

#### **Department of State Lands**

775 Summer Street NE, Suite 100 Salem, OR 97301-1279 (503) 986-5200 FAX (503) 378-4844 www.oregon.gov/dsl

**State Land Board** 

Kate Brown

Governor

Calico Resources USA Corp Attn: Nancy Wolverson

665 Anderson St.

May 3, 2018

Winnemucca, NV 89445

Re: WD #2018-0115 Wetland Delineation Report for Grassy Mountain Mine Project Malheur County; T22S R44E (Sections 5-8), Tax Lot 100, T21S R44E (Section 3, 10, 11, 14, 15, 21-23, 28, 29, 32), Tax Lot 100, T20S R44E (Sections 1, 6, 7, 12-14, 23, 26-27, 34), Tax Lots 100 and 300, T19S 44E (Sections 22-23, 26, 35-36), Tax Lots 600

and 900

Dennis Richardson Secretary of State

> **Tobias Read** State Treasurer

Dear Ms. Wolverson:

The Department of State Lands has reviewed the wetland delineation report prepared by EM Strategies for the site referenced above. Please note that the study area includes only a partion of the tax lots described above (see the attached map). Based upon the information presented and waterway boundaries as mapp copies of the preliminary wetland map with these small Department-approved maps

Within the study area, two wetlands (Wetland 1-2) totaling approximately 0.20 acres, one waterway (J-H Canal), ten tributary drainages (Tributaries 1-10), and one reservoir (Schweizer Reservoir) were identified. Wetlands 1-2 and the J-H Canal are subject to the permit requirements of the state Removal-Fill Law. Under current regulations, a state permit is required for cumulative fill or annual excavation of 50 cubic yards or more in the wetlands or below the ordinary high-water line (OHWL) of the waterway (or the 2 year recurrence interval flood elevation if OHWL cannot be determined). The ten tributaries and Schweizer Reservoir are exempt per OAR 141-085-0515(3) and -0515(7); therefore, are not subject to current state Removal-Fill requirements.

This concurrence is for purposes of the state Removal-Fill Law only. Federal or local permit requirements may apply as well. The Army Corps of Engineers will determine jurisdiction for purposes of the Clean Water Act. We recommend that you attach a copy of this concurrence letter to both copies of any subsequent joint permit application to speed application review.

Please be advised that state law establishes a preference for avoidance of wetland impacts. Because measures to avoid and minimize wetland impacts may include reconfiguring parcel layout and size or development design, we recommend that you work with Department staff on appropriate site design before completing the city or county land use approval process.

This concurrence is based on information provided to the agency. The jurisdictional determination is valid for five years from the date of this letter unless new information necessitates a revision. Circumstances under which the Department may change a determination are found in OAR 141-090-0045 (available on our web site or upon request). In addition, laws enacted by the legislature and/or rules adopted by the Department may result in a change in jurisdiction; individuals and applicants are subject to the regulations that are in effect at the time of the removal-fill activity or complete permit application. The applicant, landowner, or agent may submit a request for reconsideration of this determination in writing within six months of the date of this letter.

Thank you for having the site evaluated. Please phone me at 503-986-5218 if you have any questions.

Sincerely,

Lauren Brown

Jurisdiction Coordinator

Approved by

Kathy Werble, CPSS

Aquatic Resource Specialist

Enclosures

Superseded

ec:

Sarah Harrelson, EM Strategies, Inc.

Malheur County Planning Department (Maps enclosed for updating LWI)

Benny Dean, Corps of Engineers

Janet Gillaspie, Environmental Strategies, LLC

Randy Jones, DOGAMI Bethany Harrington, DSL

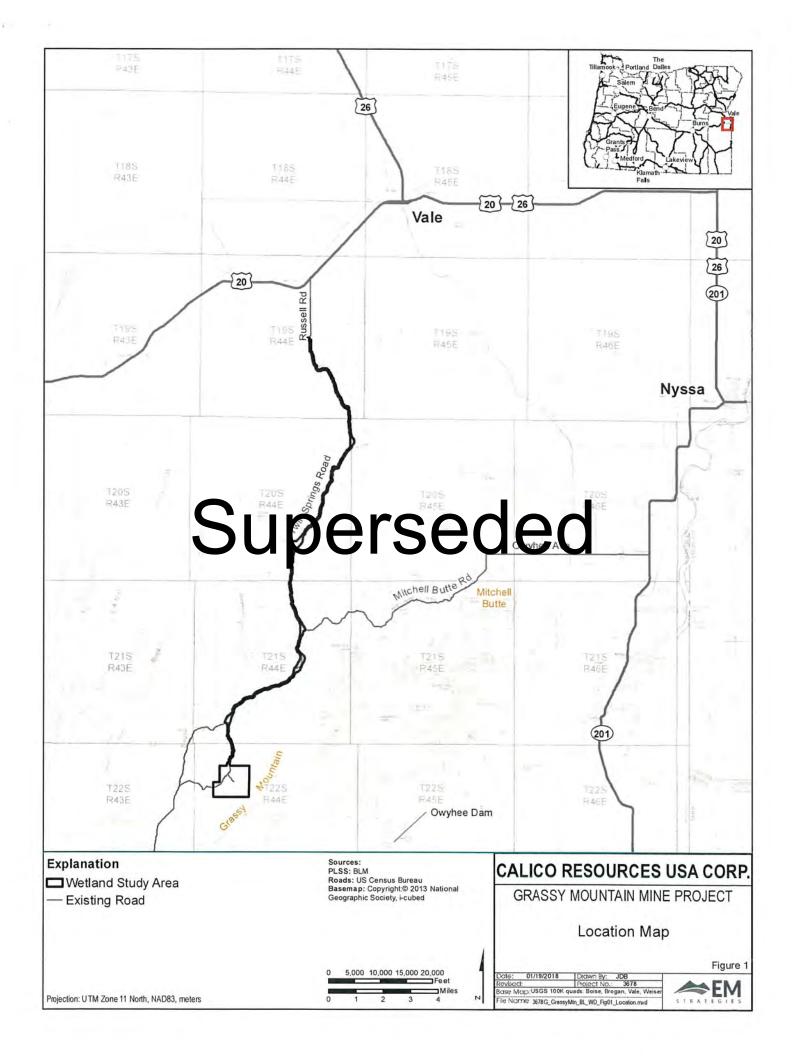
Kirk Jarvie, DSL

#### WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

Fully completed and signed report cover forms and applicable fees are required before report review timelines are initiated by the Department of State Lands. Make checks payable to the Oregon Department of State Lands. To pay fees by credit card, go online at https://apps.oregon.gov/DSL/EPS/program?key=4.

Attach this completed and signed form to the front of an unbound report or include a hard copy with a digital version (single PDF file of the report cover form and report, minimum 300 dpi resolution) and submit to: **Oregon Department of State Lands, 775 Summer Street NE, Suite 100, Salem, OR 97301-1279.** A single PDF of the completed cover from and report may be e-mailed to **Wetland\_Delineation@dsl.state.or.us**. For submittal of PDF files larger than 10 MB, e-mail DSL instructions on how to access the file from your ftp or other file sharing website.

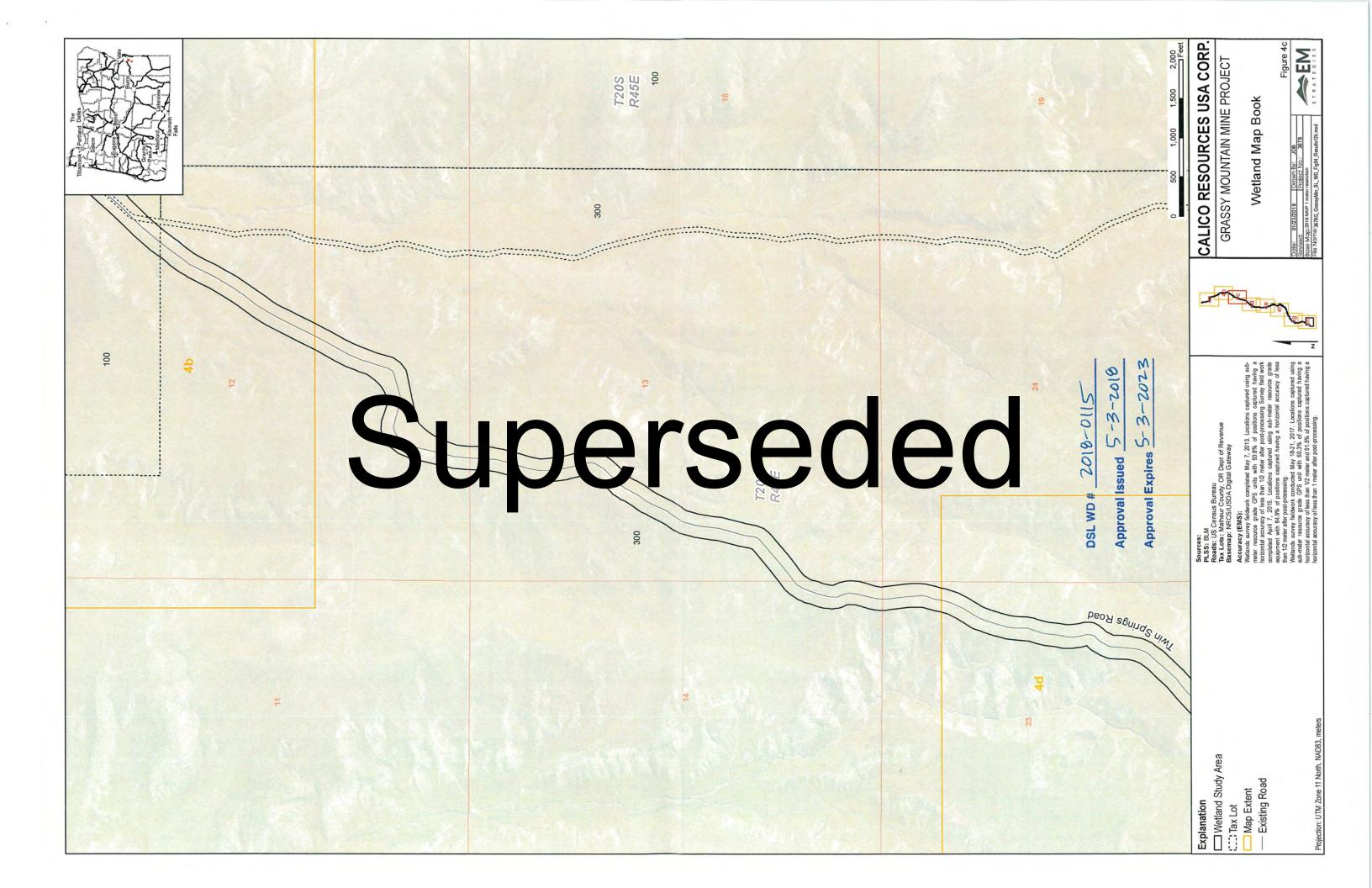
| Contract and Authorization Information   |  |  |  |  |  |
|--|--|--|--|--|--|
| Contact and Authorization Information  |  |  |  |  |  |
| Applicant Owner Name, Firm and Address:  | Business phone # (775) 625-3600  |  |  |  |  |
| Calico Resources USA Corp  | Mobile phone # (optional)  |  |  |  |  |
| 665 Anderson St.<br>Winnemucca, NV 89445   | E-mail: nancy@paramountnevada.com  |  |  |  |  |
|  | D : 4 /775\ 005 0000   |  |  |  |  |
| Authorized Legal Agent, Name and Address (if different):<br>Same as Above  |  |  |  |  |  |
| Attention: Nancy J Wolverson   | Mobile phone # (optional) (775) 770-4615<br>E-mail: nancy@paramountnevada.com      |  |  |  |  |
| The state of the s | E-mail. handy@paramountnevada.com  |  |  |  |  |
| property for the purpose of confirming the information in the report   |  |  |  |  |  |
| Typed/Printed Name: Nancy J Wolverson  | Signature: Digitally signed by Nancy J Wolverson Date: 2018.03.01 11:08:18 -08'00' |  |  |  |  |
| Date: 03/01/2018 Special instructions regarding si   |  |  |  |  |  |
| Project and Site Information   |  |  |  |  |  |
| Project Name: Grassy Mountain Mine Project   | Latitude: 43.729922 Longitude: -117.337827   |  |  |  |  |
|  | decimal degree - centroid of site or start & end points of linear project          |  |  |  |  |
| Proposed Use: hard rock mining   | Tax Map # Tax lots: 100, 300, 400, 600, 900  |  |  |  |  |
|  | Tax Lot(s)   |  |  |  |  |
| SILIDO   |  |  |  |  |  |
| Project Street Address (or other sest riptive I cation)  | Tax = '(s)   |  |  |  |  |
| Malheur County, Oregon, application 22 Nils  | Township 220 Range 442 Cestion see at QQ   |  |  |  |  |
| south-southwest of Vale, Oregon  | The superior district additional tax and recation information                      |  |  |  |  |
| City: n/a County: Malheur  | Waterway: Malheur River River Mile: n/a  |  |  |  |  |
| Wetland Delineation Information  |  |  |  |  |  |
| Wetland Consultant Name, Firm and Address:   | Phone # (775) 826-8822   |  |  |  |  |
| Sarah M. Harrelson of EM Strategies, Inc.  | Mobile phone # (if applicable)   |  |  |  |  |
| 1650 Meadow Wood Lane<br>  Reno, NV 89502  | E-mail: sarah@emstrats.com   |  |  |  |  |
|  |  |  |  |  |  |
| The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge.  Consultant Signature: Date: 3 / / / C   |  |  |  |  |  |
| A Well I'Miller  | m Date: 3/1/18   |  |  |  |  |
| Primary Contact for report review and site access is   |  |  |  |  |  |
| Wetland/Waters Present?  | a size: 1,762 acres Total Wetland Acreage: 0.29 3 cres                             |  |  |  |  |
| Check Applicable Boxes Below   |  |  |  |  |  |
| R-F permit application submitted   | √ Fee payment submitted \$ \$ 437  |  |  |  |  |
| - Total - St. 198  | Fee (\$100) for resubmittal of rejected report                                     |  |  |  |  |
|  | Request for Reissuance. See eligibility criteria. (no fee)                         |  |  |  |  |
| ☐ Wetland restoration/enhancement project  | DSL # Expiration date  |  |  |  |  |
| (not mitigation)   |  |  |  |  |  |
| ☑ Previous delineation/application on parcel   | LWI shows wetlands or waters on parcel   |  |  |  |  |
| If known, previous DSL # WD2015-0432 Wetland ID code   |  |  |  |  |  |
|  | fice Use Only  |  |  |  |  |
| DSL Reviewer: Fee Paid Date:   | _11 DSL WD# <u>2018 - 0115</u>   |  |  |  |  |
| Date Delineation Received: 3 / 1 / 8 Scanne  | d:   DSL App.#   |  |  |  |  |
| October 2017   | Project 59704  |  |  |  |  |
| October 2017   |  |  |  |  |  |

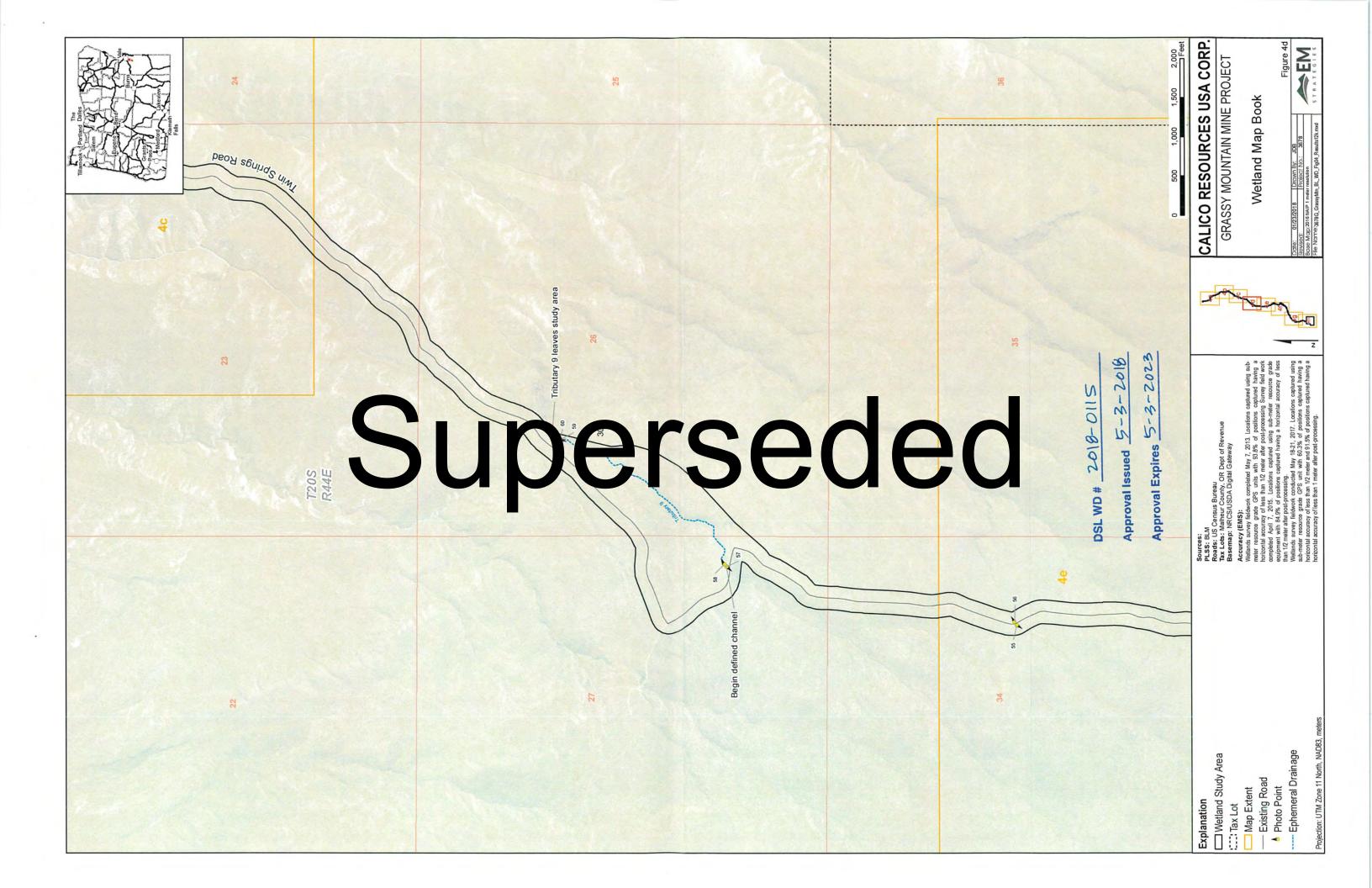


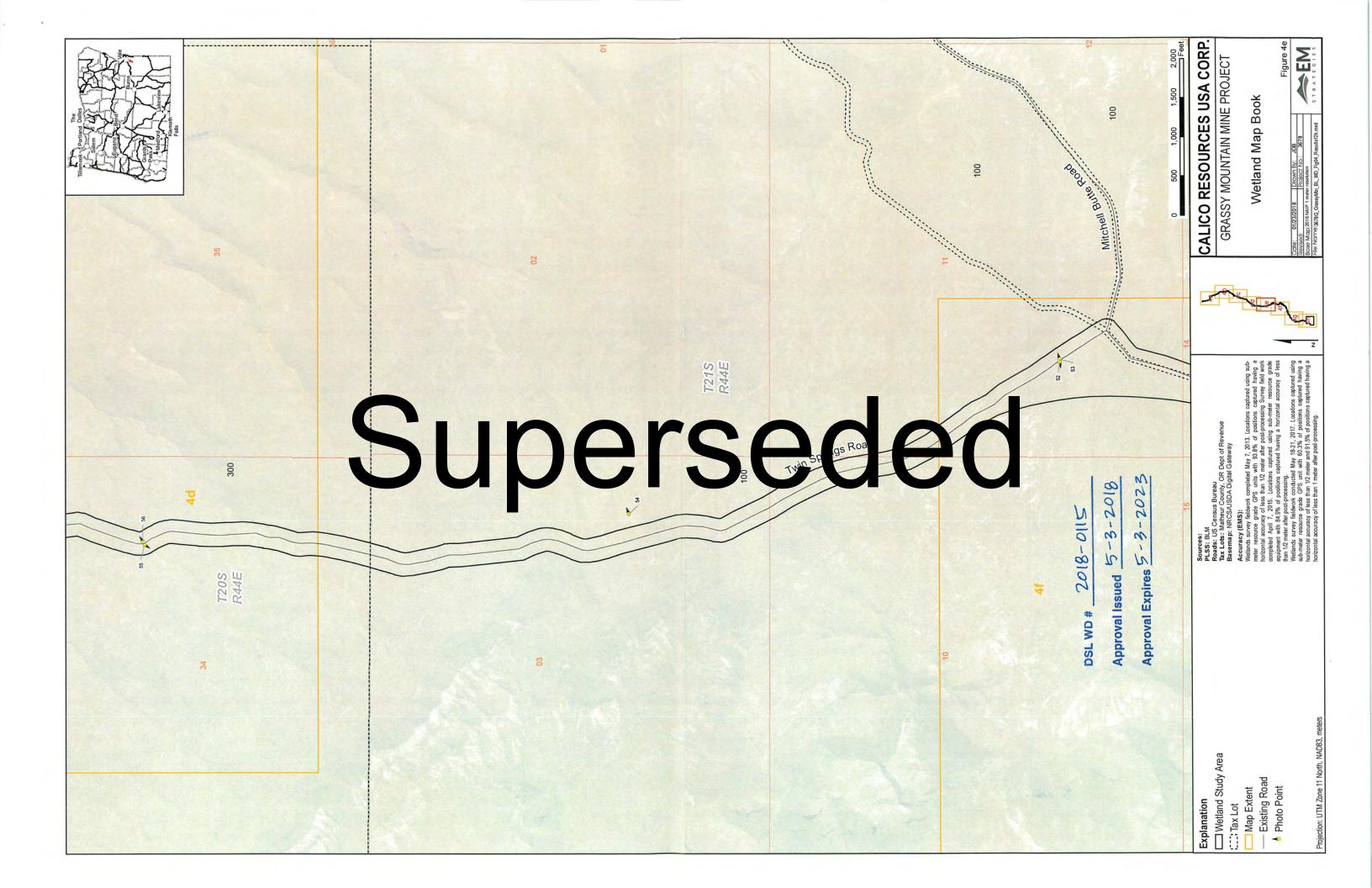


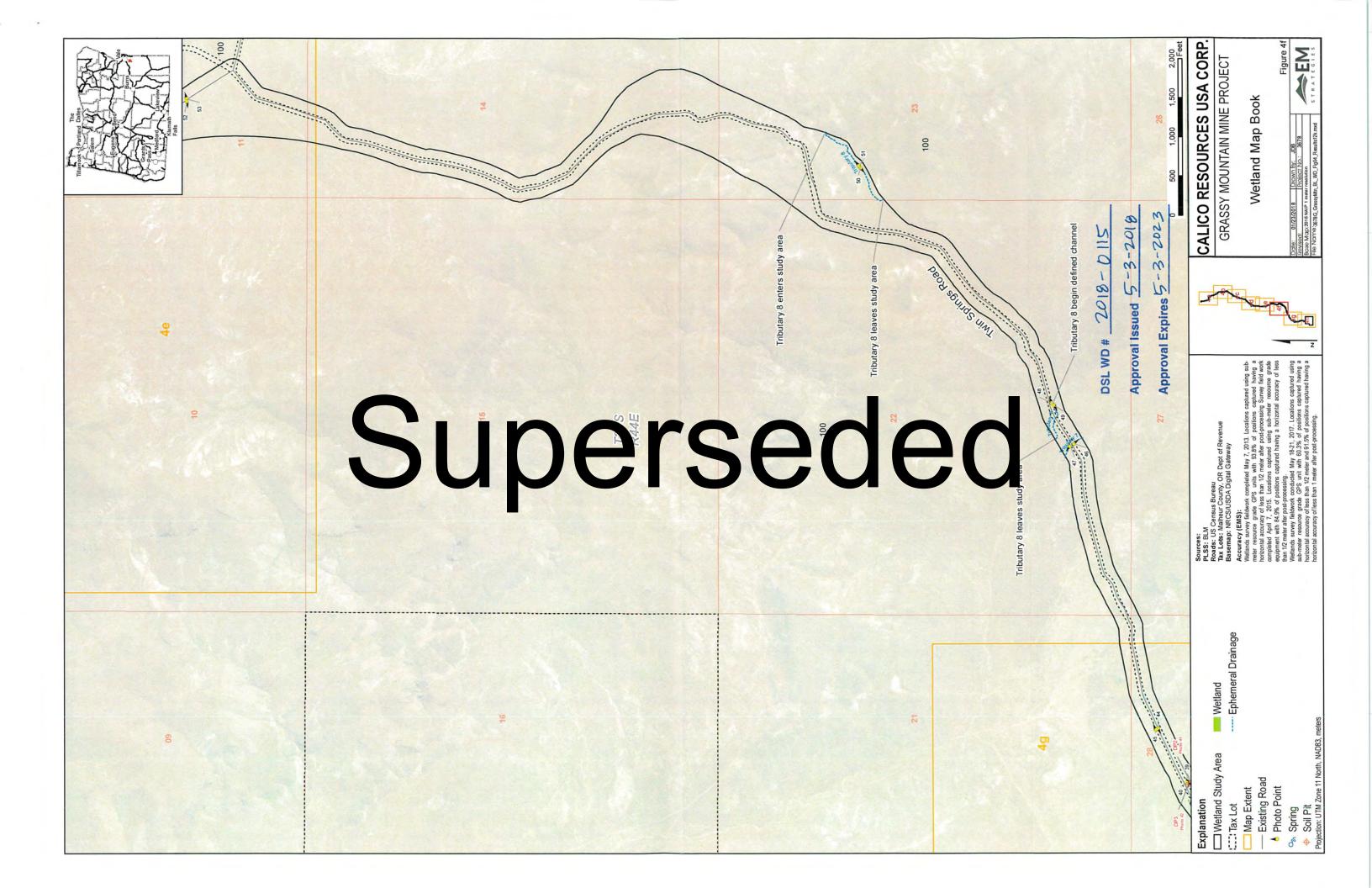


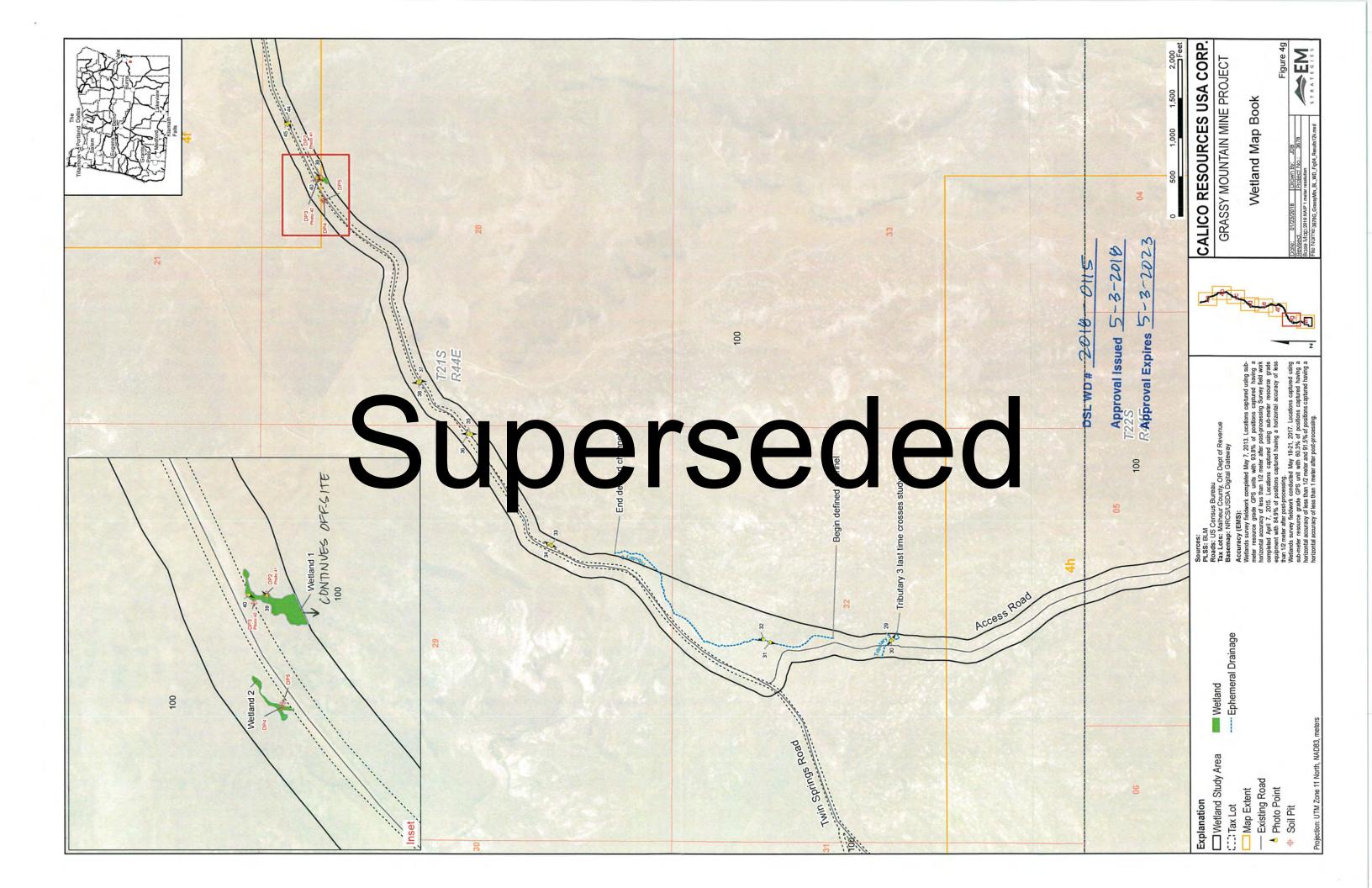


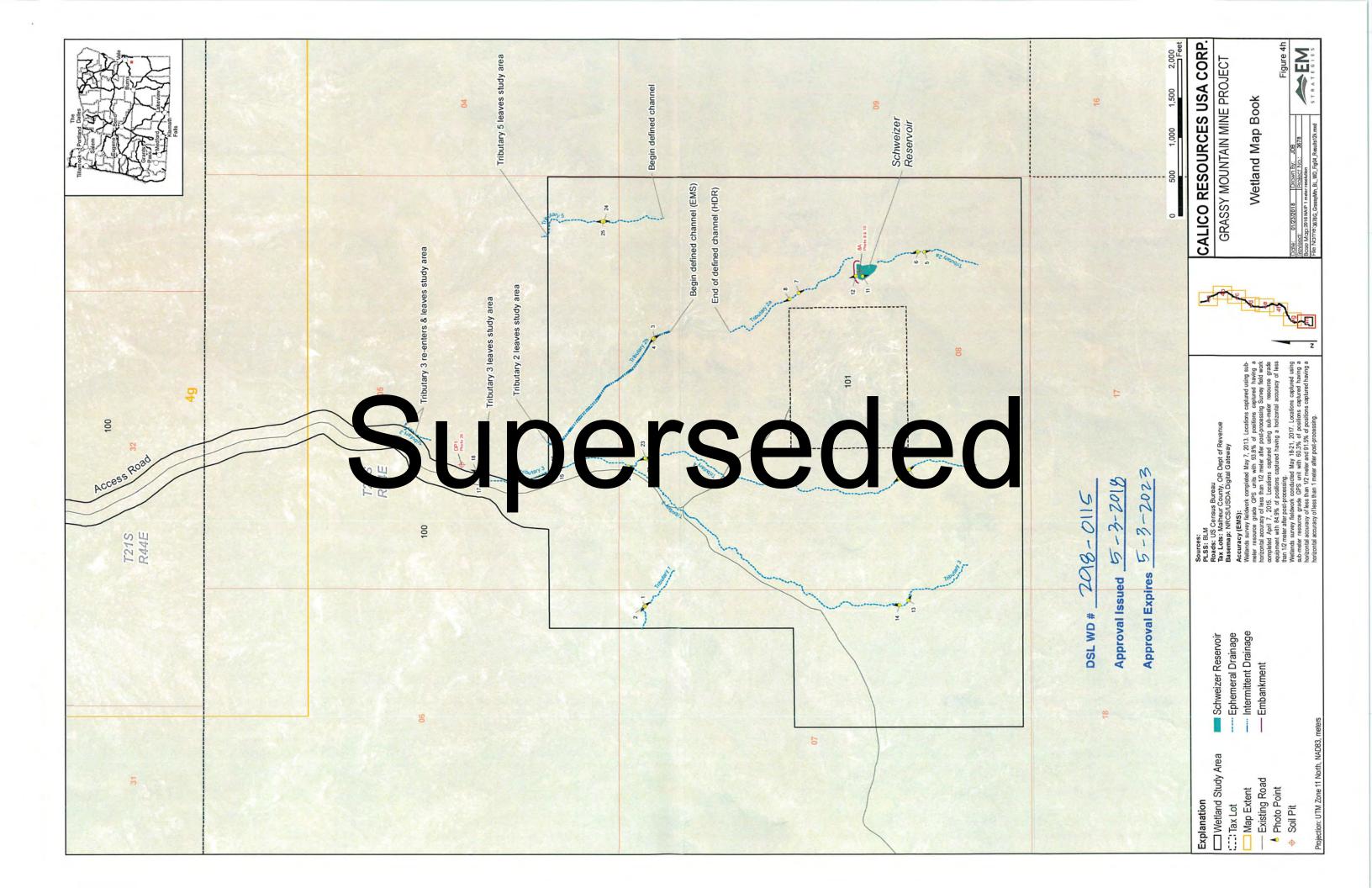












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| file from your tip or other file sharing website.   |  |  |  |  |  |
|---|--|--|--|--|--|
| Contact and Authorization Information   |  |  |  |  |  |
| ☒ Applicant ☐ Owner Name, Firm and Address:   | Business phone # (775) 625-3600  |  |  |  |  |
| Calico Resources USA Corp   | Mobile phone # (optional)  |  |  |  |  |
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| Attention. Namely 5 Wolverson   | E-IIIali. Harioy@paramountrievada.com  |  |  |  |  |
|   | to allow access to the property. I authorize the Department to access the  |  |  |  |  |
| property for the purpose of confirming the information in the report  | 4 21 Distally stand by Norwy 1 Well-years  |  |  |  |  |
| Typed/Printed Name: Nancy J Wolverson   | Signature: Date: 2018.03.01 11:08:18 -08'00'   |  |  |  |  |
| Date: 03/01/2018 Special instructions regarding si  | te access:   |  |  |  |  |
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| Cupa  | Tax Lot(s)   |  |  |  |  |
| Project Street Address (or other discriptine location.  |  |  |  |  |  |
| Malheur County, Oregon, approximately 22 miles  | Township zzs Range 44E Section see at QQ   |  |  |  |  |
|   |  |  |  |  |  |
| South-southwest of vale, Oregon   | II Use separate speet for additional tax and location information  |  |  |  |  |
|   |  |  |  |  |  |
| City: n/a  County: Malheur  Wetland Delineation Information   |  |  |  |  |  |
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#### **Project and Site Information:**

#### **Township and Range Location:**

The Wetland Study Area is located in all or portions of: Sections 5 through 8, Township 22 South, Range 44 East (T22S, R44E); Sections 3, 10, 11, 14, 15, 21 through 23, 28, 29, and 32, T21S, R44E; Sections 1, 12 through 14, 23, 26, 27, and 34; T20S, R44E; and Sections 22, 23, 26, 35, and 36, T19S, R44E, Willamette Meridian.

