Site Boundary
- Study Area Boundary

0 250 500 Feet

Figure 2
Kittitas County Transfer Station and Maintenance Facility Relocation Project
NATIONAL WETLAND INVENTORY

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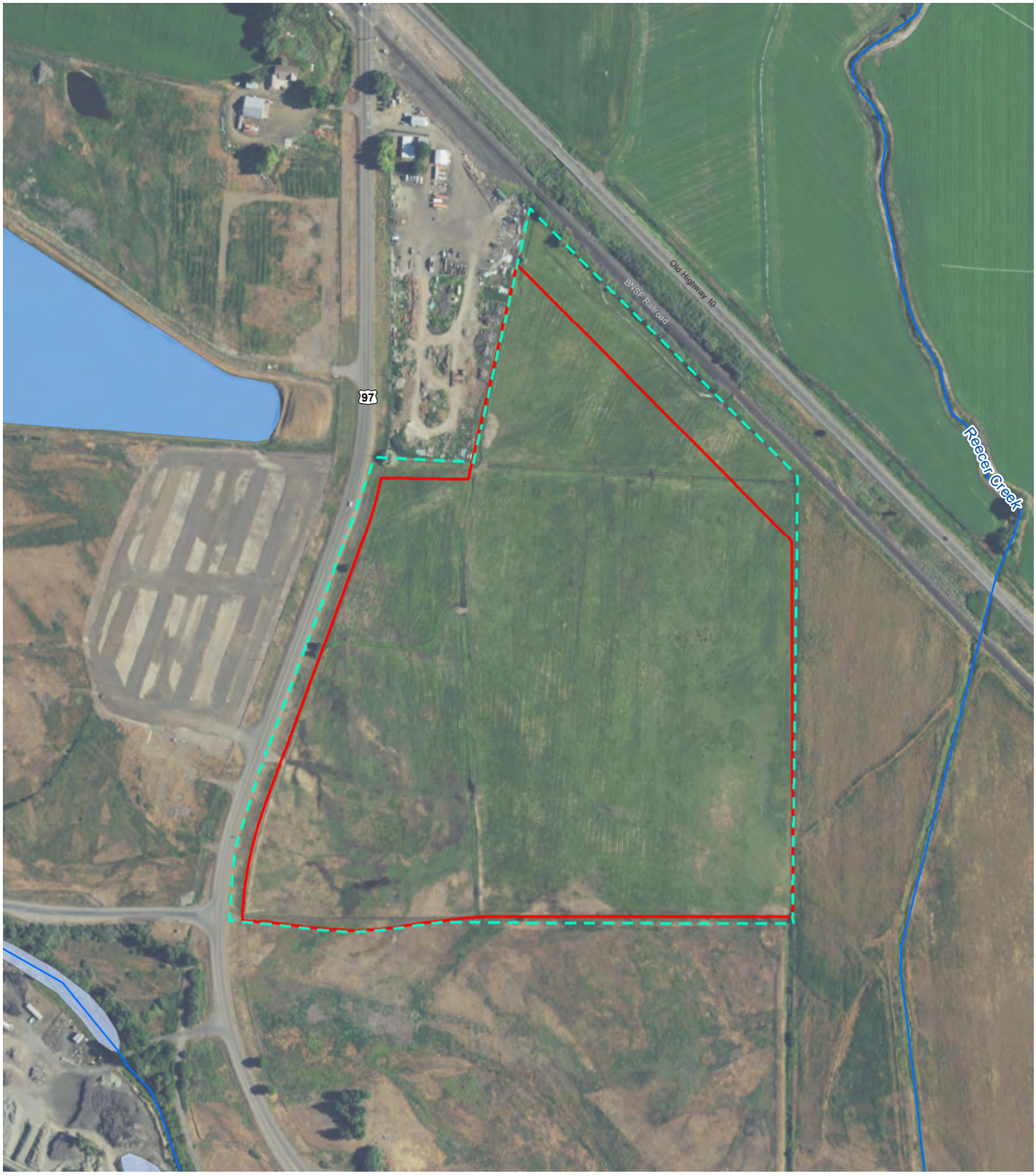

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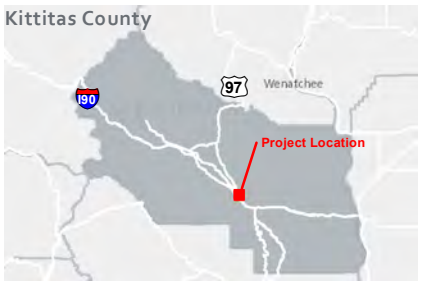

Legend

- NHDFlowline
- LakePond
- Reservoir
- Site Boundary
- Study Area Boundary

0 250 500 Feet

Figure 3
Kittitas County Transfer Station and Maintenance Facility Relocation Project
NATIONAL HYDROGRAPHY

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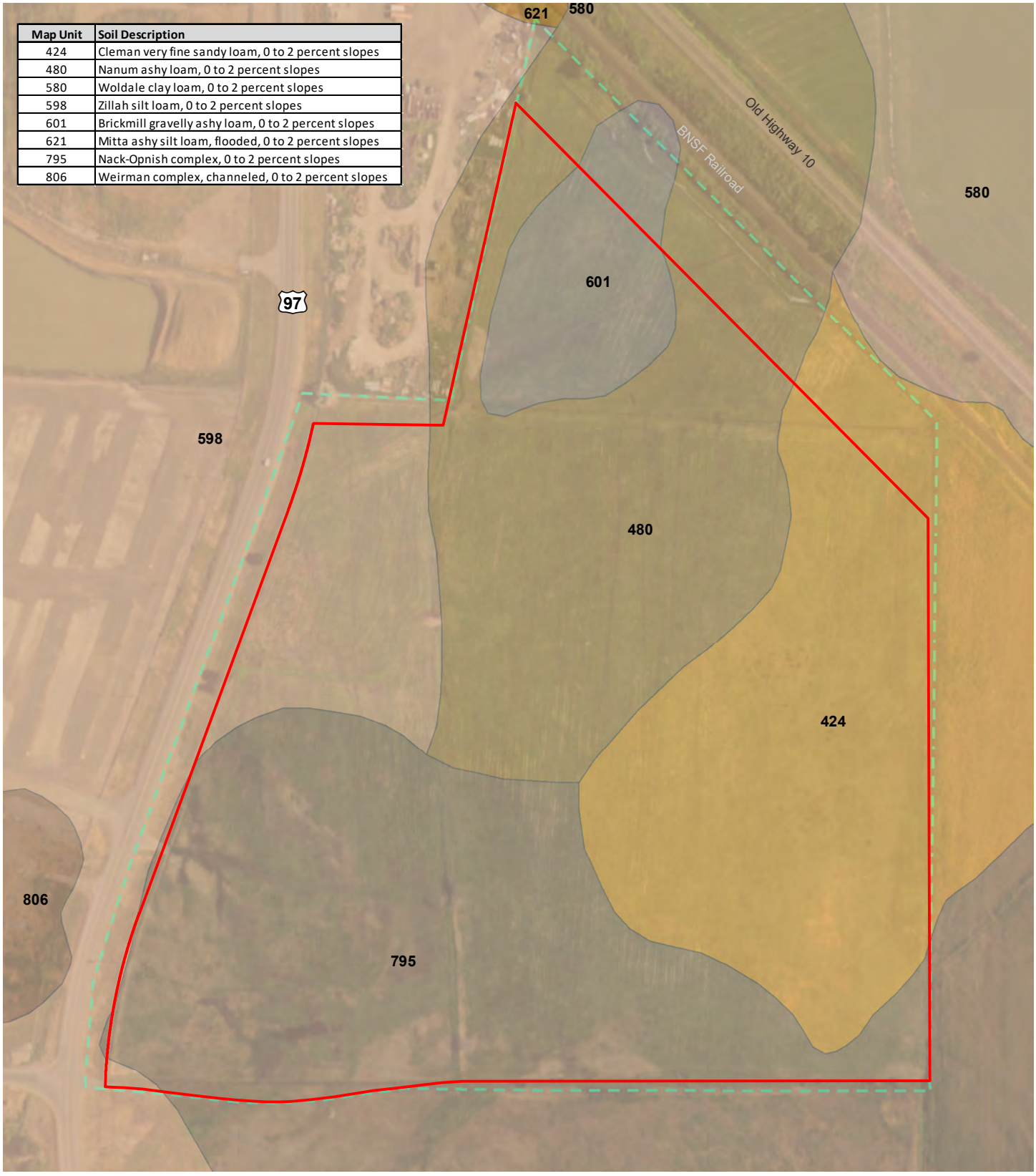
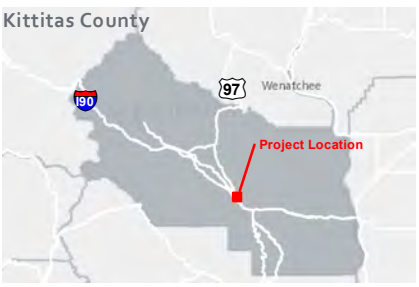


Map Unit	Soil Description
424	Cleman very fine sandy loam, 0 to 2 percent slopes
480	Nanum ashy loam, 0 to 2 percent slopes
580	Woldale clay loam, 0 to 2 percent slopes
598	Zillah silt loam, 0 to 2 percent slopes
601	Brickmill gravelly ashy loam, 0 to 2 percent slopes
621	Mitta ashy silt loam, flooded, 0 to 2 percent slopes
795	Nack-Opnish complex, 0 to 2 percent slopes
806	Weirman complex, channeled, 0 to 2 percent slopes

Locator Map



Legend

- Site Boundary
- Map Unit
  - 424
  - 480
  - 580
  - 598
  - 601
  - 621
  - 795
  - 806
- Study Area Boundary

0 250 500 Feet

Figure 4
Kittitas County Transfer Station and Maintenance Facility Relocation Project
NRCS SOILS

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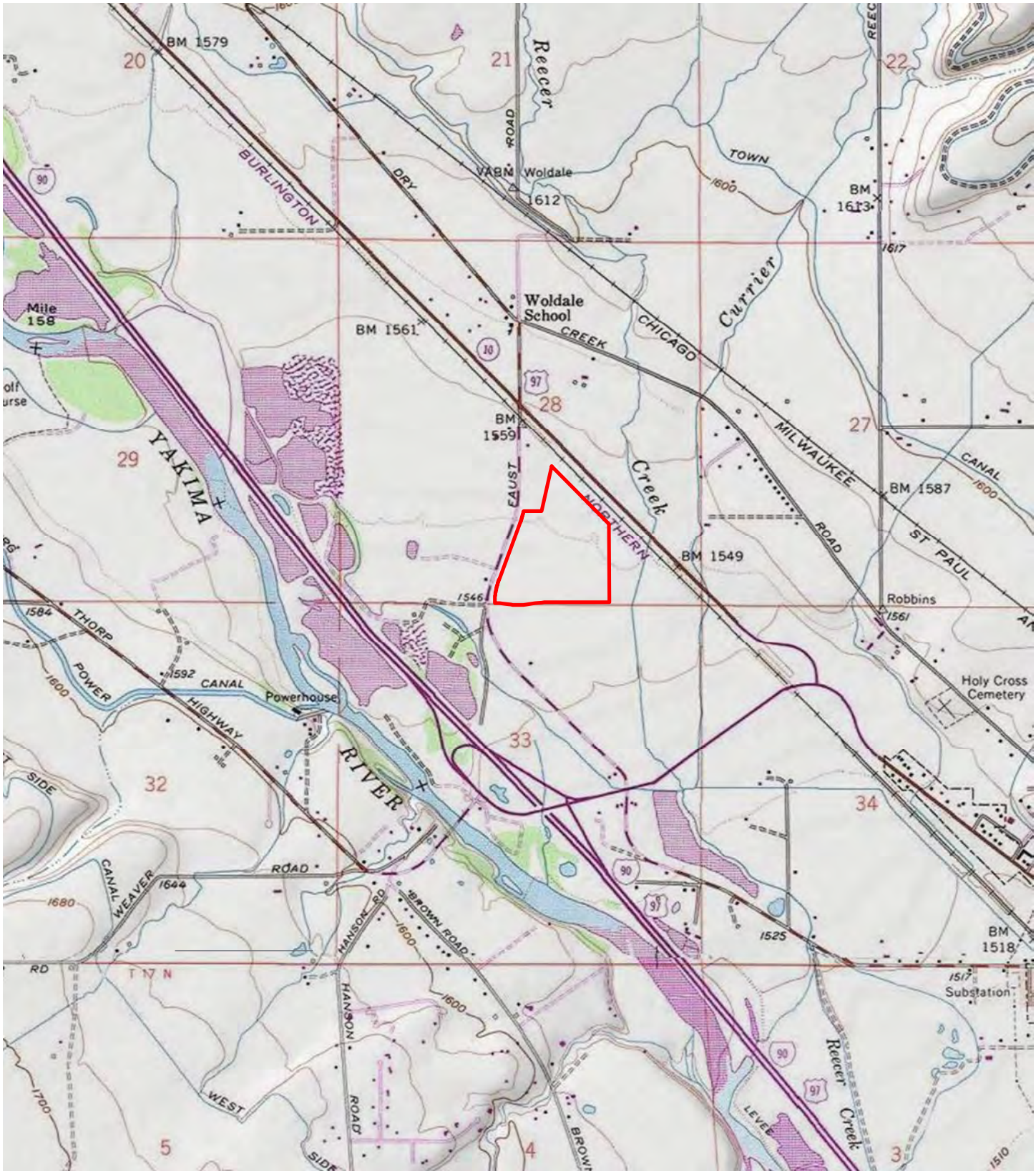

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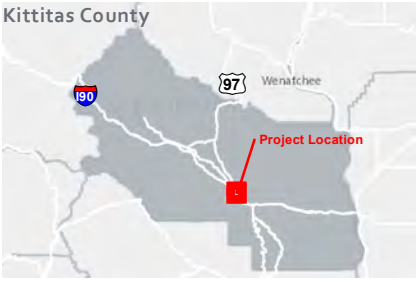

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Site Boundary

0 1,200 2,400 Feet

Figure 5

Kittitas County Transfer Station and Maintenance Facility Relocation Project

USGS Topographic Map

Ellensburg North Washington

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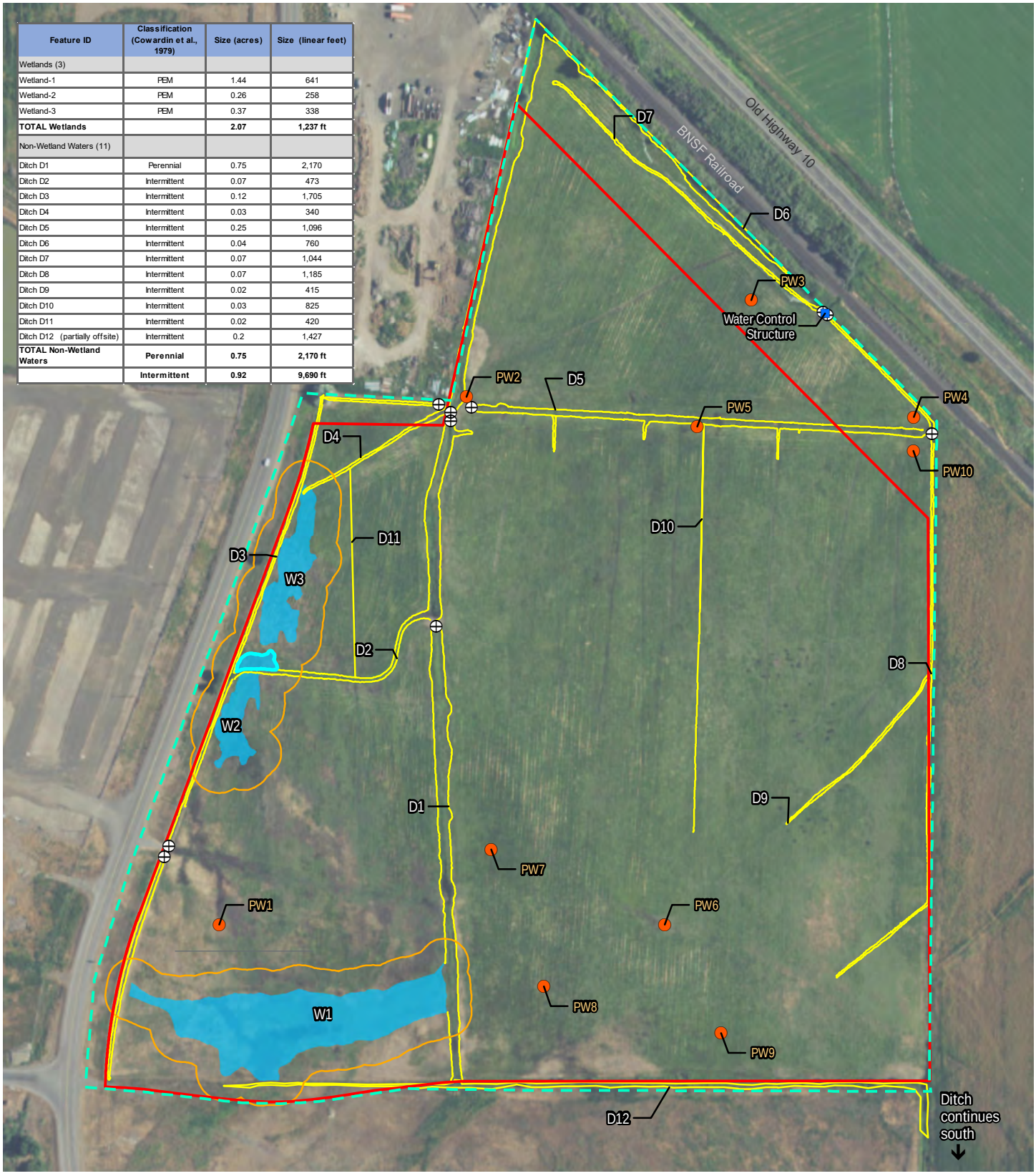
Feature ID	Classification (Cowardin et al., 1979)	Size (acres)	Size (linear feet)
Wetlands (3)			
Wetland-1	PEM	1.44	641
Wetland-2	PEM	0.26	258
Wetland-3	PEM	0.37	338
TOTAL Wetlands		**2.07**	**1,237 ft**
Non-Wetland Waters (11)			
Ditch D1	Perennial	0.75	2,170
Ditch D2	Intermittent	0.07	473
Ditch D3	Intermittent	0.12	1,705
Ditch D4	Intermittent	0.03	340
Ditch D5	Intermittent	0.25	1,096
Ditch D6	Intermittent	0.04	760
Ditch D7	Intermittent	0.07	1,044
Ditch D8	Intermittent	0.07	1,185
Ditch D9	Intermittent	0.02	415
Ditch D10	Intermittent	0.03	825
Ditch D11	Intermittent	0.02	420
Ditch D12 (partially offsite)	Intermittent	0.2	1,427
TOTAL Non-Wetland Waters	**Perennial**	**0.75**	**2,170 ft**
	Intermittent	**0.92**	**9,690 ft**



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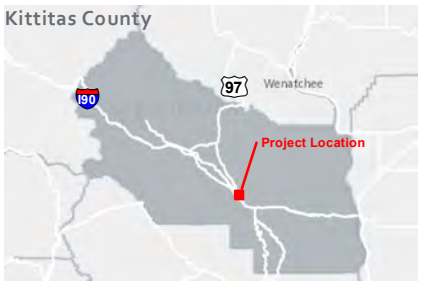

Legend

- Potential Wetlands
- Culvert
- Water Control Structure
- Ditch
- 50 ft buffer
- Wetland
- Site Boundary
- Study Area Boundary

0 250 500 Feet

Figure 6a

Kittitas County Transfer Station and Maintenance Facility Relocation Project

WETLAND OVERVIEW

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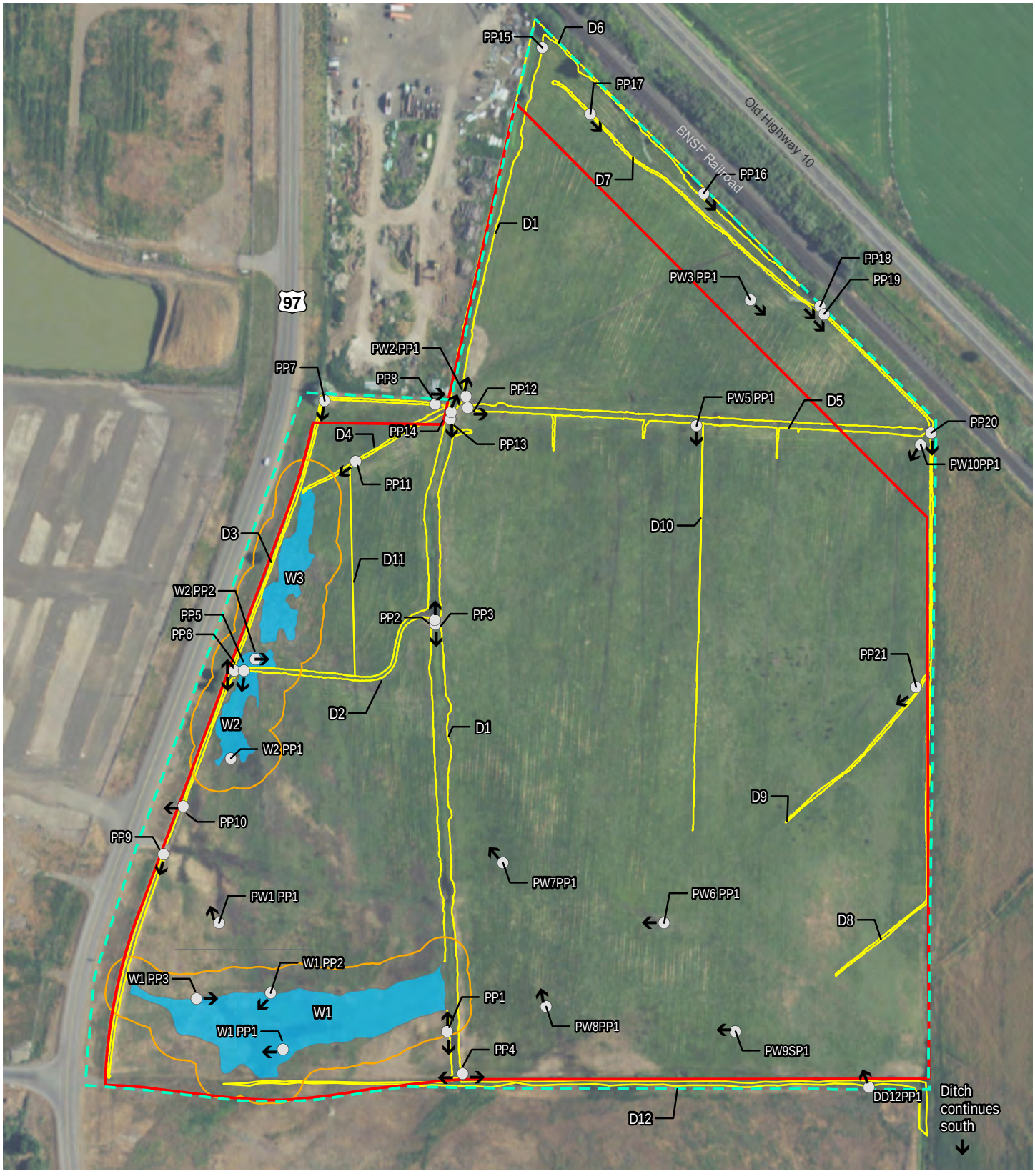

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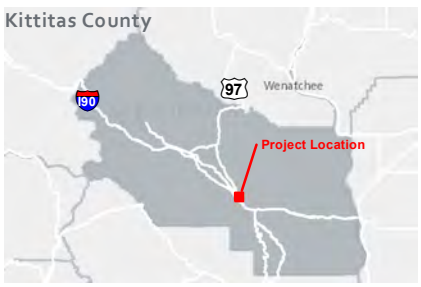

Legend

- Photo Direction
- Photo Point
- Ditch
- 50 ft buffer
- Wetland
- Site Boundary
- Study Area Boundary

0 250 500 Feet

Figure 6b
Kittitas County Transfer Station and Maintenance Facility Relocation Project
WETLAND PHOTO LOCATIONS

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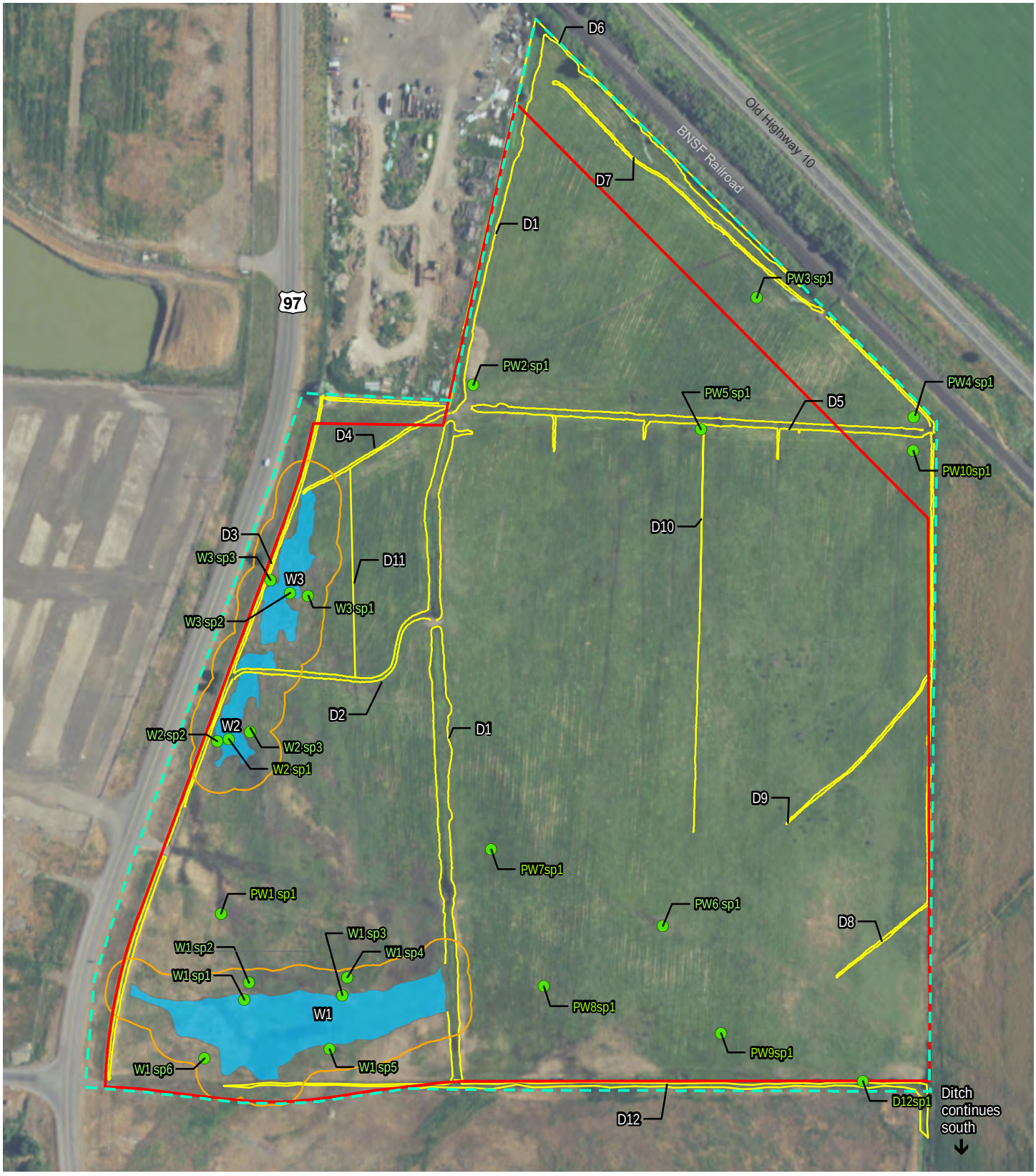

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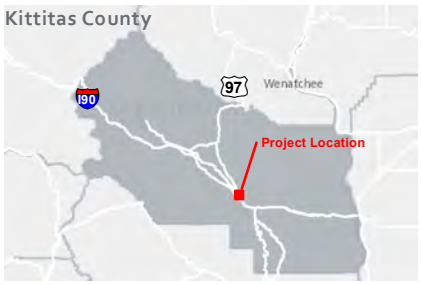


Legend

- Sample Point
- Ditch
- 50 ft buffer
- Wetland
- Site Boundary
- Study Area Boundary

0 250 500 Feet

Figure 6c
Kittitas County Transfer Station and Maintenance Facility Relocation Project
WETLAND SAMPLE LOCATIONS

JACOBS

Document Path: \\brooksidefiles\GIS_SHARE\ENBG\oo_Proj\K\Kittitas_County_WA\Maps\Report\o4_Wetland_SampleLocations.mxd

Appendix B
Site Photographs

Site Photographs

B1 Wetlands and Potential Wetlands

B2 Nonwetland Waters (Ditches)

Photo 1 Wetland 1, view southwest from photo point WW1 PP1.

Photo 2 Wetland 1, view southwest from photo point WW1 PP2.

Photo 3 Wetland 1, view east from photo point WW1 PP3.

Photo 4 Wetland 2, view north from photo point WW2 PP1.

Photo 5 Wetland 2, view south from photo point WW2 PP2.

Photo 6 View northwest of potential wetland area PW1.

Photo 7 View north of potential wetland area PW2.

Photo 8 View northeast of potential wetland area PW3.

Photo 9 View south of potential wetland area PW 5.

Photo 10 View west of possible wetland area PW6.

Photo 11 View of potential wetland area PW7.

Photo 12 View of potential wetland area PW8.

Photo 13 View of potential wetland area PW9.

Photo 14 View of potential wetland area PW10

Photo 1 View north from Photo Point 1, ditch D1.

Photo 2 View south from Photo Point 1, ditch D1.

Photo 3 View south from Photo Point 2, ditch D1.

Photo 4 View north from Photo Point 3, ditch D1.

Photo 5 View west from Photo Point 4 of vegetated ditch south of site.

Photo 6 View east from Photo Point 4 of vegetated ditch south of site.

Photo 7 View northeast from Photo Point 5, ditch D2.

Photo 8 View south from Photo Point 2, ditch D3.

Photo 9 View north from Photo Point 6, ditch D3.

Photo 10 View south from Photo Point 7, ditch D3.

Photo 11 View east from Photo Point 7, ditch D3.

Photo 12 View east from Photo Point 8, ditch D3 crossing of ditch D1.

Photo 13 View south from Photo Point 9, ditch D3

Photo 14 View west from Photo Point 10, ditch entering site from culver under road.

Photo 15 View southwest from Photo Point 11, ditch D4.

Phot 16 View east from Photo Point 12, ditch(es) D5.

Photo 17 View south from Photo Point 13, ditch D1.

Photo 18 View north from Photo Point 14, ditch D1.

Photo 19 View south from Photo Point 15, ditch D1.

Photo 20 View north from Photo Point 15, ditch D1.

Photo 21 View southeast from Photo Point 16, ditch D6.

Photo 22 View southeast from Photo Point 17, ditch D7.

Photo 23 View east from Photo Point 18, water control structure in ditch D7.

Photo 24 View east from Photo Point 19, ditch D7.

Photo 25 View south from Photo Point 20, ditch D8.

Photo 26 View southwest from Photo Point 21, ditch D9.

Photo 27 View east of ditch D12 (offsite).

Appendix C
Field Datasheets

Field Datasheets

C1 Wetland Delineation Field Datasheets

C2 Watercourse or Ditch Characterization Field Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station City/County: Ellensburg/Kittitas Sampling Date: 10/26/2016

Applicant/Owner: Kittitas Solid Waste State: WA Sampling Point: W1 SP1

Investigator(s): P. O'Neill Section, Township, Range: T18N R18E S28

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR): LRR B Lat: 47.0144774685 Long: -120.592876992 Datum:

Soil Map Unit Name: Nack-Opnish Complex, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Agrostis stolonifera	20	X	FACW
2. Poa pratensis	20	X	FAC
3. Rumex salicifolius	10		OBL
4. Juncus effusus	20	X	FACW
5. Ranunculus sceleratus	5		OBL
6.			
7.			
8.			
	85 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: W1 SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/1	100					silty clay	
8-18	10YR 3/2	95	7.5YR 4/6	5	C	M	clayey silt	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 8

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station City/County: Ellensburg/Kittitas Sampling Date: 10/26/2016

Applicant/Owner: Kittitas Solid Waste State: WA Sampling Point: W1 SP2

Investigator(s): P. O'Neill Section, Township, Range: T18N R18E S28

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 2

Subregion (LRR): LRR B Lat: 47.0145702113 Long: -120.592838665 Datum:

Soil Map Unit Name: Nack-Opnish Complex, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Festuca idahoensis	30	X	FACU
2. Poa pratensis	20	X	FAC
3. Agrostis stolonifera	30	X	FACW
4. Juncus effusus	5		FACW
5. Trifolium repens	10		FACU
6.			
7.			
8.			
	95 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: W1 SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	100					clayey silt	clayey silt loam
10-18	10YR 3/2	100					gravelly s	gravelly sandy loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station City/County: Ellensburg/Kittitas Sampling Date: 10/26/2016

Applicant/Owner: Kittitas Solid Waste State: WA Sampling Point: W1 SP3

Investigator(s): P. O'Neill Section, Township, Range: T18N R18E S28

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR): LRR B Lat: 47.0145033373 Long: -120.59208055 Datum:

Soil Map Unit Name: Nack-Opnish complex, 0 to 2 percent slopes NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Agrostis stolonifera	20	X	FACW
2. Juncus effusus	20	X	FACW
3. Poa pratensis	20	X	FAC
4. Festuca idahoensis	10		FACU
5.			
6.			
7.			
8.			
	70 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: W1 SP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/1	95	5YR 4/6	5	C	M	silty clay	
8-16	10YR 3/2	90	7.5YR 4/6	10	C	M	clayey silt	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 8

Wetland Hydrology Present? Yes ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station City/County: Ellensburg/Kittitas Sampling Date: 10/26/2016

Applicant/Owner: Kittitas Solid Waste State: WA Sampling Point: W1 SP4

Investigator(s): P. O'Neill Section, Township, Range: T18N R18E S28

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 2

Subregion (LRR): LRR B Lat: 47.01460248 Long: -120.592040316 Datum:

Soil Map Unit Name: Nack-Opnish Complex, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes _____ No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Festuca idahoensis	20	X	FACU
2. Poa pratensis	30	X	FAC
3. Agrostis stolonifera	20	X	FACW
4. Juncus effusus	10		FACW
5.			
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: W1 SP4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	100					clayey silt	clayey silt loam
8-16	10YR 3/2	100					gravely s	gravelly sandy loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station City/County: Ellensburg/Kittitas Sampling Date: 10/26/2016

Applicant/Owner: Kittitas Solid Waste State: WA Sampling Point: W1 SP5

Investigator(s): P. O'Neill Section, Township, Range: T18N R18E S28

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 2

Subregion (LRR): LRR B Lat: 47.0142023025 Long: -120.592185554 Datum:

Soil Map Unit Name: Nack-Opnish Complex, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Festuca idahoensis	30	X	FACU
2. Agrostis stolonifera	50	X	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species 50	x 2 = 100
FAC species _____	x 3 = _____
FACU species 30	x 4 = 120
UPL species _____	x 5 = _____
Column Totals: 80 (A)	220 (B)

Prevalence Index = B/A = 2.75

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: W1 SP5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	99	10YR 3/6	1	C	M	clayey silt	clayey silt loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station City/County: Ellensburg/Kittitas Sampling Date: 10/26/2016

Applicant/Owner: Kittitas Solid Waste State: WA Sampling Point: W1 SP6

Investigator(s): P. O'Neill Section, Township, Range: T18N R18E S28

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 2

Subregion (LRR): LRR B Lat: 47.0141510224 Long: -120.593198912 Datum:

Soil Map Unit Name: Nack-Opnish Complex, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Festuca idahoensis	40	X	FACU
2. Agrostis stolonifera	50	X	FACW
3. Hypochaeris radicata	10		DACU
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 50	x 2 =	100
FAC species	x 3 =	
FACU species 50	x 4 =	200
UPL species	x 5 =	
Column Totals: 100 (A)		300 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: W1 SP6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	99	10YR 3/6	1	C	M	clayey silt	clayey silt loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station City/County: Ellensburg/Kittitas Sampling Date: 10/26/2016

Applicant/Owner: Kittitas Solid Waste State: WA Sampling Point: W2 SP1

Investigator(s): P. O'Neill Section, Township, Range: T18N R18E S28

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 1

Subregion (LRR): LRR B Lat: 47.0159229426 Long: -120.593004308 Datum:

Soil Map Unit Name: Zillah silt loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Poa pratensis	20	X	FAC
2. Juncus effusus	40	X	FACW
3. Rumex salicifolius	20	X	FACW
4. Nasturtium occidentale	5		OBL
5.			
6.			
7.			
8.			
	85 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: W2 SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/1	100					cobbly sil	cobbly silt loam
8-16	10YR 3/1	95	7.5YR 4/6	5	C	M	gravelly si	gravelly silty clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 6

Wetland Hydrology Present? Yes ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station City/County: Ellensburg/Kittitas Sampling Date: 10/26/2016

Applicant/Owner: Kittitas Solid Waste State: WA Sampling Point: W2 SP2

Investigator(s): P. O'Neill Section, Township, Range: T18N R18E S28

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 1

Subregion (LRR): LRR B Lat: 47.0159097548 Long: -120.593099325 Datum:

Soil Map Unit Name: Zillah silt loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Poa pratensis	40	X	FAC
2. Festuca idahoensis	20	X	FACU
3. Agrostis stolonifera	20	X	FACW
4.			
5.			
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: W2 SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	100					silt loam	gravelly

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station City/County: Ellensburg/Kittitas Sampling Date: 10/26/2016

Applicant/Owner: Kittitas Solid Waste State: WA Sampling Point: W2 SP3

Investigator(s): P. O'Neill Section, Township, Range: T18N R18E S28

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 1

Subregion (LRR): LRR B Lat: 47.0159633775 Long: -120.592829769 Datum:

Soil Map Unit Name: Zillah silt loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Poa pratensis	60	X	FAC
2. Festuca idahoensis	30	X	FACU
3.			
4.			
5.			
6.			
7.			
8.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species 60	x 3 =	180
FACU species 30	x 4 =	120
UPL species	x 5 =	
Column Totals: 90 (A)		300 (B)

Prevalence Index = B/A = 3.33

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: W2 SP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	100					silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station City/County: Ellensburg/Kittitas Sampling Date: 10/26/2016

Applicant/Owner: Kittitas Solid Waste State: WA Sampling Point: W3 SP1

Investigator(s): P. O'Neill Section, Township, Range: T18N R18E S28

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 1

Subregion (LRR): LRR B Lat: 47.0167192447 Long: -120.592362717 Datum:

Soil Map Unit Name: Zillah silt loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes _____ No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Poa pratensis	40	X	FAC
2. Festuca idahoensis	20	X	FACU
3. Agrostis stolonifera	20	X	FACW
4.			
5.			
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: W3 SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	100					silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station City/County: Ellensburg/Kittitas Sampling Date: 10/26/2016

Applicant/Owner: Kittitas Solid Waste State: WA Sampling Point: W3 SP2

Investigator(s): P. O'Neill Section, Township, Range: T18N R18E S28

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 1

Subregion (LRR): LRR B Lat: 47.0167343972 Long: -120.592510681 Datum:

Soil Map Unit Name: Zillah silt loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Poa pratensis	30	X	FAC
2. Juncus effusus	20	X	FACW
3. Rumex salicifolius	30	X	FACW
4. Agrostis stolonifera	5		FACW
5. Nasturtium occidentale	5		OBL
6.			
7.			
8.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: W3 SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1	100					cobbly sil	cobbly silt loam
6-18	10YR 3/1	95	7.5YR 4/6	5	C	M	gravelly si	gravelly silty clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 8

Wetland Hydrology Present? Yes ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station City/County: Ellensburg/Kittitas Sampling Date: 10/26/2016

Applicant/Owner: Kittitas Solid Waste State: WA Sampling Point: W3 SP3

Investigator(s): P. O'Neill Section, Township, Range: T18N R18E S28

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 1

Subregion (LRR): LRR B Lat: 47.0168033206 Long: -120.592670338 Datum:

Soil Map Unit Name: Zillah silt loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Poa pratensis	50	X	FAC
2. Festuca idahoensis	30	X	FACU
3.			
4.			
5.			
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species 50	x 3 =	150
FACU species 30	x 4 =	120
UPL species	x 5 =	
Column Totals: 80 (A)		270 (B)

Prevalence Index = B/A = 3.375

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: W3 SP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	100					silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station City/County: Ellensburg/Kittitas Sampling Date: 10/26/2016

Applicant/Owner: Kittitas Solid Waste State: WA Sampling Point: PW1 SP1

Investigator(s): P. O'Neill Section, Township, Range: T18N R18E S28

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 1

Subregion (LRR): LRR B Lat: 47.01495385 Long: -120.593068933 Datum:

Soil Map Unit Name: Nack-Opnish, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Poa pratensis	5		FAC
2. Juncus effusus	10		FACW
3. Rumex salicifolius	5		FACW
4. Trifolium repens	20	X	FACU
5.			
6.			
7.			
8.			
	40 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 30 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 15	x 2 =	30
FAC species 5	x 3 =	15
FACU species 20	x 4 =	80
UPL species	x 5 =	
Column Totals: 40 (A)		125 (B)

Prevalence Index = B/A = 3.125

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: PW1 SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	98	10YR 3/6	2	C	M	clayey silt	clayey silt loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station City/County: Ellensburg/Kittitas Sampling Date: 10/26/2016

Applicant/Owner: Kittitas Solid Waste State: WA Sampling Point: PW2 SP1

Investigator(s): P. O'Neill Section, Township, Range: T18N R18E S28

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 1

Subregion (LRR): LRR B Lat: 47.0178882611 Long: -120.591023754 Datum:

Soil Map Unit Name: Brickmill gravelly ashy loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Festuca idahoensis	20	X	FACU
2. Juncus effusus	10		FACW
3. Veronica americana	10		OBL
4. Ranunculus sceleratus	5		OBL
5.			
6.			
7.			
8.			
	45 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 30 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 15	x 1 =	15
FACW species 10	x 2 =	20
FAC species	x 3 =	
FACU species 20	x 4 =	80
UPL species	x 5 =	
Column Totals: 45 (A)		115 (B)

Prevalence Index = B/A = 2.5

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: PW2 SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	100					clayey silt	clayey silt loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 10

Wetland Hydrology Present? **Yes** ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station City/County: Ellensburg/Kittitas Sampling Date: 10/26/2016

Applicant/Owner: Kittitas Solid Waste State: WA Sampling Point: PW3 SP1

Investigator(s): P. O'Neill Section, Township, Range: T18N R18E S28

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 1

Subregion (LRR): LRR B Lat: 47.0183736127 Long: -120.588725173 Datum:

Soil Map Unit Name: Nanum ashy loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Festuca idahoensis	30	X	FACU
2. Poa pratensis	50	X	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species 50	x 3 =	150
FACU species 30	x 4 =	120
UPL species	x 5 =	
Column Totals: 80 (A)		270 (B)

Prevalence Index = B/A = 3.375

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: PW3 SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	100					clayey silt	clayey silt loam
8-16	10YR 3/2	100					sandy, gr	sandy, gravelly silt loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 8

Wetland Hydrology Present? **Yes** ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station City/County: Ellensburg/Kittitas Sampling Date: 10/26/2016

Applicant/Owner: Kittitas Solid Waste State: WA Sampling Point: PW4 SP1

Investigator(s): P. O'Neill Section, Township, Range: T18N R18E S28

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 1

Subregion (LRR): LRR B Lat: 47.0177132276 Long: -120.587449409 Datum:

Soil Map Unit Name: Woldale clay loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Festuca idahoensis	20	X	FACU
2. Poa pratensis	50	X	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	70 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species 50	x 3 =	150
FACU species 20	x 4 =	80
UPL species	x 5 =	
Column Totals: 70 (A)		230 (B)

Prevalence Index = B/A = 3.2

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: PW4 SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	100					clayey silt	clayey silt loam
10-16	10YR 3/2	100					sandy, gr	sandy, gravelly silt loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 6

Wetland Hydrology Present? **Yes** ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station City/County: Ellensburg/Kittitas Sampling Date: 10/26/2016

Applicant/Owner: Kittitas Solid Waste State: WA Sampling Point: PW5 SP1

Investigator(s): P. O'Neill Section, Township, Range: T18N R18E S28

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 1

Subregion (LRR): LRR B Lat: 47.0176430626 Long: -120.589179537 Datum:

Soil Map Unit Name: Nanum ashy loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Festuca idahoensis	40	X	FACU
2. Poa pratensis	50	X	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species 50	x 3 =	150
FACU species 40	x 4 =	160
UPL species	x 5 =	
Column Totals: 90 (A)		310 (B)

Prevalence Index = B/A = 3.4

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: PW5 SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	100					clayey silt	clayey silt loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 10

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station City/County: Ellensburg/Kittitas Sampling Date: 10/26/2016

Applicant/Owner: Kittitas Solid Waste State: WA Sampling Point: PW6 SP1

Investigator(s): P. O'Neill Section, Township, Range: T18N R18E S28

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 1

Subregion (LRR): LRR B Lat: 47.014887745 Long: -120.589481151 Datum:

Soil Map Unit Name: Cleman very fine sandy loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5)			
1. Festuca idahoensis	40	X	FACU
2. Agrostis stolonifera	20	X	FACW
3. Rumex sallicifolia	20	X	FACW
4.			
5.			
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: PW6 SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	100					sandy silt	sandy silt loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 10

Wetland Hydrology Present? **Yes** ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station | City/County: Ellensburg/Kittitas | Sampling Date: 5/7/2019

Applicant/Owner: Kittitas Solid Waste | State: WA | Sampling Point: PW7sp1

Investigator(s): Jen Bader, Kevin Haydon | Section, Township, Range: S28 T18N R18E

Landform (hillslope, terrace, etc.): Flat | Local relief (concave, convex, none): none | Slope (%): 1

Subregion (LRR): LRR B | Lat: 47.015311 | Long: -120.590875 | Datum: NAD83

Soil Map Unit Name: Nack-Opnish Complex, 0 to 2 percent slopes | NWI Classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? (●) Yes ( ) No (If no, explain in Remarks.)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? (●) Yes ( ) No

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	( ) Yes	(●) No	**Is the Sampled Area within a Wetland?** ( ) Yes (●) No
Hydric Soil Present?	( ) Yes	(●) No	
Wetland Hydrology Present?	( ) Yes	(●) No	

Remarks:
Data Plot is east of the access road in the center of a patch of rushes and sedges that is approximately 100 feet east of ditch D1. Water is less than 1 inch deep within ditch D1.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dom. Sp.?	Relative % Cover	Indicator Status
1.				
2.				
3.				
4.				
	= Total Cover			
Sapling/Shrub Stratum (Plot size: 15 ft)				
1.				
2.				
3.				
4.				
5.				
	= Total Cover			
Herb Stratum (Plot size: 5 ft)				
1. *Juncus balticus*	50	Y	49.5	FACW
2. *Carex filifolia*	25	Y	24.8	UPL
3. *Phleum pratense*	25	Y	24.8	FACU
4. *Taraxacum officinale*	1	N	1.0	FACU
5.				
6.				
7.				
8.				
	101 = Total Cover			
Woody Vine Stratum (Plot size: 15 ft)				
1.				
2.				
	= Total Cover			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	50	x 2 =	100
FAC species	0	x 3 =	0
FACU species	26	x 4 =	104
UPL species	25	x 5 =	125
Column Totals:	101 (A)		329 (B)

Prevalence Index = B/A = 3.257

Hydrophytic Vegetation Indicators:

[ ] Dominance Test is >50%

[ ] Prevalence Index is ≤3.0[1]

[ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

[ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? ( ) Yes (●) No

Remarks:
Vegetation adjacent to patch of rushes is primarily *Phleum pratense.*

SOIL

Sampling Point: PW7sp1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	100					Silty Clay Loam	
10-18	10YR 3/2	99	10YR 3/6	1	C	M	Silty Clay Loam	Faint Mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (LRR C)
- ☐ 1 cm Muck (A9) (LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? ○ Yes ◉ No

Remarks:
Soil is relatively dry.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (Nonriverine)
- ☐ Sediment Deposits (B2) (Nonriverine)
- ☐ Drift Deposits (B3) (Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thick Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☑ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? ○ Yes ◉ No Depth (inches): _____

Water Table Present? ○ Yes ◉ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ○ Yes ◉ No Depth (inches): _____

Wetland Hydrology Present? ○ Yes ◉ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Irrigated field; however, this section of the field is relatively dry compared to the Northwest corner near data plot DP-4.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station | City/County: Ellensburg/Kittitas | Sampling Date: 5/7/2019

Applicant/Owner: Kittitas Solid Waste | State: WA | Sampling Point: PW8sp1

Investigator(s): Jen Bader, Kevin Haydon | Section, Township, Range: S28 T18N R18E

Landform (hillslope, terrace, etc.): Relatively flat | Local relief (concave, convex, none): concave | Slope (%): 1

Subregion (LRR): LRR B | Lat: 47.014551 | Long: -120.590449 | Datum: NAD83

Soil Map Unit Name: Nack-Opnish Complex, 0 to 2 percent slopes | NWI Classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? (●) Yes ( ) No (If no, explain in Remarks.)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? (●) Yes ( ) No

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	( ) Yes	(●) No	**Is the Sampled Area within a Wetland?** ( ) Yes (●) No
Hydric Soil Present?	( ) Yes	(●) No	
Wetland Hydrology Present?	( ) Yes	(●) No	

Remarks:
Data Plot is south of DP-1 in the center of a patch of rushes and sedges that is approximately 125 feet east of ditch D1. Water is less than 1 inch deep within ditch D1.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dom. Sp.?	Relative % Cover	Indicator Status
Tree Stratum (Plot size: 30 ft)				
1.				
2.				
3.				
4.				
	= Total Cover			
Sapling/Shrub Stratum (Plot size: 15 ft)				
1.				
2.				
3.				
4.				
5.				
	= Total Cover			
Herb Stratum (Plot size: 5 ft)				
1. *Juncus balticus*	40	Y	44.4	FACW
2. *Carex filifolia*	40	Y	44.4	UPL
3. *Poa pratensis*	5	N	5.6	FAC
4. *Bromus tectorum*	3	N	3.3	UPL
5. *Barbarea orthoceras*	1	N	1.1	FACW
6. *Taraxacum officinale*	1	N	1.1	FACU
7.				
8.				
	90 = Total Cover			
Woody Vine Stratum (Plot size: 15 ft)				
1.				
2.				
	= Total Cover			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	41	x 2 =	82
FAC species	5	x 3 =	15
FACU species	1	x 4 =	4
UPL species	43	x 5 =	215
Column Totals:	90 (A)		316 (B)

Prevalence Index = B/A = 3.511

Hydrophytic Vegetation Indicators:

[ ] Dominance Test is >50%

[ ] Prevalence Index is ≤3.0[1]

[ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

[ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? ( ) Yes (●) No

Remarks:
The remainder of ground cover is litter.

SOIL

Sampling Point: PW8sp1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/2	100					Sandy silt clay	
6-18	10YR 2/1	100					Sandy silt clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (LRR C)
- ☐ 1 cm Muck (A9) (LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? ○ Yes ◉ No

Remarks:

Soil is damp below 8 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (Nonriverine)
- ☐ Sediment Deposits (B2) (Nonriverine)
- ☐ Drift Deposits (B3) (Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thick Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☑ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? ○ Yes ◉ No Depth (inches): _____

Water Table Present? ○ Yes ◉ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ○ Yes ◉ No Depth (inches): _____

Wetland Hydrology Present? ○ Yes ◉ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station | City/County: Ellensburg/Kittitas | Sampling Date: 5/7/2019

Applicant/Owner: Kittitas Solid Waste | State: WA | Sampling Point: PW9sp1

Investigator(s): Jen Bader, Kevin Haydon | Section, Township, Range: S28 T18N R18E

Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave | Slope (%): 1

Subregion (LRR): LRR B | Lat: 47.014295 | Long: -120.589008 | Datum: NAD83

Soil Map Unit Name: Nack-Opnish Complex, 0 to 2 percent slopes | NWI Classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? (●) Yes ( ) No (If no, explain in Remarks.)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? (●) Yes ( ) No

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	( ) Yes	(●) No	**Is the Sampled Area within a Wetland?** ( ) Yes (●) No
Hydric Soil Present?	( ) Yes	(●) No	
Wetland Hydrology Present?	( ) Yes	(●) No	

Remarks:
Data Plot is east of DP-2 in the center of a patch of rushes and sedges near the southern boundary of the property.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dom. Sp.?	Relative % Cover	Indicator Status
1.				
2.				
3.				
4.				
	= Total Cover			
Sapling/Shrub Stratum (Plot size: 15 ft)				
1.				
2.				
3.				
4.				
5.				
	= Total Cover			
Herb Stratum (Plot size: 5 ft)				
1. *Phleum pratense*	25	Y	33.3	FACU
2. *Juncus balticus*	25	Y	33.3	FACW
3. *Carex filifolia*	25	Y	33.3	UPL
4.				
5.				
6.				
7.				
8.				
	75 = Total Cover			
Woody Vine Stratum (Plot size: 15 ft)				
1.				
2.				
	= Total Cover			

% Bare Ground in Herb Stratum 1 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	25	x 2 =	50
FAC species	0	x 3 =	0
FACU species	25	x 4 =	100
UPL species	25	x 5 =	125
Column Totals:	75 (A)		275 (B)

Prevalence Index = B/A = 3.667

Hydrophytic Vegetation Indicators:

[ ] Dominance Test is >50%

[ ] Prevalence Index is ≤3.0[1]

[ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

[ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? ( ) Yes (●) No

Remarks:
Vegetation adjacent to patch of rushes is primarily *Phleum pratense* with patchy *Carex filifolia.* The remainding ground cover is all litter.

SOIL

Sampling Point: PW9sp1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR	3/2	100						Silty clay loam	
14-18	10YR	2/1	99	10YR	3/6	1	C	M	Silty clay loam	w/ some gravels

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (LRR C)
- ☐ 1 cm Muck (A9) (LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? ○ Yes ◉ No

Remarks:
Soil is damp.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (Nonriverine)
- ☐ Sediment Deposits (B2) (Nonriverine)
- ☐ Drift Deposits (B3) (Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thick Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☑ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? ○ Yes ◉ No Depth (inches): _____

Water Table Present? ○ Yes ◉ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ○ Yes ◉ No Depth (inches): _____

Wetland Hydrology Present? ○ Yes ◉ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station | City/County: Ellensburg/Kittitas | Sampling Date: 5/7/2019

Applicant/Owner: Kittitas Solid Waste | State: WA | Sampling Point: PW10sp1

Investigator(s): Jen Bader, Kevin Haydon | Section, Township, Range: S28 T18N R18E

Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): none | Slope (%): 1

Subregion (LRR): LRR B | Lat: 47.017524 | Long: -120.587454 | Datum: NAD83

Soil Map Unit Name: Naneum ashy loam, 0 to 2 percent slopes | NWI Classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? (●) Yes ( ) No (If no, explain in Remarks.)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? (●) Yes ( ) No

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	( ) Yes	(●) No	**Is the Sampled Area within a Wetland?**	( ) Yes (●) No
Hydric Soil Present?	( ) Yes	(●) No		
Wetland Hydrology Present?	( ) Yes	(●) No		

Remarks:
Data plot is in northeast corner of irrigated field. Ground is uneven with lots of depressions from cow hooves.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dom. Sp.?	Relative % Cover	Indicator Status
1.				
2.				
3.				
4.				
	= Total Cover			
Sapling/Shrub Stratum (Plot size: 15 ft)				
1.				
2.				
3.				
4.				
5.				
	= Total Cover			
Herb Stratum (Plot size: 5 ft)				
1. *Phleum pratense*	100	Y	100.0	FACU
2.				
3.				
4.				
5.				
6.				
7.				
8.				
	100 = Total Cover			
Woody Vine Stratum (Plot size: 15 ft)				
1.				
2.				
	= Total Cover			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	100	x 4 =	400
UPL species	0	x 5 =	0
Column Totals:	100 (A)		400 (B)

Prevalence Index = B/A = 4.000

Hydrophytic Vegetation Indicators:

[ ] Dominance Test is >50%

[ ] Prevalence Index is ≤3.0[1]

[ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

[ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? ( ) Yes (●) No

Remarks:
No change in vegetation species compared to surrounding area but *Phleum pratense* is very short (less than 6 inches) and already flowering indicating it is stressed in this location. From a distance, this looked like a depression filled with grazed *Carex;* however, closer inspection indicated it was a solid patch of short grass.

SOIL

Sampling Point: PW10sp1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 2/1	100					Silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (LRR C)
- ☐ 1 cm Muck (A9) (LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? ○ Yes ◉ No

Remarks:
Soil is damp.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (Nonriverine)
- ☐ Sediment Deposits (B2) (Nonriverine)
- ☐ Drift Deposits (B3) (Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thick Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☑ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? ○ Yes ◉ No Depth (inches): _____

Water Table Present? ○ Yes ◉ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ○ Yes ◉ No Depth (inches): _____

Wetland Hydrology Present? ○ Yes ◉ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
The main irrigation ditch for the field, D5, is directly north of this data plot and full of water. There are also small, dry side ditches east and west of the point.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kittitas County Waste Transfer Station | City/County: Ellensburg/Kittitas | Sampling Date: 5/7/2019

Applicant/Owner: Kittitas Solid Waste | State: WA | Sampling Point: D12sp1

Investigator(s): Jen Bader, Kevin Haydon | Section, Township, Range: S28 T18N R18E

Landform (hillslope, terrace, etc.): Ditch | Local relief (concave, convex, none): Concave | Slope (%): 5

Subregion (LRR): LRR B | Lat: 47.014028 | Long: -120.587855 | Datum: NAD83

Soil Map Unit Name: Nack-Opnish complex, 0 to 2 percent slopes | NWI Classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? (●) Yes ( ) No (If no, explain in Remarks.)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? (●) Yes ( ) No

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	(●) Yes	( ) No	**Is the Sampled Area within a Wetland?**	( ) Yes (●) No
Hydric Soil Present?	( ) Yes	(●) No		
Wetland Hydrology Present?	(●) Yes	( ) No		

Remarks:
This data plot is along the offsite ditch approximately 5 feet south of the property boundary. The ditch is primarly *Phalaris arundinacea;* however, there were sections along it that include isolated riparian shrubs and *Typha latifolia.*

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dom. Sp.?	Relative % Cover	Indicator Status
1.				
2.				
3.				
4.				
	= Total Cover			
Sapling/Shrub Stratum (Plot size: 15 ft)				
1. *Cornus alba*	5	Y	62.5	FACW
2. *Rosa nutkana*	3	Y	37.5	FACU
3.				
4.				
5.				
	8 = Total Cover			
Herb Stratum (Plot size: 5 ft)				
1. *Phalaris arundinacea*	75	Y	75.0	FACW
2. *Solanum dulcamara*	25	Y	25.0	FAC
3.				
4.				
5.				
6.				
7.				
8.				
	100 = Total Cover			
Woody Vine Stratum (Plot size: 15 ft)				
1.				
2.				
	= Total Cover			

% Bare Ground in Herb Stratum 0 | % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	80	x 2 =	160
FAC species	25	x 3 =	75
FACU species	3	x 4 =	12
UPL species	0	x 5 =	0
Column Totals:	108 (A)		247 (B)

Prevalence Index = B/A = 2.287

Hydrophytic Vegetation Indicators:

- [✓] Dominance Test is >50%
- [✓] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? (●) Yes ( ) No

Remarks:
Uplands to the south of this ditch are weedy.

SOIL

Sampling Point: D12sp1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 2/2	100					Silty clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (LRR C)
- ☐ 1 cm Muck (A9) (LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? ○ Yes ◉ No

Remarks:
Saturated to surface

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1) (Nonriverine)
- ☐ Sediment Deposits (B2) (Nonriverine)
- ☐ Drift Deposits (B3) (Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thick Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☑ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☑ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? ○ Yes ◉ No Depth (inches): _____

Water Table Present? ◉ Yes ○ No Depth (inches): 5

Saturation Present? (includes capillary fringe) ◉ Yes ○ No Depth (inches): 0

Wetland Hydrology Present? ◉ Yes ○ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
There is surface water present in the ditch approximatly 2 feet south of the data plot.

Appendix D
Wetland Rating Forms

Wetland name or number W1

RATING SUMMARY – Eastern Washington

Name of wetland (or ID #): WETLAND 1 Date of site visit: 10/26/18

Rated by P. O'NEILL Trained by Ecology? __ Yes X No Date of training_____

HGM Class used for rating SLOPE Wetland has multiple HGM classes? ___Y X N

NOTE: Form is not complete without the figures requested (*figures can be combined*).

Source of base aerial photo/map GOOGLE EARTH

OVERALL WETLAND CATEGORY IV (based on functions___ or special characteristics___)

1. Category of wetland based on FUNCTIONS

_____**Category I** – Total score = 22-27

_____**Category II** – Total score = 19-21

_____**Category III** – Total score = 16-18

14 **Category IV** – Total score = 9-15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	Circle the appropriate ratings			
Site Potential	H M (L)	H M (L)	H M (L)	
Landscape Potential	H (M) L	H M (L)	H (M) L	
Value	H (M) L	(H) M L	H M (L)	TOTAL
Score Based on Ratings	5	5	4	14

Score for each function based on three ratings *(order of ratings is not important)*

9 = H,H,H
8 = H,H,M
7 = H,H,L
7 = H,M,M
6 = H,M,L
6 = M,M,M
5 = H,L,L
5 = M,M,L
4 = M,L,L
3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY *Circle the appropriate category*
Vernal Pools	II III
Alkali	I
Wetland of High Conservation Value	I
Bog and Calcareous Fens	I
Old Growth or Mature Forest – slow growing	I
Aspen Forest	I
Old Growth or Mature Forest – fast growing	II
Floodplain forest	II
None of the above	✓

Wetland name or number_____

Maps and figures required to answer questions correctly for Eastern Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	D 1.3, H 1.1, H 1.5	
Hydroperiods (including area of open water for H 1.3)	D 1.4, H 1.2, H 1.3	
Location of outlet (*can be added to map of hydroperiods)*	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	D 2.2, D 5.2	
Map of the contributing basin	D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	
Hydroperiods	H 1.2, H 1.3	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	R 2.4	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of wetland vs. width of stream *(can be added to another figure)*	R 4.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	L 1.1, L 4.1, H 1.1, H 1.5	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	
Hydroperiods	H 1.2, H 1.3	
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants *(can be added to figure above)*	S 4.1	
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	S 3.3	

Wetland name or number W1

HGM Classification of Wetland in Eastern Washington

For questions 1-4, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-4 apply, and go to Question 5.

1. Does the entire unit **meet both** of the following criteria?
   ___The vegetated part of the wetland is on the water side of the Ordinary High Water Mark of a body of permanent open water (without any plants on the surface) that is at least 20 ac (8 ha) in size
   ___At least 30% of the open water area is deeper than 10 ft (3 m)

   NO – go to 2 **YES** – The wetland class is **Lake Fringe** (Lacustrine Fringe)

2. Does the entire wetland unit **meet all** of the following criteria?
   ✓ The wetland is on a slope (*slope can be very gradual*),
   ✓ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks;
   ✓ The water leaves the wetland **without being impounded**.

   NO - go to 3 YES – The wetland class is **Slope**
   NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).

3. Does the entire wetland unit **meet all** of the following criteria?
   ___ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river;
   ___ The overbank flooding occurs at least once every 10 years.

   NO - go to 4 YES – The wetland class is **Riverine**
   NOTE: The Riverine wetland can contain depressions that are filled with water when the river is not flooding.

4. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

   NO – go to 5 YES – The wetland class is **Depressional**

5. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-4 APPLY TO DIFFERENT AREAS IN THE WETLAND UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

Wetland name or number W1

NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the wetland unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM Class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine (the riverine portion is within the boundary of depression)	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine

If you are still unable to determine which of the above criteria apply to your wetland, or if you have ***more than 2 HGM classes*** *within a wetland boundary, classify the wetland as Depressional for the rating.*

Wetland name or number W1

SLOPE WETLANDS **Water Quality Functions** - Indicators that the site functions to improve water quality	Points (only 1 score per box)
S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of average slope of wetland: *(a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)* Slope is 1% or less — points = 3 Slope is > 1% - 2% — points = 2 Slope is > 2% - 5% — points = 1 Slope is greater than 5% — points = 0	2
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or tureorganic *(use NRCS definitions)*: Yes = 3 No = 0	
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. *Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.* Dense, uncut, herbaceous plants > 90% of the wetland area — points = 6 Dense, uncut, herbaceous plants > ½ of area — points = 3 Dense, woody, plants > ½ of area — points = 2 Dense, uncut, herbaceous plants > ¼ of area — points = 1 Does not meet any of the criteria above for plants — points = 0	0
Total for S 1 — Add the points in the boxes above	2

Rating of Site Potential If score is: ___ 12 = H ___ 6-11 = M 2 0-5 = L *Record the rating on the first page*

S 2.0. Does the landscape have the potential to support the water quality function at the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources GRAZING Yes = 1 No = 0	1
Total for S 2 — Add the points in the boxes above	2

Rating of Landscape Potential If score is: 2 1-2 = M ___ 0 = L *Record the rating on the first page*

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly to a stream, river, or lake that is on the 303(d) list *(within 1 mi)*? Yes = 1 No = 0	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? *At least one aquatic resource in the basin is on the 303(d) list.* Yes = 1 No = 0	1
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality *(answer YES if there is a TMDL for the drainage or basin in which wetland is found)*? Yes = 2 No = 0	0
Total for S 3 — Add the points in the boxes above	1

Rating of Value If score is: ___ 2-4 = H 1 1 = M ___ 0 = L *Record the rating on the first page*

Wetland name or number W1

SLOPE WETLANDS **Hydrologic Functions** - Indicators that the site functions to reduce flooding and erosion	Points (only 1 score per box)
S 4.0. Does the site have the potential to reduce flooding and erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. *Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows.* Dense, uncut, **rigid** plants cover > 90% of the area of the wetland — points = 1 All other conditions — points = 0	0

Rating of Site Potential If score is: ___ 1 = M 0 0 = L *Record the rating on the first page*

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses that generate excess surface runoff? — Yes = 1 No = 0	1

Rating of Landscape Potential If score is: 1 1 = M ___ 0 = L *Record the rating on the first page*

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has surface flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) — points = 2 Surface flooding problems are in a sub-basin farther down-gradient — points = 1 No flooding problems anywhere downstream — points = 0	2
S 6.2. Has the site been identified as important for flood storage and flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for S 6 — Add the points in the boxes above	2

Rating of Value If score is: 2 2-4 = H ___ 1 = M ___ 0 = L *Record the rating on the first page*

NOTES and FIELD OBSERVATIONS:

Wetland name or number W1

H 1.6. Special habitat features	
Check the habitat features that are present in the wetland. The number of checks is the number of points. ____Loose rocks larger than 4 in OR large, downed, woody debris (> 4 in diameter) within the area of surface ponding or in stream. ____Cattails or bulrushes are present within the wetland. ____Standing snags (diameter at the bottom > 4 in) in the wetland or within 30 m (100 ft) of the edge. ____Emergent or shrub vegetation in areas that are permanently inundated/ponded. ____Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 45 degree slope) OR signs of recent beaver activity ✓ Invasive species cover less than 20% in each stratum of vegetation *(canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)*	1
Total for H 1 — Add the points in the boxes above	2

Rating of Site Potential If score is: ___ **15-18 = H** ___ **7-14 = M** 2 **0-6 = L** *Record the rating on the first page*

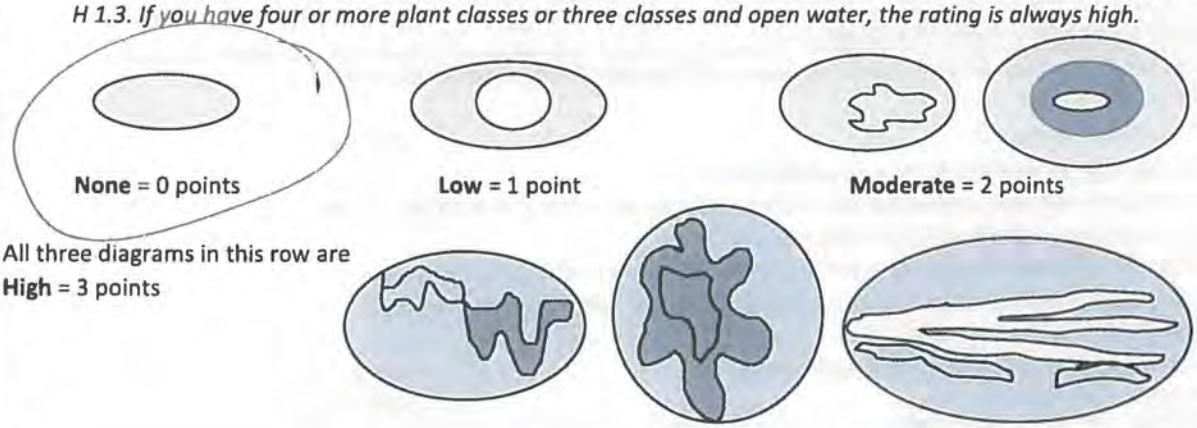
H 2.0. Does the landscape have the potential to support habitat functions of the site?	
H 2.1. Accessible habitat (only area of habitat abutting wetland). If total accessible habitat is: *Calculate:* % undisturbed habitat 10 + [(% moderate and low intensity land uses)/2] 15 = 25 % (30/2) > 1/3 (33.3%) of 1 km Polygon — points = 3 20-33% of 1km Polygon — points = 2 10-19% of 1km Polygon — points = 1 <10% of 1km Polygon — points = 0	2
H 2.2. Undisturbed habitat in 1 km Polygon around wetland. *Calculate:* % undisturbed habitat 10 + [(% moderate and low intensity land uses)/2] 15 = 25 % (30/2) Undisturbed habitat > 50% of Polygon — points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches — points = 2 Undisturbed habitat 10 - 50% and > 3 patches — points = 1 Undisturbed habitat < 10% of Polygon — points = 0	2
H 2.3. Land use intensity in 1 km Polygon: > 50% of Polygon is high intensity land use — points = (-2) Does not meet criterion above — points = 0	-2
H 2.4. The wetland is in an area where annual rainfall is less than 12 in, and its water regime is not influenced by irrigation practices, dams, or water control structures. *Generally, this means outside boundaries of reclamation areas, irrigation districts, or reservoirs* — Yes = 3 No = 0	0
Total for H 2 — Add the points in the boxes above	2

Rating of Landscape Potential If score is: ___ **4-9 = H** 2 **1-3 = M** ___ **< 1 = L** *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose the highest score that applies to the wetland being rated* Site meets ANY of the following criteria: — points = 2 — It has 3 or more priority habitats within 100 m (see Appendix B) — It provides habitat for Threatened or Endangered species (any plant or animal on state or federal lists) — It is mapped as a location for an individual WDFW species — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats within 100 m (see Appendix B) — points = 1 Site does not meet any of the criteria above — points = 0	0

Rating of Value If score is: ___ **2 = H** ___ **1 = M** 0 **0 = L** *Record the rating on the first page*

Wetland name or number W1

These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat	(only 1 score per box)
H 1.0. Does the wetland have the potential to provide habitat for many species?	
H 1.1. Structure of the plant community: *Check the Cowardin vegetation classes present and categories of emergent plants. Size threshold for each category is >= ¼ ac or >= 10% of the wetland if wetland is < 2.5 ac.* ____Aquatic bed ____Emergent plants 0-12 in (0-30 cm) high are the highest layer and have > 30% cover ✓ Emergent plants >12-40 in (>30-100 cm) high are the highest layer with >30% cover ____Emergent plants > 40 in (> 100 cm) high are the highest layer with >30% cover ____Scrub-shrub (areas where shrubs have >30% cover) 4 or more checks: points = 3 ____Forested (areas where trees have >30% cover) 3 checks: points = 2 2 checks: points = 1 1 check: points = 0	0
H 1.2. Is one of the vegetation types Aquatic Bed? Yes = 1 No = 0	0
H 1.3. Surface water H 1.3.1. Does the wetland have areas of open water (without emergent or shrub plants) over at least ¼ ac **OR** 10% of its area during the March to early June **OR** in August to the end of September? *Answer YES for Lake Fringe wetlands.* Yes = 3 points & go to H 1.4 No = go to H 1.3.2 H 1.3.2. Does the wetland have an intermittent or permanent, and unvegetated stream within its boundaries, or along one side, over at least ¼ ac or 10% of its area? *Answer yes only if H 1.3.1 is No.* Yes = 3 No = 0	0
H 1.4. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft^2. *Different patches of the same species can be combined to meet the size threshold. You do not have to name the species.* *Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Russian olive, Phragmites, Canadian thistle, yellow-flag iris, and saltcedar (Tamarisk)* # of species 4 Scoring: > 9 species: points = 2 4-9 species: points = 1 < 4 species: points = 0	1
H 1.5. Interspersion of habitats Decide from the diagrams below whether interspersion among types of plant structures (described in H 1.1), and unvegetated areas (open water or mudflats) is high, moderate, low, or none. *Use map of Cowardin and emergent plant classes prepared for questions H 1.1 and map of open water from H 1.3. If you have four or more plant classes or three classes and open water, the rating is always high.*  **None** = 0 points **Low** = 1 point **Moderate** = 2 points All three diagrams in this row are **High** = 3 points Riparian braided channels with 2 classes	Figure__ 0

Wetland name or number W1

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate category. NOTE: A wetland may meet the criteria for more than one set of special characteristics. Record all those that apply. NOTE: All wetlands should also be characterized based on their functions.

