

## Attachment I-3

### 1200-C Permit Application and Erosion and Sediment Control Plan

**ATTACHMENT I-3  
1200-C PERMIT APPLICATION AND DRAFT EROSION AND SEDIMENT  
CONTROL PLAN**

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May 3, 2012

Ms. Jackie Ray  
Oregon Department of Environmental Quality  
700 SE Emigrant, Suite 330  
Pendleton, OR 97801

Dear Ms. Ray:

Idaho Power Company (IPC) proposes to construct an overhead, high-voltage transmission line, known as the Boardman to Hemingway Transmission Line Project (Project), from near Boardman, Oregon through Morrow, Umatilla, Union, Baker and Malheur counties and into southwest Idaho. We are currently in the permitting phase of the Project that is occurring on two parallel paths. Idaho Power is pursuing a site certificate from the Oregon Energy Facility Siting Council (EFSC) as administered by the Oregon Department of Energy (Department). A federal Environmental Impact Statement (EIS) is also under development. The US Department of Interior, Bureau of Land Management (BLM) is the lead federal agency for the EIS process.

The requirements of the EFSC certificate are found in Oregon Administrative Rules OAR 345, division 021. As part of the required soils analysis (OAR 345-021-0010(i), Exhibit I) the EFSC relies, in part, on meeting soil protection standards by a determination that the Project can be expected to receive a National Pollutant Discharge Elimination System (NPDES) 1200-C permit for stormwater discharge. OAR 345-021-0000(7) allows the applicant to submit the application for the site certificate prior to applying for the federally delegated permit, but requires a copy of the federally delegated permit be submitted to the department to support their completeness finding. An initial corridor alignment has been studied and forms the basis for the preliminary Application for Site Certificate, 1200-C permit, and other ancillary permits, however, the final alignment may be modified as the EIS and EFSC processes proceed. The final 1200-C permit cannot be completed until the two decision bodies concur on the final alignment.

The purpose of this letter is to transmit the preliminary application for a 1200-C stormwater permit for the construction of the Project. IPC is submitting this preliminary application including a preliminary Erosion and Sediment Control Plan (ESCP) to facilitate ODOE and ODEQ review of the preliminary Application for Site certification which is scheduled for submittal to ODOE later this year. In absence of a complete ESCP, based on the final alignment, IPC has included an example of the plan format, content, and details that would comprise the plan when submitted.

The basis for this approach was established at a January 12, 2012 project meeting attended by Ms. Krista Ratliff, of DEQ's Bend, Oregon office. In that meeting Pike Energy, LLC, IPC's engineer, had completed preliminary erosion and sediment control

Ms. Jackie Ray

Page 2 of 2

May 3, 2012

plan (ESCP) drawings that comply with many of the requirements of the 1200-C permit. The result of that meeting was that IPC would present a preliminary 1200-C permit application, including the preliminary ESCP as a means of furthering the EFSC process. During the meeting, it was stated that the EFSC process can proceed without a final 1200-C permit if DEQ prepares a letter to EFSC that both acknowledges the initiation of the permit application process and states the estimated date when DEQ will complete its review and issue a permit decision. IPC understands that the project cannot proceed until the final 1200-C permit is obtained.

Enclosed are two copies of the preliminary 1200-C permit, including the preliminary ESCP, and the permit fee. We would appreciate your review and comments, with the understanding that later tasks may include DEQ production of the letter to EFSC, after this preliminary permit has been reviewed approved by your office.

We appreciate your consideration in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Todd Adams". The signature is fluid and cursive, with the first name "Todd" and last name "Adams" clearly distinguishable.

Todd Adams  
Project Manager

Cc: Z Funkhouser, IPC  
M Bracke, IPC  
D Dockter, IPC



<u>DEQ USE ONLY</u>
File #: _____
Application #: _____
LLID/RM: _____
River Mile: _____
Legal Name Confirmed: <input type="checkbox"/>
Notes: _____

**APPLICATION FOR NEW  
NPDES GENERAL PERMIT #1200-C**

For stormwater discharges to surface waters from construction activities disturbing one acre or more that do not meet automatic coverage requirements.