## Superseded

#### **CALICO RESOURCES USA CORPORATION**

#### **GRASSY MOUNTAIN MINE PROJECT MALHEUR COUNTY, OREGON**

#### WETLAND DELINEATION REPORT

February 2018

#### Prepared for:



Prepared by:



Reno: 1650 Meadow Wood Lane Reno, Nevada 89502 Phone: (775) 826-8822 | Fax: (775) 826-8857 | Phone: (775) 753-9496 | Fax: (775) 826-8857

Elko: 835 Railroad Street Elko, Nevada 89801

### CALICO RESOURCES USA CORPORATION GRASSY MOUNTAIN MINE PROJECT WETLAND DELINATION REPORT

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|       |                 |       |         |          |              |               |         |          |          |
| B.    |                 |       |         |          |              |               |         |          |          |
| C.    | <b>PRECIPIT</b> | ΓΑΤΙΟ | ON DATA | A AND AN | NALYSIS      |               |         |          | 2        |
| D.    |                 |       |         |          |              |               |         |          |          |
| E.    | <b>DESCRIP</b>  | TION  | OF ALL  | WETLAN   | IDS AND OTH  | ER NON-WETLA  | AND V   | VATERS   | 3        |
| F.    | DEVIATION       | ON    | FROM    | LOCAL    | WETLANDS     | INVENTORY     | OR      | NATIONAL | WETLANDS |
|       | INVENT          | ORY   |         |          |              |               |         |          | 5        |
| G.    | MAPPIN          | G M   | THOD    |          |              |               | <b></b> | ••••••   | 6        |
| H.    | <b>ADDITIO</b>  | NA    | INFOR V | /ATION:  |              | sec           |         | <b></b>  | 6        |
| l.    | RESULTS         | AN    | CONC    | UTIC VS  |              |               |         |          | 6        |
| J.    | DISCLAIR        | MER.  |         |          |              |               |         |          | 7        |
| K.    | REFEREN         | ICES. |         |          | •••••        |               | •••••   |          | 8        |
|       |                 |       |         |          |              |               |         |          |          |
|       |                 |       |         |          | TABL         | ES            |         |          |          |
| Table | <b>1</b> .      |       |         |          |              | at Owyhee Dar |         |          |          |
| Table | e 2.            | Sı    | ummary  | of Non-\ | Wetland Wate | ers           | •••••   |          | 5        |
|       |                 |       |         |          | APPEND       | DICES         |         |          |          |
|       |                 |       |         |          | ALLENE       | ,10LJ         |         |          |          |
| Арре  | ndix A:         | Figu  | res     |          |              |               |         |          |          |
| Appe  | ndix B:         | Wet   | land an | d SDAM   | Data Forms   |               |         |          |          |

i

**Appendix C:** Site Photographs

#### A. LANDSCAPE SETTING AND LAND USE

#### <u>Purpose</u>

The purpose of this wetland delineation report is to characterize existing conditions prior to the start of proposed mining operations at the Calico Resources USA Corporation (Calico) Grassy Mountain Mine Project (Project), located in Malheur County, Oregon. In addition, this report delineates wetlands within and adjacent to the wetland study area.

#### **Project Location**

Project Background

The Project is located approximately 22 miles south-southwest of Vale (Appendix A, Figure 1), and is approximately 1,762 acres in size (Wetland Study Area) (Appendix A, Figure 2).

The Wetland Study Area is located in all or portions of: Sections 5 through 8, Township 22 South, Range 44 East (T22S, R44E) Willamette Meridian (WM); Sections 3, 10, 11, 14, 15, 21 through 23, 28, 29, and 32, T21S, R44E; Sections 1, 6, 7, 12 through 14, 23, 26, 27, and 34; T20S, R44E; and Sections 22, 23, 26, 35, and 36, T19S, R44E, WM, on lands administered by the Bureau of Land Management, Vale District Office (BLM), and private land controlled by others.

A portion of the Wetland Study (reaw as surveyed for vector ds and mon-y etland waters by HDR Engineering, Inc. (HER) in 2012, identified as Tax Lot 101 on Figure 2 in Appendix A. HDR did not identify any surface waters within the 2012 survey area (HDR 2012). HDR conducted an additional survey of a second portion of the Wetland Study Area in 2015 (Appendix A, Figure 2), which identified three ephemeral drainages and one pond (Schweizer Reservoir). Results of the 2015 survey are discussed in detail in Section E of this report. The remainder of the Wetland Study Area was surveyed by EM Strategies (EMS) in 2017 (Appendix A, Figure 2).

#### **Vegetation**

With the exception of 0.3 mile of the northern portion of the Wetland Study Area which is active agriculture row crops, most of the vegetation within the Wetland Study Area is a desert-rangeland type with sagebrush and grasses as the dominant species (HDR 2015, EMS 2017). The area has been extensively grazed, and portions of the Wetland Study Area were re-seeded after a wildfire with a crested wheatgrass (*Agropyron cristatum*)-dominated seed mix. Five vegetation community types were identified within the Wetland Study Area during the 2015 and 2017 surveys:

- 1. Mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*)/crested wheatgrass community;
- 2. Crested wheatgrass seeding community;
- 3. Bluebunch wheatgrass (*Pseudoroegneria spicata* ssp. *spicata*)/cheatgrass (*Bromus tectorum*)/annual community;
- 4. Mountain big sagebrush/bluebunch wheatgrass community; and

5. Burned yellow rabbitbrush (*Chrysothamnus viscidiflorus*)/bluebunch wheatgrass community.

#### Topography

Topography within the Wetland Study Area consists of large rolling hills and open valleys. Elevations range from 2,320 feet to 3,800 feet above mean sea level. Generally, slopes range from two to 15 percent.

#### **Geology and Soils**

Geology in the Wetland Study Area consists primarily of a thick sequence of arkosic sandstone, clayey siltstone, and reworked tuffs that are locally capped by olivine basalt flows (ACZ Inc. 1993). A Natural Resources Conservation Service (NRCS) soil survey was not available for the Wetland Study Area. Field investigations conducted by HDR in 2012 and 2015, and by EMS in 2017, determined that soils generally consist of rocky sandy loams. There are smaller areas of sandy clay soils.

#### **Land Use**

Past and current activities within the vicinity of the Wetland Study Area include mineral exploration, livestock grazing, and recreation.

B. SITE ALTERATION UP CENTER OF THE PROPERTY O

Site alterations within the Wetland Study Area include agricultural fields and heavy livestock grazing. Additional site alterations within the vicinity of the Wetland Study Area include many cut and fill roads used for vehicle access to various sites, and surface disturbance due to drill pads from past exploration activities which occurred between 1986 and 2017.

#### C. PRECIPITATION DATA AND ANALYSIS

The nearest weather station is at the Owyhee Dam, station number 356405, located approximately 5.3 miles southeast of the Wetland Study Area. Although there was no precipitation during the May 18 through 21, 2017, site investigation, 0.43 inch was recorded for May 17, 2017 (NRCS 2017). The total amount of precipitation recorded for May 4 through 17 was 0.75 inch. Table 1 summarizes the percent of normal precipitation for the water year to date and the monthly percent of normal for each of the three months preceding the field investigation.

Table 1. Summary of Precipitation Data at Owyhee Dam

| Category   | Feb  | March | April | May  | Water Year-to-Date<br>(Jan-May) |
|--|------|-------|-------|------|---------------------------------|
| Monthly Total Precipitation 2017 (inches) <sup>1</sup> | 0.91 | 1.67  | 1.34  | 0.76 | 8.17                            |
| Monthly Normal 1981-2010 (inches) <sup>1</sup>         | 0.76 | 0.89  | 0.96  | 1.16 | 4.69                            |
| Percent of Normal                                      | 120% | 188%  | 140%  | 66%  | 174%                            |

<sup>1</sup>NRCS (2017)

#### D. METHODS

This wetland delineation was performed according to the standards set forth in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and *Final Arid West Supplement* (Environmental Laboratory 2008). EMS reviewed existing literature, including United States Geological Survey (USGS) topographic maps, aerial imagery, NRCS soils data (not available for the Wetland Study Area), National Wetland Inventory (NWI) maps, and National Hydrography Dataset (NHD) hydrology data to evaluate the physical features of the Wetland Study Area. The data review facilitated the identification of potential wetland areas and prioritization of field survey areas. Stream channels were evaluated for flow duration and presence of an ordinary high-water mark (OHWM) using the methods outlined in the *Streamflow Duration Assessment Method for Oregon* (SDAM) (Nadeau 2011).

EMS conducted wetland field surveys May 18 through 21, 2017; HDR conducted wetland field surveys July 5, 2012, and April 7, 2015. Paired soil pits were used to evaluate the soils, vegetation, and hydrology of potential wetlands. Wetland and stream boundaries were mapped using a handheld Trimble GeoExplorer XH6000 global positioning system (GPS) unit. Photographs were taken at each soil pit and of the surrounding environment. GPS coordinates of each feature were recorded. United States Army Corps of Engineers (USACE) wetland delineation data forms were completed to record vegetation, soil, and hydrology conditions at each site. Data from the 2015 and 2017 surveys (no data from the 2012 survey were collected within the current Wetland Study Area) are included in the following operations wetlanded lineation data forms and SDAM forms are presented in Appendix B; and plot of site presented in Appendix B;

#### E. DESCRIPTION OF ALL WETLANDS AND OTHER NON-WETLAND WATERS

A total of two wetlands, two springs, one pond, one artificial waterway, and ten tributary drainages occur within the Wetland Study Area (Figures 4a through 4h). EMS identified two wetlands, two springs, one artificial waterway (J-H Canal) and ten tributary drainages within the 2017 survey area. HDR identified three tributary drainages and one pond (Schweizer Reservoir) within the 2015 survey area (HDR 2015). The three tributary drainages surveyed by HDR are contiguous with drainages surveyed by EMS. Both survey areas are shown on Figure 2 in Appendix A. Each of these waters is discussed in detail in the appropriate sections below and are illustrated on Figures 4a through 4h.

#### **NWI Mapping**

NWI mapping (United States Fish and Wildlife Service [USFWS] 1983) indicated the presence of two emergent wetlands and three ponds within or partially within the Wetland Study Area (Appendix A, Figures 3a through 3h). The NWI describes the wetlands as PEM1Ch (palustrine, emergent, persistent, seasonally flooded, diked/impounded) and PEM1B (palustrine, emergent, persistent, saturated). The ponds are described as PUBH (palustrine, unconsolidated bottom, permanently flooded), PUSCx (palustrine, unconsolidated shore, excavated), and PUSCh (palustrine, unconsolidated shore, seasonally flooded, diked/impounded). The third pond, designated PUSCh, corresponds to Schweizer Reservoir on USGS maps. Two palustrine emergent

wetlands (Wetlands 1 and 2), two springs (Springs 1 and 2), and one impounded area (Schweitzer Reservoir) were identified during the 2017 and 2015 field investigations.

#### Wetland 1

Wetland 1, shown on Figure 4g (Appendix A), covers approximately 0.25 acre (0.09 acre extends outside of the Wetland Study Area), and is mapped by the NWI as PEM1B (palustrine, emergent, persistent, and saturated; USFWS 1983). Vegetation in Wetland 1 consisted primarily of cheatgrass and Great Basin wild rye (*Leymus cinereus*); other species observed included Baltic rush (*Juncus balticus*), cursed buttercup (*Ranunculus sceleratus*), and bulbous bluegrass (*Poa bulbosa*). Wetland soil colors were dark and consisted of sandy clay with small amounts of muck and displayed the redox dark surface hydric soil indicator. Hydrology within Wetland 1 appeared to be associated with a small, unmapped spring complex and consisted of one inch of surface water, and a high water table within two inches of the surface within the soil pit.

#### Wetland 2

Wetland 2, shown on Figure 4g (Appendix A), covers approximately 0.04 acre occurring entirely within the Wetland Study Area, and is not mapped by the NWI (USFWS 1983). Vegetation in Wetland 2 consisted primarily of Great Basin wild rye and bulbous bluegrass; other species observed included fowl bluegrass (*Poa palustris*) and meadow barley (*Hordeum brachyantherum*) we land soil colors were dark and consisted of sandy loam and displayed the redox dark surface in tric soil in ficator. Hid blogs within V that do are are to be associated with a small, unmapped spring complex and consisted of thomas es of united, water, and a high water table within three inches of the surface within the soil pit.

#### Springs 1 and 2

At springs one and two, also shown on Figure 4g (Appendix A), bubbling water was observed at the surface. Neither of the springs are indicated on USGS maps. Spring 1 comes to the surface along the side of Twin Springs Road approximately 35 feet to the south of Wetland 2. Water was observed flowing along the surface of the ground along the side of the road for approximately 285 feet before sinking into the surrounding soil. The soil was mostly bare in the area of Spring 1, and no wetland vegetation was observed. Spring 2 is located within Wetland 2, and water was observed bubbling from Spring 2 and flowing into Wetland 2.

#### **Non-wetland Waters**

#### Schweizer Reservoir

The boundary of Schweizer Reservoir and the top of the embankment were delineated (Appendix A, Figure 4h). An upland soil pit (Soil Pit #8A-2015) was dug at the low point to confirm that the area did not meet wetland criteria (HDR 2015).

#### **Tributary Drainages**

Ten un-named tributary drainages and one artificial waterway (J-H Canal) occur within the Wetland Study Area. Each drainage was mapped using a GPS unit, assessed using SDAM, and upstream/downstream photos were taken. SDAM survey results of the drainages (Table 2) indicate that the ten drainages displayed characteristics of an ephemeral channel; a portion of Tributary 2 (Tributary 2b) showed characteristics of an intermittent channel; and the J-H Canal was found to be an artificial waterway created for the purposes of crop irrigation. SDAM forms for each drainage and upstream/downstream reach photographs are included in Appendix B and Appendix C, respectively.

The J-H Canal crosses the proposed Access Road approximately 0.4 mile from the northern boundary of the Wetland Study Area (Appendix A, Figures 3a and 4a). This waterway is used for irrigation of the adjacent agricultural fields and is approximately five percent vegetated (Appendix D, photos 71 and 72). An earthen berm, approximately ten feet in height, occurs on the right bank of the canal, and a water control structure was observed on the left bank. Historically, the canal appears on both the 1952 General Land Office Survey Plat map where it is labeled as "Ditch," and on the 1967 Vale West, Oregon USGS 7.5"-Series Topographic Quadrangle, where it is labeled as "J-H Canal." Currently, NWI classifies the canal as a riverine wetland (Appendix A, Figure 3a).

| Table 2. uml              | ary of Non-Wetland V  | Vaters       | 200                  |                 |
|---------------------------|-----------------------|--------------|----------------------|-----------------|
| Drainage Nam              | SNA E to milation     | Width (reet) | A o Sited:<br>Number | Photo Number    |
| Tributary 1               | Ephemeral             | 2-5          | 4h                   | 1 and 2         |
| Tributary 2a <sup>1</sup> | Ephemeral             | 2-4          | 4h                   | 5-8 and 10      |
| Tributary 2b              | Intermittent          | 6-21         | 4h                   | 3 and 4         |
| Tributary 3 <sup>2</sup>  | Ephemeral             | 2-12         | 4g and 4h            | 13-18 and 29-30 |
| Tributary 4 <sup>2</sup>  | Ephemeral             | 1-4          | 4h                   | 19-23           |
| Tributary 5               | Ephemeral             | 5-8          | 4h                   | 24 and 25       |
| Tributary 6               | Ephemeral             | 4-14         | 4g                   | 31 and 32       |
| Tributary 7               | Ephemeral             | 3-8          | 4f                   | 46 and 47       |
| Tributary 8               | Ephemeral             | 2-6          | 4f                   | 48-51           |
| Tributary 9               | Ephemeral             | 3-7          | 4d                   | 57-60           |
| Tributary 10              | Ephemeral             | 2-20         | 4a and 4b            | 65-70           |
| J-H Canal                 | Artificial Water Body | 13-30        | 4a                   | 71 and 72       |

<sup>&</sup>lt;sup>1</sup>Tributary 2a was assessed by HDR during the 2015 survey.

### F. DEVIATION FROM LOCAL WETLANDS INVENTORY OR NATIONAL WETLANDS INVENTORY

Local Wetlands Inventory mapping was not available for the Wetland Study Area; NWI maps are included in Figures 3a-3h (Appendix A). NWI mapping indicated the presence of two emergent wetlands within or partially within the Wetland Study Area. One of these wetlands was confirmed as being Wetland 1, delineated as part of this study (Appendix A, Figures 3g and 4g). However, data from soil pit DP1 (Appendix B) indicate that the second mapped emergent wetland

<sup>&</sup>lt;sup>2</sup> Portions of Tributaries 3 and 4 were assessed by HDR during the 2015 survey.

(Appendix A, Figures 3h and 4h), does not meet wetland criteria. In addition, the presence of Wetland 2, a spring-fed emergent wetland delineated during this study (DP4 and DP5, Appendix B), was not shown on NWI mapping (Appendix A, Figures 3g and 4g).

NWI mapping shows two freshwater ponds within the northern portion of the Wetland Study Area (Appendix A, Figure 3g and 3e). One of these features did not contain water at the time of investigation and appeared to be a small, bermed area that was used to capture water from seeps that feed Wetland 1, but had since been abandoned (Appendix A, Figure 3g). Vegetation in this area consisted of upland species such as cheatgrass and bulbous bluegrass. The second feature is an existing stock water pond that is located outside of the Wetland Study Area, and not inside as indicated by NWI mapping (Appendix A, Figure 3e). Photos of these features are included in Appendix D (photos 43 and 54).

NWI maps indicate numerous intermittent, temporarily flooded streambeds within the Wetland Study Area that, in general, flow from south to north. Based on the results of this study, these areas are ephemeral stream channels, not riverine wetlands. Ten ephemeral tributary drainages, one intermittent drainage, and one artificial water body (J-H Canal) that correspond with NWI mapping were delineated within the Wetland Study Area (Section E).

#### G. MAPPING METHOD

The 2017 mappin has been prepared using wetland and stream boundaries that were recorded using a handheld GPS anit (Trim le Ce Exploier X 1500 ft). Do the 2017 feet work, approximately 60 percent of positions were captured being a horizontal accuracy of less than 0.5 meter, and 91.5 percent of positions were captured having a horizontal accuracy of less than one meter after post-processing. For the 2013 field work, 93.8 percent of positions were captured having a horizontal accuracy of less than 0.5 meter after post-processing, and for the 2015 field work, 84.9 percent of positions were captured having a horizontal accuracy of less than 0.5 meter after post-processing.

#### H. ADDITIONAL INFORMATION

Oregon Department of Fish and Wildlife (ODFW) data were analyzed to determine if there was a fish presence at any of the drainages within the Wetland Study Area. The nearest fish habitat to the Wetland Study Area was for redband (*Oncorhynchus mykiss*), located approximately 0.5 mile north of the north end of the Wetland Study Area (ODFW 2017). Given that all drainages observed within the Wetland Study Area are ephemeral or intermittent, it is unlikely that fish are present within any of the drainages within the Wetland Study Area. No fish were observed within the canal during field studies. A county soil survey map was not available for this location.

#### I. RESULTS AND CONCLUSIONS

A total of two wetlands, two springs, one pond, one artificial waterway, and ten tributary drainages occur within the Wetland Study Area (Figures 4a through 4h). EMS identified two wetlands, two springs, one artificial waterway (J-H Canal) and ten tributary drainages within the 2017 survey area. HDR identified three tributary drainages and one pond (Schweizer Reservoir)

within the 2015 survey area (HDR 2015). The three tributary drainages surveyed by HDR are contiguous with drainages surveyed by EMS.

Two PEM wetlands, totaling 0.29 acre (0.09 acre of which occur outside of the Wetland Study Area), were delineated in the Wetland Study Area by EMS during the May 18 through 21, 2017, field surveys using methods recommended in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*. Wetlands 1 and 2 are located within the Sagebrush Gulch drainage, which crosses a small portion of the Wetland Study Area (Appendix A, Figure 4g). The wetlands are associated with ground water seeps/springs located in the immediate area, but do not appear to be connected to any downstream waters. A total of ten drainages were identified within the Wetland Study Area by HDR and EMS during the 2015 and 2017 surveys. A portion of one of the drainages, Tributary 2b, has been determined to be intermittent. All other tributary channels are considered ephemeral. One artificial water body, the J-H Canal, was identified in the northern portion of the Wetland Study Area.

Wetlands in the Wetland Study Area do not have USACE jurisdictional status because they do not demonstrate a significant nexus to a traditional navigable water of the United States. A desktop analysis of drainages within the Wetland Study Area indicated that, in general, all the drainages flow north, eventually leading into the J-H Canal, which empties into the Malheur River approximately 5.5 miles northeast of the Wetland Study Area. The Malheur River flows into the Snake River, eventually feeding into the Columbia River. All ten drainages identified during the wetland study may be considered jurisdictional by the USACE if the connection to the Malheur River is confirmed via additional field studies.

The Oregon Department of State Lands (DSL), typically requires a permit for the placing of fill into "waters of the state." Waters of the state that meet jurisdictional requirements within the Wetland Study Area include Wetlands 1 and 2, and Tributary 2b. Ephemeral tributary drainages 1, 2a, and 3 through 10 do not meet DSL jurisdictional status because they have been determined to be ephemeral drainages.

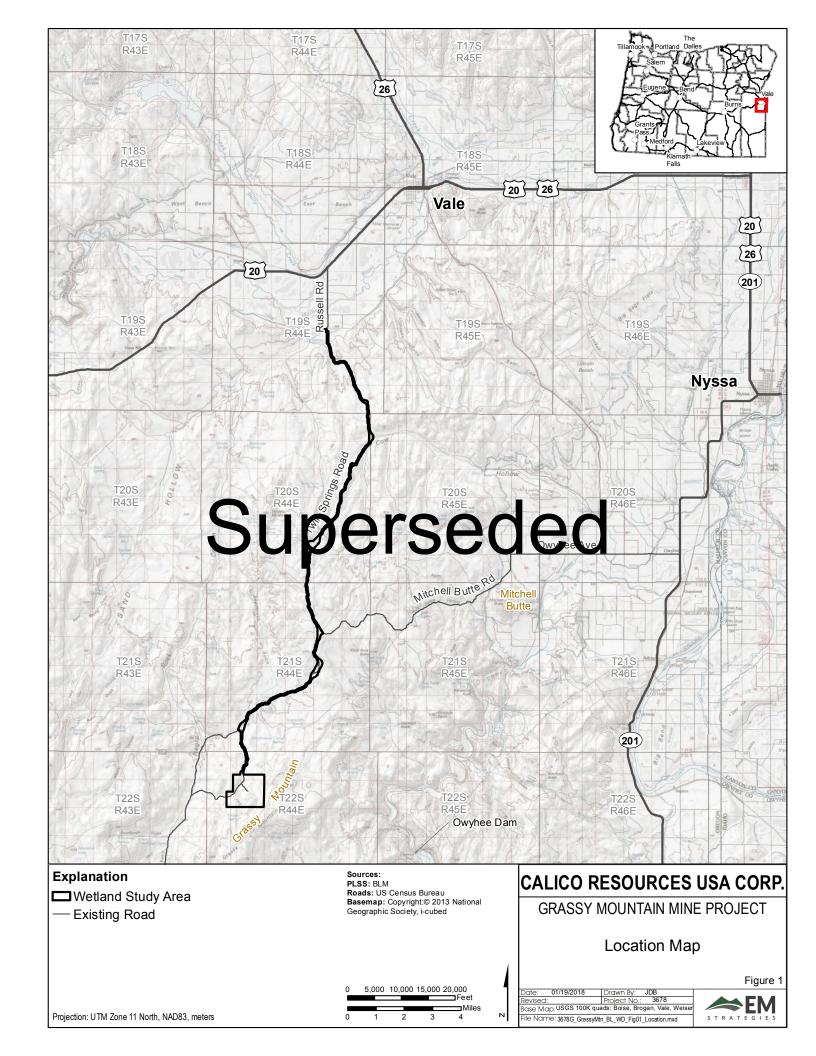
#### J. DISCLAIMER

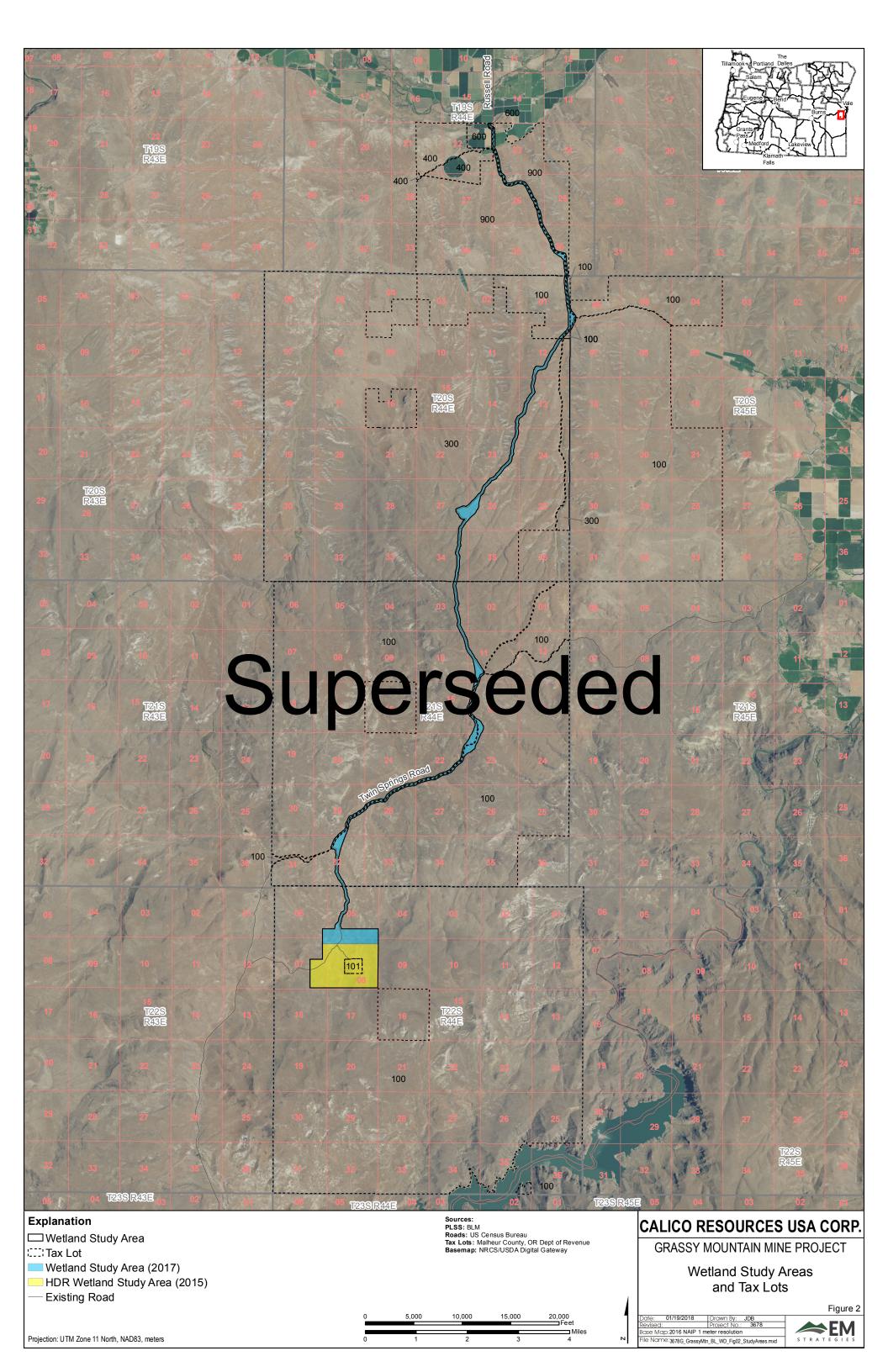
This wetland delineation and report documents the best professional judgment and conclusions of the EMS wetland investigation team. This report should be considered a draft until it is reviewed and approved in writing by the Oregon DSL in accordance with Oregon Administrative Rules 141-090-0005 through 141-090-0055.