Wetland Type *Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.*	**Category**
SC 1.0. Vernal pools Is the wetland **less than 4000 ft²**, and does it meet at least **two** of the following criteria? — Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input. — Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *If you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.* — The soil in the wetland is shallow [< 1 ft (30 cm)deep] and is underlain by an impermeable layer such as basalt or clay. — Surface water is present for less than 120 days during the wet season. Yes – Go to **SC 1.1** No = **Not a vernal pool** SC 1.1. Is the vernal pool relatively undisturbed in February and March? Yes – Go to **SC 1.2** No = **Not a vernal pool with special characteristics**	
SC 1.2. Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 mi (other wetlands, rivers, lakes etc.)? Yes = **Category II** No = **Category III**	**Cat. II** **Cat. III**
SC 2.0. Alkali wetlands Does the wetland meet **one** of the following criteria? — The wetland has a conductivity > 3.0 mS/cm. — The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 4 for list of plants found in alkali systems). — If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt. **OR** does the wetland unit meet two of the following three sub-criteria? — Salt encrustations around more than 75% of the edge of the wetland — More than ¾ of the plant cover consists of species listed on Table 4 — A pH above 9.0. All alkali wetlands have a high pH, but please note that some freshwater wetlands may also have a high pH. Thus, pH alone is not a good indicator of alkali wetlands. Yes = **Category I** No= **Not an alkali wetland**	**Cat. I**
SC 3.0. Wetlands of High Conservation Value (WHCV) SC 3.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes – Go to **SC 3.2** No – Go to **SC 3.3** SC 3.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = **Category I** No = **Not a WHCV** SC 3.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf Yes – **Contact WNHP/WDNR and go to SC 3.4** No = **Not a WHCV** SC 3.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and it is listed on their website? Yes = **Category I** No =**Not a WHCV**	**Cat. I**

Wetland name or number W1

SC 4.0 Bogs and Calcareous Fens Does the wetland (or any part of the wetland unit) meet both the criteria for soils and vegetation in bogs or calcareous fens? *Use the key below to identify if the wetland is a bog or calcareous fen.* ***If you answer yes you will still need to rate the wetland based on its functions.*** SC 4.1. Does an area within the wetland have organic soil horizons (i.e., layers of organic soil), either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? *See Appendix C for a field key to identify organic soils.* Yes – Go to **SC 4.3** No – Go to **SC 4.2** SC 4.2. Does an area within the wetland have organic soils, either peats or mucks, that are less than 16 in deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to **SC 4.3** No = **Is not a bog for rating** SC 4.3. Does an area within the wetland have more than 70% cover of mosses at ground level AND at least 30% of the total plant cover consists of species in Table 5? Yes = **Category I bog** No – Go to **SC 4.4** **NOTE:** If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 5 are present, the wetland is a bog. SC 4.4. Is an area with peats or mucks forested (> 30% cover) with subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 5 provide more than 30% of the cover under the canopy? Yes = **Category I bog** No – Go to **SC 4.5** SC 4.5. Do the species listed in Table 6 comprise at least 20% of the total plant cover within an area of peats and mucks? Yes = **Is a Calcareous Fen for purpose of rating** No – Go to **SC 4.6** SC 4.6. Do the species listed in Table 6 comprise at least 10% of the total plant cover in an area of peats and mucks, AND one of the two following conditions is met: — Marl deposits [calcium carbonate ($CaCO_3$) precipitate] occur on the soil surface or plant stems — The pH of free water is ≥ 6.8 AND electrical conductivity is ≥ 200 uS/cm at multiple locations within the wetland Yes = **Is a Category I calcareous fen** No = **Is not a calcareous fen**	**Cat. I** **Cat. I**

SC 5.0. Forested Wetlands Does the wetland have an area of forest rooted within its boundary that meets **at least one** of the following three criteria? (*Continue only if you have identified that a forested class is present in question H 1.1*) — The wetland is within the 100 year floodplain of a river or stream — Aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species — There is at least ¼ ac of trees (even in wetlands smaller than 2.5 ac) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW *(see definitions in question H3.1)* Yes – Go to **SC 5.1** No = **Not a forested wetland with special characteristics**	
SC 5.1. Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees (*see Table 7*)? Yes = **Category I** No – Go to **SC 5.2**	**Cat. I**
SC 5.2. Does the wetland have areas where aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species? Yes = **Category I** No – Go to **SC 5.3**	**Cat. I**
SC 5.3. Does the wetland have at least ¼ acre with a forest canopy where more than 50% of the tree species (by cover) are fast growing species (*see Table 7*)? Yes = **Category II** No – Go to **SC 5.4**	**Cat. II**
SC 5.4. Is the forested component of the wetland within the 100 year floodplain of a river or stream? Yes = **Category II** No = **Not a forested wetland with special characteristics**	**Cat. II**
Category of wetland based on Special Characteristics *Choose the highest rating if wetland falls into several categories* If you answered No for all types, enter "Not Applicable" on Summary Form	NA

W1

Appendix B: WDFW Priority Habitats in Eastern Washington

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here: http://wdfw.wa.gov/conservation/phs/list/)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland: ***NOTE:*** *This question is independent of the land use between the wetland and the priority habitat.*

NO **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).

NO **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).

NO **Old-growth/Mature forests:** Old-growth east of Cascade crest – Stands are highly variable in tree species composition and structural characteristics due to the influence of fire, climate, and soils. In general, stands will be >150 years of age, with 10 trees/ac (25 trees/ha) that are > 21 in (53 cm) dbh, and 1-3 snags/ac (2.5-7.5 snags/ha) that are > 12-14 in (30-35 cm) diameter. Downed logs may vary from abundant to absent. Canopies may be single or multi-layered. Evidence of human-caused alterations to the stand will be absent or so slight as to not affect the ecosystem's essential structures and functions. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west and 80-160 years old east of the Cascade crest.

NO **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).

NO **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

NO **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

NO **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

NO **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.

NO **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

NO **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 12 in (30 cm)in eastern Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

NO **Shrub-steppe:** A nonforested vegetation type consisting of one or more layers of perennial bunchgrasses and a conspicuous but discontinuous layer of shrubs (see Eastside Steppe for sites with little or no shrub cover).

NO **Eastside Steppe:** Nonforested vegetation type dominated by broadleaf herbaceous flora (i.e., forbs), perennial bunchgrasses, or a combination of both. Bluebunch wheatgrass (*Pseudoroegneria spicata*) is often the prevailing cover component along with Idaho fescue (*Festuca idahoensis*), Sandberg bluegrass (*Poa secunda*), rough fescue (*F. campestris*), or needlegrasses (*Achnatherum* spp.).

NO **Juniper Savannah:** All juniper woodlands.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

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Wetland name or number W2

RATING SUMMARY – Eastern Washington

Name of wetland (or ID #): WETLAND 2 Date of site visit: 10/26/18

Rated by P. O'NEILL Trained by Ecology? __ Yes X No Date of training _____

HGM Class used for rating SLOPE Wetland has multiple HGM classes? ___ Y X N

NOTE: Form is not complete without the figures requested (*figures can be combined*).
Source of base aerial photo/map GOOGLE EARTH

OVERALL WETLAND CATEGORY IV (based on functions___ or special characteristics___)

1. Category of wetland based on FUNCTIONS

_____**Category I** – Total score = 22-27
_____**Category II** – Total score = 19-21
_____**Category III** – Total score = 16-18
14 **Category IV** – Total score = 9-15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	Circle the appropriate ratings			
Site Potential	H M (L)	H M (L)	H M (L)	
Landscape Potential	H (M) L	H M (L)	H (M) L	
Value	H (M) L	(H) M L	H M (L)	TOTAL
Score Based on Ratings	5	5	4	14

Score for each function based on three ratings *(order of ratings is not important)*

9 = H,H,H
8 = H,H,M
7 = H,H,L
7 = H,M,M
6 = H,M,L
6 = M,M,M
5 = H,L,L
5 = M,M,L
4 = M,L,L
3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY *Circle the appropriate category*
Vernal Pools	II III
Alkali	I
Wetland of High Conservation Value	I
Bog and Calcareous Fens	I
Old Growth or Mature Forest – slow growing	I
Aspen Forest	I
Old Growth or Mature Forest – fast growing	II
Floodplain forest	II
None of the above	✓

Wetland name or number_____

Maps and figures required to answer questions correctly for Eastern Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	D 1.3, H 1.1, H 1.5	
Hydroperiods (including area of open water for H 1.3)	D 1.4, H 1.2, H 1.3	
Location of outlet (*can be added to map of hydroperiods)*	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	D 2.2, D 5.2	
Map of the contributing basin	D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	
Hydroperiods	H 1.2, H 1.3	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	R 2.4	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of wetland vs. width of stream *(can be added to another figure)*	R 4.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	L 1.1, L 4.1, H 1.1, H 1.5	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	
Hydroperiods	H 1.2, H 1.3	
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants *(can be added to figure above)*	S 4.1	
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	S 3.3	

Wetland name or number W2

HGM Classification of Wetland in Eastern Washington

For questions 1-4, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-4 apply, and go to Question 5.

1. Does the entire unit **meet both** of the following criteria?
   ___The vegetated part of the wetland is on the water side of the Ordinary High Water Mark of a body of permanent open water (without any plants on the surface) that is at least 20 ac (8 ha) in size
   ___At least 30% of the open water area is deeper than 10 ft (3 m)

   NO – go to 2 **YES** – The wetland class is **Lake Fringe** (Lacustrine Fringe)

2. Does the entire wetland unit **meet all** of the following criteria?
   ✓ The wetland is on a slope (*slope can be very gradual*),
   ✓ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks;
   ✓ The water leaves the wetland **without being impounded**.

   NO - go to 3 YES – The wetland class is **Slope**
   NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).

3. Does the entire wetland unit **meet all** of the following criteria?
   ___ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river;
   ___ The overbank flooding occurs at least once every 10 years.

   NO - go to 4 YES – The wetland class is **Riverine**
   NOTE: The Riverine wetland can contain depressions that are filled with water when the river is not flooding.

4. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

   NO – go to 5 YES – The wetland class is **Depressional**

5. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-4 APPLY TO DIFFERENT AREAS IN THE WETLAND UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

Wetland name or number W2

NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the wetland unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM Class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine (the riverine portion is within the boundary of depression)	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine

If you are still unable to determine which of the above criteria apply to your wetland, or if you have ***more than 2 HGM classes*** *within a wetland boundary, classify the wetland as Depressional for the rating.*

Wetland name or number W2

SLOPE WETLANDS **Water Quality Functions** - Indicators that the site functions to improve water quality	Points (only 1 score per box)
S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of average slope of wetland: *(a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)* Slope is 1% or less — points = 3 Slope is > 1% - 2% — points = 2 Slope is > 2% - 5% — points = 1 Slope is greater than 5% — points = 0	2
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or tureorganic *(use NRCS definitions)*: Yes = 3 No = 0	
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. *Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.* Dense, uncut, herbaceous plants > 90% of the wetland area — points = 6 Dense, uncut, herbaceous plants > ½ of area — points = 3 Dense, woody, plants > ½ of area — points = 2 Dense, uncut, herbaceous plants > ¼ of area — points = 1 Does not meet any of the criteria above for plants — points = 0	0
Total for S 1 — Add the points in the boxes above	2

Rating of Site Potential If score is: ___ **12 = H** ___ **6-11 = M** 2 **0-5 = L** *Record the rating on the first page*

S 2.0. Does the landscape have the potential to support the water quality function at the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources GRAZING — Yes = 1 No = 0	1
Total for S 2 — Add the points in the boxes above	2

Rating of Landscape Potential If score is: 2 **1-2 = M** ___ **0 = L** *Record the rating on the first page*

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly to a stream, river, or lake that is on the 303(d) list (*within 1 mi*)? Yes = 1 No = 0	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? *At least one aquatic resource in the basin is on the 303(d) list.* Yes = 1 No = 0	1
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (*answer YES if there is a TMDL for the drainage or basin in which wetland is found*)? Yes = 2 No = 0	0
Total for S 3 — Add the points in the boxes above	1

Rating of Value If score is: ___ **2-4 = H** 1 **1 = M** ___ **0 = L** *Record the rating on the first page*

Wetland name or number_____

SLOPE WETLANDS **Hydrologic Functions** - Indicators that the site functions to reduce flooding and erosion	Points (only 1 score per box)
S 4.0. Does the site have the potential to reduce flooding and erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. *Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows.* Dense, uncut, **rigid** plants cover > 90% of the area of the wetland — points = 1 All other conditions — points = 0	0

Rating of Site Potential If score is: ___1 = M (0) 0 = L *Record the rating on the first page*

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses that generate excess surface runoff? — Yes = 1 / No = 0	1

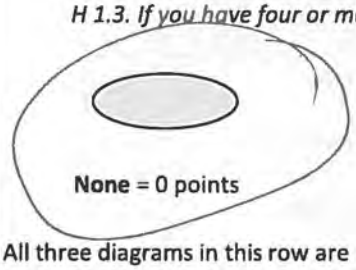
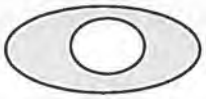
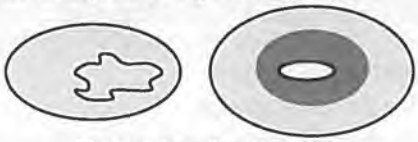
Rating of Landscape Potential If score is: (1) 1 = M ___0 = L *Record the rating on the first page*

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has surface flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) — points = 2 Surface flooding problems are in a sub-basin farther down-gradient — points = 1 No flooding problems anywhere downstream — points = 0	2
S 6.2. Has the site been identified as important for flood storage and flood conveyance in a regional flood control plan? Yes = 2 / No = 0	0
Total for S 6 — Add the points in the boxes above	2

Rating of Value If score is: (2) 2-4 = H ___1 = M ___0 = L *Record the rating on the first page*

NOTES and FIELD OBSERVATIONS:

Wetland name or number W2

These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat	(only 1 score per box)
H 1.0. Does the wetland have the potential to provide habitat for many species?	
H 1.1. Structure of the plant community: *Check the Cowardin vegetation classes present and categories of emergent plants. Size threshold for each category is >= ¼ ac or >= 10% of the wetland if wetland is < 2.5 ac.* ____Aquatic bed ____Emergent plants 0-12 in (0-30 cm) high are the highest layer and have > 30% cover ✓ Emergent plants >12-40 in (>30-100 cm) high are the highest layer with >30% cover ____Emergent plants > 40 in (> 100 cm) high are the highest layer with >30% cover ____Scrub-shrub (areas where shrubs have >30% cover) 4 or more checks: points = 3 ____Forested (areas where trees have >30% cover) 3 checks: points = 2 2 checks: points = 1 1 check: points = 0	0
H 1.2. Is one of the vegetation types Aquatic Bed? Yes = 1 No = 0	0
H 1.3. Surface water H 1.3.1. Does the wetland have areas of open water (without emergent or shrub plants) over at least ¼ ac **OR** 10% of its area during the March to early June **OR** in August to the end of September? *Answer YES for Lake Fringe wetlands.* Yes = 3 points & go to H 1.4 No = go to H 1.3.2 H 1.3.2. Does the wetland have an intermittent or permanent, and unvegetated stream within its boundaries, or along one side, over at least ¼ ac or 10% of its area? *Answer yes only if H 1.3.1 is No.* Yes = 3 No = 0	0
H 1.4. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft^2. D*ifferent patches of the same species can be combined to meet the size threshold. You do not have to name the species.* *Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Russian olive, Phragmites, Canadian thistle, yellow-flag iris, and saltcedar (Tamarisk)* # of species 4 Scoring: > 9 species: points = 2 4-9 species: points = 1 < 4 species: points = 0	1
H 1.5. Interspersion of habitats Decide from the diagrams below whether interspersion among types of plant structures (described in H 1.1), and unvegetated areas (open water or mudflats) is high, moderate, low, or none. *Use map of Cowardin and emergent plant classes prepared for questions H 1.1 and map of open water from H 1.3. If you have four or more plant classes or three classes and open water, the rating is always high.*  **None** = 0 points  **Low** = 1 point  **Moderate** = 2 points All three diagrams in this row are **High** = 3 points  Riparian braided channels with 2 classes	Figure__ 0

Wetland name or number W2

H 1.6. Special habitat features *Check the habitat features that are present in the wetland. The number of checks is the number of points.* ____Loose rocks larger than 4 in OR large, downed, woody debris (> 4 in diameter) within the area of surface ponding or in stream. ____Cattails or bulrushes are present within the wetland. ____Standing snags (diameter at the bottom > 4 in) in the wetland or within 30 m (100 ft) of the edge. ____Emergent or shrub vegetation in areas that are permanently inundated/ponded. ____Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 45 degree slope) OR signs of recent beaver activity ✓ Invasive species cover less than 20% in each stratum of vegetation *(canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)*	1
Total for H 1 — Add the points in the boxes above	2

Rating of Site Potential If score is: ___15-18 = H ___7-14 = M 2 0-6 = L *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support habitat functions of the site?	
H 2.1. Accessible habitat (only area of habitat abutting wetland). If total accessible habitat is: *Calculate:* % undisturbed habitat 10 + [(% moderate and low intensity land uses)/2] 19 = 29 % (38/2) > 1/3 (33.3%) of 1 km Polygon — points = 3 20-33% of 1km Polygon — points = 2 10-19% of 1km Polygon — points = 1 <10% of 1km Polygon — points = 0	2
H 2.2. Undisturbed habitat in 1 km Polygon around wetland. *Calculate:* % undisturbed habitat 10 + [(% moderate and low intensity land uses)/2] 19 = 29 % (38/2) Undisturbed habitat > 50% of Polygon — points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches — points = 2 Undisturbed habitat 10 - 50% and > 3 patches — points = 1 Undisturbed habitat < 10% of Polygon — points = 0	2
H 2.3. Land use intensity in 1 km Polygon: > 50% of Polygon is high intensity land use — points = (-2) Does not meet criterion above — points = 0	-2
H 2.4. The wetland is in an area where annual rainfall is less than 12 in, and its water regime is not influenced by irrigation practices, dams, or water control structures. *Generally, this means outside boundaries of reclamation areas, irrigation districts, or reservoirs* — Yes = 3 No = 0	0
Total for H 2 — Add the points in the boxes above	2

Rating of Landscape Potential If score is: ___4-9 = H 2 1-3 = M ___< 1 = L *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose the highest score that applies to the wetland being rated* Site meets ANY of the following criteria: — points = 2 — It has 3 or more priority habitats within 100 m (see Appendix B) — It provides habitat for Threatened or Endangered species (any plant or animal on state or federal lists) — It is mapped as a location for an individual WDFW species — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats within 100 m (see Appendix B) — points = 1 Site does not meet any of the criteria above — points = 0	0

Rating of Value If score is: ___2 = H ___1 = M 0 0 = L *Record the rating on the first page*

Wetland name or number W2

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate category. NOTE: A wetland may meet the criteria for more than one set of special characteristics. Record all those that apply. NOTE: All wetlands should also be characterized based on their functions.

Wetland Type *Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.*	**Category**
SC 1.0. Vernal pools Is the wetland **less than 4000 ft²**, and does it meet at least **two** of the following criteria? — Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input. — Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *If you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.* — The soil in the wetland is shallow [< 1 ft (30 cm)deep] and is underlain by an impermeable layer such as basalt or clay. — Surface water is present for less than 120 days during the wet season. Yes – Go to **SC 1.1** No = **Not a vernal pool** SC 1.1. Is the vernal pool relatively undisturbed in February and March? Yes – Go to **SC 1.2** No = **Not a vernal pool with special characteristics**	
SC 1.2. Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 mi (other wetlands, rivers, lakes etc.)? Yes = **Category II** No = **Category III**	**Cat. II** **Cat. III**
SC 2.0. Alkali wetlands Does the wetland meet **one** of the following criteria? — The wetland has a conductivity > 3.0 mS/cm. — The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 4 for list of plants found in alkali systems). — If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt. **OR** does the wetland unit meet two of the following three sub-criteria? — Salt encrustations around more than 75% of the edge of the wetland — More than ⅓ of the plant cover consists of species listed on Table 4 — A pH above 9.0. All alkali wetlands have a high pH, but please note that some freshwater wetlands may also have a high pH. Thus, pH alone is not a good indicator of alkali wetlands. Yes = **Category I** No= **Not an alkali wetland**	**Cat. I**
SC 3.0. Wetlands of High Conservation Value (WHCV) SC 3.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes – Go to **SC 3.2** No – Go to **SC 3.3** SC 3.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = **Category I** No = **Not a WHCV** SC 3.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf Yes – **Contact WNHP/WDNR and go to SC 3.4** No = **Not a WHCV** SC 3.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and it is listed on their website? Yes = **Category I** No =**Not a WHCV**	**Cat. I**

Wetland name or number W2

SC 4.0 Bogs and Calcareous Fens Does the wetland (or any part of the wetland unit) meet both the criteria for soils and vegetation in bogs or calcareous fens? *Use the key below to identify if the wetland is a bog or calcareous fen.* ***If you answer yes you will still need to rate the wetland based on its functions.*** SC 4.1. Does an area within the wetland have organic soil horizons (i.e., layers of organic soil), either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? *See Appendix C for a field key to identify organic soils.* Yes – Go to **SC 4.3** No – Go to **SC 4.2** SC 4.2. Does an area within the wetland have organic soils, either peats or mucks, that are less than 16 in deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to **SC 4.3** No = **Is not a bog for rating** SC 4.3. Does an area within the wetland have more than 70% cover of mosses at ground level AND at least 30% of the total plant cover consists of species in Table 5? Yes = **Category I bog** No – Go to **SC 4.4** **NOTE:** If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 5 are present, the wetland is a bog. SC 4.4. Is an area with peats or mucks forested (> 30% cover) with subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 5 provide more than 30% of the cover under the canopy? Yes = **Category I bog** No – Go to **SC 4.5** SC 4.5. Do the species listed in Table 6 comprise at least 20% of the total plant cover within an area of peats and mucks? Yes = **Is a Calcareous Fen for purpose of rating** No – Go to **SC 4.6** SC 4.6. Do the species listed in Table 6 comprise at least 10% of the total plant cover in an area of peats and mucks, AND one of the two following conditions is met: — Marl deposits [calcium carbonate ($CaCO_3$) precipitate] occur on the soil surface or plant stems — The pH of free water is ≥ 6.8 AND electrical conductivity is ≥ 200 uS/cm at multiple locations within the wetland Yes = **Is a Category I calcareous fen** No = **Is not a calcareous fen**	**Cat. I** **Cat. I**

SC 5.0. Forested Wetlands Does the wetland have an area of forest rooted within its boundary that meets **at least one** of the following three criteria? (*Continue only if you have identified that a forested class is present in question H 1.1*) — The wetland is within the 100 year floodplain of a river or stream — Aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species — There is at least ¼ ac of trees (even in wetlands smaller than 2.5 ac) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW *(see definitions in question H3.1)* Yes – Go to **SC 5.1** No = **Not a forested wetland with special characteristics**	
SC 5.1. Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees (*see Table 7*)? Yes = **Category I** No – Go to **SC 5.2**	**Cat. I**
SC 5.2. Does the wetland have areas where aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species? Yes = **Category I** No – Go to **SC 5.3**	**Cat. I**
SC 5.3. Does the wetland have at least ¼ acre with a forest canopy where more than 50% of the tree species (by cover) are fast growing species (*see Table 7*)? Yes = **Category II** No – Go to **SC 5.4**	**Cat. II**
SC 5.4. Is the forested component of the wetland within the 100 year floodplain of a river or stream? Yes = **Category II** No = **Not a forested wetland with special characteristics**	**Cat. II**
Category of wetland based on Special Characteristics *Choose the highest rating if wetland falls into several categories* If you answered No for all types, enter "Not Applicable" on Summary Form	NA

W2

Appendix B: WDFW Priority Habitats in Eastern Washington

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here: http://wdfw.wa.gov/conservation/phs/list/)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland: ***NOTE:*** *This question is independent of the land use between the wetland and the priority habitat.*

NO **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).

NO **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).

NO **Old-growth/Mature forests:** Old-growth east of Cascade crest – Stands are highly variable in tree species composition and structural characteristics due to the influence of fire, climate, and soils. In general, stands will be >150 years of age, with 10 trees/ac (25 trees/ha) that are > 21 in (53 cm) dbh, and 1-3 snags/ac (2.5-7.5 snags/ha) that are > 12-14 in (30-35 cm) diameter. Downed logs may vary from abundant to absent. Canopies may be single or multi-layered. Evidence of human-caused alterations to the stand will be absent or so slight as to not affect the ecosystem's essential structures and functions. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west and 80-160 years old east of the Cascade crest.

NO **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).

NO **Riparian:** The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

NO **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

NO **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

NO **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.

NO **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

NO **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 12 in (30 cm)in eastern Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

NO **Shrub-steppe:** A nonforested vegetation type consisting of one or more layers of perennial bunchgrasses and a conspicuous but discontinuous layer of shrubs (see Eastside Steppe for sites with little or no shrub cover).

NO **Eastside Steppe:** Nonforested vegetation type dominated by broadleaf herbaceous flora (i.e., forbs), perennial bunchgrasses, or a combination of both. Bluebunch wheatgrass (*Pseudoroegneria spicata*) is often the prevailing cover component along with Idaho fescue (*Festuca idahoensis*), Sandberg bluegrass (*Poa secunda*), rough fescue (*F. campestris*), or needlegrasses (*Achnatherum* spp.).

NO **Juniper Savannah:** All juniper woodlands.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

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Wetland name or number W3

RATING SUMMARY – Eastern Washington

Name of wetland (or ID #): WETLAND 3 Date of site visit: 10/26/18

Rated by R. O'NEILL Trained by Ecology? __ Yes X No Date of training_____

HGM Class used for rating SLOPE Wetland has multiple HGM classes? ___Y X N

NOTE: Form is not complete without the figures requested (*figures can be combined*).

Source of base aerial photo/map GOOGLE EARTH

OVERALL WETLAND CATEGORY IV (based on functions___ or special characteristics___)

1. Category of wetland based on FUNCTIONS

_____**Category I** – Total score = 22-27

_____**Category II** – Total score = 19-21

_____**Category III** – Total score = 16-18

14 **Category IV** – Total score = 9-15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	Circle the appropriate ratings			
Site Potential	H M (L)	H M (L)	H M (L)	
Landscape Potential	H (M) L	H M (L)	H (M) L	
Value	H (M) L	(H) M L	H M (L)	TOTAL
Score Based on Ratings	5	5	4	15

Score for each function based on three ratings *(order of ratings is not important)*

9 = H,H,H
8 = H,H,M
7 = H,H,L
7 = H,M,M
6 = H,M,L
6 = M,M,M
5 = H,L,L
5 = M,M,L
4 = M,L,L
3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY *Circle the appropriate category*
Vernal Pools	II III
Alkali	I
Wetland of High Conservation Value	I
Bog and Calcareous Fens	I
Old Growth or Mature Forest – slow growing	I
Aspen Forest	I
Old Growth or Mature Forest – fast growing	II
Floodplain forest	II
None of the above	✓

Wetland name or number W3

Maps and figures required to answer questions correctly for Eastern Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	D 1.3, H 1.1, H 1.5	
Hydroperiods (including area of open water for H 1.3)	D 1.4, H 1.2, H 1.3	
Location of outlet (*can be added to map of hydroperiods)*	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	D 2.2, D 5.2	
Map of the contributing basin	D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	
Hydroperiods	H 1.2, H 1.3	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	R 2.4	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of wetland vs. width of stream *(can be added to another figure)*	R 4.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	L 1.1, L 4.1, H 1.1, H 1.5	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	
Hydroperiods	H 1.2, H 1.3	
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants *(can be added to figure above)*	S 4.1	
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	S 3.3	

Wetland name or number W3

HGM Classification of Wetland in Eastern Washington

For questions 1-4, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-4 apply, and go to Question 5.

1. Does the entire unit **meet both** of the following criteria?
   ___The vegetated part of the wetland is on the water side of the Ordinary High Water Mark of a body of permanent open water (without any plants on the surface) that is at least 20 ac (8 ha) in size
   ___At least 30% of the open water area is deeper than 10 ft (3 m)

   NO – go to 2 **YES** – The wetland class is **Lake Fringe** (Lacustrine Fringe)

2. Does the entire wetland unit **meet all** of the following criteria?
   ___The wetland is on a slope (*slope can be very gradual*),
   ___The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks;
   ___The water leaves the wetland **without being impounded**.

   NO - go to 3 YES – The wetland class is **Slope**
   NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).

3. Does the entire wetland unit **meet all** of the following criteria?
   ___ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river;
   ___ The overbank flooding occurs at least once every 10 years.

   NO - go to 4 YES – The wetland class is **Riverine**
   NOTE: The Riverine wetland can contain depressions that are filled with water when the river is not flooding.

4. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

   NO – go to 5 YES – The wetland class is **Depressional**

5. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-4 APPLY TO DIFFERENT AREAS IN THE WETLAND UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

Wetland name or number W3

NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the wetland unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM Class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine (the riverine portion is within the boundary of depression)	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine

*If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.*

Wetland name or number W3

SLOPE WETLANDS **Water Quality Functions** - Indicators that the site functions to improve water quality	Points (only 1 score per box)
S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of average slope of wetland: *(a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)* Slope is 1% or less — points = 3 Slope is > 1% - 2% — points = 2 Slope is > 2% - 5% — points = 1 Slope is greater than 5% — points = 0	2
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or tureorganic *(use NRCS definitions)*: Yes = 3 No = 0	
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. *Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.* Dense, uncut, herbaceous plants > 90% of the wetland area — points = 6 Dense, uncut, herbaceous plants > ½ of area — points = 3 Dense, woody, plants > ½ of area — points = 2 Dense, uncut, herbaceous plants > ¼ of area — points = 1 Does not meet any of the criteria above for plants — points = 0	0
Total for S 1 — Add the points in the boxes above	2

Rating of Site Potential If score is: ___ 12 = H ___ 6-11 = M 2 0-5 = L *Record the rating on the first page*

S 2.0. Does the landscape have the potential to support the water quality function at the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources _____ Yes = 1 No = 0	1
Total for S 2 — Add the points in the boxes above	2

Rating of Landscape Potential If score is: 2 1-2 = M ___ 0 = L *Record the rating on the first page*

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly to a stream, river, or lake that is on the 303(d) list (*within 1 mi*)? Yes = 1 No = 0	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? *At least one aquatic resource in the basin is on the 303(d) list.* Yes = 1 No = 0	1
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (*answer YES if there is a TMDL for the drainage or basin in which wetland is found*)? Yes = 2 No = 0	0
Total for S 3 — Add the points in the boxes above	1

Rating of Value If score is: ___ 2-4 = H ___ 1 = M ___ 0 = L *Record the rating on the first page*

Wetland name or number W3

SLOPE WETLANDS **Hydrologic Functions** - Indicators that the site functions to reduce flooding and erosion	Points (only 1 score per box)
S 4.0. Does the site have the potential to reduce flooding and erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. *Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows.* Dense, uncut, **rigid** plants cover > 90% of the area of the wetland — points = 1 All other conditions — points = 0	0

Rating of Site Potential If score is: ___ 1 = M 0 0 = L *Record the rating on the first page*

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses that generate excess surface runoff? — Yes = 1 No = 0	1

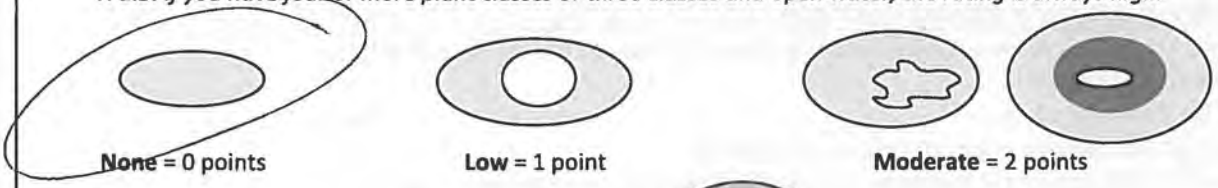
Rating of Landscape Potential If score is: 1 1 = M ___ 0 = L *Record the rating on the first page*

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has surface flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) — points = 2 Surface flooding problems are in a sub-basin farther down-gradient — points = 1 No flooding problems anywhere downstream — points = 0	2
S 6.2. Has the site been identified as important for flood storage and flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for S 6 — Add the points in the boxes above	2

Rating of Value If score is: ___ 2-4 = H ___ 1 = M ___ 0 = L *Record the rating on the first page*

NOTES and FIELD OBSERVATIONS:

Wetland name or number_____

These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat	(only 1 score per box)
H 1.0. Does the wetland have the potential to provide habitat for many species?	
H 1.1. Structure of the plant community: *Check the Cowardin vegetation classes present and categories of emergent plants. Size threshold for each category is >= ¼ ac or >= 10% of the wetland if wetland is < 2.5 ac.* ____Aquatic bed ____Emergent plants 0-12 in (0-30 cm) high are the highest layer and have > 30% cover __✓__Emergent plants >12-40 in (>30-100 cm) high are the highest layer with >30% cover ____Emergent plants > 40 in (> 100 cm) high are the highest layer with >30% cover ____Scrub-shrub (areas where shrubs have >30% cover) 4 or more checks: points = 3 ____Forested (areas where trees have >30% cover) 3 checks: points = 2 2 checks: points = 1 1 check: points = 0	0
H 1.2. Is one of the vegetation types Aquatic Bed? Yes = 1 No = 0	0
H 1.3. Surface water H 1.3.1. Does the wetland have areas of open water (without emergent or shrub plants) over at least ¼ ac **OR** 10% of its area during the March to early June **OR** in August to the end of September? *Answer YES for Lake Fringe wetlands.* Yes = 3 points & go to H 1.4 No = go to H 1.3.2 H 1.3.2. Does the wetland have an intermittent or permanent, and unvegetated stream within its boundaries, or along one side, over at least ¼ ac or 10% of its area? *Answer yes only if H 1.3.1 is No.* Yes = 3 No = 0	0
H 1.4. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft^2. D*ifferent patches of the same species can be combined to meet the size threshold. You do not have to name the species.* *Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Russian olive, Phragmites, Canadian thistle, yellow-flag iris, and saltcedar (Tamarisk)* # of species 4 Scoring: > 9 species: points = 2 4-9 species: points = 1 < 4 species: points = 0	1
H 1.5. Interspersion of habitats Decide from the diagrams below whether interspersion among types of plant structures (described in H 1.1), and unvegetated areas (open water or mudflats) is high, moderate, low, or none. *Use map of Cowardin and emergent plant classes prepared for questions H 1.1 and map of open water from H 1.3. If you have four or more plant classes or three classes and open water, the rating is always high.*  **None** = 0 points **Low** = 1 point **Moderate** = 2 points All three diagrams in this row are **High** = 3 points  Riparian braided channels with 2 classes	Figure__ 0

Wetland name or number W3

H 1.6. Special habitat features *Check the habitat features that are present in the wetland. The number of checks is the number of points.* ____Loose rocks larger than 4 in OR large, downed, woody debris (> 4 in diameter) within the area of surface ponding or in stream. ____Cattails or bulrushes are present within the wetland. ____Standing snags (diameter at the bottom > 4 in) in the wetland or within 30 m (100 ft) of the edge. ____Emergent or shrub vegetation in areas that are permanently inundated/ponded. ____Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 45 degree slope) OR signs of recent beaver activity __✓__Invasive species cover less than 20% in each stratum of vegetation *(canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)*	1
Total for H 1 — Add the points in the boxes above	2

Rating of Site Potential If score is: ___15-18 = H ___7-14 = M (2) 0-6 = L *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support habitat functions of the site?	
H 2.1. Accessible habitat (only area of habitat abutting wetland). If total accessible habitat is: *Calculate:* % undisturbed habitat 10 + [(% moderate and low intensity land uses)/2] 15 = 25 % (30/2) > 1/3 (33.3%) of 1 km Polygon — points = 3 20-33% of 1km Polygon — points = 2 10-19% of 1km Polygon — points = 1 <10% of 1km Polygon — points = 0	2
H 2.2. Undisturbed habitat in 1 km Polygon around wetland. *Calculate:* % undisturbed habitat 10 + [(% moderate and low intensity land uses)/2] 15 = 25 % (30/2) Undisturbed habitat > 50% of Polygon — points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches — points = 2 Undisturbed habitat 10 - 50% and > 3 patches — points = 1 Undisturbed habitat < 10% of Polygon — points = 0	2
H 2.3. Land use intensity in 1 km Polygon: > 50% of Polygon is high intensity land use — points = (- 2) Does not meet criterion above — points = 0	-2
H 2.4. The wetland is in an area where annual rainfall is less than 12 in, and its water regime is not influenced by irrigation practices, dams, or water control structures. *Generally, this means outside boundaries of reclamation areas, irrigation districts, or reservoirs* — Yes = 3 No = 0	0
Total for H 2 — Add the points in the boxes above	2

Rating of Landscape Potential If score is: ___4-9 = H (2) 1-3 = M ___< 1 = L *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose the highest score that applies to the wetland being rated* Site meets ANY of the following criteria: — points = 2 — It has 3 or more priority habitats within 100 m (see Appendix B) — It provides habitat for Threatened or Endangered species (any plant or animal on state or federal lists) — It is mapped as a location for an individual WDFW species — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats within 100 m (see Appendix B) — points = 1 Site does not meet any of the criteria above — points = 0	0

Rating of Value If score is: ___2 = H ___1 = M (0) 0 = L *Record the rating on the first page*

Wetland name or number_____

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate category. NOTE: A wetland may meet the criteria for more than one set of special characteristics. Record all those that apply. NOTE: All wetlands should also be characterized based on their functions.

Wetland Type *Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.*	**Category**
SC 1.0. Vernal pools Is the wetland **less than 4000 ft²**, and does it meet at least **two** of the following criteria? — Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input. — Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *If you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.* — The soil in the wetland is shallow [< 1 ft (30 cm)deep] and is underlain by an impermeable layer such as basalt or clay. — Surface water is present for less than 120 days during the wet season. Yes – Go to **SC 1.1** No = **Not a vernal pool** SC 1.1. Is the vernal pool relatively undisturbed in February and March? Yes – Go to **SC 1.2** No = **Not a vernal pool with special characteristics**	
SC 1.2. Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 mi (other wetlands, rivers, lakes etc.)? Yes = **Category II** No = **Category III**	**Cat. II** **Cat. III**
SC 2.0. Alkali wetlands Does the wetland meet **one** of the following criteria? — The wetland has a conductivity > 3.0 mS/cm. — The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 4 for list of plants found in alkali systems). — If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt. **OR** does the wetland unit meet two of the following three sub-criteria? — Salt encrustations around more than 75% of the edge of the wetland — More than ⅔ of the plant cover consists of species listed on Table 4 — A pH above 9.0. All alkali wetlands have a high pH, but please note that some freshwater wetlands may also have a high pH. Thus, pH alone is not a good indicator of alkali wetlands. Yes = **Category I** No= **Not an alkali wetland**	**Cat. I**
SC 3.0. Wetlands of High Conservation Value (WHCV) SC 3.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes – Go to **SC 3.2** No – Go to **SC 3.3** SC 3.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = **Category I** No = **Not a WHCV** SC 3.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf Yes – **Contact WNHP/WDNR and go to SC 3.4** No = **Not a WHCV** SC 3.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and it is listed on their website? Yes = **Category I** No =**Not a WHCV**	**Cat. I**

Wetland name or number_____

SC 4.0 Bogs and Calcareous Fens Does the wetland (or any part of the wetland unit) meet both the criteria for soils and vegetation in bogs or calcareous fens? *Use the key below to identify if the wetland is a bog or calcareous fen.* ***If you answer yes you will still need to rate the wetland based on its functions.*** SC 4.1. Does an area within the wetland have organic soil horizons (i.e., layers of organic soil), either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? *See Appendix C for a field key to identify organic soils.* Yes – Go to **SC 4.3** No – Go to **SC 4.2** SC 4.2. Does an area within the wetland have organic soils, either peats or mucks, that are less than 16 in deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to **SC 4.3** No = **Is not a bog for rating** SC 4.3. Does an area within the wetland have more than 70% cover of mosses at ground level AND at least 30% of the total plant cover consists of species in Table 5? Yes = **Category I bog** No – Go to **SC 4.4** **NOTE:** If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 5 are present, the wetland is a bog. SC 4.4. Is an area with peats or mucks forested (> 30% cover) with subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 5 provide more than 30% of the cover under the canopy? Yes = **Category I bog** No – Go to **SC 4.5** SC 4.5. Do the species listed in Table 6 comprise at least 20% of the total plant cover within an area of peats and mucks? Yes = **Is a Calcareous Fen for purpose of rating** No – Go to **SC 4.6** SC 4.6. Do the species listed in Table 6 comprise at least 10% of the total plant cover in an area of peats and mucks, AND one of the two following conditions is met: — Marl deposits [calcium carbonate ($CaCO_3$) precipitate] occur on the soil surface or plant stems — The pH of free water is ≥ 6.8 AND electrical conductivity is ≥ 200 uS/cm at multiple locations within the wetland Yes = **Is a Category I calcareous fen** No = **Is not a calcareous fen**	**Cat. I** **Cat. I**

SC 5.0. Forested Wetlands Does the wetland have an area of forest rooted within its boundary that meets **at least one** of the following three criteria? (*Continue only if you have identified that a forested class is present in question H 1.1*) — The wetland is within the 100 year floodplain of a river or stream — Aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species — There is at least ¼ ac of trees (even in wetlands smaller than 2.5 ac) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW *(see definitions in question H3.1)* Yes – Go to **SC 5.1** No = **Not a forested wetland with special characteristics**	
SC 5.1. Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees (*see Table 7*)? Yes = **Category I** No – Go to **SC 5.2**	**Cat. I**
SC 5.2. Does the wetland have areas where aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species? Yes = **Category I** No – Go to **SC 5.3**	**Cat. I**
SC 5.3. Does the wetland have at least ¼ acre with a forest canopy where more than 50% of the tree species (by cover) are fast growing species (*see Table 7*)? Yes = **Category II** No – Go to **SC 5.4**	**Cat. II**
SC 5.4. Is the forested component of the wetland within the 100 year floodplain of a river or stream? Yes = **Category II** No = **Not a forested wetland with special characteristics**	**Cat. II**
Category of wetland based on Special Characteristics *Choose the highest rating if wetland falls into several categories* If you answered No for all types, enter "Not Applicable" on Summary Form	NA

Appendix B: WDFW Priority Habitats in Eastern Washington

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here: http://wdfw.wa.gov/conservation/phs/list/)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland: ***NOTE:*** *This question is independent of the land use between the wetland and the priority habitat.*

No **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).

No **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).

No **Old-growth/Mature forests:** Old-growth east of Cascade crest – Stands are highly variable in tree species composition and structural characteristics due to the influence of fire, climate, and soils. In general, stands will be >150 years of age, with 10 trees/ac (25 trees/ha) that are > 21 in (53 cm) dbh, and 1-3 snags/ac (2.5-7.5 snags/ha) that are > 12-14 in (30-35 cm) diameter. Downed logs may vary from abundant to absent. Canopies may be single or multi-layered. Evidence of human-caused alterations to the stand will be absent or so slight as to not affect the ecosystem's essential structures and functions. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west and 80-160 years old east of the Cascade crest.

No **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).

No **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

No **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

No **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

No **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.

No **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

No **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 12 in (30 cm)in eastern Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

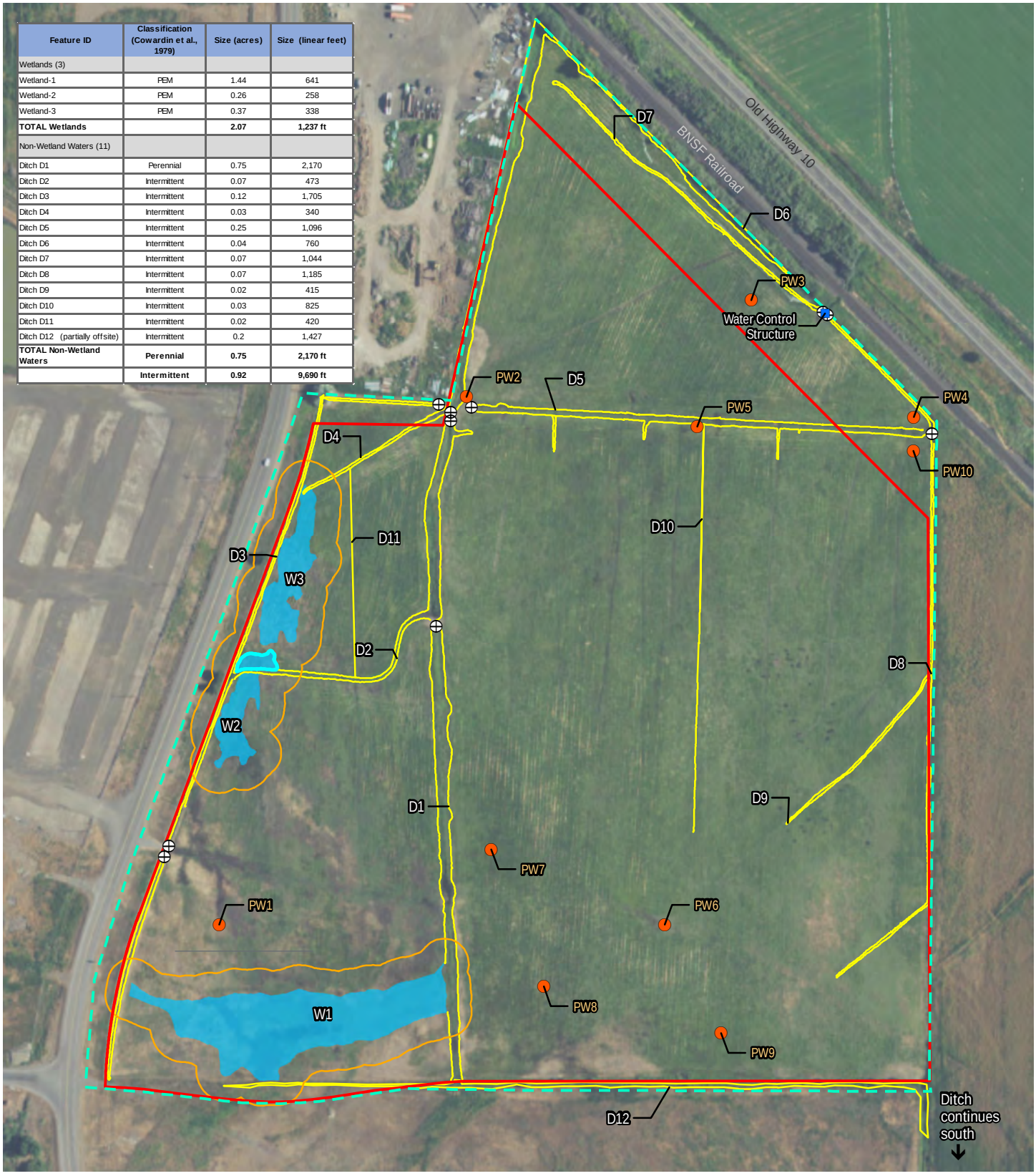
No **Shrub-steppe:** A nonforested vegetation type consisting of one or more layers of perennial bunchgrasses and a conspicuous but discontinuous layer of shrubs (see Eastside Steppe for sites with little or no shrub cover).

No **Eastside Steppe:** Nonforested vegetation type dominated by broadleaf herbaceous flora (i.e., forbs), perennial bunchgrasses, or a combination of both. Bluebunch wheatgrass (*Pseudoroegneria spicata*) is often the prevailing cover component along with Idaho fescue (*Festuca idahoensis*), Sandberg bluegrass (*Poa secunda*), rough fescue (*F. campestris*), or needlegrasses (*Achnatherum* spp.).

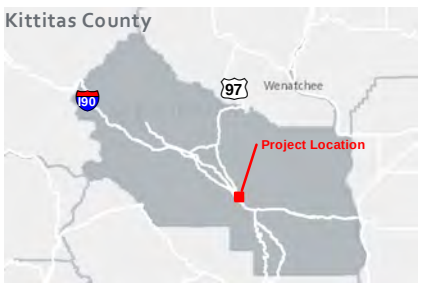
No **Juniper Savannah:** All juniper woodlands.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

Feature ID	Classification (Cowardin et al., 1979)	Size (acres)	Size (linear feet)
Wetlands (3)			
Wetland-1	PEM	1.44	641
Wetland-2	PEM	0.26	258
Wetland-3	PEM	0.37	338
TOTAL Wetlands		**2.07**	**1,237 ft**
Non-Wetland Waters (11)			
Ditch D1	Perennial	0.75	2,170
Ditch D2	Intermittent	0.07	473
Ditch D3	Intermittent	0.12	1,705
Ditch D4	Intermittent	0.03	340
Ditch D5	Intermittent	0.25	1,096
Ditch D6	Intermittent	0.04	760
Ditch D7	Intermittent	0.07	1,044
Ditch D8	Intermittent	0.07	1,185
Ditch D9	Intermittent	0.02	415
Ditch D10	Intermittent	0.03	825
Ditch D11	Intermittent	0.02	420
Ditch D12 (partially offsite)	Intermittent	0.2	1,427
TOTAL Non-Wetland Waters	**Perennial**	**0.75**	**2,170 ft**
	Intermittent	**0.92**	**9,690 ft**



Locator Map



Legend

- Potential Wetlands
- Culvert
- Water Control Structure
- Ditch
- 50 ft buffer
- Wetland
- Site Boundary
- Study Area Boundary

0 250 500 Feet

Figure 1

Kittitas County Transfer Station and Maintenance Facility Relocation Project

WETLAND OVERVIEW

JACOBS

Document Path: \\brooksidefiles\GIS_SHARE\ENBG\oo_Proj\K\Kittitas_County_WA\Maps\Report\o2_Wetland_Overview_a.mxd

Source: GoogleEarth (2018)

Land Use

- Relatively undisturbed
- Moderate & low intensity
- High intensity

Figure 2a Land Use Within 1-km Polygon of W1
Kittitas County Waste Transfer Station Site
Ellensburg, Kittitas County, WA

Source: GoogleEarth (2018)

Land Use

- Relatively undisturbed
- Moderate & low intensity
- High intensity

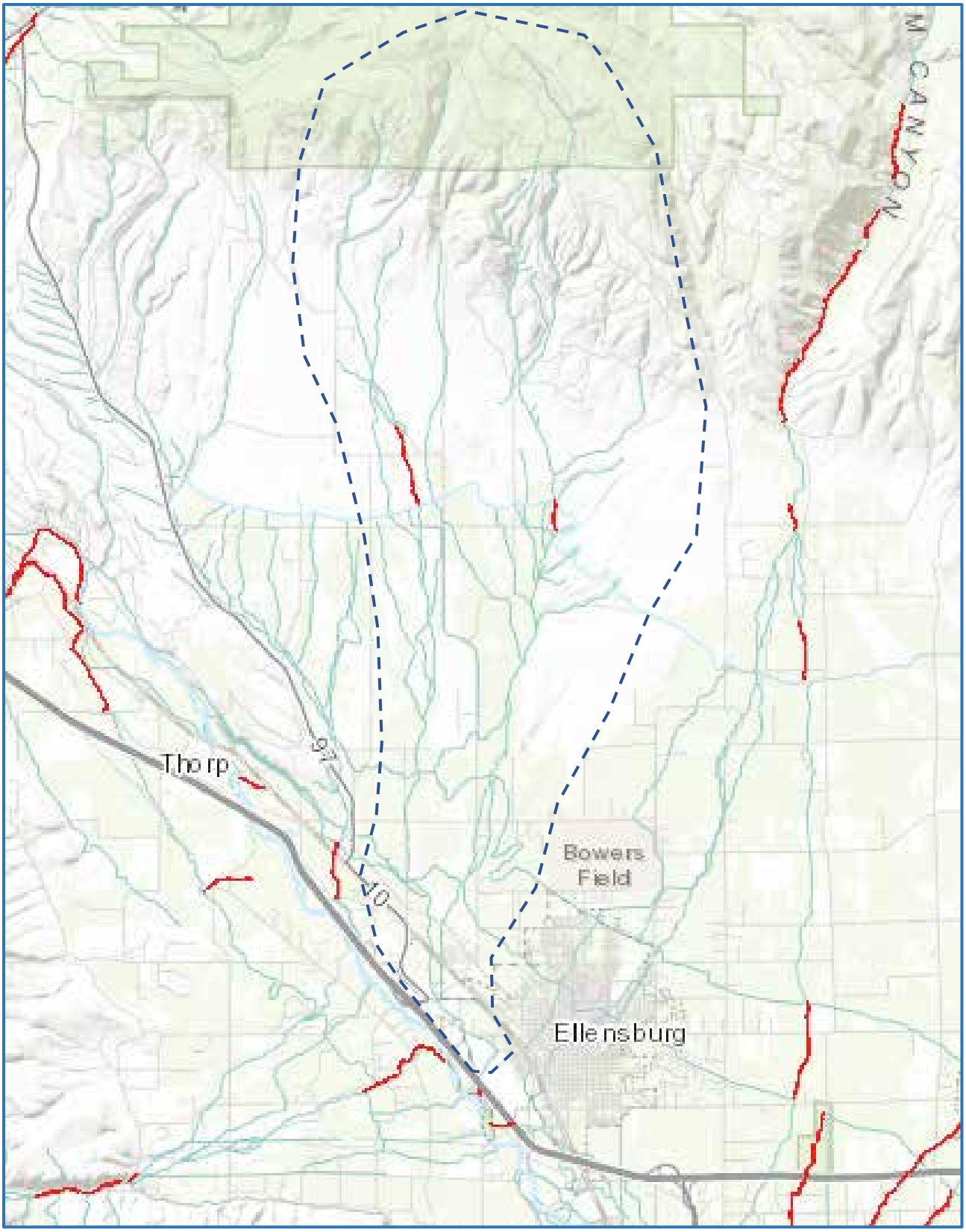
Figure 2b Land Use Within 1-km Polygon of W2 Kittitas County Waste Transfer Station Site
Ellensburg, Kittitas County, WA

Source: GoogleEarth (2018)

Land Use

- Relatively undisturbed
- Moderate & low intensity
- High intensity

Figure 2c Land Use Within 1-km Polygon of W3
Kittitas County Waste Transfer Station Site
Ellensburg, Kittitas County, WA



Source:
https://fortress.wa.gov/ecy/waterqualityatlas/map.aspx?CustomMap=y&RT=0&Layers=23,27,29&Filters=y,n,n,n&F1.4=n,n,n,n,n,y&BBox=-13521532,5875418,-13364429,6040225

Figure 3 303(d)-listed Waters in Contributing Basin
Kittitas County Waste Transfer Station Site
Ellensburg, Kittitas County, WA

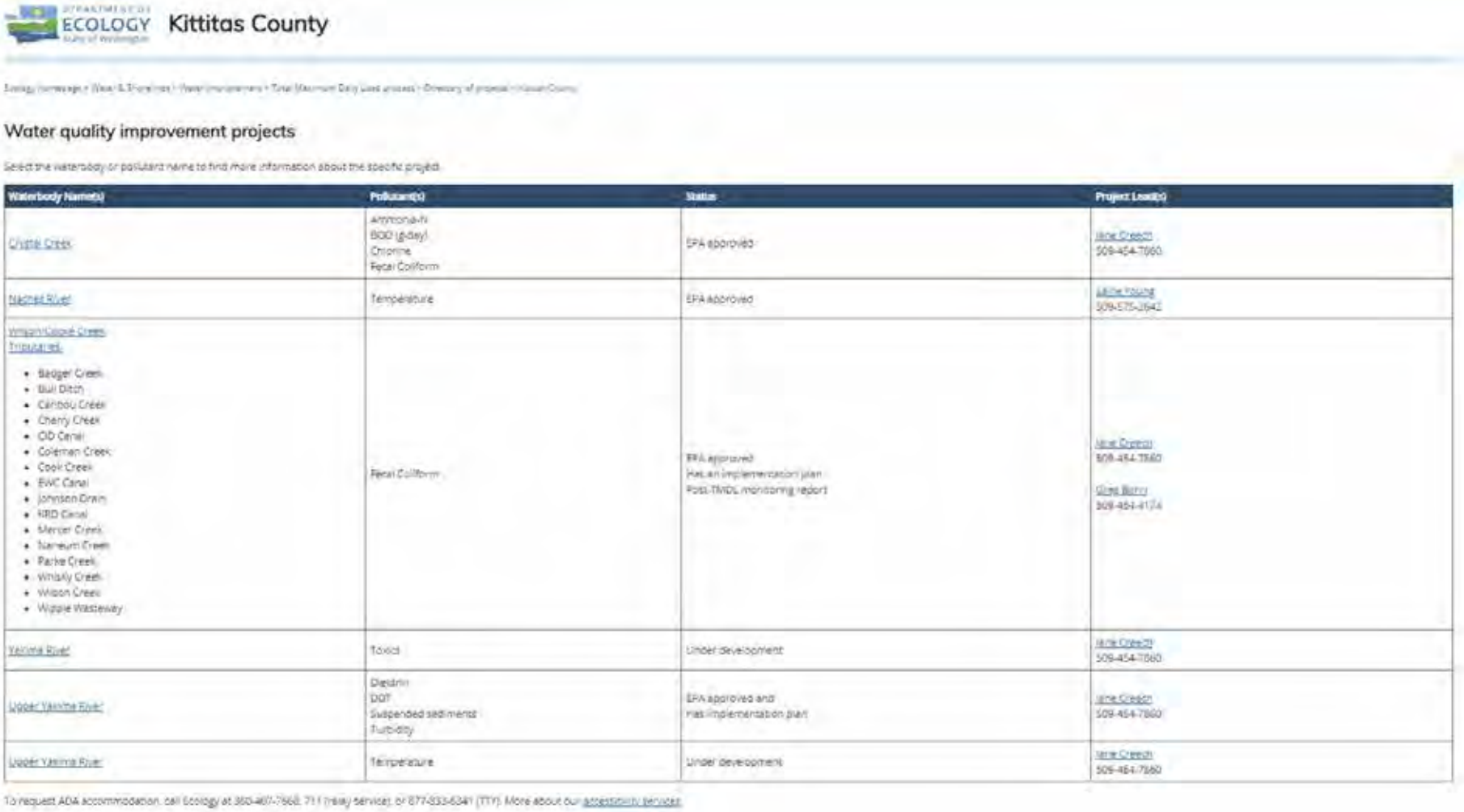


Figure 4 TMDLs for WRIA 39 Upper Yakima River
Kittitas County Waste Transfer Station Site
Ellensburg, Kittitas County, WA

Appendix E
Sensitive Species Data Search Results

Sensitive Species Data Search Results

E1 IPaC Explore Location

E2 PHSPlus Map

E3 WNHP Historic Rare Plant Element Occurrences

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Kittitas County, Washington

Local office

Washington Fish And Wildlife Office

(360) 753-9440
(360) 753-9405

510 Desmond Drive Se, Suite 102
Lacey, WA 98503-1263

http://www.fws.gov/wafwo/

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

Canada Lynx Lynx canadensis — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/3652

Gray Wolf Canis lupus — Endangered
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/4488

North American Wolverine Gulo gulo luscus — Proposed Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/5123

Birds

NAME	STATUS
Marbled Murrelet Brachyramphus marmoratus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/4467	Threatened
Yellow-billed Cuckoo Coccyzus americanus There is **proposed** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/3911	Threatened

Fishes

NAME	STATUS
Bull Trout Salvelinus confluentus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8212	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES

THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle Haliaeetus leucocephalus — Breeds Dec 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1626

Brewer's Sparrow Spizella breweri — Breeds May 15 to Aug 10
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9291

Golden Eagle Aquila chrysaetos — Breeds Dec 1 to Aug 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/1680

Lewis's Woodpecker Melanerpes lewis — Breeds Apr 20 to Sep 30
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9408

Long-billed Curlew Numenius americanus — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5511

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Sage Thrasher Oreoscoptes montanus — Breeds Apr 15 to Aug 10
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9433

White Headed Woodpecker Picoides albolarvatus — Breeds May 1 to Aug 15
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9411

Willow Flycatcher Empidonax traillii — Breeds May 20 to Aug 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/3482

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

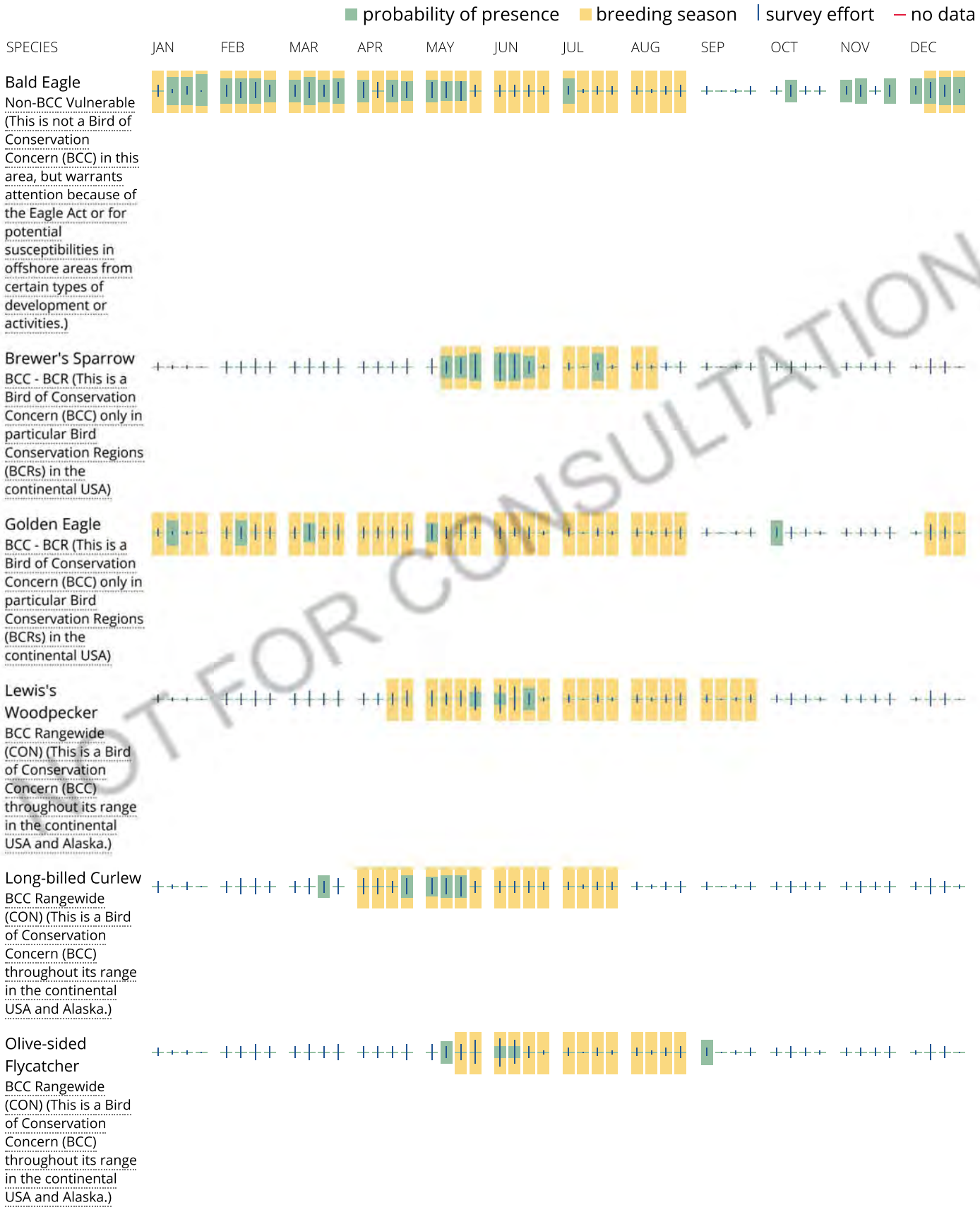
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

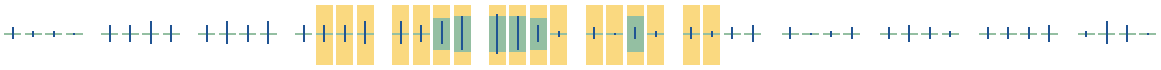
No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Sage Thrasher
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



White Headed Woodpecker
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Willow Flycatcher
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look

carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

PEM1C

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

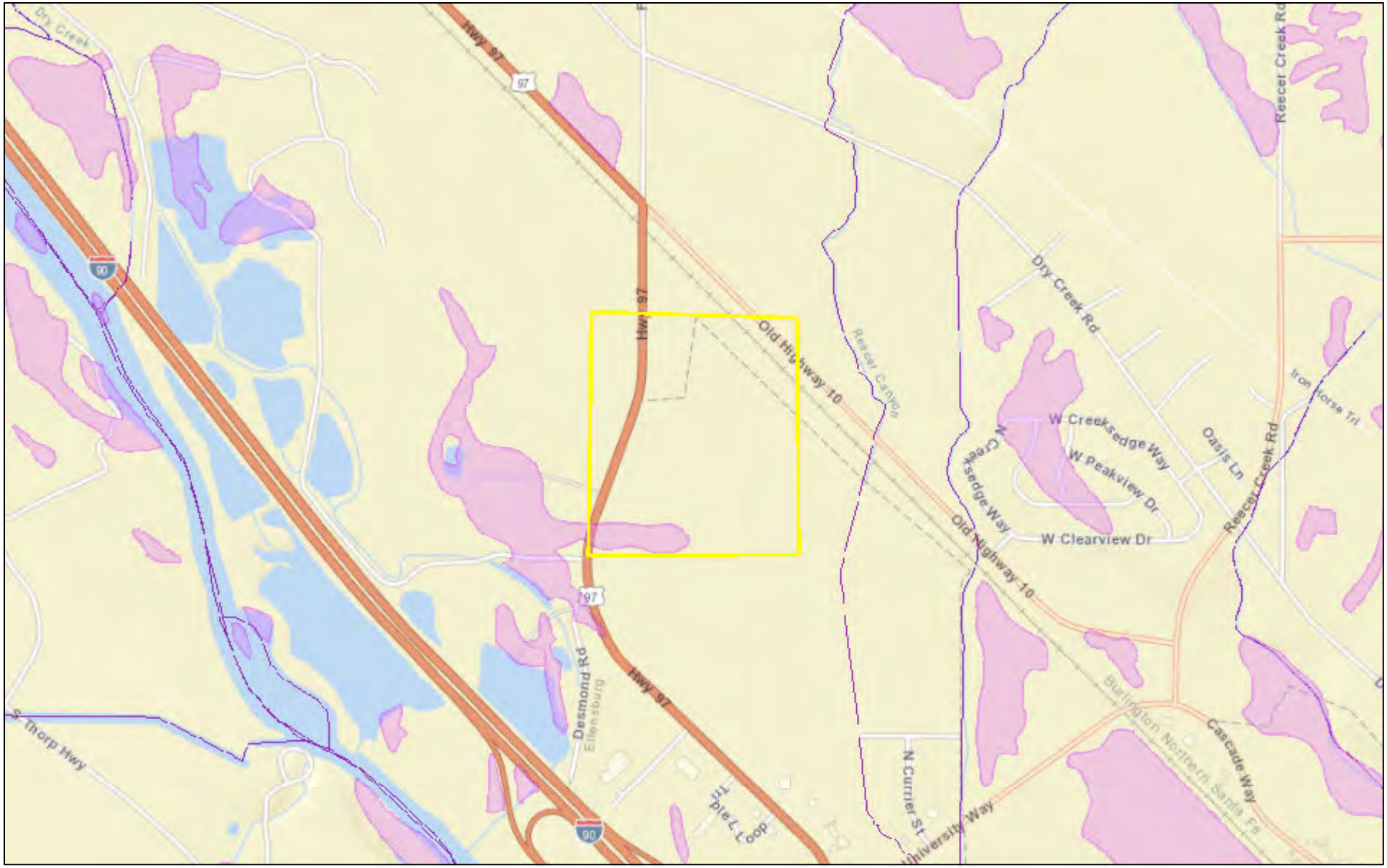
WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
PRIORITY HABITATS AND SPECIES REPORT

SOURCE DATASET: PHSPlusPublic Query ID: P181018144214
REPORT DATE: 10/18/2018 2.42

Common Name Scientific Name Notes	Site Name Source Dataset Source Record Source Date	Priority Area Occurrence Type More Information (URL) Mgmt Recommendations	Accuracy	Federal Status State Status PHS Listing Status	Sensitive Data Resolution	Source Entity Geometry Type
Freshwater Emergent	N/A NWIWetlands	Aquatic Habitat Aquatic habitat http://www.ecy.wa.	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons

DISCLAIMER. This report includes information that the Washington Department of Fish and Wildlife (WDFW) maintains in a central computer database. It is not an attempt to provide you with an official agency response as to the impacts of your project on fish and wildlife. This information only documents the location of fish and wildlife resources to the best of our knowledge. It is not a complete inventory and it is important to note that fish and wildlife resources may occur in areas not currently known to WDFW biologists, or in areas for which comprehensive surveys have not been conducted. Site specific surveys are frequently necesssary to rule out the presence of priority resources. Locations of fish and wildlife resources are subject to vraition caused by disturbance, changes in season and weather, and other factors. WDFW does not recommend using reports more than six months old.