Oregon Department of Environmental Quality

<u>DEQ USE ONLY</u>
Date Received: _____
Amount: \$ _____
Check Name: _____
Check #: _____
Deposit #: _____
Receipt #: _____
Notes: _____

\* A project *may* be eligible for "automatic coverage" under NPDES general permit 1200-CN if stormwater *does not* discharge to a water body with a TMDL or 303(d) listing for sediment or turbidity *and* it meets one of the following criteria (see 1200-CN at <http://www.deq.state.or.us/wq/wqpermit/docs/general/npdes1200cn/1200CNPermit.pdf>):

- 1) Disturbs less than one acre and is located in Gresham, Troutdale, or Wood Village.
- 2) Disturbs less than five acres and is located in Albany, Corvallis, Eugene, Milwaukie, Multnomah Co. (unincorporated areas), Springfield, West Linn, or Wilsonville.
- 3) Disturbs less than five acres and is within the jurisdictions of Clackamas Co. Water Environment Services [Gladstone, areas within Clackamas Co. Service Dist. #1 (excluding Happy Valley), and areas within the Surface Water Management Agency of Clackamas Co. (including Rivergrove)], Clean Water Services (Banks, Beaverton, Cornelius, Durham, Forest Grove, Hillsboro, King City, North Plains, Sherwood, Tigard, Tualatin, and Washington Co. within Urban Growth Boundary), or Rogue Valley Sewer Services (Central Point, Phoenix, Talent, and portions of Jackson Co. in NPDES MS4 permit area).

Please answer all questions.

A. PROJECT INFORMATION	
<p>1. <b>Idaho Power Company</b> Applicant (entity legally responsible for permit) <b>Zach Funkhouser</b> Contact Name (if different from applicant) <b>1221 West Idaho Street</b> Address <b>Boise ID 83702</b> City State Zip <b>(208) 388-5375 zfunkhouser@idaho power.com</b> Telephone E-Mail Address</p>	<p>2. <b>Zach Funkhouser</b> Invoice Contact Name (if different from applicant) (same as contact address) Address _____ City State Zip _____ Telephone E-Mail Address</p>
<p>3. <b>Pike Energy Solutions, LLC</b> Architect/Engineering Firm (Erosion &amp; Sediment Control Plan) <b>Aaron Storo</b> Project Manager <b>(503) 937-2000 astoro@pike.com</b> Telephone E-Mail Address</p>	<p>4. <b>To Be Determined</b> Applicant's Designated Erosion and Sediment Control Inspector _____ Company Name _____ Telephone E-Mail Address</p>
<p>5. _____ Name of Project <b>Boardman to Hemingway Transmission Line</b> Address or Cross Street _____ City State Zip _____ County</p>	<p>6. Nature of Construction Activity  <input type="checkbox"/> Single Family (SIC Code 1521)  <input type="checkbox"/> Multi-Family Residential (SIC Code 1522)  <input type="checkbox"/> Commercial (SIC Code 1542)  <input type="checkbox"/> Industrial (SIC Code 1541)  <input type="checkbox"/> Highway (SIC Code 1611)  <input checked="" type="checkbox"/> Utilities (SIC Code 1623): <b>Transmission Line</b>  <input type="checkbox"/> Other (include SIC Code): _____         </p>

**A. PROJECT INFORMATION (continued)**

7. Approximate location of center of site:

Latitude: 45.012

Longitude: -117.838

*\*\*For assistance: DEQ Location Tool at <http://deqgisweb.deq.state.or.us/llid/llid.html>\*\**

8. Project Size:

Total Site Acreage (acres): To Be Determined

Total Disturbed Area (acres): 5,228.9

9. Stormwater runoff during construction will flow to:

☐ Infiltration device(s)

☐ Creek/Stream (provide name):

☐ Ditch (provide name of receiving stream for ditch):

☐ Municipal storm sewer or drainage system (provide name of receiving stream for system):

☒ Other: See Attached Table A-9

10. Stormwater runoff during construction discharges directly to or through a storm sewer or drainage system that discharges to a water body with a Total Maximum Daily Load (TMDL) or 303(d) listing for turbidity or sedimentation? ☐ YES ☒ NO

*\*\*For assistance: DEQ Lookup Tool at <http://deq12.deq.state.or.us/tmdl/default.aspx> or DEQ Map/Table at <http://deq12.deq.state.or.us/tmdl/default.aspx>\*\**

**B. LAND USE COMPATIBILITY STATEMENT**

Submit a DEQ Land Use Compatibility Statement (LUCS) form that has been completed by the local land use authority with this application. Attach the *original* LUCS and, if applicable, written findings by the local authority. DEQ will not process the application unless the local land use authority indicates on the LUCS form that the project is compatible with the local acknowledged comprehensive plan and land use regulations. See Attached Insert B-1

*\*\*A copy of this form may be found at <http://www.deq.state.or.us/pubs/permithandbook/generallucs.pdf>\*\**

**C. SIGNATURE OF LEGALLY AUTHORIZED REPRESENTATIVE**

The legally authorized representative *must* sign the application.