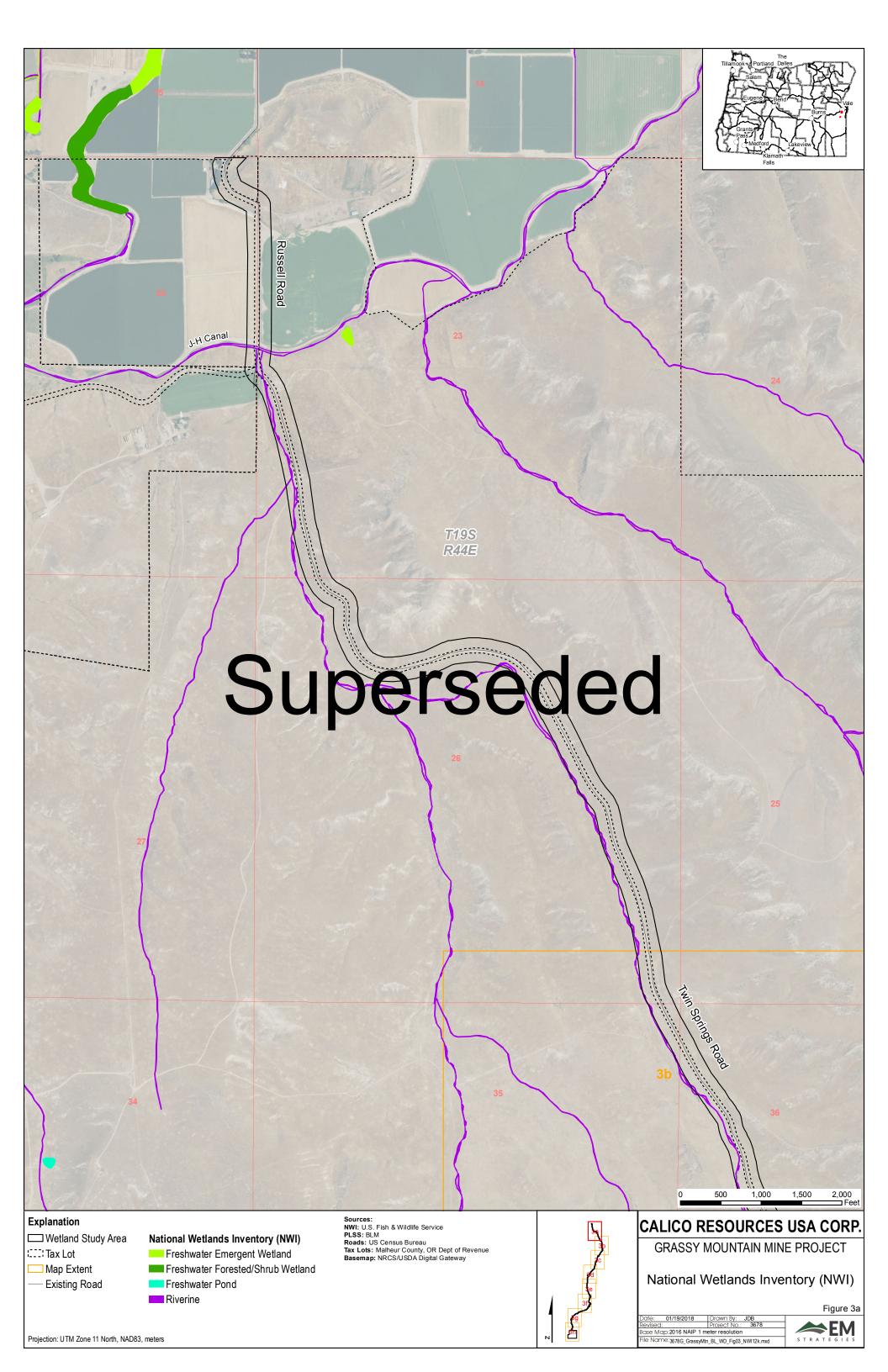
#### K. REFERENCES

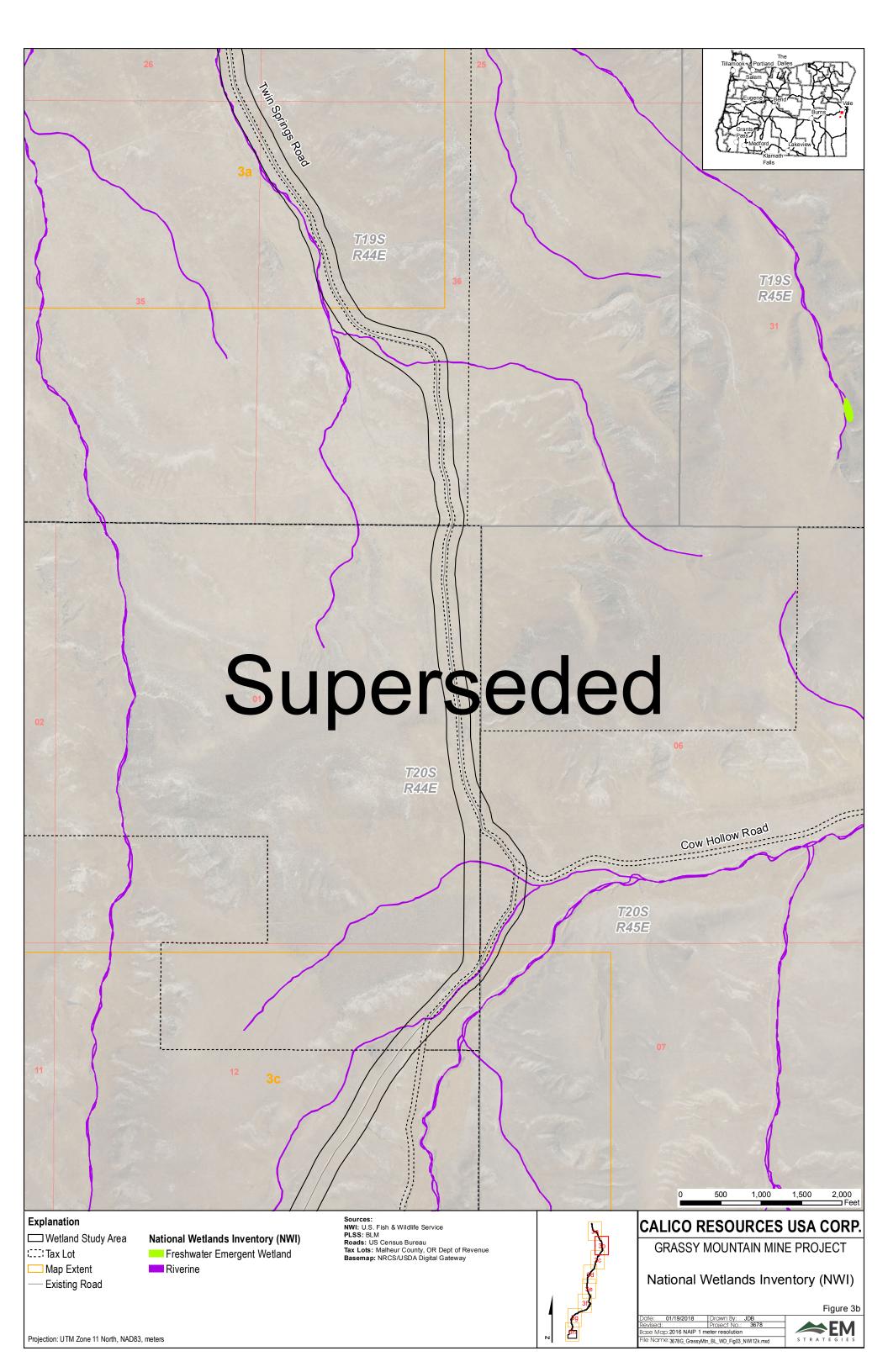
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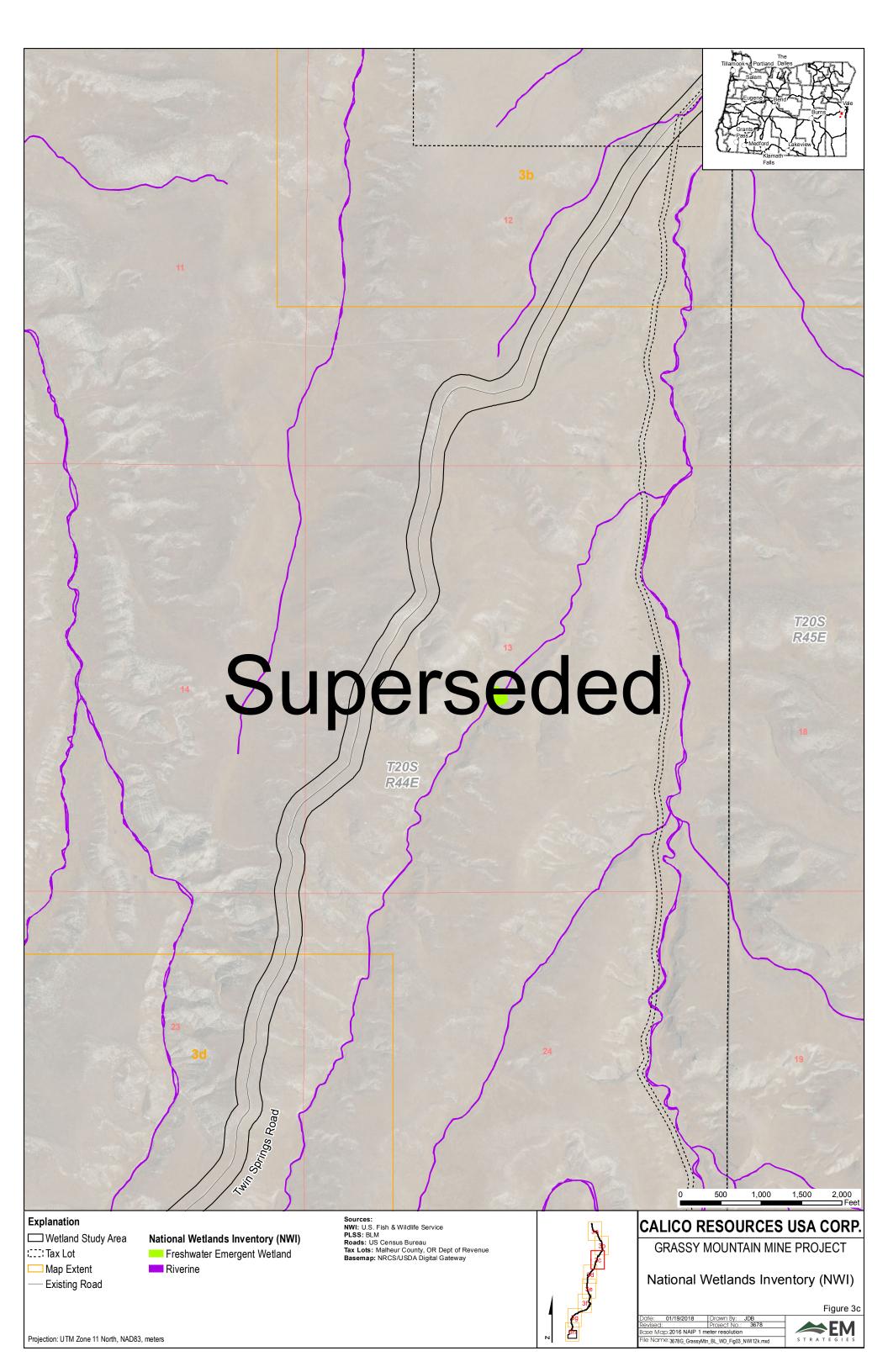
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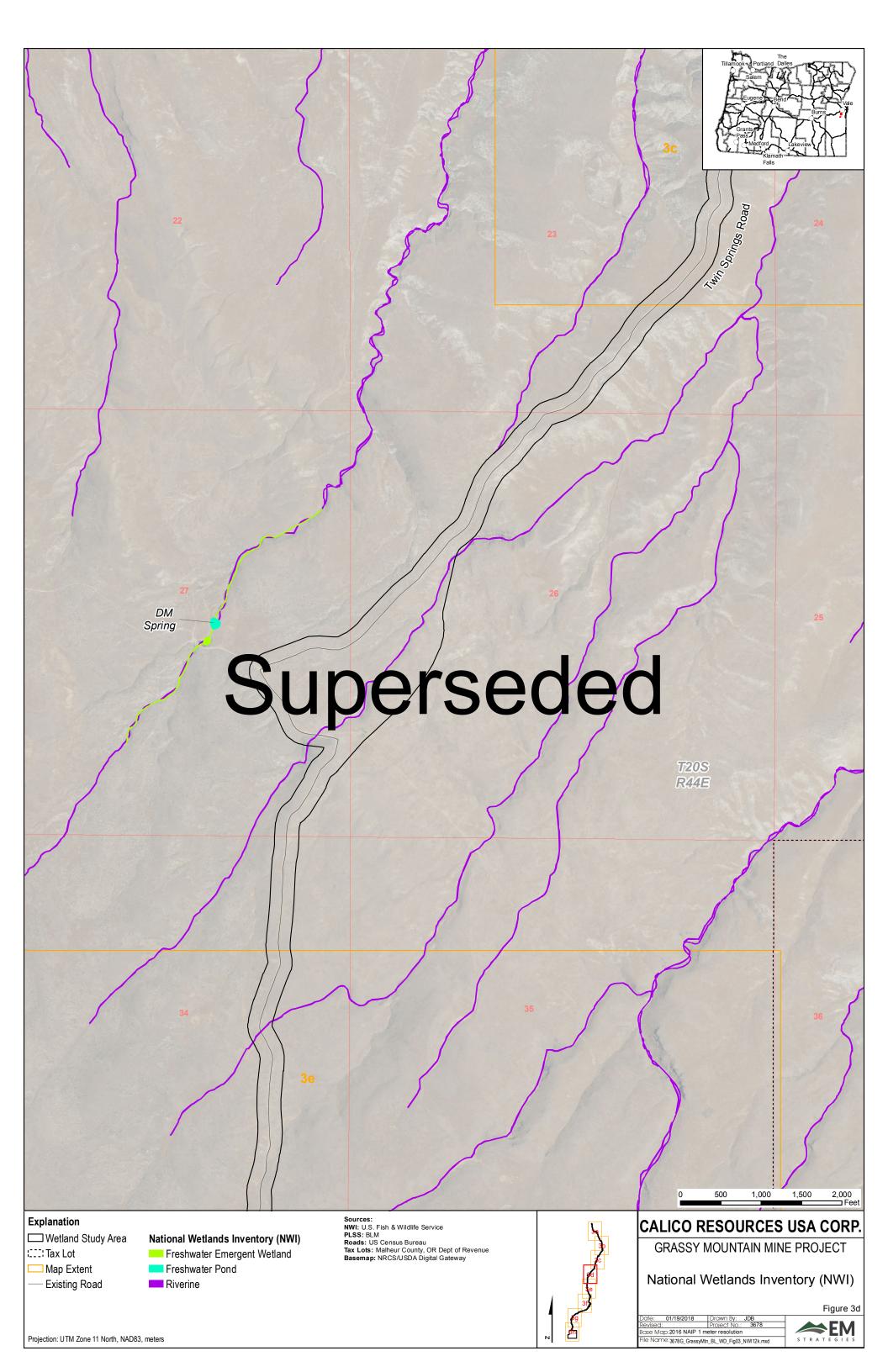