WDFW Test Map



October 18, 2018

PHS Report Clip Area

PT

LN

POLY

AS MAPPED

SECTION

QTR-TWP

TOWNSHIP

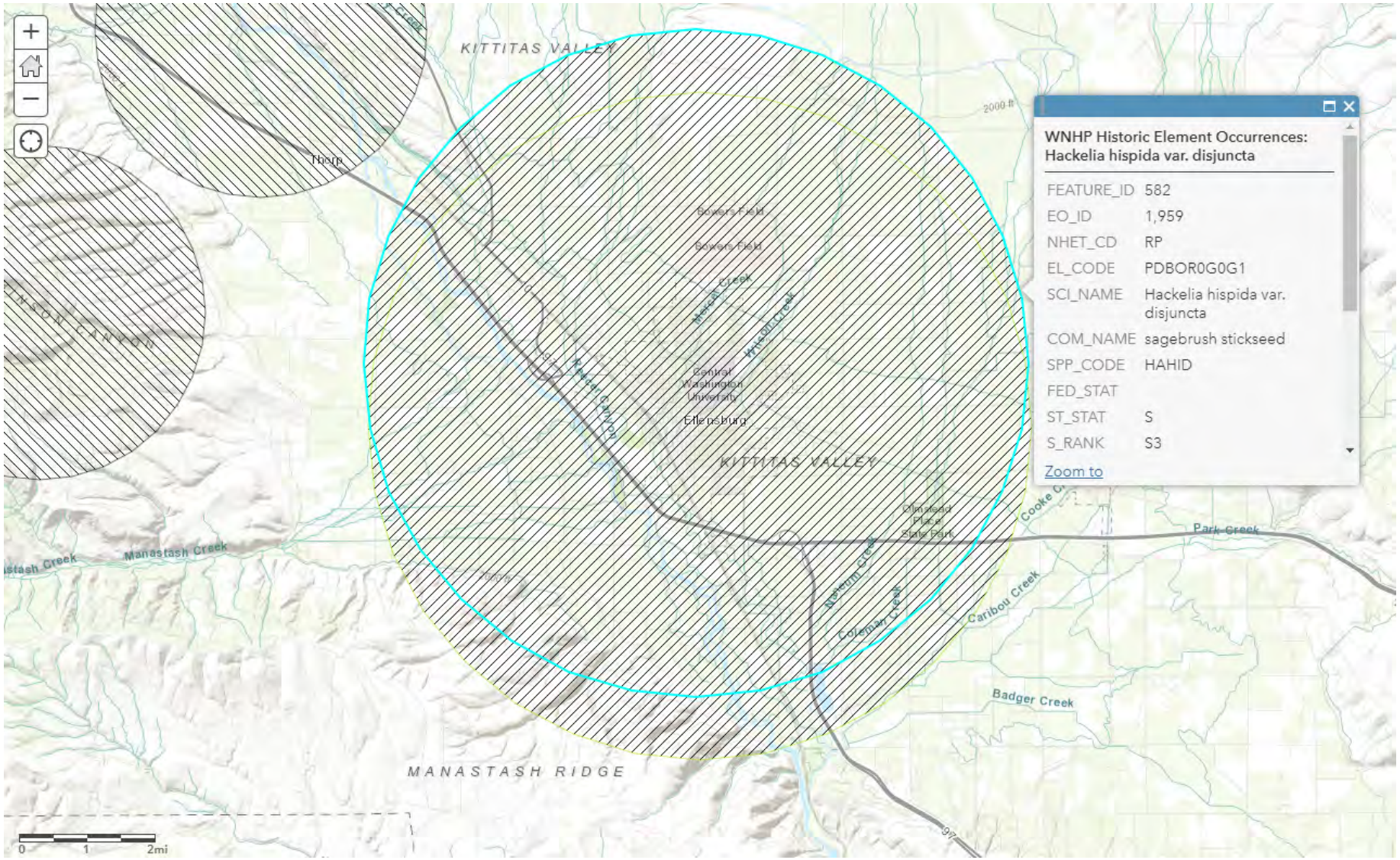
1:19,842

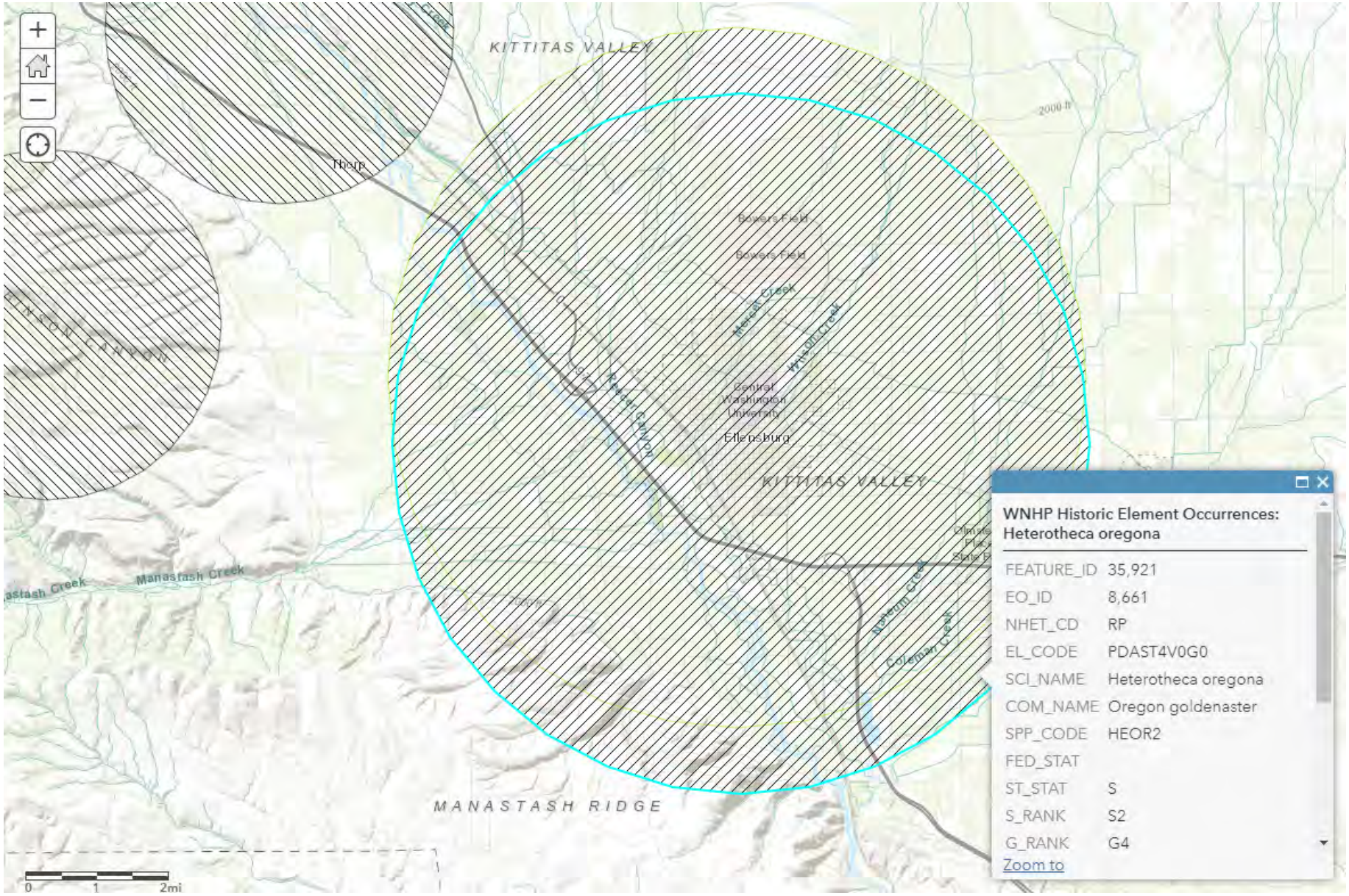
0 0.15 0.3 0.6 mi

0 0.275 0.55 1.1 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand),

WNHP Historic Rare Plant Element Occurrences. No current element occurrences of rare plant species. Nearest current occurrence is Heterotheca oregona, approximately 7.5 miles to the northwest.




KITTITAS VALLEY
Thorp
Bowers Field
Bowers Field
Mercer Creek
Wilson Creek
Central Washington University
Ellensburg
Reecer Creek
KITTITAS VALLEY
Manastash Creek
Manastash Creek
Naneum Creek
Coleman Creek
MANASTASH RIDGE
0
1
2mi
WNHP Historic Element Occurrences: Heterotheca oregona
FEATURE_ID 35,921
EO_ID 8,661
NHET_CD RP
EL_CODE PDAST4V0G0
SCI_NAME Heterotheca oregona
COM_NAME Oregon goldenaster
SPP_CODE HEOR2
FED_STAT
ST_STAT S
S_RANK S2
G_RANK G4
Zoom to

Appendix F
Plant Species Observed List

Plant Species Observed List Kittitas County Waste Transfer Station Site
October 25-26, 2018

Family	Scientific Name	Common Name	Native	Non-native	Washington State Weed Designation[a]
Asteraceae	*Cirsium arvense*	Canada thistle		X	
	Conyza canadensis	Canadian horseweed	X		
	Hypochaeris radicata	hairy cat's ears		X	
	Senecio jacobaea	tansy ragweed		X	C
	Taraxicum officinale	dandelion		X	
Brassicaceae	*Rorippa curvisiliqua*	curvepod yellowcress	X		
Cyperaceae	*Carex amplifolia*	bigleaf sedge	X		
Fabaceae	*Melilotus officinalis*	sweetclover		X	
	Trifolium arvense	rabbitfoot clover		X	
	Trifolium repens	white clover		X	
Geraniaceae	*Erodium cicutarium*	redstem stork's bill		X	
Juncacea	*Juncus effusus*	common rush	X		
Lemnaceae	*Lemna minor*	common duckweed	X		
Malvaceae	*Malva neglecta*	common mallow		X	
Plantaginaceae	*Plantago lanceolata*	narrowleaf plantain		X	
Poacea	*Agrostis stolonifera*	creeping bentgrass		X	
	Bromus tectorum	cheatgrass		X	
	Festuca idahoensis	Idaho fescue	X		
	Phalaris arundinaceae	reed canarygrass		X	
	Poa pratensis	Kentucky bluegrass		X	
Polygonaceae	*Rumex salicifolius*	willow dock	X		
Ranunculaceae	*Nasturtium officinale*	watercress		x	
	Ranunculus sceleratus	celery-leaved buttercup	X		
Salicaceae	*Salix sp.*	willow dock	X		
Scrophulariaceae	*Verbascum thapsus*	common mullein		X	
	Veronica americana	American brookline	X		
Typhaceae	*Typha latifolia*	cattail	X		

[a]Source: Chapter 16-750 WAC STATE NOXIOUS WEED LIST AND SCHEDULE OF MONETARY PENALTIES
• Class A noxious weeds are those noxious weeds not native to the state that are of limited distribution or are unrecorded in the state and that pose a serious threat to the state
• Class B noxious weeds are those noxious weeds not native to the state that are of limited distribution or are unrecorded in a region of the state and that pose a serious threat to that region.
• "Class B designate" means those Class B noxious weeds whose populations in a region or area are such that all seed production can be prevented within a calendar year.
• Class C are any other noxious weeds. (3) Any county noxious weed control board may enhance the clarity of any definition contained in subsection

Appendix C
Site Plan Map

US 97 / OLD HIGHWAY 10 SITE

NOTES:

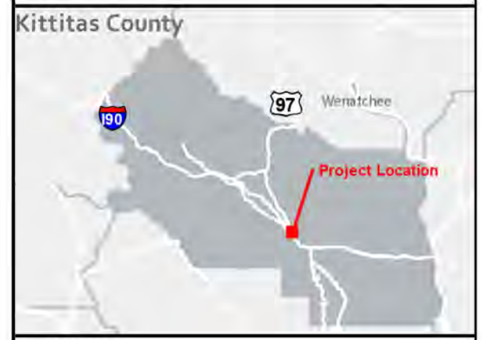
1. FINAL COLLECTOR ROAD LOCATION IN VICINITY OF EXISTING WETLAND TO BE DETERMINED IN FINAL DESIGN.

PARCEL NO. 957560
PARCEL NO. 957558
PARCEL BOUNDARY, TYP
PARCEL NO. 957561
PARCEL NO. 480436
PARCEL NO. 631033
PARCEL NO. 621033
PARCEL NO. 261033
PARCEL NO. 265736
PARCEL NO. 559333
PARCEL NO. 529333
PARCEL NO. 17337

FLOODPLAIN CHANNEL DIVERSION BERM
DE-ICING STORAGE
NEW FLOODPLAIN CHANNEL
SAND & SALT STORAGE
EQUIPMENT STORAGE
DITCH DIVERSION
BEGIN ABANDON EXISTING D1 DITCH
MAINTENANCE SHOP
ADMIN AREA
PICKUP STORAGE
GENERAL PARKING
PUBLIC WORKS ENTRANCE/EXIT
FULL TRANSFER TRAILER PARKING LANES
50-FT BUFFER, TYP
EXISTING WETLAND, TYP
EMPTY TRANSFER TRAILER PARKING LANES
TRANSFER BLDG
EXISTING ENTRANCE AND GATE
BUFFER AVERAGE AREA, TYP
2.4-ACRE ROLL-OFF STORAGE AREA
EXISTING CONDUIT POWER CONNECTION (BURIED)
END ABANDON EXISTING D1 DITCH
CULVERT, TYP
OFFSITE WATER & SEWER, EXISTING CITY UTILITIES POINT OF CONNECTION 1,100-FT TO THE SOUTH
COLLECTOR ROAD ENTRANCE
SITE DRAINAGE, TYP
SITE FENCING, TYP
COMPOSTING AREA
TOTAL PARCEL NO. 611033 BOUNDARY, 50 ACRES
15-FT LANES, TYP
SCALES, TYP
ADMIN BLDG
POTENTIAL VEHICLE QUEUING LANE
MRW BLDG
RECYCLING DROP-OFF AREA
TRANSFER STATION ENTRANCE/EXIT
64-FT COLLECTOR ROAD ROW, SEE NOTE 1

BNSF RAILWAY
OLD HIGHWAY 10
US 97
SW POND
POND
METAL/ WHITE GOODS AREA
SALES
WINDROWS
UNLOADING/ CHIPPING
OFFICE
BIOFILTER

VICINITY MAP



LEGEND

- TRAFFIC FLOW
- COMMERCIAL ROUTE
- SELF-HAUL ROUTE
- COMPOSTING ROUTE
- TRANSFER TRAILER ROUTE
- PROPERTY BOUNDARY
- EXISTING GROUND CONTOURS (1-FT INTERVAL)
- EXISTING FEMA 100-YEAR FLOODPLAIN
- NEW FLOODPLAIN CHANNEL
- PARCEL BOUNDARY
- SITE FENCING AND GATES
- W — WATER MAIN
- SS — SEWER MAIN
- ELECTRICAL (BURIED)
- GAS MAIN (BY OTHERS)
- DRAINAGE CHANNEL OR SWALE
- DRAINAGE FLOW DIRECTION
- DELINEATED WETLAND
- 50-FT BUFFER, WETLAND
- BUFFER AVERAGE AREA

DRAFT
AUG. 2, 2019

N

0 100' 200' 300'
1" = 100'

FIGURE 2
TRANSFER STATION SITE PLAN
KITTITAS COUNTY TRANSFER STATION
KITTITAS COUNTY, WASHINGTON

JACOBS

FILENAME: Kittitas_DraftSitePlan_R16.dgn PLOT DATE: 8/16/2019 PLOT TIME: 11:48:26 AM

Attachment 2
Phase 1 Environmental Site Assessment Report

June 26, 2018

Paul Jewell
Kittitas County Commissioner – Kittitas County
205 W. 5th Avenue
Ellensburg, WA 98926-2887

Subject: Draft - Phase I Environmental Site Assessment for Parcel 611033 in Ellensburg, Washington 98926

Dear Mr. Jewell,

Please find the attached Draft Phase I Environmental Site Assessment (ESA) completed for the subject property referenced above. Based on the findings and opinions of the Phase I ESA, Alta Science & Engineering, Inc. does not recommend a Phase II ESA at this time.

Thank you for the opportunity to work on this project. We look forward to working with you on future projects. Please contact us if you need additional assistance on this project or in the future.

Sincerely,

John Means
Senior Scientist / Division Manager

Alta Science & Engineering, Inc.

Draft - Phase I Environmental Site Assessment Report

Highway 97 Ellensburg, Kittitas County, Washington 98926

Prepared for: Kittitas County
June 26, 2018

Alta Science & Engineering, Inc.
988 S. Longmont Avenue, Suite 200
Boise, ID 83706
208.336.7080

alta-se.com

TABLE OF CONTENTS

Acronyms and Abbreviations

ALLSITES	Remediation Database
Alta	Alta Science & Engineering, Inc.
amsl	above mean sea level
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
bgs	below ground surface
BNSF	Burlington Northern Santa Fe
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CSCSL	Confirmed and Suspected Contaminated Sites List
CSCSL-NFA	Confirmed and Contaminated Sites-No Further Action
ECHO	Enforcement & Compliance History Information
Ecology	Washington State Department of Ecology
EDR	Environmental Data Resources, Inc.
ESA	Environmental Site Assessment
Financial Assurance	Financial Assurance Information Listing
FINDS	Facility Index System
HWTR	Hazardous Waste and Toxics Reduction
LUST	Leaking Underground Storage Tank
MTCA	Model Toxics Control Act
NPDES	National Pollutant Discharge Elimination System
PCB	polychlorinated biphenyl
pCi/L	picoCuries per liter
ppm	parts per million
PRR	public records request
RCRA-NonGen/NLR	Resource Conservation and Recovery Act-Non Generators/No Longer Recorded
SPILLS	a listing of hazardous materials spills, releases or accidents as reported to the State of Washington's Central Communications Center
USC	United States Code
USEPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
UST	Underground Storage Tank
VCP	Voluntary Cleanup Program

Glossary

Applicable or Relevant and Appropriate Requirements (ARARs)	Federal and state environmental laws and regulations that apply to a site cleanup under CERCLA.
Action-specific ARARs	usually technology or activity-based requirements or limitations on actions or conditions involving specific substances.
Alpha particle	a positively charged nuclear particle consisting of two neutrons and two protons, emitted with high energy (3 to 8 Me V) during some nuclear transformations.
Annual aggregate financial ability	the amount of money that would be required to pay for accidental releases that may occur within 12 months.
Area of concern	any location where hazardous substances or wastes are or may be present.
As-Is Site Plan	drawing of the existing site layout, shows property boundaries, streets bordering the site, and building locations and configurations, other site features, and includes an accurate scare and the north direction.
Barrier remediation	prevents radon from entering the enclosure.
Becquerel	international unit of measurement for the rate of nuclear transformations (per second).
Beta particle	an electrically-charged particle (either positive [positron] or negative [electron]) ejected from the nucleus of an atom during radioactive decay; has the mass of an electron, can penetrate skin up to about ¼ inch.
Brownfields	a former industrial or commercial site where future use is affected by real or perceived environmental contamination.
Caveat emptor	meaning “let the buyer beware;” without a warranty the buyer takes the risk of quality upon himself.
Comprehensive Environmental Response, Compensation and Liability Act (Superfund) (CERCLA)	The federal act passed in 1980 and modified in 1986 by the Superfund Amendments and Reauthorization Act (SARA). The acts created a special tax that goes into a trust fund, commonly known as Superfund, to investigate and clean up abandoned or uncontrolled hazardous waste sites. Under the Superfund program, USEPA may pay for site cleanup when responsible parties cannot be located or are unwilling or unable to perform the work. USEPA may also take legal action to force the responsible parties to clean up the site or reimburse the government for cleanup costs.
Certification (laboratories)	granted by some states to certain laboratories; ensures that laboratories meet certain minimum standards.

Chemical-specific ARARs	usually health or risk-based values or methodologies used to determine acceptable concentrations of chemicals that may be found in, or discharged to, the environment. Maximum contaminant levels (MCLs) or other water quality criteria are examples of chemical-specific ARARs.
Composite sample	a single composite sample is made up of a combination of samples.
Conditionally Exempt Small Quantity Generator (CESQG)	defined as facilities producing less than 100 kilograms of hazardous waste per calendar month (kilograms per month) or 1 kilogram or less of acutely hazardous (highly toxic) waste per calendar month; must not accumulate above 1,000 kilograms of waste at any period of time.
Contaminant of Concern (COC)	contaminant that is believed to be present at a specific site. Identifying COCs saves money, as it costs more to test for all possible contaminants than to test for a narrow range of contaminants.
Conventional pollutant	USEPA has identified five: biochemical oxygen demand, total suspended solids, pH, fecal coliform, and grease.
Critical pollutant	a pollutant for which USEPA has established, under the Clean Air Act (CAA), a national standard.
Curie	unit of measurement of the rate of nuclear transformations (per second), approximately equal to the radiation from one gram of radium.
Dilution ventilation	a method of radon remediation; increases the frequency of air exchange in an enclosure.
Direct discharge	one that is released into the “waters of the United States.”
Discharge of dredged material	generally means any addition of reintroduction of the material, either directly or indirectly, including “runoff or overflow from a contained land or water disposal area.”
Discharge of a pollutant	the Clean Water Act (CWA) defines this as any addition of a pollutant to receiving waters. Dredged material excavated or dredged from water bodies.
Due diligence	identifying and evaluating environmental liabilities and risks is also known as performing due diligence.
Eminent domain	the inherent right of the state or its designated agents to appropriate or take private property provided that the property owner receives just compensation for the taking and there has been a determination that a valid public necessity exists for the taking.
Environmental due diligence process	the process used to investigate a commercial or industrial property (usually prior to completion of a real estate transaction) for contamination by hazardous wastes or hazardous substances.

Environmental professional	ASTM standards terminology used to describe a person possessing the necessary training and experience to conduct all aspects of the ESA and also the ability to develop valid conclusion regarding the presence of recognized environmental conditions. The term is typically interchangeable with consultant, assessor, environmental assessor, engineering consultant, geologist, hydrogeologist, or certified engineering geologist.
Existing source	the construction of which commenced before publication of an applicable proposed regulation setting New Source Performance Standards for that category.
Exposed	(to radiation) the individual is subjected to airborne concentration of radionuclides with no allowance for the use of protective clothing or equipment.
Exposure assessment	the defining of exposure pathways and the calculation of the potential magnitude of exposure.
Field-constructed tanks	vertical cylinders with a capacity of greater than 50,000 gallons.
Fill material	any material used primarily for either replacing an aquatic area with dry land or filling an excavation to meeting the surrounding elevation.
First encounter ground water	the most-shallow ground water aquifer. Such an aquifer is the one most likely to be affected if surface discharges of waste have occurred.
Friable asbestos material	any material that contains more than one percent (1%) asbestos by weight, and can be crumbled, pulverized, or reduced to powder by hand pressure.
Gamma rays	electromagnetic radiation (similar to X-rays but higher in the frequency spectrum) emitted by a radioactive substance. This radiation has no charge and is the most penetrating of the radiation forms.
General permit	authorizes a type of activity as long as it meets certain standards or conditions described in the permit.
Geophysical technique	tests (including magnetometer surveys, ground penetrating radar, electrical resistivity, and seismic refraction) used to locate buried metallic objects, such as underground storage tanks (USTs) and to map groundwater pathways.
Giga	a billion.
Grab samples	uncomposited discrete samples.
Harmful quantities of oil discharge	any discharge that violates a water quality standard, or causes a film or sheen upon the surface of the water.
Hazard assessment	helps to define the potential adverse health or environmental effects associated with chemicals on site, the potential magnitude of exposure, and the frequency of exposure.

Hazard identification	the identification of those chemicals that may pose a threat to human health or the environment.
Highest and best use	the most profitable likely use to which a property can be put.
Indemnification agreement	a written promise by one party that it will not hold another party liable; also called a “hold harmless clause.”
Indirect point source discharges	discharges by industries of pollutants indirectly into U.S. waters through publically-owned treatment works (POTWs).
Individual permit	authorizes a specific individual or entity to conduct a specific activity.
Joint and several liability	imposed in cases where the harm caused is indivisible. Where there are multiple parties who are potentially responsible for the harm, but it cannot be determined with any degree of certainty which parties or defendants are responsible for which aspects of the damage.
Just compensation	is required to be paid by the Fifth Amendment to the U.S. Constitution (and counterpart state constitutions) when private property is taken (or in some states, taken or damaged). But in eminent domain cases value is defined as the highest price obtainable in the open market.
Large Quantity Generator (LQG)	defined as facilities producing more than 1,000 kilograms of hazardous waste per calendar month (kilograms per month) or more than 1 kilogram per month of acutely hazardous (highly toxic) waste per calendar month; they have no limit on the amount of hazardous waste they may accumulate on site.
Location-specific ARARs	to restrict actions or contaminant concentrations in certain environmentally sensitive areas. Examples of areas regulated under various federal and state laws include floodplains, wetlands, and locations where endangered species or historically significant cultural resources are present.
Maximum holding time	the total time a sample can be retained under proper storage conditions before analytical results are considered legally invalid.
Micro	one millionth.
New source	one for which construction began after publication of an applicable proposed regulation settings NSPS for that category.
New USTs	tanks used to contain regulated substances, and installed after December 22, 1988.
No Further Action letter	A final remediation document issued by the Department that is a determination based upon an evaluation of the historical uses and/or investigation of a site or subsite that there are no contaminants present, or that any discharged contaminants that were present have been remediated to applicable standards or remediation regulations.
Opportunity costs	those costs associated with the loss of use of the property due to remedial activities.

Polychlorinated biphenyls (PCBs)	a group of chemicals used in transformers and capacitors as an insulating material, in gas pipeline systems as a lubricant, and other purposes. Due to their toxicity and environmental persistence, sale and new use of these materials was banned in 1979. Mixtures of PCBs are often referred to as Aroclors.
Polycyclic aromatic hydrocarbon (PAH)	chemical compounds that occur in oil, coal, and tar deposits, and are produced as byproducts of fuel burning (whether fossil fuel or biomass).
Per occurrence financial ability	refers to the amount of money that must be available to pay the cost of one accidental release.
Permeability	the ability of liquid or gas to pass through.
Pesticide	any substance or mixture of substances intended to prevent, destroy, repel, or mitigate pests.
Phase I (ESA)	non-intrusive research conducted to evaluate the potential for significant onsite impacts.
Phase II (investigation)	an intrusive study of the site's soil, groundwater, or vapor to evaluate the location and extent of impacts from historical uses. A framework for identifying remediation approaches so that a cleanup strategy can be developed.
Pico	one trillionth.
Pits	floor drains that may be used to discharge hazardous wastes; also called "trenches."
Point source discharges	any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feed operation, or vessel or other floating craft, from which pollutants are or may be discharged into waters.
Pollutant	according to the Clean Waters Act (CWA), dredged soil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heating wrecked or discharged equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. See also conventional, non-conventional, and toxic pollutants.
Portable organic vapor analyzer	used to screen volatile organic compounds.
Potential to emit	calculated using the major stationary source's maximum design capacity (continuous year-round operation) following application of pollution controls.
Primary standards (for airborne pollutants)	USEPA's standards which are designed to protect human health with an adequate margin of safety.
Pristine sites	sites unaffected by any negative impact from man or nature.

Profiling	defining the subsurface features. This is used to define the lateral extent of a feature, such as a waste site, with little or no data on depth.
Proportional allocation method	involves allocating liability according to the percentage of total wastes found at the site that is clearly attributable to each potentially responsible party.
Quad map	a topographic map with an approximate scale of one inch to 2,000 feet; shows physical features such as wetlands, water bodies, roadways, mines, and buildings.
Quality assurance (QA)	a firm-wide program that establishes project policies, procedures, standards, and guidelines designed to produce an acceptable level of professional quality.
Quality control (QC) programs	establish project activities that apply the policies, procedures, standards, and guidelines designed to produce an acceptable level of professional quality.
Radioactive material	any material which emits, by spontaneous nuclear disintegration, corpuscle or electromagnetic emanations.
Radiation	includes alpha rays, beta rays, and gamma rays. Alpha and beta rays are corpuscle (particle) emanations; gamma rays are electromagnetic emanations.
Radiation area	an area accessible to personnel, in which radiation exposure could exceed 5 millirems in one hour, or 100 millirems in any five consecutive days.
Radon	a chemical element formed by the disintegration of radium; is a heavy, colorless, odorless, and radioactive gas.
Real estate value	cost approach to value involves the estimation of the replacement cost of the utility of the improvements, from which is subtracted the estimated depreciation, to which is added to the value of the land. The land value is normally obtained from the market approach value. Income approach is applicable in estimating the value of real estate that is purchased primarily for its income-producing potential. Market data approach is an appraisal process in which the estimated market value of a property is based upon prices paid in actual market transactions or upon current offering prices for similar real estate. Selected properties are compared to that under appraisal in order to arrive at an indicated value of the subject property. The various features of the comparables are considered with respect to their absence, presence, and quality in the subject property, and adjustments are made to the unit sale price of the comparable property for these major differences.
Recharge	water management systems designed to inject water collected by surface systems into ground water aquifers.
Regulated substances	1) any substance defined as a hazardous substance under CERCLA (but not including any substance regulated as hazardous waste under RCRA), and 2) petroleum.

Releases	defined by federal and most state laws as any spilling, leaking, pouring, dumping, emitting, discharging, injecting, escaping, leaching, or disposing of hazardous waste or hazardous waste constituents into the environment.
Rem	(roentgen equivalent man) a measure of ionizing radiation dosage with the same biological effect as a roentgen of X- or gamma rays.
Remedial action	the implementation of a selected remedy which often follows a remedial design; sometimes referred to as a site cleanup or a construction project.
Resource Conservation and Recovery Act (RCRA)	Federal statute that requires comprehensive regulation of hazardous waste generation, transport, treatment and disposal. New Jersey has been delegated responsibility for RCRA and has enacted a comprehensive body of regulations to administer the Act, including public hearings.
Restricted area	any area where access is controlled by the employer for the purpose of limiting employee exposure to radiation or radioactive materials.
Restricted-use pesticides	pesticides that must be applied under the supervision of a certified applicator.
Risk characterization	combines information on the potential magnitude of exposure to chemicals from the site with dose-response information derived from the “hazard assessment.” The result is a description of the potential nature and magnitude of health or environmental risk associated with each chemical on site.
Roentgen	the international unit of measurement for X-radiation or gamma radiation.
Secondary standards (for airborne pollutants)	USEPA’s standards designed to protect against environmental damage, such as damage to soils, crops, wildlife, weather, climate, and personal comfort.
Semi-volatile organic compounds (SVOCs)	a class of organic compounds that is made up of acid extractable and base neutral organic compounds. Examples of SVOCs include PAHs, phenols, and phthalates.
Small quantity generators (SQGs)	defined as facilities producing less than 1,000 kilograms of hazardous waste per calendar month (kilograms per month), which is the equivalent of about 300 gallons or about five 55-gallon drums; they can never accumulate more than 6,000 kilograms of hazardous waste on site at one time.
Soil and ground water analyses	tests used to determine the presence of surficial or subsurface contamination and concentration levels; may involve soil borings and installations of test pits and/or observation/monitoring wells.
Soil vapor surveys	surveys using gas chromatography equipment to map potential soil and groundwater contamination; soil vapor intrusion potentials.
Sophisticated surface water sampling program	consists of more samples taken at several different depths and tests of such physical parameters as pH, conductivity, presence of dissolved oxygen, and temperature.

Sounding	a radar technique used to determine the depth of a buried object at a specific location.
Strict liability	indicates that fault is not a prerequisite to determining responsibility under the statute. The purchaser may be liable for cleanup costs even if the property was contaminated prior to his or her purchase. The original owner may also be held accountable for all or part of a property's cleanup costs despite compliance with all regulations in effect at the time of property transfer.
Suction piping	piping which does not require leak detection if it has the following two main characteristics: 1) Below-grade piping is sloped so that the contents will drain back into the storage tank if the suction is released, and 2) Each suction line has only one check valve which is located directly below the suction pump.
Super lien law	provides states the authority to impose a lien on any property requiring cleanup that involves state expense. The super lien law takes precedence over all other encumbrances, including first mortgage.
Tank testing	used to identify leaks in USTs.
Tax Assessor's Map	provides legal description, property boundaries, locations, types of easement (if any), and the locations of properties bordering the subject site.
Technology-based limits	the minimum level of water pollution control technology that a discharger must apply, regardless of which water body receives the effluent discharge.
Title search	a process used to confirm legal ownership (of property).
To-be-considered materials	defined by USEPA as "non-promulgated advisories or guidance used by federal or state government that are not legally binding and do not have the status of potential ARARs." In many cleanups, TBCs will be considered along with ARARs in determining the necessary level of cleanup.
Transportation-related release	a release of a hazardous substance during transportation or storage if the stored substance is moved under manifest and has not reached its designated destination.
Trenches	floor drains which may be used to discharge hazardous wastes; also called "pits."
Underground Storage Tanks (USTs)	tanks that store regulated substances and have at least 10 percent (10%) of their volume, including the contents of connected pipes, underground.
User	American Society for Testing and Materials (ASTM) terminology for the person (usually the client) responsible for providing the data to the environmental professional.
Vadose	unsaturated zone.

Volatile organic compounds (VOCs)	A class of organic compounds that evaporate readily at room temperature. Examples of products that contain VOCs include gasoline (small carbon chains), dry cleaning fluid (solvents), and paint thinners.
Warranty	a pledge that a certain matter is true. For example, a seller may warrant that the facility has obtained all federal and state environmental permits required for continued operation.
Waste management units	physical areas of the site where hazardous wastes are generated, used, stored, or treated.
Waters of the United States (as defined by 40 CFR 230.3(o))	For the purposes of the Clean Water Act, 33 USC 1251 et seq. and its implementing regulations, subject to the exclusions in paragraph (o)(2) of this section, the term “waters of the United States” means: (i) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (ii) All interstate waters, including interstate wetlands; (iii) The territorial seas; (iv) All impoundments of waters otherwise identified as waters of the United States under this section; (v) All tributaries, as defined in paragraph (o)(3)(iii) of this section, of waters identified in paragraphs (o)(1)(i) through (iii) of this sections; (vi) All waters adjacent to a water identified in paragraphs (o)(1)(i) through (v) of this section, including wetlands, ponds, lakes, oxbows, impoundments, and similar waters; (vii) All waters in paragraphs (o)(1)(vii)(A) through (E) of this section where they are determined, on a case-specific basis, to have a significant nexus to a water identified in paragraphs (o)(1)(i) through (iii) of this section. The waters identified in each of paragraphs (o)(1)(vii)(A) through (E) of this section are similarly situated and shall be combined, for purposes of a significant nexus analysis, in the watershed that drains to the nearest water identified in paragraphs (o)(1)(vi) of this section when performing a significant nexus analysis. If waters identified in this paragraph are also an adjacent water under paragraph (o)(1)(vi), they are an adjacent water and no case-specific significant nexus is required. (viii) All waters located within the 100-year floodplain of a water identified in paragraphs (o)(1)(i) through (iii) of this section and all waters located within 4,000 feet of the high tide line or ordinary high water mark of a water identified in paragraphs (o)(1)(i) through (v) of this section where they are determined on a case-specific basis to have a significant nexus to a water identified in paragraphs (o)(1)(i) through (iii) of this section. For waters determined to have a significant nexus, the entire water is a water of the United States if a portion is located within the 100-year floodplain of a water identified in paragraphs (o)(1)(i) through (iii) of this section or within 4,000 feet of the high tide line or ordinary high water mark. Waters identified in this paragraph shall not be combined with waters identified in paragraph (o)(1)(vi) of this section when performing a significant nexus analysis. If waters identified in this paragraph are also an adjacent water under paragraph (o)(1)(vi), they are an adjacent water and no case-specific significant nexus analysis is required.
Water quality-limited requirements	the pollution controls that dischargers in selected locations must apply to ensure their discharges do not cause violations of the water quality standards set for that receiving body.
Well-casing volume	determined by multiplying the total depth of the well from ground surface to the bottom of the water column by the cross-sectional area.

Wellhead protection areas	surface and sub-surface areas surrounding water wells or well fields supplying public water systems.
Wetlands	definition varies by state, generally one or more of the following criteria apply: 1) Whether or not the area is permanently wet during most of the year, 2) Whether or not wetlands-related submergent and emergent plants are present, and 3) Whether or not characteristic soil types are present.

EXECUTIVE SUMMARY

Findings, Opinions & Conclusions and Redevelopment Potential

Findings

Alta Science and Engineering, Inc. (Alta) has performed a Phase I Environmental Site Assessment (ESA) in conformance with the scope and limitations of ASTM Practice E1527-13 of the subject property located at Highway 97 in Ellensburg, Washington, in accordance with the agreement dated June 8, 2018, and in accordance with the specifications set forth in the Agreement for Professional Services, Contract No. A18-1012 developed with Kittitas County.

The Phase I ESA uncovered the following **findings**, which identify known or suspect recognized environmental conditions, controlled recognized environmental conditions, historical recognized environmental conditions, and/or de minimis conditions:

Federal and State Database Listings identified the following sites near the subject property.

- F2M LLC Elkhorn Pit located at 1831 Highway 97. This facility is located within the FINDS and ALLSITES database and is the location of a gravel mining operation.
- Ellensburg Cement Products LO PRO 1 - located at 2121 Highway 97. This facility is a cement and construction company and gravel mining operation.
- Pilot Travel Center 389 - located southwest of the subject property. This facility has leaking underground storage tanks (LUSTs).

Opinions

The following includes Alta's **opinions** of the recognized environmental condition impacts of the findings on the subject property:

Federal and State Database Listings identified the following sites near the subject property.

- Gravel Mining Operations to the west have likely impacted how shallow ground water and local surface water migrates in the regional area.
- The LUST facility located to the southwest (Pilot Travel Center 389) appears to be down gradient of the subject property. This facility appears to be awaiting or undergoing cleanup.

Conclusions and Redevelopment Potential

Alta has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E1527-13 of the property located off Highway 97 in Ellensburg, Washington (shown in Figure 1), in accordance with the agreement dated June 8, 2018. Any exceptions to, or deletions from, this practice are described in Sections 10.0 and 11.0 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the property except for the following:

- Surrounding properties include a gravel mining operation to the west. This operation may have influenced how shallow ground water behaves within the regional area. The subject property does contain a wetland designation on a portion of the property. Should the site be developed, Alta recommends review of the onsite wetlands in accordance with development plans to comply with all local, state, and federal requirements.
- Pilot Travel Center 389 appears to be down gradient of the subject property.

Based upon the available information collected from historical databases, personal interviews, and site reconnaissance activities, it appears a Phase II ESA is not warranted at this time.

Environmental Report Summary

Alta has performed a Phase I ESA of the above referenced property. Any exceptions to, or deletions from, this practice are described in Sections 10.0 and 11.0 of this report. A summary of the report is provided in the table below and further described in Sections 7.0 and 8.0 of this report.

Environmental Report Summary (continued)

Report Section		Results	Recommendations	Cost Estimate Range
5.2.1	**Hazardous Substances**	No Risk	None	
5.2.2	**Unidentified Containers**	No Risk	None	
5.2.3	**Staining**	No Risk	None	
5.2.4	**Stressed Vegetation**	No Risk	None	
5.2.5	**Aboveground Storage Tanks (ASTs)**	No Risk	None	
5.2.6	**Lack of Secondary Containment**	Not Applicable	None	
5.2.7	**Underground Storage Tanks (USTs)**	No Risk	None	
5.2.9	**PCB Containing Equipment**	No Risk	None	
5.2.10	**Solid Waste Disposal**	No Risk	None	
5.2.11	**Wetlands**	Low-Risk	None	
5.2.12	**Septic System with On-Site Drainfield**	No Risk	None	
5.2.13	**Oil/Water Separator**	No Risk	None	
5.2.14	**Dry Wells or Injection Wells**	No Risk	None	
5.2.15	**Contamination of Soil**	No Risk	None	
5.2.16	**Contamination of Groundwater**	No Risk	None	
5.2.17	**Vapor Migration**	No Risk	None	
5.2.18	**Use of Pesticides on Site**	Low-Risk	None	
5.2.19.1	**Asbestos**	Not Applicable	None	
5.2.19.2	**Lead**	Not Applicable	None	
5.2.19.3	**Radon**	Low-Risk	None	
5.2.19.4	**Lead in Drinking Water**	Not Applicable	None	
5.2.19.5	**Mold**	Not Applicable	None	
5.3	**Exterior Observations**	Low-Risk	None	
5.4	**Interior Observations**	Not Applicable	None	

GENERAL INFORMATION

Project Information:
Kittitas County Phase I ESA
Project Number:
18038

Consultant Information:
Alta Science and Engineering, Inc.
121 South Jackson Street
Moscow, ID 83843
Phone: 208.882.7858
Fax:
E-mail Address:
Inspection Date:
Report Date: 06/29/2018

Site Information:
Duke & Dude
18XX HWY 97
Ellensburg, WA 98926
Latitude, Longitude: 47.016104, -120.590298
Site Access Contact:

Client Information:

,

Site Assessor This report has not been signed.

Senior Reviewer
Jon Munkers
Principal

EP Certification:

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in 312.10 of this part.

Jon Munkers - Principal

AAI Certification:

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Jon Munkers - Principal

1.0 INTRODUCTION

Alta Science & Engineering, Inc. (Alta) completed an inspection of the subject property, located on Highway 97 within Ellensburg, Kittitas County, Washington (hereinafter referred to as the "subject property," "target property," or "site"), on June 15, 2018. See Appendix A for a site map. This assessment was authorized by Kittitas County, the client, on June 8, 2018.

1.1 Purpose

The purpose of this Phase I Environmental Site Assessment (ESA) is to provide due diligence on the subject property for Kittitas County prior to potential acquisition. This American Society for Testing and Materials (ASTM) standard practice is intended to permit a User to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) landowner liability protection; that is, the practice that constitutes "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" (42 United States Code [USC] paragraph 9601 (35)(B)). The following conditions apply to the completion of this Phase I ESA:

- The purpose of this report is to identify recognized environmental conditions associated with the subject property and/or potential for impact from adjacent sites in conjunction with the ASTM E1527-13 Standard *Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*.
- A recognized environmental condition is defined under the ASTM Standard as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions.
- An historical recognized environmental condition is a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls. Before calling the past release an historical recognized environmental condition, the environmental professional must determine whether the past release is a recognized environmental condition at the time the Phase I ESA is conducted (for example, if there has been a change in the regulatory criteria).
- A controlled recognized environmental condition is a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.
- The ASTM E1527-13 standard practice is designed to define good commercial and customary practice in the United States of America for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of CERCLA and petroleum products.

1.2 Detailed Scope of Services

Alta conducted the Phase I ESA at the subject property in general accordance with ASTM Standard E1527-13 and included the following:

- Reviewed previous Phase I ESAs, when available,
- Reviewed regulatory files,
- Interviewed regulatory officials and personnel associated with the subject and adjoining properties,
- Visited the site, and
- Evaluated information and prepare the report provided herein.

Typically, a Phase I ESA does not include sampling or testing of air/vapor, soil, groundwater, surface water, or building materials. Alta would carry out these activities in a Phase II ESA, if required. For this Phase I ESA, Alta made no additions to the ASTM E1527-13 standard with the exception of the following.

1.3 Significant Assumptions

There is a possibility that even with the proper application of these methodologies, there may exist on the subject property conditions that could not be identified within the scope of the assessment or which were not reasonably identifiable and/or ascertainable from the available information. Alta believes that the information obtained from the regulatory file review and the interviews concerning the site are reliable. However, Alta cannot and does not warrant or guarantee that the information provided by these other sources is accurate or complete. The methodologies of this assessment are not intended to produce all inclusive or comprehensive results, but rather to provide the client with information relating to the subject property.

1.4 Limitations and Exceptions

Along with all of the limitations set forth in various sections of the ASTM E1527-13 protocol, the accuracy and completeness of this report may be limited by the following:

- Access Limitations - None
- Physical Obstructions to Observations - None
- Outstanding Information Requests - At the time of the submission of this report, Alta had not received the records request from the Kittitas County Fire Department and Washington State Department of Ecology (Ecology). Also, Alta contacted the owner's attorney; however, Alta had not conducted interviews with the current owner prior to submitting this report.
- Historical Data Source Failure - None
- Other - None

It should be noted that this assessment did not include a review or audit of operational environmental compliance issues or of any environmental management systems that may exist on the property. Where required, the documents listed in Appendices A through F were used as reference material for completing the Phase I ESA. Some of the information presented in this report was provided through existing documents and interviews. Although attempts were made, whenever possible, to obtain a minimum of two confirmatory sources of information, in certain instances Alta has been required to assume that the information provided is accurate.

The information and conclusions contained in this report are based upon work undertaken by trained professional and technical staff in accordance with generally accepted engineering and scientific practices current at the time the work was performed. The conclusions and recommendations presented represent the best judgment of Alta based on the data obtained from the work. Due to the nature of investigation and the limited data available, Alta cannot warrant against undiscovered environmental liabilities that are beyond the scope of a Phase I ESA. A Phase I ESA is not an all-encompassing investigation. It is a professional investigation with a limited scope based on reasonably obtainable information that an experienced professional practicing due care could be expected to obtain or observe and evaluate. Conclusions and recommendations presented in this report should not be construed as legal advice.

Should additional information become available that differs significantly from our understanding of conditions presented in this report, we request that this information be brought to our attention so that we may reassess the conclusions provided herein.

1.5 Special Terms and Conditions

The client gave authorization to perform this assessment on June 8, 2018. Kittitas County provided instructions as to the location of the property, site access, and an explanation of the property and facilities to be assessed.

1.6 User Reliance

The information in this report was accurate to the best of Alta's knowledge on June 25, 2018. Alta has prepared this report for the sole benefit of the client. The report may not be relied upon by any other person or entity without the express written consent of Alta Science & Engineering, Inc.

2.0 SITE DESCRIPTION

2.1 Location and Site Description

The site is located on Highway 97 within the Ellensburg city limits in Kittitas County, Washington. The parcel of land is approximately 54.95 acres and currently zoned I-L, light industrial. The parcel number, according to the Kittitas County Assessor's records, is 611033.

Based upon historical aerial photographs the subject property appears to have been open space consistently from the 1950s to the present day and used primarily as pasture for cattle and horses. Figure 1 provides the location and estimated property boundary. The topography is predominantly level. Reecer Creek runs north to south to the east of the site. The Yakima River is located approximately 0.6 miles to the south/southwest of the site.

2.2 Site and Vicinity General Characteristics

The United States Geological Survey (USGS) 7.5' Digital Elevation Models has determined the topography of the site as presented in the Environmental Data Resources, Inc. (EDR) Radius Map Report (see Appendix C). The elevation of the subject property is approximately 1,553 feet above mean sea level (amsl). The elevation rises slightly to the north and falls slightly to the south of the site towards the Yakima River. The Site is listed on the National Wetland Inventory site as found on the US Fish and Wildlife Service (USFWS) "National Wetlands Inventory" (https://www.fws.gov/wetlands/Data/Mapper.html, accessed June 20, 2018). Specific groundwater flow direction for this site is best determined using site-specific information; however, the EDR Radius Map Report did not provide such information. The shallow ground water is likely influenced significantly by irrigation and the gravel mining operations to the west. Shallow ground water likely has seasonality that may influence direction.

The EDR Radius Map Report names the dominant soil composition at the site as Malaga and describes the surface soil texture as very stony and sandy loam. The EDR Radius Map Report further listed the soil as hydrologic group Class A with high infiltration rates. See the EDR Radius Map Report in Appendix C for additional information regarding the soils surrounding the subject property.

The EDR Radius Map Report revealed that Kittitas County is designated by the US Environmental Protection Agency (USEPA) Map of Radon Zones as "Zone 2," which is defined as having a radon measurement greater than or equal to 2 picoCuries per liter of air (pCi/L) and less than or equal to 4 pCi/L. Zone designation reflects the average short-term radon measurement that can be expected to be measured in a building without the implementation of radon control methods. For more details concerning radon, conduct site-specific radon monitoring at the site.

The EDR physical setting source map identified 13 water wells within a 1-mile radius of the target property. See the EDR Radius Map Report provided in Appendix C for a more detailed list of wells in the vicinity of the site.

2.3 Current Use of the Property

The site is currently open space and used for pasture of cattle. Currently the property does not contain raised structures. The subject property is zoned light industrial.

2.4 Description of Structures, Roads, Other Improvements on the Site

The subject property is located on Highway 97 in Ellensburg, Washington. Highway 10 travels parallel to the north of the property, but does not have access to the property. There appears to be trails and/or dirt roads used to move farm equipment, but no improved roads onsite. The Burlington Northern Santa Fe (BNSF) railroad parallels the northern portion of the site.

The city of Ellensburg supplies drinking water and sanitary sewer to the area; however, the site does not appear to currently be connected to the municipal drinking water or sanitary sewer system.

2.5 Current Uses of the Adjoining Properties

Agricultural fields border the property to the south and east. The BNSF Railroad passes parallel to the north of the site. Highway 97 parallels the western portion of the site. The Concrete Facility, known as Ellensburg Cement Products, is located across Highway 97 to the west where they mine gravel. Ellensburg Cement Products also has property adjoining the northwest portion of the property.

3.0 USER PROVIDED INFORMATION

3.1 Title Records

Appendix B includes an appraisal provided by the user. No title records were provided by the user at the time of the completion of this report.

3.2 Environmental Liens or Activity and Use Limitations

No environmental liens were reported for the subject property.

3.3 Specialized Knowledge

The user did not report any specialized knowledge or experience that suggests an environmental concern or recognized environmental condition in connection with the subject property.

3.4 Commonly Known or Reasonably Ascertainable Information

A public records request (PRR) was submitted to Ecology regarding Resource Conservation and Recovery Act (RCRA) records, known/reported environmental releases, or any other information they might have on record.

A response from the Hazardous Waste and Toxics Reduction Program (HWTR) had not been received at the completion of this report.

A response from Ecology's Eastern Regional Office, which maintains information regarding non-compliance, enforcement, violations and/or inspection documentation, had not been received at the time of completion of this report.

3.5 Valuation Reduction for Environmental Issues

According to the Kittitas County Assessor's website, the value of the property does not appear to be significantly lowered or raised due to environmental concerns. See Appendix B for a recent property appraisal.

3.6 Reason For Performing Phase I

Alta is conducting the Phase I ESA as part of environmental due diligence prior to potential property acquisition and possible redevelopment. The purpose of this Phase I ESA was to determine the likely presence of recognized environmental concerns or conditions associated with the property and/or potential for impact from adjacent properties prior to the redevelopment of the property.

3.7 Owner, Property Manager, and Occupant Information

The subject property is currently owned by Duke & Dude, LLC, with Stephen M. Hayden listed at the manager. There are no occupants living at the site. There were cattle on the pasture ground during the site visit. No other pertinent information in connection with the subject property was provided by the user.

3.8 Other

No other information was provided.

4.0 RECORDS REVIEW

4.1 Standard Environmental Records Sources

Alta obtained an ASTM-compliant government records radial database report for this assessment from EDR. A comprehensive list of all databases that EDR searched, criteria for being listed on each database, and specific facility information are located within the EDR Radius Map Report (see Appendix C).

The subsequent standard federal database listings were associated with the following properties within a 1-mile radius of a central point within the site: Confirmed and Suspected Contaminated Sites List (**CSCSL**), which contains state hazardous waste sites and is Washington State's equivalent to CERCLIS; Confirmed and Contaminated Sites - No Further Action (**CSCSL-NFA**), which contains information about sites that are undergoing cleanup and sites that are awaiting further investigation and/or cleanup and sites that are on the hazardous sites list; Enforcement & Compliance History Information (**ECHO**), which is a USEPA database which provides integrated compliance and enforcement information for facilities nationwide; Facility Index System (**FINDS**); Resource Conservation and Recovery Act-Non Generators/No Longer Recorded (**RCRA-NonGen/NLR**); National Pollutant Discharge Elimination System (**NPDES**) to calculate pollutant discharge amounts; and **US Mines**, which contains all mine identification numbers issued for mines active or opened since 1971 and also includes violation information. Criteria for being listed on each database and specific facility information are reviewed within the database report (see Appendix C).

The subsequent standard state database listing was associated with the following properties within a 1-mile radius of a central point within the site: Remediation Database (**ALLSITES**); **Financial Assurance**, which is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay; Independent Cleanup Reports (**ICR**); Leaking Underground Storage Tank (**LUST**) List; Spills Data (**SPILLS**), which is a listing of hazardous materials spills, releases or accidents as reported to the State of Washington's central Communications Center; and the Voluntary Cleanup Program (**VCP**). Criteria for being listed on each database and specific facility information are reviewed within the database report (see Appendix C).

According to the EDR Radius Map Report there are 12 facilities within the applicable radii that have complete addresses and can be mapped. Information regarding these facilities, listed in the federal and/or state databases, is provided below.

F2M LLC Elkhorn Pit (FINDS, ALLSITES) is located at 1831 HWY 97 immediately adjacent to the subject property on the southwest corner of the property. It is the location of a sand and gravel pit.

University Auto Center SR 97 (ALLSITES, RCRA NonGen/NLR, FINDS, ECHO) is located at 1817 N SR 97 approximately 158 feet southwest from the subject at a lower elevation. This facility currently does not handle or generate hazardous waste. Additionally, during its time as a generator in 2002 when the facility was a new and used automobile dealer, the EDR Radius Map Report does not specify what kind(s) of hazardous waste was generated onsite. In 2007, the facility received a written informal general violation; the facility achieved compliance four months later.

Ellensburg Cement Products LO PRO 1 (ALLSITES, NPDES, US Mines) is located at 2121 HWY 97 approximately 534 feet north northwest from the subject property at a higher elevation. This facility is a sand and gravel pit and open mine for non-coal mining. The mine received unspecified citations in 2004, 2012, 2014, 2016, and 2017. All citations have been closed.

Brett Eason Leased Property (ALLSITES) is located at mile post 1 on HWY 10 approximately 744 feet north northwest from the subject property at a higher elevation. According to the EDR Radius Map Report, this facility is in the Ecology air quality program and in the ALLSITES database. There is no other information available regarding this facility.

Mobile Fleet Services Ellensburg (ALLSITES) is located at 1711 US HWY 97 approximately 1,109 feet south southwest from the subject property (less than 0.25 miles) at a lower elevation. According to the EDR Radius Map Report, this facility received a construction groundwater/surface water permit.

Ellensburg Repeater 070102 (ALLSITES, FINDS) is located at RTE 1 Box 770 approximately 1,553 feet east southeast from the subject property (less than 0.5 miles) at a lower elevation. According to the EDR Radius Map Report, this facility had an underground storage tank (UST) installed in 1949 and removed in 2002. Ecology does not list any spills, leaks, or releases in connection with this UST.

4.1 Standard Environmental Records Sources (continued)

Ellensburg Cement Products Concrete Plt (ALLSITES, FINDS) is located at 1071 SR 97 approximately 1,560 feet southwest from the subject property (less than 0.5 miles) at a lower elevation. According to the EDR Radius Map Report, this facility is in the Ecology air quality program and in the ALLSITES database. There is no other information available regarding this facility.

Triple L Ellensburg WA Phase 1 (ALLSITES) is located at the junction of SR 97 and Interstate 90 approximately 1,745 feet south from the subject property (less than 0.5 miles) at a lower elevation. According to the EDR Radius Map Report, this facility received a construction groundwater/surface water permit.

Cascade Truck & RV Wash (ALLSITES) is located at 1608 HWY 97 approximately 1,846 feet south southeast from the subject property (less than 0.5 miles) at a lower elevation. According to the EDR Radius Map Report, this facility is in the Ecology air quality program and in the ALLSITES database. There is no other information available regarding this facility.

Pilot Travel Center 389 (CSCSL, LUST, VCP, ICR, ALLSITES, SPILLS) is located at 1512 HWY 97 approximately 2,061 feet south southeast from the subject property (less than 0.5 miles) at a lower elevation. This facility operates as a convenience store and gas station. Four USTs are located onsite. In 1996, the USTs were relined but not removed. Former product lines and dispensers were drained, capped, and abandoned in place. In 1996, Ecology received a subsurface investigation report. Groundwater and soil samples were analyzed for petroleum contaminants and results indicated petroleum contamination above cleanup levels in both soil and groundwater. In 2010, Ecology received another subsurface Investigation report. The report indicated soil and groundwater at the facility were contaminated with gasoline, diesel, and lube oil range petroleum at levels above cleanup standards, and that these levels likely indicated the presence of free-phase petroleum in soils and/or in groundwater. Quarterly groundwater monitoring began in 2010.

Smittys Ellensburg 6225 (UST VCP, ALLSITES, CSCSL-NFA, Financial Assurance) is located at 1503 HWY 97 approximately 2,463 feet south southeast from the subject property (less than 0.5 miles) at a lower elevation. According to the EDR Radius Map Report, this facility had three USTs; all three were upgraded in 1998. Based on a leaking tank in 2008, the facility entered in the VCP and is currently undergoing cleanup.

PSE Woldale Substation - This facility operates as a power generation substation. In May 2013, a leaking 1,100-gallon transformer was removed. The transformer had rested on concrete, which remains in place. Mineral oil had released at the northeast edge and below the concrete slab. About 2.5 cubic yards of impacted soils were removed near the northeast edge of the slab. Groundwater was encountered at approximately 2 feet below ground surface (bgs). Soil samples were analyzed for mineral oil-range petroleum hydrocarbons. In addition, the soil sample with the highest concentration of mineral oil was screened for polychlorinated biphenyls (PCBs). The analysis did not show PCBs above 1 parts per million (ppm). Only two samples were not in compliance with the Model Toxics Control Act (MTCA) Method A soil cleanup levels for mineral oil-range organics. These two samples were obtained from below the slab at 2 feet bgs. Field observations indicated that contamination did not extend beyond the bounds of the concrete slab.

4.2 Additional Environmental Record Sources

A review of historical aerial photographs, available city directories, Sanborn Fire Insurance maps (if available), and topographical maps show the subject property and surrounding properties. Details describing these environmental record sources are described in sections 4.2.1 through 4.2.4 and the environmental records are in Appendix B.

4.2.1 City Directories

EDR conducted a review of city directories. The information below describes the status of the subject property as well as the surrounding properties. A copy of the EDR city directory review is presented in Appendix B.

4.2.1 City Directories (continued)

Subject Property
No listings were found for the subject property.

Adjoining Properties
No listings were found for properties adjoining the subject property.

4.2.2 Physical Setting Source(s)

Topographical Maps
EDR conducted a review of topographical maps. The available maps are presented in Appendix B.

- ***Subject Property:*** The subject property is labeled on the map. No structures are visible. Topography appears relatively flat. The Yakima River is located approximately 0.6 miles south of the site.
- ***Adjacent Properties:*** Adjacent properties appear undeveloped. No structures are visible. Reecer Creek flows north to south to the east of the site into the Yakima River.

Sanborn Fire Insurance Maps
EDR provided Sanborn Fire Insurance maps, presented in Appendix B. EDR's search did not uncover Sanborn Fire Insurance Maps that cover the subject property and adjacent properties.

4.2.3 Aerial Photographs

EDR conducted a review of historical aerial photographs. The dates of the maps are 1956, 1964, 1970, 1983, 1990, 2000, 2006, 2011, and 2015, which are presented in Appendix B. A review of historical aerial photographs was conducted by EDR.

Subject Property
1956 - 2015: No obvious structural improvements appear visible from 1956 to 2015. The use appears to be pasture and/or hay fields.
1956: A potential seasonal stream is visible onsite.

Adjacent Properties
North
1956 - 2015: Rail lines are visible to the north of the subject property.
1983: First appearance of structures/equipment on the parcel directly to the northwest of the site.

South
1956 - 2015: The land directly south of the subject property appears undeveloped but similar in agricultural use as the subject property.

East
1956 - 2015: The land to the east appears undeveloped and/or similar in agricultural use as the subject property.

West
1956 - 1970: It appears that the land west of the subject property is primarily undeveloped agricultural land.
1970 - 2015: The properties across Highway 97 to to the west appear to include the gravel pit and a related development.

4.2.4 Previous Environmental Assessment Reports

A PRR was submitted to Washington Department of Ecology for the site. At the time of submittal of this report, Ecology had not provided any environmental reports or investigations for the subject property were on record.

The following sites were found within the Access Washington Cleanup Site Search Database. The subject property was not listed in the search.

- **CS IDFS ID Cleanup Site Name Address**

4.2.4 Previous Environmental Assessment Reports (continued)

- 3370 6443353 Granite Construction Inc Ellensburg 1073 Sr 97 Ellensburg 98926
- 6407 62898962 SMITTYS 250 OF ELLENSBURG 1503 Hwy 97 Ellensburg 98926-9329
- 11732 18911356 Loves Travel Center Stormwater Swale 1512 Hwy 97 Ellensburg 98926-9329
- 5649 18911356 Pilot Travel Center 389 1512 Hwy 97 Ellensburg 98926-9329
- 12480 12487 PSE Woldale Substation Hwy 97 And Mcmanamy Rd Ellensburg 98926

Report Name	Date	Findings

4.3 Historical Use Information on the Property

Research suggests the subject property has not had any structures previously constructed onsite. The subject property has previously been used for pasture and hay production.

4.4 Historical Use Information on Adjoining Properties

Based on historical records reviews (described in Section 4.2), it appears the surrounding properties were historically used as pasture and hay production. The property directly to the northwest has been used to store farm equipment. Highway 97 borders the subject property to the west. The BNSF rail lines parallel the subject property to the north.

5.0 SITE RECONNAISSANCE

5.1 Methodology and Limiting Conditions

The site reconnaissance was conducted on June 15, 2018, by Tom Jenkins, with Alta. The visual reconnaissance consisted of observing the boundaries of the property and systematically traversing the site to provide an overlapping field of view, wherever possible. Access for portions of the eastern and southern property was limited. Photographs of pertinent site features identified during the site reconnaissance are included in Appendix E.

It must be noted that a property assessment functions as a screening tool for use in assessing actual or potential environmental risks. It includes limited research, a review of specified and reasonably ascertainable listings, and a site reconnaissance to identify recognized environmental conditions in general accordance with industry standards. Recognized environmental conditions are defined under the ASTM standard as "the presence or likely presence of any hazardous substances or petroleum products on a site under conditions that indicate an existing release, a past release, or a material threat of release of any hazardous or petroleum products into structures on the property or into the ground, groundwater or surface water of the property." It is not intended to be conducted as a final site investigation and/or risk assessment. Additional information may affect the conclusions of this report.

5.2 General Site Setting

The site is located off Highway 97 in Ellensburg, Washington, in a light industrial city zoning designation.

5.2.1 Hazardous Substances

No hazardous substances that constitute evidence of a recognized environmental condition were observed at the subject property at the time of the site reconnaissance.

5.2.2 Unidentified Containers

No unidentified containers that constitute evidence of a recognized environmental condition were observed at the subject property at the time of the site reconnaissance.

5.2.3 Staining

No staining that constitutes evidence of a recognized environmental condition was observed at the subject property at the time of the site reconnaissance.

5.2.4 Stressed Vegetation

No unidentified stressed vegetation that constitutes evidence of a recognized environmental condition was observed at the subject property at the time of the site reconnaissance.

5.2.5 Aboveground Storage Tanks (ASTs)

No ASTs were observed on the subject property at the time of the site reconnaissance.

5.2.6 Lack of Secondary Containment

At the time of the site reconnaissance, there was no evidence of ASTs in need of secondary containment.

5.2.7 Underground Storage Tanks (USTs)

The subject property was undeveloped land. The subject property does not appear to contain USTs. In addition, the regulatory records review did not indicate the current registration of USTs at the subject property, and no evidence of vent pipes, fill pipes, or access ways indicating USTs were discovered at the time of the site reconnaissance.

5.2.8 Pits, Ponds, And Lagoons

No ponds or lagoons associated with onsite processes were observed at the subject property at the time of the site reconnaissance. There were ponds across Highway 97 to the west that appear associated with the gravel mining and concrete operation.

5.2.9 PCB Containing Equipment

No PCB-containing equipment was identified during the site reconnaissance. There were no pole-mounted transformers observed on the subject property.

5.2.10 Solid Waste Disposal

No indications of improper disposal of solid waste or burial activities were noted within the scope of this investigation.