I hereby certify that the information contained in this application is true and correct to the best of my knowledge and belief. In addition, I agree to pay all permit fees required by Oregon Administrative Rules 340-045. This includes a compliance determination fee invoiced annually by DEQ to maintain the permit.

Vern Porter

**Name of Legally Authorized Representative (Type or Print)**

VP, Delivery, Engineering and Operations

**Title**

**Signature of Legally Authorized Representative**

**Date**

**APPLICATION AND FEE SUBMITTAL**

**To authorize permit registration, the following must be completed and submitted to the appropriate DEQ regional office or DEQ Agent (see list of offices in application instructions, pp. 3-4):**

☒ DEQ application form signed by the Legally Authorized Representative and meeting the signature requirements below.

☐ DEQ LUCS by local land use authority indicating the activity is compatible with local acknowledged comprehensive plan and land use regulations. Include the Findings if so stated on the LUCS.

☐ Stormwater Erosion and Sediment Control Plan Narrative, if applicable.

☒ Stormwater Erosion and Sediment Control Plan Drawings; full-sized hard copy and electronic PDF files.

☐ The fee for a new application is \$1,586 payable to Oregon DEQ and you must submit it with this application. Please note that DEQ will also invoice you for an annual fee of \$804 if your project needs permit coverage for more than a year. These fees are subject to change; please visit <http://www.deq.state.or.us/wq/rules/div045/tables.pdf> for current fees. If you are sending your application to a DEQ Agent, check with the DEQ Agent for appropriate fees and make check payable to the DEQ Agent.

### NPDES General Permit 1200-C for Construction Activities Application Instructions

#### A. PROJECT INFORMATION

1. Enter the legal name of the applicant. Permit coverage will be issued to this entity. This is the person, business, public organization, or other entity responsible for ensuring that erosion and sediment controls are in place and in working order through the life of the project.
  - The name must be a legal, active name registered with the Oregon Department of Commerce, Corporation Division in Salem at 503-378-4752 or [http://egov.sos.state.or.us/br/pkg\\_web\\_name\\_srch\\_inq.login](http://egov.sos.state.or.us/br/pkg_web_name_srch_inq.login), unless otherwise exempted by their rules. If the name of the applicant is not registered with the Corporation Division and the applicant is a business entity, attach legal documents that verify the entity's existence with the application. The applicant may not use an assumed business name.
  - Permit coverage may be transferred from one party to another. For example, a developer may apply for a permit and then transfer the permit to a contractor. Transfer forms are available from DEQ or at <http://www.deq.state.or.us/wq/stormwater/constappl.htm>.
2. Provide invoice contact information for billing of DEQ annual permit fee if different from the applicant in #1 above.
3. Provide contact information for the Architect or Consulting Engineer who designed the Erosion and Sediment Control Plan (ESCP).
4. Provide information on the Erosion and Sediment Control Inspector. This is not a DEQ or DEQ Agent inspector; this is an inspector employed by the applicant. If the inspector has not been selected yet, please provide the name of consultant who prepared the ESCP and their ESC certification. When the inspector is selected, submit to DEQ or to the DEQ Agent, the name, contact information, training and experience (see condition A.12.b.iii of the 1200-C).
5. Provide the common name of the project (for example, the name of the subdivision), the location of the site with respect to crossroads in the area, and, if available, a street address.
6. Check the box that best describes the nature of the construction activity. If "other" is selected, describe the use and include a Standard Industrial Classification Code (visit <http://www.osha.gov/pls/imis/sicsearch.html> for codes).
7. Enter latitude and longitude for the approximate center of the site (DEQ Location Tool at <http://deqgisweb.deq.state.or.us/lid/lid.html> or at <http://deqapp1/website/lit/data.asp>).
8. Provide information on the project size as indicated (based on the total project and not just a single phase).
9. Indicate where stormwater runoff during construction will flow. Use your best judgment to determine the name of the receiving water body.
10. Indicate whether stormwater runoff during construction will discharge directly to or through a storm sewer or drainage system that discharges to a Total Maximum Daily Load (TMDL) or 303(d) listed water body for turbidity or sedimentation. To make this determination, the following tools are available on DEQ's website:
  - Map and table: <http://www.deq.state.or.us/WQ/TMDLs/basinmap.htm>
  - Lookup tool: <http://deq12.deq.state.or.us/tmdl/default.aspx>

#### B. LAND USE COMPATIBILITY STATEMENT

Complete as indicated.