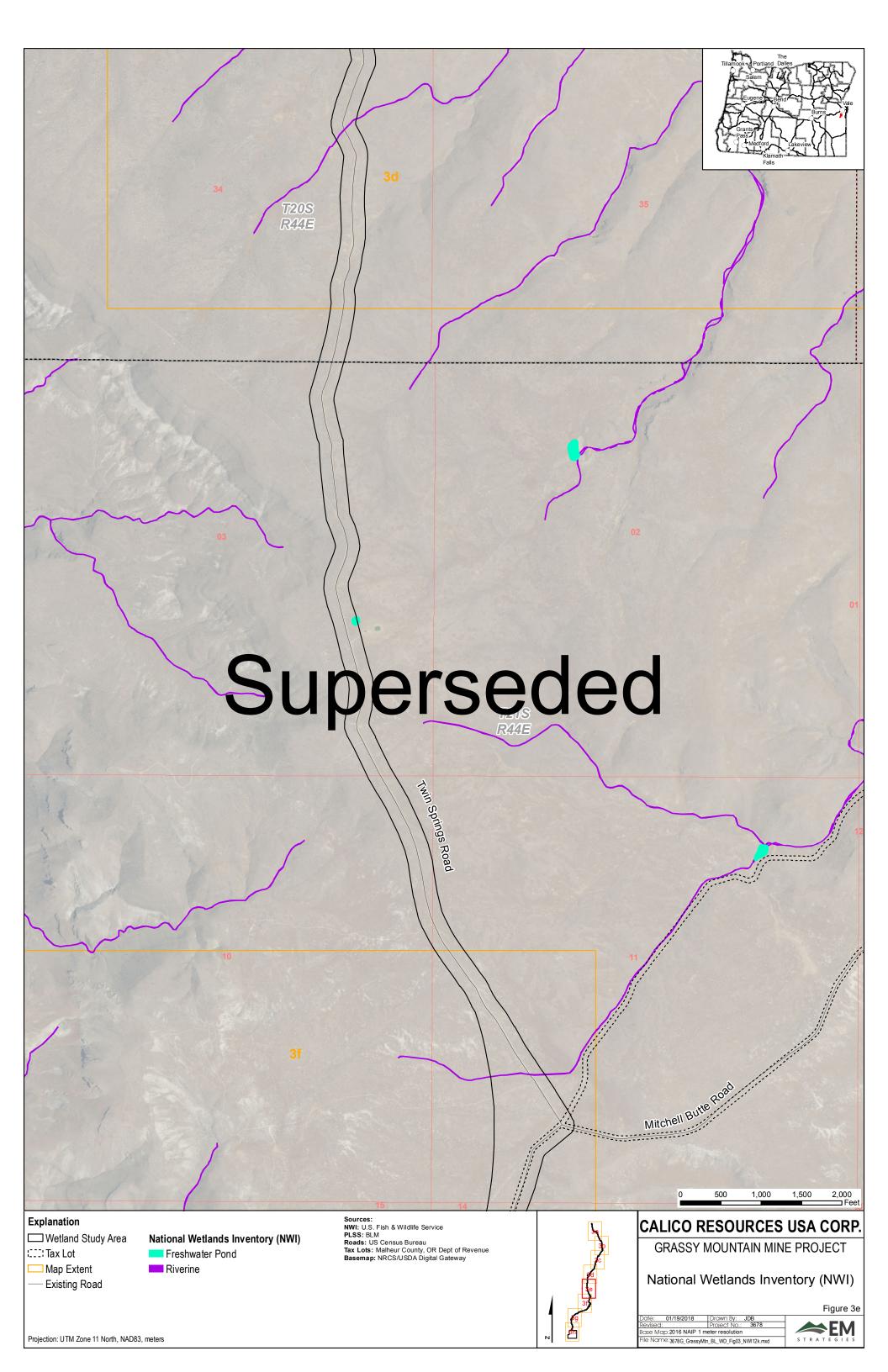


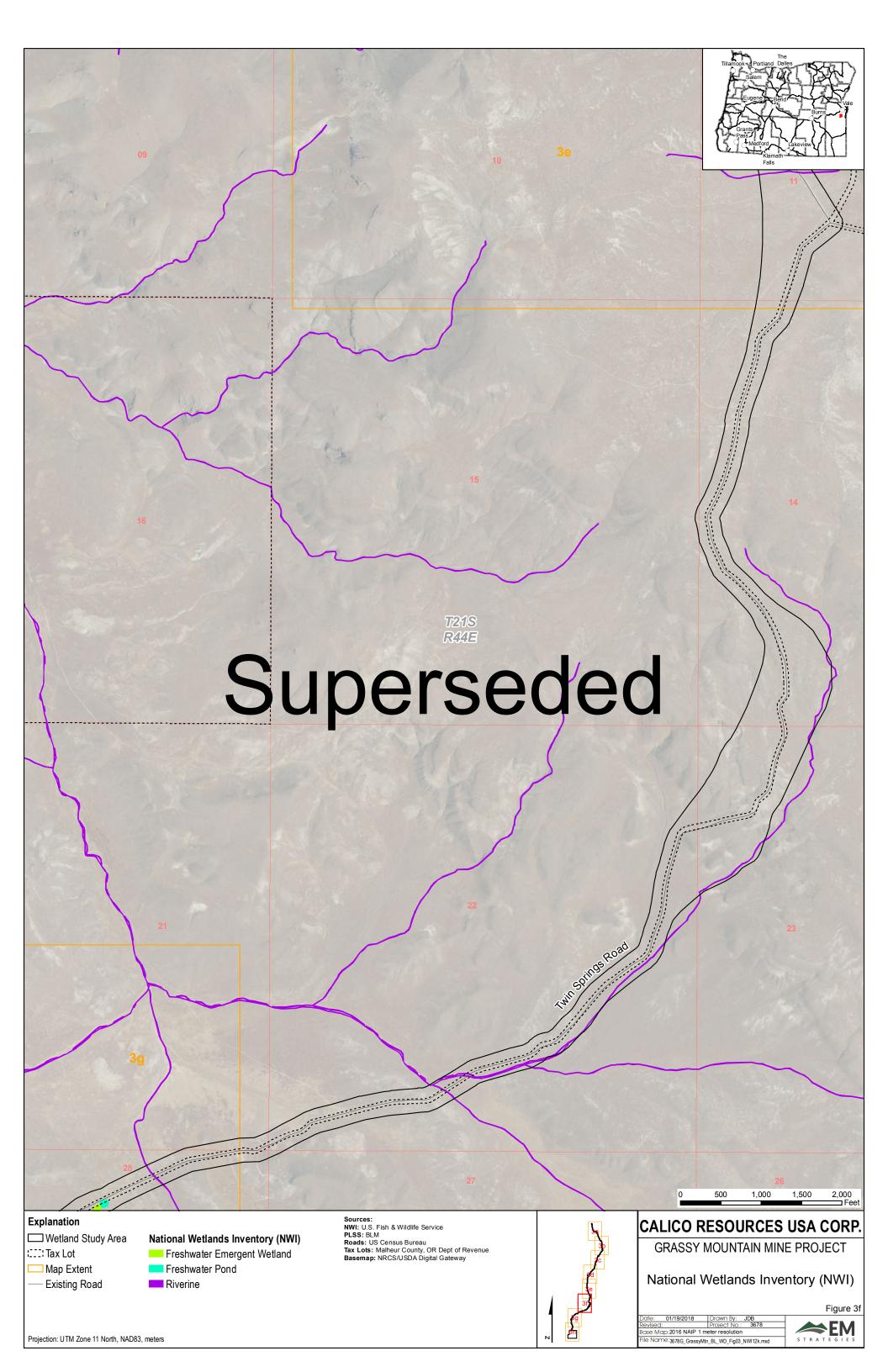


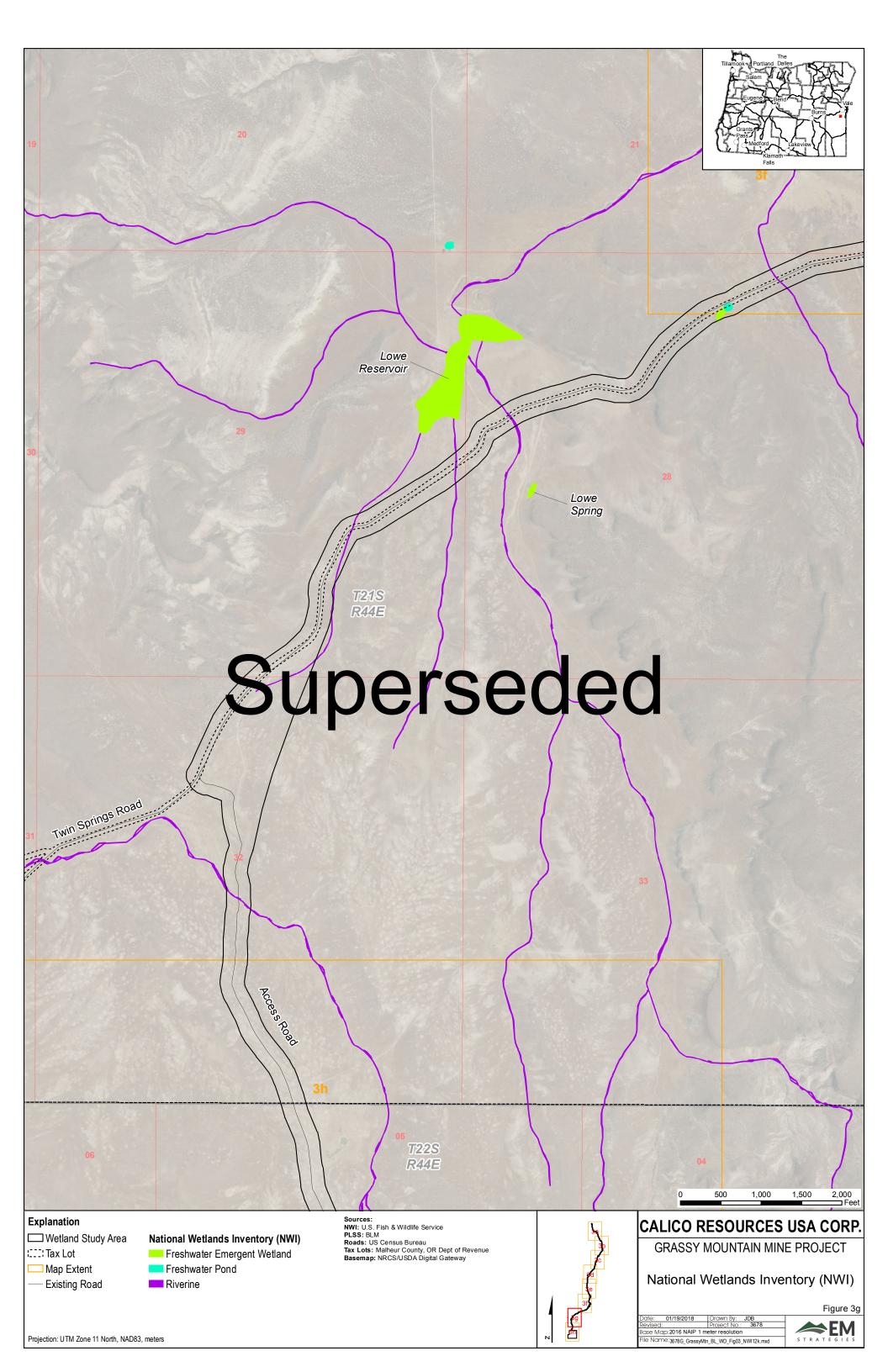








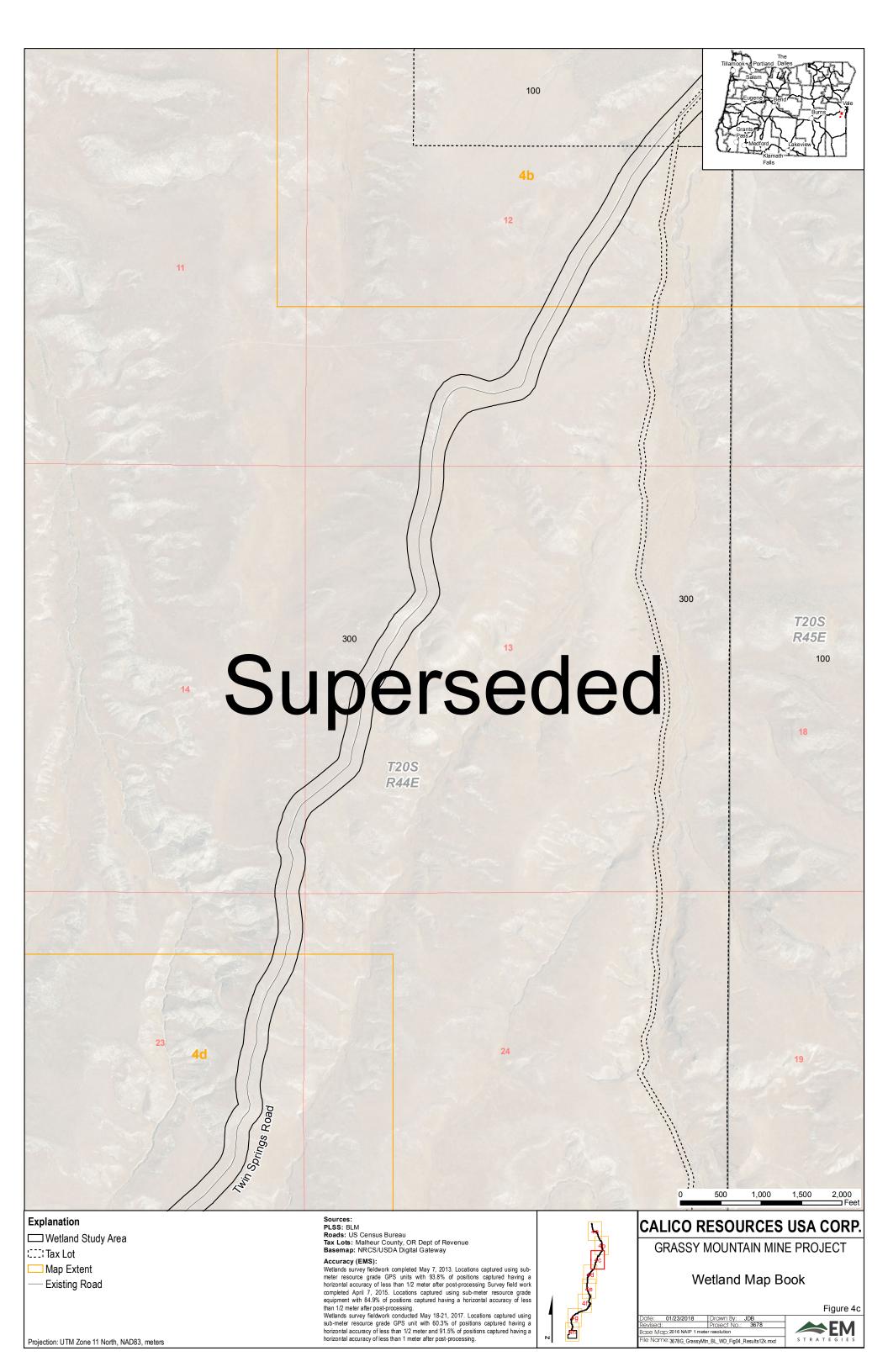


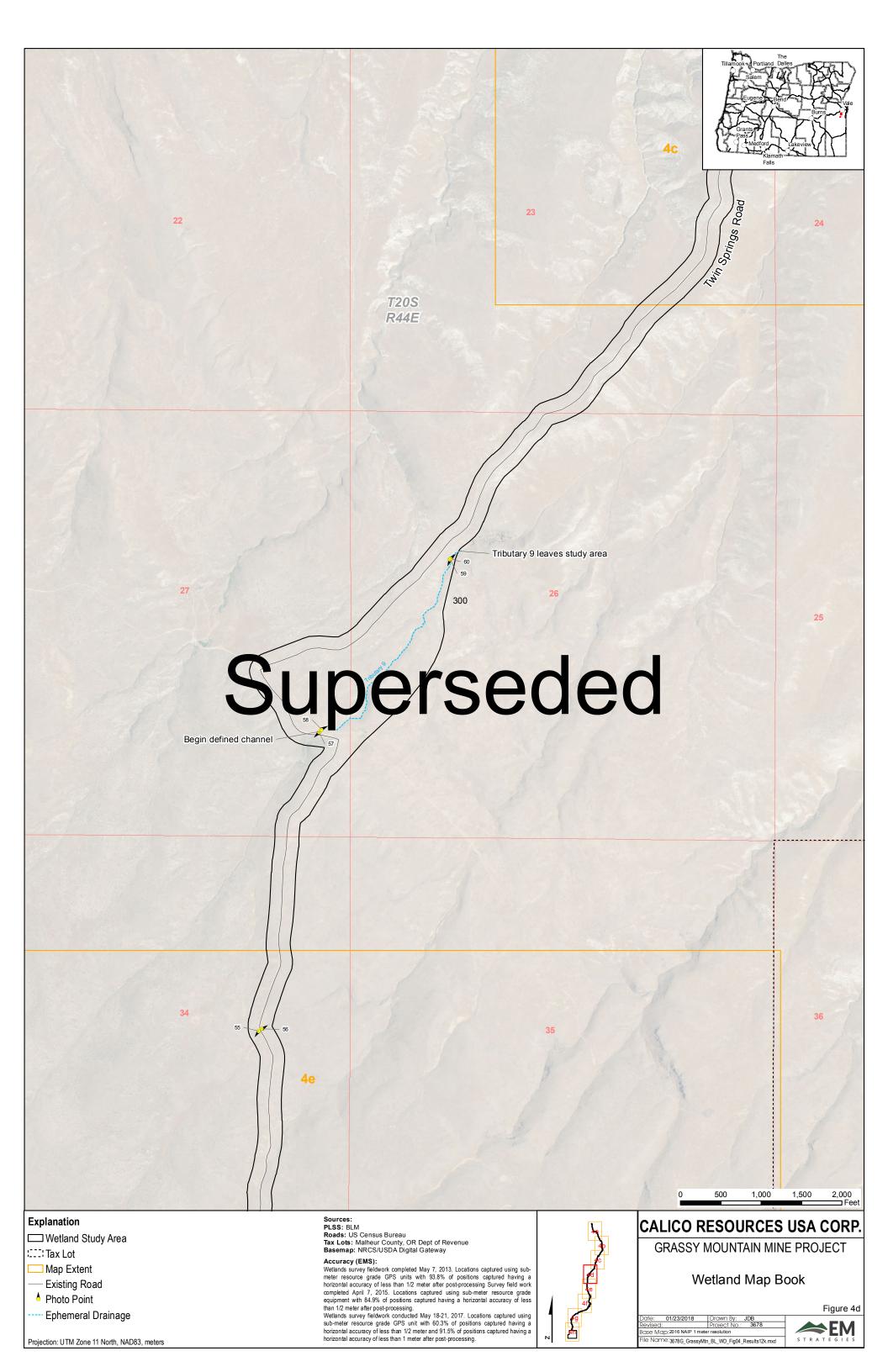






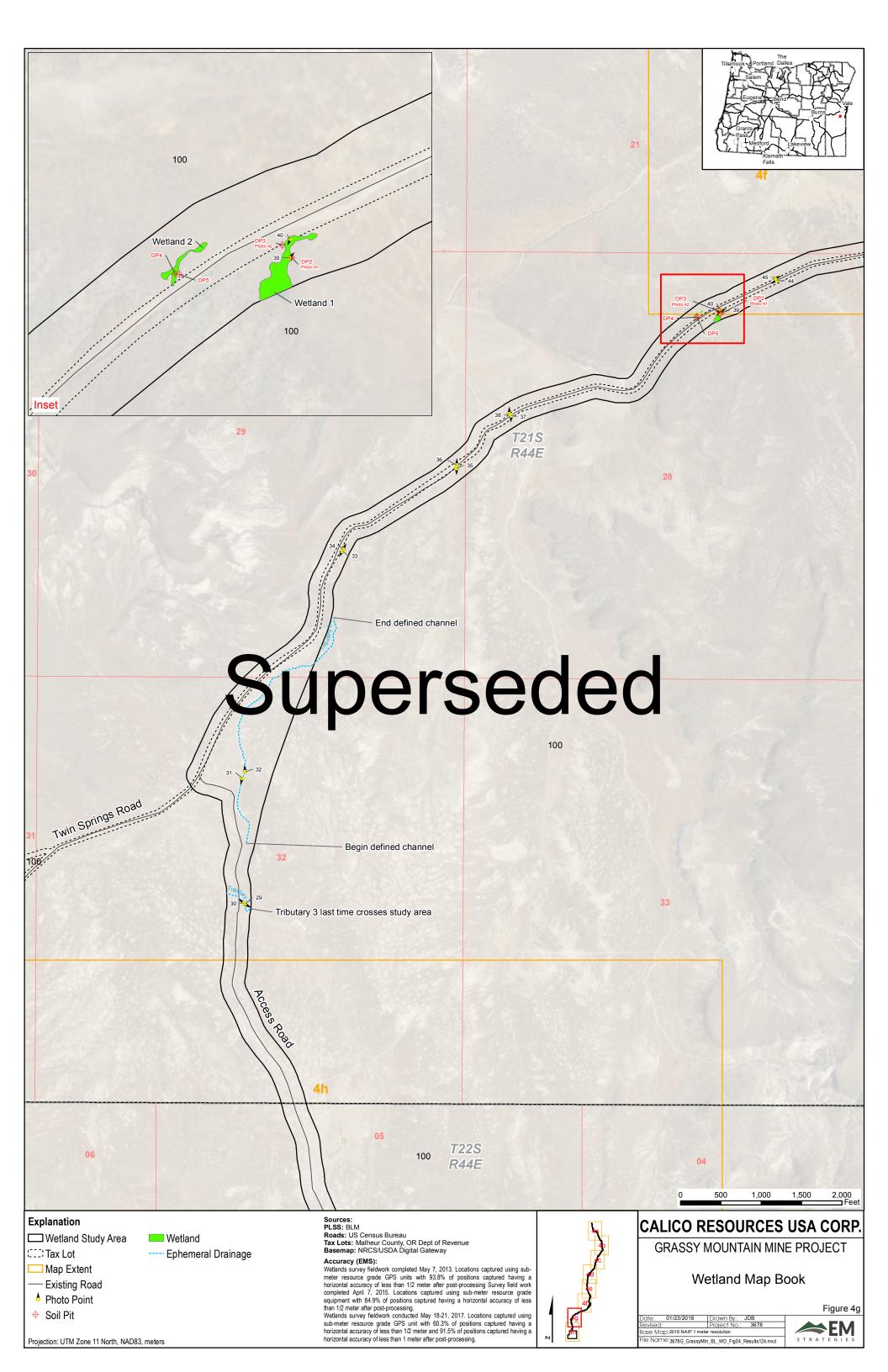


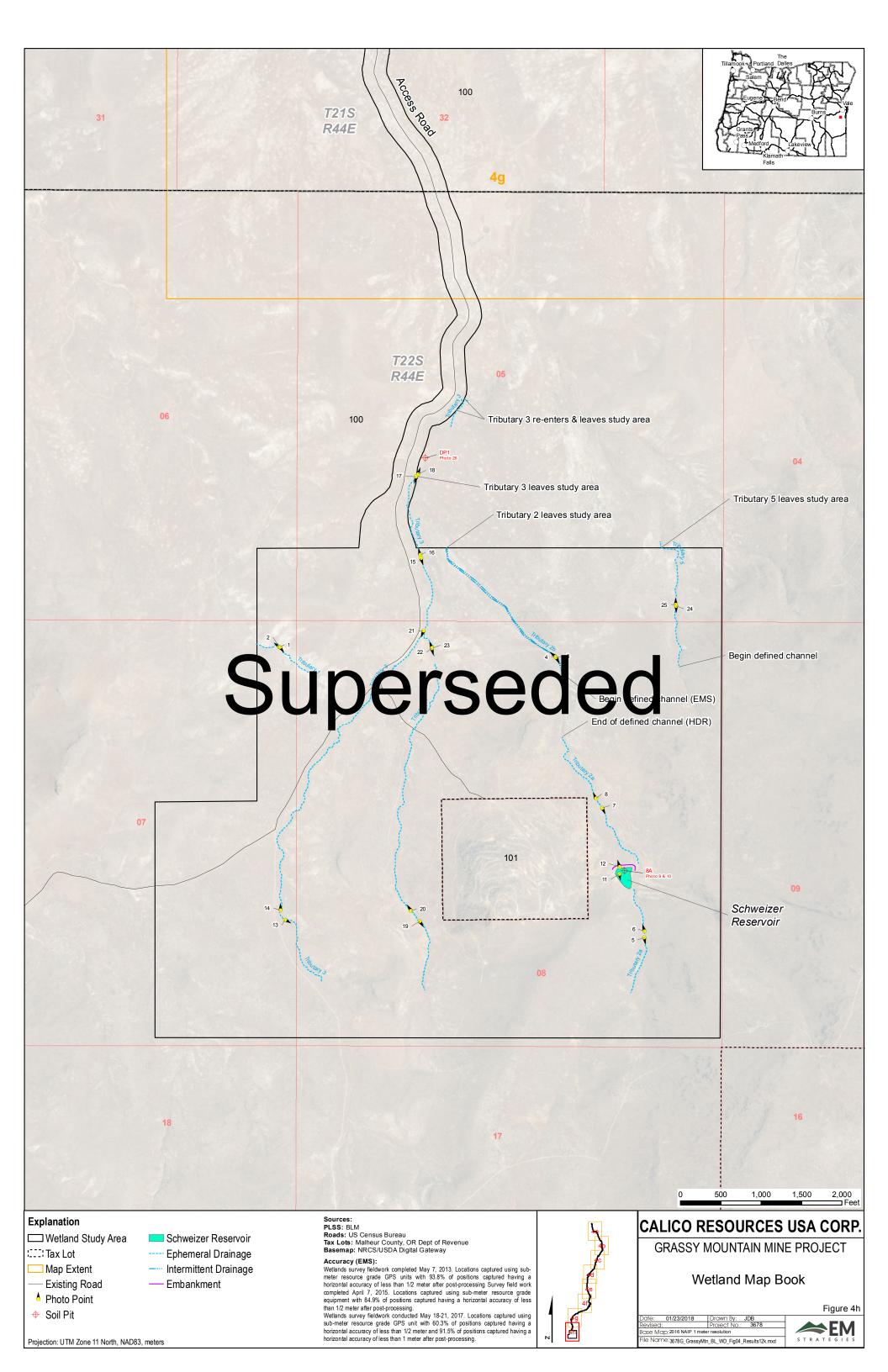












# Superseded WETLAND AND SDAM DATA FORMS

| WEILAND DEIER   | RMINATION                   | DATA FORM -                   | - Arid West Region  | 1                                 | 1   |
|---|-----------------------------|-------------------------------|---|-----------------------------------|---|
| Project/Site: 6859 WHM  | City/0                      | County: Mal                   | heur  | Sampling Date:                    | 5/18/   |
| Applicant/Owner: (2/120 Resources In                              |                             |                               | State: OR   |                                   | K' - 1  |
|   | war )                       | on, Township, Rai             |   | Cumping Font                      | -1/1  |
| Landform (hillslope, terrace, etc.): Plain                        | Loca                        | I relief (concave, o          | convex, none): CONC   | ave slope                         | (%):  |
| Subregion (LRR): NOW Western Whestz Rai                           |                             |                               |   |                                   |   |
| Soil Map Unit Name: notavailable                                  | J                           |                               | NWI classifi  | cation PEM                        | ich   |
| Are climatic / hydrologic conditions on the site typical for this | time of year?               | es No                         | X (If no, explain in F  | Remarks )                         |   |
| Are Vegetation, Soil, or Hydrology si                             |                             |                               | Normal Circumstances"   | \/                                | No  |
| Are Vegetation, Soil, or Hydrologyn                               |                             |                               | eded, explain any answe   | 1                                 |   |
| SUMMARY OF FINDINGS – Attach site map                             | showing san                 | npling point lo               | ocations, transects   | s, important fea                  | tures, etc.   |
| Hydrophytic Vegetation Present? Yes No                            | X                           |                               |   |                                   |   |
| Hydric Soil Present? Yes No                                       |                             | Is the Sampled                |   | >                                 |   |
| Wetland Hydrology Present? Yes No                                 | X                           | within a Wetlan               | d? Yes  | No                                |   |
| Remarks:  | (4.9)                       |                               | Walter  | 1885-48                           |   |
| Precipitation higher 4ha  | on ov                       | erage                         |   |                                   |   |
| L v   |                             |                               |   |                                   |   |
| VEGETATION – Use scientific names of plant                        |                             |                               |   |                                   | 11  |
| Tree Stratum (Plot size:)   | Absolute Dor<br>% Cover Spe | ninant Indicator cies? Status | Dominance Test worl   |                                   |   |
| 1. Non é  |                             |                               | Number of Dominant S<br>That Are OBL, FACW,                     |                                   | (A)   |
| 2   |                             |                               | Total Number of Domir   | ant                               |   |
| 3.  |                             |                               | Species Across All Stra   | /                                 | (B)   |
| 4.  |                             |                               | Per of Panant   | ac #                              | 1000  |
| Sapling/Shrub Stratum (Plot sizt /5).                             |                             | ital over                     | Tat Ar C 1. Ci,   | or AC:                            | (A/B)   |
| 1. Artemisia Indentata  |                             | Y CAN                         | Prevalence Index wo   | ksheet:                           |   |
| 2. Chrysothamnus Viscid Hloms                                     |                             | n/2                           |   | Multiply I                        | ov:   |
| 3   |                             |                               | OBL species   |                                   | CONTRACTOR OF THE PARTY OF THE |
| 4   |                             |                               | FACW species  |                                   |   |
| 5.  |                             | ana da Lebi                   | FAC species   |                                   |   |
| 51  | 10 = To                     | tal Cover                     | FACU species  |                                   |   |
| Herb Stratum (Plot size: 5)                                       | 13                          | TARIL                         | UPL species   | x 5 =                             |   |
| 2. Bromus tectorum  | 10                          | PIGU                          | Column Totals:  | (A)                               | (B)   |
| 3. Ceratice phala testiculata                                     |                             | 1 1/0                         | Provolence Index  | : = B/A =                         |   |
|   |                             | - h/d                         | Hydrophytic Vegetati  | THE SECOND SECOND                 | THE RESIDENCE   |
| 5.  |                             |                               | Dominance Test is   |                                   |   |
| 6.  |                             |                               | Prevalence Index  |                                   |   |
| 7   |                             |                               |   | ptations <sup>1</sup> (Provide s  | upportina   |
| 8.  |                             |                               | data in Remark  | s or on a separate s              | heet)   |
|   | 102 = TO                    | ital Cover                    | Problematic Hydro   | phytic Vegetation <sup>1</sup> (E | Explain)  |
| Woody Vine Stratum (Plot size:)                                   |                             |                               | 40 87 A   |                                   |   |
| 1. None   |                             |                               | <sup>1</sup> Indicators of hydric so<br>be present, unless dist |                                   |   |
| 2   |                             | Will o Minner                 |   | c. see or problematic             |   |
|   | = To                        | tal Cover                     | Hydrophytic<br>Vegetation                                       |                                   | ,   |
| % Bare Ground in Herb Stratum % Cover                             | of Biotic Crust _           |                               | Present? Ye   | sNoX                              |   |
| Remarks:  |                             | ·                             | I   |                                   |   |
|   |                             |                               |   |                                   |   |
|   |                             |                               |   |                                   | 2   |
|   |                             |                               |   |                                   |   |

| - | -                          |  |
|---|----------------------------|--|
| c | $\boldsymbol{\mathcal{L}}$ |  |
|   |                            |  |
|   |                            |  |

Sampling Point: DP1

| Depth inches         Matrix           0 -10         10 / R 4/3         100  | Redox Features Color (moist) % Type <sup>1</sup>   | Loc² Texture Remarks  Cly/@M   |
|---|--|--|
| ype: C=Concentration, D=Depletion, RM: ydric Soil Indicators: (Applicable to all 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) estrictive Layer (if present): | =Reduced Matrix, CS=Covered or Coated S LRRs, unless otherwise noted.)  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)                     | Sand Grains.  2 Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils3:  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.  |
| 1001 1001   |  | The state of the s |
| Type:   | unorca   | Hydric Soil Present? Yes No  |
| Type:   | uperse   |  |
| Type:   | uperse   |  |
| Type:   | Arthur III   | eded   |
| Type:   | d; check all that apply)   | Secondary Indicators (2 or more required)  |
| Type:   | d; check all that apply) Salt Crust (B11)  | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)   |
| Type:   | d; check all that apply)   | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  |
| Type:   | d; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)   | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)   |
| Type:   | d; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)  |
| Type:   | d; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)   |
| Type:   | d; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Lir   | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  ving Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  |
| Type:   | d; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Li  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled S  | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  ving Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  |
| Type:   | d; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Li  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled S  | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  ving Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C5)   |
| Type:   | d; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled (B7) Thin Muck Surface (C7)  | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Ving Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  |
| Type:   | d; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled (S7) 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)  ving Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C8)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)   |
| Type:   | d; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled (C7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches):                 | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Ving Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C8)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)   |
| Type:   | d; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled (S7) 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)  Ving Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)   |
| Type:   | d; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled 3 Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches):  Depth (inches):   | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Ving Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C8)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)   |
| Type:   | d; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled 3 Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches): | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Ving Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C8)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)   |
| Type:   | d; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled 3 Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches): | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Ving Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C8)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)   |
| Type:   | d; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled 3 Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches): | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Ving Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C8)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)   |

DP2 Wetland 1

|   | DETERMINATION DATA FORM   |  |
|---|---|--|
| Project/Site: Grassy M4n 30                             | 78 City/County: Mo  | Meur Sampling Date: 5/19/  |
| Applicant/Owner: Calico Resource                        | es Inc  | State: OR Sampling Point: BPZ  |
| Investigator(s): S.M. Harrelson                         | Section, Township, Ra   | ange:  |
| Landform (hillslope, terrace, etc.): 1065/0pe           |   | convex, none): None Slope (%): /   |
| Subregion (LRR)Columbia Snake Rive                      | rHateou 41940871  | Long: 472381.8 Datum: NADE   |
| Soil Map Unit Name: Notavailab                          |   | NWI classification: PEMIB  |
| Are climatic / hydrologic conditions on the site typica |   | (If no, explain in Remarks.)   |
| Are Vegetation, Soil, or Hydrology                      |   | "Normal Circumstances" present? Yes No   |
| Are Vegetation, Soil, or Hydrology                      |   | eeded, explain any answers in Remarks.)  |
|   |   | locations, transects, important features, etc.   |
| Hydrophytic Vegetation Present? Yes _>                  | No Is the Sampler   |  |
| Hydric Soil Present? Yes                                | No.   |  |
| Wetland Hydrology Present? Yes                          | No within a Wetla   | nd? Yes No No  |
| Remarks:  |   |  |
| Precipitation higher                                    | - Unan Due man  |  |
| 11 Celpilation right                                    | , man goerage   | AT THE PARTY WAS A PARTY OF THE |
|   |   | ONE CONTROL OF THE PROPERTY OF |
| VEGETATION – Use scientific names of                    | f plants.   |  |
| Tree Stratum (Plot size:)                               | Absolute Dominant Indicator   | Dominance Test worksheet:  |
| 1. None   | % Cover Species? Status   | Number of Dominant Species   |
| 2   |   | That Are OBL, FACW, or FAC: (A)  |
| 3   |   | Total Number of Dominant   |
| 4   |   | Species Across All Strata: (B)   |
| A AL ELLENANT AND A                                     | tal Gyer  | Prices of Form ant ope es<br>That Ari Court Fibrary, or AC: 5050 (A/B)   |
| Sapling/Shrub Stratum (Plot size                        |   | That Ar County City, or IAC: (A/B)   |
| 1. None   |   | Prevalence Index worksheet:  |
| 2.  |   | Total % Cover of: Multiply by:   |
| 3.  |   | OBL species $O = X1 = O$   |
| 4.  |   | FACW species   |
| 5.  |   | FAC species <u>50</u> x3 = <u>/50</u>  |
| Herb Stratum (Plot size: 5')                            | = Total Cover   | FACU species   |
| 1. Bromus tectorum                                      | 50 Y N/L  | UPL species  |
| 2. Leymus cinereus                                      | 50 Y FAC  | Column Totals: <u>58</u> (A) <u>172</u> (B)  |
| 3. Juncus balticus                                      | 5 FACU  | Prevalence Index = B/A =2.9  |
| 4. POD bulbosa  | 3 FACIA   | Hydrophytic Vegetation Indicators:   |
| 5.  | ni dang itah a Seniki Amalah  | Dominance Test is >50%   |
| 6.  | AND SOME AND A  | ∠ Prevalence Index is ≤3.0¹  |
| 7   |   | Morphological Adaptations¹ (Provide supporting   |
| 8.  |   | data in Remarks or on a separate sheet)  |
|   | 108 = Total Cover   | Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  |
| Woody Vine Stratum (Plot size:)                         |   | The second secon |
| 1   |   | <sup>1</sup> Indicators of hydric soil and wetland hydrology must<br>be present, unless disturbed or problematic.  |
| 2   | the first and the same of the |  |
|   | = Total Cover   | Hydrophytic Vegetation   |
| % Bare Ground in Herb Stratum %                         | 6 Cover of Biotic Crust   | Present? Yes No No   |
| Remarks:  |   |  |
|   |   | and the second s |
|   |   | aprile test of the section of  |
|   |   |  |

Sampling Point: DPZ

| rofile Description: (Describe to the depo  | Redox   | x Feature:   |  |                  |  |                 |
|--|---|--|--|------------------|--|-----------------|
| inches) Color (moist) %  | Color (moist)   | %  | Type <sup>1</sup>  | Loc <sup>2</sup> | Texture Remarks  |                 |
| 0-Z 10YR 7/1 98  | 10 YR 3/6   | Z  | C  | m                | Sandy loam W/ Some   | mu              |
| 2-12 104/23/3 100  |   |  | PI   | -                | Sondy (ODM   |                 |
|  |   | 0.00   |  |                  | A CONTRACTOR OF THE CONTRACTOR | HUIDSHIP        |
|  |   |  |  | 7.               |  |                 |
|  |   |  |  |                  |  |                 |
|  |   |  |  |                  |  |                 |
|  |   | 11/2/1   |  |                  |  | TOP TO          |
|  |   | 2400   |  |                  |  |                 |
| KENNER CHEST SALES   |   |  |  | 4                |  |                 |
| consocia, impostent frautres, e  | a religio di Salo.  | mila   | ibeen  | Magazi           | an ole fastis State elemen   |                 |
| Type: C=Concentration, D=Depletion, RM=  | Reduced Matrix, CS  | S=Covered  | d or Coate   | ed Sand G        | rains. <sup>2</sup> Location: PL=Pore Lining, M=Ma   | trix.           |
| ydric Soil Indicators: (Applicable to all  |   |  |  |                  | Indicators for Problematic Hydric Soils  |                 |
| Histosol (A1)  | Sandy Redo  | ox (S5)  |  |                  | 1 cm Muck (A9) (LRR C)   |                 |
| _ Histic Epipedon (A2)   | Stripped Ma   |  |  |                  | 2 cm Muck (A10) (LRR B)  |                 |
| Black Histic (A3)  | Loamy Muc   |  | I (F1)   |                  | Reduced Vertic (F18)   |                 |
| _ Hydrogen Sulfide (A4)  | Loamy Gley  |  |  |                  | Red Parent Material (TF2)  |                 |
| _ Stratified Layers (A5) (LRR C)   | Depleted Ma   |  | (, -)  |                  | Other (Explain in Remarks)   |                 |
| _ 1 cm Muck (A9) (LRR D)   | Redox Dark  | , ,  | (F6)   |                  | only (Explain in Remarks)  |                 |
| _ Depleted Below Dark Surface (A11)  | Depleted Da   |  |  |                  |  |                 |
| Thick Dark Surface (A12)   | Redox Depr  |  |  |                  | <sup>3</sup> Indicators of hydrophytic vegetation and  |                 |
| Sandy Mucky Mineral (S1)   | Vernal Pool   |  | 1 0)   |                  | wetland hydrology must be present,   |                 |
| _ Sandy Gleyed Matrix (S4)   | vernari ou  | 3 (1 3)  |  |                  | unless disturbed or problematic.   |                 |
| estrictive Layer (if present):   |   |  |  |                  | diffess distarsed of problematic.  |                 |
|  |   |  |  |                  |  |                 |
| Type:  |   |  |  |                  |  |                 |
|  |   |  |  |                  | V  |                 |
| Depth (inches):  Remarks:  Very dark Surtage   |   | <b>3</b> /   | S  | 0                | Hydric Soil Present? Yes No.   | F'              |
| emarks:<br>Very dark surface<br>presence of much   |   | <b>9</b> 4   | S  | 0                | Hydric Soil Present? Yes No.   | ş'              |
| emarks:<br>Very dark surtace<br>Presence of much<br>ODROLOGY   | ₩P€   | <b>3</b> 4   | S  | 0                | Hydric Soil Present? Yes No.   | > <u> </u>      |
| emarks:  Nery dark surface  Presence of much  (DROLOGY  Vetland Hydrology Indicators:  | etroid<br>grand to a  |  | S  | <b>e</b>         | C C S evident  | ۶'              |
| emarks:  Very dark Surface  Presence of muce  /DROLOGY  /etland Hydrology Indicators:  rimary Indicators (minimum of one require)  | d; check all that appl  | y)   | S  | 0                | Secondary Indicators (2 or more red  | \$ '            |
| emarks:  Nery dark Surface  Presence of Truce  (DROLOGY  Vetland Hydrology Indicators:  rimary Indicators (minimum of one required  Surface Water (A1)   | d; check all that appl  | y)<br>(B11)  | S  | 0                | Secondary Indicators (2 or more red<br>— Water Marks (B1) (Riverine)   |                 |
| emarks:  Jery dark Surface  Presence of Truce  (DROLOGY  Vetland Hydrology Indicators:  rimary Indicators (minimum of one required  Surface Water (A1)   | d; check all that appl  | y)<br>(B11)  | S  | 0                | Secondary Indicators (2 or more red  |                 |
| emarks:  Nery dark Surface  Presence of Truce  /DROLOGY  /etland Hydrology Indicators:  rimary Indicators (minimum of one required  Surface Water (A1)   | d; check all that appl  | y)<br>(B11)<br>st (B12)  | Date:  | 0                | Secondary Indicators (2 or more red  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  |                 |
| emarks:  Nety dark Surtage  Presence of muce  /DROLOGY  /etland Hydrology Indicators:  rimary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  | d; check all that appl Salt Crust Biotic Crus Aquatic In  | y)<br>(B11)<br>st (B12)<br>vertebrate  | es (B13)   | 0                | Secondary Indicators (2 or more red  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  |                 |
| emarks:  Very dark Surtage  Presence of muce  /DROLOGY  /etland Hydrology Indicators:  rimary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  | d; check all that appl Salt Crust Biotic Crus Aquatic In Hydrogen   | y)<br>(B11)<br>st (B12)<br>vertebrate<br>Sulfide O   | es (B13)   |                  | Secondary Indicators (2 or more red  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)   |                 |
| emarks:  Very dark Surfice  Presence of Truce  /DROLOGY  /etland Hydrology Indicators:  rimary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)   | d; check all that appl Salt Crust Biotic Crus Aquatic In Hydrogen Oxidized F  | y)<br>(B11)<br>st (B12)<br>vertebrate<br>Sulfide O<br>Rhizosphe  | es (B13)<br>Idor (C1)<br>eres alonç  | ı Living Ro      | Secondary Indicators (2 or more red  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  ots (C3) Dry-Season Water Table (C2)   |                 |
| emarks:  Nery dark Surface  Presence of Truce  (DROLOGY  Vetland Hydrology Indicators:  rimary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  | d; check all that appl Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F   | y) (B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduce   | es (B13)<br>idor (C1)<br>eres along<br>ed Iron (C  | յ Living Ro      | Secondary Indicators (2 or more red  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  ots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  | ne)             |
| remarks:  Sery dark Surface  Presence of Truce  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)   | d; check all that appl  Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro                      | y)<br>(B11)<br>st (B12)<br>vertebrate<br>Sulfide O<br>Rhizosphe<br>of Reduct                               | es (B13)<br>dor (C1)<br>eres along<br>ed Iron (C<br>ion in Tillo                                   | յ Living Ro      | Secondary Indicators (2 or more reg  Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) ots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Image  | ne)             |
| emarks:  Very dark Surface  Presence of muce  (DROLOGY  Vetland Hydrology Indicators:  rimary Indicators (minimum of one required  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 (B  | d; check all that appl  Salt Crust Biotic Crus Aquatic In Hydrogen Oxidized F Presence Recent Ird                       | y) (B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduct on Reduct Surface                               | es (B13)<br>dor (C1)<br>eres along<br>ed Iron (C<br>tion in Tilla<br>(C7)                          | յ Living Ro      | Secondary Indicators (2 or more reg  Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) ots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Ima  | ne)             |
| remarks:  Very dark Surface  Presence of muce  P | d; check all that appl  Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro                      | y) (B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduct on Reduct Surface                               | es (B13)<br>dor (C1)<br>eres along<br>ed Iron (C<br>tion in Tilla<br>(C7)                          | յ Living Ro      | Secondary Indicators (2 or more reg  Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) ots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Image  | ne)             |
| emarks:  Very dark Surface  Presence of muce  (DROLOGY  Vetland Hydrology Indicators: rimary Indicators (minimum of one required  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 (B  Water-Stained Leaves (B9)  ield Observations:  | d; check all that appl  Salt Crust Biotic Crus Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp  | y) (B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduct on Reduct x Surface plain in Re                 | es (B13) dor (C1) eres along ed Iron (C tion in Tille (C7) emarks)                                 | յ Living Ro      | Secondary Indicators (2 or more reg  Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) ots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Ima  | ne)             |
| remarks:  Very dark Surface  Presence of Truce  Presence of Truce  Vetland Hydrology Indicators:  rimary Indicators (minimum of one required  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 (B  Water-Stained Leaves (B9)  ield Observations:  surface Water Present?  Yes   | d; check all that appl  Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Ex  | y) (B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduct on Reduct c Surface plain in Re                 | es (B13) edor (C1) eres along ed Iron (C ion in Tille (C7) emarks)                                 | յ Living Ro      | Secondary Indicators (2 or more reg  Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) ots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Ima  | ne)             |
| TOROLOGY  Vetland Hydrology Indicators:  Irimary Indicators (minimum of one required 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 (B Water-Stained Leaves (B9)  Field Observations: Surface Water Present?  Yes  | d; check all that appl  Salt Crust Biotic Crus Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp  | y) (B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduct on Reduct c Surface plain in Re                 | es (B13) edor (C1) eres along ed Iron (C ion in Tille (C7) emarks)                                 | յ Living Ro      | Secondary Indicators (2 or more reg  Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) ots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Ima  | ne)             |
| TOROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required)  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 (B  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Ves  X  | d; check all that appl  Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Ex  | y) (B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduct on Reduct c Surface plain in Re                 | es (B13) edor (C1) eres along ed Iron (C ion in Tille (C7) emarks)                                 | j Living Ro      | Secondary Indicators (2 or more regarded)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  ots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Images Shallow Aquitard (D3)  FAC-Neutral Test (D5)   | ne)             |
| TOROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required)  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 (B)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Ves  Saturation Present?  Ves  Saturation Present?  Yes  Saturation Present?   | d; check all that appl  Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp | y) (B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduct on Reduct c Surface plain in Re aches): aches): | es (B13) Idor (C1) Idor (C1) Idores along Idored Iron (C1) Idored Iron (C7) Idoremarks) Idoremarks | Living Ro        | Secondary Indicators (2 or more red  Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) ots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Ima Shallow Aquitard (D3) FAC-Neutral Test (D5)  | ne)<br>gery (C9 |
| TOROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required)  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 (B)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Ves  Saturation Present?  Ves  Saturation Present?  Yes  Saturation Present?   | d; check all that appl  Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp | y) (B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduct on Reduct c Surface plain in Re aches): aches): | es (B13) Idor (C1) Idor (C1) Idores along Idored Iron (C1) Idored Iron (C7) Idoremarks) Idoremarks | Living Ro        | Secondary Indicators (2 or more red  Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) ots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Ima Shallow Aquitard (D3) FAC-Neutral Test (D5)  | ne)<br>gery (C9 |
| TOROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required)  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 (B)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Ves  Saturation Present?  Ves  Saturation Present?  Yes  Saturation Present?   | d; check all that appl  Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp | y) (B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduct on Reduct c Surface plain in Re aches): aches): | es (B13) Idor (C1) Idor (C1) Idores along Idored Iron (C1) Idored Iron (C7) Idoremarks) Idoremarks | Living Ro        | Secondary Indicators (2 or more red  Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) ots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Ima Shallow Aquitard (D3) FAC-Neutral Test (D5)  | ne)<br>gery (C9 |
| Remarks:  Very dark Surface  Presence of muce  YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required  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 (B  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Ves  Vater Table Present?  Ves  Saturation Present?  Ves  Saturation Present?  Ves  Sincludes capillary fringe)  Describe Recorded Data (stream gauge, more   | d; check all that appl  Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Ex  | y) (B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduct on Reduct c Surface plain in Re aches):         | es (B13) odor (C1) eres along ed Iron (C ion in Tille (C7) emarks)  Z  3                           | J Living Ro      | Secondary Indicators (2 or more red  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  ots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Ima  Shallow Aquitard (D3)  FAC-Neutral Test (D5)   | gery (C9        |
| Remarks:  Very dark Surface  Presence of muce  YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required  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 (B  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Ves  Vater Table Present?  Ves  Saturation Present?  Ves  Saturation Present?  Ves  Sincludes capillary fringe)  Describe Recorded Data (stream gauge, more   | d; check all that appl  Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Ex  | y) (B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduct on Reduct c Surface plain in Re aches):         | es (B13) odor (C1) eres along ed Iron (C ion in Tille (C7) emarks)  Z  3                           | J Living Ro      | Secondary Indicators (2 or more red  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  ots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Ima  Shallow Aquitard (D3)  FAC-Neutral Test (D5)   | gery (C9        |
| TOROLOGY  Vetland Hydrology Indicators:  Irimary Indicators (minimum of one required  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 (B  Water-Stained Leaves (B9)  Vield Observations:  Surface Water Present?  Ves  Vater Table Present?  Ves  Saturation Present?  Ves  Saturation Present?  Ves  Saturation Present?  Ves  Second Stream gauge, more  | d; check all that appl  Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Ex  | y) (B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduct on Reduct c Surface plain in Re aches):         | es (B13) odor (C1) eres along ed Iron (C ion in Tille (C7) emarks)  Z  3                           | J Living Ro      | Secondary Indicators (2 or more red  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  ots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Ima  Shallow Aquitard (D3)  FAC-Neutral Test (D5)   | gery (C9        |
| remarks:  Very dark Surface  Presence of Truce  Velland Hydrology Indicators:  rimary Indicators (minimum of one required  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 (B  Water-Stained Leaves (B9)  ield Observations:  urface Water Present?  Ves  Vater Table Present?  vater Table Present?  remarks:  Ves  Ves  Ves  Ves  Ves  Ves  Ves  V   | d; check all that appl  Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Ex  | y) (B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduct on Reduct c Surface plain in Re aches):         | es (B13) odor (C1) eres along ed Iron (C ion in Tille (C7) emarks)  Z  3                           | J Living Ro      | Secondary Indicators (2 or more red  Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) ots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Ima Shallow Aquitard (D3) FAC-Neutral Test (D5)  | gery (C9        |