5.2.11 Wetlands

A wetlands map for the subject property prepared by the USFWS was reviewed online. Designated wetlands were identified on the subject property (approximately 3.25 acres) as part of the National Wetland Inventory. An irrigation canal enters the property on the north and trends north to south on the property. No natural standing bodies of water or typically hydrophylic vegetation were observed on the subject property during the site reconnaissance.

5.2.12 Septic System with On-Site Drainfield

There were no obvious indications of an onsite drainfield or septic system at the time of the site reconnaissance.

5.2.13 Oil/Water Separator

No oil/water separators were observed on the subject property.

5.2.14 Dry Wells or Injection Wells

No dry or injection wells were observed on the subject property at the time of reconnaissance.

5.2.15 Contamination of Soil

No significant staining or other visual indications of soil contamination were observed during the site reconnaissance.

5.2.16 Contamination of Groundwater

No observations were noted to suggest the potential for groundwater contamination due to activities onsite.

5.2.17 Vapor Migration

No obvious visual evidence was noted to suggest potential for vapor intrusion from onsite activities to the subject property.

5.2.18 Use of Pesticides on Site

There were no obvious signs of pesticide mixing or synthesis on the subject property at the time of the site reconnaissance that would indicate a recognized environmental condition. The site has a history of

5.2.18 Use of Pesticides on Site (continued)

agricultural use where there is the likelihood of pesticide and/or fertilizer use consistent with standard application practices.

5.2.19 Other Concerns

5.2.19.1 Asbestos

There are no buildings onsite and therefore asbestos building materials does not appear to be a recognized environmental condition.

5.2.19.2 Lead

Under the "Residential Lead-Based Paint Hazard Reduction Act of 1992," also known as Title X (10), the USEPA established standards for lead-based paint hazards in most pre-1978 housing and child-occupied facilities. There are currently no structures and previous reports and review of the historical aerial photographs do not suggest structures with the potential for lead-based paint existed onsite.

5.2.19.3 Radon

Radon gas is a product of the decay series that begins with uranium. Radon is produced directly from radium, which can be commonly found in bedrock that contains black shale and/or granite. Radon gas can migrate through the ground and enter buildings through porous concrete or fractures. Radon tends to accumulate in poorly ventilated basements. Long-term exposure to radon has been associated with lung cancer.

The USEPA has designated three zones of classification indicating the predicted average indoor screening level of radon per county. Kittitas County, Washington, is classified in Zone 2 (moderate potential), which indicates a predicted level between 2 and 4 pCi/L. The USEPA "Action Level" is 4 pCi/L. Based on the lack of subsurface areas and structures, radon does not appear to be a recognized environmental condition. However, testing is required to determine site-specific radon levels.

5.2.19.4 Lead in Drinking Water

Lead-containing materials were banned from use in public water systems, including plumbing connection, in 1986. Research did not uncover onsite drinking water wells; therefore, potable water testing and assessment was not performed on the subject property and does not appear to be a recognized environmental condition.

5.2.19.5 Mold

The subject property does not contain any structures; therefore, visual assessment for mold within any building was not performed. Mold is not a current recognized environmental condition.

5.3 Exterior Observations

The property was explored for obvious visual indications of potential recognized environmental conditions. Appendix E contains photographs collected during the site visit. The site is currently being used as pasture. There were approximately 40 head of steers/cows on the property. The property is relatively flat. There are irrigation canals that appear to be used to flood irrigate the site. The property is fenced with barbwire fencing. There are no structures currently onsite. There is a gate that provides access off Highway 97 on the northwest corner of the property. The property to the northwest appears to be a lay-down yard for road construction activities (culverts, trucks, gravel, etc.).

5.4 Interior Observations

The subject property does not contain any structures/buildings;therefore, no building interiors were observed.

6.0 INTERVIEWS

6.1 Interview with the Owner Representative
The owner representative, Stephen M. Hayden with Duke & Dude, LLC, was not available during the site reconnaissance. Duke & Dude, LLC, allowed access to the site. A request was made for an interview, but Mr. Hayden was not available prior to the completion of this report.

6.2 Interview with the Site Manager
Mr. Hayden was not available prior to the completion of this report.

6.3 Interview with Occupants
The subject property is currently used for cattle pasture. The site does not currently have any occupants.

6.4 Interview with State Government Officials
An Alta employee submitted a PRR to Ecology regarding hazardous materials storage, generation, or handling status for the subject property. Ecology had not responded prior to the completion of this report.

6.5 Interview with Local Government Officials
Kittitas Valley Fire and Rescue (KVFR)
An Alta employee submitted a PRR to KVFR on June 20, 2018, and received a response the same day. There were no records connected to the site. A copy of the PRR and response are in Appendix F. A call was also placed to Fire Chief John Sinclair, but a response was not received prior to the completion of this report.

Kittitas County Assessor's Office
An Alta employee contacted the Assessor's Office via telephone requesting acreage, legal description, and other known information regarding the subject property. An employee of the Assessor's Office supplied the necessary information about the subject property. Parcel, acreage and other relevant data is located in Appendix F.

Ellensburg City Hall
An Alta employee contacted Kirsten Sackett, the Community Development Director at Ellensburg City Hall, but Ms. Sackett was unable to respond within the time frame of this report.

6.6 Interview with Others
No others were interviewed during the site reconnaissance.

7.0 FINDINGS

Alta has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E1527-13 of the subject property located at Highway 97 in Ellensburg, Washington, in accordance with the agreement dated June 8, 2018, and in accordance with the specifications set forth in the Agreement for Professional Services, Contract No. A18-1012 developed with the Kittitas County.

The Phase I ESA uncovered the following **findings**, which identify known or suspect recognized environmental conditions, controlled recognized environmental conditions, historical recognized environmental conditions, and de minimis conditions:

Federal and State Database Listings Identified the following sites near the subject property.

- F2M LLC Elkhorn Pit located at 1831 Highway 97. This site is located within the FINDS and ALLSITES database. This site is the location of a gravel mining operation.
- Ellensburg Cement Products LO PRO 1 - located at 2121 Highway 97. This facility is a cement and construction company and gravel mining operation.
- Pilot Travel Center 389 - located southwest of the site. This facility has LUSTs.

8.0 OPINIONS

The following includes Alta's **opinions** of the REC impacts of the findings on the subject property:

Federal and State Database Listings identified the following sites near the subject property.

- Gravel Mining Operations to the west have likely impacted how shallow ground water and local surface water migrates in the regional area.
- The LUST facility located to the southwest (Pilot Travel Center 389) appears to be down gradient of the subject property. This facility appears to be awaiting or undergoing cleanup.

9.0 CONCLUSIONS AND REDEVELOPMENT POTENTIAL

Alta has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E1527-13 of the property located off Highway 97 in Ellensburg, Washington (shown in Figure 1), in accordance with the agreement dated June 8, 2018. Any exceptions to, or deletions from, this practice are described in Sections 10.0 and 11.0 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the property except for the following:

- Surrounding properties include a gravel mining operation to the west. This operation may have influenced how shallow ground water behaves within the regional area. The site does contain a wetland designation on a portion of the property. Should the site be developed, Alta recommends review of the onsite wetlands in accordance with development plans to comply with all local, state, and federal requirements.
- Pilot Travel Center 389 appears down gradient of the subject property.

Based upon the available information collected from historical databases, personal interviews, and site reconnaissance activities, it appears a Phase II ESA is not warranted at this time.

10.0 DEVIATIONS

No deviations from the recommended scope of ASTM Standard E1527-13 were performed as part of this Phase I ESA with the exception of any additions noted in Section 1.2 Detailed Scope of Services.

11.0 ADDITIONAL SERVICES

Alta provided no other services in addition to the Phase I ESA.

12.0 REFERENCES / INFORMATION SOURCES

American Society for Testing and Materials (ASTM) E1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.*

Kittitas County Assessor, http://co.kittitas.wa.us/property.aspx, June 25, 2018.

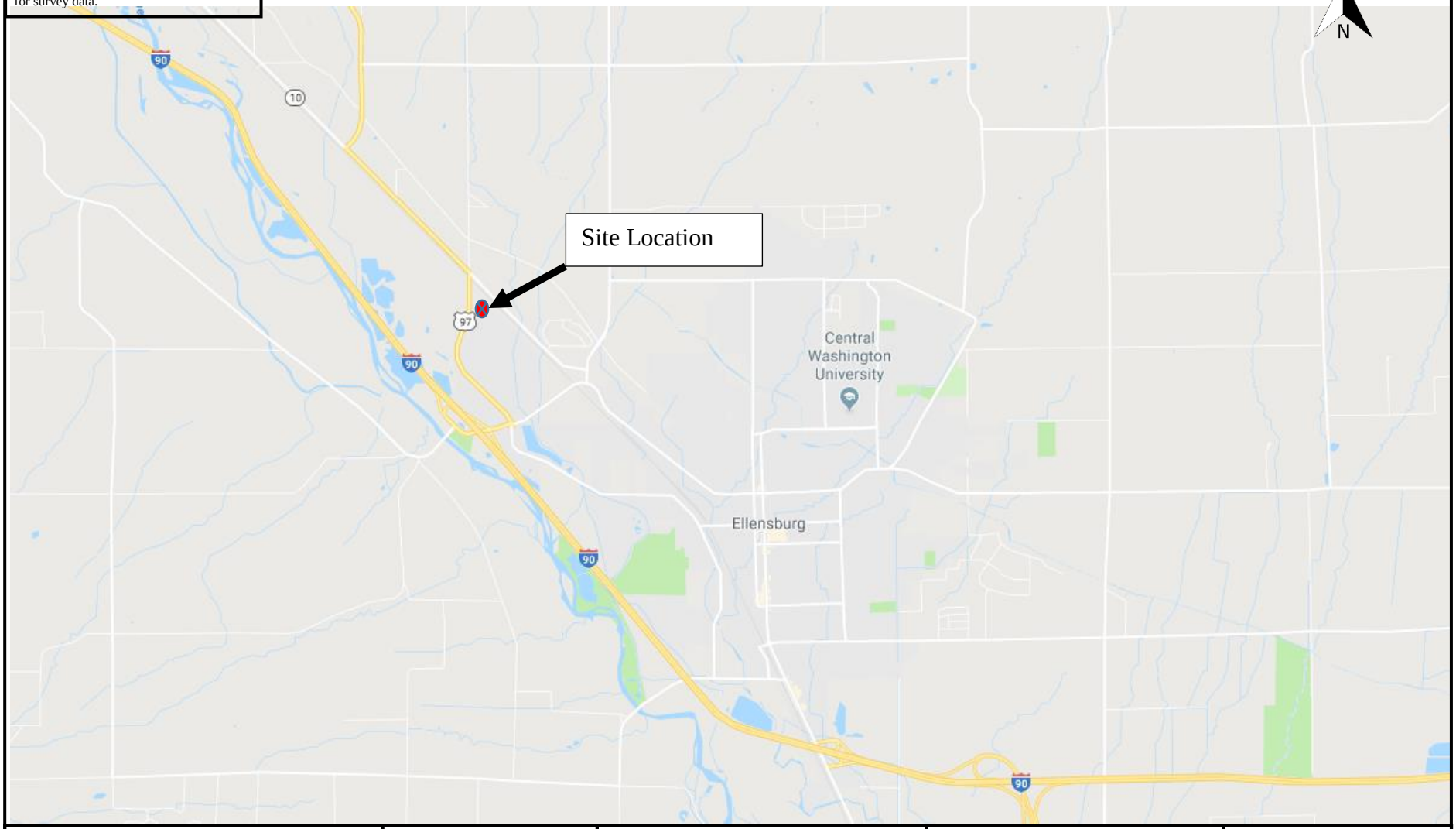
Environmental Data Resources, Inc (EDR). 2018. Inquiry Number 5329489. 6 Armstrong Road, 4th floor, Shelton, Connecticut 06484. June 12, 2018.

National Wetland Inventory site. <https://www.fws.gov/wetlands/Data/Mapper.html>, accessed June 20, 2018.

Appendix A:

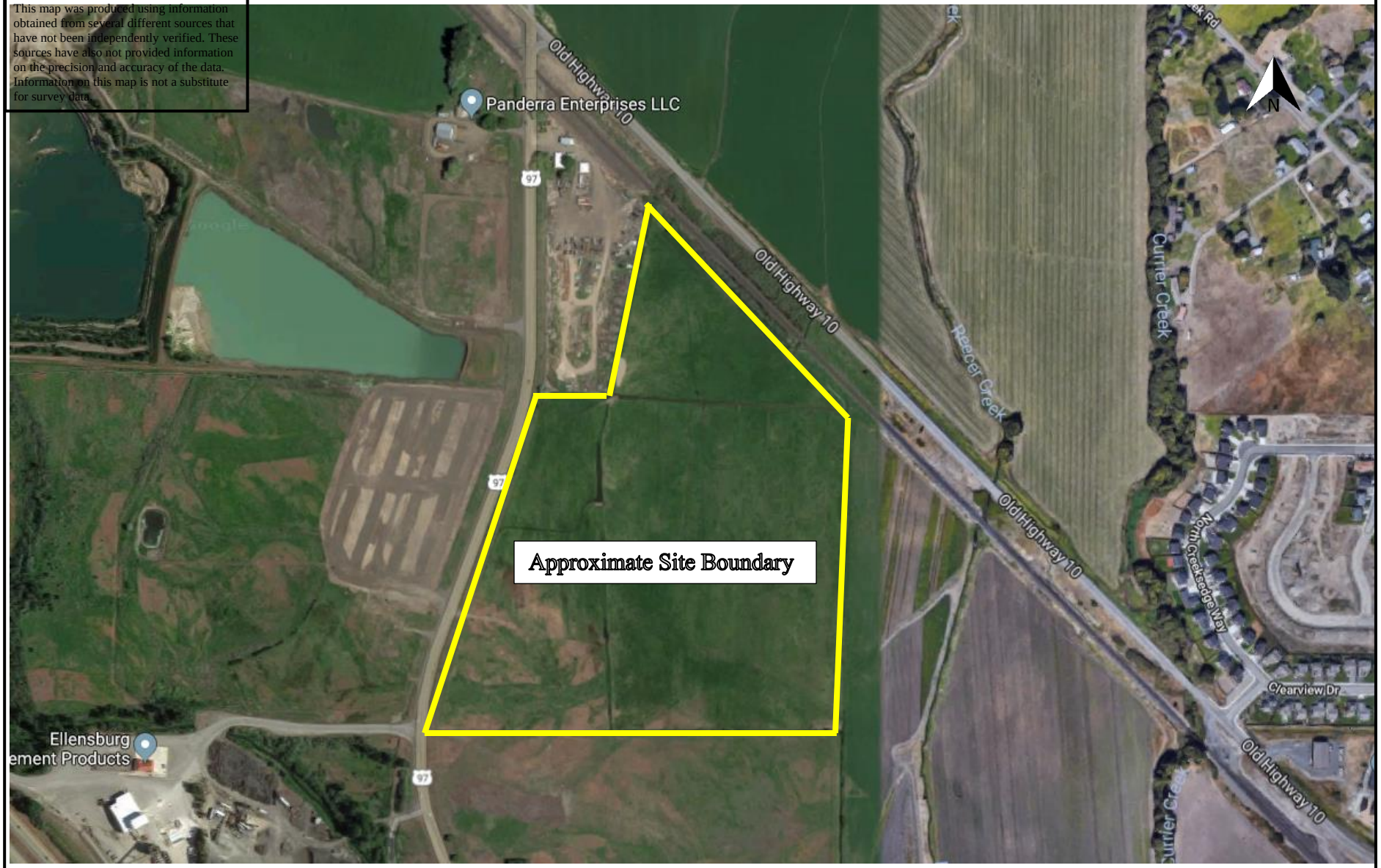
Figures

This map was produced using information obtained from several different sources that have not been independently verified. These sources have also not provided information on the precision and accuracy of the data. Information on this map is not a substitute for survey data.



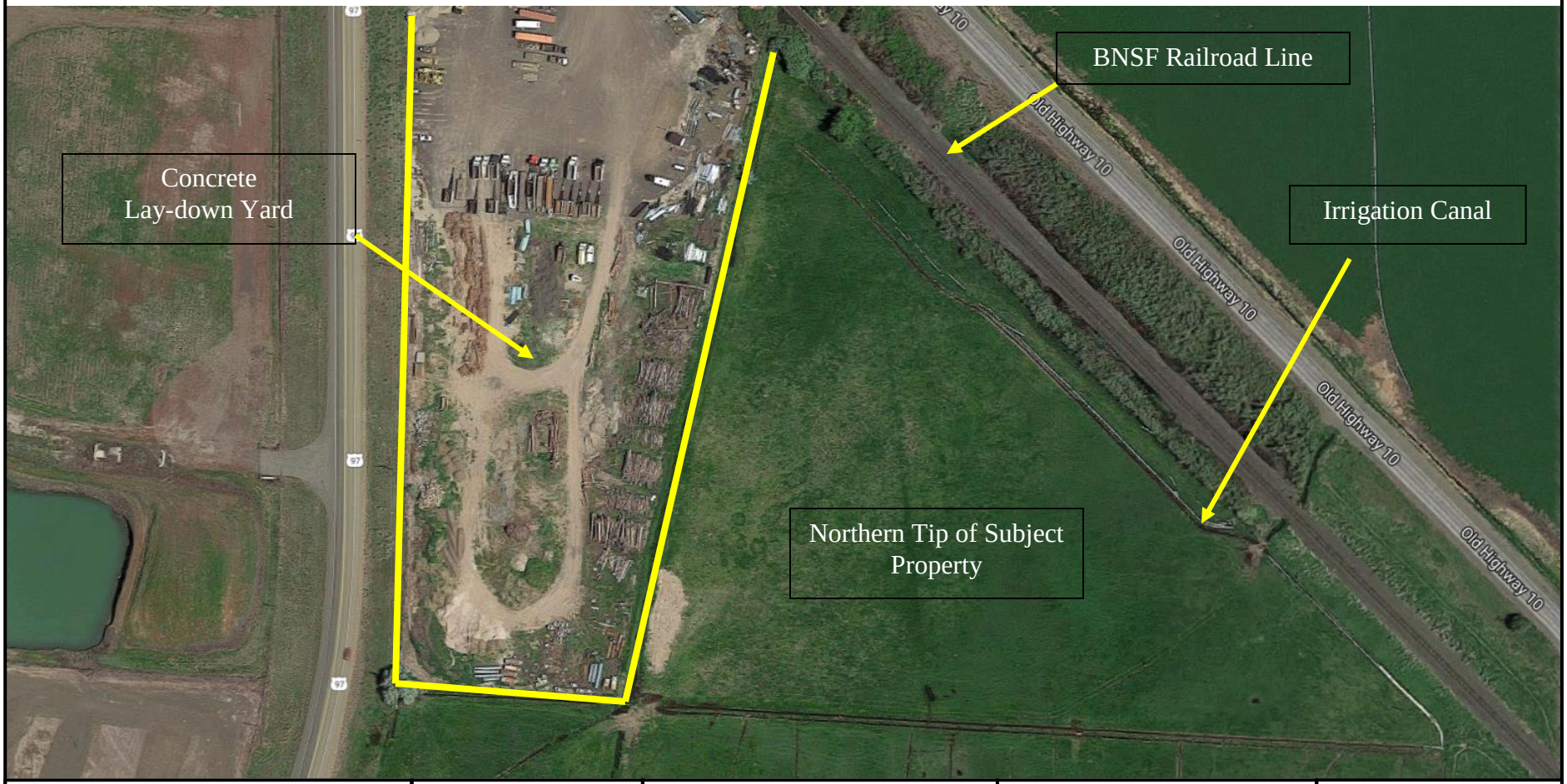
Alta Science & Engineering, Inc.	PRINT DATE: October 21, 2014	PROJECTION: NTS		PROJECT NAME: Kittitas County Highway 97 Ellensburg, Washington	FIGURE 1 Approximate Site Location
	PROJECT NUMBER: 18067	PROJECT MANAGER: J. Munkers	CARTOGRAPHER: J. Munkers		

This map was produced using information obtained from several different sources that have not been independently verified. These sources have also not provided information on the precision and accuracy of the data. Information on this map is not a substitute for survey data.



Alta Science & Engineering, Inc.	PRINT DATE: June 2018	PROJECTION: NTS		PROJECT NAME: Kittitas County Highway 97 Ellensburg, Washington	FIGURE 2 Approximate Site Boundary
	PROJECT NUMBER: 18067	PROJECT MANAGER: J. Munkers	CARTOGRAPHER: J. Munkers		

This map was produced using information obtained from several different sources that have not been independently verified. These sources have also not provided information on the precision and accuracy of the data. Information on this map is not a substitute for survey data.



Alta Science & Engineering, Inc.	PRINT DATE: June 2018	PROJECTION: NTS	PROJECT NAME: Kittitas County Highway 97 Ellensburg, Washington	FIGURE 3 Adjacent NW Parcel
	PROJECT NUMBER: 18067	PROJECT MANAGER: J. Munkers / CARTOGRAPHER: J. Munkers		

Appendix B:

Historical Research Documentation

Duke & Dude

18XX HWY 97

Ellensburg, WA 98926

Inquiry Number: 5329489.3

June 12, 2018

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

06/12/18

Site Name:

Duke & Dude
18XX HWY 97
Ellensburg, WA 98926
EDR Inquiry # 5329489.3

Client Name:

Terra Graphics
1220 Big Creek Rd
Kellogg, ID 83837
Contact: Jon Munkers

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Terra Graphics were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 7D6C-4C81-B166

PO # NA

Project 18038

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 7D6C-4C81-B166

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Duke & Dude

18XX HWY 97

Ellensburg, WA 98926

Inquiry Number: 5329489.4

June 12, 2018

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

06/12/18

Site Name:

Duke & Dude
18XX HWY 97
Ellensburg, WA 98926
EDR Inquiry # 5329489.4

Client Name:

Terra Graphics
1220 Big Creek Rd
Kellogg, ID 83837
Contact: Jon Munkers

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Terra Graphics were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# NA
Project: 18038

Coordinates:

Latitude:	47.016104 47° 0' 58" North
Longitude:	-120.590298 -120° 35' 25" West
UTM Zone:	Zone 10 North
UTM X Meters:	683140.20
UTM Y Meters:	5209771.81
Elevation:	1553.00' above sea level

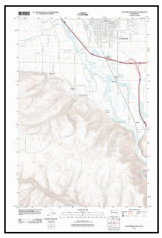
Maps Provided:

2013, 2014
1978
1958
1901, 1902
1897, 1899

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2013, 2014 Source Sheets



Ellensburg South
2013
7.5-minute, 24000

Ellensburg North
2014
7.5-minute, 24000

1978 Source Sheets

Ellensburg South
1978
7.5-minute, 24000
Aerial Photo Revised 1975

Ellensburg North
1978
7.5-minute, 24000
Aerial Photo Revised 1975

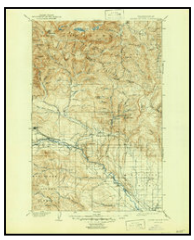
1958 Source Sheets

Ellensburg North
1958
7.5-minute, 24000
Aerial Photo Revised 1956

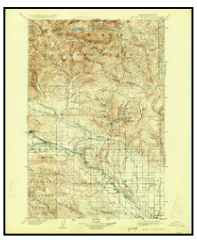
Ellensburg South
1958
7.5-minute, 24000
Aerial Photo Revised 1956

1901, 1902 Source Sheets

Ellensburg
1901
30-minute, 125000



Mount Stuart
1902
30-minute, 125000

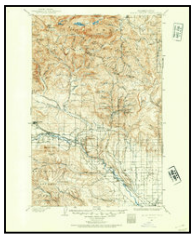


Mt Stuart
1902
30-minute, 125000

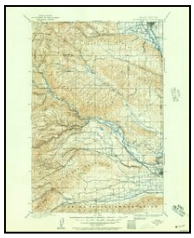
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1897, 1899 Source Sheets



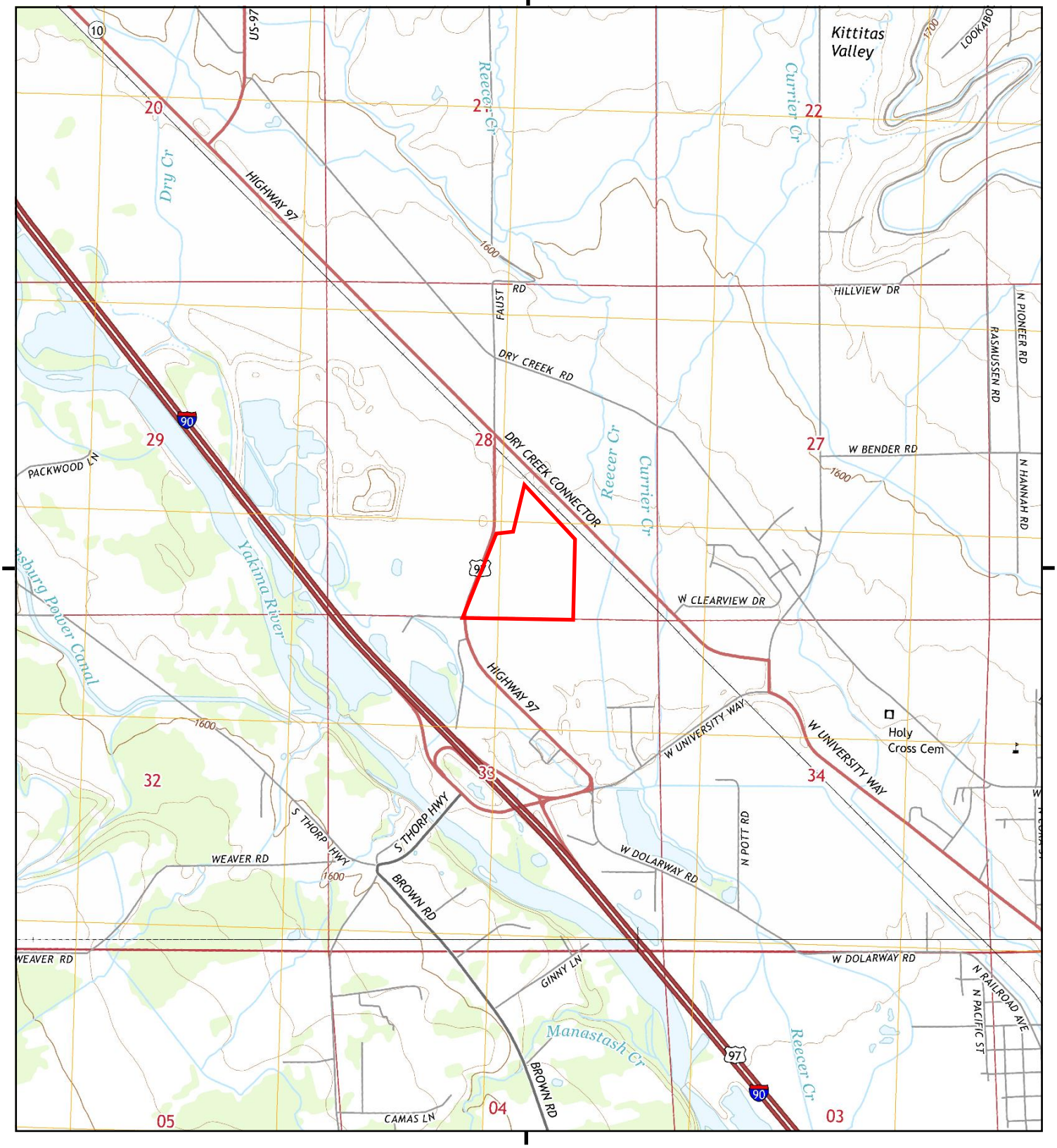
Mount Stuart
1897
30-minute, 125000



Ellensburg
1899
30-minute, 125000

Historical Topo Map

2013, 2014



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

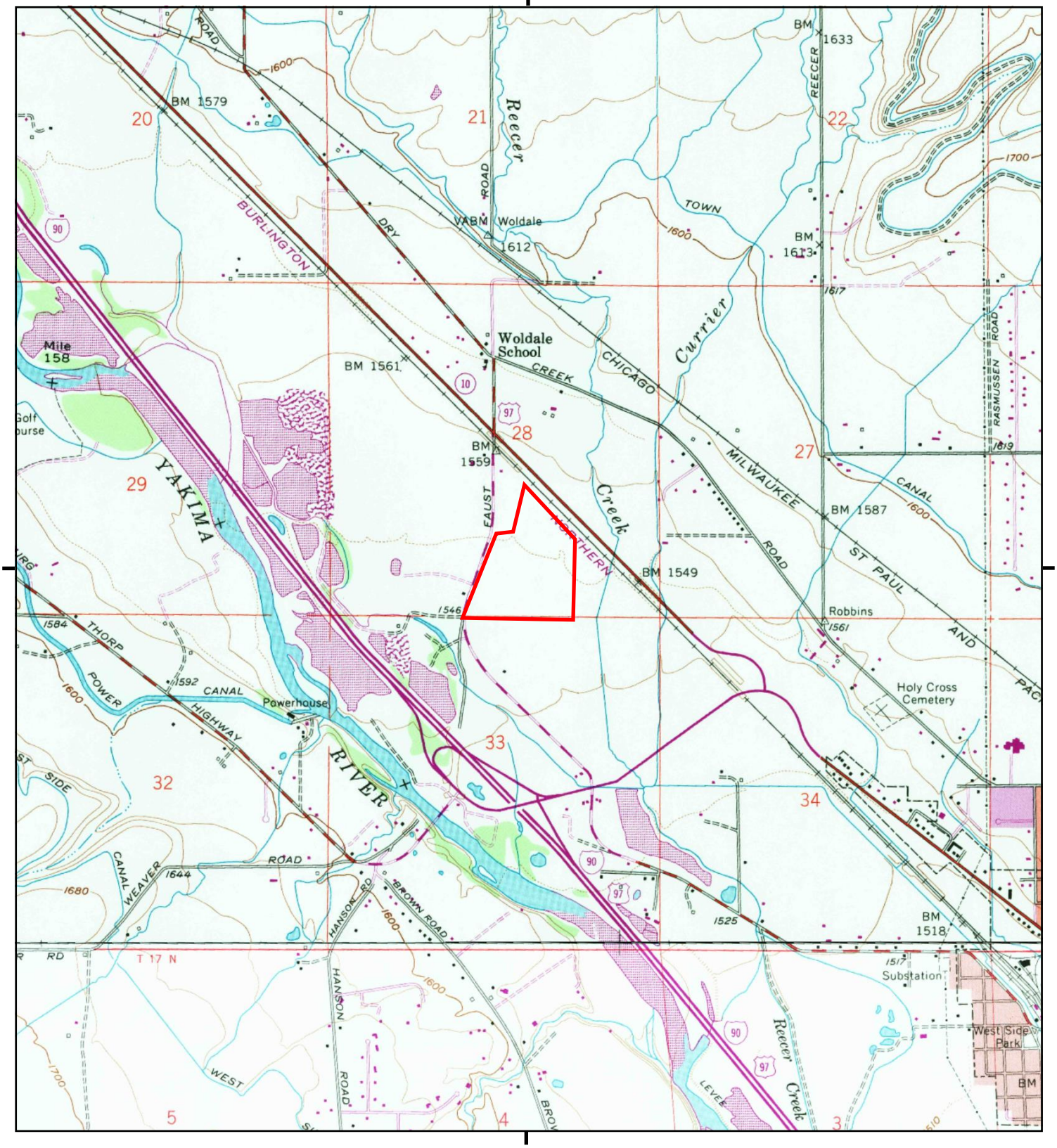
TP, Ellensburg North, 2014, 7.5-minute
S, Ellensburg South, 2013, 7.5-minute

SITE NAME: Duke & Dude
ADDRESS: 18XX HWY 97
Ellensburg, WA 98926
CLIENT: Terra Graphics

N

Historical Topo Map

1978



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

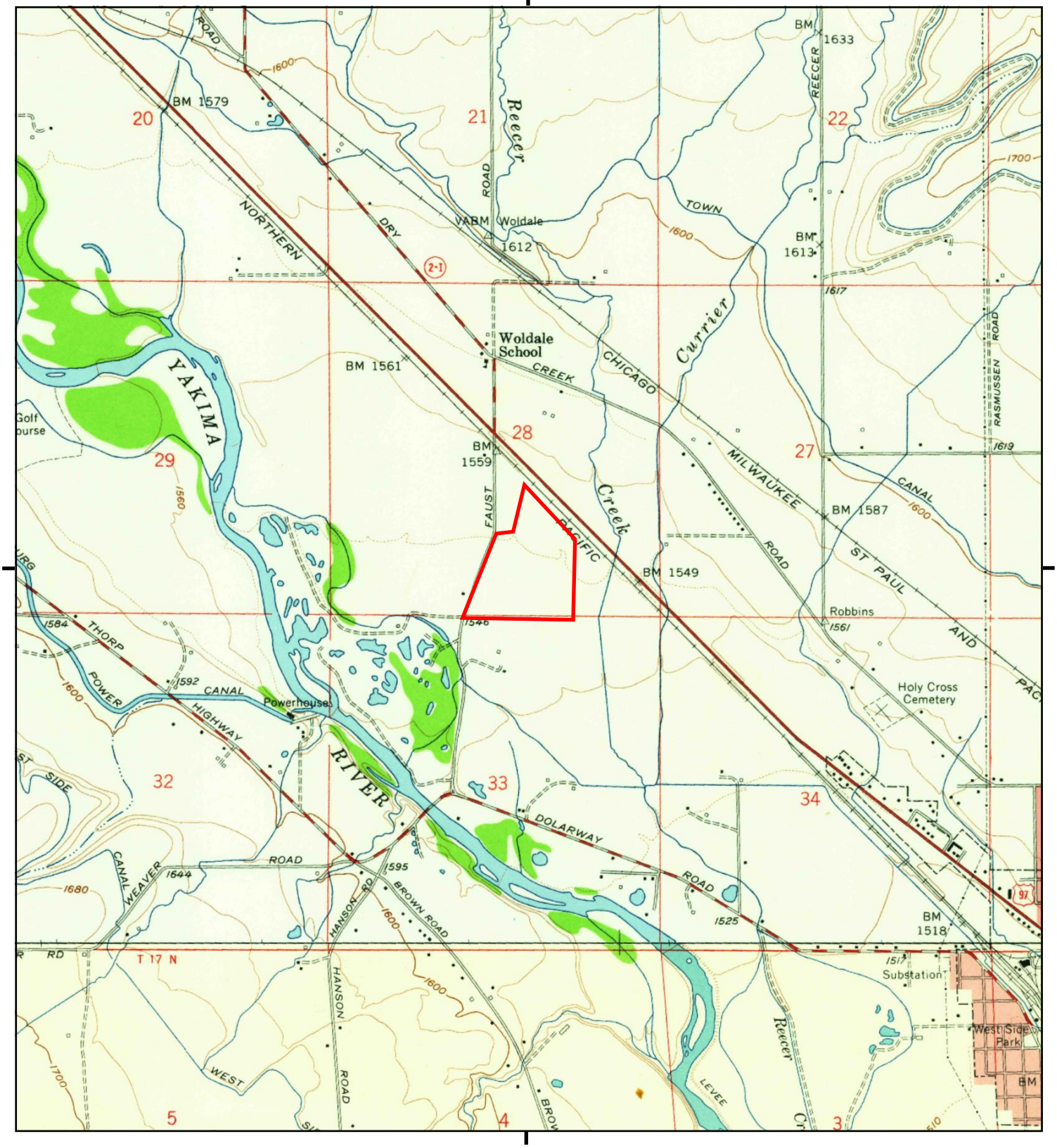
TP, Ellensburg North, 1978, 7.5-minute
S, Ellensburg South, 1978, 7.5-minute

SITE NAME: Duke & Dude
ADDRESS: 18XX HWY 97
Ellensburg, WA 98926
CLIENT: Terra Graphics

N

Historical Topo Map

1958



This report includes information from the following map sheet(s).

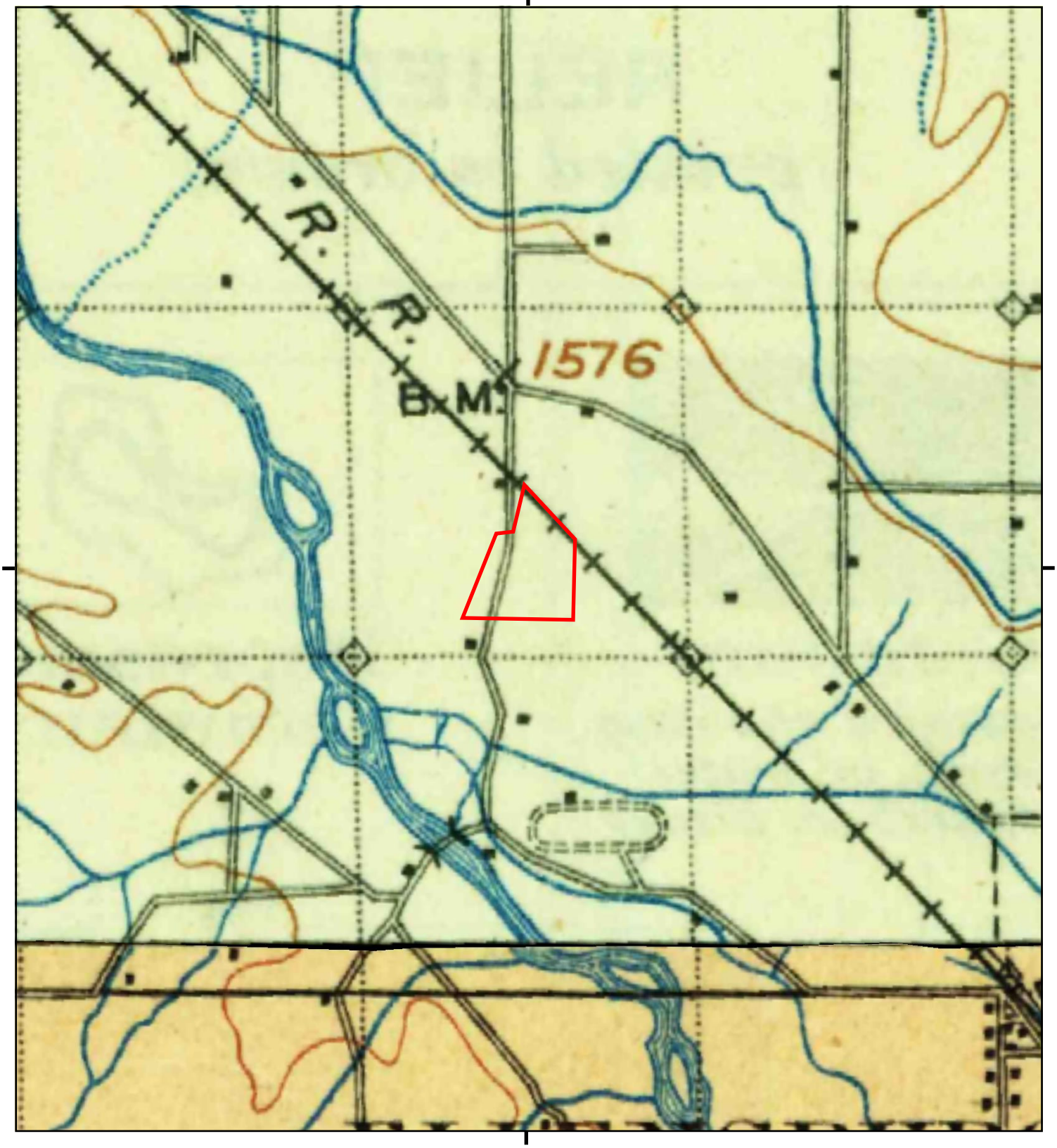
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Ellensburg North, 1958, 7.5-minute
S, Ellensburg South, 1958, 7.5-minute

SITE NAME: Duke & Dude
ADDRESS: 18XX HWY 97
Ellensburg, WA 98926
CLIENT: Terra Graphics

N



This report includes information from the following map sheet(s).

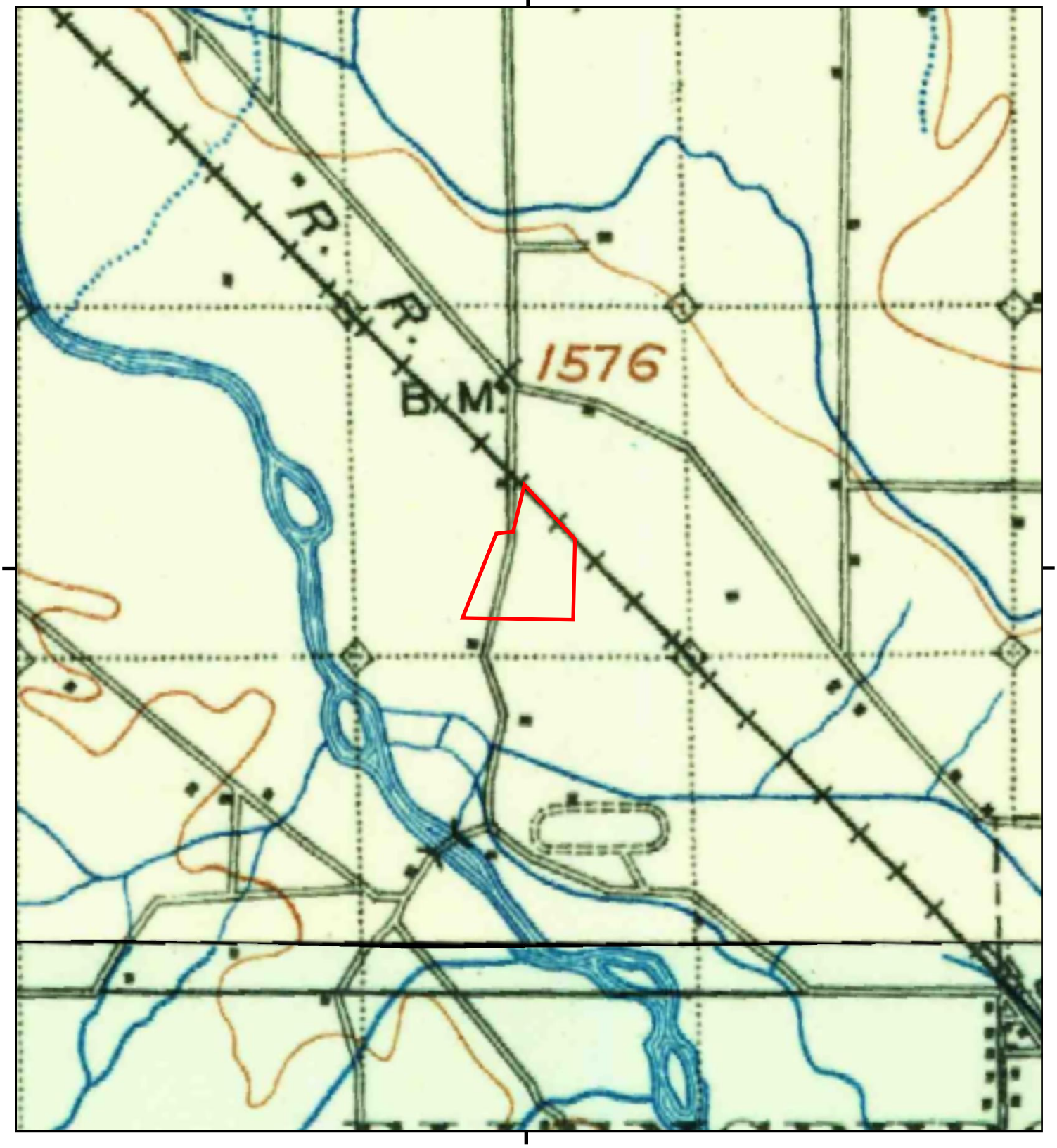
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Mount Stuart, 1902, 30-minute
S, Ellensburg, 1901, 30-minute
TP, Mt Stuart, 1902, 30-minute

SITE NAME: Duke & Dude
ADDRESS: 18XX HWY 97
Ellensburg, WA 98926
CLIENT: Terra Graphics

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Mount Stuart, 1897, 30-minute
S, Ellensburg, 1899, 30-minute

SITE NAME: Duke & Dude
ADDRESS: 18XX HWY 97
Ellensburg, WA 98926
CLIENT: Terra Graphics

N

Duke & Dude

18XX HWY 97

Ellensburg, WA 98926

Inquiry Number: 5329489.8

June 12, 2018

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

06/12/18

Site Name:

Duke & Dude
18XX HWY 97
Ellensburg, WA 98926
EDR Inquiry # 5329489.8

Client Name:

Terra Graphics
1220 Big Creek Rd
Kellogg, ID 83837
Contact: Jon Munkers

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	*Scale*	*Details*	*Source*
2015	1"=500'	Flight Year: 2015	USDA/NAIP
2011	1"=500'	Flight Year: 2011	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
2000	1"=500'	Acquisition Date: June 15, 2000	USGS/DOQQ
1990	1"=750'	Flight Date: June 18, 1990	USGS
1983	1"=500'	Flight Date: August 12, 1983	USGS
1970	1"=500'	Flight Date: August 17, 1970	USGS
1964	1"=500'	Flight Date: November 05, 1964	USGS
1956	1"=500'	Flight Date: August 09, 1956	USGS

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.


INQUIRY #: 5329489.8
YEAR: 2015
= 500'
N
EDR


INQUIRY #: 5329489.8
YEAR: 2011
= 500'
N
EDR


INQUIRY #: 5329489.8
YEAR: 2006
= 500'
N
EDR


INQUIRY #: 5329489.8
YEAR: 2000
= 500'
N
EDR

INQUIRY #: 5329489.8

YEAR: 1990

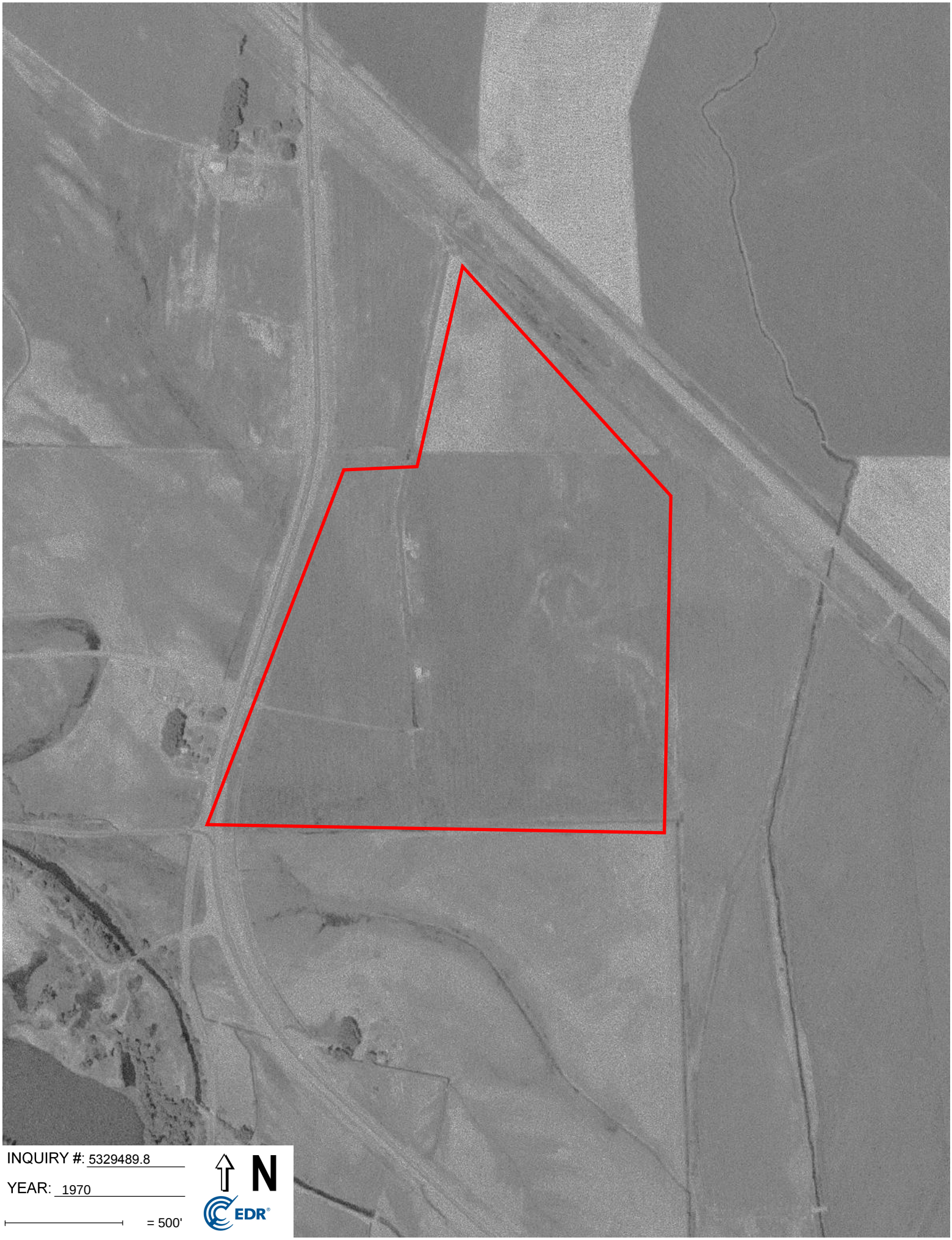
= 750'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.


INQUIRY #: 5329489.8
YEAR: 1983
= 500'
N
EDR



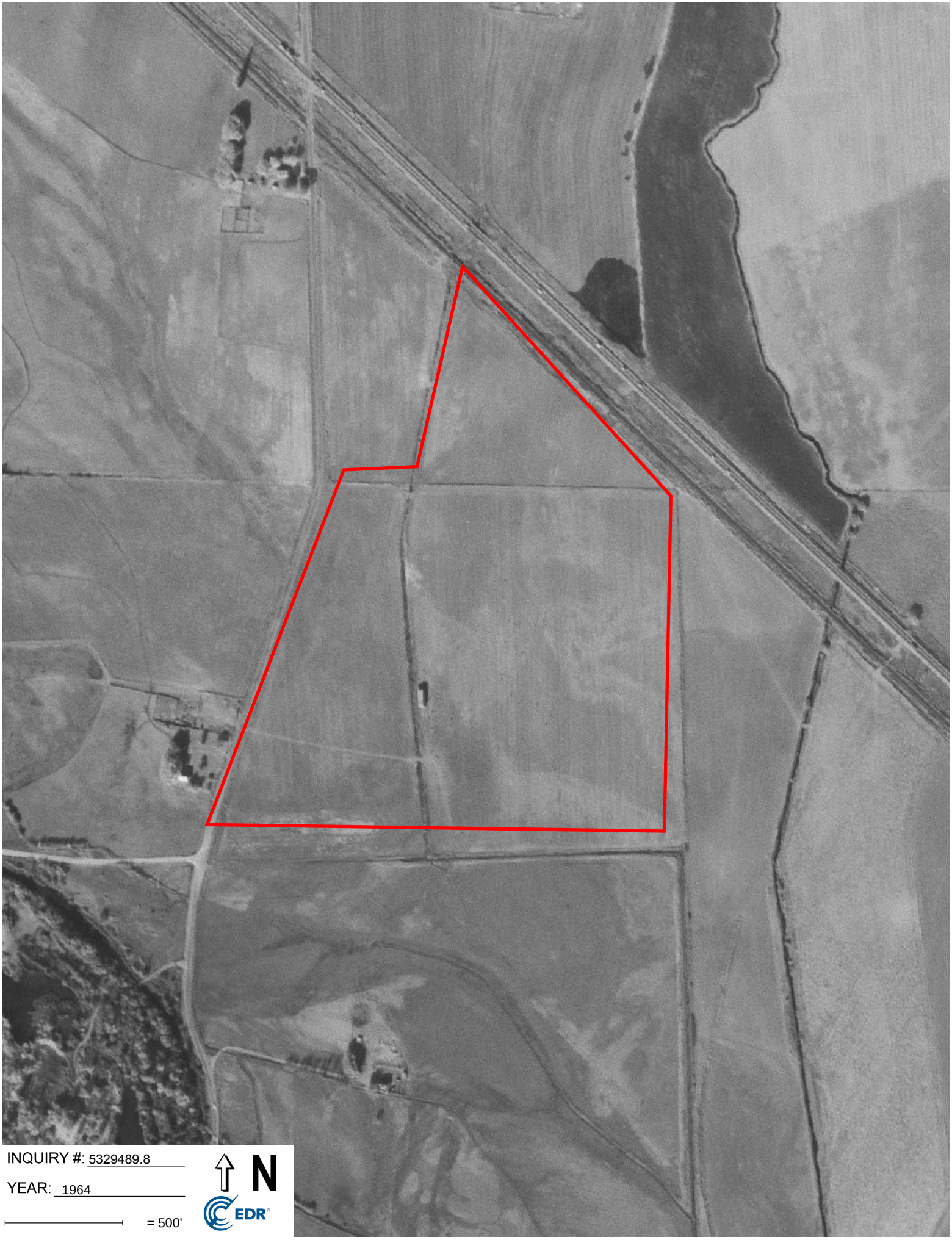
INQUIRY #: 5329489.8

YEAR: 1970

= 500'

N

EDR



INQUIRY #: 5329489.8

YEAR: 1964

= 500'

N

EDR


INQUIRY #: 5329489.8
YEAR: 1956
= 500'
N
EDR

Duke & Dude
18XX HWY 97
Ellensburg, WA 98926

Inquiry Number: 5329489.5
June 14, 2018

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

EDR is licensed to reproduce certain City Directory works by the copyright holders of those works. The purchaser of this EDR City Directory Report may include it in report(s) delivered to a customer. Reproduction of City Directories without permission of the publisher or licensed vendor may be a violation of copyright.

Data by
infoUSA®

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2014	☑	☐	EDR Digital Archive
2010	☑	☐	EDR Digital Archive
2005	☑	☐	EDR Digital Archive
2000	☑	☐	EDR Digital Archive
1995	☑	☐	EDR Digital Archive
1992	☑	☐	EDR Digital Archive
1988	☐	☐	Polk's City Directory
1983	☐	☐	Polk's City Directory
1978	☐	☐	Polk's City Directory
1974	☐	☐	Polk's City Directory
1969	☐	☐	Polk's City Directory
1963	☐	☐	Polk's City Directory
1946	☐	☐	Polk's City Directory

FINDINGS

TARGET PROPERTY STREET

18XX HWY 97
Ellensburg, WA 98926

Year	*CD Image*	*Source*	
HWY 97			
2014	pg A2	EDR Digital Archive	
2010	pg A4	EDR Digital Archive	
2005	pg A5	EDR Digital Archive	
2000	pg A6	EDR Digital Archive	
1995	pg A7	EDR Digital Archive	
1992	-	EDR Digital Archive	Target and Adjoining not listed in Source
1988	-	Polk's City Directory	Street not listed in Source
1983	-	Polk's City Directory	Street not listed in Source
1978	-	Polk's City Directory	Street not listed in Source
1974	-	Polk's City Directory	Street not listed in Source
1969	-	Polk's City Directory	Street not listed in Source
1963	-	Polk's City Directory	Street not listed in Source
1946	-	Polk's City Directory	Street not listed in Source
US HIGHWAY 97			
1992	pg A8	EDR Digital Archive	
1988	-	Polk's City Directory	Street not listed in Source
1983	-	Polk's City Directory	Street not listed in Source
1978	-	Polk's City Directory	Street not listed in Source
1974	-	Polk's City Directory	Street not listed in Source
1969	-	Polk's City Directory	Street not listed in Source
1963	-	Polk's City Directory	Street not listed in Source
1946	-	Polk's City Directory	Street not listed in Source

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

HWY 97 2014

1191	OCCUPANT UNKNOWN,
1503	SMITTYS RESTAURANTS
1504	HABERKRAFT INC
1512	LOVES TRAVEL STOPS
	STEVES PALLET RECYCLING
	SUBWAY
1608	CASCADE TRUCK & R V WASH
1817	BUDGET RENT A CAR SYSTEM INC
1830	OCCUPANT UNKNOWN,
1831	OCCUPANT UNKNOWN,
	PANDERRA ENTERPRISES LLC
2361	OCCUPANT UNKNOWN,
2363	OCCUPANT UNKNOWN,
2451	BURUGE, ERIC
	BURVEE AUCTIONEERING
	CASCADE MTN GRILLING & MORE
2611	HOWARD, SAMANTHA
2613	BJORKMAN JASON
	OCCUPANT UNKNOWN,
3008	TAYLOR, KATY M
3012	TAYLOR RANCHES LLC
	TAYLOR, PATRICK S
3014	OCCUPANT UNKNOWN,
3321	OCCUPANT UNKNOWN,
3323	RYAN, HEATHER
4041	OCCUPANT UNKNOWN,
	THERMOROCK LLC
4050	CASKEY, GARY L
7081	SCHWARTZ, NORMAN D
7650	BENNETT, TAMMY L
7651	MCKENZIE, ALFRED H
7652	MORRIS, JAMES R
7820	MCINTOSH POLE BUILDINGS INC
	MCINTOSH, SCOTT W
8251	GARDNER, JOHN W
8331	HIGH WIDE AND HVY PROPERTY MGT
	OCCUPANT UNKNOWN,
8543	WINTERER, MAX R
8545	BAILEY, JONATHAN L
8660	SILVER, LYNN C
10140	OCCUPANT UNKNOWN,
11110	HOMETREXX
	OCCUPANT UNKNOWN,
13051	HERBERT MARK L
	HILL, ERIC E
13053	RHODEN, SCOTT D
13741	OCCUPANT UNKNOWN,
13850	MAUNEY, MARTIN M
13921	LETSON, WADE D
14030	MONTGOMERY, BRUCE A

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

HWY 97 2014 (Cont'd)

14608 NORMAN, FRED W
14920 JONES, LIZ J
WITCHES CLOSET
15290 BLUME, GREGORY M
16011 WISE, ELAINE F
16281 CAMPBELL, MICHAEL J
16801 MILLETT, SHARON D
16803 OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

HWY 97 2010

1504	HABERKRAFT INC
1512	LOVES TRAVEL STOPS
	STEVES PALLET RECYCLING
1608	CASCADE TRUCK & R V WASH
1817	BUDGET RENT A CAR SYSTEM INC
1830	LUCKYS AGATE SHOP
	WOOD, CHARLES A
1831	F2M LLC
	FULL PACK SUPPLY
2361	FLORENCE, ROBERT D
2363	BARNHART, LESLIE V
2451	CASCADE MTN GRILLING & MORE
2611	BEWS, SHANE
	CUTRONE JOE
3012	TAYLOR, PATRICK S
3014	TAYLOR TYGE N
3323	RYAN, HEATHER
4041	THERMOROCK LLC
4050	CASKEY, GARY L
7081	SCHWARTZ, NORMAN D
7650	FLETCHER, LINDA L
7651	MCKENZIE, ALFRED H
7652	MORRIS, HEATHER
7820	MCINTOSH POLE BUILDINGS INC
	MCINTOSH, SCOTT W
8251	GARDNER, WAYNE
8331	ANDERSON, RICHARD D
8541	VERNOR, JEROLD D
10350	SPARKS, ROBERT C
11110	HOMETREXX
13051	OLD WEST HOLSTER CO
	RHODEN, LARRY G
13053	RHODEN FLOORS
13850	DAVIS, JANINE
13921	LETSON, RAMONA
14030	MONTGOMERY, BRUCE A
14608	ABOUT AIR
14610	NORMAN, FRED W
14920	JONES, LIZ J
	WITCHES CLOSET
15290	BLUME, GREGORY M
16011	UNDER HEAVEN ACRES
16281	CAMPBELL, MICHAEL J
16801	ZELLMER, DEAN R

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

HWY 97 2005

1073 SUPERIOR ASPHALT & PAVING CO
1191 SCOTT, JOHN M
1504 HABERKRAFT INC
1512 PILOT TRAVEL CENTERS LLC
STEVES PALATE RECYCLING
1608 CASCADE TRUCK & R V WASH
1830 LUCKYS AGATE SHOP
WILLETT, AL B
1831 F2M LLC
FULLPAC SUPPLY
2361 FLORENCE, ROBERT D
2451 HOSTETTER, SHANNON N
SHANS CLEANING SERVICE
3008 TAYLOR, KATY
3014 TAYLOR, TYGE N
3321 RUNKEL, JACOB
4041 DEWITT PAINTING & HOME RE
DEWITT, RANCE P
4050 CASKEY, GARY L
7081 SCHWARTZ, NORMAN D
7650 FLETCHER, LAWRENCE H
7651 MCKENZIE, ALFRED H
8251 CHOUINARD, KEVIN S
8331 LOAME, EMMETT P
8541 VERNOR, JEROLD D
8543 WINTERER, MAX R
10350 SPARKS, ROBERT C
11110 PETERSON, ERIK
13051 OLD WEST HOLSTER CO
RHODEN, LARRY G
13053 RHODEN FLOORS
13741 WANECHEK, GERARD D
13921 CRAWFORD, DALE W
14608 ABOUT AIR
14920 TAASEVIGEN, EDWARD L
WITCHES CLOSET
15290 BLUME, GREGORY M
16011 UNDER HEAVEN ACRES

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

HWY 97 2000

1503 SMITH R H DISTRIBUTING CO
1504 HABERKRAFT INC
1512 STEVES PALATE RECYCLING
1830 LUCKYS AGATE SHOP
WILLETT, A B
1831 FULLETON-PACIFIC CORP
4041 DEWITT PAINTING & HOME RE
DEWITT, RANCE
4050 CASKEY, GARY
7081 SCHWARTZ, N D
7651 MCKENZIE, ALFRED H
8543 WINTERER, MAX
10140 DEFOOR LYLE R
10350 SPARKS, ROBERT C
13051 RHODEN, LARRY
13053 RHODEN FLOORS
RHODEN, SHANE
14920 JONES, LIZ
TAASEVIGEN, EDWARD
16011 UNDER HEAVEN ACRES

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

HWY 97 1995

1504 HABERKRAFT INC
1512 STEVES AUTO/TRUCK STOP INC

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

US HIGHWAY 97 1992

1504 HABERKRAFT INC
1512 STEVES AUTO/TRUCK STOP INC

Appendix C:

Regulatory Records Documentation

Duke & Dude
18XX HWY 97
Ellensburg, WA 98926

Inquiry Number: 5329489.2s
June 12, 2018

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
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with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

18XX HWY 97
ELLENSBURG, WA 98926

COORDINATES

Latitude (North):	47.0161040 - 47° 0' 57.97''
Longitude (West):	120.5902980 - 120° 35' 25.07''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	683145.9
UTM Y (Meters):	5209553.5
Elevation:	1553 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	6004933 ELLENSBURG NORTH, WA
Version Date:	2014
South Map:	5992487 ELLENSBURG SOUTH, WA
Version Date:	2013

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20150703, 20150807
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
18XX HWY 97
ELLENSBURG, WA 98926

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	F2M LLC ELKHORN PIT	1831 HWY 97	FINDS	Lower	1 ft.
A2	F2M LLC ELKHORN PIT	1831 HWY 97	ALLSITES	Lower	1 ft.
A3	UNIVERSITY AUTO CENT	1817 N SR 97	ALLSITES, RCRA NonGen / NLR, FINDS, ECHO	Lower	158, 0.030, SW
4	ELLENSBURG CEMENT PR	2121 HWY 97	ALLSITES, NPDES	Higher	534, 0.101, NNW
B5	BRETT EASON LEASED P	MILE POST 1 HWY 10	ALLSITES	Higher	744, 0.141, NNW
B6	ELLENSBURG CEMENT PR		US MINES	Higher	755, 0.143, NNW
7	MOBILE FLEET SERVICE	1711 US HWY 97	ALLSITES	Lower	1109, 0.210, SSW
8	ELLENSBURG CEMENT PR		US MINES	Lower	1161, 0.220, WSW
9	ELLENSBURG REPEATER	RTE 1 BOX 770	ALLSITES, FINDS	Lower	1553, 0.294, ESE
10	ELLENSBURG CEMENT PR	1071 SR97	ALLSITES, FINDS	Lower	1560, 0.295, SW
11	TRIPLE L ELLENSBURG	SR97 & I90	ALLSITES	Lower	1745, 0.330, South
12	CASCADE TRUCK & RV W	1608 HWY 97	ALLSITES	Lower	1846, 0.350, SSE
13	PILOT TRAVEL CENTER	1512 HWY 97	CSCSL, LUST, VCP, ICR, ALLSITES, SPILLS	Lower	2061, 0.390, SSE
14	SMITTYS ELLENSBURG 6	1503 HWY 97	UST, VCP, ALLSITES, CSCSL NFA, Financial Assurance	Lower	2463, 0.466, SSE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List

US INST CONTROL Sites with Institutional Controls

Federal ERNS list

ERNS Emergency Response Notification System

State- and tribal - equivalent NPL

HSL Hazardous Sites List

State and tribal landfill and/or solid waste disposal site lists

SWF/LF Solid Waste Facility Database

State and tribal leaking storage tank lists

INDIAN LUST Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST Underground Storage Tank Listing
UST Underground Storage Tank Database
AST Aboveground Storage Tank Locations
INDIAN UST Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

INST CONTROL Institutional Control Site List

State and tribal voluntary cleanup sites

INDIAN VCP Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS Brownfields Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

SWTIRE Solid Waste Tire Facilities
SWRCY Recycling Facility List
INDIAN ODI Report on the Status of Open Dumps on Indian Lands
ODI Open Dump Inventory
DEBRIS REGION 9 Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL Delisted National Clandestine Laboratory Register

CDL	Clandestine Drug Lab Contaminated Site List
HIST CDL	List of Sites Contaminated by Clandestine Drug Labs
US CDL	National Clandestine Laboratory Register

Local Land Records

LIENS 2	CERCLA Lien Information

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
SPILLS	Reported Spills
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
ABANDONED MINES	Abandoned Mines
DOCKET HWC	Hazardous Waste Compliance Docket Listing
UXO	Unexploded Ordnance Sites
ECHO	Enforcement & Compliance History Information
FUELS PROGRAM	EPA Fuels Program Registered Listing
AIRS	Washington Emissions Data System
ASBESTOS	ASBESTOS
COAL ASH	Coal Ash Disposal Site Listing
DRYCLEANERS	Drycleaner List

Financial Assurance ---------- Financial Assurance Information Listing
Inactive Drycleaners ---------- Inactive Drycleaners
MANIFEST ---------- Hazardous Waste Manifest Data
NPDES ---------- Water Quality Permit System Data
UIC ---------- Underground Injection Wells Listing

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP ---------- EDR Proprietary Manufactured Gas Plants
EDR Hist Auto ---------- EDR Exclusive Historical Auto Stations
EDR Hist Cleaner ---------- EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS ---------- Recovered Government Archive State Hazardous Waste Facilities List
RGA LF ---------- Recovered Government Archive Solid Waste Facilities List
RGA LUST ---------- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

State- and tribal - equivalent CERCLIS

CSCSL: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Ecology's Confirmed & Suspected Contaminated Sites List.

A review of the CSCSL list, as provided by EDR, and dated 04/16/2018 has revealed that there is 1 CSCSL site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PILOT TRAVEL CENTER	***1512 HWY 97***	***SSE 1/4 - 1/2 (0.390 mi.)***	***13***	***24***

Site Status: Awaiting Cleanup
Site Status: Cleanup Started
Facility ID: 18911356
Clean Up Siteid: 11732
Clean Up Siteid: 5649

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Ecology's Leaking Underground Storage Tanks Site List.

A review of the LUST list, as provided by EDR, has revealed that there is 1 LUST site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PILOT TRAVEL CENTER	***1512 HWY 97***	***SSE 1/4 - 1/2 (0.390 mi.)***	***13***	***24***
Database: LUST, Date of Government Version: 05/15/2018 Facility Status: Cleanup Started Cleanup Site ID: 5649 Facility ID: 18911356				

State and tribal voluntary cleanup sites

ICR: These are remedial action reports Ecology has received from either the owner or operator of the site. These actions have been conducted without department oversight or approval and are not under an order or decree.

A review of the ICR list, as provided by EDR, and dated 12/01/2002 has revealed that there is 1 ICR site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PILOT TRAVEL CENTER	***1512 HWY 97***	***SSE 1/4 - 1/2 (0.390 mi.)***	***13***	***24***

VCP: Sites that have entered either the Voluntary Cleanup Program or its predecessor Independent Remedial Action Program.

A review of the VCP list, as provided by EDR, and dated 04/16/2018 has revealed that there are 2 VCP sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PILOT TRAVEL CENTER	***1512 HWY 97***	***SSE 1/4 - 1/2 (0.390 mi.)***	***13***	***24***
Facility ID: 18911356 Cleanup Siteid: 5649				
SMITTYS ELLENSBURG 6	***1503 HWY 97***	***SSE 1/4 - 1/2 (0.466 mi.)***	***14***	***29***
Facility ID: 62898962 Cleanup Siteid: 6407				

EXECUTIVE SUMMARY

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

ALLSITES: Information on facilities and sites of interest to the Department of Ecology.