| WEŢLAND  | DETERMINATION                                  | DATA FORM          | - Arid West Regio  | n                                    | ,                         |
|--|--|--------------------|--|--------------------------------------|---------------------------|
| Project/Site: 60554 M4N  Applicant/Owner: 61/00, Resource  Applicant/Owner: 50 M. Hame Source  | City   | County: Mal        | heur   | Sampling Date:                       | 5/21/                     |
| Applicant/Owner: Calico, Resour  | ices Inc                                       |                    | State: OR  | Sampling Point:                      | 13P3                      |
| Investigator(s): S. M. Hamelso   | m (tms) sec                                    | tion, Township, Ra | nge:   | _ Camping Form                       | 0, 0                      |
| Landform (hillslope, terrace, etc.): +0es/o  |  |                    | convex, none): CON   | VYX Slope                            | (%). /                    |
| Subregion (LRR): NOT Yhwestem Wheat  | 13   |                    |  |                                      | NADE                      |
| Soil Map Unit Name: Not availabl   |  |                    | NWI classit  |                                      |                           |
| Are climatic / hydrologic conditions on the site typi  |  |                    | \ /  |                                      |                           |
| Are Vegetation, Soil, or Hydrology   |  |                    | Normal Circumstances'  | V                                    | No                        |
| Are Vegetation, Soil, or Hydrology   |  |                    | eded, explain any answ   |                                      |                           |
| SUMMARY OF FINDINGS - Attach sit   | te map showing sa                              | mpling point le    | ocations, transect   | s, important fea                     | tures, etc.               |
| Hydrophytic Vegetation Present? Yes  | No X   | Is the Sampled     | Aros   |                                      |                           |
|  | No   | within a Wetlar    |  | No                                   |                           |
|  | No   | Within a Wetlar    | id: Tes  |                                      |                           |
| Remarks:   |  |                    |  |                                      |                           |
| Precipitation higher   | - HOUN NU                                      | ofano U            | his wear   |                                      |                           |
| The state of the s |  | Je "               | " year   |                                      |                           |
| VEGETATION – Use scientific names  | of plants.                                     |                    | West - Aller   | 3 23 22 6 5 water 5                  | render =                  |
|  |  | minant Indicator   | Dominance Test wo  | rksheet:                             |                           |
| Tree Stratum (Plot size:)  | % Cover Sp                                     | ecies? Status      | Number of Dominant   |                                      |                           |
| 1. pone  |  | 41 - 1 /           | That Are OBL, FACW   | , or FAC:                            | (A)                       |
| 2.   |  |                    | Total Number of Dom  |                                      |                           |
| 4  |  |                    | Species Across All St  | rata:                                | (B)                       |
|  | INA  | otal Sver          | Percen of Paris, ant   | pe es 50                             | (4 (5)                    |
| Sapling/Shrub Stratum (Plot size   |  |                    | T at An O  | , or FAC:                            | (A/B)                     |
| 1. None  |  |                    | Prevalence index wo  | orksheet:                            |                           |
| 2.   |  |                    |  | Multiply t                           | The state of the state of |
| 3.   |  |                    | OBL species  |                                      |                           |
| 4.   |  |                    | FAC species  |                                      |                           |
| 5  | =T   | intal Cours        | FAC species  |                                      |                           |
| Herb Stratum (Plot size: 5)  |  | otal Cover         |  | x5=                                  |                           |
| 1. Bromus HCtorum  | <u>+0</u>                                      | y n/a              | Column Totals:   |                                      |                           |
| 2. Leymus cinereus   | <u> 30                                    </u> | Y FAC              |  |                                      |                           |
| 3. Chorispara tenella  |  | 1/2                |  | ex = B/A =                           |                           |
| 4  |  |                    | Hydrophytic Vegetat  |                                      |                           |
| 5.   |  |                    | Dominance Test Prevalence Index  |                                      |                           |
| 6  |  |                    | A CONTRACTOR OF THE PROPERTY O | t is ≤3.0<br>Iaptations¹ (Provide su | innorting                 |
| 7  |  |                    | data in Remar  | ks or on a separate sl               | neet)                     |
|  | 112  | otal Cover         | Problematic Hydr   | ophytic Vegetation¹ (E               | Explain)                  |
| Woody Vine Stratum (Plot size:   |  | (paces of          | 8"   |                                      |                           |
| 1. none  |  |                    | <sup>1</sup> Indicators of hydric s<br>be present, unless dis  |                                      |                           |
| 2.   |  |                    |  | standed or problematic               |                           |
|  |  | otal Cover         | Hydrophytic Vegetation   | \                                    | ,                         |
| % Bare Ground in Herb Stratum  | % Cover of Biotic Crust                        |                    | Present? Y   | 'es NoX                              |                           |
| Remarks:   |  |                    |  |                                      |                           |
|  |  |                    |  |                                      |                           |
|  |  |                    |  |                                      | *                         |
|  |  |                    |  |                                      |                           |

| - | -   | 1 |   |
|---|-----|---|---|
| 5 | ( ) | 1 | 8 |
|   |     |   |   |

Sampling Point: DP3

| (inches) Color (m  | oist) _   |  | Color (moist) % Type <sup>1</sup>  | Loc <sup>2</sup> Textur           | e Remarks   |
|--|---|--|--|-----------------------------------|---|
| 0-14 10 YK   | 13  | 100  |  | Sano                              | dy las m  |
|  |   |  |  |                                   |   |
|  |   |  |  |                                   |   |
|  |   |  |  |                                   |   |
|  | State II a  | Name of Fig.   |  | an phy o school                   | min activity introductional taken we consider   |
| AND AND SON Y  | A SURPLO VIEW   |  | Lavana testa de la compania de la co | official cos                      | eurosta para  |
|  |   |  |  |                                   |   |
|  | 4   |  |  |                                   |   |
| a camuration writers   |   | depart of  |  |                                   |   |
| Type: C=Concentration  | D=Deplet  | ion, RM=Red  | luced Matrix, CS=Covered or Coate  | d Sand Grains.                    | <sup>2</sup> Location: PL=Pore Lining, M=Matrix.  |
|  |   |  | s, unless otherwise noted.)  |                                   | tors for Problematic Hydric Soils <sup>3</sup> :  |
| _ Histosol (A1)  |   | 20.7   | Sandy Redox (S5)   | 1                                 | cm Muck (A9) (LRR C)  |
| _ Histic Epipedon (A2)   |   |  | Stripped Matrix (S6)   |                                   | cm Muck (A10) (LRR B)   |
| _ Black Histic (A3)  |   |  | Loamy Mucky Mineral (F1)   | R                                 | educed Vertic (F18)   |
| _ Hydrogen Sulfide (A  |   |  | Loamy Gleyed Matrix (F2)   | R                                 | ed Parent Material (TF2)  |
| _ Stratified Layers (A5  |   | WITH .   | Depleted Matrix (F3)   | 0                                 | ther (Explain in Remarks)   |
| 1 cm Muck (A9) (LR   |   |  | Redox Dark Surface (F6)  |                                   |   |
| Depleted Below Dark  |   | A11)   | Depleted Dark Surface (F7)   | athride to its                    | use national add - Mid A 130  |
| Thick Dark Surface (   |   | War Team   | Redox Depressions (F8)   |                                   | ators of hydrophytic vegetation and   |
| <ul><li>Sandy Mucky Minera</li><li>Sandy Gleyed Matrix</li></ul>   |   |  | Vernal Pools (F9)  |                                   | land hydrology must be present,   |
| Restrictive Layer (if pre  |   |  |  | unie                              | ess disturbed or problematic.   |
|  | Sonty.  |  |  |                                   |   |
|  |   |  |  |                                   |   |
| Type:  |   |  |  | 11                                | 0-11 P  |
| Depth (inches):  | (   | Su   | ipers  | ed <sup>Hydric</sup>              | Soil Present? Yes No No   |
| Depth (inches):  |   | 31   | ipers  | ed <sup>Hytric</sup>              | Soil Present? Yes No No   |
| Depth (inches): Remarks:  YDROLOGY   |   | 31   | ipers  | ed <sup>Hy</sup>                  | Soil Present? Yes No No   |
| Depth (inches):  | icators:  | and the latest services                                    |  | ed                                | Soil Present? Yes No  |
| Depth (inches): Remarks:  YDROLOGY  Vetland Hydrology Ind  Primary Indicators (minir   | icators:  | and the latest services                                    | eck all that apply)  | ed                                | Secondary Indicators (2 or more required)   |
| Depth (inches):  | icators:<br>num of one  | and the latest services                                    | eck all that apply) Salt Crust (B11)   | ed                                | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  |
| Depth (inches):  Remarks:  YDROLOGY  Vetland Hydrology Ind  Primary Indicators (mining  Surface Water (A1)  High Water Table (A  | icators:<br>num of one  | and the latest services                                    | neck all that apply) Salt Crust (B11) Biotic Crust (B12)   | ed                                | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)   |
| Depth (inches): Remarks:  YDROLOGY  Vetland Hydrology Ind Primary Indicators (mining Surface Water (A1) High Water Table (A) Saturation (A3)   | icators:<br>num of one<br>2)  | e required; ch   | neck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)  | ed                                | Gecondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)   |
| Depth (inches):  Primary Indicators (mining Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) (N   | icators:<br>num of one<br>2)  | e required; ch   | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)  | ed                                | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  |
| Primary Indicators (mining Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) (N Sediment Deposits (  | icators: num of one 2) lonriverine B2) (Nonr  | e required; ch   | Salt Crust (B11) Salt Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along   | Ed S                              | 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)   |
| Depth (inches):  Primary Indicators (mining Surface Water (A1) High Water Table (A1) Water Marks (B1) (N1) Sediment Deposits (C1) Drift Deposits (B3) (  | icators: num of one 2) lonrivering B2) (Nonr  | e required; ch   | Salt Crust (B11) Salt Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C-1)  | ELiving Roots (C3)                | 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)  |
| Primary Indicators (minir Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) (N Sediment Deposits (B3) ( Drift Deposits (B3) ( Surface Soil Cracks  | icators: num of one 2) lonriverine B2) (Nonr Nonriverir                                   | e required; ch   | Salt Crust (B11) Salt Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4) Recent Iron Reduction in Tille  | Eliving Roots (C3)                | 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 (CS)   |
| Depth (inches):  Remarks:  YDROLOGY  Vetland Hydrology Ind  Primary Indicators (mining  Surface Water (A1)  High Water Table (A)  Saturation (A3)  Water Marks (B1) (N)  Sediment Deposits (B3) (C)  Drift Deposits (B3) (C)  Surface Soil Cracks  Inundation Visible of   | icators: num of one 2) Ionriverine B2) (Nonr Nonriverire (B6) n Aerial Im                 | e required; ch   | Salt Crust (B11) Salt Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4) Recent Iron Reduction in Tille Thin Muck Surface (C7)   | Living Roots (C3)                 | 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 (CS)  Shallow Aquitard (D3)                        |
| Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Ind  Primary Indicators (mining Surface Water (A1) High Water Table (A) Saturation (A3) Water Marks (B1) (N) Sediment Deposits (B3) (Compared to the position of the po | icators: num of one 2) Ionriverine B2) (Nonr Nonriverire (B6) n Aerial Im                 | e required; ch   | Salt Crust (B11) Salt Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4) Recent Iron Reduction in Tille  | Living Roots (C3)                 | 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 (CS)   |
| Depth (inches):  Remarks:  YDROLOGY  Vetland Hydrology Ind  Primary Indicators (minir  Surface Water (A1)  High Water Table (A  Saturation (A3)  Water Marks (B1) (N  Sediment Deposits (B3) (  Drift Deposits (B3) (  Surface Soil Cracks  Inundation Visible of  Water-Stained Leav  Field Observations:   | icators: num of one 2) lonriverine B2) (Nonr Nonriverir (B6) n Aerial Im es (B9)          | e required; ch<br>e)<br>iverine)<br>ne)<br>agery (B7)      | Salt Crust (B11) Salt Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Tille Thin Muck Surface (C7) Other (Explain in Remarks)   | Living Roots (C3)                 | 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 (CS)  Shallow Aquitard (D3)                        |
| Popth (inches):  Popth  | icators: num of one 2) lonrivering B2) (Nonr Nonrivering (B6) n Aerial Im es (B9)         | e required; che e) iverine) ne) agery (B7)                 | Salt Crust (B11) Salt Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4) Recent Iron Reduction in Tille Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches):   | Living Roots (C3)                 | 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 (CS)  Shallow Aquitard (D3)                        |
| Popth (inches):  Remarks:  YDROLOGY  Vetland Hydrology Ind  Primary Indicators (mining Surface Water (A1) High Water Table (A) Saturation (A3) Water Marks (B1) (N) Sediment Deposits (B3) (Compared to the compared to the co | icators: num of one 2) Ionriverine B2) (Nonr Nonriverire (B6) n Aerial Im es (B9) Yes Yes | e required; che e) iverine) ne) agery (B7) s No _ s No _   | Salt Crust (B11) Salt Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C- Recent Iron Reduction in Tille Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):  | Living Roots (C3)                 | 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 (C8)  Shallow Aquitard (D3)  FAC-Neutral Test (D5) |
| Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Ind  Primary Indicators (minir  Surface Water (A1)  High Water Table (A  Saturation (A3)  Water Marks (B1) (N  Sediment Deposits (B3) (  Drift Deposits (B3) (  Surface Soil Cracks  Inundation Visible on  Water-Stained Leav  Field Observations:  Surface Water Present?  Water Table Present?  Saturation Present?  Saturation Present?  Sincludes capillary fringe   | icators: num of one 2) lonriverine B2) (Nonr Nonriverine (B6) n Aerial Im es (B9) Yes Yes | e required; che  e) iverine) ne) agery (B7)  6 No _ 6 No _ | Salt Crust (B11) Salt Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Tille Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):  | Living Roots (C3)<br>d Soils (C6) | 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 (CS)  Shallow Aquitard (D3)  FAC-Neutral Test (D5) |
| Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Ind  Primary Indicators (minir  Surface Water (A1)  High Water Table (A  Saturation (A3)  Water Marks (B1) (N  Sediment Deposits (B3) (  Drift Deposits (B3) (  Surface Soil Cracks  Inundation Visible on  Water-Stained Leav  Field Observations:  Surface Water Present?  Water Table Present?  Saturation Present?  Saturation Present?  Sincludes capillary fringe   | icators: num of one 2) lonriverine B2) (Nonr Nonriverine (B6) n Aerial Im es (B9) Yes Yes | e required; che  e) iverine) ne) agery (B7)  6 No _ 6 No _ | Salt Crust (B11) Salt Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C- Recent Iron Reduction in Tille Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):  | Living Roots (C3)<br>d Soils (C6) | 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 (CS)  Shallow Aquitard (D3)  FAC-Neutral Test (D5) |
| Popth (inches):  Popth  | icators: num of one 2) lonriverine B2) (Nonr Nonriverine (B6) n Aerial Im es (B9) Yes Yes | e required; che  e) iverine) ne) agery (B7)  6 No _ 6 No _ | Salt Crust (B11) Salt Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Tille Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):  | Living Roots (C3)<br>d Soils (C6) | 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 (CS)  Shallow Aquitard (D3)  FAC-Neutral Test (D5) |
| Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Ind  Primary Indicators (minir  Surface Water (A1)  High Water Table (A  Saturation (A3)  Water Marks (B1) (N  Sediment Deposits (B3) (  Drift Deposits (B3) (  Surface Soil Cracks  Inundation Visible on  Water-Stained Leav  Field Observations:  Surface Water Present?  Water Table Present?  Saturation Present?  Saturation Present?  Sincludes capillary fringe   | icators: num of one 2) lonriverine B2) (Nonr Nonriverine (B6) n Aerial Im es (B9) Yes Yes | e required; che  e) iverine) ne) agery (B7)  6 No _ 6 No _ | Salt Crust (B11) Salt Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Tille Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):  | Living Roots (C3)<br>d Soils (C6) | 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 (CS)  Shallow Aquitard (D3)  FAC-Neutral Test (D5) |
| Popth (inches):  Popth  | icators: num of one 2) lonriverine B2) (Nonr Nonriverine (B6) n Aerial Im es (B9) Yes Yes | e required; che  e) iverine) ne) agery (B7)  6 No _ 6 No _ | Salt Crust (B11) Salt Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Tille Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):  | Living Roots (C3)<br>d Soils (C6) | 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 (CS)  Shallow Aquitard (D3)  FAC-Neutral Test (D5) |

Wetland 2

| Project/Site: GBS54  | MAN                         |  | Wal                                     | -  |  | 5/211  |
|--|-----------------------------|--|---|--|--|--|
|  | 11111                       | City   | County: //a //                          | heur   | Sampling Date:   | 2/4/1  |
| Applicant/Owner: Colico  | Resource                    | s Inc  |   | State: OR  |  | DP4  |
| nvestigator(s): S.M. Ha  |                             | mal  | tion, Township, Ra                      |  |  |  |
| andform (hillslope, terrace, etc.):  |                             | The state of the s |   | convex, none):   | neave slop   | e (%): /                                     |
| ubregion (LRR):  |                             |  |   | Long: 4722   |  | NAD  |
| oil Map Unit Name:   | wildle                      |  |   |  | ification: Non   |  |
| re climatic / hydrologic conditions  |                             | his time of year?  | Yes No                                  | (If no, explain in   |  |  |
| re Vegetation, Soil  |                             |  | /                                       | 'Normal Circumstances  | ~/   | No   |
| re Vegetation, Soil  |                             |  |   | eeded, explain any ans   |  |  |
| UMMARY OF FINDINGS   | - Attach site maj           | showing sa   | mpling point le                         | ocations, transec  | ts, important fea  | itures, etc.                                 |
| Hydrophytic Vegetation Present?<br>Hydric Soil Present?<br>Wetland Hydrology Present?  | Yes                         | No<br>No<br>No   | Is the Sampled within a Wetlar          |  | \  |  |
| Remarks: Precipitation   | higher 4                    | nan ou   | erage                                   | Real Control of the C |  |  |
| /EGETATION – Use scier   | ntific names of pla         | nts.   |   |  |  |  |
| Tree Stratum (Plot size:   | ) taking                    |  | minant Indicator<br>ecies? Status       | Number of Dominant<br>That Are OBL, FACV   | t Species  | (A)  |
|  |                             |  |   |  | 2  |  |
| 2  | h and care all              |  |   | Total Number of Dor<br>Species Across All S  |  | (B)  |
| . 0 1  | Su                          | oe   | otal Guer                               | Species Across All S Persen of Portin ant That Ari Course IV Prevalence Index w Total % Cover of   | pe es () () () () () () () () () () () () ()   | (A/B)  |
| . 0 - 1  | Sup                         | )e   | otal Quer                               | Species Across All S Persen of Portin ant That Ari Course IV Prevalence Index w Total % Cover of   | pe es () () () () () () () () () () () () ()   | (A/B)  |
| . 0 1  | Sup                         | ) <b>e</b>   | otal See C                              | Prevalence Index w Total % Cover of OBL species  FACW species  | pe es , or FAC:  //Orksheet: f: Multiply  x 1 = , x 2 =  | (A/B)  |
| . 0 1  | Su                          | )e   | otal Guer C                             | Prevalence Index w Total % Cover o OBL species FACW species FAC species  | pe es , or FAC:  | (A/B)  |
| 1. <u>NME</u><br>235.  | <b>O G J</b>                | <b>)e</b>  | otal Quer                               | Prevalence Index w Total % Cover o OBL species FACW species FACU species FACU species FACU species   | pe es , or FAC:  | (A/B)  |
| 1  | Sup                         |  | otal Gwer                               | Prevalence Index w Total % Cover o OBL species FACW species FACU species UPL species UPL species   | pe es , or i AC:   | by:  |
| 1. None 2  |                             |  | otal Quer  otal Cover  FACU  FACU       | Prevalence Index w Total % Cover of OBL species FACW species FACU species FACU species UPL species Column Totals:  | pe es  | (A/B)  |
| 1. None 2. 3. 4. 5. Herb Stratum (Plot size: 1. Hardlum Drace 2. Paa bulbosa 3. Paa pa wstns                                 | zh yorthen w                |  | otal Guer Cotal Cover  FACU  FACU  FACU | Prevalence Index w Total % Cover of OBL species FACW species FACU species UPL species Column Totals:  Prevalence Index w Total % Cover of OBL species FACW species FACW species FACU species FACU species  | pe es , or FAC:  | (A/B)  |
| 1. None 2. 3. 4. 5. Herb Stratum (Plot size: 1. Hardeum brace 2. Paa bulbosa 3. Paa pa wst ns 4. Leymus Cine                 | ens                         |  | otal Guer C                             | Prevalence Index w Total % Cover o OBL species FACW species FACU species UPL species Column Totals: Prevalence Ind Hydrophytic Vegeta  | pe es , or FAC:  | (A/B)  |
| 1. NOME 2. 3. 4. 5. Herb Stratum (Plot size: 1. Har deum Drace 2. Paa bulbosa 3. Paa pa wstns 4. Leymus Ciner 5. Juncus buf  | chyonthenum<br>ceus         | 1 10<br>25<br>20<br>30   | otal Cover  FACM FACM FACM FACM         | Prevalence Index w Total % Cover o OBL species FACW species FACU species UPL species Column Totals: Prevalence Ind Hydrophytic Vegeta Dominance Test   | pe es , or i AC:   | (A/B)  |
| 1. NOME 2. 3. 4. 5. Herb Stratum (Plot size: 1. Hardeum Drace 2. Poo bulbosa 3. Poo powstns 4. Leymus Ciner 5. Juncus buf 6. | enyonthemw<br>eus<br>onius  | 1 10<br>25<br>20<br>30<br>3  | FACU<br>Y FACU<br>Y FAC<br>Y FACU       | Prevalence Index was Total % Cover of OBL species FACW species FACU species UPL species Column Totals:  Prevalence Index was Total % Cover of OBL species FACW species FACU species UPL species UPL species UPL species Column Totals:  Prevalence Index was Total % Cover of OBL %  | Pe   es  | (A/B)  |
| 1. None 2. 3. 4. 5. Herb Stratum (Plot size: 1. Hardeum brace 2. Foo bulbosa 3. Poo palustns 4. Leymus Ciner 5. Juncus buf   | chyonthemw<br>reus<br>onius | 1 10<br>25<br>20<br>30<br>3  | FACU<br>Y FACU<br>Y FAC<br>Y FACU       | Prevalence Index w Total % Cover o OBL species FACW species FACU species UPL species Column Totals:  Prevalence Inde Hydrophytic Vegeta Dominance Test Prevalence Inde Morphological A   | pe es , or i AC:   | (A/B)  |
| 1. None 2  | eus<br>onius                | 1 10<br>25<br>20<br>30<br>3  | FACU<br>Y FACU<br>Y FAC<br>Y FACU       | Prevalence Index w Total % Cover o OBL species FACW species FACU species UPL species Column Totals: Prevalence Inde Morphological A data in Rema   | Pe es   Pe | (A/B) by: (B)                                |
| 2. Poo bulbosa 3. Poo palustris 4. Leymus Ciner 5. Juncus buf 6. 7. 8. Woody Vine Stratum (Plot size:                        | eus<br>onius                | 1 10<br>25<br>20<br>30<br>3  | FACW<br>Y FACU<br>Y FAC<br>Y FACW       | Prevalence Index w Total % Cover o OBL species FACW species FACU species UPL species Column Totals:  Prevalence Inde Morphological A data in Rema  | Pe   Pes   Pes | (A/B)  by:  (B)  supporting sheet)  Explain) |

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Sampling Point:

| Depth Matrix   | Redox Features   |  |
|--|--|--|
|  | olor (moist) % Type <sup>1</sup> L   | oc <sup>2</sup> Texture Remarks  |
| 0-10" 10/R 3/1 58 10   | 0 /R 3/6 2 C 1   | m sordy loam   |
| 10 1R 3/2 40   |  | January January  |
|  |  | Part of the state  |
|  |  |  |
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| The state of the s |  |  |
|  |  | alta   |
| and warranted (district on the state of  | Authoritation of Street and and and  | Newscanner and a Report of the Community |
| Type: C=Concentration, D=Depletion, RM=Redu  | uced Matrix CS=Covered or Coated S   | and Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.   |
| lydric Soil Indicators: (Applicable to all LRRs  |  | Indicators for Problematic Hydric Soils <sup>3</sup> :   |
| Histosol (A1)  | Sandy Redox (S5)   | 1 cm Muck (A9) (LRR C)   |
| Histic Epipedon (A2)   | Stripped Matrix (S6)   | 2 cm Muck (A10) (LRR B)  |
| Black Histic (A3)  | Loamy Mucky Mineral (F1)   | Reduced Vertic (F18)   |
| Hydrogen Sulfide (A4)  | Loamy Gleyed Matrix (F2)   | Red Parent Material (TF2)  |
| Stratified Layers (A5) (LRR C)   | Depleted Matrix (F3)   | Other (Explain in Remarks)   |
| 1 cm Muck (A9) (LRR D)   | Redox Dark Surface (F6)  |  |
| Depleted Below Dark Surface (A11)  | Depleted Dark Surface (F7)   |  |
| Thick Dark Surface (A12)   | Redox Depressions (F8)   | <sup>3</sup> Indicators of hydrophytic vegetation and  |
| Sandy Mucky Mineral (S1)   | Vernal Pools (F9)  | wetland hydrology must be present,   |
| Sandy Gleyed Matrix (S4)   |  | unless disturbed or problematic.   |
| Restrictive Layer (if present):  |  |  |
| Type:  |  |  |
|  |  |  |
| Depth (inches):  | inerse   | Hydric Soil Present? Yes No  |
| Semarks:   | perse  | Hydric Soil Present? Yes No  |
| YDROLOGY   | iperse   | Hydric Soil Present? Yes No No   |
| YDROLOGY Vetland Hydrology Indicators:   |  | eded   |
| YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; che  | eck all that apply)  | Secondary Indicators (2 or more required)  |
| YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; che  | eck all that apply) Salt Crust (B11)   | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)   |
| YDROLOGY  Vetland Hydrology Indicators:  Irimary Indicators (minimum of one required; che  Surface Water (A1)  High Water Table (A2)   | eck all that apply) Salt Crust (B11) Biotic Crust (B12)  | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  |
| YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; che  | eck all that apply) Salt Crust (B11)   | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)   |
| YDROLOGY  Vetland Hydrology Indicators:  Irimary Indicators (minimum of one required; che  Surface Water (A1)  High Water Table (A2)   | eck all that apply) Salt Crust (B11) Biotic Crust (B12)  | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)   |
| YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; che  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)   | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)   |
| YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; che  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)  | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)   |
| YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; che  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)   | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv  | 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)   |
| YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; che Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine)   | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Live   | 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)   |
| Verland Hydrology Indicators:  Irimary Indicators (minimum of one required; che 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)  | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S   | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  ing Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  |
| VDROLOGY Vetland Hydrology Indicators:  Irimary Indicators (minimum of one required; che 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) Field Observations:   | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S 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)  ing Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)   |
| Process  Primary Indicators (minimum of one required; chesses 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)  | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7)   | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  ing Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)   |
| Primary Indicators:  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)  Field Observations:  Surface Water Present?  Yes  No   | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S 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)  ing Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)   |
| Primary Indicators (minimum of one required; che 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)  Field Observations:  Surface Water Present?  Water Table Present?  Yes  No  Saturation Present?  Yes  No  Saturation Present?  | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches):                 | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  ing Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)   |
| Primary Indicators (minimum of one required; chesses 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)  Field Observations:  Surface Water Present?  Water Table Present?  Yes  No  No   | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches): | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  ing Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No   |
| Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; cheese 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)  Field Observations:  Surface Water Present?  Ves  No  Saturation Present?  Yes  No  Saturation Present?  | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches): | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  ing Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No   |
| Print Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Water Table Present? Water Table Present? Water Table Preserics Water Table Present? Wa | Salt Crust (B11) Soltic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches): Depth (inches):     | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  ing Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No   |

| Cacal Wha  | - Arid West Region   |
|--|--|
| Project/Site: 6855/ NHh City/County: Ma/   | heur Sampling Date: 5/2/   |
|  | State: OR Sampling Point: DP5  |
| ivestigator(s): S.M. Harrelson (Ems) Section, Township, Rai  |  |
|  | convex, none): Slope (%):/   |
|  | Long: 472793.7 Datum: NA   |
| oil Map Unit Name: Not available   | NWI classification: Non E  |
| e climatic / hydrologic conditions on the site typical for this time of year? Yes No   |  |
|  | "Normal Circumstances" present? Yes No   |
|  | eeded, explain any answers in Remarks.)  |
| UMMARY OF FINDINGS – Attach site map showing sampling point l  | ocations, transects, important features, et  |
| Hydrophytic Vegetation Present? Yes No Is the Sampled  | production and a line and a line and a substitute than the   |
| Hydric Soil Present?  Yes No within a Wetlar   |  |
| Wetland Hydrology Present? Yes No Within a Wetland Remarks:  | 165  |
| Precipitation higher 4non average  | Particular St. May 1997 (2004) |
| EGETATION – Use scientific names of plants.  | ungan grafin samer sam mark  |
| Absolute Dominant Indicator  Tree Stratum (Plot size:)   | Dominance Test worksheet:  |
| 1. None  | Number of Dominant Species That Are OBL, FACW, or FAC:(A)  |
|  | Total Number of Dominant   |
| 3. TANSA EL TERMINAL POR ANTINA DE LA ANTINA DE LA CONTRA DEL CONTRA DE LA CONTRA DEL CONTRA DE LA CONTRA DEL CONTRA DE LA CONTRA DE LA CONTRA DEL CONTRA DEL CONTRA DE LA CONTRA DEL CON | Special Across All Strata (B)  |
| Sapling/Shrub Stratum (Plot size U) DE= Total Co. C.   | Fercer of formit ar Species  Light A & C BL, FAC V, or FAC: (A/E   |
|  | Prevalence Index worksheet:  |
| 2.   | Total % Cover of:Multiply by:  |
| 3.   | Total % Cover of:         Multiply by:           OBL species         x 1 =   |
| 2  | Total % Cover of:         Multiply by:           OBL species         x 1 =           FACW species         x 2 =  |
| 3  | Total % Cover of:         Multiply by:           OBL species         x 1 =           FACW species         x 2 =           FAC species         x 3 =  |
| = Total Cover  | Total % Cover of:         Multiply by:           OBL species         x 1 =           FACW species         x 2 =           FAC species         x 3 =           FACU species         x 4 =   |
| Herb Stratum (Plot size: = Total Cover   | 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 =   |
| lerb Stratum (Plot size:  Bromus Lectorum 35 Y n/s Pascopyrum Smithii 50 Y FAC   | 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   |
| Herb Stratum (Plot size:  Bromus Lectorum  HOSCOPYrum SMIYNII  HOSCOPYrum SMIYNII  HOSCOPYRUM SMIYNII  | Total % Cover of:         Multiply by:           OBL species         x 1 =   |
| = Total Cover  Herb Stratum (Plot size: Bromus Lectorum 35 Y N/S Pascopyrum Smithii 50 Y FAC   | 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)           Prevalence Index = B/A =           Hydrophytic Vegetation Indicators:  |
| Herb Stratum (Plot size:  Bromus Lectorum 35 Y n/s  PASCOPIrum SMITHI; 50 Y FAC  | 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:   |
| a.  3.  4.  5.  Herb Stratum (Plot size:  1. Bromus Lectorum 35 Y n/s  2. Pascop frum smithii 50 Y FAC  3.  4.  5.  6.   | 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)           Prevalence Index = B/A =           Hydrophytic Vegetation Indicators:  |
| a.  Herb Stratum (Plot size:  Bromus Lectorum 35 Y N/S  POSCOPYrum Smithii 50 Y FAC  3.  4.  5.  6.  7.  | Total % Cover of: Multiply by:  OBL species  |
| 2. 3. 4. 5. ————————————————————————————————   | Total % Cover of:         Multiply by:           OBL species         x 1 =   |
| 2. 3. 4. 5. ————————————————————————————————   | Total % Cover of: Multiply by:  OBL species  |
| 2. 3. 4. 5. ————————————————————————————————   | Total % Cover of: Multiply by:  OBL species  |
| 2  | Total % Cover of: Multiply by:  OBL species  |
| 2  | Total % Cover of: Multiply by:  OBL species  |