A review of the ALLSITES list, as provided by EDR, and dated 05/09/2018 has revealed that there are 11 ALLSITES sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ELLENSBURG CEMENT PR Facility Id: 20493 Facility Id: 24201	***2121 HWY 97***	***NNW 0 - 1/8 (0.101 mi.)***	***4***	***12***
BRETT EASON LEASED P Facility Id: 4557	MILE POST 1 HWY 10	NNW 1/8 - 1/4 (0.141 mi.)	B5	13

Lower Elevation	Address	Direction / Distance	Map ID	Page
F2M LLC ELKHORN PIT Facility Id: 17096	1831 HWY 97	0 - 1/8 (0.000 mi.)	A2	8
UNIVERSITY AUTO CENT Facility Id: 29321323	***1817 N SR 97***	***SW 0 - 1/8 (0.030 mi.)***	***A3***	***9***
MOBILE FLEET SERVICE Facility Id: 19351	1711 US HWY 97	SSW 1/8 - 1/4 (0.210 mi.)	7	15
ELLENSBURG REPEATER Facility Id: 5542876	***RTE 1 BOX 770***	***ESE 1/4 - 1/2 (0.294 mi.)***	***9***	***22***
ELLENSBURG CEMENT PR Facility Id: 5117819	***1071 SR97***	***SW 1/4 - 1/2 (0.295 mi.)***	***10***	***22***
TRIPLE L ELLENSBURG Facility Id: 21736	SR97 & I90	S 1/4 - 1/2 (0.330 mi.)	11	23
CASCADE TRUCK & RV W Facility Id: 11779	1608 HWY 97	SSE 1/4 - 1/2 (0.350 mi.)	12	24
PILOT TRAVEL CENTER Facility Id: 18911356	***1512 HWY 97***	***SSE 1/4 - 1/2 (0.390 mi.)***	***13***	***24***
SMITTYS ELLENSBURG 6 Facility Id: 62898962	***1503 HWY 97***	***SSE 1/4 - 1/2 (0.466 mi.)***	***14***	***29***

CSCSL NFA: The data set contains information about sites previously on the Confirmed and Suspected Contaminated Sites list that have received a No Further Action (NFA) determination. Because it is necessary to maintain historical records of sites that have been investigated and cleaned up, sites are not deleted from the database when cleanup activities are completed. Instead a No Further Action code is entered based upon the type of NFA determination the site received.

A review of the CSCSL NFA list, as provided by EDR, and dated 04/16/2018 has revealed that there is 1 CSCSL NFA site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SMITTYS ELLENSBURG 6	***1503 HWY 97***	***SSE 1/4 - 1/2 (0.466 mi.)***	***14***	***29***

EXECUTIVE SUMMARY

Facility/Site Id: 62898962
CS Id: 6407

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 12/11/2017 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
UNIVERSITY AUTO CENT	***1817 N SR 97***	***SW 0 - 1/8 (0.030 mi.)***	***A3***	***9***

US MINES: Mines Master Index File. The source of this database is the Dept. of Labor, Mine Safety and Health Administration.

A review of the US MINES list, as provided by EDR, has revealed that there are 2 US MINES sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ELLENSBURG CEMENT PR		NNW 1/8 - 1/4 (0.143 mi.)	B6	14
Database: US MINES, Date of Government Version: 01/25/2018				

Lower Elevation	Address	Direction / Distance	Map ID	Page
ELLENSBURG CEMENT PR		WSW 1/8 - 1/4 (0.220 mi.)	8	15
Database: US MINES, Date of Government Version: 01/25/2018				

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

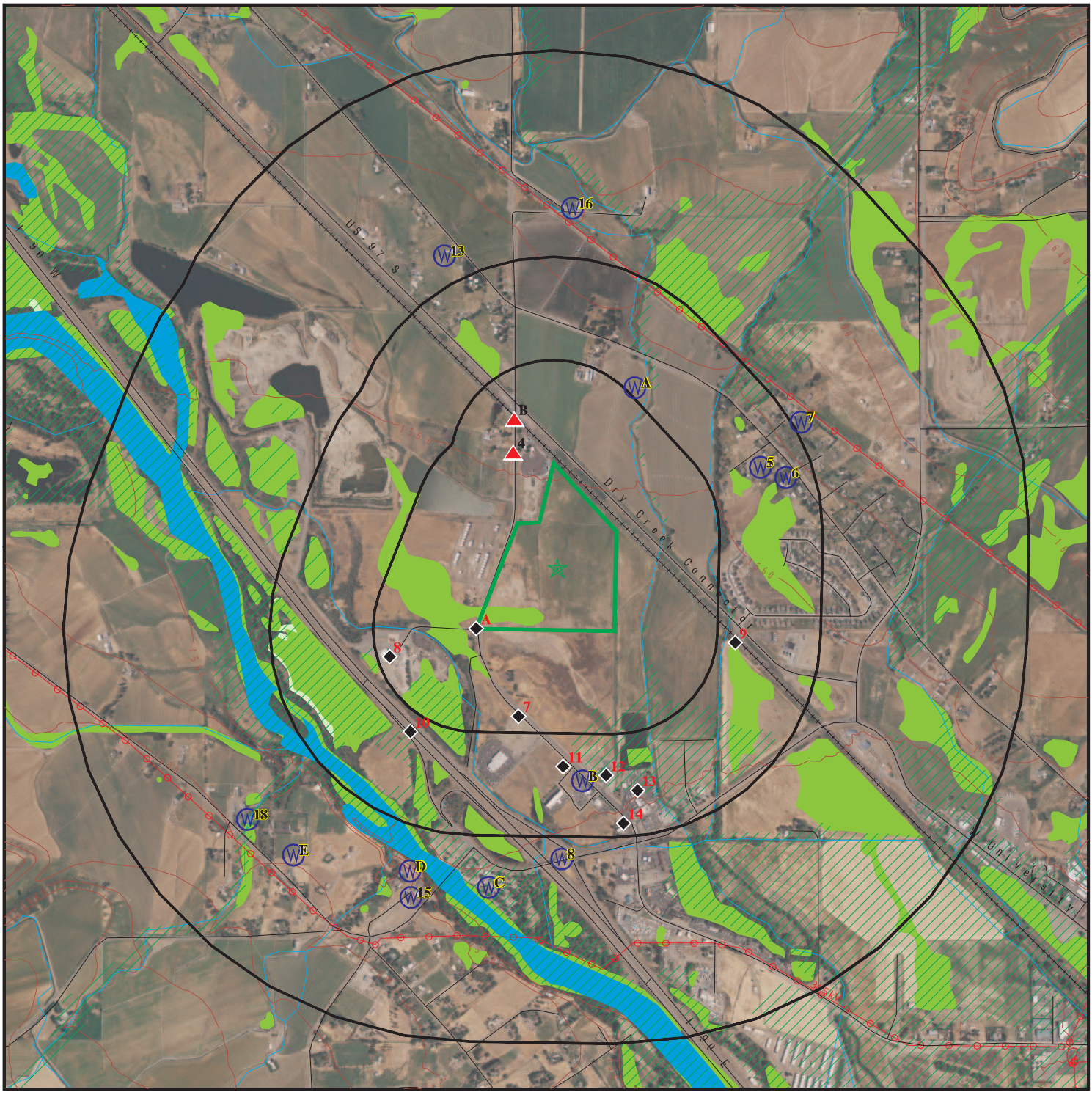
A review of the FINDS list, as provided by EDR, and dated 02/21/2018 has revealed that there is 1 FINDS site within approximately 0.001 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
F2M LLC ELKHORN PIT	1831 HWY 97	0 - 1/8 (0.000 mi.)	A1	8

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 5329489.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

100-year flood zone

500-year flood zone

National Wetland Inventory

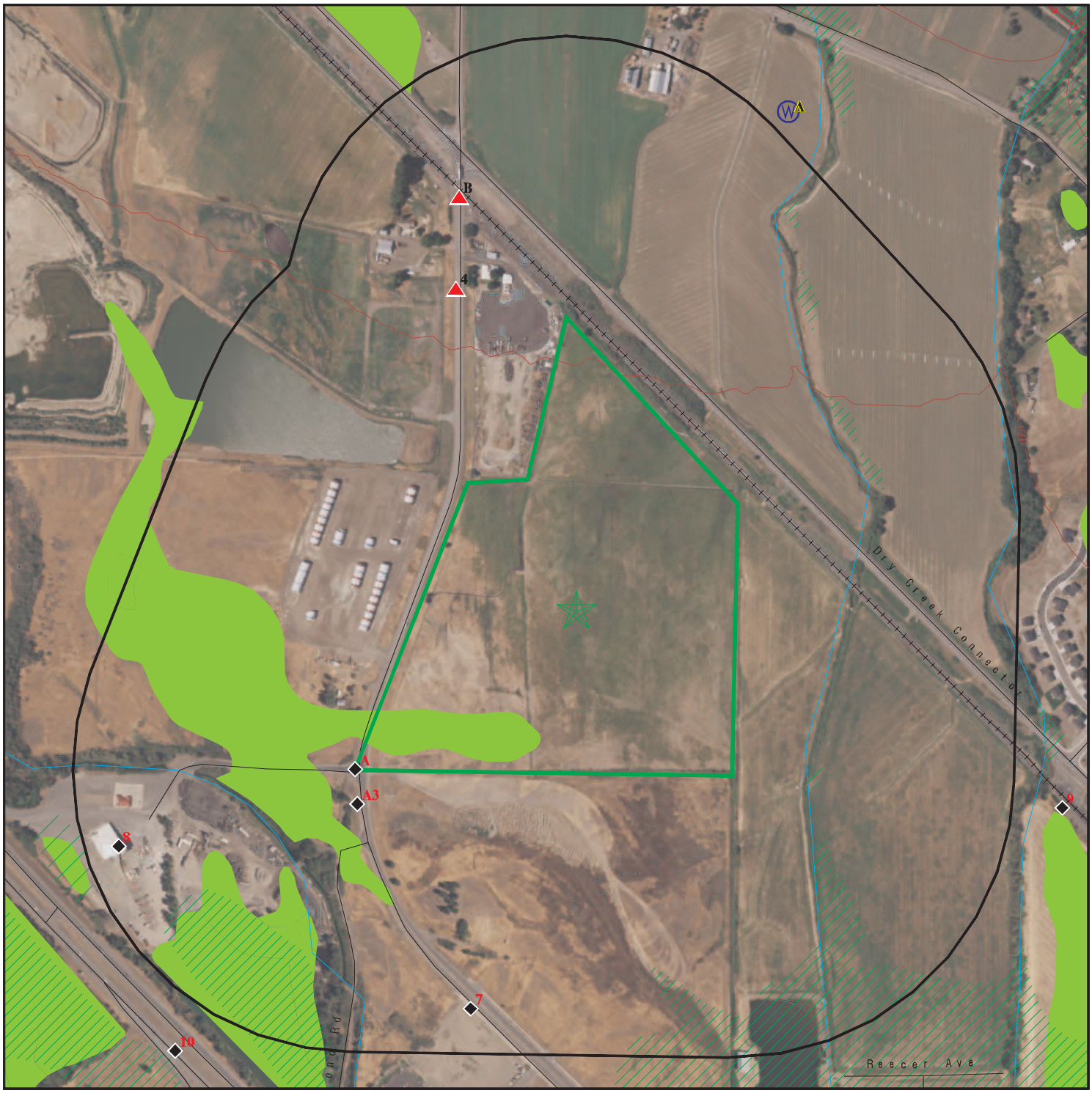
State Wetlands

Upgradient Area

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Duke & Dude	CLIENT: Terra Graphics
ADDRESS: 18XX HWY 97 Ellensburg WA 98926	CONTACT: Jon Munkers
LAT/LONG: 47.016104 / 120.590298	INQUIRY #: 5329489.2s DATE: June 12, 2018 1:37 pm

DETAIL MAP - 5329489.2S



0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Duke & Dude	CLIENT: Terra Graphics
ADDRESS: 18XX HWY 97 Ellensburg WA 98926	CONTACT: Jon Munkers INQUIRY #: 5329489.2s
LAT/LONG: 47.016104 / 120.590298	DATE: June 12, 2018 1:39 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
HSL	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
CSCSL	1.000		0	0	1	0	NR	1
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	1	NR	NR	1

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
ICR	0.500		0	0	1	NR	NR	1
VCP	0.500		0	0	2	NR	NR	2
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
SWTIRE	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
ALLSITES	0.500		3	2	6	NR	NR	11
CDL	0.001		0	NR	NR	NR	NR	0
HIST CDL	0.001		0	NR	NR	NR	NR	0
CSCSL NFA	0.500		0	0	1	NR	NR	1
US CDL	0.001		0	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	0.001		0	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
SPILLS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		1	0	NR	NR	NR	1
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	0.001		0	NR	NR	NR	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	2	NR	NR	NR	2
ABANDONED MINES	0.001		0	NR	NR	NR	NR	0
FINDS	0.001		1	NR	NR	NR	NR	1
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	0.001		0	NR	NR	NR	NR	0
ASBESTOS	0.001		0	NR	NR	NR	NR	0
COAL ASH	0.500		0	0	0	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
Inactive Drycleaners	0.250		0	0	NR	NR	NR	0
MANIFEST	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA HWS	0.001		0	NR	NR	NR	NR	0
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	5	4	12	0	0	21

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **F2M LLC ELKHORN PIT** **FINDS** **1007678045**
1831 HWY 97 **N/A**
< 1/8 **ELLENSBURG, WA 98926**
1 ft.

Site 1 of 3 in cluster A

Relative: FINDS:
Lower

Actual: Registry ID: 110017939301
1549 ft.

Environmental Interest/Information System
Washington Facility / Site Identification System (WA-FSIS) provides a means to query and display data maintained by the Washington Department of Ecology. This system contains key information for each facility/site that is currently, or has been, of interest to the Air Quality, Dam Safety, Hazardous Waste, Toxics Cleanup, and Water Quality Programs.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

A2 **F2M LLC ELKHORN PIT** **ALLSITES** **S110037232**
1831 HWY 97 **N/A**
< 1/8 **ELLENSBURG, WA 98926**
1 ft.

Site 2 of 3 in cluster A

Relative: ALLSITES:
Lower
Facility Name: F2M LLC ELKHORN PIT
Actual: Facility Id: 17096
1549 ft.

Interaction: 87994
Interaction 1: I
Interaction 2: SANDGP
Ecology Program: WATQUAL
Program Data: PARIS
Facility Alt.: F2M LLC
Program ID: WAG500071
Date Interaction: 2004-09-07 00:00:00
Date Interaction 3: Sand and Gravel GP
Latitude: 47.020805228
Longitude: -120.59336853000001

Interaction: 87056
Interaction 1: I
Interaction 2: SANDGP
Ecology Program: WATQUAL
Program Data: PARIS
Facility Alt.: F2M LLC ELKHORN PIT
Program ID: WAG505201
Date Interaction: 2005-02-04 00:00:00
Date Interaction 3: Sand and Gravel GP
Latitude: 47.020805228
Longitude: -120.59336853000001

A3
SW
< 1/8
0.030 mi.
158 ft.

UNIVERSITY AUTO CENTER SR 97
1817 N SR 97
ELLENSBURG, WA 98926

Site 3 of 3 in cluster A

ALLSITES
RCRA NonGen / NLR
FINDS
ECHO

1005445492
WAH000017640

Relative:
Lower

Actual:
1549 ft.

ALLSITES:

Facility Name:	UNIVERSITY AUTO CENTER SR 97
Facility Id:	29321323
Interaction:	36588
Interaction 1:	I
Interaction 2:	HWG
Ecology Program:	HAZWASTE
Program Data:	TURBOWASTE
Facility Alt.:	Not reported
Program ID:	WAH000017640
Date Interaction:	2002-03-05 00:00:00
Date Interaction 3:	Hazardous Waste Generator
Latitude:	47.201532874000002
Longitude:	-120.713367941

RCRA NonGen / NLR:

Date form received by agency:	03/01/2004
Facility name:	UNIVERSITY AUTO CENTER SR 97
Facility address:	1817 N SR 97 ELLENSBURG, WA 98926
EPA ID:	WAH000017640
Mailing address:	PO BOX 619 ELLENSBURG, WA 98926
Contact:	JEFF FALTUS
Contact address:	PO BOX 619 ELLENSBURG, WA 98926-0619
Contact country:	US
Contact telephone:	509-962-7151
Contact email:	Not reported
EPA Region:	10
Land type:	Private
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	UNIVERSITY AUTO CENTER
Owner/operator address:	PO BOX 619 ELLENSBURG, WA 98926
Owner/operator country:	US
Owner/operator telephone:	509-962-7151
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	UNIVERSITY AUTO CENTER
Owner/operator address:	PO BOX 619

UNIVERSITY AUTO CENTER SR 97 (Continued) **1005445492**

ELLENSBURG, WA 98926
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 03/05/2002
Owner/Op end date: Not reported

Owner/operator name: UNIVERSITY AUTO CENTER
Owner/operator address: PO BOX 619
ELLENSBURG, WA 98926
Owner/operator country: US
Owner/operator telephone: 509-962-7151
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: JEFF FALTUS
Owner/operator address: PO BOX 619
ELLENSBURG, WA 98926
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1900
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 03/01/2004

UNIVERSITY AUTO CENTER SR 97 (Continued) **1005445492**

Site name: UNIVERSITY AUTO CENTER SR 97
Classification: Not a generator, verified

Date form received by agency: 12/31/2003
Site name: UNIVERSITY AUTO CENTER SR 97
Classification: Not a generator, verified

Date form received by agency: 03/05/2002
Site name: UNIVERSITY AUTO CENTER SR 97
Classification: Not a generator, verified

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 10/16/2007
Date achieved compliance: 02/19/2008
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/06/2007
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 10/16/2007
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 02/19/2008
Evaluation lead agency: State

Evaluation date: 08/21/2002
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110012559882

Environmental Interest/Information System

Washington Facility / Site Identification System (WA-FSIS) provides a means to query and display data maintained by the Washington Department of Ecology. This system contains key information for each facility/site that is currently, or has been, of interest to the Air Quality, Dam Safety, Hazardous Waste, Toxics Cleanup, and Water Quality Programs.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

UNIVERSITY AUTO CENTER SR 97 (Continued) **1005445492**

HAZARDOUS WASTE BIENNIAL REPORTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1005445492
Registry ID:	110012559882
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110012559882

---

4 NNW < 1/8 0.101 mi. 534 ft. **ELLENSBURG CEMENT PRODUCTS LO PRO 1** **ALLSITES S110035434**
2121 HWY 97 **NPDES N/A**
ELLENSBURG, WA 98926

Relative: Higher

Actual: 1562 ft.

ALLSITES:

Facility Name:	ELLENSBURG CEMENT PRODUCTS LO PRO 1
Facility Id:	20493
Interaction:	92609
Interaction 1:	A
Interaction 2:	SANDGP
Ecology Program:	WATQUAL
Program Data:	PARIS
Facility Alt.:	Ellensburg Cement LO PRO 1
Program ID:	WAG500111
Date Interaction:	2010-02-26 00:00:00
Date Interaction 3:	Sand and Gravel GP
Latitude:	47.013828574999998
Longitude:	-120.599838682

Facility Name:	ELLENSBURG CEMENT IVAN HUTCHINSON
Facility Id:	24201
Interaction:	87171
Interaction 1:	A
Interaction 2:	SANDGP
Ecology Program:	WATQUAL
Program Data:	PARIS
Facility Alt.:	Ellensburg Cement Ivan Hutchinson
Program ID:	WAG505070
Date Interaction:	1994-11-18 00:00:00
Date Interaction 3:	Sand and Gravel GP
Latitude:	47.013894229000002
Longitude:	-120.59498553100001

NPDES:

Facility Status:	Inactive
Facility Type:	Sand and Gravel GP
Admin Region:	Central
Date Issued:	02/17/2016
Latitude:	47.01383434
Longitude:	-120.599853

ELLENSBURG CEMENT PRODUCTS LO PRO 1 (Continued) **S110035434**

Permit ID:	WAG500111
Permit Version:	2
Permit Status:	Active
Permit SubStatus:	Coverage Issued
Ecology Contact:	Pamela Perun
WRIA:	Upper Yakima
Permit Expiration Date:	03/31/2021
Effective Date:	04/01/2016
Days to Expiration:	1261
Facility Status:	Active
Facility Type:	Sand and Gravel GP
Admin Region:	Central
Date Issued:	02/17/2016
Latitude:	47.0139
Longitude:	-120.595
Permit ID:	WAG505070
Permit Version:	4
Permit Status:	Active
Permit SubStatus:	Coverage Issued
Ecology Contact:	Pamela Perun
WRIA:	Upper Yakima
Permit Expiration Date:	03/31/2021
Effective Date:	04/01/2016
Days to Expiration:	1261

B5 **BRETT EASON LEASED PROPERTY** **ALLSITES** **S109554535**
NNW **MILE POST 1 HWY 10** **N/A**
1/8-1/4 **ELLENSBURG, WA 98926**
0.141 mi.
744 ft. **Site 1 of 2 in cluster B**

Relative: **Higher**

Actual: **1564 ft.**

ALLSITES:

Facility Name:	BRETT EASON LEASED PROPERTY
Facility Id:	4557
Interaction:	77153
Interaction 1:	A
Interaction 2:	ENFORFNL
Ecology Program:	AIRQUAL
Program Data:	DMS
Facility Alt.:	Not reported
Program ID:	Not reported
Date Interaction:	2009-04-17 00:00:00
Date Interaction 3:	Enforcement Final
Latitude:	47.021264156999997
Longitude:	-120.592611691

B6
NNW
1/8-1/4
0.143 mi.
755 ft.

Relative:
Higher

Actual:
1564 ft.

ELLENSBURG CEMENT PRODUCTS INC
KITTITAS (County), WA
Site 2 of 2 in cluster B

US MINES **1016513603**
N/A

US MINES:

Mine ID:	4503183
SIC code(s):	144200 000000 000000 000000 000000 000000
Entity name:	PORTABLE UNIT NO 2
Company:	ELLENSBURG CEMENT PRODUCTS INC
Status:	2
Status date:	20140530
Operation Class:	non-Coal Mining
Number of shops:	0
Number of plants:	0
Latitude:	47 01 17
Longitude:	120 35 33

Violations Details:

Violation Number:	8997233
Date Issued:	7/19/2017
Mine Status:	Intermittent
Status Date:	5/30/2014
Action Type:	104(a)
Date Abated:	7/25/2017
Citation/Order:	Citation
Sig and Sub Designation:	N
Proposed Penalty:	116
Paid Penalty:	116
Assessment Status code:	Closed
Assess. Case Status code:	Proposed
Assessment Amount:	116
Year:	2017

Violation Number:	8780065
Date Issued:	07/10/2014
Mine Status:	Intermittent
Status Date:	05/30/2014
Action Type:	104(a)
Date Abated:	07/10/2014
Citation/Order:	Citation
Sig and Sub Designation:	Y
Proposed Penalty:	100.00
Paid Penalty:	100.00
Assessment Status code:	Closed
Assess. Case Status code:	Proposed
Assessment Amount:	100.00
Year:	2014

Violation Number:	8780066
Date Issued:	07/10/2014
Mine Status:	Intermittent
Status Date:	05/30/2014
Action Type:	104(a)
Date Abated:	Not reported
Citation/Order:	Citation
Sig and Sub Designation:	N
Proposed Penalty:	Not reported

ELLENSBURG CEMENT PRODUCTS INC (Continued) **1016513603**

Paid Penalty:	Not reported
Assessment Status code:	Not reported
Assess. Case Status code:	Not reported
Assessment Amount:	Not reported
Year:	2014

Violation Number:	8881589
Date Issued:	06/08/2016
Mine Status:	Intermittent
Status Date:	05/30/2014
Action Type:	104(a)
Date Abated:	06/09/2016
Citation/Order:	Citation
Sig and Sub Designation:	N
Proposed Penalty:	114.00
Paid Penalty:	114.00
Assessment Status code:	Closed
Assess. Case Status code:	Proposed
Assessment Amount:	114.00
Year:	2016

7
SSW
1/8-1/4
0.210 mi.
1109 ft.

MOBILE FLEET SERVICES ELLENSBURG **ALLSITES** **S118493888**
1711 US HWY 97 **N/A**
ELLENSBURG, WA 98926

Relative:
Lower

Actual:
1545 ft.

ALLSITES:

Facility Name:	MOBILE FLEET SERVICES ELLENSBURG
Facility Id:	19351

Interaction:	116441
Interaction 1:	A
Interaction 2:	CONSTSWGP
Ecology Program:	WATQUAL
Program Data:	PARIS
Facility Alt.:	Mobile Fleet Services Ellensburg
Program ID:	WAR303697
Date Interaction:	2016-01-15 00:00:00
Date Interaction 3:	Construction SW GP
Latitude:	47.009161087000003
Longitude:	-120.590524199

8
WSW
1/8-1/4
0.220 mi.
1161 ft.

ELLENSBURG CEMENT PRODUCTS INC **US MINES** **1016513420**
N/A
KITTITAS (County), WA

Relative:
Lower

Actual:
1548 ft.

US MINES:

Mine ID:	4502508
SIC code(s):	144200 000000 000000 000000 000000 000000
Entity name:	PORTABLE UNIT #1
Company:	ELLENSBURG CEMENT PRODUCTS INC
Status:	1

ELLENSBURG CEMENT PRODUCTS INC (Continued) **1016513420**

Status date: 20130221
Operation Class: non-Coal Mining
Number of shops: 0
Number of plants: 0
Latitude: 47 00 47
Longitude: 120 35 56

Violations Details:

Violation Number: 8997183
Date Issued: 5/9/2017
Mine Status: Active
Status Date: 2/21/2013
Action Type: 104(a)
Date Abated: 5/9/2017
Citation/Order: Citation
Sig and Sub Designation: N
Proposed Penalty: 116
Paid Penalty: 0
Assessment Status code: Received
Assess. Case Status code: InContest
Assessment Amount: 116
Year: 2017

Violation Number: 8997180
Date Issued: 5/9/2017
Mine Status: Active
Status Date: 2/21/2013
Action Type: 104(a)
Date Abated: 5/16/2017
Citation/Order: Citation
Sig and Sub Designation: Y
Proposed Penalty: 160
Paid Penalty: 0
Assessment Status code: Received
Assess. Case Status code: InContest
Assessment Amount: 160
Year: 2017

Violation Number: 8997184
Date Issued: 5/17/2017
Mine Status: Active
Status Date: 2/21/2013
Action Type: 104(a)
Date Abated: 6/6/2017
Citation/Order: Citation
Sig and Sub Designation: N
Proposed Penalty: 116
Paid Penalty: 116
Assessment Status code: Closed
Assess. Case Status code: Proposed
Assessment Amount: 116
Year: 2017

Violation Number: 8997138
Date Issued: 3/7/2017
Mine Status: Active
Status Date: 2/21/2013

ELLENSBURG CEMENT PRODUCTS INC (Continued) **1016513420**

Action Type:	104(a)
Date Abated:	3/7/2017
Citation/Order:	Citation
Sig and Sub Designation:	Y
Proposed Penalty:	116
Paid Penalty:	116
Assessment Status code:	Closed
Assess. Case Status code:	Proposed
Assessment Amount:	116
Year:	2017

Violation Number:	8997132
Date Issued:	3/7/2017
Mine Status:	Active
Status Date:	2/21/2013
Action Type:	104(a)
Date Abated:	3/7/2017
Citation/Order:	Citation
Sig and Sub Designation:	N
Proposed Penalty:	116
Paid Penalty:	116
Assessment Status code:	Closed
Assess. Case Status code:	Proposed
Assessment Amount:	116
Year:	2017

Violation Number:	8997134
Date Issued:	3/7/2017
Mine Status:	Active
Status Date:	2/21/2013
Action Type:	104(a)
Date Abated:	3/7/2017
Citation/Order:	Citation
Sig and Sub Designation:	N
Proposed Penalty:	116
Paid Penalty:	116
Assessment Status code:	Closed
Assess. Case Status code:	Proposed
Assessment Amount:	116
Year:	2017

Violation Number:	8997136
Date Issued:	3/7/2017
Mine Status:	Active
Status Date:	2/21/2013
Action Type:	104(a)
Date Abated:	3/8/2017
Citation/Order:	Citation
Sig and Sub Designation:	N
Proposed Penalty:	116
Paid Penalty:	0
Assessment Status code:	Closed
Assess. Case Status code:	Vacated
Assessment Amount:	0
Year:	2017

Violation Number:	8997137

ELLENSBURG CEMENT PRODUCTS INC (Continued) **1016513420**

Date Issued:	3/7/2017
Mine Status:	Active
Status Date:	2/21/2013
Action Type:	104(a)
Date Abated:	3/8/2017
Citation/Order:	Citation
Sig and Sub Designation:	N
Proposed Penalty:	116
Paid Penalty:	116
Assessment Status code:	Closed
Assess. Case Status code:	Proposed
Assessment Amount:	116
Year:	2017

Violation Number:	8997135
Date Issued:	3/7/2017
Mine Status:	Active
Status Date:	2/21/2013
Action Type:	104(a)
Date Abated:	3/8/2017
Citation/Order:	Citation
Sig and Sub Designation:	Y
Proposed Penalty:	160
Paid Penalty:	160
Assessment Status code:	Closed
Assess. Case Status code:	Proposed
Assessment Amount:	160
Year:	2017

Violation Number:	8997133
Date Issued:	3/7/2017
Mine Status:	Active
Status Date:	2/21/2013
Action Type:	104(a)
Date Abated:	3/7/2017
Citation/Order:	Citation
Sig and Sub Designation:	N
Proposed Penalty:	116
Paid Penalty:	116
Assessment Status code:	Closed
Assess. Case Status code:	Proposed
Assessment Amount:	116
Year:	2017

Violation Number:	7979364
Date Issued:	12/18/2007
Mine Status:	Active
Status Date:	02/21/2013
Action Type:	104(a)
Date Abated:	12/18/2007
Citation/Order:	Citation
Sig and Sub Designation:	N
Proposed Penalty:	100.00
Paid Penalty:	100.00
Assessment Status code:	Closed
Assess. Case Status code:	Proposed
Assessment Amount:	100.00

ELLENSBURG CEMENT PRODUCTS INC (Continued) **1016513420**

Year: 2007

Violation Number: 8610186
Date Issued: 12/12/2012
Mine Status: Active
Status Date: 02/21/2013
Action Type: 104(a)
Date Abated: 12/12/2012
Citation/Order: Citation
Sig and Sub Designation: N
Proposed Penalty: 100
Paid Penalty: 100
Assessment Status code: Closed
Assess. Case Status code: Proposed
Assessment Amount: 100
Year: 2012

Violation Number: 8610185
Date Issued: 12/12/2012
Mine Status: Active
Status Date: 02/21/2013
Action Type: 104(a)
Date Abated: 12/12/2012
Citation/Order: Citation
Sig and Sub Designation: N
Proposed Penalty: 100
Paid Penalty: 100
Assessment Status code: Closed
Assess. Case Status code: Proposed
Assessment Amount: 100
Year: 2012

Violation Number: 6363443
Date Issued: 11/19/2004
Mine Status: Active
Status Date: 02/21/2013
Action Type: 104(a)
Date Abated: 11/19/2004
Citation/Order: Citation
Sig and Sub Designation: N
Proposed Penalty: 60.00
Paid Penalty: 60.00
Assessment Status code: Closed
Assess. Case Status code: Proposed
Assessment Amount: 60.00
Year: 2004

Violation Number: 6363442
Date Issued: 11/18/2004
Mine Status: Active
Status Date: 02/21/2013
Action Type: 104(a)
Date Abated: Not reported
Citation/Order: Citation
Sig and Sub Designation: N
Proposed Penalty: Not reported
Paid Penalty: Not reported

ELLENSBURG CEMENT PRODUCTS INC (Continued) **1016513420**

Assessment Status code: Not reported
Assess. Case Status code: Not reported
Assessment Amount: Not reported
Year: 2004

Violation Number: 6363438
Date Issued: 11/18/2004
Mine Status: Active
Status Date: 02/21/2013
Action Type: 104(a)
Date Abated: 11/19/2004
Citation/Order: Citation
Sig and Sub Designation: Y
Proposed Penalty: 217.00
Paid Penalty: 217.00
Assessment Status code: Closed
Assess. Case Status code: Proposed
Assessment Amount: 217.00
Year: 2004

Violation Number: 6363439
Date Issued: 11/18/2004
Mine Status: Active
Status Date: 02/21/2013
Action Type: 104(a)
Date Abated: 11/19/2004
Citation/Order: Citation
Sig and Sub Designation: N
Proposed Penalty: 60.00
Paid Penalty: 60.00
Assessment Status code: Closed
Assess. Case Status code: Proposed
Assessment Amount: 60.00
Year: 2004

Violation Number: 6363440
Date Issued: 11/18/2004
Mine Status: Active
Status Date: 02/21/2013
Action Type: 104(a)
Date Abated: Not reported
Citation/Order: Citation
Sig and Sub Designation: Y
Proposed Penalty: Not reported
Paid Penalty: Not reported
Assessment Status code: Not reported
Assess. Case Status code: Not reported
Assessment Amount: Not reported
Year: 2004

Violation Number: 6363441
Date Issued: 11/18/2004
Mine Status: Active
Status Date: 02/21/2013
Action Type: 104(a)
Date Abated: 11/19/2004
Citation/Order: Citation

ELLENSBURG CEMENT PRODUCTS INC (Continued) **1016513420**

Sig and Sub Designation:	N
Proposed Penalty:	60.00
Paid Penalty:	60.00
Assessment Status code:	Closed
Assess. Case Status code:	Proposed
Assessment Amount:	60.00
Year:	2004

Violation Number:	6363437
Date Issued:	11/18/2004
Mine Status:	Active
Status Date:	02/21/2013
Action Type:	104(a)
Date Abated:	11/18/2004
Citation/Order:	Citation
Sig and Sub Designation:	Y
Proposed Penalty:	217.00
Paid Penalty:	217.00
Assessment Status code:	Closed
Assess. Case Status code:	Proposed
Assessment Amount:	217.00
Year:	2004

ELLENSBURG CEMENT PRODUCTS INC (Continued) **1016513420**

Click this hyperlink while viewing on your computer to access
65 additional US_MINES: record(s) in the EDR Site Report.

9
ESE
1/4-1/2
0.294 mi.
1553 ft.

ELLENSBURG REPEATER 070102 **ALLSITES** **1007078022**
RTE 1 BOX 770 **FINDS** **N/A**
ELLENSBURG, WA 98926

Relative:
Lower

Actual:
1546 ft.

ALLSITES:

Facility Name:	ELLENSBURG REPEATER 070102
Facility Id:	5542876
Interaction:	16951
Interaction 1:	I
Interaction 2:	UST
Ecology Program:	TOXICS
Program Data:	UST
Facility Alt.:	Not reported
Program ID:	9966
Date Interaction:	1949-01-01 00:00:00
Date Interaction 3:	Underground Storage Tank
Latitude:	47.013504626
Longitude:	-120.581014344

FINDS:

Registry ID: 110015547050

Environmental Interest/Information System
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Click this hyperlink while viewing on your computer to access
additional FINDS: detail in the EDR Site Report.

10
SW
1/4-1/2
0.295 mi.
1560 ft.

ELLENSBURG CEMENT PRODUCTS CONCRETE PLT **ALLSITES** **1011279459**
1071 SR97 **FINDS** **N/A**
ELLENSBURG, WA 98926

Relative:
Lower

Actual:
1546 ft.

ALLSITES:

Facility Name:	ELLENSBURG CEMENT PRODUCTS CONCRETE PLT
Facility Id:	5117819
Interaction:	16080
Interaction 1:	A
Interaction 2:	ENFORFNL
Ecology Program:	AIRQUAL

ELLENSBURG CEMENT PRODUCTS CONCRETE PLT (Continued) **1011279459**

Program Data:	DMS
Facility Alt.:	Not reported
Program ID:	Not reported
Date Interaction:	2005-10-27 00:00:00
Date Interaction 3:	Enforcement Final
Latitude:	47.010423711999998
Longitude:	-120.597817018

FINDS:

Registry ID: 110036138177

Environmental Interest/Information System

Washington Facility / Site Identification System (WA-FSIS) provides a means to query and display data maintained by the Washington Department of Ecology. This system contains key information for each facility/site that is currently, or has been, of interest to the Air Quality, Dam Safety, Hazardous Waste, Toxics Cleanup, and Water Quality Programs.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

11
South
1/4-1/2
0.330 mi.
1745 ft.

TRIPLE L ELLENSBURG WA PHASE1 **ALLSITES** **S110039720**
SR97 & I90 **N/A**
ELLENSBURG, WA 98926

Relative:
Lower

Actual:
1543 ft.

ALLSITES:

Facility Name:	TRIPLE L ELLENSBURG WA PHASE1
Facility Id:	21736
Interaction:	85034
Interaction 1:	I
Interaction 2:	CONSTSWGP
Ecology Program:	WATQUAL
Program Data:	PARIS
Facility Alt.:	TRIPLE L ELLENSBURG WA PHASE1
Program ID:	WAR010177
Date Interaction:	2007-12-11 00:00:00
Date Interaction 3:	Construction SW GP
Latitude:	47.009194227999998
Longitude:	-120.589985533

12
SSE
1/4-1/2
0.350 mi.
1846 ft.

CASCADE TRUCK & RV WASH
1608 HWY 97
ELLENSBURG, WA 98926

ALLSITES **S117449854**
N/A

Relative:
Lower

Actual:
1542 ft.

ALLSITES:

Facility Name:	CASCADE TRUCK & RV WASH
Facility Id:	11779
Interaction:	110680
Interaction 1:	A
Interaction 2:	ENFORFNL
Ecology Program:	AIRQUAL
Program Data:	DMS
Facility Alt.:	Not reported
Program ID:	Not reported
Date Interaction:	2014-12-01 00:00:00
Date Interaction 3:	Enforcement Final
Latitude:	47.008911228000002
Longitude:	-120.587708534

13
SSE
1/4-1/2
0.390 mi.
2061 ft.

PILOT TRAVEL CENTER 389
1512 HWY 97
ELLENSBURG, WA 98926

CSCSL **U001124809**
LUST **N/A**
VCP
ICR
ALLSITES
SPILLS

Relative:
Lower

Actual:
1541 ft.

CSCSL:

Facility ID:	18911356
Region:	Central
Lat/Long:	47.00736 / -120.58629
Brownfield Status:	Not reported
Rank Status:	N
Clean Up Siteid:	11732
Site Status:	Awaiting Cleanup
PSI?:	Not reported
Contaminant Name:	Petroleum-Diesel
Ground Water:	Suspected
Surface Water:	Not reported
Soil:	Confirmed Above Cleanup Level
Sediment:	Not reported
Air:	Not reported
Bedrock:	Not reported
Responsible Unit:	Central

Facility ID:	18911356
Region:	Central
Lat/Long:	47.00736 / -120.58629
Brownfield Status:	Not reported
Rank Status:	N
Clean Up Siteid:	11732
Site Status:	Awaiting Cleanup
PSI?:	Not reported
Contaminant Name:	Petroleum-Other
Ground Water:	Suspected
Surface Water:	Not reported
Soil:	Confirmed Above Cleanup Level

PILOT TRAVEL CENTER 389 (Continued) **U001124809**

Sediment: Not reported
Air: Not reported
Bedrock: Not reported
Responsible Unit: Central

Facility ID: 18911356
Region: Central
Lat/Long: 47.00736 / -120.58629
Brownfield Status: Not reported
Rank Status: N
Clean Up Siteid: 5649
Site Status: Cleanup Started
PSI?: Not reported
Contaminant Name: Petroleum Products-Unspecified
Ground Water: Confirmed Above Cleanup Level
Surface Water: Not reported
Soil: Not reported
Sediment: Not reported
Air: Not reported
Bedrock: Not reported
Responsible Unit: Central

Facility ID: 18911356
Region: Central
Lat/Long: 47.00736 / -120.58629
Brownfield Status: Not reported
Rank Status: N
Clean Up Siteid: 5649
Site Status: Cleanup Started
PSI?: Not reported
Contaminant Name: Petroleum-Diesel
Ground Water: Confirmed Above Cleanup Level
Surface Water: Not reported
Soil: Confirmed Above Cleanup Level
Sediment: Not reported
Air: Confirmed Above Cleanup Level
Bedrock: Not reported
Responsible Unit: Central

Facility ID: 18911356
Region: Central
Lat/Long: 47.00736 / -120.58629
Brownfield Status: Not reported
Rank Status: N
Clean Up Siteid: 5649
Site Status: Cleanup Started
PSI?: Not reported
Contaminant Name: Petroleum-Gasoline
Ground Water: Confirmed Above Cleanup Level
Surface Water: Not reported
Soil: Confirmed Above Cleanup Level
Sediment: Not reported
Air: Confirmed Above Cleanup Level
Bedrock: Not reported
Responsible Unit: Central

Facility ID: 18911356

PILOT TRAVEL CENTER 389 (Continued) **U001124809**

Region: Central
Lat/Long: 47.00736 / -120.58629
Brownfield Status: Not reported
Rank Status: N
Clean Up Siteid: 5649
Site Status: Cleanup Started
PSI?: Not reported
Contaminant Name: Petroleum-Other
Ground Water: Not reported
Surface Water: Not reported
Soil: Confirmed Above Cleanup Level
Sediment: Not reported
Air: Confirmed Above Cleanup Level
Bedrock: Not reported
Responsible Unit: Central

LUST:
Facility ID: 18911356
Lust Status Type: Cleanup Started
Cleanup Site ID: 5649
Cleanup Unit Type: Upland
Process Type: Voluntary Cleanup Program
Cleanup Unit Name: Pilot Travel Center 389
Lust Status Date: 09/22/2011
Response Section: Central
Lat/Long: 47.00736 / -120.58629

VCP:
edr_fstat: WA
edr_fzip: 98926-9329
edr_fcnty: KITTITAS
edr_zip: Not reported
Facility ID: 18911356
VCP Status: Not reported
VCP: Yes
Ecology Status: Not reported
NFA Type: Not reported
Date NFA: Not reported
Rank: N
Cleanup Siteid: 5649

edr_fstat: WA
edr_fzip: 98926-9329
edr_fcnty: KITTITAS
edr_zip: Not reported
Facility ID: 18911356
VCP Status: Not reported
VCP: Yes
Ecology Status: Not reported
NFA Type: Not reported
Date NFA: Not reported
Rank: N
Cleanup Siteid: 5649

edr_fstat: WA
edr_fzip: 98926-9329

PILOT TRAVEL CENTER 389 (Continued) **U001124809**

edr_fcnty: KITTITAS
edr_zip: Not reported
Facility ID: 18911356
VCP Status: Not reported
VCP: Yes
Ecology Status: Not reported
NFA Type: Not reported
Date NFA: Not reported
Rank: N
Cleanup Siteid: 5649

edr_fstat: WA
edr_fzip: 98926-9329
edr_fcnty: KITTITAS
edr_zip: Not reported
Facility ID: 18911356
VCP Status: Not reported
VCP: Yes
Ecology Status: Not reported
NFA Type: Not reported
Date NFA: Not reported
Rank: N
Cleanup Siteid: 5649

ICR:
Date Ecology Received Report: 11/01/96
Contaminants Found at Site: Petroleum products
Media Contaminated: Soil, Air
Waste Management: Tank
Region: Central
Type of Report Ecology Received: Not reported
Site Register Issue: 94-51
County Code: 19
Contact: Not reported
Report Title: Not reported

ALLSITES:
Facility Name: PILOT TRAVEL CENTER 389
Facility Id: 18911356

Interaction: 98610
Interaction 1: A
Interaction 2: INDPNDNT
Ecology Program: TOXICS
Program Data: ISIS
Facility Alt.: Loves Travel Center Stormwater Swale
Program ID: Not reported
Date Interaction: 2011-12-01 00:00:00
Date Interaction 3: Independent Cleanup
Latitude: 47.007354227
Longitude: -120.58627553399999

Interaction: 30838
Interaction 1: I
Interaction 2: TIER2

PILOT TRAVEL CENTER 389 (Continued) **U001124809**

Ecology Program:	HAZWASTE
Program Data:	EPCRA
Facility Alt.:	Not reported
Program ID:	CRK000046990
Date Interaction:	1998-01-01 00:00:00
Date Interaction 3:	Emergency/Haz Chem Rpt TI
Latitude:	47.007354227
Longitude:	-120.58627553399999

Interaction:	30837
Interaction 1:	A
Interaction 2:	LUST
Ecology Program:	TOXICS
Program Data:	ISIS
Facility Alt.:	Not reported
Program ID:	7062
Date Interaction:	1996-11-01 00:00:00
Date Interaction 3:	LUST Facility
Latitude:	47.007354227
Longitude:	-120.58627553399999

Interaction:	98019
Interaction 1:	A
Interaction 2:	VOLCLNST
Ecology Program:	TOXICS
Program Data:	ISIS
Facility Alt.:	PILOT TRAVEL CENTER 389
Program ID:	CE0352
Date Interaction:	2011-09-21 00:00:00
Date Interaction 3:	Voluntary Cleanup Sites
Latitude:	47.007354227
Longitude:	-120.58627553399999

Interaction:	30839
Interaction 1:	A
Interaction 2:	UST
Ecology Program:	TOXICS
Program Data:	UST
Facility Alt.:	LOVES TRAVEL STOP 413
Program ID:	7062
Date Interaction:	2000-01-27 00:00:00
Date Interaction 3:	Underground Storage Tank
Latitude:	47.007354227
Longitude:	-120.58627553399999

Interaction:	30840
Interaction 1:	I
Interaction 2:	INDPNDNT
Ecology Program:	TOXICS
Program Data:	ISIS
Facility Alt.:	PILOT TRAVEL CENTER 389
Program ID:	Not reported
Date Interaction:	1996-11-01 00:00:00

PILOT TRAVEL CENTER 389 (Continued) **U001124809**

Date Interaction 3: Independent Cleanup
Latitude: 47.007354227
Longitude: -120.58627553399999

SPILLS:

Facility ID: 630439
Medium: SOIL
Material Desc: PETROLEUM - GASOLINE
Material Qty: 10
Material Units: GALLON
Date Received: 11/13/2011
Contact Name: KEY
Incident Date: Not reported
Incident Category Type: Not reported
Incident Category: Not reported
Latitude: Not reported
Longitude: Not reported
Source Type: Not reported
Source: Not reported
Vessel Facility Name2: Not reported
Recovered Quantity: Not reported
Resp Party Name: Not reported

Facility ID: 547557
Medium: Not reported
Material Desc: PETROLEUM - DIESEL FUEL
Material Qty: 50
Material Units: GALLON
Date Received: 04/13/2005
Contact Name: WHITE
Incident Date: Not reported
Incident Category Type: Not reported
Incident Category: Not reported
Latitude: Not reported
Longitude: Not reported
Source Type: Not reported
Source: Not reported
Vessel Facility Name2: Not reported
Recovered Quantity: Not reported
Resp Party Name: Not reported

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14 **SMITTYS ELLENSBURG 6225** **UST** **U001127692**
SSE **1503 HWY 97** **VCP** **N/A**
1/4-1/2 **ELLENSBURG, WA 98926** **ALLSITES**
0.466 mi. **CSCSL NFA**
2463 ft. **Financial Assurance**

Relative:
Lower

Actual:
1539 ft.

UST:

Facility ID: 62898962
Site Id: 100047
UBI: Not reported
Phone Number: Not reported
Decimal Latitude: 47.0069423288021
Decimal Longitude: -120.586790914166

Tank Name: 1

SMITTYS ELLENSBURG 6225 (Continued) **U001127692**

Tag Number:	A1366
Tank Status:	Operational
Tank Status Date:	08/06/1996
Tank Install Date:	00/01/1989
Tank Closure Date:	Not reported
Capacity Range:	10,000 to 19,999 Gallons
Tank Permit Expiration Date:	07/31/2018
Tank Upgrade Date:	02/25/1998
Tank Spill Prevention:	Spill Bucket/Spill Box
Tank Overfill Prevention:	Ball Float Valve (vent line)
Tank Material:	Dielectric Coated Steel
Tank Construction:	Single Wall Tank
Tank Tightness Test:	Not reported
Tank Corrosion Protection:	Sacrificial Anode
Tank Manifold:	Not reported
Tank Release Detection:	Automatic Tank Gauging
Tank SFC Type:	Galvanic Anode
Pipe Material:	Fiberglass
Pipe Construction:	Single Wall Pipe
Pipe Primary Release Detection:	Automatic Line Leak Detector (ALLD)
Pipe Second Release Detection:	Annual Line Tightness Test (LTT)
Pipe Corrosion Protection:	Corrosion Resistant
Pipe Pumping System:	Pressurized System
Responsible Unit:	CENTRAL
Dispencer/Pump SFC Type:	Sump

Tank Name:	2
Tag Number:	A1366
Tank Status:	Operational
Tank Status Date:	08/06/1996
Tank Install Date:	00/01/1989
Tank Closure Date:	Not reported
Capacity Range:	10,000 to 19,999 Gallons
Tank Permit Expiration Date:	07/31/2018
Tank Upgrade Date:	02/25/1998
Tank Spill Prevention:	Spill Bucket/Spill Box
Tank Overfill Prevention:	Ball Float Valve (vent line)
Tank Material:	Dielectric Coated Steel
Tank Construction:	Single Wall Tank
Tank Tightness Test:	Not reported
Tank Corrosion Protection:	Sacrificial Anode and Interior Lining
Tank Manifold:	Not reported
Tank Release Detection:	Automatic Tank Gauging
Tank SFC Type:	Galvanic Anode
Pipe Material:	Fiberglass
Pipe Construction:	Single Wall Pipe
Pipe Primary Release Detection:	Automatic Line Leak Detector (ALLD)
Pipe Second Release Detection:	Annual Line Tightness Test (LTT)
Pipe Corrosion Protection:	Corrosion Resistant
Pipe Pumping System:	Pressurized System
Responsible Unit:	CENTRAL
Dispencer/Pump SFC Type:	Sump

Tank Name:	3
Tag Number:	A1366

SMITTYS ELLENSBURG 6225 (Continued) **U001127692**

Tank Status:	Operational
Tank Status Date:	08/06/1996
Tank Install Date:	00/01/1989
Tank Closure Date:	Not reported
Capacity Range:	5,000 to 9,999 Gallons
Tank Permit Expiration Date:	07/31/2018
Tank Upgrade Date:	02/25/1998
Tank Spill Prevention:	Spill Bucket/Spill Box
Tank Overfill Prevention:	Automatic Shutoff (fill pipe)
Tank Material:	Dielectric Coated Steel
Tank Construction:	Single Wall Tank
Tank Tightness Test:	Not reported
Tank Corrosion Protection:	Sacrificial Anode
Tank Manifold:	Not reported
Tank Release Detection:	Automatic Tank Gauging
Tank SFC Type:	Galvanic Anode
Pipe Material:	Fiberglass
Pipe Construction:	Single Wall Pipe
Pipe Primary Release Detection:	Automatic Line Leak Detector (ALLD)
Pipe Second Release Detection:	Annual Line Tightness Test (LTT)
Pipe Corrosion Protection:	Corrosion Resistant
Pipe Pumping System:	Pressurized System
Responsible Unit:	CENTRAL
Dispencer/Pump SFC Type:	Sump

VCP:

edr_fstat:	WA
edr_fzip:	98926-9329
edr_fcnty:	KITTITAS
edr_zip:	Not reported
Facility ID:	62898962
VCP Status:	Not reported
VCP:	Yes
Ecology Status:	Not reported
NFA Type:	Not reported
Date NFA:	9/11/2014
Rank:	Not reported
Cleanup Siteid:	6407

ALLSITES:

Facility Name:	SMITTYS 250 OF ELLENSBURG
Facility Id:	62898962

Interaction:	109772
Interaction 1:	I
Interaction 2:	VOLCLNST
Ecology Program:	TOXICS
Program Data:	ISIS
Facility Alt.:	SMITTYS 250 OF ELLENSBURG
Program ID:	CE0335
Date Interaction:	2010-12-21 00:00:00
Date Interaction 3:	Voluntary Cleanup Sites
Latitude:	47.006937542999999
Longitude:	-120.586792715

SMITTYS ELLENSBURG 6225 (Continued) **U001127692**

Interaction:	55466
Interaction 1:	I
Interaction 2:	TIER2
Ecology Program:	HAZWASTE
Program Data:	EPCRA
Facility Alt.:	Not reported
Program ID:	CRK000029860
Date Interaction:	1991-01-01 00:00:00
Date Interaction 3:	Emergency/Haz Chem Rpt TI
Latitude:	47.006937542999999
Longitude:	-120.586792715

Interaction:	55467
Interaction 1:	A
Interaction 2:	UST
Ecology Program:	TOXICS
Program Data:	UST
Facility Alt.:	Smittys Ellensburg 6225
Program ID:	100047
Date Interaction:	2000-02-08 00:00:00
Date Interaction 3:	Underground Storage Tank
Latitude:	47.006937542999999
Longitude:	-120.586792715

Interaction:	55469
Interaction 1:	I
Interaction 2:	LUST
Ecology Program:	TOXICS
Program Data:	ISIS
Facility Alt.:	Not reported
Program ID:	100047
Date Interaction:	2008-09-15 00:00:00
Date Interaction 3:	LUST Facility
Latitude:	47.006937542999999
Longitude:	-120.586792715

Interaction:	55468
Interaction 1:	A
Interaction 2:	ENFORFNL
Ecology Program:	TOXICS
Program Data:	DMS
Facility Alt.:	Not reported
Program ID:	Not reported
Date Interaction:	2005-11-08 00:00:00
Date Interaction 3:	Enforcement Final
Latitude:	47.006937542999999
Longitude:	-120.586792715

Interaction:	55470
Interaction 1:	I
Interaction 2:	SCS
Ecology Program:	TOXICS
Program Data:	ISIS

SMITTYS ELLENSBURG 6225 (Continued) **U001127692**

Facility Alt.:	SMITTYS 250 OF ELLENSBURG
Program ID:	Not reported
Date Interaction:	2009-01-07 00:00:00
Date Interaction 3:	State Cleanup Site
Latitude:	47.006937542999999
Longitude:	-120.586792715

CSCSL NFA:

Facility/Site Id:	62898962
CS Id:	6407
NFA Date:	09/11/2014
Rank:	Not reported
VCP:	Yes
Latitude:	47.006942329
Longitude:	-120.58679091

WA Financial Assurance 1:

DOE Site ID:	100047
Financial Resp Type:	GREAT AMERICAN E & S INSURANCE
Inception Date:	02/15/2015
Expiration Date:	02/15/2016
Address 2:	Not reported
Policy Number:	BTA9986665-05
Effective Date:	02/15/2015
Liability Limit Type:	Mktg, 1-100 tanks; 1m per occurence, 1m aggregate
Compliance Method:	Approved pollution liability insurance
Proof of Responsibility Document Flag:	0
Retroactive Date:	Not reported
Latitude:	47.006942329
Longitude:	-120.58679091

DOE Site ID:	100047
Financial Resp Type:	GREAT AMERICAN INSURANCE
Inception Date:	02/15/2017
Expiration Date:	02/15/2018
Address 2:	Not reported
Policy Number:	BTA 9986665-07
Effective Date:	02/15/2017
Liability Limit Type:	Mktg, 1-100 tanks; 1m per occurence, 1m aggregate
Compliance Method:	Approved pollution liability insurance
Proof of Responsibility Document Flag:	0
Retroactive Date:	Not reported
Latitude:	47.006942329
Longitude:	-120.58679091

DOE Site ID:	100047
Financial Resp Type:	GREAT AMERICAN ASSURANCE COMPANY
Inception Date:	02/15/2016
Expiration Date:	02/15/2017
Address 2:	Not reported
Policy Number:	BTA9986665-06
Effective Date:	02/15/2016
Liability Limit Type:	Mktg, 1-100 tanks; 1m per occurence, 1m aggregate
Compliance Method:	Approved pollution liability insurance
Proof of Responsibility Document Flag:	0

SMITTYS ELLENSBURG 6225 (Continued) **U001127692**

Retroactive Date:	Not reported
Latitude:	47.006942329
Longitude:	-120.58679091

Count: 0 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 66

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 66

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 02/16/2018
Date Data Arrived at EDR: 02/22/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 78

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/09/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/29/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/29/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/19/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 73

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

HSL: Hazardous Sites List

The Hazardous Sites List is a subset of the CSCSL Report. It includes sites which have been assessed and ranked using the Washington Ranking Method (WARM).

Date of Government Version: 02/21/2018
Date Data Arrived at EDR: 03/15/2018
Date Made Active in Reports: 04/11/2018
Number of Days to Update: 27

Source: Department of Ecology
Telephone: 360-407-7200
Last EDR Contact: 06/08/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Semi-Annually

State- and tribal - equivalent CERCLIS

CSCSL: Confirmed and Suspected Contaminated Sites List

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 04/16/2018
Date Data Arrived at EDR: 04/18/2018
Date Made Active in Reports: 06/04/2018
Number of Days to Update: 47

Source: Department of Ecology
Telephone: 360-407-7200
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Solid Waste Facility Database

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 03/05/2018
Date Data Arrived at EDR: 03/13/2018
Date Made Active in Reports: 04/11/2018
Number of Days to Update: 29

Source: Department of Ecology
Telephone: 360-407-6132
Last EDR Contact: 06/04/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Annually

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tanks Site List

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 05/15/2018
Date Data Arrived at EDR: 05/17/2018
Date Made Active in Reports: 06/05/2018
Number of Days to Update: 19

Source: Department of Ecology
Telephone: 360-407-7183
Last EDR Contact: 05/17/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/24/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/12/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/12/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/16/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 01/06/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 136
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Varies

UST: Underground Storage Tank Database
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 05/01/2018
Date Data Arrived at EDR: 05/01/2018
Date Made Active in Reports: 05/09/2018
Number of Days to Update: 8
Source: Department of Ecology
Telephone: 360-407-7183
Last EDR Contact: 05/01/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Quarterly

AST: Aboveground Storage Tank Locations
A listing of aboveground storage tank locations regulated by the Department of Ecology's Spill Prevention, Preparedness and Response Program.

Date of Government Version: 12/14/2015
Date Data Arrived at EDR: 02/02/2016
Date Made Active in Reports: 05/03/2016
Number of Days to Update: 91
Source: Department of Ecology
Telephone: 360-407-7562
Last EDR Contact: 04/30/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 01/13/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/12/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/24/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/24/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 12/08/2017
Number of Days to Update: 134

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/16/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

INST CONTROL: Institutional Control Site List
Sites that have institutional controls.

Date of Government Version: 04/16/2018
Date Data Arrived at EDR: 04/18/2018
Date Made Active in Reports: 06/04/2018
Number of Days to Update: 47

Source: Department of Ecology
Telephone: 360-407-7170
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Quarterly

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/21/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

ICR: Independent Cleanup Reports
These are remedial action reports Ecology has received from either the owner or operator of the sites. These actions have been conducted without department oversight or approval and are not under an order or decree. This database is no longer updated by the Department of Ecology.

Date of Government Version: 12/01/2002
Date Data Arrived at EDR: 01/03/2003
Date Made Active in Reports: 01/22/2003
Number of Days to Update: 19

Source: Department of Ecology
Telephone: 360-407-7200
Last EDR Contact: 08/10/2009
Next Scheduled EDR Contact: 11/09/2009
Data Release Frequency: No Update Planned

VCP: Voluntary Cleanup Program Sites
Sites that have entered either the Voluntary Cleanup Program or its predecessor Independent Remedial Action Program.

Date of Government Version: 04/16/2018
Date Data Arrived at EDR: 04/18/2018
Date Made Active in Reports: 06/07/2018
Number of Days to Update: 50

Source: Department of Ecology
Telephone: 360-407-7200
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Sites Listing
A listing of brownfields sites included in the Confirmed & Suspected Sites Listing. Brownfields are abandoned, idle or underused commercial or industrial properties, where the expansion or redevelopment is hindered by real or perceived contamination. Brownfields vary in size, location, age, and past use -- they can be anything from a five-hundred acre automobile assembly plant to a small, abandoned corner gas station.

Date of Government Version: 01/18/2017
Date Data Arrived at EDR: 01/20/2017
Date Made Active in Reports: 03/17/2017
Number of Days to Update: 56

Source: Department of Ecology
Telephone: 360-725-4030
Last EDR Contact: 04/20/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 03/19/2018
Date Data Arrived at EDR: 03/21/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/21/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

SWTIRE: Solid Waste Tire Facilities

This study identified sites statewide with unauthorized accumulations of scrap tires.

Date of Government Version: 11/01/2005
Date Data Arrived at EDR: 03/16/2006
Date Made Active in Reports: 04/13/2006
Number of Days to Update: 28

Source: Department of Ecology
Telephone: N/A
Last EDR Contact: 09/08/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Varies

SWTIRE 2: Solid Waste Tire Facilities 2

solid waste tire piles

Date of Government Version: 06/20/2017
Date Data Arrived at EDR: 06/23/2017
Date Made Active in Reports: 05/30/2018
Number of Days to Update: 341

Source: Department of Ecology
Telephone: 425-649-7104
Last EDR Contact: 06/04/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

SWRCY: Recycling Facility List

A llisting of recycling center locations.

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 05/01/2018
Date Made Active in Reports: 06/04/2018
Number of Days to Update: 34

Source: Department of Ecology
Telephone: 360-407-6105
Last EDR Contact: 04/20/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 01/30/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Varies

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39
Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137
Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176
Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 05/04/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 02/22/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 71
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: No Update Planned

ALLSITES: Facility/Site Identification System Listing
Information on facilities and sites of interest to the Department of Ecology.

Date of Government Version: 05/09/2018
Date Data Arrived at EDR: 05/11/2018
Date Made Active in Reports: 06/07/2018
Number of Days to Update: 27
Source: Department of Ecology
Telephone: 360-407-6423
Last EDR Contact: 04/30/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Quarterly

CDL: Clandestine Drug Lab Contaminated Site List
Illegal methamphetamine labs use hazardous chemicals that create public health hazards. Chemicals and residues can cause burns, respiratory and neurological damage, and death. Biological hazards associated with intravenous needles, feces, and blood also pose health risks.

Date of Government Version: 05/01/2018
Date Data Arrived at EDR: 05/17/2018
Date Made Active in Reports: 06/05/2018
Number of Days to Update: 19
Source: Department of Health
Telephone: 360-236-3380
Last EDR Contact: 05/04/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Varies

HIST CDL: List of Sites Contaminated by Clandestine Drug Labs
This listing of contaminated sites by Clandestine Drug Labs includes non-remediated properties. The current CDL listing does not. This listing is no longer updated by the state agency.

Date of Government Version: 02/08/2007
Date Data Arrived at EDR: 06/26/2007
Date Made Active in Reports: 07/19/2007
Number of Days to Update: 23
Source: Department of Health
Telephone: 360-236-3381
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

CSCSL NFA: Confirmed and Contaminated Sites - No Further Action
This report contains information about sites that are undergoing cleanup and sites that are awaiting further investigation and/or cleanup. Sites on the Hazardous Sites List (see above) are included in this data set.

Date of Government Version: 04/16/2018
Date Data Arrived at EDR: 04/18/2018
Date Made Active in Reports: 06/04/2018
Number of Days to Update: 47
Source: Department of Ecology
Telephone: 360-407-7170
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Quarterly

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 02/22/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 71
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Quarterly

Local Land Records

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 94
Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/26/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 73
Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

SPILLS: Reported Spills
Spills reported to the Spill Prevention, Preparedness and Response Division.

Date of Government Version: 03/05/2018
Date Data Arrived at EDR: 03/08/2018
Date Made Active in Reports: 04/11/2018
Number of Days to Update: 34

Source: Department of Ecology
Telephone: 360-407-6950
Last EDR Contact: 06/04/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Semi-Annually

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 05/23/2006
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/06/2013
Number of Days to Update: 62

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 05/25/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/15/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 01/11/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 03/02/2018
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 05/07/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/08/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/23/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Every 4 Years

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/10/2018
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 2

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/25/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/09/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 94

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 11/02/2017
Date Data Arrived at EDR: 11/17/2017
Date Made Active in Reports: 12/08/2017
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/20/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3
Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 06/01/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 126
Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 04/09/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 05/03/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 06/07/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 06/04/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017
Date Data Arrived at EDR: 11/30/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 04/27/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/03/2018
Date Data Arrived at EDR: 01/04/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 99

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 05/03/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 79

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 05/25/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 12/23/2016
Date Data Arrived at EDR: 12/27/2016
Date Made Active in Reports: 02/17/2017
Number of Days to Update: 52

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 05/07/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 10/11/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 23

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 03/02/2018
Number of Days to Update: 24

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 01/25/2018
Date Data Arrived at EDR: 02/28/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 72

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/31/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/08/2018
Date Data Arrived at EDR: 03/13/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 87

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/21/2018
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 28

Source: EPA
Telephone: (206) 553-1200
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/30/2016
Date Data Arrived at EDR: 10/31/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 73

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 01/04/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 06/01/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 02/25/2018
Date Data Arrived at EDR: 03/17/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/21/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 30

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/23/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Quarterly

AIRS (EMI): Washington Emissions Data System

Emissions inventory data.

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/04/2018
Number of Days to Update: 40

Source: Department of Ecology
Telephone: 360-407-6040
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Annually

ASBESTOS: Asbestos Notification Listing

Asbestos sites

Date of Government Version: 03/13/2018
Date Data Arrived at EDR: 03/16/2018
Date Made Active in Reports: 04/11/2018
Number of Days to Update: 26

Source: Department of Labor & Industries
Telephone: 360-902-6209
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

COAL ASH: Coal Ash Disposal Site Listing

A listing of coal ash disposal site locations.

Date of Government Version: 03/08/2018
Date Data Arrived at EDR: 03/13/2018
Date Made Active in Reports: 04/11/2018
Number of Days to Update: 29

Source: Department of Ecology
Telephone: 360-407-6933
Last EDR Contact: 06/04/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

DRYCLEANERS: Drycleaner List

A listing of registered drycleaners who registered with the Department of Ecology (using the SIC code of 7215 and 7216) as hazardous waste generators.

Date of Government Version: 04/19/2018
Date Data Arrived at EDR: 04/23/2018
Date Made Active in Reports: 06/04/2018
Number of Days to Update: 42

Source: Department of Ecology
Telephone: 360-407-6732
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

A listing of financial assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 01/02/2018
Date Data Arrived at EDR: 03/23/2018
Date Made Active in Reports: 04/24/2018
Number of Days to Update: 32

Source: Department of Ecology
Telephone: 360-586-1060
Last EDR Contact: 05/15/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: No Update Planned

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for hazardous waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 01/26/2018
Date Data Arrived at EDR: 02/13/2018
Date Made Active in Reports: 03/07/2018
Number of Days to Update: 22

Source: Department of Ecology
Telephone: 360-407-6754
Last EDR Contact: 06/01/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Varies

Financial Assurance 3: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 11/15/2017
Date Data Arrived at EDR: 11/20/2017
Date Made Active in Reports: 01/04/2018
Number of Days to Update: 45

Source: Department of Ecology
Telephone: 360-407-6136
Last EDR Contact: 05/14/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: No Update Planned

INACTIVE DRYCLEANERS: Inactive Drycleaners

A listing of inactive drycleaner facility locations.

Date of Government Version: 04/19/2018
Date Data Arrived at EDR: 04/23/2018
Date Made Active in Reports: 06/04/2018
Number of Days to Update: 42

Source: Department of Ecology
Telephone: 360-407-6732
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Annually

WA MANIFEST: Hazardous Waste Manifest Data

Hazardous waste manifest information.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/04/2018
Number of Days to Update: 40

Source: Department of Ecology
Telephone: N/A
Last EDR Contact: 03/19/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Annually

NPDES: Water Quality Permit System Data

A listing of permitted wastewater facilities.

Date of Government Version: 10/17/2017
Date Data Arrived at EDR: 10/18/2017
Date Made Active in Reports: 10/20/2017
Number of Days to Update: 2

Source: Department of Ecology
Telephone: 360-407-6073
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Quarterly

UIC: Underground Injection Wells Listing

A listing of underground injection wells.

Date of Government Version: 04/16/2018
Date Data Arrived at EDR: 04/18/2018
Date Made Active in Reports: 06/04/2018
Number of Days to Update: 47

Source: Department of Ecology
Telephone: 360-407-6143
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Ecology in Washington.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Ecology
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Ecology in Washington.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/10/2014
Number of Days to Update: 193

Source: Department of Ecology
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Ecology in Washington.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Ecology
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

KING COUNTY:

Abandoned Landfill Study in King County

The King County Abandoned Landfill Survey was conducted from October through December 1984 by the Health Department's Environmental Health Division at the request of the King County Council. The primary objective of the survey was to determine if any public health problems existed at the predetermined 24 sites.

Date of Government Version: 04/30/1985
Date Data Arrived at EDR: 11/07/1994
Date Made Active in Reports: N/A
Number of Days to Update: 0

Source: Seattle-King County Department of Public Health
Telephone: 206-296-4785
Last EDR Contact: 10/21/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SEATTLE COUNTY:

Abandoned Landfill Study in the City of Seattle

The Seattle Abandoned Landfill Survey was conducted in June and July of 1984 by the Health Department's Environmental Health Division at the request of the Mayor's Office. The primary objective of the survey was to determine if any public health problems existed at the predetermined 12 sites.

Date of Government Version: 07/30/1984
Date Data Arrived at EDR: 11/07/1994
Date Made Active in Reports: N/A
Number of Days to Update: 0

Source: Seattle - King County Department of Public Health
Telephone: 206-296-4785
Last EDR Contact: 10/21/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SEATTLE/KING COUNTY:

Seattle - King County Abandoned Landfill Toxicity / Hazard Assessment Project

This report presents the Seattle-King County Health Department's follow-up investigation of two city owned and four county owned abandoned landfills which was conducted from February to December 1986.

Date of Government Version: 12/31/1986
Date Data Arrived at EDR: 08/18/1995
Date Made Active in Reports: 09/20/1995
Number of Days to Update: 33

Source: Department of Public Health
Telephone: 206-296-4785
Last EDR Contact: 08/14/1995
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SNOHOMISH COUNTY:

Solid Waste Sites of Record at Snohomish Health District

Solid waste disposal and/or utilization sites in Snohomish County.

Date of Government Version: 11/16/2011
Date Data Arrived at EDR: 03/29/2012
Date Made Active in Reports: 05/03/2012
Number of Days to Update: 35

Source: Snohomish Health District
Telephone: 206-339-5250
Last EDR Contact: 03/23/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Semi-Annually

TACOMA/PIERCE COUNTY:

Closed Landfill Survey

Following numerous requests for information about closed dumpsites and landfills in Pierce County, the Tacoma-Pierce County Health Department decided to conduct a study on the matter. The aim of the study was to evaluate public health risks associated with the closed dumpsites and landfills, and to determine the need, if any, for further investigations of a more detailed nature. The sites represent all of the known dumpsites and landfills closed after 1950.

Date of Government Version: 09/01/2002
Date Data Arrived at EDR: 03/24/2003
Date Made Active in Reports: 05/14/2003
Number of Days to Update: 51

Source: Tacoma-Pierce County Health Department
Telephone: 206-591-6500
Last EDR Contact: 03/19/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 01/03/2018
Date Data Arrived at EDR: 02/14/2018
Date Made Active in Reports: 03/22/2018
Number of Days to Update: 36

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: No Update Planned

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 04/30/2018
Date Data Arrived at EDR: 05/03/2018
Date Made Active in Reports: 06/07/2018
Number of Days to Update: 35

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 05/03/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 07/25/2017
Date Made Active in Reports: 09/25/2017
Number of Days to Update: 62

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/12/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 04/13/2017
Date Made Active in Reports: 07/14/2017
Number of Days to Update: 92

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/11/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: PennWell Corporation
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.
Daycare Centers: Daycare Center Listing
Source: Department of Social & Health Services
Telephone: 253-383-1735

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Ecology
Telephone: 360-407-6121

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

DUKE & DUDE
18XX HWY 97
ELLENSBURG, WA 98926

TARGET PROPERTY COORDINATES

Latitude (North):	47.016104 - 47° 0' 57.97''
Longitude (West):	120.590298 - 120° 35' 25.07''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	683145.9
UTM Y (Meters):	5209553.5
Elevation:	1553 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	6004933 ELLENSBURG NORTH, WA
Version Date:	2014
South Map:	5992487 ELLENSBURG SOUTH, WA
Version Date:	2013

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

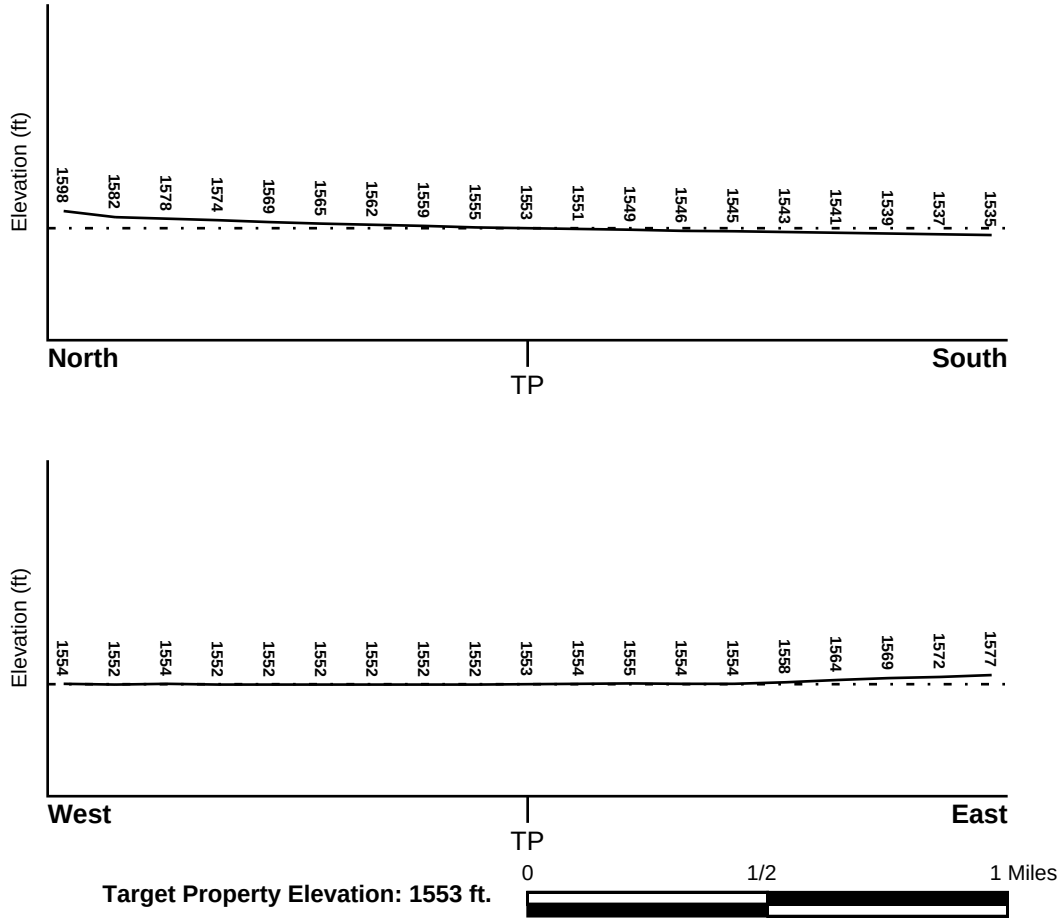
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General South

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
5300950439B	FEMA Q3 Flood data

Additional Panels in search area:	FEMA Source Type
5300950438C	FEMA Q3 Flood data
5302340001C	FEMA Q3 Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
ELLENSBURG NORTH	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	MALAGA
Soil Surface Texture:	very stony - sandy loam
Hydrologic Group:	Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.
Soil Drainage Class:	Somewhat excessive. Soils have high hydraulic conductivity and low water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	MODERATE
Depth to Bedrock Min:	> 60 inches
Depth to Bedrock Max:	> 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	3 inches	very stony - sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 2.00 Min: 0.60	Max: 7.80 Min: 6.10
2	3 inches	15 inches	gravelly - sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 2.00 Min: 0.60	Max: 7.80 Min: 6.10
3	15 inches	19 inches	very gravelly - sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel	Max: 6.00 Min: 2.00	Max: 7.80 Min: 6.10
4	19 inches	60 inches	extremely gravelly - coarse sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Clean gravels, Poorly Graded Gravel.	Max: 20.00 Min: 20.00	Max: 8.40 Min: 6.10

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: gravelly - sandy loam
stony - sandy loam
fine sandy loam
cobbly - sandy loam
stony - very fine sandy loam

Surficial Soil Types: gravelly - sandy loam
stony - sandy loam
fine sandy loam
cobbly - sandy loam
stony - very fine sandy loam

Shallow Soil Types: gravelly - loam

Deeper Soil Types: very cobbly - coarse sand

unweathered bedrock

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	USGS40001240706	1/4 - 1/2 Mile NNE
A2	USGS40001240717	1/4 - 1/2 Mile NNE
5	USGS40001240601	1/2 - 1 Mile ENE
6	USGS40001240587	1/2 - 1 Mile ENE
7	USGS40001240664	1/2 - 1 Mile ENE
8	USGS40001239999	1/2 - 1 Mile South
D12	USGS40001239990	1/2 - 1 Mile SSW
13	USGS40001240855	1/2 - 1 Mile NNW
D14	USGS40001239968	1/2 - 1 Mile SSW
15	USGS40001240000	1/2 - 1 Mile SSW
16	USGS40001240948	1/2 - 1 Mile North
E17	USGS40001240023	1/2 - 1 Mile SW
18	USGS40001240067	1/2 - 1 Mile SW
E19	USGS40001239991	1/2 - 1 Mile SW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

No PWS System Found

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

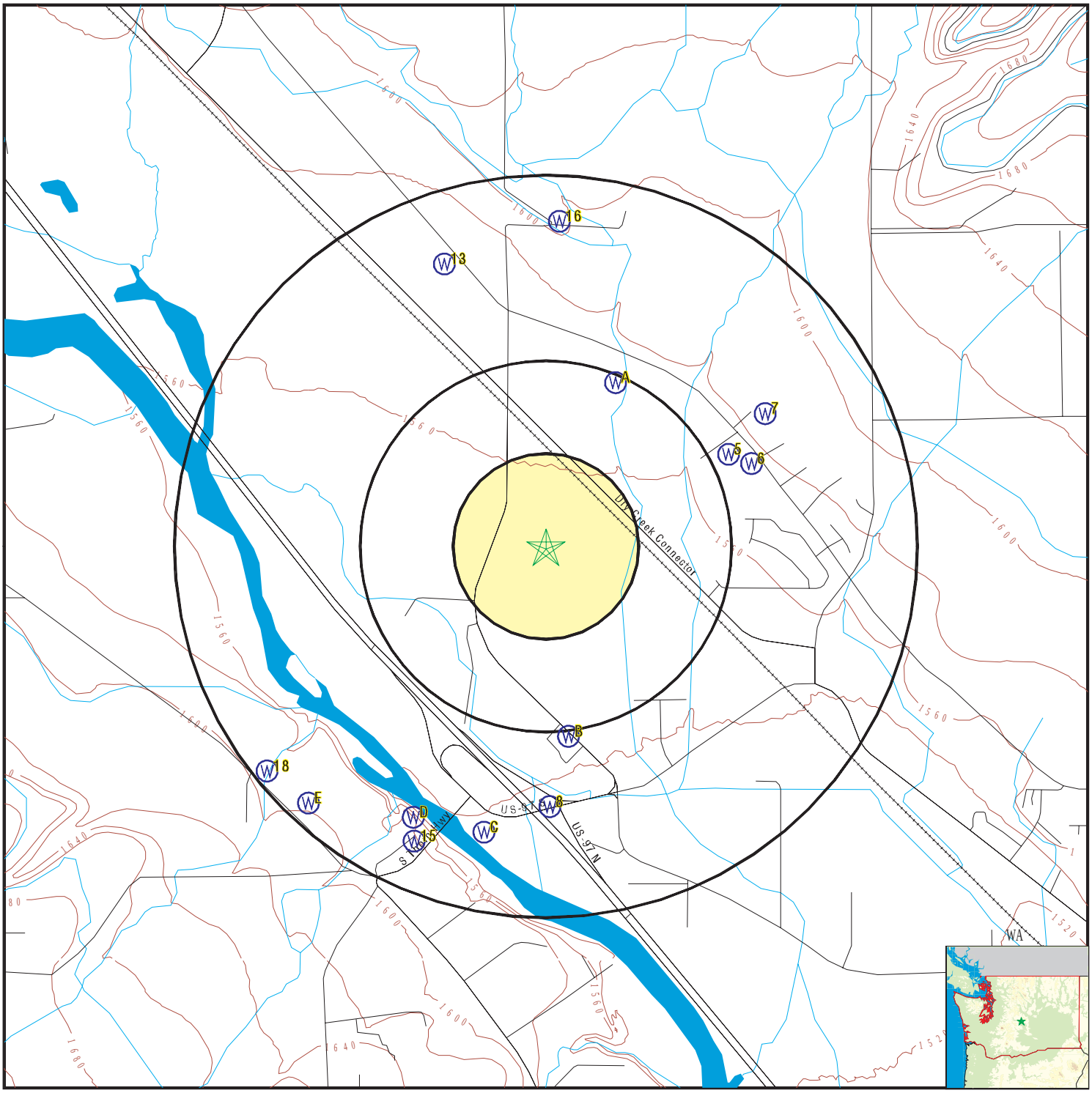
MAP ID	WELL ID	LOCATION FROM TP
B3	WA8000000024457	1/2 - 1 Mile South
B4	WA8000000027477	1/2 - 1 Mile South

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
C9	WA8000000025697	1/2 - 1 Mile SSW
C10	WA8000000029730	1/2 - 1 Mile South
C11	WA8000000022200	1/2 - 1 Mile SSW

PHYSICAL SETTING SOURCE MAP - 5329489.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME: Duke & Dude	CLIENT: Terra Graphics
ADDRESS: 18XX HWY 97	CONTACT: Jon Munkers
Ellensburg WA 98926	INQUIRY #: 5329489.2s
LAT/LONG: 47.016104 / 120.590298	DATE: June 12, 2018 1:40 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A1
NNE **FED USGS** **USGS40001240706**
1/4 - 1/2 Mile
Higher

Org. Identifier:	USGS-WA		
Formal name:	USGS Washington Water Science Center		
Monloc Identifier:	USGS-470121120350601		
Monloc name:	18N/18E-28H02		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	17030001	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	47.0223473
Longitude:	-120.586182	Sourcemap scale:	Not Reported
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from Digital Map		
Horiz coord refsys:	NAD83	Vert measure val:	1575
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from digital elevation model (DEM)		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19790401	Welldepth:	12
Welldepth units:	ft	Wellholedepth:	12
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

A2
NNE **FED USGS** **USGS40001240717**
1/4 - 1/2 Mile
Higher

Org. Identifier:	USGS-WA		
Formal name:	USGS Washington Water Science Center		
Monloc Identifier:	USGS-470122120350701		
Monloc name:	18N/18E-28H01		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	17030001	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	47.022625
Longitude:	-120.5864599	Sourcemap scale:	Not Reported
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from Digital Map		
Horiz coord refsys:	NAD83	Vert measure val:	1574
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from digital elevation model (DEM)		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	19790401	Welldepth:	9
Welldepth units:	ft	Wellholedepth:	9
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

B3
South
1/2 - 1 Mile
Lower

WA WELLS **WA8000000024457**

Fid:	24456	Lerootid:	55583
Srcrootid:	9845	Pwsid:	10290
Srcnum:	01	Pwssrcid:	1029001
Systemname:	C & H FRUIT STAND	Systemgrou:	A
Systemtype:	TNC	Region:	EA
County:	KITTITAS	Smaid:	Not Reported
Ftrespopul:	0	Resconnect:	0
Totalconne:	1	Srcname:	WELL #1
Srctype:	W	Srcusecode:	P
Srcwelldep:	184	Township:	18
Range :	18E	Section:	33
Qtrqtrsect:	NESE		
Longitude:	-120.589		
Latitude:	47.0087		
Latlongmet:	QtrQtrSe	Srcsuscept:	U
Srcvulnioc:	Not Reported	Srcvulnvoc:	Not Reported
Srcvulnsoc:	Not Reported	Doewelltag:	Not Reported
Srctot6mo:	0	Srctot1yr:	0
Srctot5yr:	0	Srctot10yr:	0
Protection:	Assigned	Pricontact:	5099251547
Priconta 1:	Not Reported	Priconta 2:	P O BOX 859
Priconta 3:	ELLENSBURG	Priconta 4:	WA
Priconta 5:	98926		
Priconta 6:	Not Reported		
Pwseffecti:	01-JUL-88	Pwsstatusi:	I
Pwsinactiv:	01-JUL-88	Srcstatusi:	I
Srceffecti:	01-JAN-70	Srcinactiv:	01-JUL-88
Floodzonei:	N	Priconta 7:	BOYD CHAMPLIN
Srcswinflu:	U	Latlongdat:	Not Reported
Site id:	WA8000000024457		

B4
South
1/2 - 1 Mile
Lower

WA WELLS **WA8000000027477**

Fid:	27476	Lerootid:	65150
Srcrootid:	22455	Pwsid:	67036
Srcnum:	01	Pwssrcid:	6703601
Systemname:	PERKINS CAKE N STEAK	Systemgrou:	A
Systemtype:	TNC	Region:	EA
County:	KITTITAS	Smaid:	Not Reported
Ftrespopul:	0	Resconnect:	1
Totalconne:	1	Srcname:	WELL 01
Srctype:	W	Srcusecode:	P
Srcwelldep:	157	Township:	18

Range :	18E	Section:	33
Qtrqtrsect:	NESE		
Longitude:	-120.589		
Latitude:	47.0087		
Latlongmet:	QtrQtrSe	Srcsuscept:	U
Srcvulnioc:	Not Reported	Srcvulnvoc:	Not Reported
Srcvulnsoc:	Not Reported	Doewelltag:	Not Reported
Srctot6mo:	0	Srctot1yr:	0
Srctot5yr:	0	Srctot10yr:	0
Protection:	Assigned	Pricontact:	0000000000
Priconta 1:	Not Reported	Priconta 2:	RT 4
Priconta 3:	ELLENSBURG	Priconta 4:	WA
Priconta 5:	98926		
Priconta 6:	Not Reported		
Pwseffecti:	01-OCT-82	Pwsstatusi:	I
Pwsinactiv:	01-OCT-82	Srcstatusi:	I
Srceffecti:	01-JAN-70	Srcinactiv:	01-OCT-82
Floodzonei:	N	Priconta 7:	PRIMARY CONTACT WS# 67036 PERKINS C
Srcswinflu:	U	Latlongdat:	Not Reported
Site id:	WA8000000027477		

5
ENE **FED USGS** **USGS40001240601**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-WA		
Formal name:	USGS Washington Water Science Center		
Monloc Identifier:	USGS-470111120344301		
Monloc name:	18N/18E-27M01		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	17030001	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	47.0196946
Longitude:	-120.5798847	Sourcemap scale:	24000
Horiz Acc measure:	.5	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	1570
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19981203	Welldepth:	305
Welldepth units:	ft	Wellholedepth:	305
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 5

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
2002-03-12					
Note: The site was flowing, but the head could not be measured without additional equipment.					
2001-08-20	3.07				
Note: The site had been pumped recently.					

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
2001-03-01	-2.6				
2000-09-01					

Note: The site was flowing, but the head could not be measured without additional equipment.

1998-12-09	-3		

6
ENE **FED USGS** **USGS40001240587**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-WA		
Formal name:	USGS Washington Water Science Center		
Monloc Identifier:	USGS-470110120343901		
Monloc name:	18N/18E-27M02		
Monloc type:	Well		
Monloc desc:	09/01/2000 NO ACCESS WELL HEAD BURIED		
Huc code:	17030001	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	47.0193335
Longitude:	-120.578579	Sourcemap scale:	24000
Horiz Acc measure:	.5	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	1570
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19890511	Welldepth:	120
Welldepth units:	ft	Wellholedepth:	120
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1989-05-15	5	

7
ENE **FED USGS** **USGS40001240664**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-WA		
Formal name:	USGS Washington Water Science Center		
Monloc Identifier:	USGS-470117120343601		
Monloc name:	18N/18E-27E01		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	17030001	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	47.0212779
Longitude:	-120.5778013	Sourcemap scale:	24000

Horiz Acc measure:	.5	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	1580
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19981010	Welldepth:	98
Welldepth units:	ft	Wellholedepth:	100
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 2

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
2000-09-01					
Note: The site was flowing, but the head could not be measured without additional equipment.					
1998-10-10	-7				

8
South **FED USGS** **USGS40001239999**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-WA		
Formal name:	USGS Washington Water Science Center		
Monloc Identifier:	USGS-470022120352001		
Monloc name:	18N/18E-33K01		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	17030001	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	47.0059584
Longitude:	-120.5900708	Sourcemap scale:	62500
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1510
Vert measure units:	feet	Vertacc measure val:	40
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19740620	Welldepth:	137
Welldepth units:	ft	Wellholedepth:	142
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1974-07-05	35	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database | EDR ID Number

C9
SSW
1/2 - 1 Mile
Lower

WA WELLS **WA8000000025697**

Fid:	25696	Lerootid:	58010
Srcrootid:	13130	Pwsid:	22940
Srcnum:	01	Pwssrcid:	2294001
Systemname:	ELLENSBURG KOA	Systemgrou:	A
Systemtype:	TNC	Region:	EA
County:	KITTITAS	Smaid:	Not Reported
Ftrespopul:	2	Resconnect:	1
Totalconne:	106	Srcname:	WELL #1 AFK930
Srctype:	W	Srcusecode:	P
Srcwelldep:	124	Township:	18
Range :	18E	Section:	33
Qtrqtrsect:	Not Reported		
Longitude:	-120.593582		
Latitude:	47.005031		
Latlongmet:	GPS	Srcsuscept:	N
Srcvulnioc:	H	Srcvulnvoc:	H
Srcvulnsoc:	X	Doewelltag:	AFK930
Srctot6mo:	0	Srctot1yr:	0
Srctot5yr:	0	Srctot10yr:	0
Protection:	Assigned	Pricontact:	5099259319
Priconta 1:	Not Reported	Priconta 2:	32 S THORP HWY
Priconta 3:	ELLENSBURG	Priconta 4:	WA
Priconta 5:	98926		
Priconta 6:	koaggm@hotmail.com		
Pwseffecti:	01-JAN-70	Pwsstatusi:	A
Pwsinactiv:	Not Reported	Srcstatusi:	A
Srceffecti:	01-JAN-70	Srcinactiv:	Not Reported
Floodzonei:	Y	Priconta 7:	GARY & GAIL MCCONNELL
Srcswinflu:	U	Latlongdat:	Not Reported
Site id:	WA8000000025697		

C10
South
1/2 - 1 Mile
Lower

WA WELLS **WA8000000029730**

Fid:	29729	Lerootid:	58010
Srcrootid:	13131	Pwsid:	22940
Srcnum:	02	Pwssrcid:	2294002
Systemname:	ELLENSBURG KOA	Systemgrou:	A
Systemtype:	TNC	Region:	EA
County:	KITTITAS	Smaid:	Not Reported
Ftrespopul:	2	Resconnect:	1
Totalconne:	106	Srcname:	WELL #2 AFK929
Srctype:	W	Srcusecode:	P
Srcwelldep:	94	Township:	18

Range :	18E	Section:	33
Qtrqtrsect:	Not Reported		
Longitude:	-120.593268		
Latitude:	47.004861		
Latlongmet:	GPS	Srcsuscept:	N
Srcvulnioc:	H	Srcvulnvoc:	H
Srcvulnsoc:	X	Doewelltag:	AFK929
Srctot6mo:	0	Srctot1yr:	0
Srctot5yr:	0	Srctot10yr:	0
Protection:	Assigned	Pricontact:	5099259319
Priconta 1:	Not Reported	Priconta 2:	32 S THORP HWY
Priconta 3:	ELLENSBURG	Priconta 4:	WA
Priconta 5:	98926		
Priconta 6:	koaggm@hotmail.com		
Pwseffecti:	01-JAN-70	Pwsstatusi:	A
Pwsinactiv:	Not Reported	Srcstatusi:	I
Srceffecti:	01-JAN-70	Srcinactiv:	16-JAN-14
Floodzonei:	Y	Priconta 7:	GARY & GAIL MCCONNELL
Srcswinflu:	U	Latlongdat:	01-OCT-04
Site id:	WA8000000029730		

C11
SSW **WA WELLS** **WA8000000022200**
1/2 - 1 Mile
Lower

Fid:	22199	Lerootid:	58010
Srcrootid:	32503	Pwsid:	22940
Srcnum:	03	Pwssrcid:	2294003
Systemname:	ELLENSBURG KOA	Systemgrou:	A
Systemtype:	TNC	Region:	EA
County:	KITTITAS	Smaid:	Not Reported
Ftrespopul:	2	Resconnect:	1
Totalconne:	106	Srcname:	WELL #3 - BHT577
Srctype:	W	Srcusecode:	P
Srcwelldep:	119	Township:	18
Range :	18E	Section:	33
Qtrqtrsect:	NESE		
Longitude:	-120.5946		
Latitude:	47.005		
Latlongmet:	QtrQtrSection	Srcsuscept:	L
Srcvulnioc:	H	Srcvulnvoc:	M
Srcvulnsoc:	L	Doewelltag:	BHT577
Srctot6mo:	188	Srctot1yr:	266
Srctot5yr:	594	Srctot10yr:	840
Protection:	CFR	Pricontact:	5099259319
Priconta 1:	Not Reported	Priconta 2:	32 S THORP HWY
Priconta 3:	ELLENSBURG	Priconta 4:	WA
Priconta 5:	Not Reported		
Priconta 6:	koaggm@hotmail.com		
Pwseffecti:	01-JAN-70	Pwsstatusi:	A
Pwsinactiv:	Not Reported	Srcstatusi:	A
Srceffecti:	15-MAY-13	Srcinactiv:	Not Reported
Floodzonei:	Not Reported	Priconta 7:	GARY & GAIL MCCONNELL
Srcswinflu:	Not Reported	Latlongdat:	01-SEP-14
Site id:	WA8000000022200		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

D12
SSW **FED USGS** **USGS40001239990**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-WA		
Formal name:	USGS Washington Water Science Center		
Monloc Identifier:	USGS-470021120354801		
Monloc name:	18N/18E-33M01		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	17030001	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	47.0056806
Longitude:	-120.5978488	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1581
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19760510	Welldepth:	67
Welldepth units:	ft	Wellholedepth:	67
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1976-05-10	27	

13
NNW **FED USGS** **USGS40001240855**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-WA		
Formal name:	USGS Washington Water Science Center		
Monloc Identifier:	USGS-470137120354201		
Monloc name:	18N/18E-28C01		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	17030001	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	47.027111
Longitude:	-120.5960796	Sourcemap scale:	24000
Horiz Acc measure:	.5	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	1575
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Glacio-Fluviatile		

Aquifer type: Not Reported
Construction date: 19780609 Welldepth: 57
Welldepth units: ft Wellholedepth: 57
Wellholedepth units: ft

Ground-water levels, Number of Measurements: 6

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
2002-03-12	4.53				
2001-08-20	2.40				
Note: The site had been pumped recently.					
2001-03-22	4.25				
1984-02-29					
Note: An obstruction was encountered in the well above the water surface (no water level recorded).					
1983-02-25	4.05		1978-06-14	3	

D14
SSW
1/2 - 1 Mile
Higher

FED USGS **USGS40001239968**

Org. Identifier: USGS-WA
Formal name: USGS Washington Water Science Center
Monloc Identifier: USGS-470020120354801
Monloc name: 18N/18E-33M02
Monloc type: Well
Monloc desc: Not Reported
Huc code: 17030001 Drainagearea value: Not Reported
Drainagearea Units: Not Reported Contrib drainagearea: Not Reported
Contrib drainagearea units: Not Reported Latitude: 47.0054028
Longitude: -120.5978488 Sourcemap scale: 24000
Horiz Acc measure: 5 Horiz Acc measure units: seconds
Horiz Collection method: Interpolated from map
Horiz coord refsys: NAD83 Vert measure val: 1582
Vert measure units: feet Vertacc measure val: 10
Vert accmeasure units: feet
Vertcollection method: Interpolated from topographic map
Vert coord refsys: NGVD29 Countrycode: US
Aquifername: Not Reported
Formation type: Not Reported
Aquifer type: Not Reported
Construction date: 19760512 Welldepth: 58
Welldepth units: ft Wellholedepth: 58
Wellholedepth units: ft

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1976-05-12	22	

15
SSW
1/2 - 1 Mile
Higher

FED USGS **USGS40001240000**

Org. Identifier:	USGS-WA		
Formal name:	USGS Washington Water Science Center		
Monloc Identifier:	USGS-470022120355201		
Monloc name:	18N/18E-33M03		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	17030001	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	47.0046112
Longitude:	-120.5978015	Sourcemap scale:	24000
Horiz Acc measure:	.5	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	1585
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19740620	Welldepth:	137
Welldepth units:	ft	Wellholedepth:	142
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

16
North
1/2 - 1 Mile
Higher

FED USGS **USGS40001240948**

Org. Identifier:	USGS-WA		
Formal name:	USGS Washington Water Science Center		
Monloc Identifier:	USGS-470144120351801		
Monloc name:	18N/18E-21Q01		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	17030001	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	47.0287778
Longitude:	-120.5895239	Sourcemap scale:	24000
Horiz Acc measure:	.5	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	1600
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19941118	Welldepth:	58
Welldepth units:	ft	Wellholedepth:	60
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 2

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
2000-09-19	14.47				
Note: The site had been pumped recently.					
1994-11-21	13				

E17
SW
1/2 - 1 Mile
Higher

FED USGS **USGS40001240023**

Org. Identifier:	USGS-WA		
Formal name:	USGS Washington Water Science Center		
Monloc Identifier:	USGS-470024120360901		
Monloc name:	18N/18E-32J02		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	17030001	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	47.0065139
Longitude:	-120.6036823	Sourcemap scale:	62500
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1650
Vert measure units:	feet	Vertacc measure val:	40
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19750414	Welldepth:	150
Welldepth units:	ft	Wellholedepth:	150
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1975-04-18	73	

18
SW
1/2 - 1 Mile
Higher

FED USGS **USGS40001240067**

Org. Identifier:	USGS-WA		
Formal name:	USGS Washington Water Science Center		
Monloc Identifier:	USGS-470027120361801		
Monloc name:	18N/18E-32H01		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	17030001	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	47.0073472
Longitude:	-120.6061823	Sourcemap scale:	24000

Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1590
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19750422	Welldepth:	55
Welldepth units:	ft	Wellholedepth:	55
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1975-04-22	30	

E19
SW
1/2 - 1 Mile
Higher

FED USGS **USGS40001239991**

Org. Identifier:	USGS-WA		
Formal name:	USGS Washington Water Science Center		
Monloc Identifier:	USGS-470021120361001		
Monloc name:	18N/18E-32J01		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	17030001	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	47.0056806
Longitude:	-120.60396	Sourcemap scale:	62500
Horiz Acc measure:	10	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1600
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19740116	Welldepth:	66
Welldepth units:	ft	Wellholedepth:	66
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1974-01-24	22	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for KITTITAS County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 98926

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.300 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Ecology
Telephone: 360-407-6121

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Wells
Source: Department of Health
Telephone: 360-236-3148
Group A and B well locations.

Water Well Listing
Source: Public Utility District
Telephone: 206-779-7656
A listing of water well locations in Kitsap County.

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Listing
Source: Department of Natural Resources
Telephone: 360-902-1450
Locations that represent oil and gas test well sites in Washington State from 1890 to present.

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

Appendix D:

Site Survey Information

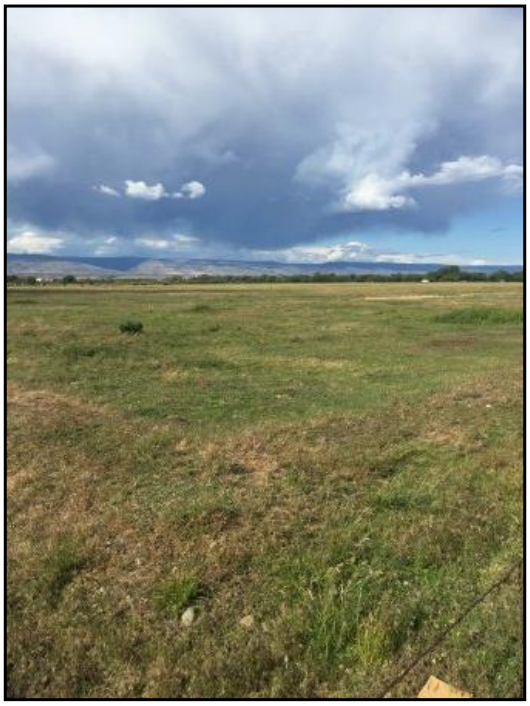
No documents have been associated with this appendix.

Appendix E:

Site Photographs

IMG_2962

IMG_2963



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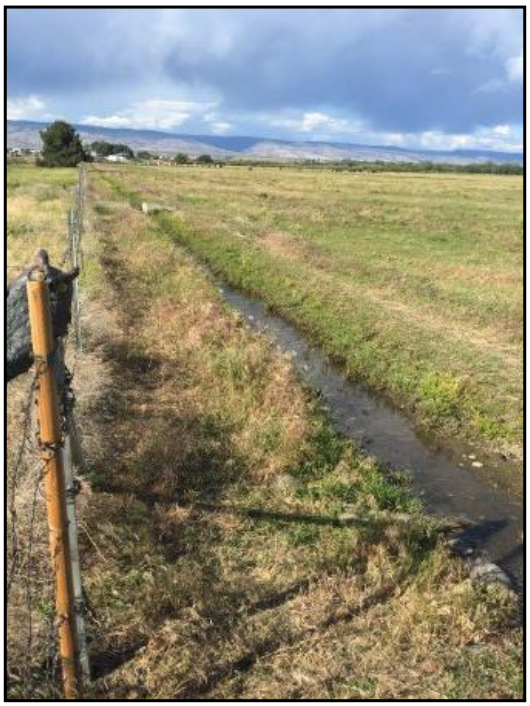
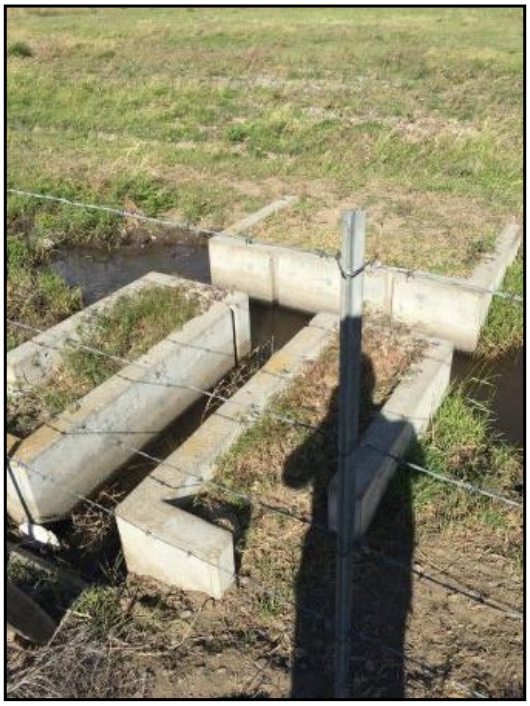


IMG_2965

IMG_2966

IMG_2967



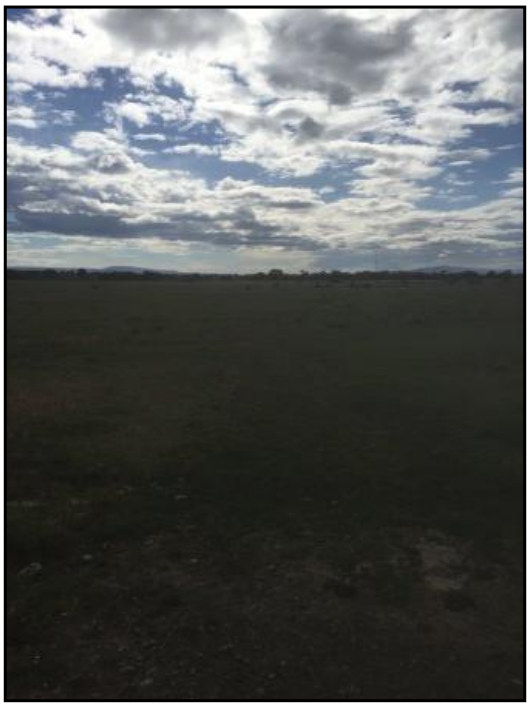
IMG_2968

IMG_2969

IMG_2970

IMG_2971

IMG_2972



IMG_2973

Appendix F:

Miscellaneous Information

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 8/23/2017

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Laura Webber
Troy Insurance Agency Inc 1822 18th Ave P.O. Box 796 Lewiston ID 83501	PHONE (A/C, No, Ext): (208) 743-3541 FAX (A/C, No): (208) 743-3542 E-MAIL ADDRESS: lwebber@troyins.com

INSURED	INSURER(S) AFFORDING COVERAGE	NAIC #
Alta Science & Engineering, Inc 220 E 5th St Moscow ID 83843	INSURER A: One Beacon Environmental	
	INSURER B: Acuity A Mutual Insurance Co	14184
	INSURER C: State Insurance Fund	
	INSURER D:	
	INSURER E:	
	INSURER F:	

COVERAGES **CERTIFICATE NUMBER:** 17-18 NEW LIA POLICY **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS		
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [ ] LOC [ ] OTHER:	X	Y	793-00-66-25-0000	7/16/2017	7/16/2018	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ $ $ $ $ $	3,000,000 500,000 10,000 3,000,000 3,000,000 3,000,000
B	AUTOMOBILE LIABILITY [X] ANY AUTO [ ] ALL OWNED AUTOS [ ] SCHEDULED AUTOS [X] HIRED AUTOS [X] NON-OWNED AUTOS	X	Y	Z78325	7/24/2017	7/24/2018	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) Underinsured motorist	$ $ $ $ $	1,000,000 1,000,000
A	[X] UMBRELLA LIAB [X] OCCUR [ ] EXCESS LIAB [ ] CLAIMS-MADE DED [X] RETENTION $ 10,000		Y	793-00-66-26-0000	7/16/2017	7/16/2018	EACH OCCURRENCE AGGREGATE	$ $	2,000,000 2,000,000
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N [ ] (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		659171	07/26/2017	07/26/2018	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ $ $	 1,000,000 1,000,000 1,000,000
A	Pollution Liability Professional Liability	X	Y	793-00-66-25-0000 793-00-66-25 Retro 7/16/17	7/16/2017 7/16/2017	7/16/2018 7/16/2018	Per Wtongul Act/Condition Aggregate		$3,000,000 $3,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

THIS CERTIFICATE ISSUED TO ALTA SCIENCE & ENGINEERING, INC, NAMED INSUREDS, INTENDED FOR INSURANCE VERIFICATION PURPOSES ONLY. THIS CERTIFICATE DOES NOT GUARANTEE COVERAGE NOR PROVIDE ANY ADDITIONAL INSURED COVERAGE FOR ANY PERSONS, ORGANIZATIONS, OR ANY CONTRACT HOLDER DOING BUSINESS WITH OR FOR ALTA, AS NAMED ABOVE.

CERTIFICATE HOLDER

ALTA SCIENCE & ENGINEERING, INC
VERIFICATION OF INSURANCE
220 E 5TH ST
MOSCOW, ID 83843

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

JON MUNKERS, M.S., M.B.A.

Principal Environmental Scientist

Alta Science & Engineering, Inc.

Alta-se.com

Experience Summary

Jon Munkers manages numerous projects throughout Idaho and the Pacific Northwest. He has overseen and collected thousands of environmental samples for evaluating threats to human health and the environment; written many Sampling Analysis Plans/Quality Assurance Project Plans (SAP/QAPPs); and has extensive experience with field test equipment, field and analytical protocols, and Quality Assurance/Quality Control (QA/QC) procedures. He brings a balanced technical approach and a strong human health risk assessment background to Idaho community projects. Mr. Munkers has completed additional training with the State of Idaho's Remediation Evaluation Manual (REM). He oversees Boise Regional operations and manages a variety of projects throughout Idaho communities, including mine-impacted environments, with a wide range of stakeholder involvement. He has organized, led, and presented at outreach meetings focused on environmental issues.

Education

M.B.A., (Master in Business Administration) Boise State University, 2008

M.S., Environmental Science
University of Idaho, 2000

B.S., Chemistry/Human Biology
Lewis-Clark State College, 1998

Areas of Expertise

- Brownfields Assessment
- LUST/UST Investigations
- Phase I, II, and III ESAs
- Contract Management
- Human Health RA
- QAPPs and H&SPs
- ABCA
- Remediation Oversight
- Sampling Plans
- Surface Water, Groundwater, and Soil Sampling
- Grant Writing and Financial Analysis
- Outreach

Project Experience

Environmental Sampling

Mr. Munkers is currently responsible for more than $1 million worth of environmental assessment and remediation work. Over the past 18 years, he has collected, or overseen the collection of, thousands of environmental samples (soil, surface water, groundwater, vapor, and dust).

IDEQ Waste Management and Remediation Division Contract, Idaho, 2009–Present

This contract focuses on every aspect of Brownfields, underground storage tanks (UST)/ leaking underground storage tanks (LUST), and hazardous waste sites, including grant writing, site characterization, risk assessment, and remedial design activities. Alta coordinates efforts with potential developers/land owners and integrates remedial design activities into future property use. Mr. Munkers oversees this contract and personally works on many projects within the contract, ranging from abandoned dry cleaners to methamphetamine cleanups. On dozens of projects, the predominant focus of the investigation was underground storage tanks. Mr. Munkers completed many risk-based evaluations (REM) and worked on risk-based cleanups. He is familiar with a wide range of assessment tools, sampling techniques (e.g., sub-slab vapor, soil vapor, soil, and groundwater), and remediation technologies (e.g., SVE, ozone sparging, passive venting, and bioremediation). He has supported several Brownfields Assessment grants and provided public outreach and risk communication to grantees. He has completed SAPs, QAPPs, Work Plans, ABCAs, VCP applications, and other related DEQ documents.

City of Ellensburg Brownfields Project, Ellensburg, Washington, 2012–2015

Mr. Munkers was the project manager for the City of Ellensburg Brownfields Assessment Grant Project. This $400,000 grant inventoried potential Brownfields sites, completed Phase I Environmental Site Assessments (ESAs), Phase II ESAs, and Analysis of Brownfields Cleanup Alternatives (ABCAs) on sites throughout the city of Ellensburg. Mr. Munkers worked with a wide range of stakeholders to identify landowners for participation within the program and to identify potential Brownfields sites.

Priest River Landfill Reclamation Project, Priest River, Idaho, 2010–2012

As the Project Manager and Principal-in-Charge, Mr. Munkers worked with Priest Community Forest Connection to assess, design, and oversee remediating an abandoned city dump site for possible future development into a park with public access to the adjacent river. The US Environmental Protection Agency's (USEPA) Brownfields Program Stimulus Act and the State of Idaho Brownfields Clean-up Revolving Loan Fund Program funded this project.

The project included checking for hazardous materials (using ground-penetrating radar and shallow boreholes), engineering design, bid support services, and construction management services for the Priest River Former Landfill as required by the Voluntary Cleanup Program (VCP).

Pend Oreille Bay Trail (Panhandle Smelter), Bonner County, Idaho, 2011–Present

Alta is conducting a Phase II Site Investigation and risk assessment for the Zone 4 Panhandle Smelter of the Pend Oreille Bay Trail Brownfields Assessment Coalition Project. Mr. Munkers has worked with the Idaho Department of Environmental Quality (IDEQ) and wide range of stakeholders in preparation for assessing the impacts from the historic Pend Oreille Smelter site near Sandpoint, Idaho. Mr. Munkers participated in community meetings and planning efforts. The community is transforming the site into a 2+-mile trail along Lake Pend Oreille.

Bayhorse Mine Site Remediation and Cleanup, Challis, Idaho, 2006–2012

This project converted a historic ghost town mining district, contaminated by hard-rock mining waste, into a public state park. Mr. Munkers worked with IDEQ, Idaho Department of Parks and Recreation, and a variety of stakeholders to complete the initial Phase I ESAs, as well as subsequent characterization activities, risk evaluation, and remediation at the site to convert Idaho's first lead smelter into Idaho's newest state park. The park remedial design included capping a mine tailings pile, closing a slag pile, and constructing features for a state park. The company prepared the site-specific Institutional Controls Program and closure reports.

Low-Level Mercury Sampling

Mr. Munkers worked with and oversaw a sampling crew in collecting low-level mercury samples from seven different streams in Idaho. Strict sampling protocols and QA/QC measures were critical to acquire the detection limits necessary.

Study of Selenium Impacts within the Idaho Phosphate Resource Area

Mr. Munkers' research focused on environmental selenium that was released from a mine-impacted french drain impoundment. He studied abiotic and biotic processes associated with release and control of selenium leachate from phosphoria waste dumps in the Southeastern Idaho Phosphate Resource Area. A "green-chemistry" approach was used, focusing on amendments that stimulated chemical and microbial sequestration processes. Mr. Munkers worked with mining companies and various other stakeholders to collect and present his findings.

Lead Risk Assessment Comparison Study, Shoshone and Latah Counties, Idaho

Mr. Munkers wrote the application for the $200,000+ Housing & Urban Development (HUD) Lead In House Dust Assessment grant that was awarded to the Panhandle Health District for comparison of HUD and Bunker Hill lead risk assessment methods. He was the primary HUD risk assessor for that project, working with 30+ volunteer households from three different Idaho communities.

Lead Treatability Studies

Mr. Munkers coordinated with IDEQ, U.S. Fish and Wildlife Service, and the University of Idaho to conduct installation and field sampling to evaluate the success of various soil amendments on heavy metals (e.g., lead and zinc) sequestration and the subsequent limitation of biological availability. Six local citizens were employed to install the test plots.

Certifications/Training

- HAZWOPER, 40 hour +refreshers, current
- PSMJ Principals Boot Camp, September 2012
- Contaminant Chemistry and Transport Workshop. NWETC. Portland, Oregon, 2008
- International Business Week. IPADE University. Mexico City, Mexico, 2007
- PSMJ Project Management Boot Camp, August 2007
- Washington MTCA Training, 2004
- Idaho Risk Evaluation Model Training, 2004
- Certified Radon Risk Assessor, 2005, not current
- USEPA-Accredited Lead-Based Paint Inspector/Risk Assessor, 2001 and renewals, not current
- Asbestos Building Inspector – TSCA Title II/40 CFR 763 (AHERA), 2000 and renewals, not current

Special Appointments, Memberships, or Affiliations

- Board Member –Treasure Valley Land Trust, January 2012-2014
- Board Member – Northwest Environmental Business Council, 2009-2015
- Steering Committee, Idaho Environmental Summit, 2008
- Member – National Groundwater Association, National Brownfields Association, Boise Young Professionals

- Advisory Board Member – University of Idaho, Professional Science Maters Program, 2010
- "Top 40 Accomplished Under 40" – Idaho Business Review, 2010
- Rising Star Alumni – Lewis-Clark State College, 2010

Publications/Presentations

National Brownfields Conference, New Orleans, LA. "Developing a Mine Impacted Ghost Town into Idaho's newest State Park." 2009.

Washington State Brownfields Conference, Tacoma, WA. "Sponsor Presenter." 2009.

Idaho Environmental Summit, Boise, ID. "Brownfields Projects in Education." 2007.

Idaho Environmental Summit, Boise, ID. "Brownfields Projects and Programs in Idaho." 2006.

National Brownfields Conference, Denver CO. Poster Presentation: "Colville Tribal Reservation-Wide Assessment and Database." October 2005.

National Brownfields Conference, St. Louis, MO. 2004.

Moderator. National Brownfields Conference, Portland, OR. "Brownfields on Tribal Lands." 2003.

National Brownfields Conference, Portland, OR. "Colville Tribal Agency Headquarters Brownfields Assessment Project." 2003.

University of Idaho. Environmental Toxicology & Risk Assessment. "Selenium issues in S.E. Phosphate Resource Area." April 2001.

Abiotic and Biotic Processes in the Release and Control of Selenium in the Western Phosphate Resource Area. M.S. Thesis. University of Idaho, Moscow, ID. December 2000.

The Biogeochemistry of Selenium in the US Western Phosphate Resource Area: Sources, Pathways, Receptors and Controls. Proceedings of the Twenty-Fourth Annual British Columbia Mine Reclamation Symposium. Williams Lake, BC, Canada. June 2000.

Combined Abiotic/Biotic Stimulation of Selenium Immobilization in a Multi-Phase Environmental System: Field Studies. 5th International Society of Environmental Geochemistry Meeting, Cape Town, South Africa. June 2000.

Reaction Pathway Analysis of Environmental Selenium in the Idaho Phosphate Resource Area. Society of Environmental Toxicology and Chemistry Annual Meeting, Philadelphia, PA. November 1999.

Fielding Combined Chemical/Biological in Situ Treatment Approaches. Biotransformation Biogeochemistry Workshop: Combined Chemical and Microbiological Approaches to Remediating Metal and Radionuclide Contaminants, Invited presentation. US DOE NABIR, Washington, DC. October 1999.

JOHN MEANS, MES

Senior Environmental Manager

Alta-se.com

Experience Summary

John Means leads the Environmental Science and Development Services Division at Alta where he guides clients though the planning, assessment, clean up, and redevelopment process. He has 19 years of project management experience in the environmental and heavy industrial sectors. In these sectors, he has been responsible for project financial pro forma development and budget oversight, work plans, scheduling, construction bid specifications, cost estimates and managing professional and contractor services. He was a Senior Program Manager directing the Washington State Department of Ecology Brownfields Program. Mr. Means acted as the project manager and conceptual architect of a multi-year Strategic Brownfield Policy Initiative that resulted in omnibus legislation to amend the State of Washington Model Toxics Control Act. To implement the legislation, Mr. Means was lead policy advisor for administrative code rulemaking and guidance. He has managed and overseen large-scale projects with annual operation budgets exceeding $1 million. He has effectively built close-knit client/regulator teams to guide projects through complex regulatory and economic conditions.

Education

M.E.S., Master of Environmental Studies, Environmental Science and Policy
The Evergreen State College, 2008

B.A., Ecological Planning and Design
The Evergreen State College, 2004

Areas of Expertise

- Brownfields Cleanup and Redevelopment
- Project/Program Management
- Environmental Policy and Planning
- Freshwater Habitat Restoration
- Heavy Industrial Equipment Construction

Project Experience

Mr. Means brings a strong interdisciplinary perspective to his work that emphasizes integrating remediation and reuse planning that provides efficient and cost-effective project delivery strategies for clients in Idaho and Washington State. He is especially known for his ability to effectively work between project proponents and regulatory sectors to craft equitable and scientifically sound solutions to remediate complex sites.

Washington State Department of Ecology – Toxics Cleanup Program, Olympia, Washington, July 2006–Sepember 2014

As the former Brownfields Program manager, Mr. Means brought together leading thinkers to establish a nationally recognized state Brownfields program that is known for innovative thinking and close working relationships with key partners in the governmental, private, academic, and community sectors. As the state of Washington Brownfields expert and senior level Brownfields Program Manager for Washington State Department of Ecology (Ecology), Mr. Means was responsible for Brownfields program initiatives and policy development. These initiatives resulted in innovative strategies and business practices that made Ecology an effective partner for expediting the cleanup and redevelopment of distressed Brownfields properties and urban renewal projects. Mr. Means was the architect and co-author of a series of publications, which resulted in a final report and recommendation that culminated in landmark legislation. Mr. Means was the senior advisor to a team that that developed policy and guidance to implement the legislation. Concurrently, he developed and managed the highly successful Brownfield Integrated Planning Program with 23 projects statewide and $6 million in funding. This program employed a project delivery method that integrated environmental investigation site planning, finance, and land use planning into a cohesive development strategy. This strategy significantly reduced cleanup cycle time and cost.

Mr. Means provided operational leadership, developed annual work plans and resource allocation scheduling, oversaw and managed programmatic income grants from the US EPA Section 128(a) State and Tribal Response Program, and capital project funding budgets. He was responsible for annual work plans, task and budget development, invoice review, charges and deliverables for work completion and contract compliance, and technical assistance for clients who were developing or have executed grant agreements with the EPA Brownfields Program and the Department of Ecology's Integrated Planning Grant Program.

Mr. Means is a frequent speaker at state and national conferences and known for communicating the importance of prioritizing community outreach, economic development forecasting, and environmental justice goals as integral effective cleanup projects. Mr. Means also served in a senior

advisory role providing mentoring, input, and review for younger Brownfields practitioners.

Relocating and Restoring Historic Train Depot, Brownfields Redevelopment Project, Morton, Washington, July 2004–July 2006

Mr. Means was the project manager for an award-winning Brownfields redevelopment project that entailed relocating and restoring a historic train depot in Morton, Washington. The central project elements included cleanup of petroleum-contaminated soils, economic opportunity development within a timber-affected community, preservation of a historically significant structure, and transportation enhancement planning. Specific duties included financial pro forma development and budget oversight, preparation and management of project development scope, implementation of schedule and construction bid specifications, construction cost estimates, management of $1.2 million in federal and state grants, management of professional and contractor services and preparation of National Environmental Policy Act (NEPA)/ Smart Electric Power Alliance (SEPA) and cultural review documentation.

Building Construction and Heavy Industry

Mr. Means has 18 years' experience in commercial building and heavy industrial equipment construction. Projects included large-scale commercial building construction, large steam turbine retrofits in nuclear plants, and petroleum pipeline weld annealing. Duties included construction crew supervision, field installation of heavy machinery, client-training, blueprint take off, materials estimating and layout, job site management, oversight of heavy equipment excavating and grading operations, concrete form construction, and structural steel erection.

Freshwater Fish Habitat Study and Restoration

Mr. Means was the owner of a small private consulting firm specializing in fisheries habitat study and remediation design/construction. The firm provided non-profit and municipality clientele by investigating and analyzing existing conditions, limiting factors to fish production, and making recommendations for habitat remediation and enhancement. This included data collection and analytical methods and reporting of biological and physical conditions for project design, with a special emphasis in the investigation, design and remediating fish passage structures. Working with the timber industry and tribes, he had a leading role in developing a methodology to conduct watershed scale fish passage evaluations for road crossing structures.

Certifications/Training

- 40-hour HAZWOPER certification, current

Publications/Presentations

- Model Toxics Control Act Remedial Action Grants
- Alternative Financing Evaluation
- University of Washington Brownfield Report: Linking Toxics
- Redevelopment across the States: Lessons Learned for Washington State
- Ecology's Guide to Leveraging Brownfield Redevelopment for Community Revitalization

THOMAS JENKINS, B.A.

Environmental Scientist

Alta-se.com

Experience Summary

Tom Jenkins is an environmental scientist with 8 years of field, laboratory, and office experience in environmental sciences, ecology, and biology. He investigated wetlands and wildlife conservation areas for Critical Areas according to the state of Washington's Growth Management Act, where he gained experience in wetland delineation. He has knowledge of Resource Conservation and Recovery Act (RCRA) Hazardous Waste and Investigation Derived Waste Regulations and management. In his field experience, he collected samples of surface and groundwater, vapor, soil, sediment (via Vibecore and Wildco Ponar systems). He also installed vapor wells and performed direct push drilling (using the Geoprobe and AgPro systems), and conducted Phase I and II Environmental Site Assessments (ESAs) and field surveys (including total station and GPS for topographic mapping applications). He carried out wildlife surveys using a combination of field activities and GIS, performed statistical analyses, conducted biomass assessments, performed water quality tests, and developed extensive knowledge of applicable regulations.

Education

B.A., Ecology, minor in Geography
University of Denver, 2010

Areas of Expertise

- Ecology, Biology, and Environmental Science
- Wetland Delineation
- Water, Soil, Vapor Sampling
- Drilling – well installation, soil core sampling, ISM
- Field Survey
- Terrestrial Ecology
- State and Federal Regulations
- Phase I and II ESA and Report Preparation
- Data entry and Review
- Software: Microsoft Office, ArcGIS, Arcview, AutoCAD, HOBO, and Solinst DataLoggers

Project Experience

Alta Science and Engineering, Inc., Moscow, Idaho, 2012–Present

Mr. Jenkins has contributed a role to over 30 projects of varying objectives since 2012.

In 2017, Mr. Jenkins has taken the lead role in drill rig operations for soil sampling, groundwater and vapor well installation, as well as water and vapor sampling for the following projects:

- Elk City Remediation Site Assessment, Elk City, Idaho, 2017
- Archer Photography Phase II ESA, Moscow, Idaho, 2017
- FH-Vandals Phase II ESA, Moscow, Idaho, 2017
- Pierce Community Center Phase II ESA, Pierce, Idaho, 2017
- Robinson Mobile Home Court – Tank Removal Assessment, Moscow, Idaho, 2017
- Gem Stop Phase II ESA, McCall, Idaho, 2017
- Pacific West Communities Phase II ESA, Boise, Idaho, 2017

US Vs. Howell Phase I ESA, Kamiah, Idaho, 2016–Present

Alta has been tasked to do a Phase I ESA in the U.S Department of Justice vs. Howell case in Kamiah, Idaho. Mr. Jenkins took part in the Phase I assessment by drilling and collecting soil, sediment, and water samples. He will continue to play a role in the Phase II moving forward.

City of Lewiston, Sediment Sampling, Lewiston, Idaho, 2016

The City of Lewiston generated plans to dredge sediment out of the Lewiston Drinking Water Intake Inlet on the Clearwater River. The U.S. Army Corps of Engineers requested chemical analysis of the material to be dredged. Mr. Jenkins was the project manager and field personnel for the sediment sampling event.

CDA BNSF ROW Phase II ESA, Coeur D'Alene, Idaho, 2016–2017

Mr. Jenkins operated the Agpro direct push drill rig and Geoprobe drill rig to conduct Incremental Sampling Methodology (ISM) soil sampling in 17 decision units along a 2-mile stretch of the abandoned Santa Fe Railway right-of-way.

Kittitas Valley Fire & Rescue Groundwater Monitoring, Ellensburg, Washington, 2015–Present

Ongoing groundwater monitoring events are conducted by Mr. Jenkins on a quarterly basis.

City of Pullman, Critical Area Report, Pullman, Washington, 2016

Mr. Jenkins conducted a Critical Area investigation for an expanding housing development in Pullman, Washington. Investigations included a wetland delineation and research into whether the subject project area existed on any critical aquifer recharge areas, frequently flooded areas, geologically hazardous areas, or fish and wildlife habitat conservation areas. He acquired extensive knowledge of regulatory online natural resource information while writing the report.

St. John Hardware Phase II ESA, Moscow, Idaho, 2016

Project activities that Mr. Jenkins played a role for the St. John Hardware Phase II included groundwater monitoring, soil sampling, boring logs, ambient and soil vapor sampling, core drilling, excavation and backfill oversight, and well abandonment.

USFS Newsome Creek Wetland Delineation, Survey and Design, Idaho County, Idaho, 2016

Mr. Jenkins took part in the first UAV LiDAR survey conducted by the field crew. His responsibilities for this project included equipment maintenance, operation, and supply, wetland delineation, floodplain and cross-sectional stream survey, stream discharge measurements, and pebble counts.

Lake City Truck Phase II ESA, Lewiston, Idaho, 2013–Present

Mr. Jenkins played a role in installing groundwater monitoring wells, ambient and soil vapor sampling, bioremediation well injections, and quarterly groundwater monitoring activities.

Twin City Foods East and West Phase II ESA, Lewiston, Idaho, 2016

Mr. Jenkins conducted ISM soil sampling with direct push drill methods and groundwater well installation and sampling at the Twin City Foods East and West site in Lewiston, Idaho.

City of Moscow, Dumas Seed Phase II ESA, Moscow, Idaho, 2016

Mr. Jenkins conducted ISM soil sampling methods for stockpiles and decision units on the Dumas Seed site for multiple sampling events. Throughout the soil removal phase of this project, he gained knowledge of investigation-derived waste management protocols.

Sediment Sampling, Hells Gate State Park Marina, Lewiston, Idaho, 2016

By using the VibeCore sediment sampling system, Mr. Jenkins collected a sediment sample at the port of entrance in Hells Gate State Park Marina.

Injection/Extraction Well Development and Construction Moscow URA, Idaho, 2015–2017

Mr. Jenkins helped install extraction well pumps, drawdown testing, well injections, and ongoing groundwater monitoring. Project managers, assisted by Mr. Jenkins, troubleshot electrical and mechanical problems.

Lapwai Creek Survey and Design, Culdesac, Idaho, 2015

Mr. Jenkins completed survey of a half-mile stretch of floodplain of Lapwai Creek along Highway 95 south of Culdesac, Idaho. He managed difficult surveying conditions, such as dense vegetative cover and highway disturbance. Mr. Jenkins also assisted in the design of this project once field data was collected.

Latah Soil Water Conservation District Floodplain Survey, Latah County, Idaho, 2014–2015

Mr. Jenkins took part in stream and floodplain survey for the Nora Creek, East Fork, Mason, Tourmaline, 2-Mile Meadow, and Olson project sites for the District throughout 2014 and 2015. Via multiple field surveys, Mr. Jenkins developed knowledge of Trimble total station and GPS equipment. He also conducted cross-sectional, topographical, and structure surveys throughout these projects.

Latah County Culvert Replacement Survey, Latah County, Idaho, 2015

Alta replaced a total of 5 culverts in Latah County along Little Bear Creek to improve fish passage in the Clearwater River Basin. Mr. Jenkins took part in surveying the existing structures throughout the summer of 2015 and acquired extensive knowledge of Trimble Total Station system through multiple break downs and set-ups.

Butcher Creek/Davis Property Wetland Delineation, Grangeville, Idaho, 2014

Mr. Jenkins carried out a wetland investigation and delineation on the Davis property to determine any existing wetlands and the boundaries if present. By analyzing hydrology, soil, and vegetation on site, wetland delineation was performed under the Army Corps of Engineers 1987 Wetland Delineation Manual and its Regional Supplement to Western Mountains, Valleys, and Coast (version 2.0).

Robinson Creek Wetland Delineation, Kootenai County, Idaho, 2013

Mr. Jenkins assisted in the wetland delineation on Robinson Creek in coordination with Idaho Fish and Game Department to assess the scale of existing wetland. While working at Robinson Creek, he acquired advanced knowledge of hyrdophitic vegetation, hydric soil indicators, and wetland hydrology.

Big Creek Repository Annex Wetland Investigation, Big Creek, Idaho, 2013

Mr. Jenkins carried out a wetland investigation to determine if any wetlands existed within the Annex property. Distinctions between upland and wetland plants were necessary to determine potential wetlands on site.

East Fork Nine Mile Spring High Flow Water Sampling, Shoshone County, Idaho, 2013

Surface and groundwater sampling was performed during USGS peak flow event. Mr. Jenkins worked closely with Maul Foster Alongi project managers to effectively monitor site water resources.

St. Joe River Streambank Stabilization Phase 1, Idaho, 2012–2013

Mr. Jenkins provided assistance in surveying St. Joe River stream banks and site characterization. He recorded vegetation and important native species throughout the site.

Phase I and II Environmental Site Assessments (ESAs)

Mr. Jenkins has worked for Brownfields projects and other ESAs. He provided water sampling for groundwater wells, logged soil borings, and installed vapor wells and ambient air quality samplers. He assisted in writing reports.

Environmental and Facilities Maintenance Technician, 2012–2016

Mr. Jenkins applied his prior technical experience to assist with a range of projects. His other responsibilities included the following: conducting most interior/exterior facilities maintenance and upkeep tasks at the Moscow office; coordinating, tracking, and scheduling service and maintenance requirements for Moscow fleet vehicles with assistance given to other locations when necessary; tracking items stored in off-site facilities; assisting with administrative tasks such as document production and reception; and assisting project managers with preparing and maintaining project equipment and supplies.

Colorado Parks and Wildlife Headquarters, Denver, Colorado, 2011–2012

During much of 2012, Mr. Jenkins worked as a Call Center Representative for Colorado Parks and Wildlife. He fielded calls and emails concerning the policies, regulations, management, and other questions about wildlife, hunting, and fishing in Colorado. He also created documents helpful to hunters and the public (e.g., maps and information including hunted species, terrain, elevation, and patterns of big game species). After developing extensive knowledge of Division regulations regarding wildlife, hunting, fishing, and trapping, he was promoted to also oversee call center employees who contacted customers regarding mistakes on their big game applications.

During the winter of 2011-2012, Mr. Jenkins was responsible for the upkeep of the Division Headquarters facility interior and exterior; the maintenance and safe operation of equipment and vehicles such as ATVs, front-loaders, street-sweepers, and plows; and moving heavy items such as filing cabinets and furniture in a safe manner. For this position it was imperative that he be able to multi-task and keep a list of tasks to prioritize. Duties involved extensive use of hand and power tools, use of heavy machinery, and upkeep of property landscape, walkways, and driveways by removing snow, ice, leaves, gravel, and other debris. He completed tasks both individually and as part of a team.

Prior Educational Experience, University of Denver, Colorado, and International Project in Kenya

Mr. Jenkins obtained experience in various fields and with a variety of equipment and software as listed below:

- Demonstrated proficiency with using a dissecting microscope to identify benthic organisms, microbes, bacteria, and the components of a cell.
- Conducted wildlife species counts by mapping GIS data points in Amboseli National Park and Tsavo East National Park, Kenya, Fall 2008.
- Completed scientific research paper for the School of Field studies in Kenya and gained working knowledge of how to write proficiently in scientific fashion, Fall 2008.
- Demonstrated proficiency mapping with ArcGIS and Arcview software.
- Performed statistical analysis using parametric tests (Anova, T-test, and Pearson) with population data collected from the field, Fall 2008 and Winter 2009.
- Performed water quality analyses using Hach water test kits for all necessary tests in Colorado, Fall 2009 .
- Gained working knowledge on hydrology and aquatic ecology principles.
- Collected benthic organisms in the field and identified the taxonomy of specimens down to genus by using the dichotomous key (Aquatic Ecology).

Volunteer Responsibilities, 2006–2012

While volunteering for the Colorado Division of Wildlife in 2011, Mr. Jenkins carried out a range of tasks including collecting fish from gill nets during spawning season of walleye, collecting data for hatcheries, big game mammal counts in Mount Evans State Wildlife Area, and electro-fishing on streams of private ranches to conduct population counts and species identification of salmonids.

Regulatory Knowledge

Mr. Jenkins has experience with state and federal regulations, in particular through his work with Investigation Derived Waste, EPA RCRA Hazardous Waste, and the Colorado Division of Parks and Wildlife. He has extensive knowledge of EPA RCRA hazardous waste management and Division regulations regarding wildlife, hunting, fishing, and trapping.

Certifications/Training

- HAZWOPER, 40 hour +refreshers, current
- Basic Wetland Delineation, 2014–National Wetland Institute
- Wildland Firefighter Type 2, Colorado Fire Camp, 2011
- Cherrington Global Scholar - awarded scholarship based on academic merit for study abroad program spring of 2008
- Wilderness First Responder, 2011–Wilderness Medicine Outfitters Fall-Winter 2011 (Carl Weil)

Publications/Presentations

“Assessing the perceptions and economic efficiency of community conservation initiatives within the Amboseli-Tsavo Ecosystem” School of Field studies in Kenya, Fall 2008.

Lathrop, Winbauer, Harrel, Slothower & Denison L.L.P.
Attorneys at Law
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May 22, 2018

VIA EMAIL ONLY
neil.caulkins@co.kittitas.wa.us

Neil Caulkins
Kittitas County Prosecuting Attorney's Office
205 W 5th Ave, Ste 213
Ellensburg WA 98926-2887

Re: Duke and Dude, LLC's Sale to Kittitas County

Dear Neil:

I wanted to follow up on our May 15, 2018 telephone conversation. You contacted me to discuss the particulars of the County's acquisition of 54.95+/- acres of property owned by my client, Duke and Dude, LLC.

I have obtained my client's permission to provide you with the enclosed appraisal that was prepared by Broadview Appraisal, Inc. for Duke and Dude, LLC, setting forth their opinion of value as of February 3, 2018 of 3.3 million dollars (not including the water rights). My client is willing to sell this property to Kittitas County for 3.3 million dollars.

You inquired as to whether the water rights were available, and my client would be willing to sell the water rights to Kittitas County. The land immediately to the east of Duke and Dude, LLC's property sold their water rights in 2017 for $6,500.00 per consumptive acre-foot. Using the analysis of that transaction, there were 3.33 consumptive acre-feet per acre. The water right for this property is actually for 56 acres (see enclosed Exhibit B). Therefore 3.33 multiplied by 56 would equal 186.48 consumptive acre feet multiplied by $6,500.00 would be $1,212,120.00 for the water rights.

The total purchase price for the real property and the water rights (the "Property") is $4,512,120.00.

My client would sell both the real estate and the water for the above-referenced amounts in their current, as-is, where-is condition, with no representation or warranty as to the condition of the

property. The property has long been a pasture, therefore my client would expect the County to assume the risk of any environmental contamination on the property and to indemnify my client and Steve Hayden individually for any environmental contamination that may subsequently be found on the property. All closing costs, including Real Estate Excise Tax, will be divided equally between Purchaser and Seller. Taxes for 2018 will be prorated as of the date of closing. Closing will occur by September 1, 2018.

We understand the only contingency would be an affirmative vote of the Board of County Commissioners consistent with Washington law, to acquire the property.

If this is acceptable to the Commissioners, I will prepare a Real Estate Purchase and Sale Agreement to present to you.

If you have any questions or concerns, please don't hesitate to contact me.

Very truly yours,

Jeff Slothower

JS:hh
cc: Client

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APPRAISAL REPORT OF

DUKE AND DUDE
INDUSTRIAL LAND
18XX HIGHWAY 97
ELLENSBURG, WASHINGTON 98926

As of:
February 3, 2018

Prepared for:

DUKE AND DUDE LLC
2950 KILLMORE ROAD
ELLENSBURG, WASHINGTON 98926

Prepared by:

Broadview Appraisal, Inc.
925 North 130th Street
Seattle, Washington 98133
Broadview Appraisal Job No. 18-011

BROADVIEW APPRAISAL, INC.
Real Estate Appraisers and Consultants

BROADVIEW APPRAISAL, INC.
Real Estate Appraisers and Consultants
925 North 130th Street
Seattle, WA 98133
(206) 362-0100
Fax (206) 362-0110

February 20, 2018

Mr. Stephen Hayden
Duke and Dude LLC
2950 Killmore Road
Ellensburg, Washington 98926

RE: Duke and Dude Industrial Land
18xx Highway 97
Ellensburg, Washington 98926

Broadview Appraisal Job No. 18-011

Dear Mr. Hayden:

At your request, I have prepared a narrative Appraisal Report to provide an opinion of the As Is Market Value of the fee simple estate in the subject property. The subject consists of one parcel of land that contains 54.95 acres and is zoned for light industrial uses. The property has historically been in open space.