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Sampling Point: DP5

| Depth Matrix   | Redox Features   |   |  |
|--|--|---|--|
| . 11.  | olor (moist) % Type <sup>1</sup>   | Loc <sup>2</sup> Textu  | re Remarks   |
| 0-14" 10/R3/3 100  |  | San   | edy loan   |
|  |  |   | O The Property of Color Control of Color Control   |
| THE STREET STREET  | Alwa a Market San  | to the  | The state of the second second   |
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|  | A CONTRACTOR OF THE PROPERTY O |   | policus and was a major page of Militer Chine by a still make  |
| Commission and Commission and Commission of  | One of the signs of the office value   | militaria de la composição | serior to the total and the series of  |
| CONTRACTOR AND ADMINISTRATION OF THE PARTY.  | in paracolate. Continuations   | uin den   | mpanint to the State of the Sta |
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| Francis Co-Consortation De Doubline DM-Doub  |  | 0. 10 :   | 21   |
| Type: C=Concentration, D=Depletion, RM=Reduydric Soil Indicators: (Applicable to all LRRs  |  |   | Location: PL=Pore Lining, M=Matrix.  Ators for Problematic Hydric Soils <sup>3</sup> :   |
|  |  |   |  |
| Histosol (A1)<br>_ Histic Epipedon (A2)  | Sandy Redox (S5) Stripped Matrix (S6)  |   | cm Muck (A9) (LRR C)   |
| Black Histic (A3)  | Loamy Mucky Mineral (F1)   |   | cm Muck (A10) (LRR B)<br>educed Vertic (F18)   |
| Hydrogen Sulfide (A4)  | Loamy Gleyed Matrix (F2)   |   | ed Parent Material (TF2)   |
| Stratified Layers (A5) (LRR C)   | Depleted Matrix (F3)   |   | other (Explain in Remarks)   |
| 1 cm Muck (A9) (LRR D)   | Redox Dark Surface (F6)  | _ ~   | and (Explain in Normania)  |
| Depleted Below Dark Surface (A11)  | Depleted Dark Surface (F7)   |   |  |
| Thick Dark Surface (A12)   | Redox Depressions (F8)   | <sup>3</sup> Indica   | ators of hydrophytic vegetation and  |
| Sandy Mucky Mineral (S1)   | Vernal Pools (F9)  |   | tland hydrology must be present,   |
| _ Sandy Gleyed Matrix (S4)   |  | uni   | ess disturbed or problematic.  |
| lestrictive Layer (if present):  | AND A. L.  |   |  |
|  |  |   |  |
| Type:  | ipers  | ed  | Soil Present? Yes No X   |
| Depth (inches):  | ipers  | ed  | Soil Present? Yes No X   |
| Depth (inches):S   | ıpers  | ed  | Soil Present? Yes No X   |
| Depth (inches):  Semarks:  YDROLOGY  Vetland Hydrology Indicators:   | 48.49.4<br>0.72.43   | ed  | ed   |
| Permarks:  Primary Indicators (minimum of one required; chemical in the control of the control o | eck all that apply)  | ed  | Secondary Indicators (2 or more required)  |
| Depth (inches):  | eck all that apply) Salt Crust (B11)   | ed  | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)   |
| Pepth (inches):  Depth  | eck all that apply) Salt Crust (B11) Biotic Crust (B12)  | ed  | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  |
| Depth (inches):  Demarks:  YDROLOGY  Wetland Hydrology Indicators:  Irimary Indicators (minimum of one required; che  Surface Water (A1)  High Water Table (A2)  Saturation (A3)   | eck all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)  | ed  | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  |
| Depth (inches):  Demarks:  YDROLOGY  Wetland Hydrology Indicators:  Inimary Indicators (minimum of one required; che  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)   | eck all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)   | ed  | Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)   |
| Depth (inches):  Demarks:  YDROLOGY  Vetland Hydrology Indicators:  Irimary Indicators (minimum of one required; che  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)   | eck all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along L  | ed  | 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)  |
| Depth (inches):  Jemarks:  JOROLOGY  Wetland Hydrology Indicators:  Irimary Indicators (minimum of one required; che  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  | eck all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along L  Presence of Reduced Iron (C4)   | ed  | 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)   |
| Popth (inches):  Semarks:  YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; che 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)   | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled  | ed  | 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 (C3)  |
| Popth (inches):  Idemarks:  YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; checomorphism)  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)   | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7)   | ed  | 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 (C8)  Shallow Aquitard (D3)   |
| Popth (inches):  Idemarks:  Popology  Wetland Hydrology Indicators:  Inimary Indicators (minimum of one required; che  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)   | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled  | ed  | 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 (C3)  |
| Print (inches):  Primary Indicators (minimum of one required; check of the control of the contro | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7)   | ed  | 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 (C8)  Shallow Aquitard (D3)   |
| Popth (inches):  Idemarks:  Popology  Vetland Hydrology Indicators:  Inimary Indicators (minimum of one required; che  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)  Sield Observations:  | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7)   | ed  | 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 (C8)  Shallow Aquitard (D3)   |
| Popth (inches):  Semarks:  YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; check of the control of the  | eck all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along L  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled  Thin Muck Surface (C7)  Other (Explain in Remarks)  | ed  | 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 (C8)  Shallow Aquitard (D3)   |
| Popth (inches):  Primary Indicators (minimum of one required; check of the control of the contro | eck all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along L  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled  Thin Muck Surface (C7)  Other (Explain in Remarks)  | ec  | 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 (C8)  Shallow Aquitard (D3)   |
| Popeth (inches):  Primary Indicators (minimum of one required; checuring value)  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)  Field Observations:  Surface Water Present? Yes No  Nater Table Present? Yes No  Saturation Present? Yes No  Saturation Present? Yes No  Saturation Present? Yes No  | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):   | iving Roots (C3) Soils (C6) Wetland Hydi  | 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)  |
| Popth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; che 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)  Field Observations: Surface Water Present?  Water Table Present?  Yes No Saturation Present?  Yes No Saturation Present?   | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):   | iving Roots (C3) Soils (C6) Wetland Hydi  | 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)  |
| Process  Process  Process  Primary Indicators (minimum of one required; chemarks:  Primary Indicators (minimum of one required; chemary Indicators (Malicators)  Surface 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)  Field Observations:  Surface Water Present? Yes No  Noter Table Present? Yes No  Saturation Present? Yes No  Saturation Present? Yes No  Saturation Present? Yes No  Sociators (Saturation Present)  Describe Recorded Data (stream gauge, monitoricator)   | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):   | iving Roots (C3) Soils (C6) Wetland Hydi  | 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)  |
| Print Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water Table Pesent? Surface Water Present? Surface Water Present? Water Table Present? Remarks:   | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches): Depth (inches):   | iving Roots (C3) Soils (C6) Wetland Hydi  | 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)  |
| Popposition of the present?  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; che 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)  Field Observations:  Surface Water Present? Yes No  Saturation Present? Yes No  Saturation Present? Yes No  Saturation Present? Yes No  Saturation Present? Yes No  Social Cracks (B6)  Social Control of the present of the  | eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches): Depth (inches):   | iving Roots (C3) Soils (C6) Wetland Hydi  | 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)  |

### **WETLAND DETERMINATION DATA FORM - ARID WEST REGION**

| Project Site:   | Calico Resourc     |                     | Landfo      |             | Reser      | voir    |           | Slope(%):   |                        | 0-2                 |                |
|---|--------------------|---------------------|-------------|-------------|------------|---------|-----------|-------------|------------------------|---------------------|----------------|
| City/County:  | Malheur            | State: Oregon       | Local F     | Relief:     | Depre      | ssion   |           | Sub-Regio   | on (LRR):              | В                   |                |
| Sampling Date:  | 5/7/2015           |                     | Section     | n:          | 8          |         |           | Lat:        |                        | 43.67038217         |                |
| Applicant/Owner:                                      | Calico Resourc     | ces                 | Towns       | hip:        | 22S        |         |           | Long:       |                        | -117.3537400        | 69             |
| Sampling Point:                                       | 8A (2015)          |                     | Range:      |             | 44E        |         |           | Datum:      |                        | NAD 83              |                |
| Investigator 1:                                       | R. Waldher         |                     |             |             |            |         |           | Soil Map I  | Jnit Name:             | N/A                 |                |
| Investigator 2:                                       | J. Tatum           |                     |             |             |            |         |           | NWI Class   | sification:            | PUSCH               |                |
|   |                    |                     |             |             |            |         |           |             |                        |                     |                |
| Are climatic / hydrol                                 | ogic conditions    | s on the site typic | al for this | s time of y | year?      | ✓ Yes   | ; N       | lo (If No   | Explain in             | Remarks)            |                |
| Are Vegetation  | Soil               | Hydrology           | Sig         | nificantly  | Disturbe   | d?      | Are       | normal Co   | onditions pre          | esent? 🗸 Y          | 'es No         |
| Are Vegetation  | Soil               | Hydrology           | Nat         | urally Pro  | blematic   | ?       |           |             |                        |                     |                |
| SUMMARY OF FI   | NDING - Atta       | ach a site map      | showi       | ng sam      | pling p    | oint le | ocatio    | ns, trans   | ects, imp              | ortant featu        | res, etc.      |
| Hydrophytic Veget                                     | ation Present?     | ☐ Yes               | ✓ No        |             |            |         |           |             |                        |                     |                |
| Hydric Soil Presen                                    | t?                 | ☐ Yes               | ✓ No        |             |            | s the S | Sampled   | d Area with | nin a Wetland          | d? 🗌 Yes            | ✓ No           |
| Wetland Hydrology                                     | / Present?         | ☐ Yes               | ✓ No        |             |            |         |           |             |                        |                     |                |
| Summary Soil pit t<br>Remarks: at the no<br>aerial bu | orth end of the re |                     | meral dra   |             |            |         |           |             |                        |                     |                |
| VEGETATION  |                    | ntific Names)       |             |             |            |         |           |             |                        |                     |                |
| YEGETHTON   | (OSC OOICI         | ntino ivanicoj      |             | %_          | Domina     | ant l   | Indicator | r [         | Dominance              | Test Workshe        | et:            |
| herb  |                    |                     |             | Cover       | Speci      |         | Status    |             | Number of              | Dominant            | 0              |
| Onopordum acanthiun                                   | <br>n              |                     |             | 8           |            |         | UPL       |             | Species the FACW, or I | at are OBL,         | (A)            |
| Ceratocephala testicul                                | ata                |                     |             | 35          | Y          |         | UPL       | <del></del> | Total Numl             |                     | 2              |
| Bromus tectorum                                       |                    |                     |             | 40          | Υ          |         | UPL       | <u> </u>    | Dominant S             | Species             | (B)            |
|   |                    | Su                  | n           |             | <b>^</b> C |         | 7         | 10          | Across all             | Dominant            | 0.00%          |
|   | •                  |                     | M           |             | J          |         |           |             | FACW, or I             | at are OBL,<br>FAC: | (A/B)          |
|   |                    |                     |             |             |            |         |           |             | Prevalence             | Index Worksh        | eet            |
|   |                    |                     |             |             |            |         |           |             |                        | (A)                 | (B)            |
|   |                    |                     |             |             |            |         |           |             | OBL:                   | 0 x1                | 0              |
|   |                    |                     |             |             |            |         |           |             | FACW:                  | 0 x2                | 0              |
|   |                    |                     |             |             |            |         |           |             | FAC:                   | 0 x3                | 0              |
|   |                    |                     |             |             |            |         |           |             | FACU:                  | 0 x4                | 0              |
|   |                    |                     |             |             |            |         |           |             | UPL:                   | 83 x5               | 415            |
|   |                    |                     |             |             |            |         |           |             |                        | 83                  | 415            |
|   |                    |                     |             |             |            |         |           |             | <u>Prevalence</u>      | Index = B/A         | 5.00           |
|   |                    |                     |             |             |            |         |           |             | Hydrophyti             | c Vegetation Ir     | ndicators:     |
|   |                    |                     |             |             |            |         |           |             | Domina                 | nce Test > 50%      | <b>%</b>       |
|   |                    |                     |             |             |            |         |           |             | Prevale                | nce Index <= 3      | 3.0            |
|   |                    |                     |             |             |            |         |           |             | ■ Morpho               | logical Adapta      | itions         |
|   |                    |                     |             |             |            |         |           |             | Problem                | natic Hydrophy      | tic Vegetation |
|   |                    |                     | т           | ree Perce   | ntage:     | 0       |           |             | Hydrophyt              | ic .                |                |
| % Bare Ground in                                      |                    | 17                  |             | ub Perce    | _          | 0       |           |             | Vegetation             |                     | <b>✓</b> No    |
| % Cover of Biotic (                                   | Crust:             |                     | Не          | erb Perce   | ntage:     | 83      |           |             | Present?               |                     |                |
| Vegetation Vegetati                                   | on dominated by    | y weedy upland sp   | ecies.      |             |            |         |           |             |                        |                     |                |
| Remarks:  |                    |                     |             |             |            |         |           |             |                        |                     |                |

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### **WETLAND DETERMINATION DATA FORM - ARID WEST REGION**

SOIL- Profile Description: (Describe to the Depth needed to Document the Indicator or Confirm the Absense of Indicators.) Matrix Redox Features Depth (in) ٧ C % % Remarks н Color (moist) **Type** Texture Loc 10YR 2 100 1/2" pebbles throughout 4 4 sandy loam 20 10YR 100 Rocks up to 2" diameter sandy loam **Indicators for Problematic Hydric Soils: SOIL-Hydric Soil Indicators:** Sandy Redox (S5) 1 cm Muck (A9) (LRR C) Histosol (A1) 2 cm Muck (A10) (LRR B) Stripped Matrix (S6) Histic Epipedon (A2) **Loamy Mucky Mineral (F1)** Black Histic (A3) Reduced Vertic (F18) Loamy Gleyed Matrix (F2) Red Parent Material (TF2) Hydrogen Sulfide (A4) **Depleted Matrix (F3)** Other (Explain in Remarks) Stratfied Layers (A5) (LRR C) Redox Dark Surface (F6) 1cm Muck (A9) (LRR D) ☐ Depleted Below Dark Surface (A11) **Depleted Dark Surface (F7) Redox Depressions (F8)** Thick Dark Surface (A12) Vernal Pools (F9) □ Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) **Restrictive Layer Present?** Type: Yes ✓ No **Hydric Soil Present?** Depth (inches): Soil No hydric soil indicators present. Remarks: **HYDROLOGY-Wetland Hydrology Indicators:** ersede Primary Indicators (any one indic Surface Water (A1) Marks (B1) (Riverine) High Water Table (A2) **Botic Crust (B12)** Sediment Deposits (B2) (Riverine) Saturation (A3) Aguatic Invertebrates (B13) ☐ Drift Deposits (B3) (Riverine) ■ Water Marks (B1) Hydrogen Sulfide Odor (C1) ☐ Drainage Patterns (B10) Sediment Deposits (B2) Oxidized Rhizospheres along Living Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) Presence of Reduced Iron (C4) ☐ Thin Muck Surface (C7) Recent Iron Reduction in Plowed Soils (C6) Surface Soil Cracks (B6) Crayfish Burrows (C8) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Saturation Visible on Aerial Imagery (C9) ■ Water-Stained Leaves (B9) Shallow Aquitard (D3) FAC-Neutral Test (D5) **Field Observations:** Surface Water Present? Depth (inches): **Wetland Hydrology Present?** Yes V No Water Table Present? Depth (inches): Saturation Present? Depth (inches): **Hydrology Remarks:** Soil was damp at approx 12 inches but no saturation was present. No wetland hyldrology indicators at this location.

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| Proje        | ect#/N   | ame 3678/Gras  | sy M         | th   | Assessor HARREL SON  |  |  |  |
|--------------|--|--|--------------|--|--|--|--|--|
| Addı         |  |  | -            | TENEDE S   | Date 5/18/17   |  |  |  |
| Wate         | Waterway Name Trib 1   |  |              |  | Coordinates at Lat. 43° 40' 40, 95 N                               |  |  |  |
| Read         | Reach Boundaries See Fig. 5  |  |              |  | downstream end Long. //7°22' 15.92 w                               |  |  |  |
| Prec         | ipitation  | w/in 48 hours (cm) $\mathcal{O}$ , $\mathcal{G}$                                     | el Width (m) | District of Oil / Differ to  |  |  |  |  |
|              | % of reach w/observed surface flow   |  |              |  |  |  |  |  |
|              |  | ved Wetland Plants   |              | Observed   | d Macroinvertebrates:  |  |  |  |
|              | (and in  | dicator status):   |              | Ta   | Taxon Indicator Ephemer- # of                                      |  |  |  |
| Observations | N  | one  |              |  | Status optera? Individuals   |  |  |  |
|              | 1. Are a   | aquatic macroinvertebrates p   | resent?      |  | ☐ Yes No   |  |  |  |
| SI           |  | or more now uals of the O  |              | emeroptera r   |  |  |  |  |
| cato         | _  | perennial indicator axa on se  |              |  |  |  |  |  |
| Indicators   |  |  | /            | Witnin ½ chann   |  |  |  |  |
|              | -  | t is the slope? (In percent, meas  |              |  |  |  |  |  |
|              | ,  | If Yes: Are 6 or more individuals of the Order Ephemeroptera present?  (Indicator 2) |              | If Yes: Are perennial indicator taxa present? (Indicator 3)  If No: INTERMITTENT | Slope < 16%: If No: What is the slope? (Indicator 5)  Slope ≥ 16%: |  |  |  |
| Conclusions  | Are aquatic macroinvertebrates present? (Indicator 1)  If Yes: What is the slope? (Indicator 5)  If Yes: What is the slope? (Indicator 5)  Slope ≥ 10.5%: INTERMITTENT  Slope ≥ 10.5%: EPHEMERAL  If No: EPHEMERAL |  |              |  |  |  |  |  |
|              | ☐ Fish   | Indicators:<br>n<br>phibians   |              |  | Finding: Ephemeral Intermittent Perennial                          |  |  |  |

| interfere with indicators, etc.)  Difficult Situation:                         | Describe situation. For disturbed streams, note extent,  |
|--|--|
| Prolonged Abnormal Rainfall / Snowpack   | type, and history of disturbance.  |
| Below Average  |  |
| ☐ Above Average  |  |
| ☐ Natural or Anthropogenic Disturbance   |  |
|  |  |
| Other:   | A STATE OF THE STA |
| Additional Notes: (sketch of site, description additional sheets as necessary. | of photos, comments on hydrological observations, etc.) Attac  |
|  | - no water at time of evaluation   |
| 100  | - Substrate = cobble, gravel, sand   |
|  | - nun-off-from sumunding hil<br>shubs Cheatgass*   |
| 5  | ran of point survey  |
| 2 3  | shribs Cheatgass*  |
|  | Some bhush *   |
|  | bitter brush   |
| C  | _  |
| Ancillary Information  | erseded  |
| Riparian Corridor  | 0.0000   |
|  |  |
| - Valar W  | AV   |
| ☐ Erosion and Deposition — Very min  |  |
|  | . 1  |
| $\square$ Floodplain Connectivity $-$ no $+$ lo                                | iph present  |
|  |  |
|  |  |
|  |  |
| Or   | oserved Amphibians, Snake, and Fish:   |
|  | Life Number of   |
|  | History Location Individuals Taxa Stage Observed Observed  |
|  |  |
|  | Vone Stage Observed Coserved   |
|  |  |
|  |  |

### **Streamflow Duration Field Assessment Form**

| Proje  | ect # / Na      | ame Calico Resour   | r05   | ASIA TERM  | Assessor R.  | Waldhe                              | Y   |     |
|--|-----------------|---|---|--|--|-------------------------------------|---|-----|
| Addı   | ess             | CIMION (40304)  | Trik  | 2a   |  | Date                                | 5/8/15  |     |
| Wate   | erway Na        | ame Tributary 11(   | 2015) (20   | 17)  | Coordinates at   | Lat. 46.6                           | 1265003   | N   |
|  |                 | daries ~ 1000 downstra  |   | bearkment  | downstream er  | ad                                  | . 3549443   | w   |
|  |                 |   |   |  |  |                                     | Site / Difficult                                  |     |
| Precipitation w/in 48 hours (cm) Channel Width (m) Att - 4ft Situation (Describe in "Notes") |                 |   |   |  |  |                                     |   |     |
|  | erved<br>rology | % of reach w/observed % of reach w/any flow ( # of pools observed | surface or hyp  |  |  |                                     | - Ti  |     |
|  |                 | ed Wetland Plants   |   | Observed   | Macroinverteb  | rates: Non                          | l   | T   |
| tions  | (and in         | dicator status): Non  | ٤   | Ta   |  | cator Ephematus optera              | er- # of  |     |
| Observations   |                 |   |   | -  |  |                                     | **  | H   |
| O  |                 |   |   |  |  | 5.41                                |   |     |
|  | 1.00            |   |   |  |  |                                     |   | Ш   |
| М  | 1. Are          | aquatic macroinvertebrat  | es present?   | 1 121  |  | Yes                                 | ⊠No   |     |
| ပ  |                 | 6 or more activid als of  |   | m Topie a r  |  |                                     | <u>⊠</u> No                                       |     |
| Indicators   |                 | perennial adicate tara  | re on 2 / str   | to Table 11  |  | H 10.                               | ∑ No  |     |
| dic  |                 |   | oto propent?  | Matthete 1/  |  |                                     |   |     |
| =  | _               | FACW, OBL, or SAV pla   |   |  |  | Yes                                 | ⊠No   | -10 |
| $\vdash$   | 5. Wha          | t is the slope? (In percent,                                      | measured for the                                      | valley, not the  | stream)  | 8-11) %                             |   | 4   |
| Conclusions  | macr (I         | If Yes: A more indicator 1)  If No: An FACW, c plants presents.   | viduals brider optera nt? or 2)  a SAV, or OBL esent? | If Yes: Are perennial indicator taxa present? (Indicator 3)  If No: INTERMITTENT  If Yes: What is the slope? (Indicator 5)  If No: EPHEMERAL | If Yes: PEF  If No. Wh stop (Indica  Stope < INTERM  Stope ≥ EPHEM | at is the se? tor 5)  10.5%: ITTENT | Slope < 16%: INTERMITTENT  Slope ≥ 16%: PERENNIAL |     |
|  | │               | e Indicators: None<br>h<br>phibians                               |   |  | amg.   | Inter                               | mittent<br>ennial                                 |     |

## Streamflow Duration Field Assessment Form T-11 (2015)

| Prolonged Abnormal Rainfall / Snowpack   Below Average   Above Average   Natural or Anthropogenic Disturbance   Other:   Additional Notes: (sketch of site, description of photos, comments on hydrological observations, etc.) Attach additional sheets as necessary.    Cattle   Channel Width   Upland plant species   Channel Width   The plant species   Poorly defined OHWM (flow path approx. 2.5 ft wide)   Poorly defined OHWM (flow path approx. 2.5 ft wide)   Poorly defined OHWM (flow path approx. 2.5 ft wide)   Poorly defined OHWM (flow path approx. 3.5 ft wide)   Poorly defined OHWM    | Notes: single indicator conc interfere with indicators, etc.)   | lusions, description of distu                                    | rbances o   | r modificatio                      | ns that may    |
|--|---|--|-------------|------------------------------------|----------------|
| Below Average   Above Average   Above Average   Above Average   Natural or Anthropogenic Disturbance   Other:  | Difficult Situation:  |  |             | eams, note                         | extent,        |
| Above Average   Natural or Anthropogenic Disturbance   Other:   Additional Notes: (sketch of site, description of photos, comments on hydrological observations, etc.) Attach additional sheets as necessary.    Cattle  | Prolonged Abnormal Rainfall / Snowpack  |  |             |                                    |                |
| Natural or Anthropogenic Disturbance     Other:  | ☐ Below Average   |  |             |                                    |                |
| Other:   Additional Notes: (sketch of site, description of photos, comments on hydrological observations, etc.) Attach additional sheets as necessary.    Cattle   | ☐ Above Average   |  |             |                                    |                |
| Additional Notes: (sketch of site, description of photos, comments on hydrological observations, etc.) Attach additional sheets as necessary.  Cattle Channel Width Upland plant species  Drainage terminates a schweitzer reservoir (upland conditions)  Poorly defined of HWM (flow path approx. 3.5 ft wide)  Drainage terminates a schweitzer reservoir (upland conditions)  Riparian Corridor  Riparian Corridor  Floodplain Connectivity  Observed Amphibians, Snake, and Fish:  History Location Number of Individuals  | ☐ Natural or Anthropogenic Disturbance  |  |             |                                    |                |
| Cottle Channel Width upland plant species  Drainage terminates (a) schweitzer reservoir (upland conditions  Poorly defined OHWM (flow path approx. 3.5 ft wide)  Primage John Market (a) schweitzer reservoir (upland conditions)  Riparian Corridor  Riparian Corridor  Floodplain Connectivity  Observed Amphibians, Snake, and Fish:  History Location   Number of Individuals   Number of Individu | Other:  |  |             |                                    | ni ii idi      |
| Drainage terminates @ schweitzer reservoir (upland conditions)  Poorly defined OHWM (flow path approx. 2.5 ft wide)  Drainage terminates @ schweitzer reservoir (upland conditions)  Poorly defined OHWM (flow path approx. 2.5 ft wide)  Drainage terminates @ schweitzer reservoir (upland conditions)  Poorly defined OHWM (flow path approx. 2.5 ft wide)  Preserved  Ancillary Information:    Riparian Corridor    Floodplain Connectivity    Observed Amphibians, Snake, and Fish:   Life   Number of     History   Location   Individuals     Life   Life     Life   Life   Life   Life     Life   Life   Life   Life     Life   Life   Life   Life     Life   Life   Life   Life   Life     Life   Life   Life   Life   Life     Life   Life   Life   Life   Life   Life   Life     Life   L | Additional Notes: (sketch of site, description of additional sheets as necessary.                         | photos, comments on hydr   | ological ol | oservations,                       | etc.) Attach   |
| Ancillary Information:  Riparian Corridor  Erosion and Deposition  Floodplain Connectivity  Observed Amphibians, Snake, and Fish:  Life   Number of Individuals  | Exam. S   |  |             | *                                  |                |
| ☐ Erosion and Deposition ☐ Floodplain Connectivity  Observed Amphibians, Snake, and Fish:  Life   Number of Individuals  | · Drainage terminates · Poorly defined OHWM · uplant veretains · Drange and Wartin Ancillary Information: | A schweitzer  A (flow path approximate)  A rots  A leda receptor | reservo     | oir (uplan<br>of twide<br>of prese | nd conditions) |
| Floodplain Connectivity  Observed Amphibians, Snake, and Fish:  Life   Number of History Location Individuals  | ☐ Riparian Corridor   |  |             |                                    | a 3 1          |
| Floodplain Connectivity  Observed Amphibians, Snake, and Fish:  Life   Number of History Location Individuals  |   |  |             |                                    |                |
| Observed Amphibians, Snake, and Fish:  Life   Number of History Location Individuals   | ☐ Erosion and Deposition  |  |             |                                    |                |
| Life Number of History Location Individuals  | Floodplain Connectivity   |  |             |                                    |                |
| Life Number of History Location Individuals  | - Inc.  |  |             |                                    | 30 VBI         |
|  | Obs   | erved Amphibians, Shake  | Life        |                                    |                |
|  | L   | Taxa   |             |                                    |                |
|  |   |  |             |                                    |                |
|  |   |  |             |                                    |                |
|  | e amate in neith is   |  | 11 11 11    | 100                                | HHOE I         |
|  | Maria Maria   |  |             |                                    | J 1            |

Assessor S.M. Harrelson Project #/Name 3678 /GBSSY M-1. Address Date 5/18/17 Waterway Name Coordinates at Lat. 430 40'52.89 N downstream end Long. 117021' 43.77 W Reach Boundaries (ddd.mm.ss) Disturbed Site / Difficult Precipitation w/in 48 hours (cm) 0, 8 Channel Width (m) Situation (Describe in "Notes") % of reach w/observed surface flow % of reach w/any flow (surface or hyporheic) 14/70 Observed Hydrology **Observed Wetland Plants Observed Macroinvertebrates:** (and indicator status): Juneus sp. FACW/OBL Taxon Indicator Ephemer-# of Eleachoris aciculans obl Ranunculus cymbalana od R. Sceleratus OBL Status optera? Individuals Yes 1. Are aquatic macroinvertebrates present? ☐ No ndicators 2. Are 6 or more individuals of the Order Ephemeroptera present? Yes >Wo 3. Are perennial 4. Are FACW, O 5. What is the slope? (In percent, measured for the valley, not the stream) 0 % If Yes: PERENNIAL If Yes: Are perennial indicator taxa present? If Yes: Are 6 or Slope < 16%: INTERMITTENT more individuals (Indicator 3) If No: What is the of the Order slope? Ephemeroptera present? (Indicator 5) Slope ≥ 16%: PERENNIAL (Indicator 2) INTERMITTENT Are aquatic Conclusions macminvertebrates Slope < 10.5%: INTERMITTENT present? If Yes: What is the slope? (Indicator 1) If No: Are SAV, (Indicator 5) FACW, or OBL Slope ≥ 10.5%: EPHEMERAL plants present? (Indicator 4) If No: EPHEMERAL Finding: **Ephemeral** Single Indicators: Intermittent Fish Amphibians Perennial

| Difficult Situation:   | Describe situation. For disturbed streams, note extent, type, and history of disturbance.  |
|--|--|
| ☐ Prolonged Abnormal Rainfall / Snowpack   | in the second se |
| ☐ Below Average  |  |
| ☐ Above Average  |  |
| ☐ Natural or Anthropogenic Disturbance   |  |
| Other:   |  |
| Additional Notes: (sketch of site, description additional sheets as necessary.   | of photos, comments on hydrological observations, etc.) Attach  - very limited a reas w/  hydrophytic veg  -no hydroc soils observations, etc.) Attach  OHWN = line on bank  Substrate sort  |
|  |  |
| □ Riparian Corridor — none pre   | erseded  ninor erosion observed  |
| ☐ Riparian Corridor — none pres  | minor erasion observed   |
| □ Riparian Corridor — none president = Some v  | ninor erosion observed   |
| □ Riparian Corridor — none president = Some v  | ninor erosion observed   |
| □ Riparian Corridor — none pres □ Erosion and Deposition — Some r □ Floodplain Connectivity — no flood  X In the Southern particles  Shifted to the west,  | ninor erosion observed  Ipln observed  on of the study arta, this to  leaving 2 old ephemeral cut  |
| □ Riparian Corridor — none pres □ Erosion and Deposition — Some r □ Floodplain Connectivity — no floo  **X In the Southern particles  Shifted to the west,  nels, these Channels ob                        | minor erosion observed  on of the study arta, this to leaving 2 old ephemeral cuts  served Amphibians, Snake, and Fish:  |
| □ Riparian Corridor — none pres □ Erosion and Deposition — Some r □ Floodplain Connectivity — no floo  **X In the Southern particle  **Shifted to the west,  nels, these Channels ob  er have a Connection | ninor ension observed  (pln observed ion of the study often, this to leaving 2 old ephemeral cut  served Amphibians, Snake, and Fish:  Life History Stage Observed Observed  |
| □ Riparian Corridor — none pres □ Erosion and Deposition — Some r □ Floodplain Connectivity — no floo  **X In the Southern particles  Shifted to the west,  nels, these Channels ob                        | ninor ension observed  (pln observed ion of the study often, this to leaving 2 old ephemeral cut  served Amphibians, Snake, and Fish:  Life History Stage Observed Observed  |