The subject property includes water rights that are reportedly marketable independent of the associated real estate. These rights have not been valued in this appraisal and it is a hypothetical condition that they do not contribute value in conjunction with the subject property. The value in this appraisal is also subject to the extraordinary assumption that there are no significant impacts from wetland areas located on the subject property. This condition and assumption may affect the values concluded in this appraisal.

BROADVIEW APPRAISAL, INC.
Real Estate Appraisers and Consultants

The following Appraisal Report is subject to the enclosed assumptions and limiting conditions, and has been prepared in conformity with the Uniform Standards of Professional Appraisal Practice, specifically Standards Rule 2-2 (a), promulgated by the Appraisal Standards Board of the Appraisal Foundation; and the appraisal guidelines of Duke and Dude LLC, the client of this report.

Based on the discussions and analyses contained in this appraisal, the As Is Market Value as of the effective date of value on February 3, 2018 is:

THREE MILLION THREE HUNDRED THOUSAND DOLLARS

$3,300,000

Respectfully submitted,

John C. Bryan, MAI
Washington Certified General Appraiser
No. 1101826

TABLE OF CONTENTS

ADDENDA

EXECUTIVE SUMMARY

Property Identification	Duke and Dude Industrial Land 18xx Highway 97 Ellensburg, Washington 98926
Property Description	The subject consists of a single parcel of industrially-zoned land located at the western incorporated limits of the City of Ellensburg. The property is currently vacant and used for agricultural purposes.
Property Owner	Duke and Dude LLC
Property Interest Appraised	Fee simple estate
Date of Inspection	February 3, 2018
Site Size	54.95 acres, or 2,393,622 square feet
Zoning	I-L, Light Industrial, City of Ellensburg
Highest and Best Use	
As Vacant	Industrial development; subdivision
Exposure Time	Up to 3 years
VALUE INDICATIONS	
Sales Comparison Approach	**$3,350,000**
Development Analysis	**$3,160,000**
VALUE CONCLUSION	
As Is Market Value as of February 3, 2018	**$3,300,000**

ASSUMPTIONS AND LIMITING CONDITIONS

1. **REPORT:** This Appraisal Report is intended to comply with the reporting requirements set forth under the Uniform Standards of Professional Appraisal Practice. As such, a discussion of the data, reasoning, and analyses that were used in the appraisal process to develop the appraisers' opinion of value are included herein. The appraisers are not responsible for unauthorized use of this report.
2. **LIMIT OF LIABILITY:** The liability of Broadview Appraisal, Inc. and employees is limited to the client. Further, there is no accountability, obligation or liability to any third party. If this report is placed in the hands of anyone other than the client, the client shall make such party aware of all limiting conditions and assumptions of the assignment and related discussions. The appraisers are in no way to be responsible for any costs incurred to discover or correct any deficiencies of any type present in the property; physically, financially and/or legally. In the case of limited partnerships or syndication offerings or stock offerings in real estate, the client agrees that in case of a lawsuit (brought by lender, partner or part owner in any form of ownership, tenant, or any other party), any and all awards, settlements of any type in such suit, regardless of outcome, the client will hold appraiser completely harmless in any such action.
3. **DISTRIBUTION, USE OF REPORT:** Possession of this report or any copy thereof does not carry with it the right of publication, nor may it be used for other than its intended use.

   Neither all nor any part of this appraisal report shall be disseminated to the general public by the use of advertising media, public relations, news, sales or other media for public communication without the prior written consent of the appraisers.

   Use of this appraisal by any party other than the parties identified within this report, and for any other use or purpose than the stated intended use, is expressly prohibited. The appraisers assume no responsibility or liability for the use of this report, or any information contained herein, including the valuation conclusion, by any party not named as a user of this report.
4. **CONFIDENTIALITY:** This appraisal is to be used only in its entirety, and no part is to be used without the whole report. All conclusions and opinions concerning the analysis as set forth in the report were prepared by the appraisers whose signatures appear on the Appraisal Report unless indicated as "Review Appraiser." No change of any item in the report shall be made by anyone other than the appraisers and/or officer of the firm. The appraisers and firm shall have no responsibility if any such unauthorized change is made.
5. **TRADE SECRETS:** This appraisal was obtained from Broadview Appraisal, Inc. or related companies and/or its individuals or related independent contractors and consists of "trade secrets and commercial or financial information" which is privileged and confidential and exempted from disclosure under 5 USC 552 (b) (4). Notify the appraisers signing the report of any request to reproduce this appraisal in whole or in part.
6. **INFORMATION USED:** No responsibility is assumed for accuracy of information furnished by work of others, the client, his designee or public records. The comparable data relied upon in this report has been confirmed with one or more parties familiar with the transaction or from affidavit or other source thought reasonable; all are considered appropriate for inclusion to the best of our factual judgment and knowledge.
7. **COMPLETION OF CONTRACT FOR APPRAISAL SERVICES:** The contract for appraisal, consultation or analytical service are fulfilled and the total fee payable upon completion of the report. The appraisers or those assisting in the preparation of the report will not be asked or required to give testimony in court or hearing because of having made the

appraisal, in full or in part, nor engage in post appraisal consultation with the client or third parties except under separate and special arrangement and at an additional fee.

8. **EXHIBITS:** The sketches and maps in this report are included to assist the reader in visualizing the property and are not necessarily to scale. Various photos, if any, are included for the same purposes as of the date of the photos. Site plans are not surveys unless shown from separate surveyor.
9. **LEGAL, STRUCTURAL OR MECHANICAL HIDDEN COMPONENTS:** No responsibility is assumed for matters legal in character or nature, or matters of survey, or of any architectural, structural, mechanical, or engineering nature. No opinion is rendered as to the title, which is presumed to be good and merchantable. The property is appraised as if free and clear, unless otherwise stated in particular parts of the report. The legal description is assumed to be correct as used in this report as furnished by the client, his designee, or as derived by the appraisers.Please note that no opinion is provided regarding mechanical equipment or structural integrity or adequacy, nor soils and potential for settlement, drainage, and such (seek assistance from qualified architect and/or engineer) nor matters concerning liens, title status, and legal marketability.

   The appraisers have visually inspected the land and the improvements; however, it was not possible to personally observe conditions beneath the soil or hidden structural components. No representations are made herein with regard to the mechanical components unless specifically stated and considered in the report. If the appraisers have not been supplied with a structural inspection, survey or occupancy permit, no responsibility is assumed for any deficiencies discovered after they are obtained.

   No unknown conditions that would cause a loss of value are considered in the value conclusion. The appraisers do not warrant against conditions or occurrences of structural problems arising from unknown soil conditions. The appraisal is based on there being no hidden, unapparent, or apparent conditions of the site, subsoil, or structures that would render it more or less valuable. No responsibility is assumed for any such conditions, which may require engineering expertise. While the flood zone is identified in this report, the appraisers assume no responsibility for any consequences arising due to the need or the lack of need for flood hazard insurance.
10. **LEGALITY OF USE:** The appraisal is based on the premise that there is full compliance with all applicable federal, state and local environmental regulations and laws unless otherwise stated in the report; further that all applicable zoning, building, and use regulations and restrictions of all types have been complied with unless otherwise stated in the report; further, it is assumed that all required licenses, consents, permits, or other legislative or administrative authority, (local, state, federal and/or private entity or organization) have been or can be obtained or renewed for any use considered in the value estimate.
11. **COMPONENT VALUES:** The distribution of the total valuation in this report between land and improvements applies only under the existing program of utilization. The separate valuations for land and building must not be used in conjunction with any other appraisal and are invalid if so used.
12. **EXCLUSIONS:** Furnishings and equipment or personal property or business operations, except as specifically indicated and typically considered as a part of real estate, have been disregarded with only the real estate being considered in the value estimate unless otherwise stated. In some property types, business and real estate interests and values are combined.
13. **PROPOSED IMPROVEMENTS, CONDITIONED VALUE:** Improvements proposed, if any, on or off-site, as well as any repairs required are considered, for purposes of this

appraisal, to be completed in good and workmanlike manner according to information submitted and/or considered by the appraisers. In cases of proposed construction, the appraisal is subject to change upon inspection of property after construction is completed.

14. **VALUE CHANGE, DYNAMIC MARKET INFLUENCES:** The estimated market value, which is defined in the report, is subject to market changes over time; value is highly related to exposure, time, promotional effort, terms, motivation, and conditions surrounding the offering. The value conclusion considers the productivity and relative physical and economic condition within the marketplace.
15. **MANAGEMENT OF THE PROPERTY:** It is assumed that the property which is the subject of this report will be under prudent and competent ownership and management; neither inefficient nor super-efficient.
16. **FEE:** The fee for this appraisal or study is for the service rendered and not for the time spent on the physical report or the physical report itself. Neither the employment to make the appraisal nor the compensation is contingent upon the amount of the valuation reported.
17. **TOXIC AND HAZARDOUS MATERIALS:** The appraisers are not qualified to detect hazardous waste and/or toxic materials. Comments herein regarding the possibility such substances are not confirmation of the presence of hazardous waste and/or toxic materials. Such determination would require investigation by a qualified expert in the field of environmental assessment. The presence of substances such as asbestos, urea-formaldehyde foam insulation, or other potentially hazardous materials may affect the value of the property. The appraisers' value estimate is predicated on the assumption that there is no such material on or in the property that would cause a loss in value unless otherwise stated in this report. No responsibility is assumed for any environmental conditions, or for any expertise or engineering knowledge required to discover them. The appraiser descriptions and resulting comments are the result of the routine observations made during the appraisal process.
18. **CHANGES, MODIFICATIONS:** The appraisers and/or officers of Broadview Appraisal, Inc., reserve the right to alter statements, analysis, conclusion or any value conclusion in the appraisal if there becomes known to us facts pertinent to the appraisal process which were unknown to us when the report was finished. Any such alterations will be compliant with all applicable practice standards and the Client will be provided with the updated product.
19. **ADA DISCLAIMER:** The Americans with Disabilities Act (ADA) became effective January 26, 1992. We have not made a specific compliance survey and analysis of this property to determine whether or not it is in conformity with the various detailed requirements of the ADA. It is possible that a compliance survey of the property together with a detailed analysis of the requirements of the ADA could reveal that the property is not in compliance with one or more of the requirements of the act, which could negatively affect the value of the property.
20. **FIRREA/USPAP:** The Financial Institutions Reform Recovery and Enforcement Act of 1989 (FIRREA), Title XI, was implemented to protect federal financial and public policy interests in real estate related transactions requiring the services of an appraiser. Regulatory agencies (FDIC, FRB, NCUA, OCC, OTS, and RTC) have issued virtually identical regulations to provide uniformity in requirements for appraisals. It is our intention that the following report is in compliance with the Uniform Standards of Professional Appraisal Practice as promulgated by the Appraisal Standards Board of the Appraisal Foundation and the regulatory agency, if applicable.

CERTIFICATION

I, John C. Bryan, MAI, certify that, to the best of my knowledge and belief:

The statements of fact contained in this Appraisal Report are true and correct.

The appraisal assignment was not based on a requested minimum valuation, a specific valuation or the approval of a loan.

The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are my personal, unbiased, professional analyses, opinions and conclusions.

I have no present or prospective interest in, or bias with respect to, the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved.

I have performed no services, as an appraiser or in any other capacity, regarding the property that is the subject of this appraisal, within the three-year period immediately preceding acceptance of this assignment.

My engagement in this assignment was not contingent upon developing or reporting predetermined results.

The compensation is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value estimate, the attainment of a stipulated result, or the occurrence of a subsequent event.

The reported analyses, opinions and conclusions were developed, and this report has been prepared, in conformity with the requirements of the Code of Professional Ethics & Standards of Professional Appraisal Practice of the Appraisal Institute. This appraisal also complies with the Uniform Standards of Professional Appraisal Practice.

I have personally inspected the subject property and I am competent and qualified to perform this appraisal assignment.

As of the date of this report, I have completed the requirements of the continuing education program of the State of Washington, and I am currently certified until July 26, 2018 as a general classification real estate appraiser.

As of the date of this report, I have completed the continuing education program for Designated Members of the Appraisal Institute

I do not authorize the out-of-context quoting from or partial reprinting of this Appraisal Report.

The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.

No one provided significant real property appraisal assistance to the person signing this certification.

February 20, 2018
Date

John C. Bryan, MAI
Washington Certified General Appraiser
No. 1101826

ASSIGNMENT CONDITIONS

Client:	Duke and Dude LLC
Intended User:	Duke and Dude LLC and Stanley V. Piha of Stanley Real Estate, Inc.
Intended Use:	To assist the Client in establishing an asking price.
Purpose of the Appraisal:	To develop an opinion of the following property interest and value as of the effective date of value.
Property Rights Appraised:	Fee simple estate
Date of Inspection:	February 3, 2018
Value Provided:	**Effective Date:**
As Is Market Value	February 3, 2018

EXTRAORDINARY ASSUMPTIONS

The City of Ellensburg GIS indicates wetland areas on the southwestern portion of the subject property. A wetland reconnaissance would need to be performed in order to determine the status and extent of these wetlands and what impediments, if any, these might pose to the development potential of the property. There have been no wetland studies performed, to the best of the appraiser's knowledge, and no discounts are applied for these areas because, based on the soil and vegetative patterns shown on aerial photographs, it is possible that they would not be delineated as wetlands. If information contrary to this assumption becomes available, I reserve the right to amend my value conclusion.

The development analysis has been performed with rudimentary estimates for the potential costs to develop an industrial plat on the subject property. It is an extraordinary assumption of this appraisal that these costs are reasonable.

These assumptions may affect the results of this appraisal.

HYPOTHETICAL CONDITIONS

The subject property includes water rights that are reportedly marketable independent of the associated real estate. These rights have not been valued in this appraisal and it is a hypothetical condition that they do not contribute value in conjunction with the subject property.

This condition may affect the results of this appraisal.

UNAVAILABLE INFORMATION

The following information was not available for this assignment and could include information that would affect the conclusions within this report: title report, environmental assessment, wetlands delineation and soils report. This would be helpful information but is not believed to have affected the analyses and conclusions contained in this report. If this information becomes available at a later date and contains information that would affect the assignment results, I reserve the right to amend my analyses and conclusions. The property, as I understand it for purposes of this appraisal, is as described herein and as shown on the plat maps, aerials and site plans contained in this appraisal.

APPRAISER COMPETENCY

I have appraised industrial land and improved industrial properties in the Kittitas and Yakima County markets. I am competent and qualified to perform this appraisal.

SCOPE OF WORK

The property contact for this assignment was Mr. Stephen Hayden, the owner of the subject property.

Date of inspection: February 3, 2018

Extent of inspection: The property was inspected from the Highway 97 road frontage at the southwest corner and from Old Highway 10. The interior of the property was not inspected.

Information about the subject property, neighborhood and market area was compiled using the following sources:

- Kittitas County Assessor and Treasurer records
- Kittitas County information services
- City of Ellensburg information services
- Google Earth
- ESRI Demographics

The following comparable sales data sources were consulted for this appraisal:

- Kittitas County Assessor records
- Northwest Multiple Listing Service and Realist

- Costar Comparables
- Broadview Appraisal, Inc. internal files

The sales comparison approach and a development approach are developed in this appraisal. These two approaches incorporate elements of all three approaches to value and are sufficient to develop a reliable indication of value for the subject property.

Present the results in this narrative report. John C. Bryan, MAI undertook the research and developed the opinions expressed in this report.

DEFINITIONS

Market Value

Market Value is defined as the most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition are the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

1. Buyer and seller are typically motivated;
2. Both parties are well informed or well advised, and acting in what they consider their own best interest;
3. A reasonable time is allowed for exposure in the open market;
4. Payment is made in terms of cash in United States dollars or in terms of financial arrangements comparable thereto; and
5. The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

Source: OCC: 12 CFR part 34, Subpart C; Section 34.42(g)

The following definitions, unless otherwise noted, are all from The Dictionary of Real Estate Appraisal, 6th Edition (Chicago: Appraisal Institute, 2015).

As Is Market Value

The estimate of the market value of real property in its current physical condition, use, and zoning as of the appraisal date. (Proposed Interagency Appraisal and Evaluation Guidelines, OCC-4810-33-P 20%)

Extraordinary Assumption

An assumption, directly related to a specific assignment, which, if found to be false, could alter the appraiser's opinions or conclusions. Extraordinary assumptions presume

as fact otherwise uncertain information about physical, legal, or economic characteristics of the subject property; or about conditions external to the property such as market conditions or trends; or about the integrity of data used in an analysis.

Hypothetical Condition
That which is contrary to what exists but is supposed for the purpose of analysis. Hypothetical conditions assume conditions contrary to known facts about physical, legal, or economic characteristics of the subject property; or about conditions external to the property, such as market conditions or trends; or about the integrity of data used in an analysis.

Exposure Time

The estimated length of time the property interest being appraised would have been offered on the market prior to the hypothetical consummation of a sale at market value on the effective date of the appraisal; a retrospective estimate based on an analysis of past events assuming a competitive and open market.

Marketing Time
An opinion of the amount of time it might take to sell a real or personal property interest at the concluded market value level during the period immediately after the effective date of an appraisal. Marketing time differs from exposure time, which is always presumed to precede the effective date of an appraisal.

Fee Simple Estate
Absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power, and escheat.

APPRAISAL REPORT

Owner:	Duke and Dude LLC
Governor:	Stephen M. Hayden
Source:	Kittitas County Assessor records and Washington State Secretary of State records
Property Contact:	Mr. Stephen Hayden - (509) 929-1931
Relation to Property	Owner

PROPERTY LOCATION

Street Address:	18xx Highway 97 Ellensburg, Washington 98926
County:	Kittitas
Census Tract Number:	9755

The immediate area consists of predominantly vacant land tracts with some light industrial uses located to the north and highway interchange type uses located to the southeast. There is also a working gravel pit located to the west of the subject. The property is located on the east side of Highway 97, approximately 0.3 miles to the south of the intersection of Highway 97 and Old Highway 10.

PROPERTY DESCRIPTION AND PRESENT USE

The subject consists of a single tax parcel that contains 54.95 acres of industrially zoned land. The site is irregularly shaped with predominantly level topography that is slightly below the grade of the frontage street. The property has a long frontage along a primary highway through the subject's market area. Access is rated good with an average level of exposure. There is a linkage point with the regional transportation network located less than 1 mile from the subject and the linkage is rated good.

The site is zoned I-L, Light Industrial, by the City of Ellensburg. The purpose of this zone is to accommodate certain industrial structures and uses having physical and operational characteristics which might adversely affect the economic welfare of adjoining residential and commercial uses.

The property is currently in open space. The owner, who is also the Client for this appraisal, reports that he has been approached by Kittitas County to potentially purchase the property as the location for a proposed waste transfer station.

PROPERTY HISTORY

The property was purchased by the current owner in 2002 and appears to have been kept in open space since.

LEGAL DESCRIPTION

There was no title report provided for this assignment. The property is identified on Kittitas County Assessor's records by parcel number 611033. A copy of these records is included in the Addenda and contains an abbreviated legal description of the subject property. A plat map is also included in the Addenda and assists in further identifying the subject property.

SUBJECT PHOTOGRAPHS

Looking Northeast over the Subject Property from Southwest Corner of Property

Looking South over Subject from Railroad Right of Way on North Side of the Subject Property

SUBJECT PHOTOGRAPHS

Looking North along Western Property Line from Southwestern Corner of Subject Property

Looking East along Southern Property Line from Southwestern Corner of Subject Property

SUBJECT PHOTOGRAPHS

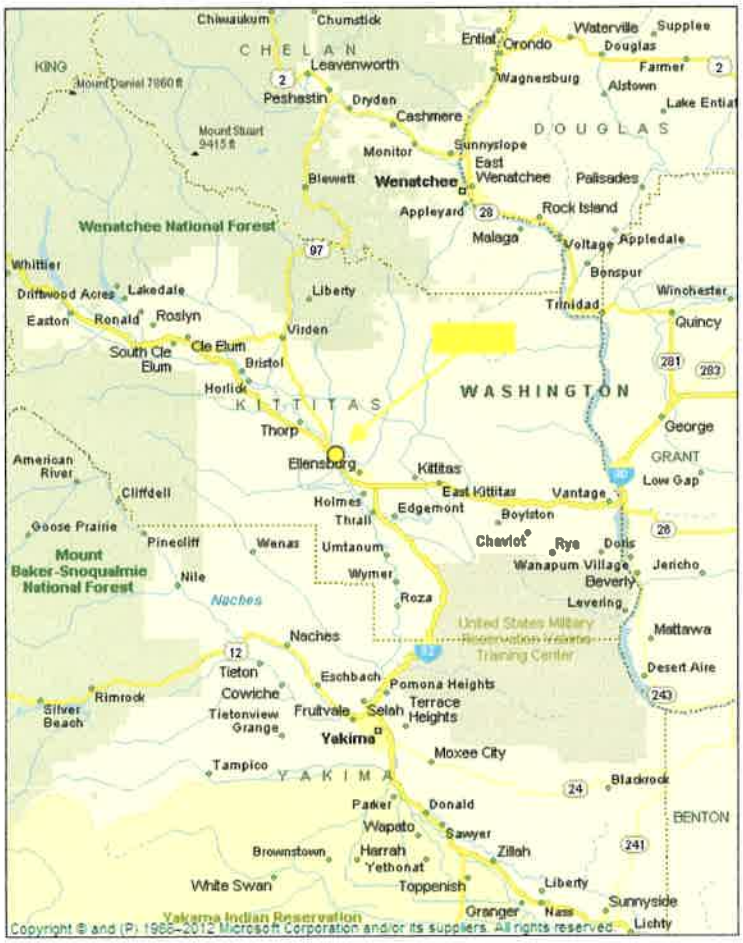
Looking North on Highway 97, subject at right

Looking Southeast on Highway 97, subject at left

SUBJECT AERIAL PHOTOGRAPH

Source: Google Earth. Property lines are approximate

REGIONAL MAP



REGIONAL OVERVIEW

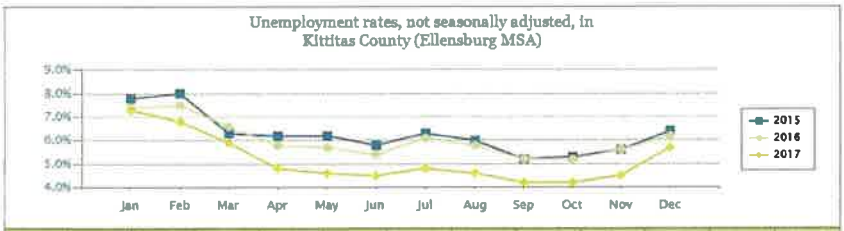
Kittitas County is located near the geographic center of Washington State and covers nearly 2,308 square miles, approximately 3.5 percent of the total land area of Washington State. Kittitas County is geographically Washington State's eighth largest county and is bounded by Chelan County to the north, Yakima County to the south, Grant County to the east, and King County and the Cascade Mountain Range to the west.

The northwest portion of the county is heavily forested wilderness, part of which is Wenatchee National Forest. The Columbia River runs along the eastern border of the county and three large lakes located in the northwest portion of the county (Lakes Keechelus, Kachess and Cle Elum) are the source of the Yakima River. Large portions of the county are controlled by Federal and State governments. These areas include portions of the Wenatchee National Forest, Snoqualmie National Forest, Coluckum State Wildlife Area, Lt. Murry State Wildlife Area, Sckoake State Wildlife and Recreation Area and the Yakima Firing Center.

Interstate 90 is the major regional freeway through the county providing east/west transportation access. Other prominent highways include Interstate 82, which runs south from Ellensburg through Yakima, and U.S. 97, which runs north to the Wenatchee Area. Burlington Northern and Washington Central Railroad operate a rail line through the central area of the county. These tracks reportedly run up to 12 trains daily.

The population of Kittitas County was 33,362 in 2000 and increased to 40,915 for Census 2010, indicating an average annual increase of 2.3 percent. The estimated population in 2017 was 44,730. Of the county's total population, about 54 percent, or 24,345 people, live in incorporated areas. Ellensburg, the largest city and county seat, accounts for the large majority of this population, with a population of 19,550. Cle Elum is the second largest city, with a 2017 population of 1,875.

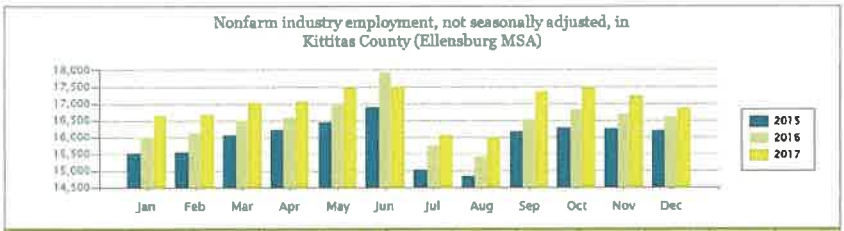
Central Washington University is also located in Ellensburg. Enrollment at CWU is approximately 10,750 presently. This is a four-year university that offers 150 majors and competes nationally in a number of sporting categories.



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	7.8%	8.0%	6.3%	6.2%	6.2%	5.9%	6.3%	6.0%	5.2%	5.3%	5.6%	6.4%
2016	7.4%	7.5%	6.6%	5.8%	5.7%	5.4%	6.1%	5.8%	5.2%	5.2%	5.6%	6.2%
2017	7.3%	6.8%	5.9%	4.8%	4.6%	4.5%	4.8%	4.6%	4.2%	4.2%	4.5%	5.7%

Source: Washington State Employment Security Department, Labor Market and Performance Analysis

As of December 2017 the civilian labor force in Kittitas County was estimated at 16,860, up 1.6 percent from December 2016. The unemployment rate for December 2017 was 5.7 percent, down 0.5 percent from the prior year.



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	15,330	15,550	16,040	16,210	16,420	16,870	15,030	14,810	16,160	16,280	16,240	16,190
2016	15,980	16,140	16,490	16,560	16,930	17,920	15,750	15,400	16,530	16,820	16,690	16,590
2017	16,620	16,870	17,010	17,040	17,470	17,490	16,040	15,960	17,340	17,470	17,220	16,860

Source: Washington State Employment Security Department, Labor Market and Performance Analysis

The median household income in Kittitas County is estimated by the Office of Financial Management at $49,275. This is significantly below the statewide median of $65,500 and places Kittitas County in the lower half of counties in the state.

The top five employers in the county include Central Washington University, Kittitas Valley Community Hospital, Kittitas County, the Ellensburg School District, and Anderson Hay and Grain. Government is the largest employer in the county, with state and local government together accounting for 39.7 percent of the work force. Trade, Transportation and Utilities and Leisure and Hospitality are the two largest industry sectors in the county, each accounting for about 15.8 percent of the labor force.

The production of livestock, mainly cattle and sheep, is another major industry in Kittitas County. Most of the ranches are small and independently owned but together represent

27.5 percent of the value of all agricultural products sold in the county, making Kittitas the 9th largest producing county in the state. Hay is the foremost agricultural product and represents over 50 percent of the value of the agricultural products produced in the county. The hay produced in Kittitas County is very high quality and attracts buyers from around the world.

The major tourist attraction in the county is the ski area in the Snoqualmie Pass Summit area and the Suncadia Resort outside of Cle Elum. Four state parks and recreation areas exist in the county.

The housing market in Kittitas County has been strengthening over the past year, with 2017 prices up 11 percent from 2016, to a median price of $277,000. Marketing times decreased as well from 39 days on average in 2016 to 24 days in 2017. There were 918 sales in 2017, up 3.3 percent from 2016.

Looking forward, employment growth is forecast to pace population growth in the retail, services and health care sectors. The large base of government employment and the presence of Central Washington University both offer a relatively consistent employment base and further growth is forecast for the university. Economic growth should bolster the tourism sector as well, owing to the location proximate to the Cascade Mountains and rising interest in agri-tourism. A stable market for the agricultural commodities produced in this market should in turn act as another reliable force in the local economy. Overall, stable growth is forecast.

NEIGHBORHOOD DESCRIPTION

Neighborhood Boundaries		Adjacent Properties	
North	Old Highway 10	**North**	Contractor's yard and railroad right of way then Old Highway 10
South	Interstate 90 / W Dolarway Road	**South**	Undeveloped acreage
East	Old Highway 10 / W University Way	**East**	Undeveloped acreage
West	Highway 97	**West**	Highway 97 then undeveloped acreage and mineral lands

LINKAGES

Highway 97

This is a regional highway that runs from the Washington-Oregon border on the Yakima Indian Reservation on the south to the U.S.-Canada border at Oroville on the north. The highway aligns with Interstate 82 near Toppenish and Zillah in Yakima County, to Ellensburg, before continuing north into Chelan and Okanogan Counties. In the vicinity of the subject, this highway carries approximately 3,500 vehicles daily.

Interstate 90 This is part of the primary regional transportation system, connecting with Interstate 82 and Yakima County on the east side of Ellensburg. Interstate 90 continues easterly to Spokane and continuing across the United States. In the vicinity of Ellensburg, Interstate 90 carries approximately 25,000 vehicles daily but it is noted that these counts are over 10 years old and no more recent data is available.

DEMOGRAPHICS

	1-mile	3-mile	5-mile	Ellensburg	Kittitas Co.
2017 Population	648	17,990	26,667	19,476	44,439
2022 Population	717	19,077	28,290	20,560	47,447
2017-2022 Annual Change Rate	2.04%	1.18%	1.19%	1.09%	1.32%
Average Household Size	2.91	2.34	2.32	2.2	2.34
2017 Median Household Income	$55,041	$30,625	$39,035	$32,327	$47,942
2022 Median Household Income	$61,456	$34,334	$46,609	$36,703	$57,029
2017-2022 Annual Change Rate	2.23%	2.31%	3.61%	2.57%	3.53%
Renter-Occupied Housing Units	34%	63%	54%	61%	33%

Source: ESRI Demographics

The subject's immediate neighborhood is predominantly rural with commercial uses located at the interchange of University Way and Interstate 90. Residential uses are generally rural and agricultural and this results in a low population density with relatively large household sizes and a low percentage of renter-occupied units. The demographics for the City of Ellensburg reflect a more urban area with a large demographic of students and this results in a high percentage of renter-occupied units, smaller household sizes and lower median household incomes. Future projections for the immediate area are for higher than typical population growth, attributable to the small overall population, and gradual improvement in the household incomes. Within Ellensburg, the population is forecast to grow at a more moderate rate and with larger increases in household incomes, the income increase predominantly attributable to the lower median household incomes in this area compared to the outlying areas that include a more affluent population and a much larger percentage of detached single family homes.

NEIGHBORHOOD CHARACTER

The property is located on the east side of Highway 97, approximately 0.3 miles to the south of the intersection of Highway 97 and Old Highway 10. The immediate area is predominantly rural and consists vacant land tracts and agricultural uses with a light industrial use located to the immediate north and traffic-oriented highway interchange

type uses located to the southeast, closer to the interchange of Interstate 90, University Way, Dolarway Road and Highway 97. There is also a working gravel pit located to the west of the subject, opposite Highway 97, and a railroad line running along the north side of the property.

The uses closer to the interchange include a truck stop/fueling facility, a truck wash, a truck service facility, a hotel, an RV dealership and a couple of restaurants. East of the intersection of Dolarway Road and University Way are multitenant office and retail uses as well as number of light industrial uses.

Development in this area was commencing when the recession of 2007-09 occurred. This caused a protracted stagnant period with few sales and almost no new construction. Over the past couple of years, there has been an increase in the pace of activity, with a new truck service facility located on the south side of Highway 97, a short distance to the southeast of the subject. A new self-storage facility is proposed farther to the east on four contiguous parcels of land located on a secondary street off of Dolarway Road. A 25 acre tract of land immediately to the east of the subject was purchased in late 2017 by an abutting owner but the plans for this site are unknown.

SUMMARY

The neighborhood is on the fringe of the urban areas of Ellensburg in an area of sporadic development that is predominantly oriented toward Interstate traffic. With the improvement in the overall economy, there is increasing interest in development in this area, as evidenced by development in recent years and more recent speculative purchases. The future for this area is forecast to be stable to steadily improving apace with the overall economy.

Agricultural Tracts
Agricultural Tracts
10
W Bende Rd
E Bende Rd
Peace Creek Rd
Old Highway 10
Airport Rd
Thorp Hwy S
W University Way
W Dolarway Rd
97
Rural Residential
Agricultural Tracts
Downtown Ellensburg
© 2018 Google
Google

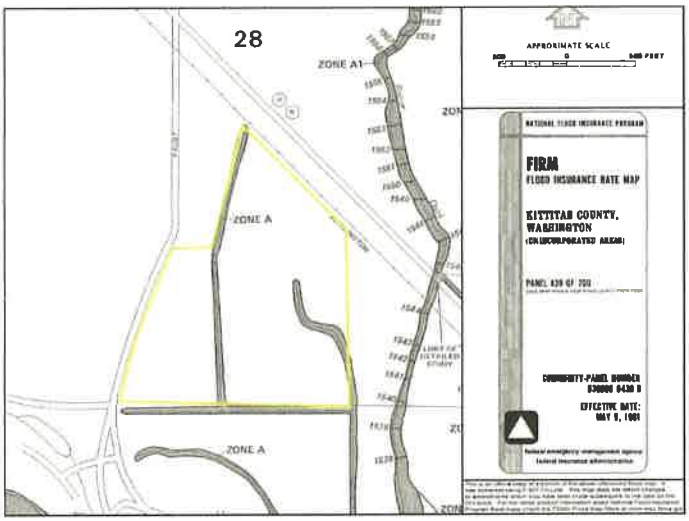
SITE DESCRIPTION

Photographs of the property are located at the front of this report and a plat map is located in the Addenda. The following descriptions are based on my inspection on February 3, 2018 and a review of the surrounding neighborhood, Kittitas County Assessor Records, and Kittitas County and City of Ellensburg information services.

Property Address:	18xx Highway 97 Ellensburg, Washington 98926.
Census Tract:	Kittitas County Census Tract No. 9755.
Location:	The property is located on the east side of Highway 97, approximately 0.3 miles to the south of the intersection of Highway 97 and Old Highway 10.
Neighborhood Character:	The immediate area consists of predominantly vacant land tracts with some light industrial uses located to the north and highway interchange type uses located to the southeast. There is also a working gravel pit located to the west of the subject.
Block Orientation:	Interior.
Frontage Street:	
Highway 97:	This is a primary highway through Central Washington with one lane in either direction and wide shoulders on either side. Farther to the southeast, there are concrete curbs, gutters and sidewalks and it is very likely that development of the subject would require the construction of frontage improvements consistent with those in place along Highway 97 to the southeast. Traffic counts along this highway were approximately 2,900 daily, as of 2016.
Site Area:	54.95 acres, or 2,393,622 square feet. There are areas that appear to be drainage ditches that are shown as being within the flood zone. These areas do not encumber a significant portion of the site.
Site Dimensions:	
Frontage:	1,392 +/- square feet
Depth:	Approximately 1,225 to 1,665 square feet.
Width:	Approximately 1,325 to 2,125 square feet.
Shape:	Irregular

Topography:	Mostly level
Utilities:	Electrical service is available to the property. The remaining public utilities are located in the right of way for Highway 97, approximately 1,300 linear feet to the southeast of the subject property. Based on conversations with the City of Ellensburg, the subject property would most likely be responsible for frontage improvements, to include concrete curbs, gutters and sidewalks, as well as sanitary sewer and public water. It is possible that a local improvement district (LID) could be formed to finance the cost of these improvements over a longer timeline (estimated at 10 to 15 years) but there are no current plans in the works to establish this type of district.
Access:	Average; the property has a long frontage along Highway 97 with numerous potential access configurations possible.
Exposure:	Average; average daily traffic counts are estimated by the Washington State Department of Transportation at between 3,700 and 3,900.
Linkage:	Good; the nearest connection with the regional transportation network is slightly less than 1 mile to the southeast.
Railroad Frontage:	There is a railroad line that runs along the northern boundary of the site.
Views / Amenities:	There are good mountain and territorial views available.

FLOOD MAP



Flood Zone Information:

FEMA Panel No.:	530095 0439B
Date:	May 5, 1981
Flood Zone:	A
Definition:	These are areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply. These areas are in a few narrow areas on the site that appear to be drainage ditches. The large majority of the site is in Flood Zone C, an area that is outside of the 100 and 500 year flood hazard areas.

SOILS MAP

Soils Overview:

Nack-Opnish Complex:	These soils are a mix of Nack and Opnish soils and are about 31.5 percent of the site. The Nack soils are somewhat poorly drained with low available water storage. The Opnish soils are moderately well drained with high available water storage. The water table is typically within 15 to 40 inches.
Cleman very fine sandy loam:	These soils comprise about 27 percent of the site. These are well-drained soils with moderate available water storage. The water table is more than 80 inches deep.

Nanum ashy loam: These soils comprise about 25.5 percent of the site. These are somewhat poorly drained soils with moderate available water storage. The water table is typically between 21 and 28 inches deep.

Zillah silt loam: These soils comprise about 10 percent of the site. These are poorly drained soils with high available water storage. The water table is typically 5 to 7 inches deep.

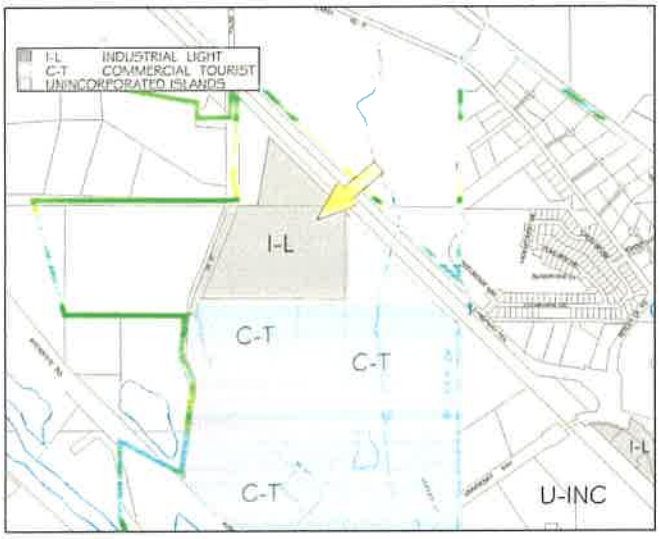
Soil Conditions: No soils data was provided for this assignment. Soils are assumed adequate for supporting light to heavy industrial scale improvements.

CRITICAL AREAS MAP

Environmental Concerns: There was no environmental data provided for this assignment. There are approximately 3.25 acres shown on the City of Ellensburg GIS as encumbered by wetlands. There was no evidence of ponding or wetlands in these areas at the time of inspection nor is there any evidence on aerial photographs to indicate that these are likely wetland areas. There have been no wetland studies performed on this property to the best of the appraiser's knowledge and it is an extraordinary assumption of this appraisal that these areas would not cause any impediments to the overall developability of the site.

The appraiser is not an expert with regard to determining environmental factors as they affect the subject property. If questions arise, further research is recommended.

ZONING MAP



Zoning:

Designation: I-L, Light Industrial

Jurisdiction:	City of Ellensburg
Purpose:	To accommodate certain industrial structures and uses having physical and operational characteristics which might adversely affect the economic welfare of adjoining residential and commercial uses.
Allowed Uses:	Home occupations; fruit stands; heavy retail; heavy service; nurseries and greenhouses (ancillary to a retail use); restaurants and bars; small scale retail; regional retail; day care facilities; general services; kennels; professional and business offices; mini-warehouses; light industrial uses; parks and playgrounds; police, public agencies and utility facilities.
Minimum Lot Size:	None
Height Limit:	35 feet
Setbacks:	
Front:	10 feet
Rear:	None
Side Yard:	None
Parking Requirements:	Varies depending on use.
Title Report:	There was no title report provided for this assignment.
Easements and Encroachments:	There were no obvious easements or encroachments noted during the inspection but the entire interior of the site was inspected. If there are questions, a title report and survey are recommended.

ASSESSMENT AND TAX DATA

Parcel No.	Site Size (SF)	Site Size (acres)	Assessed Land	Assessed Improvements	Assessed Total	Current Use Land	Current Use Improvements	Current Use Total	Taxes
611033	2,393,622	54.95	$1,084,710	-	$1,084,710	$58,800	-	$58,800	$796.66

The subject's millage rate, based on the assessed value, is $0.734445 per $1,000 of assessed value. Based on the current use, the millage rate is $13.548639 per $1,000 of current use value. The captioned taxes include $4.00 in special assessments for the Noxious Weed District. Without these special assessments, the subject's millage rate is $0.730896 per $1,000 of assessed value and, based on the current use, the millage rate is $13.483163 per $1,000 of assessed value. Taxes were current as of the effective date of value. The total taxes for 2018 are $14,625.31 but $13,820.50 of these taxes are exempt

due to the open space categorization of the property. Any change in use of the property would require payment of back taxes and interest in order to convert the property toward a non-agricultural use. Based on the historical assessments and millage rates, the estimated cost to remove the subject property from the open space categorization would be approximately $135,000. It is possible that this cost could be staggered by developing the subject in phases. This would also reduce the associated holding costs if the property were to be subdivided by sheltering the remainder of the property from increased assessments associated with the change in use.

SITE SUMMARY

The site is large and irregularly shaped with frontage along a primary highway. The property is at the western limits of incorporated City of Ellensburg and at the west end of an area that is zoned to accommodate tourist commercial type uses. The site is zoned for light industrial uses but this zoning also allows a number of commercial uses, including heavy retail, heavy services and office uses. There are a few areas on the property that are located in the flood zone and it's unclear if these are sensitive areas that would constrain the development potential of the overall property; it is an extraordinary assumption of this appraisal that these areas would not pose any significant impediments to the overall utility of the site. Overall this site merits an average rating.

MARKET ANALYSIS

Evaluating the market position of a property requires assessing the characteristics of the property, identifying the buyer profile and market of users for a property. A market area is delineated and, depending on the property type, this could be a small well-defined local area or a property that could compete regionally, nationally or even internationally in the case of a highly specialized property with a narrow profile of potential buyers. Supply and demand trends are analyzed and the current market conditions are evaluated alongside the specific attributes of the property in order to determine the competitive position of the property.

PROPERTY ANALYSIS

The property consists of approximately 55 acres of industrially-zoned land at the western municipal limits of the City of Ellensburg. This property is larger than would typically be developed for use by a single end user and would most likely be developed into individual smaller lots.

The property has a long frontage along a U.S. highway and is also proximate to an interchange with Interstate 90. Along the north end of the property is a working BNSF rail line that reportedly carries 12 trains a day. This feature could be very attractive to a narrow segment of potential users.

MARKET DELINEATION

The subject property would compete among other light industrial sites located within or on the fringes of the Ellensburg market. The property would also compete regionally due to the location proximate to an interchange with Interstate 90. Buyers for the property could come from the Kittitas County market area or potentially nationally for a buyer seeking a large contiguous tract with good linkage to the regional markets.

BUYER PROFILE

The most likely buyer profile for the property would either be an investor looking to subdivide the property into smaller units for individual sale or possibly a large owner-user seeking to develop their own facility, most likely a distribution type of use.

SUPPLY AND DEMAND ANALYSIS

At present there is a greater supply of available land in the vicinity of the subject than there is demand. Prices have been stagnant for a number of years but a few properties have increased their asking prices in recent years, anticipating an overall improvement in the market for development land. There has been an uptick in sales activity nearby, with

a new building developed for truck services on a 5-acre tract that sold in 2015 and two recent sales of tracts to the immediate south of the subject.

MARKET CONDITIONS

Market conditions are currently improving. After a protracted slow period, recent sales activity suggests that the market for land is improving along with the overall economy. Future improvement is forecast, apace with the overall economy.

SUBJECT MARKET POSITION

There are many properties on the market that the subject would compete against. The large size of the property narrows the potential market segment considerably and this supports a potential subdivision of the property. Alternately, the large size could appeal to a narrow subset of users. On balance, the property is concluded to have an average to below average market position in its current configuration.

EXPOSURE AND MARKETING TIME

The large size of the property would limit the market for the property and would most likely protract the marketing period. Looking backward, the concluded exposure time would be up to 3 years. Looking forward, a similar marketing period would be expected. No discounts are applied for a potentially protracted marketing period.

HIGHEST AND BEST USE

In appraisal practice, the concept of highest and best use represents the premise upon which value is based. "Highest and Best Use" is defined as "the reasonably probable use of property that results in the highest value. The four criteria that the highest and best use must meet are legal permissibility, physical possibility, financial feasibility, and maximum productivity." (The Dictionary of Real Estate Appraisal, 6th ed.) Alternatively, it is that use from among reasonable, probable and legal alternatives, found to be physically feasible, and which results in the highest land value. The highest and best use may be different from the existing use.

The analysis of the highest and best use is designed to simulate the actions and thinking of prudent and knowledgeable purchasers, and pursued the following logical sequence.

1. Legally Permissible Use: What uses are permitted by zoning, deed or other similar restrictions?

2. Physically Possible Use: To what use is it physically possible to put the site in question?

3. Financially Feasible Use: What possible and permissible uses will produce the required net rate of return on the investment and provide the requisite return on the land?

4. Maximally Productive Use: Among the financially feasible uses, what use produces the highest residual land value consistent with the rate of return required by the market for that use, or, what use results in the highest value?

AS VACANT

Legally Permissible

The property is zoned primarily for the accommodation of light industrial uses as well as heavy services and heavy retail, which are both uses that more closely parallel light industrial uses than typical commercial uses. Office uses and restaurants are also permitted.

Physically Possible

The site is level and slightly below the grade of the frontage street with access onto a U.S. Highway and linkage to Interstate 90 within 1 mile of the property. The site is larger than there would likely be demand for from a single user and would most likely be more marketable were the property to be subdivided. The area where the property is located is generally rural with some industrial uses in the vicinity.

Based on the legal and physical considerations, the most likely use for the subject property would be industrial development, most likely in conjunction with the subdivision of the property.

Financially Feasible

Financial feasibility is typically inferred from the pricing of comparable properties in the market. General development trends can also be instructive as to the likely uses that a property could be put toward. In the immediate vicinity, development patterns are inconsistent and include agricultural, light industrial and mineral extraction. A short distance to the southeast of the property, there are a number of commercial and light industrial uses constructed on lots closer to the interchange with Interstate 90.

Commercial uses would not be well-suited to the subject's location due to the lack of compatible development on the abutting parcels as well as the distance from the main locus of development around the interchange. This leaves light industrial type uses as the most likely financially feasible use for the site.

Maximum Productivity

There are no other obvious uses for the property aside from industrial development in conjunction with the likely subdivision of the property. This is the concluded highest and best use for the subject property.

SALES COMPARISON APPROACH

This approach is based upon the principle of substitution, that is, the value of the property tends to coincide with the actions of informed buyers and sellers in the market for comparable and similar properties. Following the principle of substitution, an investor should not be expected under normal circumstances to purchase a property for a higher price than they could purchase an alternative property of equal utility. This approach analyzes sales of competing properties to provide an indication of market value.

The most likely unit of comparison is the metric typically used by buyers that yields the most logical analysis based on the characteristics of a given property type, and the most common unit of comparison for properties like the subject is the price per square foot or price per acre of land area. Due to the large size of the subject property and the very narrow market for parcels of this size, the property has also been analyzed using a development approach that models the property as though parceled into ten 5-acre tracts and sold individually.

The Ellensburg market was researched for sales of land with similar development potential as the subject property. This research found only one sale of a large tract of land similar to the subject. Therefore the search was broadened to include Yakima, Chelan, Douglas and Benton Counties. This research found an adequate number of sales that transacted over the past 2.5 years to develop a reasonable indication for the value of the subject property.

The comparables are analyzed for property rights conveyed, financing terms, conditions of sale and market conditions, as well as location and physical characteristics, to provide an indication of value for the subject property. A summary table of the sales, a location map and plat maps are provided on the following pages.

COMPARABLE LAND SALES SUMMARY TABLE

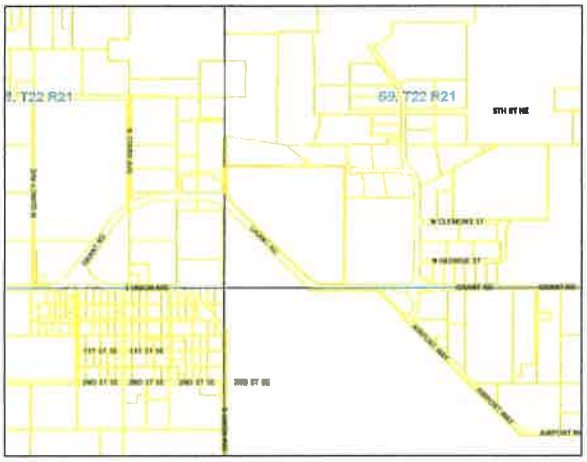
Duke and Dude Industrial Land - 18xx Highway 97, Ellensburg, Washington

Comp No.	SUBJECT	1	2	3	4	5
Property Identification	18xx Highway 97 Ellensburg, WA Kittitas County Parcel No. 611033	17xx Highway 97 Ellensburg, WA Kittitas County Parcel No. 17337	3555 Grant Road East East Wenatchee, WA Douglas County Parcel No. 222109-30003	27xx S 16th Avenue Union Gap, WA Yakima County Parcel No. 181202-42421	700 Wine Country Road Prosser, WA Benton County Parcel Nos. 221036-34417, -34418, -34419 (subdivided since)	7800 Postma Road Moxee, WA Yakima County Parcel No. 191202-11008
TRANSACTIONAL DETAILS						
Date of Sale	2/ 3/ 2018	11/ 27/ 2017	7/ 17/ 2017	3/ 21/ 2017	2/ 12/ 2016	6/ 4/ 2015
Sale Price	N/ Ap.	$1,400,000	$3,332,000	$960,000	$1,500,000	$940,675
PROPERTY CHARACTERISTICS						
Site Size (SF)	2,393,622	1,084,208	1,941,905	684,328	660,805	634,234
Site Size (acres)	54.95	24.89	44.58	15.71	15.17	14.56
Shape	Irregular	Irregular	Irregular, triangular	Rectangular	Irregular	Slightly irregular
Topography	Level	Level	Level	Level	Level	Level
Access	Good	Average	Good	Below average	Good	Good
Exposure	Average	Average	Average	Below average	Average	Average
Linkage	Good	Good	Average	Average	Very Good	Average
Flood Plain	Minor	Partial	No	Yes	No	No
VALUE INDICATORS						
Site Size (SF)	2,393,622	1,084,208	1,941,905	684,328	660,805	634,234
Price / SF	N/ Ap.	$1.29	$1.72	$1.40	$2.27	$1
Site Size (acres)	55	24.89	44.58	15.71	15.17	15
Price / acre	N/ Ap.	$56,247	$74,742	$61,108	$98,879	$64,607

COMPARABLE LAND SALES LOCATION MAP

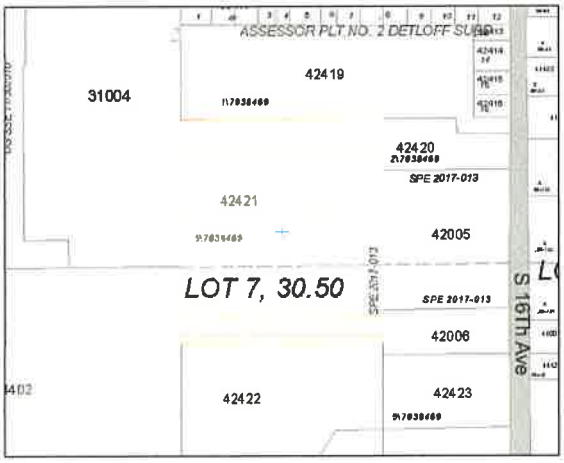
COMPARABLE LAND SALE PLAT MAPS

Comparable Land Sale 1 – 17xx Highway 97, Ellensburg

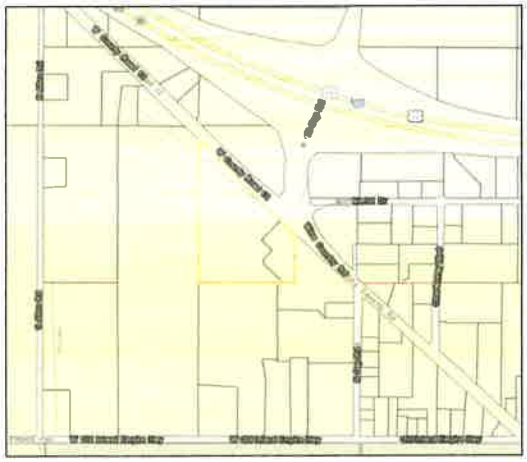


Comparable Land Sale 2 – 3555 Grant Road East, East Wenatchee

COMPARABLE LAND SALE PLAT MAPS

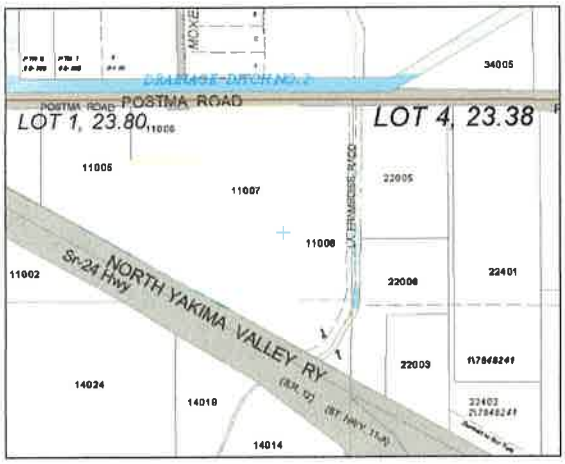


Comparable Land Sale 3 - 27xx S 16th Avenue, Union Gap



Comparable Land Sale 4 – 700 Wine Country Road, Prosser

COMPARABLE LAND SALE PLAT MAPS



Comparable Land Sale 5 - 7800 Postma Road, Moxee

DISCUSSION OF COMPARABLE LAND SALES

Comparable Land Sale 1 ($1.29/SF) is the November 2017 sale of 24.89 acres of industrially-zoned land located immediately to the south of the subject. This site is irregularly shaped with level topography at grade with the frontage street. The City of Ellensburg geographic information systems indicate that there are wetlands on this site as well as areas that are within the 100 year flood plain. The plans for this property are unknown but the buyer owns the truck wash facility that is located to the immediate east.

Comparable Land Sale 2 ($1.72/SF) is the June 2017 sale of 44.58 acres of industrially-zoned land in East Wenatchee. This is agricultural land located on the urban fringe in an area that is transitioning toward industrial uses. The site is irregularly shaped with generally level topography that is slightly below the grade of the street frontage. The buyer of this property plans to build a data center on the site.

Comparable Land Sale 3 ($1.40/SF) is the March 2017 sale of 15.71 acres of industrially-zoned land located at the intersection of South 16th Avenue and Industrial Way in Union Gap. This parcel is level and at grade with the frontage street with access via an easement across an abutting parcel. The site has a rectangular shape and all utilities available. This property is also located within the flood plain. The buyer of this property plans to construct a manufacturing facility on the site.

Comparable Land Sale 4 ($2.27/SF) is the February 2016 sale of three contiguous parcels that together form a 15.17 acre commercially-zoned site in Prosser, a short distance to the south of the interchange of Interstate 82 and North Gap Road in an area with established commercial uses. This property is irregular in shape with predominantly level topography. The buyer of this property purchased the site for development of a truck stop along with a fast food restaurant and hotel.

Comparable Land Sale 5 ($1.48/SF) is the June 2015 sale of two contiguous parcels that together contain 14.56 acres of industrially-zoned land located just east of State Route 24 in Moxee, approximately 4 miles east of Yakima, among light industrial and agricultural uses. This site is irregular in shape and mostly level, with access at grade from a fully improved street with all utilities available. The buyer of this property was an I-502 producer that is using the property for cultivation.

ANALYSIS OF COMPARABLE SALES

The comparables are analyzed and adjusted based on the following elements of comparison:

Property Rights Conveyed

All of the sales represent the transfer of the fee simple interest in the properties, similar to the subject's interest. No adjustments are applied for this element of comparison.

Financing Terms

All of the sales transacted on cash or cash equivalent terms and no adjustments are applied for this element of comparison.

Conditions of Sale

Comparable 1 was purchased by an abutting owner and is rated superior for this element of comparison. All of the other sales were arm's length transactions to the best of the appraiser's knowledge. No adjustments are applied for this element of comparison.

Market Conditions

The market for land has been steadily improving. One paired sale of a large acreage tract on Sandifur Parkway in Pasco was found during the course of performing research for this assignment. This property sold twice over 2.5 years and indicated an annual appreciation rate of 13 percent. Not all of the details associated with this sale were available and it is possible that there were other factors that contributed to the increase between the two sale prices. For purposes of this analysis, an annual appreciation rate of 6 percent is applied to the comparable sales. This adjustment ranges from 1 percent for the most recent sale to 16 percent for the oldest sale.

Location

The subject is located on the outskirts of Ellensburg in an area where development patterns transition from rural to urban. This area has a relatively low population within a 5-mile ring and low median household incomes. The comparables are adjusted based on the quality of the demographics in the surrounding area. Comparable 2 is rated slightly superior; Comparable 3 is rated superior; and Comparables 4 and 5 are rated inferior.

Physical Characteristics

The comparables are adjusted for various physical characteristics: site size, site shape, topography, access, exposure, linkage and flood plain. The ratings for these characteristics are based on the qualitative evaluation of the various traits for the subject property and comparable sales. No other adjustments are applied. The adjustment process is summarized on the following page.

COMPARABLE SALES ADJUSTMENT GRID

Duke and Dude Industrial Land - 18xx Highway 97, Ellensburg, Washington

Comp No.	SUBJECT	1	2	3	4	5
Date of Sale	2/ 3/ 2018	11/ 27/ 2017	7/ 17/ 2017	3/ 21/ 2017	2/ 12/ 2016	6/ 4/ 2015
Sale Price	N/ Ap.	$1,400,000	$3,332,000	$960,000	$1,500,000	$940,675
Site Size (SF)	2,393,622	1,084,208	1,941,905	684,328	660,805	634,234
Price/ SF	N/ Ap.	$1.29	$1.72	$1.40	$2.27	$1.48
Site Size (acres)	55	24.89	44.58	15.71	15.17	14.56
Price/ acre	N/ Ap.	$56,247	$74,742	$61,108	$98,879	$64,606.76
Transactional Adjustments						
Property Rights	Fee simple	-	-	-	-	-
Financing Terms	Cash equivalent	-	-	-	-	-
Conditions of Sale	Arm's length	Superior	-	-	-	-
Market Conditions	2/ 3/ 2018	+1.0%	+3.0%	+5.0%	+12.0%	+16.0%
Location	Ellensburg	-	Sl. Superior	Superior	Inferior	Inferior
Physical Characteristics						
Site Size	54.95 acres	Sl. Superior	-	Superior	Superior	Superior
Shape	Irregular	-	Sl. Superior	Superior	-	-
Topography	Level	-	-	-	-	-
Access	Good	Inferior	-	V. Inferior	-	-
Exposure	Average	-	-	Inferior	-	-
Linkage	Good	-	Inferior	Inferior	Superior	Inferior
Flood Plain	Minor	Sl. Inferior	Sl. Superior	Sl. Superior	Sl. Superior	Sl. Superior
Final Adjusted Price/ SF		$1.30	$1.77	$1.47	$2.54	$1.72
Final Adjusted Price/ acre		$56,810	$76,984	$64,163	$110,745	$74,944
Overall Rating		Similar	Superior	Sl. Superior	Superior	Superior
Comparative Analysis		Near	Below	Sl. Below	Below	Below
		$1.30	$1.77	$1.47	$2.54	$1.72

INDICATED VALUE – SALES COMPARISON APPROACH

Prior to adjusting for changing market conditions, the comparable sales show a range of unit values between $1.29 and $2.27 per square foot. After adjusting for market conditions, the comparable sales indicate an adjusted range of unit values between $1.30 and $2.54 per square foot.

Comparable 1 is obviously the strongest indication of value for the subject. This property is rated superior for conditions of sale and slightly superior for the smaller site size. This comparable is also rated inferior for the more narrow access and slightly inferior for the apparent flood plain and wetlands impacts. On balance, the adjustments offset and this provides a good indication for the value of the subject property.

Comparable 2 is rated slightly superior for location, site shape and the flood plain location. This comparable is rated inferior for the lower level of linkage. These adjustments largely offset but overall this property is rated somewhat superior and indicates a unit value somewhat below $1.77 per square foot.

Comparable 3 is rated superior for location, site size and site shape and slightly superior for the flood plain impacts. This comparable is rated inferior for the lower level of exposure and linkage and is rated very inferior for the access characteristics. On balance, these ratings mostly offset, with this comparable sale rated slightly superior overall and indicating a unit value slightly below $1.47 per square foot.

Comparable 4 is rated superior for the smaller site size and better linkage traits and is rated slightly superior for flood plain impacts. This comparable is rated inferior for the demographics of the area where it is located but, given the proximity to an Interstate interchange, limited weight is allocated to this factor. Overall this comparable is rated superior to the subject and indicates a unit value below $2.27 per square foot.

Comparable 5 is rated superior for the smaller site size and slightly superior for the flood plain impacts. This comparable is rated inferior for location and for the lower level of linkage. These adjustments largely offset but this property is rated somewhat superior overall and indicates a unit value somewhat below $1.72 per square foot.

In conclusion, the strongest indications of value come from Comparable Sales 1 and 3 which indicate a unit value between $1.30 and $1.47 per square foot. Comparable Sales 2 and 5 both indicate a unit value somewhat below the adjusted unit values for these comparable sales in the range of $1.72 and $1.77 per square foot. Comparable Sale 4 is clearly superior and indicates a unit value well below $2.54 per square foot.

Overall, a unit value of $1.40 per square foot is supported for the subject property. Applying this unit value to the 2,393,622 square feet at the subject property results in a value indication of $3,351,071, rounded to **$3,350,000.**

DEVELOPMENT ANALYSIS

The subject has also been analyzed using a subdivision analysis. It is important to note that this is speculative because there are many unknown factors associated with the property, including potential impacts from wetlands and unknown offsite costs for street and utility improvements in order to develop the property.

Based on a rough development scheme, it is estimated that the site could be developed with 10 lots, as shown on the following aerial.

Aggregate of Retail Values

In order to value the prospective lots, the Ellensburg market was surveyed for sales and listings of similar parcels. This research found sales, pending sales and listings that are captioned on the following table.

Address	Date of Sale	Sale Price	Site Size (SF)	Price / SF
Lot 3, Currier Street	Listing	$550,000	90,169	$6.10
2607 Triple L Loop	Listing	$755,000	100,624	$7.50
2609 Triple L Loop	Listing	$797,350	104,980	$7.60
2402 W Dolarway Road	Listing	$3,250,000	315,810	$10.29
Enterprise Road	Pending	$712,000	175,982	$4.05
Enterprise Road	12/8/2017	$508,000	148,104	$3.43
17xx Highway 97	3/31/2017	$400,000	50,965	$7.85
1711 Highway 97	9/28/2015	$775,000	217,800	$3.56
1341 Reecer Creek Road	3/2/2015	$199,999	102,366	$1.95
503 S Water Street	4/29/2014	$750,000	92,341	$8.12

The listings indicate unit values in the range of $6.10 to $10.29 per square foot and most of these properties have been listed on the market for multiple years. The strongest indications come from the recent sale and pending sale on Enterprise Road and the sales of sites along Highway 97 in the vicinity of the subject. Brokers interviewed for this assignment commented that the going rate for typical industrial land without strong exposure was about $4.00 per square foot in the current market. Based on the indications from these comparable sales and comments from brokers, the prospective interior lots at the subject that lack direct frontage would have an approximate unit value of $4.00 per square foot. The sites that have frontage along Highway 97 would have a higher value, concluded at $5.00 per square foot. The concluded values for the prospective lots and the total value are captioned on the following table.

Lot Count	Price / SF	Avg. Site Size (SF)	Retail Value	Total Value
4	$5.00	217,800	$1,089,000	$4,356,000
6	$4.00	217,800	$871,200	$5,227,200
10	$4.40	217,800	$958,320	$9,583,200

The aggregate of retail values is $9,583,200, or an average of $958,320 per lot.

Absorption

Projecting absorption for the prospective lots is especially challenging due to the lingering effects of the recession of 2007-09. Most of the lots currently listed on the market were under development at the time of the recession and have languished on the market since. Prior to the downturn, the pace of activity was generally stable, with newer

facilities developed along Dolarway Road and along Vantage Highway. Over the past couple of years the pace of activity has increased and there have been a few recent sales in the subject's immediate and wider market area.

Looking forward, absorption projections need to consider the amount of land located closer to the intersection of Highway 97 and University Way in the Triple L business park and along Currier Street. The projected price points for the subject's prospective lots are low enough to be competitive with these better located properties and absorption should be consistent with the absorption of other competing properties. Nonetheless, absorption of the lots will most likely require a protracted period of time.

On balance, absorption of slightly over one lot per year with a total absorption period of 9 years appears reasonable. This equals an absorption rate of 1.11 lots per year. No presales are forecast.

Price Appreciation

The price for industrial land has been improving and this analysis forecasts that prices will increase at pace with inflation and the overall rate of economic growth. This analysis forecasts stabilized prices increasing 3 percent annually.

Costs of Sale

Costs of sale include closing costs, selling commissions, marketing and overhead.

Seller's title insurance is based on a forecast rate of 0.25 percent and this is supported by other work performed by the appraiser. Excise taxes are based on the actual local tax rate of 1.53 percent of the sales price. Miscellaneous fees including real estate taxes, escrow fee, reconveyance fee, and document fee, are forecast at one-half of 1 percent of the sales price. Total closing costs are estimated at 2.25 percent.

Selling commissions are based on typical realtors' commissions of 5 percent for this property type.

Overhead to cover promotion and advertising during the sellout, taxes and general plat maintenance is estimated at 1.5 percent of sales.

Profit Rate

Profit has not been used as a line item in this analysis. An overall discount rate that incorporates profit has been employed instead.

Discount Rate

The discount rate incorporates the time value of money and the risk associated with receiving the expected cash flows. Discount rates for real estate investments often

include holding periods between 7 and 10 years, similar to the duration of the model for the development of the subject.

PricewaterhouseCoopers produces reports that include responses from land developers once or twice annually. In the most recent report that included this information, discount rates for development land were in the range of 10 to 20 percent with an average of 16 percent. This is consistent with the reports from the prior survey in 2016 that included the same range of rates but a slightly lower average rate of 15.50 percent.

For the subject, given the location in a secondary market, a slightly higher rate would be supported. For this analysis, a discount rate of 17 percent has been employed. This rate blends the profit component into one inclusive rate.

Discounted Cash Flow Analysis

The preceding assumptions are incorporated into a discounted cash flow analysis. Applying the concluded discount rate of 17 percent results in a value indication of $4,878,178, rounded to **$4,900,000.** The calculations are shown on the following table.

Discounted Cash Flow Analysis
Highway 97 Industrial Lots

Summary of Assumptions	
Aggregate of Retail Values (ARV)	$9,583,200
Number of Lots	10
Average Retail Lot Value	$958,320
Absorption Rate (Annually)	1.11
Presales	0.00
Annual Appreciation Rate	3.00%
Costs of Sale	
Closing	2.25%
Commissions	5.00%
Marketing and Overhead	1.50%
Total Costs of Sale	8.8%
Discount Rate	17.0%
Profit Rate	0.0%

Summary of Conclusions	
Sellout Period (Years)	9.00
Sellout Period (Annual Intervals)	10
Aggregate of Retail Values (ARV)	$9,583,200
Total Appreciation	$1,558,739
Total Retail Sales with Appreciation	$11,141,939
Total Costs of Sale	$974,920
Total Profit	$0
Total Net Cash Flows	$10,167,019
Net Present Value (NPV)	$4,878,178
Net Present Value (Rounded)	$4,900,000
Net Present Value per Lot	$490,000
Net Present Value per Lot (Rounded)	$490,000
NPV as Percent of ARV	51.1%

Interval (Annual)	Date	Beginning Lots	Lots Sold	Remaining Lots	Base Cash Flow	Appreciation	Costs of Sale	Profit	Net Cash Flow	Discount Factor	Discounted Cash Flow
0 (Presales)	Mar-2018	10.0	0.0	10.0	$0	$0	$0	$0	$0	1.0000	$0
1	Mar-2019	10.0	1.1	8.9	$1,064,800	$31,944	($95,965)	$0	$1,000,779	0.8547	$855,367
2	Mar-2020	8.9	1.1	7.8	$1,064,800	$64,846	($98,844)	$0	$1,030,802	0.7305	$753,015
3	Mar-2021	7.8	1.1	6.7	$1,064,800	$98,736	($101,809)	$0	$1,061,726	0.6244	$662,911
4	Mar-2022	6.7	1.1	5.6	$1,064,800	$133,642	($104,864)	$0	$1,093,578	0.5337	$583,588
5	Mar-2023	5.6	1.1	4.4	$1,064,800	$169,595	($108,010)	$0	$1,126,385	0.4561	$513,757
6	Mar-2024	4.4	1.1	3.3	$1,064,800	$206,627	($111,250)	$0	$1,160,177	0.3898	$452,282
7	Mar-2025	3.3	1.1	2.2	$1,064,800	$244,770	($114,587)	$0	$1,194,982	0.3332	$398,163
8	Mar-2026	2.2	1.1	1.1	$1,064,800	$284,057	($118,025)	$0	$1,230,832	0.2848	$350,519
9	Mar-2027	1.1	1.1	0.0	$1,064,800	$324,522	($121,566)	$0	$1,267,757	0.2434	$308,577

Development Costs

The costs to develop the subject would include the construction of the internal street network, estimated to include 1,700 linear feet, and the construction of the required

street improvements and installation of utilities along the frontage, estimated to include 1,200 linear feet.

The costs to construct these improvements is based on data contained in Broadview Appraisal database for subdivision improvements. The costs for internal streets in residential subdivisions in Western Washington can range from $700 to over $1,000 per linear foot, depending on the requirements of the municipalities where the properties are located.

Given the subject's location in a secondary market as well as the proximity to an active aggregate mining operation, the estimated costs to the subject would be at the low end of the range. The cost to construct the internal roads are forecast at $700 per linear foot.

For the frontage improvements, it is estimated that the developer of the subject would be required to build a half the width of the street to include curbs, gutters and sidewalks with underground utilities to the main property access. The estimated cost for these improvements would be half of the construction cost for the whole streets that are part of the internal road network. The cost for the frontage improvements are forecast at $350 per linear foot.

The following table shows the costs that the subject would be expected to incur in conjunction with development.

Cost Item	Amount (LF)	Cost / LF	Total Cost
Internal Streets	1,700	$700	$1,190,000
Frontage Improvements	1,200	$350	$420,000
Total			$1,610,000

The total development costs are forecast at $1,610,000.

Open Space Removal

In order to develop the subject, the property would need to be removed from the open space tax categorization in which it is currently enrolled. These costs are 7 years of back taxes along with interest. Assessment data for the last 5 years was available and millage rates were available for the past 7 years. For the 2 years where the assessed values of the subject is unknown, the assessments for 2014 are employed. Based on this data, the cost to remove the subject from open space is forecast at $135,000. The calculations are shown on the following table.

Year	Use Value	Assessed Value	Difference	Millage Rate	Base Taxes	Interest	Taxes & Interest
2018	$58,800	$1,084,710	$1,025,910	13.483151	$13,832.50	12.00%	$15,492.40
2017	$58,800	$1,084,710	$1,025,910	13.898062	$14,258.16	24.00%	$17,680.12
2016	$58,800	$1,084,710	$1,025,910	13.436869	$13,785.02	36.00%	$18,747.62
2015	$58,800	$1,088,010	$1,029,210	12.774257	$13,147.39	48.00%	$19,458.14
2014	$38,630	$1,088,010	$1,049,380	12.161190	$12,761.71	60.00%	$20,418.74
2013	$38,630	$1,088,010	$1,049,380	11.775268	$12,356.73	72.00%	$21,253.58
2012	$38,630	$1,088,010	$1,049,380	11.113423	$11,662.20	84.00%	$21,458.46
Total							$134,509.05

INDICATED VALUE – DEVELOPMENT APPROACH

The following calculation shows the indicated value from the discounted cash flow analysis and deducts the costs to construct the improvements to subdivide the property and remove the property from open space tax categorization.

Discounted Cash Flow Analysis	$4,900,000
Construction Costs	($1,610,000)
Open Space Removal	($135,000)
Indicated Value	$3,155,000

The indicated value for the subject by the development approach is $3,155,000, rounded to **$3,160,000.**

AS IS MARKET VALUE

The indicated value by the sales comparison approach is $3,350,000. The indicated value by the development analysis is $3,160,000. The development analysis is the more speculative of the two approaches and less weight is given to this indication. On balance, the indicated value of the subject as of the date of inspection on February 3, 2018 is concluded at **$3,300,000.**

RECONCILIATION AND VALUE CONCLUSIONS

Reconciliation is the process of placing various levels of emphasis on each of the different approaches used in the appraisal report. Typically, this process considers the quality and quantity of information available in the various approaches to determine which approach or combination of approaches is the most relevant to the final value of the subject. Considerations include the reliability of data and the acceptability of the various valuation approaches within the particular industry, market area, or property type.

The subject is a large tract of industrial land. The property has been valued using both a sales comparison and a development approach. The findings of the individual approaches are captioned following:

Value Indications	
Sales Comparison Approach	**$3,350,000**
Development Analysis	**$3,160,000**

Sales Comparison Approach

The sales comparison approach was developed through the comparison of the subject property with 5 comparable sales of properties with similar development potential located in four different markets around the Central Washington region. The adjustment process was qualitative and provided a reasonable basis for the value indicated by this analysis. Primary weight is allotted to this approach.

Development Approach

The development analysis was speculative due to the unknown costs to develop the property and protracted potential timeline for the sale of the individual lots. This approach receives secondary emphasis.

AS IS MARKET VALUE CONCLUSION

On the basis of the discussion and analyses contained in this appraisal, the concluded As Is Market Value as of the date of inspection on February 3, 2018, is concluded to be:

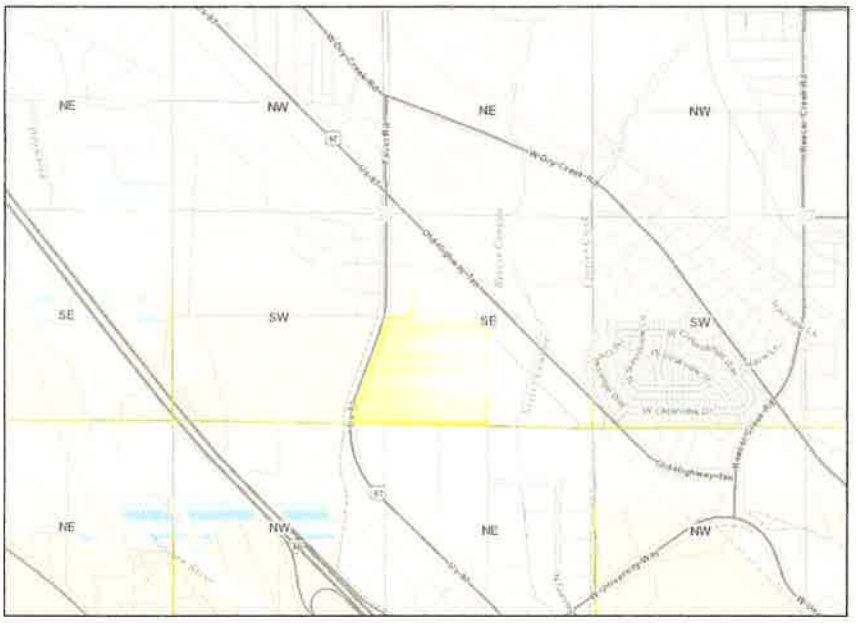
THREE MILLION THREE HUNDRED THOUSAND DOLLARS

$3,300,000

ADDENDA

Exhibit I.
Subject Plat Map

Subject Plat Map



Broadview Appraisal, Inc.

Exhibit II.

Kittitas County Assessor and Treasurer Records

Mike Hougardy
Kittitas County Assessor 205 W 5th Ave Ste 101 Ellensburg WA 98926

Parcel

Parcel#	611033	Owner Name	DUKE & DUDE LLC &
DOR Code	83 - Resource - Agriculture Current Use	Address1	HAYDEN, STEPHEN M
Situs	HWY 97 ELLENSBURG	Address2	2950 KILLMORE RD
Map Number	18-18-28030-0008	City State	ELLENSBURG WA
Status		Zip	98926-5510
Description	ACRES 54.95, CD. 8782; SEC. 28; TWP. 18; RGE. 18; SE1/4 SW1/4 TAX NO. 10; NW1/4 SE1/4 TAX NO. 4; SW1/4 SE1/4; LESS .98 @ SR 21; .52 @ SR 90;		
Comment			

2018 Market Value		2018 Taxable Value		2018 Assessment Data	
Land:	$1,084,710	Land:	$58,800	District:	18 - CIEB SD401 F02 H01 CO COF ST
Improvements:	$0	Improvements:	$0	Current Use/DFL:	Yes
Permanent Crop:	$0	Permanent Crop:	$0	Senior/Disability Exemption:	No
Total	$1,084,710	Total	$58,800	Total Acres:	54.95000

Ownership

Owner's Name	Ownership %
DUKE & DUDE LLC &	100 %

Sales History

Sale Date	Sales Document	# Parcels	Excise #	Grantor	Grantee	Price
10/23/12	2012-1632	1	2012-1632	HAYDEN, STEPHEN M TRUSTEE &	DUKE & DUDE LLC &	$0
12/17/09	2009-1735	1	2009-1735	HAYDEN, STEPHEN M ETUX	HAYDEN, STEPHEN M TRUSTEE &	$0
06/06/02	15077	1	15077	OECHSNER, MONTERIE J ETAL	HAYDEN, STEPHEN M ETUX	$686,675
12/01/92	3538200	3	3538200	FRANK OESCHSNER JR. ETAL	OECHSNER, MONTERIE J ETAL	$0
05/01/89	2718700	6	2718700	JOSEPH MCMANAMY	FRANK OESCHSNER JR. ETAL	$0

Building Permits

No Building Permits Available

Historical Valuation Info

Year	Billed Owner	Land	Impr	PermCrop Value	Total	Exempt	Taxable
2018	DUKE & DUDE LLC &	$1,084,710	$0	$0	$1,084,710	$0	$58,800
2017	DUKE & DUDE LLC &	$1,084,710	$0	$0	$1,084,710	$0	$58,800
2016	DUKE & DUDE LLC &	$1,084,710	$0	$0	$1,084,710	$0	$58,800
2015	DUKE & DUDE LLC &	$1,088,010	$0	$0	$1,088,010	$0	$58,800
2014	DUKE & DUDE LLC &	$1,088,010	$0	$0	$1,088,010	$0	$38,630

View Taxes

Parcel Comments

No Comments Available

Property Images

Click on an image to enlarge it.

BRETT WACHSMITH
Kittitas County Treasurer 205 W 5th AVE Suite 102 Ellensburg WA 98926

Parcel

Parcel#	611033	Owner Name	DUKE & DUDE LLC &
DOR Code	83 - Resource - Agriculture Current Use	Address1	HAYDEN, STEPHEN M
Situs	HWY 97 ELLENSBURG	Address2	2950 KILLMORE RD
Map Number	18-18-28030-0008	City State	ELLENSBURG WA
Status		Zip	98926-5510
Description	ACRES 54.95, CD. 8782; SEC. 28; TWP. 18; RGE. 18; SE1/4 SW1/4 TAX NO. 10; NW1/4 SE1/4 TAX NO. 4; SW1/4 SE1/4; LESS .98 @ SR 21; .52 @ SR 90;		
Comment			

Current Tax Year Details

Type	Taxpayer	Statement #	Gross Tax	Tax Exempt	Net Tax	Assmts	Total Tax
Real Property	DUKE & DUDE LLC &	2018-6[illegible]	$14,625.31	$13,832.50	$792.81	$3.85	$796.66

Balances Due

Type	Taxpayer	Statement #	Tax Amount	Fees	Interest Due	Balance(s) Due	
Real Property	DUKE & DUDE LLC &	2018-6[illegible]	$796.66	$0.00	$0.00	$796.66	

Add Selected to Cr

* Please expect a delay of 3-5 business days for your payment to post. Note: The receipt date will reflect the day the payment was initiated.

5 Year Tax History

Type	Statement Number	Taxes	Assessments	Fees	Balance Due
Real Property	2018-611033	$792.81	$3.85	$0.00	$796.66

Type	Statement Number	Taxes	Assessments	Fees	Balance Due
Real Property	2017-611033	$817.21	$3.85	$0.00	$0.00
	Receipt Number	Receipt Date	Taxes/ Fees	Interest Paid	Total Paid
	2017-0587642	03/09/2017	$821.06	$0.00	$821.06

Type	Statement Number	Taxes	Assessments	Fees	Balance Due
Real Property	2016-611033	$790.09	$3.85	$0.00	$0.00
	Receipt Number	Receipt Date	Taxes/ Fees	Interest Paid	Total Paid
	2016-0626057	03/24/2016	$793.94	$0.00	$793.94

Type	Statement Number	Taxes	Assessments	Fees	Balance Due
Real Property	2015-611033	$751.13	$3.85	$0.00	$0.00
	Receipt Number	Receipt Date	Taxes/ Fees	Interest Paid	Total Paid
	2015-0568117	04/13/2015	$754.98	$0.00	$754.98

Type	Statement Number	Taxes	Assessments	Fees	Balance Due
Real Property	2014-011033	$469.79	$3.85	$0.00	$0.00
	Receipt Number	Receipt Date	Taxes/Fees	Interest Paid	Total Paid
	2014-0500354	03/20/2014	$473.64	$0.00	$473.64

Type	Statement Number	Taxes	Assessments	Fees	Balance Due
Real Property	2013-011033	$454.88	$3.85	$0.00	$0.00
	Receipt Number	Receipt Date	Taxes/Fees	Interest Paid	Total Paid
	2013-0458129	05/01/2013	$458.73	$0.00	$458.73

Property Images

Click on an image to enlarge it.

Jake Hougardy
Kittitas County Assessor 205 W 5th Ave Ste 101 Ellensburg WA 98926

Parcel

Parcel#	611033	Owner Name	DUKE & DUDE LLC &
DOR Code	83 - Resource - Agriculture Current Use	Address1	HAYDEN, STEPHEN M
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Status		Zip	98926-5510
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Comment			

Land

Land

Land Code	Unit Type	Units	Land Shape	Width	Depth
72A1	Acres	4.00000000			
72A2	Acres	49.95000000			
72BV	Acres	1.00000000			

Property Images

Click on an image to enlarge it.

Exhibit III.
Letter of Engagement

AGREEMENT FOR PROFESSIONAL VALUATION SERVICES

DATE OF AGREEMENT: January 10, 2018

PARTIES TO AGREEMENT:

Client:
Duke and Dude LLC
Mr. Stephen M. Hayden
2950 Killmore Road
Ellensburg, Washington 98926

Phone: _____
Fax: N/Av.

E-mail _____

Appraiser:
John C. Bryan, MAI
Broadview Appraisal, Inc.
925 North 130th Street
Seattle, Washington 98133
Phone: 206-362-0100
Fax: 206-362-0110
E-mail: johnb@broadviewappraisal.com

Client hereby engages Appraiser to complete an appraisal assignment as follows:

PROPERTY IDENTIFICATION
Kittitas County Tax Parcel 611033
South and Southeast of the Intersection of US 97 and Old Highway 10
Ellensburg, Washington 98296

PROPERTY TYPE
Light industrial acreage

INTEREST VALUED
Fee simple

INTENDED USERS
Stephen M. Hayden; Duke and Dude LLC

Note: No other users are intended by Appraiser. Appraiser shall consider the intended users when determining the level of detail to be provided in the Appraisal Report.

INTENDED USE
To assist Client in establishing an asking price.

TYPE OF VALUE
Market value as defined by the appraisal requirements pursuant to FIRREA.

DATE OF VALUE
Current

HYPOTHETICAL CONDITIONS, EXTRAORDINARY ASSUMPTIONS
None.

APPLICABLE REQUIREMENTS OTHER THAN THE UNIFORM STANDARDS OF PROFESSIONAL APPRAISAL PRACTICE (USPAP)
The Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute

ANTICIPATED SCOPE OF WORK

Site visit
Site inspection

Valuation approaches
Sales Comparison Approach

Note: Appraiser shall use all approaches necessary to develop a credible opinion of value.

APPRAISAL REPORT

Form or format:
Narrative

CONTACT FOR PROPERTY ACCESS, IF APPLICABLE

To be provided. _____

DELIVERY DATE
February 15, 2018

DELIVERY METHOD
Email delivery of PDF version of report.

NUMBER OF COPIES
Up to 2 hard copies available upon request.

PAYMENT TO APPRAISER
$4,250 with $2,000 payable as retainer prior to commencement of assignment.

PROPOSED IMPROVEMENTS
None reported.

PROPERTIES UNDER CONTRACT FOR SALE
If the property appraised is currently under contract for sale, Client shall provide to Appraiser a copy of said contract including all addenda.

CONFIDENTIALITY
Appraiser shall not provide a copy of the written Appraisal Report to, or disclose the results of the appraisal prepared in accordance with this Agreement with, any party other than Client, unless Client authorizes, except as stipulated in the Confidentiality Section of the ETHICS RULE of the Uniform Standards of Professional Appraisal Practice (USPAP).

CHANGES TO AGREEMENT
Any changes to the assignment as outlined in this Agreement shall necessitate a new Agreement. The identity of the client, intended users, or intended use; the date of value; type of value; or property appraised cannot be changed without a new Agreement.

CANCELLATION
Client may cancel this Agreement at any time prior to the Appraiser's delivery of the Appraisal Report upon written notification to the Appraiser. Client shall pay Appraiser for work completed on assignment prior to Appraiser's receipt of written cancellation notice, unless otherwise agreed upon by Appraiser and Client in writing.

NO THIRD PARTY BENEFICIARIES
Nothing in this Agreement shall create a contractual relationship between the Appraiser or the Client and any third party, or any cause of action in favor of any third party. This Agreement shall not be construed to render any person or entity a third party beneficiary of this Agreement, including, but not limited to, any third parties identified herein.

USE OF EMPLOYEES OR INDEPENDENT CONTRACTORS
Appraiser may use employees or independent contractors at Appraiser's discretion to complete the assignment, unless otherwise agreed by the parties. Notwithstanding, Appraiser shall sign the written Appraisal Report and take full responsibility for the services provided as a result of this Agreement.

TESTIMONY AT COURT OR OTHER PROCEEDINGS
Unless otherwise stated in this Agreement, Client agrees that Appraiser's assignment pursuant to this Agreement shall not include the Appraiser's participation in or preparation for, whether voluntarily or pursuant to subpoena, any oral or written discovery, sworn testimony in a judicial, arbitration or administrative proceeding, or attendance at any judicial, arbitration, or administrative proceeding relating to this assignment.

APPRAISER INDEPENDENCE
Appraiser cannot agree to provide a value opinion that is contingent on a predetermined amount. Appraiser cannot guarantee the outcome of the assignment in advance. Appraiser cannot insure that the opinion of value developed as a result of this Assignment will serve to facilitate any specific objective by Client or others or advance any particular cause. Appraiser's opinion of value will be developed competently and with independence, impartiality and objectivity.

EXPIRATION OF AGREEMENT
This Agreement is valid only if signed by both Appraiser and Client within five business days of the Date of Agreement specified.

GOVERNING LAW & JURISDICTION
The interpretation and enforcement of this Agreement shall be governed by the laws of the state in which the Appraiser's principal place of business is located, exclusive of any choice of law rules.

By Appraiser:	By Client:
	
(Signature)	(Signature)
John C. Bryan, MAI	
(Printed name)	(Printed name)
January 10, 2018	
(date)	(date)

Exhibit IV.
Appraiser's Qualifications

BROADVIEW APPRAISAL, INC.
Real Estate Appraisers and Consultants

QUALIFICATIONS OF APPRAISER JOHN C. BRYAN, MAI

EDUCATION:
Bachelor of Arts, English, State University of New York at Albany
Certificate of Construction Management, University of Washington

Appraisal Coursework:
Appraisal Institute – Business Practices and Ethics
Appraisal Institute – General Applications
Appraisal Institute – Report Writing and Case Studies
Appraisal Institute – Advanced Sales Comparison and Cost Approaches
Appraisal Institute – Advanced Market Analysis and Highest and Best Use
Appraisal Institute – Advanced Concepts and Case Studies
Appraisal Institute – Advanced Income Capitalization
Appraisal Institute – Quantitative Analysis
Appraisal Institute – General Demonstration Report Writing
Appraisal Institute – Uniform Appraisal Standards for Federal Land Acquisitions
Appraisal Institute – Analysis of Operating Expenses
International Right of Way Association 401 – Appraisal of Partial Acquisitions
Uniform Standards of Professional Appraisal Practice
Washington State and State of Virginia Right of Way Consultant Seminars

EMPLOYMENT HISTORY:

2014-Present	Broadview Appraisal, Inc. – Seattle, Washington
2007-2014	Columbia Valuation Group, Inc. – Shoreline, Washington
2002-2007	PGP Valuation, Inc. – Seattle, Washington

APPRAISAL EXPERIENCE:

- Industrial buildings: single and multi-tenant
- Retail developments: freestanding single-tenant buildings to neighborhood shopping centers with outparcels
- Office buildings: freestanding single tenant to small midrise
- Development land: residential and commercial plats; planned unit developments
- Multifamily properties: apartments, condominiums, townhouses and mixed-use buildings
- Agricultural and resource properties, including timber and mineral lands
- Special purpose properties, including food processing facilities
- Golf courses and country clubs
- Churches and houses of worship
- Tidelands, waterfront and submerged lands
- Right of way appraisal, including complex damages
- Across-the-fence valuations, including rail corridors

CERTIFICATIONS:

Washington State Certified General Real Estate Appraiser, License Number 1101826
Appraisal Institute – Designated Member
Washington State Department of Transportation Approved Appraiser

STATE OF WASHINGTON

DEPARTMENT OF LICENSING – BUSINESS AND PROFESSIONS DIVISION

THIS CERTIFIES THAT THE PERSON OR BUSINESS NAMED BELOW IS AUTHORIZED AS A

CERTIFIED GENERAL REAL ESTATE APPRAISER

JOHN C BRYAN
925 NORTH 130TH ST.
SEATTLE WA 98133

1101826	05/04/2007	07/26/2018
License Number	Issued Date	Expiration Date

Pat Kohler

Pat Kohler, Director

PL-600-159 (R/3/16)

REQUEST FOR PUBLIC RECORD
DEPARTMENT OF ECOLOGY

Public Records Officer
PO Box 47600
Olympia, WA 98504-7600
publicrecordsofficer@ecy.wa.gov
Phone: (360) 407-6040 Fax: (360) 407-6989

Date of Request: 6/20/2018

Contact Information:

Requester Name: Kate Eiriksson	Phone Number: (208) 336-7080
Company (if applicable): Alta Science & Engineering, Inc.	Alternate Number: ( )
Address: 988 S. Longmont Ave., Suite 200	Fax Number: (208) 908-4980
City/State/Zip: Boise, ID 83706	Email Address: kate.eiriksson@alta-se.com
	Preferred Communication: Phone☐ Email **X**

Please describe the records you are requesting (i.e., facility name(s), address(es), Facility/Site ID, permit number) and any additional information that will help identify and locate responsive records. Failure to provide information sufficient to identify records may cause a delay. Please include a date range/time frame of records you are seeking if applicable.

Request is related to: Phase I X Litigation ☐

As part of a Phase I ESA, I am looking for information relevant to, and would like to view information on the following properties:

Parcel #611033, 54.95 acres, located on Highway 97, Ellensburg, WA 98926

Ellensburg Cement Products at 1071 US-97, Ellensburg, WA 98926

Particularly useful information would include LUST/UST/AST registrations, Hazardous sites lists, landfills (TIER 1 & 2), RCRA generators with and without violations, VCP sites, general remediation sites, etc.

☐ **I want to review records in person (we will contact you for an appointment).**

X **I would like duplication of records (you will be notified of estimated costs prior to duplication).**

By submitting this request, you acknowledge and agree to:

Pay Ecology to duplicate responsive records, according to the copy fee schedule. This may include actual costs Ecology incurs when using an outside vendor to perform duplication, as allowed by RCW 42.56.120.

Not use any lists of individuals obtained through this public records request for commercial purposes, in accordance with RCW 42.56.070(8).

Please visit our website to see what happens when a request is submitted.

If you need this publication in an alternate format, please call the Public Records Office at (360) 407-6040. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call (877) 833-6341.

KITTITAS VALLEY FIRE & RESCUE

REQUEST FOR PUBLIC RECORDS

NAME OF REQUESTER: KATE EIRIKSSON WITH ALTA SCIENCE + ENGINEERING, INC.

ADDRESS: 988 S. LONGMONT AVE., STE. 200

CITY: BOISE STATE ID ZIP 83706

PHONE: 208-336-7088 DATE OF REQUEST: 6/20/18 TIME: 10:30AM

NATURE OF REQUEST:

1. Identification of records: PARCEL #611033 ON HWY. 97 - SEE MAP OWNED BY STEVE HAYDEN/DUKE + DUDE'S LLC
LOOKING FOR RESPONSES TO SPILLS OR OTHER ENVIRONMENTAL INCIDENTS, RELATED INFO. LIKE HAZ. MATERIALS STORAGE, RESPOND TO GENERAL CALLS, ETC.

2. Inspection only 1

3. Number of copies requested 1

I declare under penalty of perjury under the laws of the State of Washington that I do not intend to use any list of individuals that may be covered by this request for commercial purposes.

Signature Kate Eiriksson

==========

For Office Use Only: Dated 6/20/18 Time 11:51Am

(1) Request Granted _____ Record Withheld _____ Record Redacted _____

(2) No Record Found ✓

(3) If consent is needed, name of individual: _____

(4) If withheld or redacted, identify the exemption contained in chapter 42.56 RCW or other applicable statute that authorizes the withholding of the record or part of record:

_____

(5) If withheld or redacted, explain how the exemption applies to the record withheld:

_____

_____

Signature _____

Attachment 3
Cultural Resources Assessment and Decision

CULTURAL RESOURCES REPORT COVER SHEET

Author: Michael D. Farrell and Michael Chidley

Title of Report: Cultural Resources Assessment for the Kittitas County Transfer Station Project, Kittitas County, Washington

Date of Report: December 2018

County(ies): Kittitas Section: 28 Township: 18 N Range: 18E

Quad: Ellensburg North Acres: 50

PDF of report submitted (REQUIRED) ☒ Yes

Historic Property Export Files submitted? ☒ Yes ☐ No

Archaeological Site(s)/Isolate(s) Found or Amended? ☐ Yes ☒ No

TCP(s) found? ☐ Yes ☒ No

Replace a draft? ☐ Yes ☒ No

Satisfy a DAHP Archaeological Excavation Permit requirement? ☐ Yes # ☒ No

DAHP Archaeological Site #:

_____

_____

_____

Cultural Resources Assessment for the Kittitas County Transfer Station Project, Kittitas County, Washington

Prepared for:

Kittitas County Solid Waste

925 S. Industrial Way
Ellensburg, WA 98926

Prepared by:

JACOBS®

1100 112th Avenue NE, Suite 500
Bellevue, Washington 98004

Author:

Michael D. Farrell and Michael Chidley

December 2018

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TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

ACRONYMS AND ABBREVIATIONS

BP	before present
cm	centimeter
cmbs	centimeters below surface
DAHP	Washington State Department of Archaeology and Historic Preservation
ft	feet
GLO	General Land Office
Jacobs	Jacobs Engineering Group Inc.
km	kilometer
m	meter
RCW	Revised Code of Washington
STP	shovel test pit
WISAARD	Washington Information System for Architectural and Archaeological Research Data

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SUMMARY OF FINDINGS

A cultural resources inventory was conducted at a 50-acre site for a proposed Kittitas County Transfer Station. A pedestrian survey and a series of shovel test pits were completed across the proposed location to identify and assess any subsurface archaeological deposits. As a result of the survey, no archaeological deposits were identified. Jacobs recommends that the proposed construction of Kittitas Waste Transfer Station will have no effect upon historic properties.

INTRODUCTION

Project Location and Description

Kittitas Solid Waste proposes to construct a new solid waste transfer station within Kittitas County, located in Township 18 North, Range 18 East, portions of Section 28. (**Figure 1**). The projected population growth and solid waste management needs of Kittitas County, combined with existing Ellensburg Transfer Station (existing facility) challenges and limitations, requires construction of a new solid waste transfer station at a new location. The new transfer station will be designed to address existing facility limitations and support a growing community. The new facility will include a transfer building, composting area, moderate-risk waste (MRW) building, and recycling dropoff area as well as various administrative, parking, and other required elements.

For the purposes of the cultural resources survey, the proposed Project Area includes the horizontal extent of the proposed construction and/or parcel limits for the Kittitas County Waste Transfer Station project. The proposed Project Area encompasses an area of approximately 50-acre, comprised of a single parcel of livestock/agricultural land (see **Figure 1**).

This technical report provides the results of a cultural resources inventory survey for the purposes of assessing the potential for unrecorded archaeological resources within the project area.

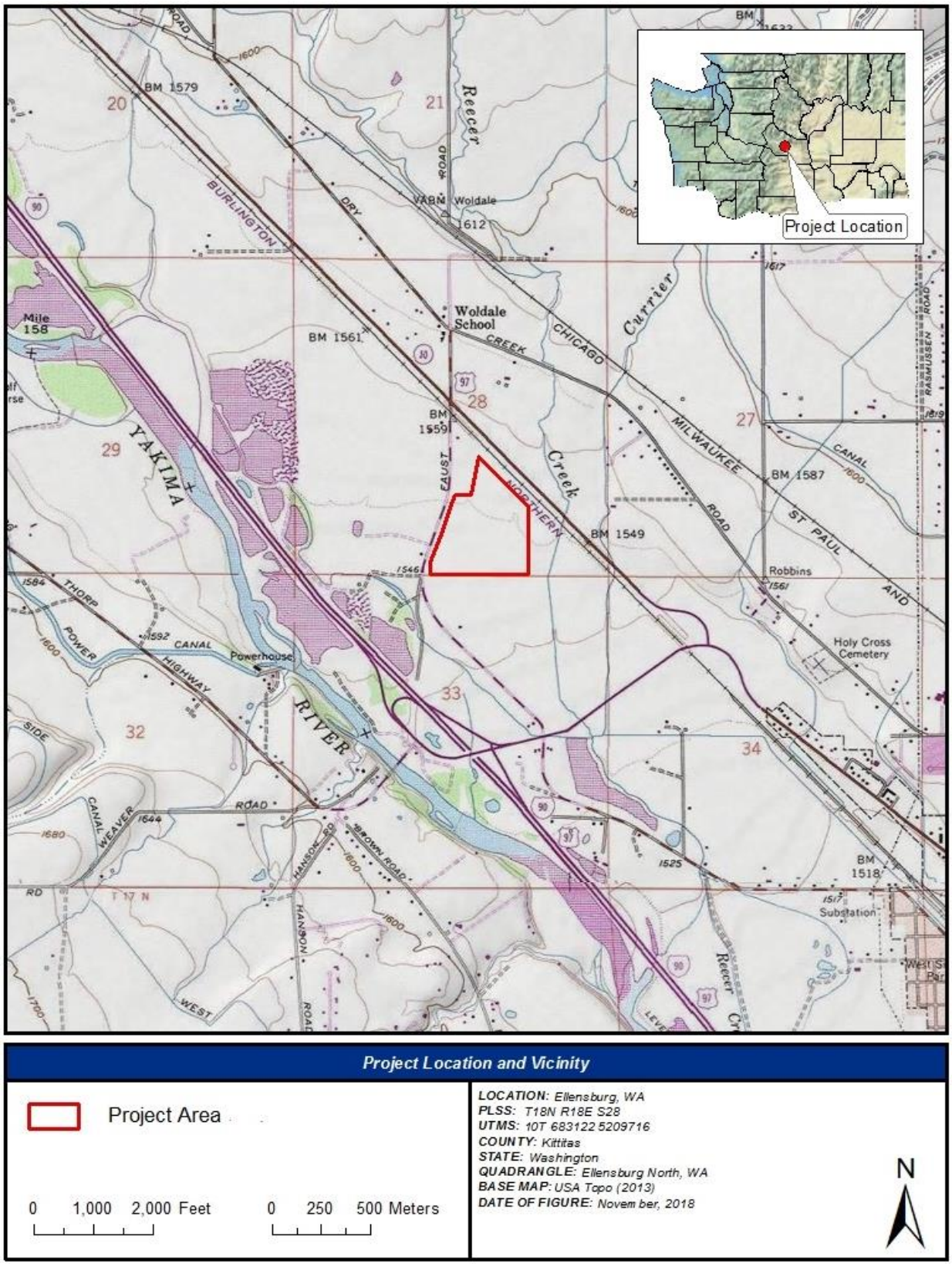

Figure 1. Kittitas County Transfer Station Project location.

Regulatory Context

The current archaeological study is being conducted in support of State Environmental Policy Act compliance and is not tied to regulatory compliance with the National Environmental Policy Act or Section 106 of the National Historic Preservation Act. State laws and policies that govern the protection of archaeological resources include the following:

- Revised Code of Washington (RCW) 27.44, Indian Graves and Records, provides for the protection of Native American graves and burial grounds, encourages voluntary reporting of said sites when they are discovered, and mandates a penalty for disturbance or desecration of such sites.
- RCW 27.53, Archaeological Sites and Resources, governs the protection and preservation of archaeological sites and resources and establishes the Department of Archaeology and Historic Preservation (DAHP) as the administering agency for these regulations.
- RCW 36.70A.020, Planning goals, includes a goal to "Identify and encourage the preservation of lands, sites, and structures that have historical, cultural, and archaeological significance." Cities planning under the Washington State Growth Management Act must consider and incorporate this historic preservation goal.
- RCW 68.60, Abandoned and Historic Cemeteries and Historic Graves, provides for the protection and preservation of abandoned and historic cemeteries and historic graves.

Key Personnel

Jacobs archaeologists and historians conducted background research and field survey, recorded and evaluated cultural resources older than 50 years of age for listing on the NRHP, and authored the report. Michael Chidley, Senior Archaeologist, served as principal investigator and meets the Secretary of the Interior's Standards for an archaeologist and Washington State standards for an archaeologist.

A desktop records search was conducted by archaeologist Michael Farrell to determine if previously recorded archaeological and historic resources are located within the Project Area. Additional research, fieldwork, and report contributions were completed by Jacobs archaeologists Michael Chidley, MA, Michael Farrell, MSc, and Jane Wiegand, MSc.

ENVIRONMENTAL AND CULTURAL SETTING

Environmental Context

The Project Area is located in a northwestern part of the Kittitas Valley, approximately 3.1 kilometers (km) northwest of the City of Ellensburg. The terrain is generally flat, and lies within the large, defuse Yakima River floodplain. The Yakima River itself is located approximately 1.4 km to the south. Reecer Creek, located approximately 500 meters (m) to the east, is channelized within a ditch and flows to the south to the Yakima River.

Native vegetation in this area would have been typical of the sagebrush steppe zone (Franklin and Dyrness 1988). This zone conforms to the semiarid Xeric regime. Predominant species include shrubs, dominated by mature big sagebrush (*Artemisia tridentate),* with minor presence of rabbitbrush (*Chrysothamnus viscidiflorus)* and threetip sagebrush *(Artemisia tripartite).* Perennial grasses such as blue bunchgrass, cheatgrass, rice grass, and Idaho fescue (*Festuca idahoensis*) are also common in this zone.

The modern landscape of the project area consists of an agricultural pasture field. Vegetation on the site consists of close-cropped grasses and forbs, including invasive weeds such as cheatgrass. Small drainage ditches are presented throughout the Project Area, and small gravel/culvert bridges cross these ditches at intervals. Overall, the Project Area appears to have been impacted by trampling, ditch channelization, plowing, and grading.

The soils in the proposed Project Area are mapped as Nack-Opnish complex. 2 to 0 percent slopes (NRCS 2018). The landform is considered an alluvial fan with the soils derived from alluvium and volcanic ash. The typical soil profile consists of a thin upper horizon of gravelly ashy loam (0 - 6 inches [0 - 15 cm] deep), followed by a clay loam (6 - 15 inches (15 - 38 cm), and an extremely gravelly sandy clay (15 - 60 inches (15 - 152 cm).

Cultural Context

Plateau Culture Area and Ethnographic Cultures

The Columbia Plateau is a broad physiographic region formed of a large trough, underlain by deep basaltic bedrock, drained by the Columbia River and its major tributaries, such as the Okanogan, Spokane, Yakima, Snake, John Day, and Deschutes Rivers. The Middle Columbia River region encompasses the Yakima River and the Snake River to the Okanogan River. The Middle Columbia region was traditionally occupied by several cultural groups, some of whose descendants are now represented by the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Colville Reservation, the Wanapum Band, and other smaller tribes of the Plateau region. The project area lies within the ceded lands of the Yakama Nation as provide in the Treaty of 1855.

The Plateau cultures have been recognized as complexes of deeply-rooted cohesive cultural traits well-adapted to the semi-arid climate of the region, focused on subsistence strategies exploiting edible roots and anadromous fish, and deeply involved in a cross-regional trade and

travel network that included the surrounding regions (Ray 1936, 1939; Schalk and Cleveland 1983; Walker 1998).

During the early historic period, speakers of the Sahaptian and Interior Salishan languages were predominant in the Middle Columbia region. Ethnographic data indicates that the geographic division between these language groups was roughly coincident with the upper Yakima River drainages (Walker 1998). The area of this survey was the ethnographically known domain of the Kittitas (Schuster 1998:327-328). The largest villages in the area were “about two miles below the present town of Ellensburg on the west side of the Yakima River” and “one mile above Thorp, opposite the mouth of Taneum creek” (Ray 1936:143).

Ethnographic and early historic peoples of the Middle Columbia were known to be mobile hunter-fisher-gatherers, moving from winter villages to other seasonally productive resource bases. Each group worked cooperatively with their neighbors to accommodate and gain access to environmentally variable plant and animal resources. Hunting and fishing both were important subsistence systems, substantially supplemented by vital root and plant gathering and processing. Trade with neighboring groups and neighboring regions was facilitated by a complex and productive trade system centered upon the Columbia River with inter- and intra-regional routes and centers. Ethnographic material culture has been documented as earthlodge and mat lodge structures with increasing use of skin lodges and tents though time, dugout canoes of cottonwood, pine, and driftwood cedar, well-crafted basketry intensively used for cooking, processing, storage and transport of food and trade items, and a complex of lithic and other tool systems (knapped stone, groundstone, bone, wood, and shell implements). Offensive weaponry is known to have included the bow and arrow, thrusting spears, clubs, and knives (Chidley 2009).

Precontact Archaeological Context

Paleoarchaic (pre-11,000 - 8000 BP)

The Paleoarchaic period includes the period of earliest recognized occupation of the Columbia Plateau, including the two earliest artifactual cultures - the fluted point and western stemmed-point traditions. Andrefsky (2004) combines these type traditions into the Paleoarchaic. The Paleoarchaic includes Ames et al.’s (1998) Period 1A (11,500 - 11,000 BP) and Period 1B (11,000 BP - 7000/6400 BP), and King and Putnam’s (1994) Clovis period and Windust Phase. The fluted point tradition, defined by the presence of large spear points exhibiting basally-originating long flaked flutes, encompasses the commonly known Clovis and Folsom traditions, Fluted points in the region are most notably known from the East Wenatchee cache site (Mehringer and Foit 1990) and other isolated contexts. The fluted point tradition is indicative of the earliest recognized culture in North America (and the Plateau), and although there is increasing argument for a pre-fluted point occupation, it is typically dated to the 1000-year period beginning 11,500 BP.

The western stemmed-point occupation of the Columbia Plateau, which in some instances appears to pre-date fluted point types, is comprised generally of the Windust, Lind Coulee, early

Cascade, and similar type artifacts. The western stemmed-point tradition occurs coincident and/or continues later than the fluted point traditions, with dated contexts as late as 8000 BP or later. Western stemmed-point assemblages have been found throughout the Plateau and Middle Columbia reach, including an early occurrence on the Yakima Training Center at the Sentinel Gap site (10,100 - 10,600 BP) (Galm and Gough 2005). The Paleoarchaic cultures are interpreted as mobile broad-spectrum hunters and foragers, with what appears to be a common use of pluvial lake margins and rockshelters (Andrefsky 2004).

Early Archaic (8000 - 5000 BP)

The Early Archaic roughly coincides with increasing warmth and dryness during the Anithermal environmental conditions. Material culture of this period exhibits a continuation and/or alteration of Paleoarchaic characteristics and subsistence. While several Paleoarchaic adaptations persist into the Early Archaic period, regionally specific patterns develop in the area in response to local adaptations and activities. In the Middle Columbia, these are recognized as two somewhat contemporaneous and overlapping phases - the Cascade and Vantage Phases. Noted projectile point types include: the shouldered lanceolate Mahkin Shouldered point/knife (8000 - 5000 BP); the large triangular Cold Springs Side-notched type (6000 - 4000 BP); the Cascade projectile type group, consisting of three variants of a small lenticular, lanceolate point (8000 - 5000 BP) (Lohse and Schou 2008); and other non-specific stemmed shouldered lanceolates (Herbel and Bowden 2005).

This period is characterized by small, low-density sites interpreted as being occupied by small highly-mobile opportunistic foragers, with a broadening base of subsistence and greater inclusion of plan foods. Microblade technology also appears in the artifact assemblages during this period (Andrefsky 2004). A high frequency of salmon bones at Fivemile Rapids (Ames et al. 1998), one of the earliest known intensive fishery sites, represents the emergence and exploitation of that important resource.

Middle Archaic (5000 - 2000 BP)

In the Middle Columbia region, this period is also known as the very late Vantage phase and Frenchman Springs phase. Diagnostic point types of the period and Middle Columbia are: non-Cascade willow leaf-shaped projectile points; Rabbit Island Stemmed, defined as stemmed triangular points with squared shoulders; the Quilomene Bar Corner-Notched, a distinctive triangular point with broad corner notches; and the Columbia Corner-Notched Type A, a large corner notched triangular point with a straight to expanding stem (Herbel and Bowden 2005; Lohse and Schou 2008). Additional technological developments during the Middle Archaic include net sinkers, hopper mortar and pestles, cobble spall tools, and a variety of ground stone implements. The addition of these tools and materials indicates an increase in root crop exploitation around 4000 BP and a shift toward intensive salmon fishing around 3300 and 2200 BP (Andrefsky 2004).

Settlement patterns of the period include the continued use of open campsites and rockshelters, as well as the developing use of semi-subterranean pithouses. Though occurring sporadically very early in the period, pithouses become more common across the region by 4500 BP and

appear to be associated with seasonal foragers focused on exploiting local subsistence resources (Ames 1991; Andrefsky 2004; Kimball 2005).

Late Archaic (2000 BP - A.D. 1720)

The Late Archaic period saw the intensification of patterns developed in the Middle Archaic and the emergence of ethnographic characteristics. All available resource niches were intensively occupied and utilized. During this period, regional trade networks involving lithic and other non-local materials developed. Large pithouse villages were occupied on the primary watercourses and are typically interpreted as indicative of the development of the ethnographically known Plateau hunter-fisher-gatherer adaptations of intensive fishing, winter village settlement, and intensive use of processed and stored resources (Andrefsky 2004; Browman and Munsell 1969: 260-262; Chatters 2004). On the Middle Columbia, this period is associated with the Cayuse Phase.

Distinctive artifact types of the Cayuse Phase are net weights, adzes, shell beads and jewelry, and small projectile points. Temporally diagnostic point types for the Late Archaic include: the Quilomene Bar Basal-Notched, a stemmed basal-notched point with square to tapering barbs; the Columbia Corner-Notched B, a small corner-notched triangular point with straight to expanding stems; the Columbia Stemmed, a basal-notched triangular point with sharp, blunt, or square barbs; the Wallula Rectangular Stemmed, a small corner-notched triangular point with long straight stems; and Plateau Side Notched, a small side-notched triangular point with a base (Andrefsky 2004; Herbel and Bowden 2005; Lohse and Schou 2008).

Historic Context

Early Settlement and Industries

The first documented exploration of the Columbia Plateau was in 1805 by Meriwether Lewis and William Clark, who reported extensive salmon fishing economies of indigenous groups settled along the Columbia and Snake rivers. According to Splawn (1917), the territory of the people Lewis and Clark encountered was vast, spanning both banks of the Columbia River from the mouth of the Yakima River to the Saddle Mountains. The Yakima River drainage was occupied by the Kittitas and Yakama bands. The APE is within the area occupied by the Kittitas, who were the uppermost of two bands. The Kittitas are thought to be related linguistically to the Yakama. Both speak dialects of Ichi Skin Sinwit (what ethnographers and linguists refer to as Sahaptin). The Kittitas maintained ties with Salish-speaking tribes like the Wenatchi to the north (Schuster 1998).

Further European contact with Native Americans came with increased competition between fur trading companies navigating the Columbia River. Along this route, fur traders from the Northwest and Pacific Fur companies sought camp at areas occupied by Kittitas and Yakama groups. During an 1813 expedition, Alexander Ross of the Pacific Fur Company documented the indigenous council grounds in the Kittitas Valley. He observed the expansive gathering, which stretched across the landscape for great distances and included activities such as horse- and foot-racing, dancing, gambling, singing, hunting, and root gathering (Ross 1855).

As western ideologies proliferated across North America, the period of extensive European exploration and trade followed with the Euro-American settlement of the Kittitas Valley in 1848 through the establishment of Catholic missions. The influx of Catholicism to the region is thought to be the impetus for settler conflicts with both indigenous peoples and an emigrant population that was predominately of the Protestant faith (Ricard 1976). Perhaps realizing the potential mutualistic benefits, some tribal leaders requested the construction of Catholic missions on their traditional lands. A mission was constructed on the Simcoe River in 1848 at the request of Ka-mi-akin of the Yakamas (Glauert and Kinz 1976). Around the same period, a Catholic priest named Father Pandosy resided at a temporary mission with a Kittitas band living in the Selah Valley (Splawn 1917).

One mission, Holy Cross, is of particular significance in terms of inter-cultural conflict at the onset of the Historic period. Holy Cross was established in 1852 on Ahtanum Creek and was later burned to the ground by Washington Territorial volunteer troops upset with the mission's intervening on behalf of Yakama during a conflict known as the Yakama Wars (Glauert and Kunz 1976). The conflict began in the midst of treaty negotiations between the US government and tribal leaders in 1855. The dialogs were interrupted due to increased trespassing by gold prospectors across Yakama lands, which was met with vehement aggression from Native Americans.

Following the end of the war, the Yakama Treaty of 1855 was eventually signed; and the Yakama Nation, composed of 14 formerly independent bands (including the Kittitas Band), was created (Woody 2009). Provisions of the treaty called for the tribes to cede approximately 29,000 square miles of land, from which 1,875 square miles would be reserved for the sole use of the Yakama (Schuster 1990). These lands today are known as the Ceded Lands and the Yakama Nation Reservation. The Ceded Lands, to which the Yakama Nation maintains legal rights to resource procurement within, encompass the whole of the Kittitas Valley (Woody 2009).

The discovery of gold in portions of the Kittitas Valley in 1873 brought an influx of mining companies who hired Chinese laborers to work deposits along the Columbia River (Camuso and Lally 2012). White cattlemen also flocked to the region during the mid to late nineteenth century, given the suitability of the lush grasslands for ranching. By the 1880s, cattle overgrazing had decimated the landscape in the Yakima and Kittitas valleys. This, along with severe winters that killed large herds of cattle, resulted in setbacks for early ranchers, leaving only enough grassland to support seasonal rounds of grazing sheep (Herbal and Bowden 2005). Sheep herders in the region would winter their flocks near the Columbia River, herd them through the North Cascades to graze in the summer months, and then return to the Kittitas Valley for fall grazing (Shaw 1942).

The utilization of local waterways by Euro-American fur traders also proved viable for the growing logging industry of the late 1870s. The Kittitas Valley afforded this industry large supplies of timber; and, by 1880, several thousand feet of lumber was floated down the Yakima River to the Columbia River (Holstine 1994). The success of the local lumber industry led to

numerous sawmills and the construction of railroads, which were used to transport timber by land when river routes were closed by dam and irrigation projects. The Columbia River ferry system was also significant in facilitating the movement of people and goods across the Columbia Plateau from the mid-nineteenth century into the early twentieth century. This form of transportation set the stage for the development of additional land transportation means via the railroad and automobile industries.

In addition to supplying lumber and a means of transporting goods and people, Kittitas Valley river systems played an important role in agriculture, which prospered during the late nineteenth century. The construction of water diversions such as Manastash Canal in 1872, Taneum Ditch in 1873-1874, Ellensburg Town Canal in 1885-1889, Olson Ditch in 1870, Bull Ditch in 1886, and the Cascade Canal in 1903-1904 brought approximately 47,373 acres of Kittitas Valley land under irrigation before 1904 (Woody 2009; Doncaster 2016:7). The federally sponsored irrigation projects that followed during the early twentieth century would lead to improved farming conditions in notoriously arid portions of the Columbia Plateau.

Construction of the first major railroad through the region, the Northern Pacific Railway (NPR), was completed in 1884. Land along the right-of-way was granted to NPR by the federal government as payment for completing the transcontinental railroad; NPR then leased that land to newly arriving settlers and prospectors, while all surrounding area remained open for homesteading (Meinig 1968). Although many settlers wagered heavily that an economic boom would follow completion of the railroad, this did not occur. Prolonged periods of severe drought at the turn of the century along with the hardships of the Great Depression forced many homesteaders to sell their land, which was purchased by a few successful ranching families (Owens 2005; Doncaster 2016).

The city of Ellensburg was first settled by William Bud Wilson in 1868 and the first store "Robbers Roost" was opened by AJ Splawn and Ben Burch in 1870 to facilitate the trade of furs, supplies, and horses between the settlers and the local Kittitas band and Yakama Nation (City of Ellensburg 2017). Trade and commerce throughout the region flourished during the early part of the 1880s, and the city of Ellensburg was incorporated in 1883, becoming the county seat for Kittitas County that same year (ellensburgdowntown.org). The first election to form the city government was held in 1886 and soon after the North Pacific Railroad reached the city (ellensburgdowntown.org). As the population and commerce of the region expanded and prospered, Central Washington University was founded as the Washington State Normal School at Ellensburgh in 1891 (Mohler 1967).

The Early Twentieth Century

Although gold mining operations of the late nineteenth century were relatively short-lived given the lack of significant deposits in the region (Owens 2005), the early twentieth century saw success in mining silica from areas within the Kittitas Valley. The earliest of these operations began in 1915 with the Great Western Silica Company and the American-Japanese Silica Company (Camuso and Lally 2012). Other mining companies such as The Inland Empire Silica

Production Company and the Kittitas Diatomite Company began operations in 1919 and 1939, respectively. Silica mining in this region came to an end in the 1950s. Telltale remnants of these operations are observed in open trenches and scattered historical debris at the abandoned mines (Camuso and Lally 2012).

RECORDS AND LITERATURE REVIEW

Jacobs archaeologist Michael Farrell conducted a records search of the proposed project location and the surrounding areas using the Washington Information System for Architectural and Archaeological Records Database (WISAARD). WISAARD contains all cultural resource documents submitted to the Washington State Department of Archaeology and Historic Preservation (DAHP) since 1995. The records searches included the proposed Kittitas County Transfer Station location and a 1-mile surrounding radius area.

Additional sources of background research and information included: historic maps and General Land Office (GLO) records, National Register of Historic Places-Listed properties, historic United States Geological Survey topographic maps, and modern aerial photographs and topographic maps.

Jacobs archaeologists reviewed the records search results to contextualize the previously recorded cultural resources and to inform the development of expectations for archaeological and/or ethnographic resources to be located in the inventory area. The project location has never been surveyed; therefore, there are no previously identified cultural resources recorded in WISAARD within the Project Area.

The DAHP Predictive Model indicates portions of the project location range from moderate risk to very high risk of encountering cultural resources. Based on review of the setting, landform, and previous disturbance, the project location has a moderate potential for archaeological sites; the location is relatively near the Yakima River, but otherwise lies within an undifferentiated area of the Kittitas Valley. Previously, one cultural resource inventory has been conducted within 0.5 miles of the project area; no previously recorded cultural resources have been recorded within 0.5 miles. **Tables 1** and **2** contain the records search results.

Table 1. Previous Cultural Resource Studies Conducted within 0.5 mile of the Kittitas County Transfer Station Project Location.

Report #	Year	Author	Title	Description
1349174	2006	Orvald, Tucker O.	Cultural Resource Inventory for the Proposed Pautzke Diversion Redesign Project, Lower Currier Creek	Pedestrian Survey

Source: WISAARD (2018)

Table 2. Previously Recorded Cultural Resources within 0.5 mile of the Kittitas County Transfer Station Project Location.

Resource #	Distance from Project Location (Miles)	Description	NRHP Eligibility
N/A		No previously recorded cultural resources.	

Source: WISAARD (2018)

RESEARCH DESIGN

The following section provides an outline of the proposed objectives, expectations, and resulting developed methodology. This research design has been developed based upon the preceding information regarding the Project setting, review of previous work and documentation, and the preliminary results from the preceding field survey.

Objective and Expectations

The primary objective of the investigation was to conduct an inventory of the proposed Project Area to assess the presence/absence of previously undiscovered built environment and archaeological resources specifically with regard to potential impacts from construction of the waste transfer facility.

Background research indicated that no known cultural resources have been recorded within the proposed Project Area. Presumably, precontact occupation and use of the project vicinity would have included low-intensity hunting and foraging and travel through the area, as well as perhaps more intensive occupation near the Yakima River. Aerial images and historic maps indicate that the proposed Project Area has been used historically and currently for agricultural purposes for many years. Agricultural activities have included grazing, livestock fencing, and associated isolated improvements. Such activities would have disturbed archaeological deposits located on or near the surface. Depending on the depth, type, and frequency of disturbance, artifacts associated with archaeological deposits would have been disturbed and likely dispersed throughout the proposed Project Area.

Based upon that analysis and common archaeological and historic resources in this area, site types potentially located within the proposed Project Area include: campsites, lithic scatters, lithic quarries, irrigation canals and similar features, herding camps, livestock pens and features, and isolated precontact and historic artifacts.

Field Methods

Field methods consisted of a pedestrian survey and the excavation of shovel test pits (STP). The pedestrian survey consisted of walking interval pedestrian lines on east-west azimuth-oriented transects that were spaced approximately 10 - 15 meters apart. Transect survey was completed across 100% of the proposed Project Area. Indications of historic and modern

development were noted and documented. In areas of poor visibility, surveyors examined all exposed ground surfaces including erosional features, rodent backdirt piles, and animal paths. Field conditions were noted, and photographs taken to document the encountered conditions.

Placement of STPs within the proposed Project Area was based upon a uniform grid across the enclosure as a grid system was determined by Jacobs archaeologists as the most effective means to identify and assess potential subsurface archaeological deposits. Following the results of the pedestrian survey, which identified disturbance along the margins of the property, a 60 m interval cardinal grid was determined to be sufficient to sample and characterize the Project Area subsurface throughout the bulk of the survey area. All STPs measured approximately 40 centimeters (cm) (13.5 inches) in diameter and were excavated to depths of approximately 0 to 100 cm (0 to 40 inches), when hydric soils, water, dense alluvial rocks and gravel, or very dense subsoils were encountered. Supplemental excavation with a 10 cm diameter auger within selected shovel tests augers was used to assess soil deposits deeper than 100 cm. All excavated sediment was screened through 0.6-cm (1/4 inch) mesh hardware cloth. Upon completion, representative STP profiles were photographed with a digital camera and backfilled.

Artifact Recovery Protocol

Excavations used hand shovels, hand augers, soil probes, and trowels. Artifacts collected from each level were to be analyzed in the field. Any artifacts were to be temporarily reserved through the unit excavation and returned to the base of the hole prior to backfilling. Artifacts were to be returned in their natural state, and were not bagged, tagged, or otherwise modified.

Protocol in the Event of Discovery of Human Remains

The discovery of human remains did not occur during the cultural resources investigation. However, in the event of such occurrence, the DAHP policy regarding the Inadvertent Discovery of Human Skeletal Remains on Non-Federal and Non-Tribal Land in the State of Washington (Revised Code of Washington [RCW] 68.50.645, RCW 27.44.055, and RCW 68.60.055) was to be followed.

RESULTS

Field survey of the proposed Project Area was conducted by Michael Chidley, Michael Farrell, and Jane Wiegand on October 24 - 26, 2018. **Figures 2** through **4** provide maps and photographs of the inventory results.

Pedestrian Survey Results

The proposed APE is a relatively flat, grass-covered parcel containing a former livestock pasture/agricultural field. As noted above, the parcel has been modified for agricultural purposes, with channelized ditches, culvert crossings, and informal two track roads present scattered around the property. Livestock trampling had compacted and rutted the surface across the entire parcel, and multiple small irrigation ditches bisect the parcel. Pockets of standing water were present in isolated areas of the Project Area, but were most common in the southern and eastern quadrants.

None of the proposed Project Area is unaltered by anthropogenic activity. Due to grass vegetation and surface disturbances, surface visibility throughout varied between approximately 0 and 75 percent and averaged around 15 to 20 percent. The southern and western areas of the Project Area appear to be former wetland areas that have been infilled with transported alluvial sands, gravel and cobbles.

No surface artifacts or indication of historical period structures were identified during the pedestrian survey.

Shovel Test Results

Jacobs completed 54 STPs within the Project Area. A table of field results from shovel testing is provided in **Appendix A**. No artifacts were recovered from any of the STPs. STPs were assigned alphanumeric designations based upon transect lines and ordinal position. As noted above, STPs were completed on a 60 m cardinal north/south grid.

Soil and sediment profiles in the STPs revealed a highly variable subsurface stratigraphy. In the southern and western section of the parcel (STP lines F-H), the soil type was found to be hydric in composition, indicating that this area was a wetland area at one time during the past. This prior condition is further supported by the presence of remnant wetland areas beyond the property fence to the south (see Figure 4). However, it appears that fill materials, in the form of river sand, gravels, and cobbles, were brought onto the parcel to solidify and stabilize the ground surface. Northern STPs typically also contained hydric soils. However, no capping fill sediment was seen. A relatively intact A horizon remained below an overlying thin plow zone; both consisted of predominately silt clay loam with subangular gravels. The water table was found to be shallow and was frequently encountered less than 100 centimeters below surface (cmbs).

A subtle ridge or remnant terrace edge was seen in the Project Area, corresponding to the central portion of STP grid lines A through E. The soil profile along this ridge were consistent. The soils were deeper and more developed, consisting of a plow zone overlying a thin buried A horizon of silty clay loam, followed by compact B horizons of silty clay loam with an abundance of gravels. Supplemental auger excavation within select STPs in this area indicated that, below 100 cmbs, the soils consist of clayey sand with abundant gravels, and cobbles. This soil composition possibly indicates a former course of the Yakima River to the west of the parcel or Reecer Creek to the east.

No artifacts were recovered during shovel testing, and no evidence of archaeological potential were observed, such as buried anthropogenic soils or paleosols.

Figure 2. Kittitas County Transfer Station Project area survey results.

Figure 3. Overview of Kittitas County Transfer Station Project Area, view south.

Figure 4. Wetlands area south of parcel, view south.

ANALYSIS

No archaeological artifacts, features, or sites were identified during the course of surface and subsurface inventories.

CONCLUSIONS AND RECOMMENDATIONS

The pedestrian survey did not identify any precontact or historical archaeological artifacts or deposits in the proposed Project Area. Similarly, no archaeological deposits were observed in the STPs. The great majority of the proposed APE has been disturbed by livestock trampling and the soils are hydric throughout a large portion of the parcel. Small irrigation ditches are present through the property. Based on the presence of extensive historic and modern landscape modifications in the Project Area, there is little apparent potential for intact precontact or unidentified historic archaeological sites within the proposed Project Area.

No additional cultural resources studies are recommended at this time and archaeological monitoring is not recommended. In the event that archaeological materials are discovered during construction, the contractor is required to halt excavations in the vicinity of the find, have a professional archaeologist assess the significance of the archaeological deposits discovered during construction, and contact Kittitas County and DAHP. If human skeletal remains are discovered, the Kittitas County Sheriff and DAHP must be notified immediately.

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Appendix A

Shovel Test Results

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Test #	Width (cm)	Depth (cm)	Description	Artifacts
A1	40	0-100	0-20 - Ap - silty loam 20-70 - Ab - silty clay loam 70-100 - sand clay with sub-angular gravels	No
A2	40	0-100	Hydric soils - sandy clay mottled gray, tan, black	No
A3	40	0-100	0-22 - Ap - dark brown silty loam 22-100 - B1 - brown silt clay with gravels	No
A4	40	0-100	0-25 - Ap - dark brown silty loam 25-100 - B1 - brown silt clay with gravels	No
A5	40	0-100	0-15 - Ap - dark brown silty loam 15-25 - A- compact dark brown silty loam 25-100 - B1 - brown silt clay with gravels	No
A6	40	0-100	0-25 - Ap - dark brown silty loam 25-100 - Ab - brown silt clay with gravels	No
B1	40	0-100	0-21 - Ap - dark grayish brown sandy loam 23-65 - A - dark grayish brown sandy loam 65-75 - AB1 - Brown sandy clay loam 75 -100 - AB2 - Brown sandy clay loam with gravels	No
B2	40	0-100	0-23 - Ap - Brown sandy clay loam 23-100 - AB2 - Brown sandy clay loam with gravels	No
B3	40	0-100	0-26 - Ap - Brown sandy clay loam 26-100 - AB2 - Brown sandy clay loam with gravels	No
B4	40	0-78	0-19 - Ap - Brown sandy clay loam 19-68 - B1 - Brown sandy clay loam with gravels 68-78 - hydric	No
B5	40	0-100	0-23 - Ap - Brown sandy clay loam 23-74 - B1 - Brown sandy clay loam with gravels	No

Test #	Width (cm)	Depth (cm)	Description	Artifacts
			74-100 - hydric	
B6	40	0-100	0-16 - Ap - brown silt loam 16-34 - A - dark brown silt clay loam 34-85 - B1 - brown sandy clay loam with gravels 85- 100 - B2 - compact sandy clay loam with gravels	No
B7	40	0-125	0-18 - Ap - brown silt loam 18-32 - A - dark brown silt clay loam 32-80 - B1 - brown sandy clay loam with gravels 80-110 - B2 - compact sandy clay loam with gravels 110-125 - C - clay sand with gravels - Auger	
C1	40	0-125	0-12- Ap - brown silt loam 12-40 - A - dark brown silt clay loam 40-78 - B1 - brown sandy clay loam with gravels 78-105 - B2 - compact sandy clay loam with gravels 105-125 - C - clay sand with gravels water - Auger	No
C2	40	0-110	0-11 Ap - brown silt loam 11-29 A - dark brown silt clay loam 29-72 - B1 - brown sandy clay loam with gravels 72-95 - B2 - compact sandy clay loam with gravels 95-110 - C - clay sand with gravels water - Auger	No
C3	40	0-100	0-21 - Ap - dark brown loamy clay 21-40 - B1 light brown loamy clay 40-100 - B2 - light brown loamy clay with grey granules	No
C4	40	0-100	0-21 - Ap - dark loamy clay. 21-70 - B1 light brown loamy clay. 70-100 - B2 - brown loamy clay with grey granules.	No

Test #	Width (cm)	Depth (cm)	Description	Artifacts
C5	40	0-100	0-22 - Ap - dark loamy clay. 22-48 - B1 - light brown loamy clay. 48-100 - B2 - brown loamy clay with grey granules.	No
C6	40	0-100	0-15 - Ap - dark loamy clay. 15-45 - B1 - light brown loamy clay. 45-100 - B2 - brown loamy clay with grey granules.	No
C7	40	0-100	0-21 - Ap - dark loamy clay. 70-100 - B2 - brown loamy clay with grey granules.	No
C8	40	0-100	Hydric soils	No
D1	40	0-100	0-27 - Ap - dark brown silty clay loam 27-100 - hydric soils	No
D2	40	0-20	0-10 - Ap - dark brown silty clay loam 10-20 - hydric soils	No
D3	40	0-130	0-28 - Ap - brown silty clay loam 28-46 - A - dark brown silty clay loam 46-120 - B1 - brown compact silty clay loam with gravels 120-130 - C - sand clay and gravels - Auger	No
D4	40	0-100	0-9 - Ap - brown silty clay loam 9-38 - A - dark brown silty clay loam 38-100 - B1 - compact silty clay loam with gravels	No
D5	40	0-100	0-11 - Ap - brown silty clay loam 11-27 - A - dark brown silty clay loam 27-100 - B1 - compact silty clay loam with gravels	No
D6	40	0-100	0-18 - Ap - brown silty clay loam 18-34 - A - dark brown silty clay loam 34-65 - B1 - compact silty clay loam with gravels	No

Test #	Width (cm)	Depth (cm)	Description	Artifacts
D7	40	0-100	0-16 - Ap - brown silt clay loam 16-32 - A - very dark brown silt clay loam with gravels 32-100 - B1 - light brown silt clay loam	No
D8	40	0-4	Hydric soils	No
D9	40	4-12	Hydric soils	No
E1	40	0-50	0-19 - Ap - dark brown silty clay loam 19-26 - A - compact brown silty clay loam 29-50 - hydric soils	No
E2	40	0-50	0-22 - Ap - dark brown silty clay loam 22-50 - hydric soils	No
E3	40	0-50	0-16 - Ap - dark brown silty clay loam 16-20 - A - compact brown silty clay loam 20-50 - hydric soils	No
E4	40	0-65	0-19 - Ap - dark brown silty clay loam 19-48 - A - compact brown silty clay loam 48-65 - hydric soils	No
E5	40	0-100	0-17 - Ap - dark brown silty clay loam 17-100 - hydric soils	No
E6	40	0-60	0-25 - Ap - dark brown silty clay loam 25-30 - A - compact brown silty clay loam 30-60 - hydric soils	No

Test #	Width (cm)	Depth (cm)	Description	Artifacts
E7	40	0-85	0-32 - Ap - brown silty clay loam 32-85 - B1 - light brown compact silty clay loam with gravels. Water at 85	No
E8	40	0-65	0-32 - Ap - brown silty clay loam 32-65 - B1- light brown compact silty clay loam with gravels. Water at 65	No
E9	40	0-65	0-18 - Ap - brown silty clay loam 18-34 - A - dark brown silty clay loam 34-65 - B1 - compact silty clay loam with gravels Water at 65	No
F1	40	0-45	0-8 - Ap - Silt clay loam brown 75% gravels 8-20 - Hydric soils	No
F2	40	0-20	0-9 - Ap - Silt clay loam brown 75% gravels 9-20 - Hydric soils	No
F3	40	0-25	0-12 - Ap - Silt clay loam 75% gravels 12-25 - Hydric soils	No
F4	40	30	0-19 - Ap - silt clay loam 75% gravels 19-30 - Hydric soils	No
F5	40	0-40	0-10 - Ap - brown silty clay loam 10-15 - A - dark brown silty clay loam 15-40 - hydric soils	No
F6	40	0-50	0-18 - Ap - dark brown silty clay loam 18-50 - hydric soils	No
G1	40	0-45	Hydric soils - sandy clay mottled gray, tan, black	No
G2	40	0-28	Hydric soils - sandy clay mottled gray, tan, black	No
G3	40	0-30	Sandy clay, very dark brown. 75% gravels, rock refusal	No
G4	40	0-30	0-14 - Ap - silt clay loam 75% gravels	No

Test #	Width (cm)	Depth (cm)	Description	Artifacts
			14-30 - Hydric soils	
G5	40	0-30	0-13 - Ap - silt clay loam 75% gravels 13-30 - Hydric soils	No
G6	40	0-50	0-20 - Ap - dark brown silty clay loam 20-30 - A - compact brown silty clay loam 30-50 - hydric soils	No
H1	40	0-45	Hydric soils - sandy clay mottled gray, tan, black	No
H2	40	0-45	Hydric soils - sandy clay mottled gray, tan, black	No
H3	40	0-45	Hydric soils - sandy clay mottled gray, tan, black	No

Allyson Brooks Ph.D., Director
State Historic Preservation Officer

April 23, 2019

Ms. Patti Johnson
Director
Kittitas County Solid Waste
925 Industrial Way
Ellensburg, WA. 98926

In future correspondence please refer to:
Project Tracking Code: 2018-09-07209
Property: Kittitas County_ Solid Waste Transfer Station Construction Project
Re: Executive Order 05-05 No Effect to Historic Properties

Dear Ms. Johnson:

Thank you for contacting the Department of Archaeology and Historic Preservation (DAHP) and providing a copy of the cultural resources survey report for the above referenced project. As a result of our review, we agree with recommendations made in the report and your finding of no effect on cultural resources. As a result of our agreement, further contact with DAHP on this matter is not necessary.

Should new information become available or the scope of work changes, please resume consultation as our assessment may be revised. In the event that archaeological or historic materials are discovered during project activities, work in the immediate vicinity must stop, the area secured, and contact made with concerned tribes and DAHP for further consultation.

We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of Executive Order 05-05.

These comments are based on the information available at the time of this review and on the behalf of the State Historic Preservation Officer in conformance with Executive Order 05-05.

Thank you for the opportunity to review and comment. If you have any questions, please contact me.

Sincerely,

Dennis Wardlaw
Transportation Archaeologist
(360) 586-3085
dennis.wardlaw@dahp.wa.gov