### Streamflow Duration Field Assessment Form

| Proje        | ect # / Na      | ame Calico Resource   | 05  | Assessor R. Waldher   |
|--------------|-----------------|---|---|---|
| Addı         | ess             |   | Trib 3  | Date 5/8/15   |
| Wate         | erway Na        | ame Tributary 9 (8  | 015) (2017)   | Coordinates at Lat. 43. 668 753 24 N  |
| Read         | ch Boun         | daries 1500' from Southern  | study boundary  | downstream end Long. 117. 369 7958 W  |
|              |                 | w/in 48 hours (cm)  | Channel Width (n  | District of City (Different   |
|              | erved<br>rology | % of reach w/observed surf % of reach w/any flow (surf # of pools observed  |   |   |
|              |                 | ved Wetland Plants<br>dicator status): Nono   | Observe   | Taxon Indicator Ephemer- # of   |
| Observations | -               |   |   | Status optera? Individuals  |
|              |                 | aquatic macroinvertebrates p  |   | ☐ Yes ☑ No  |
| ndicators    | 2. Are          | or more a dividuals of the  | reer bot em copte e   | a pires int?  |
| icat         | 3. Are          | perennia di atchia e  | ent efe to 1 bl-1)  | U U W No  |
| 르            | 4. Are          | FACW, OBL, or SAV plants p  | resent? (Within ½ cha   | annel width) Yes No   |
|              | 5. Wha          | t is the slope? (In percent, mea  | sured for the valley, not the   | the stream) <u>8-10</u> %   |
| Conclusions  | macr            | If Yes: Are 5 or more individuals of the Order Ephemeroptera present?  (Indicator 2)  If No: Are SAV, FACW, or OBL plants present?  (Indicator 4) | If Yes: Are perent indicator taxa present? (Indicator 3)  If No: INTERMITTEN*  If Yes: What is the slope? (Indicator 5)  If No: EPHEMERAL | Slope < 16%: If No: What is the slope? (Indicator 5)  Slope ≥ 16%: PERENNIAL  Slope > 10.5%: INTERMITTENT  Slope ≥ 10.5%: EPHEMERAL |
|              | ☐ Fis           | Indicators: None<br>h<br>phibians   |   | Finding: Ephemeral Intermittent Perennial   |

### **Streamflow Duration Field Assessment Form**

| 1110 3 (2017 | • | _      |
|--------------|---|--------|
| Tributary    | 9 | (2015) |

| Notes: single indicator of interfere with indicators, etc.) | onclusions, description of distur                              | bances or                  | modification                           | ns that may                          |
|---|--|----------------------------|--|--------------------------------------|
| Difficult Situation:  | Describe situation. For dis type, and history of disturbations |                            | eams, note                             | extent,                              |
| Prolonged Abnormal Rainfall / Snowpack                      | بسامية اللها والسوا  |                            |  |                                      |
| ☐ Below Average   | anna villa a rite  |                            |  |                                      |
| Above Average   |  |                            |  |                                      |
| ☐ Natural or Anthropogenic Disturbance                      |  |                            |  |                                      |
| Other:  |  |                            |  | new ran Tr                           |
| Delineated saw<br>Upland vegetat                            |  | Flow po<br>2.5 for<br>near | ss veget<br>ath app<br>t wide)<br>road | ation                                |
| Ancillary Information:                                      | and the second second  | /kg _ 3/1                  | L liggia                               | 9 I                                  |
| ☐ Riparian Corridor   |  |                            |  |                                      |
| ☐ Erosion and Deposition ☐ Floodplain Connectivity          |  |                            |  |                                      |
|   |  |                            |  |                                      |
| Circumstance of   |  |                            |  | 1 4                                  |
| X 454 5 4 3   |  |                            |  | 12.1                                 |
|   | Observed Americkians Cooks                                     |                            |  | <u> </u>                             |
|   | Observed Amphibians, Snake,<br>Taxa                            | Life History Stage         | Location<br>Observed                   | Number of<br>Individuals<br>Observed |
|   |  |                            |  | 1 1                                  |
| Total 12 J. Committee                                       |  | n 1 s                      |  | 6771                                 |
| 11137/W1137 II  |  |                            | 300 304 - 301 I I I I I                |                                      |

| Proj  | Project #/ Name 3678/GRSSY Mtn Assessor S.m. Harrelson                    |  |  |   |                     |                         |   |  |  |
|---|---|--|--|---|---------------------|-------------------------|---|--|--|
| Address   Date 5/18/17  |   |  |  |   |                     |                         |   |  |  |
| Wat   | erway N   | ame Tnb3   | Coordinates a  |   | 304110.63"          | N                       |   |  |  |
| Reach Roundaries See Fin 6 downstream end 1/7021'411  |   |  |  |   |                     |                         |   |  |  |
| Precipitation w/in 48 hours (cm) 0.8 Channel Width (m) 3 Disturbed Site / Difficult Situation (Describe in "Notes") |   |  |  |   |                     |                         |   |  |  |
| % of reach w/observed surface flow  |   |  |  |   |                     |                         |   |  |  |
|   |   | ved Wetland Plants   |  | Observed  | Macroinverte        | brates:                 |   |  |  |
| Observations  |   | dicator status):   |  | Nov   | S                   |                         | nemer- # of<br>stera? Individuals                 |  |  |
|   | 1. Are a  | aquatic macroinvertebra  | tes present?   |   | - 17.7              | ☐ Yes                   | No  |  |  |
| ors   | 2. Are 6 or more individuals of the Order Ephemeroptera present?          |  |  |   |                     |                         |   |  |  |
| Indicators  | 3. Are perennial in ligator axa prevent? efer Tole C CES No               |  |  |   |                     |                         |   |  |  |
| Ind   | 4. Are FACW, Old or 6A (plants present 2 Wittin 1/2 handel hight) Les XNo |  |  |   |                     |                         |   |  |  |
|   | 5. Wha  | 5. What is the slope? (In percent, measured for the valley, not the stream)%   |  |   |                     |                         |   |  |  |
| Conclusions   | macroin<br>pre<br>(India  | aquatic present?  ador 1)  If Yes: An more indiv of the O Ephemerc present (Indicate vertebrates sent?  If No: Are FACW, or plants pre (Indicate to the control of the cont | e 6 or iduals reducer optera pitera propera pr | Yes: Are perennial indicator taxa present? (Indicator 3)  If No: INTERMITTENT  If Yes: What is the slope? (Indicator 5)  If No: EPHEMERAL | If No: W slo (Indic | hat is the pe? sator 5) | Slope < 16%: INTERMITTENT  Slope ≥ 16%: PERENNIAL |  |  |
|   | ☐ Fish  |  |  |   |                     |                         | ermittent   |  |  |
|   | ☐ Amp   | hibians  |  |   |                     | Pe                      | rennial   |  |  |

| <b>Notes:</b> single indicator conclusions, description of disturbances or modifications that may interfere with indicators, etc.)   |       |  |  |  |  |  |  |  |
|--|-------|--|--|--|--|--|--|--|
| Describe situation For disturbed streams note extent   |       |  |  |  |  |  |  |  |
| Prolonged Abnormal Rainfall / Snowpack Ohannel appears to have been berm   | ed in |  |  |  |  |  |  |  |
| Below Average (1/10 ms+ t) Crente 2 pond. Berm no longer   | tunc  |  |  |  |  |  |  |  |
| Above Average Dand gone creating a break in this   | e     |  |  |  |  |  |  |  |
| Total Situation:  type, and history of disturbance.  Total Control of the characteristic of the characterist |       |  |  |  |  |  |  |  |
| Other:no longer Mere.  |       |  |  |  |  |  |  |  |
| Additional Nation (closely of the description of the Assessment of the description of the Assessment o |       |  |  |  |  |  |  |  |
| additional sheets as necessary.  - dry Channel W/M Sageb - some cdoble   | mish  |  |  |  |  |  |  |  |
| - some coloble - see photos  |       |  |  |  |  |  |  |  |
| - Some Colonie   |       |  |  |  |  |  |  |  |
| - see photos   |       |  |  |  |  |  |  |  |
|  |       |  |  |  |  |  |  |  |
|  |       |  |  |  |  |  |  |  |
|  |       |  |  |  |  |  |  |  |
| Superseded   |       |  |  |  |  |  |  |  |
| Ancillary Information DC 3 CC CC   |       |  |  |  |  |  |  |  |
| □ Riparian Corridor — none observed  |       |  |  |  |  |  |  |  |
|  |       |  |  |  |  |  |  |  |
| □ Erosion and Deposition — Very little   |       |  |  |  |  |  |  |  |
|  |       |  |  |  |  |  |  |  |
| Floodplain Connectivity NONE Observed  |       |  |  |  |  |  |  |  |
|  |       |  |  |  |  |  |  |  |
|  |       |  |  |  |  |  |  |  |
|  |       |  |  |  |  |  |  |  |
| Observed Amphibians, Snake, and Fish:  |       |  |  |  |  |  |  |  |
| Life Number of History Location Individuals  Taxa Stage Observed Observed  |       |  |  |  |  |  |  |  |
|  |       |  |  |  |  |  |  |  |
| None   |       |  |  |  |  |  |  |  |
|  |       |  |  |  |  |  |  |  |
|  |       |  |  |  |  |  |  |  |

### Streamflow Duration Field Assessment Form

| Proje        | ect # / Na   | ame Calico Resour  |               |   | Assessor R. \   | waldher        |   |   |
|--------------|--|--|---------------|---|---|----------------|---|---|
| Addr         | 2000   | LALICO RESOUR  | Date 5/8/15   |   |   |                |   |   |
|              | Address Trib 4 Date 5/8 Waterway Name Tributary 10 (2015) (2017) Coordinates at Lat. 43, 66879 |  |               |   |   |                |   | N |
|              | desynctron and   |  |               |   |   |                |   |   |
|              | Disturbed Site / Difficult   |  |               |   |   |                |   |   |
| Prec         | Precipitation w/in 48 hours (cm) Channel Width (m) 3ft-4ft Situation (Describe in "Notes")     |  |               |   |   |                |   |   |
|              | erved<br>rology  | % of reach w/observed surface flow   |               |   |   |                |   |   |
|              |  | ved Wetland Plants   |               | Observed  | Macroinvertebr  | ates: None     |   |   |
|              | (and in  | d indicator status): None  |               |   | Town Indicates Enhance # of   |                |   |   |
| SE           |  |  |               | Taxon Indicator Ephemer- # of<br>Status optera? Individuals   |   |                |   |   |
| Observations |  |  |               |   |   |                |   |   |
| l ° l        |  |  |               |   |   |                |   |   |
|              |  |  |               |   |   |                |   |   |
|              | 1. Are   | aquatic maeroinvertebrate  | s present?    |   |   | Yes            | ⊠ No  |   |
| <u>5</u>     | 2. Are 6 or more dividuals of the Drief plent ropte a p  |  |               |   |   |                | ⊠ No  |   |
| cato         | 3. Are perennial indicate to talk a vector (Lefe to 1641)                                      |  |               |   |   |                | Ť   |   |
| Indicators   |  | FACW, OBL, or SAV plant  | s present?    | Within ½ chann  | nel width)  |                | ⊠.No  | _ |
| -            | _  | nt is the slope? (In percent, n  |               |   | <del> </del>  | -10 %          | 1 6µ4 #1  |   |
| Conclusions  | maçı   | Il Yes: Are more individual of the Ord Ephemerop present?  (Indicator t)  If No: Are S FACW, or plants present (Indicator the Indicator the In | sav. DBL ent? | If Yes: Are perennial indicator taxa present? (Indicator 3)  If No: INTERMITTENT  If Yes: What is the slope? (Indicator 5)  If No EPHEMERAL | If Yes: PERE  If No: What slope?  (Indicato:  Slope < 10 INTERMIT  Slope ≥ 10 EPHEME! | is the ?? r 5) | Slope < 16%: INTERMITTENT  Slope ≥ 16%: PERENNIAL |   |
|              | ☐ Fis  | e Indicators: None<br>h<br>aphibians   |               |   | Finding:  | Epher Interm   | nittent   |   |

Trib 4 (2017)

### Streamflow Duration Field Assessment Form T-10(2016)

| Notes: single indicator con interfere with indicators, etc.)                      | clusions, description of disturbances or modifications that may  |
|---|--|
| Difficult Situation:  | Describe situation. For disturbed streams, note extent, type, and history of disturbance.  |
| Prolonged Abnormal Rainfall / Snowpack  | typo, and motory of distarbance.   |
| ☐ Below Average   |  |
| Above Average   | CHIEF THE PARTY OF |
| ☐ Natural or Anthropogenic Disturbance  | The second second second   |
| Other:  | Annual Company of the second of  |
| Additional Notes: (sketch of site, description of additional sheets as necessary. | of photos, comments on hydrological observations, etc.) Attach   |
| · Sparse upland veger  · Very rocky draina  | Rocky conditions   |
| Very 10017  | A/D sollo decay 7 Th 11  |
| Packy define of   | SECE Wide  |
| Ancillary Information:  | 71 O C G C G   |
| Riparian Corridor   |  |
|   |  |
| ☐ Erosion and Deposition  |  |
| ☐ Floodplain Connectivity   |  |
|   |  |
|   |  |
|   |  |
| Obs   | served Amphibians, Snake, and Fish:  |
|   | Life Number of History Location Individuals  |
| =   | Taxa Stage Observed Observed   |
|   |  |
| The same is   |  |
| 4-81 3-11   |  |
| e 18 f  |  |

| Proj                  | Project #/ Name 3678/60554 mtn. Assessor S. m. Harreson   |   |   |   |  |  |  |  |
|-----------------------|---|---|---|---|--|--|--|--|
| Address Date 5 /18/17 |   |   |   |   |  |  |  |  |
| Wat                   | Waterway Name Trib 4 Coordinates at Lat. 4/3°40'42.02" N  |   |   |   |  |  |  |  |
| Rea                   | Boach Boundaries and 1/20 2/1/47 6/   |   |   |   |  |  |  |  |
|                       | Precipitation w/in 48 hours (cm) 0.8 Channel Width (m) /,3 Disturbed Site / Difficult Situation (Describe in "Notes") |   |   |   |  |  |  |  |
|                       | erved   | % of reach w/observed surface flow  |   |   |  |  |  |  |
| нуа                   | # of pools observed_  |   |   |   |  |  |  |  |
|                       |   | ved Wetland Plants dicator status):   | Observed  | Observed Macroinvertebrates:  |  |  |  |  |
| Observations          | Nane  |   |   | Taxon Indicator Ephemer- # of Status optera? Individuals  |  |  |  |  |
| Obse                  |   |   |   |   |  |  |  |  |
|                       | 1 Are a   | aquatic macroinvertebrates pre  | esent?  | ☐ Yes ♣No   |  |  |  |  |
| ς.                    | 1. Are aquatic macroinvertebrates present?  |   |   |   |  |  |  |  |
| Indicators            |   |   |   |   |  |  |  |  |
| dic                   |   |   |   |   |  |  |  |  |
| =                     |   |   |   |   |  |  |  |  |
|                       | 5. What is the slope? (In percent, measured for the valley, not the stream) 4-6 %                                     |   |   |   |  |  |  |  |
| Conclusions           | macroinv<br>pre   | If Yes: Are 6 or more individuals of the Order Ephemeroptera present?  (Indicator 2)  If No: Are SAV, FACW, or OBL plants present?  (Indicator 4) | If Yes: Are perennia indicator taxa present? (Indicator 3)  If No: INTERMITTENT  If Yes: What is the slope? (Indicator 5)  If No: EPHEMERAL | Slope < 16%: If No: What is the slope? (Indicator 5)  Slope ≥ 16%: PERENNIAL  Slope > 10.5%: INTERMITTENT  Slope ≥ 10.5%: EPHEMERAL |  |  |  |  |
|                       | Fish  | Indicators:<br>Dhibians   |   | Finding: Ephemeral Intermittent Perennial   |  |  |  |  |

Tnb4

| Difficult Situation:                              | Describe situation. For disturbed streams, note extent,       |
|---|---|
| Prolonged Abnormal Rainfall / Snowpack            | type, and history of disturbance.                             |
| ☐ Below Average                                   |   |
| ☐ Above Average                                   |   |
| ☐ Natural or Anthropogenic Disturbance            |   |
| Other:  |   |
| Additional Notes: (sketch of site, description of | of photos, comments on hydrological observations, etc.) Attac |
| additional sheets as necessary.                   | - Small Tribof Trib   |
|   |   |
|   | _ dry Channel w/  |
|   | - dry Channel W/.  Sagebrush  - Cattle gazing                 |
|   | Sage bins.  |
| OHWM = line on bank                               | - Cattle apzina   |
| Substrate sor                                     | tona  |
|   |   |
| Ancillary Information                             | erseded   |
|   | ,   |
| □ Riparian Corridor None obser                    | VEO   |
| - 1010-174  | 4,5   |
| ☐ Erosion and Deposition Very 17#                 | <i>CE</i>   |
| 1225 70   | and affilial appeared   |
| ☐ Floodplain Connectivity 105 0€                  | cess no fld plnobserved                                       |
|   |   |
|   |   |
|   |   |
|   |   |
| Obs   | served Amphibians, Snake, and Fish:                           |
| Obs   | Life Number of History Location Individual                    |
| Obs   | Life History Location Individual Stage Observed Observed      |
| Obs   | Life Number of History Location Individual                    |
| Obs   | Life History Location Individual Stage Observed Observed      |

| Proj   | ect#/N   | ame 3678 /G  | Assessor S. M. Harrelson   |  |            |  |  |  |  |
|--|--|--|--|--|------------|--|--|--|--|
| Address   Date 5/18/17   |  |  |  |  |            |  |  |  |  |
| Wat  | Waterway Name Trib 5 Coordinates at Lat. 43°40'53, 79"1  |  |  |  |            |  |  |  |  |
| Reach Boundaries See Fig 5 downstream end (ddd.mm.ss) Long. /17°21'07.86 |  |  |  |  |            |  |  |  |  |
| Pred   | Precipitation w/in 48 hours (cm) 0, 8 Channel Width (m) /, 99 Disturbed Site / Difficult Situation (Describe in "Notes") |  |  |  |            |  |  |  |  |
|  | erved<br>rology  | % of reach w/observed surface flow   |  |  |            |  |  |  |  |
|  |  | red Wetland Plants   |  | Observed   | Macroinver | tebrates:  |  |  |  |
| Observations   | (and indicator status):  None  None  |  |  |  |            | Indicator Ephemer- # of<br>Status optera? Individuals  |  |  |  |
|  | 1. Are aquatic macroinvertebrates present?   |  |  |  |            |  |  |  |  |
| ors  | 2. Are 6 or more in thirduals of the Order Ephemeroptera present?  |  |  |  |            |  |  |  |  |
| Indicators   | 3. Are perennial in ligator axa present? efer a Tole C C Tes Tho   |  |  |  |            |  |  |  |  |
| lnd  | 4. Are FACW, ON or 6A of integrated 2 Wittin 1/2 harvel lights Test  |  |  |  |            |  |  |  |  |
|  | 5. Wha   | t is the slope? (In percent, r   | neasured for the   | valley, not the s  | stream)    | 10-15%   |  |  |  |
| Conclusions  | macroinv<br>pre  | If Yes: Are 6 more individu  of the Ords Ephemeropt present? (Indicator 2 sentebrates sent?  the No: Are S. FACW, or O plants prese (Indicator 4 | is or all services and services are services | If Yes: Are perennial indicator taxa present? (Indicator 3)  If No: INTERMITTENT  If Yes: What is the slope? (Indicator 5)  If No: EPHEMERAL | Sio EP     | Slope < 16%: INTERMITTENT  Slope ≥ 16%: PERENNIAL  Slope ≥ 16%: PERENNIAL  PERENNIAL  Slope ≥ 16%: PERENNIAL |  |  |  |
|  | ☐ Fish   | Indicators: phibians   |  |  | · manig    | Intermittent   |  |  |  |
|  | L Vink   | MIDIANS  |  |  |            | Perennial  |  |  |  |

| slope |
|-------|
|       |
|       |
|       |
|       |
|       |
|       |
|       |
|       |

### **Appendix B: Streamflow Duration Field Assessment Form**

| Proj         | ect#/N          | ame 3678/6ns  | symt.           |   | Assessor S. M. Harrelson  |          |
|--------------|-----------------|---|-----------------|---|---|----------|
| Add          |                 |   |                 |   | Date 5//9//7  |          |
| Wat          | erway Na        | ame Trib6   |                 |   | Coordinates at Lat. 43042135,96"  | 'N       |
| Rea          | ch Boun         | daries see Figs   |                 |   | downstream end (ddd.mm.ss) Long. 117°21'39.43   |          |
| Pred         | cipitation      | w/in 48 hours (cm) 0, 8   | Channe          | el Width (m)  | D: 1 1 100 1000 1   |          |
|              |                 | % of reach w/observed s   | urface flow_(   | <b>D</b>  | A Province of the State of the |          |
|              | erved           | % of reach w/any flow (so   | urface or hyp   | orheic) 💯   |   |          |
| Нуа          | rology          | # of pools observed   |                 |   |   |          |
|              |                 | # of pools observed \( \mathcal{P} \)   |                 |   |   |          |
|              |                 | red Wetland Plants  |                 | Observed  | d Macroinvertebrates:   |          |
| -            | (and in         | dicator status):  |                 | Та  | Taxon Indicator Ephemer- # of   |          |
| Observations |                 | 1)00  |                 |   | Status optera? Individuals  |          |
| vat          | JV              | one   |                 | NO  | ne  |          |
| ose          |                 |   |                 | 1000  |   |          |
| ō            |                 |   |                 |   |   |          |
|              |                 |   |                 |   |   | - 1      |
|              | 1. Are a        | quatic macroinvertebrates   | present?        |   | ☐ Yes → No  |          |
| rs.          |                 | or more in this duals of the  |                 | merontera n   |   |          |
| ato          |                 | perennial in "eator axa pre   |                 | TIGO  | POOR No   |          |
| Indicators   |                 | FACW, ON or SA Colonts  | ore en 2        | lith a 14 han   | el 'cità' Ves Vivo  |          |
|              |                 | t is the slope? (In percent, m  |                 | valley not the s  |   | $\dashv$ |
|              | O. Wila         | no the elepe. (in percent, in   | easured for the | valley, not the s   | e stream)   | $\dashv$ |
| Conclusions  | macroin\<br>pre | If Yes: Are 6 more individual of the Order Ephemeropter present? (Indicator 2)  If No: Are SAY FACW, or OB plants present (Indicator 4) | or ls           | Yes: Are perennial indicator taxa present? (Indicator 3)  If No: INTERMITTENT  If Yes: What is the slope? (Indicator 5)  If No: EPHEMERAL | Slope < 16%: INTERMITTENT  Slope > 16%: INTERMITTENT  Slope ≥ 16%: PERENNIAL  |          |
|              |                 | Indicators:   |                 |   | Finding: Ephemeral  |          |
|              | ☐ Fish          | hibians   |                 |   | Intermittent  |          |
|              |                 |   |                 |   | Perennial   |          |

| Notes: single indicator con interfere with indicators, etc.) | nclusions, description of disturbances or modifications that may   |
|--|--|
| Difficult Situation:   | Describe situation. For disturbed streams, note extent, type, and history of disturbance.  |
| Prolonged Abnormal Rainfall / Snowpack                       | type, and history of disturbance.  |
| ☐ Below Average  |  |
| Above Average  |  |
| ☐ Natural or Anthropogenic Disturbance                       |  |
| Other:   |  |
| Additional Notes: (sketch of site, description of            | of photos, comments on hydrological observations, etc.) Attach   |
| additional sheets as necessary.                              | Ibanks begins & ends who   |
| - presence of bedy   | 9 - 4  |
|  |  |
| - heavily truebed  | e by coxte   |
| - Some moderate  | e by cattle<br>evosion in N partion  |
| othwn = Scounny,   | line on bank   |
|  | MINITED TO INTERNATIONAL CONTROL OF STREET IN STREET, INSTRUCTION OF STREET, INSTRUCTION OF STREET, INSTRUCTION  |
| SIID   | erseded  |
| none has   | OIOOGOG  |
|  | , o ca   |
| □ Erosion and Deposition Modera                              | te ~20% of length  |
| □ Floodplain Connectivity NOFIDP                             | In observed  |
|  | Charles of the same of the sam |
|  |  |
|  |  |
| Obs  | served Amphibians, Snake, and Fish:  |
|  | Life Number of History Location Individuals  |
|  | Taxa Stage Observed Observed   |
|  | None   |
| Transcrutina - 15 - 15 mileria                               | A Company of the Comp |
|  |  |
| Transfer A   |  |

### **Appendix B: Streamflow Duration Field Assessment Form**

| Proj   | ect#/N   | ame 3678/G/  | 25541      | mt.  | Assessor $\leq$                | s.M. Harrelson   |  |  |
|--|--|--|------------|--|--------------------------------|--|--|--|
| Add  | ress   |  | 114 8      |  |                                | Date 5/19/17   |  |  |
| Waterway Name Trib 7 Coordinates at Lat. 4/30 4/31 29.05 11  |  |  |            |  |                                |  |  |  |
| Reach Boundaries See Fig 5 downstream end (ddd.mm.ss) Long. 117°19'38.08"  |  |  |            |  |                                |  |  |  |
| Pred   | pitation   | w/in 48 hours (cm) Or  | A1         | hannel Width (m)   | 1.52                           | Disturbed Site / Difficult Situation (Describe in "Notes")                                     |  |  |
| % of reach w/observed surface flow_  Observed Hydrology # of pools observed  # of pools observed # of pool |  |  |            |  | <u> </u>                       |  |  |  |
|  |  | ed Wetland Plants  |            | Observed   | Macroinverte                   | ebrates:   |  |  |
| Observations   |  | dicator status):   |            |  |                                | dicator Ephemer- # of<br>Status optera? Individuals  |  |  |
|  | 1. Are a   | iquatic macroinvertebra  | tes prese  | nt?  |                                | ☐ Yes ———————————————————————————————————  |  |  |
| ors  | 2. Are 6 or more in triduals of the Order Ephemeroptera present?       |  |            |  |                                |  |  |  |
| Indicators   | 3. Are perennial in light axa present lefer a Tole Communication in No |  |            |  |                                |  |  |  |
| ludi   | 4. Are FACW, O. Lor SA ( pl. nt. preset 2 / Vitt n ½ har let kith)     |  |            |  |                                |  |  |  |
|  | 5. Wha   | t is the slope? (In percent  | , measured | for the valley, not the s  | stream)                        | 1-2%   |  |  |
| Conclusions  | macroin<br>pre<br>(India   | If Yes: Ar more individual of the O Ephemer preser (Indicate reretebrates sent?  If No: Are FACW, o plants pre (Indicate | or 2)      | If Yes: Are perennial indicator taxa present? (Indicator 3)  If No: INTERMITTENT  If Yes: What is the slope? (Indicator 5)  If No: EPHEMERAL | If No: V sl (Indi  Slope INTER | Slope < 16%: INTERMITTENT  cator 5)  Slope ≥ 16%: PERENNIAL  < 10.5%: MITTENT  ≥ 10.5%: EMERAL |  |  |
|  | ☐ Fish   | Indicators:  |            |  |                                | Intermittent Perennial   |  |  |
|  |  |  |            |  |                                |  |  |  |

Trib 7

| Notes: single indicator condinterfere with indicators, etc.)   | lusions, description of disturb                           | ances or                    | modificatio | ns that may           |
|--|---|-----------------------------|-------------|-----------------------|
| Difficult Situation:   | Describe situation. For distribe, and history of disturba |                             | eams, note  | extent,               |
| ☐ Prolonged Abnormal Rainfall / Snowpack   | i, po, and motory or distance                             |                             |             |                       |
| Below Average  |   |                             |             |                       |
| Above Average  |   |                             |             |                       |
| ☐ Natural or Anthropogenic Disturbance   |   |                             |             |                       |
| Other:   |   |                             |             |                       |
| Additional Notes: (sketch of site, description of additional sheets as necessary.  - dy Channel w/cul  3+wm = line on ba | vert under  |                             |             | etc.) Attach          |
| Ancillary Information SUDE   |   | de                          | d           |                       |
| □ Erosion and Deposition Very 11#1   | e   |                             |             |                       |
| □ Floodplain Connectivity no fldplr  | observed  |                             |             |                       |
|  |   |                             |             |                       |
|  |   | 151                         | •           |                       |
| Obs  | erved Amphibians, Snake.                                  | and Fish                    |             |                       |
| Obs  | erved Amphibians, Snake,                                  | and Fish<br>Life<br>History | Location    | Number of Individuals |
| Obs  | Taxa  | Life                        |             |                       |
| Obs  |   | Life<br>History             | Location    | Individuals           |

| Drai         |  |  |   |   |                        | Assessment Former                          |   |
|--------------|--|--|---|---|------------------------|--|---|
|              |  | ame 36 78/GI   | NS34 11/1   | //  |                        |  |   |
| Add          |  |  |   |   | lo " "                 | Date 5//                                   | 19/17                                     |
|              | erway N  |  |   |   | Coordinat<br>downstrea |  |   |
|              | ch Boun  |  |   |   | (ddd.mm.ss             | Long. // F /9'                             |   |
| Prec         | cipitation   | w/in 48 hours (cm)   | 8 Channe  | l Width (m)   | 1.14                   | Disturbed Site / Situation (Describe in    |   |
|              |  | % of reach w/observed  | d surface flow                                    | 0   |                        |  |   |
|              | erved<br>rology  | % of reach w/any flow  | (surface or hype                                  | orheic)   | <b></b>                |  |   |
| ·yu          | iology   | # of pools observed  | Ø   |   |                        |  |   |
|              |  | /ed Wetland Plants<br>dicator status):   |   | Observed  | Macroinv               | ertebrates:                                |   |
| SI           |  | 1  |   |   | axon                   | Indicator Ephemer-<br>Status optera? Inc   | # of<br>dividuals                         |
| Observations | N  | one  |   | 1/1   | ne                     | Status Optera: Inc                         | ividuais                                  |
| erve         |  |  |   | 100   | "                      |  |   |
| psq          |  |  |   |   |                        |  |   |
| ٥            |  |  |   |   |                        |  |   |
|              |  |  |   |   |                        |  |   |
|              | 1. Are a   | aquatic macroinvertebra  | tes present?                                      |   |                        | ☐ Yes — N                                  | 0   |
| ors          | 2. Are 6 or more in this duals of the Order Ephemeroptera present? |  |   |   |                        |  |   |
| ndicators    |  | perennial in l'aator axa   | ore en. efer                                      | T Gle   | 0                      | Tes AN                                     | 0   |
| Indi         | 4. Are I   | FACW, ON OF SA CD  | nt preser 2                                       | Vitl n ½ bar  | el idtb                | Ver CAN                                    | 0   |
|              |  | t is the slope? (In percent  | measured for the v                                | valley not the  | stream)                | 3-10.%                                     |   |
|              |  | tie die dieper (imperesin  | , modernou for the                                | rancy, not the  | otreamy                | <i>2.</i> 70                               |   |
| Conclusions  | macroin<br>pre   | aquatic vertebrates sent? cator 1)  If Yes: Ar more indiv of the O Ephemen preser (Indicate FACW, o plants pre (Indicate | e 6 or riduals rider optera of 2)  SAV, OBL sent? | Yes: Are perennial indicator taxa present? (Indicator 3)  If No: NTERMITTENT  Yes: What is the slope? (Indicator 5)  If No: EPHEMERAL |                        | No: What is the slope? (Indicator 5) Slope | e < 16%:<br>MITTENT<br>e ≥ 16%:<br>ENNIAL |
|              | Fish   | Indicators:<br>o<br>ohibians   |   |   | Findir                 | ng: Ephemera Intermitter Perennial         |   |

Trib8

| Notes: single indicator cor interfere with indicators, etc.)                   | clusions, description of disturb                           | oances or        | modificatio          | ons that may            |          |
|--|--|------------------|----------------------|-------------------------|----------|
| Difficult Situation:   | Describe situation. For dist type, and history of disturba |                  |                      |                         | ren      |
| Prolonged Abnormal Rainfall / Snowpack   | type, and history of disturbation of the channel           | cuts             | off 2                | portion                 | 1 of The |
| ☐ Below Average  | Unib. Channel  | Start            | 5 200                | in out                  | side of  |
| Above Average  | 5/11/1/11/11/27  | OR I             | 5                    |                         |          |
| Natural or Anthropogenic Disturbance   | Study area   |                  |                      |                         |          |
| Other:   |  |                  |                      |                         |          |
| Additional Notes: (sketch of site, description additional sheets as necessary. |  | ological ob      | servations,          | etc.) Attach            |          |
| - dry channela long  | g road   |                  |                      |                         |          |
| -ends at small   | berm, no   | cl               | nonn                 | el p.                   | rsent    |
| dwnstrm of 4nis<br>othum= line on  | P+.  |                  |                      |                         |          |
| OHWM = line on   | bank   |                  |                      |                         |          |
|  |  |                  |                      |                         |          |
| 0  |  |                  |                      |                         |          |
| Ancillary Informatio SUD   | ersec  | 10               | 4                    |                         |          |
| ☐ Riparian Corridor  |  |                  |                      |                         |          |
| Hiparian Corridor 7/10   |  |                  |                      |                         |          |
| □ Erosion and Deposition Vey 11H   | le   |                  |                      |                         |          |
| ☐ Floodplain Connectivity  | ofldpln obsen  | red              |                      |                         |          |
|  |  |                  |                      |                         |          |
|  |  |                  |                      |                         |          |
| Ob   | served Amphibians, Snake,                                  | and Fish<br>Life |                      | Number of               |          |
|  | Taxa   | History<br>Stage | Location<br>Observed | Individuals<br>Observed |          |
|  | None   |                  |                      |                         |          |
| Lucy and Sign and the  |  |                  |                      |                         |          |
|  |  |                  |                      |                         |          |
|  |  |                  |                      |                         |          |

|              | Арр                              | endix B: Streamfle  | ow Duration  | Field As  | Trib<br>sessment Form  |
|--------------|----------------------------------|---|--|---|--|
| Proj         | ject # / N                       | ame 3678 / Gras   | SYMH   | Assessor <  | 3.M. Harrelson   |
|              | iress                            |   |  |   | Date 5/19/17   |
| Wat          | terway N                         | ame Tnb9  |  | Coordinates a   | t Lat. 4/304/9'15, 03" N   |
| Rea          | ich Boun                         | daries see Fig 5  |  | downstream e  | end Long. /17°/8'35.9" W   |
| Pred         | cipitation                       | w/in 48 hours (cm) 0, 8   | Channel Width (m)  | 1.42  | Disturbed Site / Difficult Situation (Describe in "Notes")       |
|              |                                  | % of reach w/observed surfa   | ce flow  |   |  |
|              | served<br>Irology                | % of reach w/any flow (surfaction) # of pools observed  | ce or hyporheic) <u></u>   |   |  |
|              | Observ                           | ved Wetland Plants  | Observed   | Macroinvertel   | brates:  |
|              | (and in                          | dicator status):  | Te   | xon Îndi  | icator Ephemer- # of   |
| Observations |                                  | Vone  |  |   | atus optera? Individuals   |
| Indicators   | 2. Are 6<br>3. Are p<br>4. Are F | equatic macroinvertebrates pressor more individuals of the Orderennial National axabrater axabrater FACW, O. V. or SA V. plant order is the slope? (In percent, measure | der Ephemeroptera p  |   | Yes No Yes No No No No 8-20%                                     |
| Conclusions  | macroinvi<br>pres<br>(Indica     | If Yes: Are 6 or more individuals of the Order Ephemeroptera present?  (Indicator 2)  If No: Are SAV, FACW, or OBL plants present?  (Indicator 4)                       | If Yes: Are perennial indicator taxa present? (Indicator 3)  If No: INTERMITTENT  If Yes: What is the slope? (Indicator 5)  If No: EPHEMERAL | If Yes: PEI  If No: Who slop (Indica)  Slope < INTERMI  Slope ≥ EPHEM | Slope < 16%: INTERMITTENT  Slope ≥ 16%: PERENNIAL  10.5%: ITTENT |
|              | Fish                             | hibians   |  |   | Intermittent Perennial   |

| Notes: single indicator condinterfere with indicators, etc.)   | clusions, description of disturbances or modifications that may                           |
|--|---|
| Difficult Situation:   | Describe situation. For disturbed streams, note extent, type, and history of disturbance. |
| ☐ Prolonged Abnormal Rainfall / Snowpack   | type, and history of disturbance.   |
| ☐ Below Average  |   |
| Above Average  |   |
| ☐ Natural or Anthropogenic Disturbance   |   |
| Other:   |   |
| Additional Notes: (sketch of site, description of additional sheets as necessary.  | of photos, comments on hydrological observations, etc.) Attach                            |
| - dry channel her  | vily incised  |
| - Significant eroson   | vily incised  n ~75-80% of length  ting, line on wak                                      |
| OHWM = Substrate Sor   | ting, linean work   |
|  |   |
|  |   |
| Cun  | araadad   |
| Ancillary Information  | erseded   |
| □ Riparian Corridor None observ  | ved   |
| ☐ Erosion and Deposition Significa   | ant, observed along 6050 of reach   |
| ☐ Floodplain Connectivity NO, Char   | inel inciscol   |
|  |   |
|  |   |
| The state of the s |   |
| Obs  | served Amphibians, Snake, and Fish: Life   Number of                                      |
|  | History Location Individuals Taxa Stage Observed Observed                                 |
|  | None  |
| to to see many in the see of   |   |
| The last off the   |   |
| ABUREAUT L   |   |

### **Appendix B: Streamflow Duration Field Assessment Form**

| Proj         | ject # / N   | ame 3678/                         | GRESTY                                   | mt.          |  | Assessor   | Harrels                     | on  |          |
|--------------|--|-----------------------------------|--|--------------|--|--|-----------------------------|---|----------|
|              | Iress  |                                   |  |              |  |  |                             | Date 5/19 5'5                               | 120/1    |
| Wat          | terway N   | ame Trib                          | 19                                       |              |  | Coordinate   | es at Lat. 4                | Date 5/19 5'5<br>1850/66:42                 | N        |
| Rea          | each Boundaries SER Fig 5 downstream end Long. 475066.45 w |                                   |  |              |  |  |                             |   |          |
| Pred         | cipitation   | w/in 48 hours (cm)                | 0.8                                      | Channe       | el Width (m)                                     |  |                             | rbed Site / Difficu<br>(Describe in "Notes" |          |
|              |  | % of reach w/obs                  |  |              |  | J  |                             |   |          |
|              | served   | % of reach w/any                  | flow (surfa                              | ace or hyp   | orheic)  | <u>)                                    </u>   |                             |   | Carl Co. |
| Hyd          | lrology  |                                   | (1)                                      |              |  |  |                             |   |          |
|              |  | # of pools observ                 | ed_F                                     |              |  |  |                             |   |          |
|              |  | ved Wetland Plant                 | s  |              | Observed   | Macroinve  | ertebrates:                 |   |          |
|              | (and in  | idicator status):                 |  |              | To   | ixon   | Indicator Ep                | hemer- # of                                 |          |
| Observations |  | 1 × × × 0                         |  |              | /  | LXOI1  |                             | ptera? Individuals                          |          |
| /atio        |  | USNE                              |  |              |  | AMP  |                             |   |          |
| ser          | ,  |                                   |  |              | 10 6   |  |                             |   |          |
| Op           |  |                                   |  |              |  |  |                             |   |          |
|              |  |                                   |  |              |  |  |                             |   |          |
|              | 2  |                                   |  |              |  |  |                             |   |          |
|              | 1. Are a   | aquatic macroinver                | tebrates pr                              | esent?       |  |  | ☐ Yes                       | No  |          |
| iors         | 2. Are 6   | 6 or more i <del>n livid</del> ua | ls of the O                              | rder Ephe    | meroptera p                                      | resent?  | Yes                         | No  |          |
| Indicators   | 3. Are   | perennial in ligator              | axa pre le                               | n. efer      | T ofe  |  | ☐ / es                      | No  |          |
| Ind          | 4. Are I   | FACW, ON or SA                    | of nte or                                | re lei 2     | Vitl n ½ har                                     | el idtb  | Ves                         | A No  |          |
|              | 5. Wha   | t is the slope? (In p             | ercent, meas                             | ured for the | valley, not the                                  | stream)  | 1-5 %                       |   |          |
|              |  |                                   |  |              |  |  | 7                           |   |          |
|              |  |                                   |  |              |  |  |                             |   |          |
|              |  |                                   |  | ("           | Year Are personal                                | H Ye   | es: PERENNIAL               |   |          |
|              |  |                                   |  | , "          | Yes: Are perennial<br>indicator taxa<br>present? |  |                             |   |          |
|              |  | m                                 | Yes: Are 6 or<br>ore individuals         |              | (Indicator 3)                                    | The state of the s | No: What is the             | Slope < 16%:<br>INTERMITTENT                |          |
|              | 1  |                                   | of the Order<br>phemeroptera<br>present? |              |  |  | slope?                      |   |          |
|              | 1-11   |                                   | (Indicator 2)                            |              | If No:   | )  | (Indicator 5)               | Slope ≥ 16%:<br>PERENNIAL                   |          |
| S            |  | aquatic<br>vertebrates            | -1 -217                                  |              |  | _  |                             |   |          |
| Sion         | pre  | esent?                            |  | (II          | Yes: What is the                                 | SIN  | lope < 10.5%:<br>TERMITTENT |   |          |
| clu          | (Indi  |                                   | No: Are SAV,                             |              | slope?   |  |                             |   |          |
| Conclusions  |  |                                   | ACW, or OBL ants present?                | K            | (Indicator 5)                                    |  | lope ≥ 10.5%:<br>EPHEMERAL  |   |          |
|              |  |                                   | (Indicator 4)                            |              | If No:   | 1  |                             |   |          |
|              |  |                                   |  |              | EPHEMERAL  | )  |                             |   |          |
|              |  |                                   |  |              |  |  |                             |   |          |
|              |  |                                   |  |              |  |  |                             |   |          |
|              |  |                                   |  |              |  | Findin   | g: Ep                       | hemeral                                     |          |
|              | Single Fish  | Indicators:                       |  |              |  | aiii   |                             | ermittent                                   |          |
|              |  | ohibians                          |  |              |  |  |                             |   |          |
|              |  |                                   |  |              |  |  |                             | erennial                                    |          |

| Notes: single indicator cond                                     | Jugiono description of district  | 200                      | modificati  | no that are i                |
|--|--|--------------------------|-------------|------------------------------|
| Notes: single indicator cond<br>interfere with indicators, etc.) | lusions, description of disturb  | oances or                | modificatio | ons that may                 |
| Difficult Situation: disturbance                                 | Describe situation. For dist type, and history of disturba   | nce                      |             | A Carling of                 |
| Prolonged Abnormal Rainfall / Snowpack                           | - Cattle g BZI   | na t                     | or en       | time                         |
| ☐ Below Average  | extent   | J                        |             |                              |
| Above Average  | Chicili  |                          |             |                              |
| Natural or Anthropogenic Disturbance                             |  |                          |             |                              |
| Other:   |  |                          |             |                              |
| Additional Notes: (sketch of site, description or                | f photos, comments on hydro  | logical ob               | servations, | etc.) Attach                 |
| la ch ki disturbed   | 1 & incised  | 1 de                     | y Cl        | dune                         |
| - Mighty anstarted   |  | , C                      | /           |                              |
| - highly disturbed  - heavily vegetated  Cirsium sp.             | : cheatgass  | , ne                     | rbs         | gphin,                       |
| Cirsium sp.  |  |                          |             |                              |
| 0  |  |                          |             |                              |
|  |  |                          |             |                              |
|  |  |                          |             |                              |
| Ancillary Information SUD (                                      | arcac  | 10                       | 7           |                              |
|  |  |                          | , G         |                              |
| □ Riparian Corridor NONC OBSEN                                   | Md   |                          |             |                              |
| 10.0   | 200/110  | 0.01.                    | no 100      | 20/0                         |
| □ Erosion and Deposition Neavy er                                | 03/08/ 2 rong 4  | riti                     | 16 116      | 3 (1)                        |
|  |  |                          |             |                              |
| The Floodplain Connectivity nofldp                               | In observed  |                          |             | (00)                         |
| * several prosional sin  | de channels u  | MH                       | not         | mappie                       |
| 0,000  | A STATE OF THE STA |                          |             |                              |
|  |  |                          |             |                              |
| Obs  | erved Amphibians, Snake,   |                          | :           | Number of                    |
|  | Tava   | Life<br>History<br>Stage | Location    | Number of Individuals        |
|  | Taxa   | Slage                    | Observed    | Observed                     |
| $\wedge$   | ione   |                          |             |                              |
| the second of the second   |  |                          | 1 = 1       | Stock anyoge                 |
| interest (Tr.  |  |                          |             | BUTSHTA                      |
|  | lone   |                          | 4=0         | Salayan<br>ayar<br>artera La |

### **Appendix B: Streamflow Duration Field Assessment Form**

| Address   Date   Sec.   Fig.   | Pro         | ject # / N   | ame 3678/6   | PRSSY           | m4n  | Assessor          | Harrelson   |                 |  |  |  |
|--|-------------|--|--|-----------------|--|-------------------|---|-----------------|--|--|--|
| Waterway Name  | Add         | Iress  |  |                 |  |                   | Date 5/2  | 0/17            |  |  |  |
| Precipitation w/in 48 hours (cm) O. B. Channel Width (m) 4.B. Disturbed Site / Difficult Situation (Describe in *Notes*)  % of reach w/observed surface flow //OO  | Wat         | Waterway Name J-H Canal Coordinates at Lat. 4861176.53 N                             |  |                 |  |                   |   |                 |  |  |  |
| Precipitation w/in 48 hours (cm) O. B Channel Width (m) 4, B Disturbed Site / Difficult Situation (Describe in *Notes*)  % of reach w/observed surface flow IOO % of reach w/any flow (surface or hyporheic) IOO # of pools observed D  Observed Wetland Plants (and indicator status):  Taxon Indicator Status Optera* Individuals  None Observed due to hyporheic optera* Individuals  None Observed due to hyporheic optera* Individuals  None Observed due to hyporheic optera* Individuals  I Are aquatic macroinvertebrates present?  2. Are 6 or more individuals of the Order Ephemeroptera present?  2. Are 6 or more individuals of the Order Ephemeroptera present?  3. Are perennial houseon axa indicator in the order individuals  4. Are FACW, Observed Auchin historical Combination of the order individuals  5. What is the slope? (in parcent, measured for the valley, not the stream)  If Yes, Are perennial houseon in the order indicator is a present?  If Yes, Are perennial houseon in the order is a perennial houseon in the order in the order is a perennial houseon in the order in the order is a perennial houseon in | Rea         | Beach Boundaries SPR FIA 5 downstream end  |  |                 |  |                   |   |                 |  |  |  |
| Observed Hydrology  # of pools observed   Observed Wetland Plants (and indicator status):    Typhol sp. OBL  | Pre         | Precipitation w/in 48 hours (cm) 0 8 Channel Width (m) 48 Disturbed Site / Difficult |  |                 |  |                   |   |                 |  |  |  |
| Source   Status   S   |             |  |  |                 |  |                   |   |                 |  |  |  |
| Observed Wetland Plants (and indicator status):  Taxon Indicator Ephemer- Status optera? Individuals  Vane Observed date to  Individuals  I | Нус         | irology  |  | ,               | riyporrieic) <u>70</u>   |                   |   |                 |  |  |  |
| (and indicator status):  Taxon Indicator Status optera? Individuals optera? Individual |             |  | # of pools observed  | <u> </u>        |  |                   |   |                 |  |  |  |
| (and Indicator status):  Taxon Indicator Status opera? # of opera? Individuals    None Observed dure to   Individuals    1. Are aquatic macroinvertebrates present?  2. Are 6 or more individuals of the Order Ephermeroptera present?    4. Are perennial individuals of the Order Ephermeroptera present?    4. Are FACW, Olica And Internet of Control 1/2 (and all the Status of the Color Ephermeroptera present?    (Indicator is the slope? (In percent, measured for the valley, not the stream)  1. Yes: Are parennial indicator is the slope? (In percent, measured for the valley, not the stream)  2. What is the slope? (In percent, measured for the valley, not the stream)  2. What is the slope? (In percent, measured for the valley, not the stream)  3. Slope 105%: PERENNIAL  1. Yes: What is the slope? (Indicator 3)  2. Slope 105%: PERENNIAL  3. Slope 105%: PERENNIAL  4. PREMERAL  5. Slope 105%: PERENNIAL  5. Slope 105%: PHEMERAL  5. Slope 105%: PHEMERAL  5. Slope 105%: PHEMERAL  6. INDICATOR SINCE PREMERAL  6. INDICATOR  |             | Observ   | ved Wetland Plants   |                 | Observed   | Macroinverte      | ebrates:  |                 |  |  |  |
| Status optera? Individuals  None observed due to high flow, but presumed present  1. Are aquatic macroinvertebrates present?  2. Are 6 or more judicials of the Order Ephemeroptera present?  3. Are perennial investor axa present end of the Order Ephemeroptera present?  4. Are FACW, Olaps A. Put the present end of the Valley, not the stream)  5. What is the slope? (In percent, measured for the valley, not the stream)  1. Are aquatic macroinvertebrates present?  1. Are aquatic macroinvertebrates present? |             | (and in  | dicator status):   |                 |  |                   |   |                 |  |  |  |
| 1. Are aquatic macroinvertebrates present?  2. Are 6 or more individuals of the Order Ephemeroptera present?  3. Are perennial individual individual indicator axa present indicator taxa present?  4. Are FACW, Olars And Integrated City in 1/2 against the Stope?  5. What is the slope? (In percent, measured for the valley, not the stream)  7. What is the slope? (In percent, measured for the valley, not the stream)  8. Stope < 105%; Intermittent  8. Stope < 105%; Ephemeral Intermittent  8. Stope < 105%; Ephemeral Intermittent  | ns          |  |  |                 |  | 8                 | Status optera? Indiv                                    | viduals         |  |  |  |
| 1. Are aquatic macroinvertebrates present?  2. Are 6 or more individuals of the Order Ephemeroptera present?  3. Are perennial individual individual indicator axa present indicator taxa present?  4. Are FACW, Olars And Integrated City in 1/2 against the Stope?  5. What is the slope? (In percent, measured for the valley, not the stream)  7. What is the slope? (In percent, measured for the valley, not the stream)  8. Stope < 105%; Intermittent  8. Stope < 105%; Ephemeral Intermittent  8. Stope < 105%; Ephemeral Intermittent  | atio        | TV   | phasp. OBL   |                 | Nan  | e 0050            | red due to  |                 |  |  |  |
| 1. Are aquatic macroinvertebrates present?  2. Are 6 or more individuals of the Order Ephemeroptera present?  3. Are perennial individual individual indicator axa present indicator taxa present?  4. Are FACW, Olars And Integrated City in 1/2 against the Stope?  5. What is the slope? (In percent, measured for the valley, not the stream)  7. What is the slope? (In percent, measured for the valley, not the stream)  8. Stope < 105%; Intermittent  8. Stope < 105%; Ephemeral Intermittent  8. Stope < 105%; Ephemeral Intermittent  | erv         | 1/   |  |                 | had a h  | Slau.             | hild merunas  | . 1             |  |  |  |
| 1. Are aquatic macroinvertebrates present?  2. Are 6 or more is dividuals of the Order Ephemeroptera present?  3. Are perennial invitator axa present after it file  | Obs         |  |  |                 | 11191  | 11000             | out production  | -0              |  |  |  |
| 1. Are aquatic macroinvertebrates present?  2. Are 6 or more is attrictuals of the Order Ephemeroptera present?  3. Are perennial invitator axa present after it defeated by the present of the present of the present of the present?  4. Are FACW, On the probability of the Order Ephemeroptera present?  4. Are FACW, On the present, measured for the valley, not the stream)  5. What is the slope? (In percent, measured for the valley, not the stream)  1. Yes: Are perennial indicator taxa present?  (Indicator 3)  1. No: What is the slope? (Indicator 5)  1. No: Internittent  1. No: What is the slope? (Indicator 5)  1. No: Internittent  |             |  |  |                 | preso  | ent               |   |                 |  |  |  |
| 2. Are 6 or more inclinical as of the Order Ephemeroptera present?  2. Are 6 or more inclinical as a resemble filter to the stream as a resemble filter to t |             |  |  |                 |  |                   |   |                 |  |  |  |
| 5. What is the slope? (In percent, measured for the valley, not the stream)    Yes: Are perennial indicator taxa present? (Indicator 3)   If Yes: Are perennial indicator taxa present? (Indicator 3)   If No: What is the slope? (Indicator 5)   If No: What is the slope? (Indicator 5)  |             | 1. Are a   | quatic macroinvertebra   | ites present?   |  |                   | Yes No  |                 |  |  |  |
| 5. What is the slope? (In percent, measured for the valley, not the stream)    Yes: Are perennial indicator taxa present? (Indicator 3)   If Yes: Are perennial indicator taxa present? (Indicator 3)   If No: What is the slope? (Indicator 5)   If No: What is the slope? (Indicator 5)  | ors         | 2. Are 6   | or more in this duals of   | the Order Ep    | hemeroptera p  | resent?           | ■ Yes ■ No  | unknown         |  |  |  |
| 5. What is the slope? (In percent, measured for the valley, not the stream)    Yes: Are perennial indicator taxa present? (Indicator 3)   If Yes: Are perennial indicator taxa present? (Indicator 3)   If No: What is the slope? (Indicator 5)   If No: What is the slope? (Indicator 5)  | cate        |  |  |                 |  | 00                | Vices No.   | assumed         |  |  |  |
| 5. What is the slope? (In percent, measured for the valley, not the stream)  2-3 %    Yes: Are perennial indicator taxa present? (Indicator 3)   Yes: Are perennial indicator taxa present? (Indicator 5)   Yes: Are per  | Indi        |  |  | nts pre en      | With a 1/2 har   | el idtb           |   | (00)            |  |  |  |
| If Yes: Are perennial indicator taxa present?   If No: What is the slope?   If No: W   |             |  |  | t, measured for | the valley, not the  | stream)           |   |                 |  |  |  |
| If Yea: Are 6 or more individuals of the Order Ephemeroptera present?   (Indicator 3)   (Indicator 5)   (Ind   |             |  |  |                 |  |                   |   |                 |  |  |  |
| ☐ Fish   | Conclusions | macroinv<br>pre  | indicate adjusted and the Components of the Comp | or 2)           | indicator taxa present? (Indicator 3)  If No: INTERMITTENT  If Yes: What is the slope? (Indicator 5) | If No: V sl (Indi | Slope INTERM ope? cator 5) Slope > PEREI < 10.5%: METAL | 2:16%:<br>NNIAL |  |  |  |
| □ Amphibiana   |             |  |  |                 |  | i manig.          |   |                 |  |  |  |
|  |             |  |  |                 |  |                   | Perennial   |                 |  |  |  |

| Notes: single indicator concluinterfere with indicators, etc.)   | sions, description of disturbances or modifications that may  |
|--|---|
| Difficult Situation:   | Describe situation. For disturbed streams, note extent, ype, and history of disturbance.                      |
| ☐ Prolonged Abnormal Rainfall / Snowpack   | ype, and history of disturbance.  |
| ☐ Below Average  |   |
| ☐ Above Average  |   |
| ☐ Natural or Anthropogenic Disturbance   |   |
| Other:   |   |
| Additional Notes: (sketch of site, description of photos, comments on hydrological observations, etc.) Attach additional sheets as necessary.  — irrigation Canal w/ pumped water = water flow controls  — water murky no fish /amphibians absenced, but they are likely present w/in the canal  Ancillary Information None  |   |
| □ Erosion and Deposition Observed on night bank  |   |
| Floodplain Connectivity NO fldpln observed   |   |
|  |   |
|  | ved Amphibians, Snake, and Fish:  Life History Location Observed  Taxa  Location Observed  Observed  Observed |
| in terms to a second to the se |   |

# Superseded

Photo 1.



Photo 2.



Tributary 1 (ephemeral) facing upstream.

OHWM defined by setiment corting and scouring.

Tributary 1 (ephemeral) facing downstream.

Change width anged between 2-5 feet.

Photo 3.



Tributary 2b (intermittent) facing upstream. Some wetland plants and macroinvertebrates were observed.

Photo 4.



Tributary 2b (intermittent) facing downstream.

Photo 5.



Tributary 2a (ephemeral) facing upstream at location above Schweizer Reservoir.
Channel width ranged between 2-4 feet.
OHWM was poorly defined (FLSR 2015).

Photo 7.



Tributary 2a (ephemeral) facing upstream at location below Schweizer Reservoir. Reservoir embankment is visible in background. OHWM was poorly defined (HDR 2015).

Photo 6.



Tributary 2a (ephemeral) facing down tream at location above Solweizer Received. Vege a for was dominated by sagebrush and upland bunningrasses (HDR 2015).

Photo 8.



Tributary 2a (ephemeral) facing downstream. Vegetation was upland throughout (HDR 2015).

Photo 9.



Photo 10.



Soil Pit #8A was dug at the low point of Schweizer reservoir to confirm the absence of wetlands. Soils were light in color and Confirm the absence not hydric (HDR 2015).

Photo 11.



Schweizer Reservoir facing upstream at ephemeral drainage Tributary 2. Grazing was evident throughout the reservoir (HDR 2015).

Photo 12.



Schweizer Reservoir facing north toward reservoir embankment (HDR 2015).

Photo 13.



Photo 14.



Tributary 3 (ephemeral) facing upstream. Channel width ranged between 2-3 feet OHWM was poorly defined (IDL 2)15

Photo 15. Photo 16.



Tributary 3 (ephemeral) facing upstream. OHWM was poorly defined, and upland vegetation was present throughout.



Tributary 3 (ephemeral) facing downstream.

Photo 17.



Photo 18.



Tributary 3 (ephemeral) facing upstream. Channel width ranged between 4-12 feet. OHWM was poorly define.

Tributary 3 (ephemeral) facing downstream.

Tributary 3 (ephemeral) facing downstream.

Photo 19.

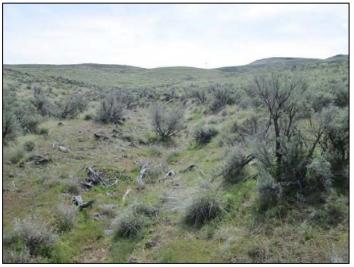


Photo 20.



Tributary 4 (ephemeral) facing upstream. Channel width ranged between 3-4 feet. OHWM was poorly defined (HDR 2015).

Tributary 4 (ephemeral) facing downstream. Vegetation was fairly sparse and soils were rocky (HDR 2015).

Photo 21.



Photo 22.



Tributary 4 (ephemeral) facing upstream.

Channel width ranged between 1-3 feet
OHWM was poorly defined.

Tributary 4

Vagetation
OHWM was poorly defined.

Tributary 4 (ephemeral) facing upstream.

Vagetation was uplend throughout, and at was heavily grazed.

Photo 23. Photo 24.



Tributary 4 (ephemeral) facing downstream.



Tributary 5 (ephemeral) facing upstream. Channel width ranged between 5-8 feet, and the OHWM was poorly defined.

Photo 25.



Photo 26.



Tributary 5 (ephemeral) facing downstream. Sagebrush was common throughout the channel.

Soil pit DP1 facing north. Partial berm from De Se Per Se

Photo 27.



Photo 28.



Photo facing downstream (south) from DP1 towards the end of Tributary 3 in this area.

Photo facing upstream (north) from DP1.

Photo 29.



Photo 30.



Tributary 3 (ephemeral) facing upstream.

Tributary 3 (ephemeral) facing downstream

SuperSecret of Control of

Photo 32. Photo 31.



Tributary 6 (ephemeral) facing upstream. Channel width ranged between 4-14 feet; OHWM was defined by scouring and a line impressed on the bank.



Tributary 6 (ephemeral) facing downstream. Old berm is visible on the left bank.

Photo 33.



Photo 34.



Photo facing southwest (upstream). Area

Photo facing northeast (downstream). Area north of Tributary 6 with no evident Channel.

Photo 35.



Photo facing south (upstream). Area mapped as a stream channel, however, no channel is evident.

Photo 36.



Photo facing north (downstream). Area mapped as a stream channel, however, no channel is evident.

Photo 37.



Photo 38.

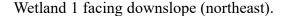


Photo facing southeast (unstream). Area mapped as a stream clannel, however no channel is evident.

Photo facing northwest (downstream). Area capped as a stream channel however, no channel is evident.

Photo 39. Photo 40.







Wetland 1 facing upslope (southwest).

Photo 41.



Photo 42.



Wetland data point DP2 facing south inside
Wetland 1.

Upland data point DP3 facing
Upland data point DP3 facing Upland data point DP3 facing southwest.

Photo 43.



Photo facing east from Wetland 1 towards area mapped as a pond by NWI.

Photo 44.



Photo facing southeast (upstream). Area mapped as a stream channel, however, no channel is evident.

Photo 45.



Photo 46.



Photo facing northwest (downstream). Area
mapped as a stream clannel, however to channel is evident.

Tributary 7 (ephemeral) facing upstream.

Channel width anged between 3-8 feet.

Photo 47.



Tributary 7 (ephemeral) facing downstream. OHWM was poorly defined.

Photo 48.



Tributary 8 (ephemeral) facing upstream. Beginning of defined channel.

Photo 49.



Photo 50.



Tributary 8 (ephemeral) facing downstream.

Tributary 8 (ephemeral) facing upstream. Channel width ranged between 2-first persent of the Channel width ranged between 2-first persent p

Photo 51.



Tributary 8 (ephemeral) facing downstream. OHWM was defined by sediment sorting and a line impressed on the bank.

Photo 52.



Photo facing west (upstream). Area mapped as a stream channel, however, no channel is evident.

#### Photo 53.



Photo 54.



Photo facing east (downstream). Area

Cattle pond outside project area.

mapped as a stream clannel, bowever of channel is evident.

Cattle pond outside project area.

Photo 55.



Photo facing southwest (upstream). Area mapped as a stream channel, however, no channel is evident.

Photo 56.



Photo facing northeast (downstream). Area mapped as a stream channel, however, no channel is evident.

Photo 57.



Photo 58.



Tributary 9 (ephemeral) facing upstream.

Beginning of defined thankel

CHWM was defined by some sediment

String and changes in viget tion.

Photo 59.



Tributary 9 (ephemeral) facing upstream. Channel widths ranged between 3-7 feet.

Photo 60.



Tributary 9 (ephemeral) facing downstream.

Photo 61.



Photo 62.



Photo facing southwest (upstream). Area mapped as a stream clannel, however, so channel is evident.

Photo facing northeast (downstream). Area

clannel, however no

channel, however no

channel widen

Channel widen

Photo 63.



Photo facing northwest (upstream). Area mapped as a stream channel, however, no channel is evident.

Photo 64.



Photo facing southeast (downstream). Area mapped as a stream channel, however, no channel is evident.

Photo 65.



Photo 66.



anged

Area is heavily grazed with cattle room throughout channel. Tributary 10 (ephemeral) facing upstream. Tributary 10 (enhemeral) facing Ders Gereger

Photo 67.



Tributary 10 (ephemeral) facing upstream.

Photo 68.



Tributary 10 (ephemeral) facing downstream. Channel is deeply incised with moderate to severe erosion.

Photo 69.



Photo 70.



Tributary 10 (ephemeral) facing upstream.

Area is heavily grazed with cettle rouging throughout channel.

Tributary 10 (ephemeral) facing throughout channel.

Tributary 10 (ephemeral) facing throughout channel.

Photo 71.



J-H Canal (artificial waterbody) facing upstream.

Photo 72.



J-H Canal (artificial waterbody) facing downstream. Berm is visible on right bank, and water control structure is visible on the left bank.