#### C. SIGNATURE OF LEGALLY AUTHORIZED REPRESENTATIVE

##### DEFINITION OF LEGALLY AUTHORIZED REPRESENTATIVE:

Please also provide the information requested in brackets [ ]

- **Corporation** - president, secretary, treasurer, vice-president, or any person who performs principal business functions; or a manager of one or more facilities that is authorized in accordance to corporate procedure to sign such documents.
- **Partnership** - General partner *[list of general partners, their addresses, and telephone numbers]*.
- **Sole Proprietorship** - Owner(s) *[each owner must sign the application]*.
- **City, County, State, Federal, or other Public Facility** - Principal executive officer or ranking elected official.
- **Limited Liability Company** - Member *[articles of organization]*.
- **Trusts** - Acting trustee *[list of trustees, their addresses, and telephone numbers]*.

(please see 40 CFR §122.22 for more detail, if needed)

**NPDES General Permit 1200-C for Construction Activities  
Application Instructions**

**APPLICATION AND FEE SUBMITTAL**

Submit this application, Narrative Parts I, II & III (if applicable), LUCS, Erosion and Sediment Control Plan (2 full-sized hard copies and 1 PDF copy), and the applicable fee to the appropriate DEQ regional office or DEQ Agent listed below. Contact the appropriate DEQ regional office or DEQ Agent for the best way to submit the electronic version of the ESCP.

- If you are in an area serviced by a DEQ Agent, check with the DEQ Agent for appropriate fees and make check payable to the DEQ Agent.
- If you are sending your application to DEQ, the fee for a new application is \$1,586 payable to the Oregon DEQ. Please note that DEQ will also invoice you for an annual fee of \$804 if your project needs permit coverage for more than a year. These fees are subject to change; visit <http://www.deq.state.or.us/wq/rules/div045/tables.pdf> for current fees.

<b>DEQ Northwest Region</b> 2020 SW 4th Avenue, Suite 400 Portland, OR 97201-4987 503-229-5438 or 1-800-452-4011	<b>DEQ Western Region</b> 165 East 7th Avenue, Suite 100 Eugene, OR 97401 541-687-7326 or 1-800-452-4011	<b>DEQ Eastern Region</b> 700 SE Emigrant Avenue, Suite 330 Pendleton, OR 97801 541-278-4605 or 1-800-452-4011
<b>City of Eugene</b> 99 W. 10th Avenue Eugene, OR 97401 541-722-5519	<b>City of Hermiston</b> 215 Gladys Avenue Hermiston, OR 97838 541-667-5025	<b>City of Troutdale</b> 342 SW 4th Street Troutdale, OR 97060 503-674-7270
<b>Clean Water Services</b> 2550 SW Hillsboro Highway Hillsboro, OR 97123 503-681-5101 <i>Includes Banks, Beaverton, Cornelius, Durham, Forest Grove, Gaston, Hillsboro, King City, North Plains, Sherwood, Tigard, Tualatin, and portions of Washington Co.</i>	<b>Rogue Valley Sewer Services</b> 138 West Vilas Road, PO Box 3130 Central Point, OR 97502 541-353-4594 <i>Includes Central Point, Phoenix, Talent, White City and portions of Jackson Co.</i>	<b>Clack Co. Water Environmental Services</b> 150 Beaver Creek Road, Suite 430 Oregon City, OR 97045 503-742-4567 <i>Unincorporated Clackamas County and areas within the Cities of Rivergrove and Gladstone</i>

## **Insert B-1**

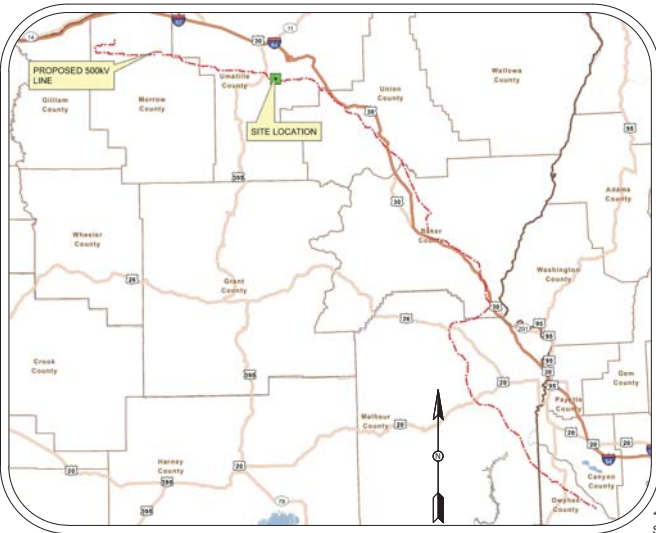
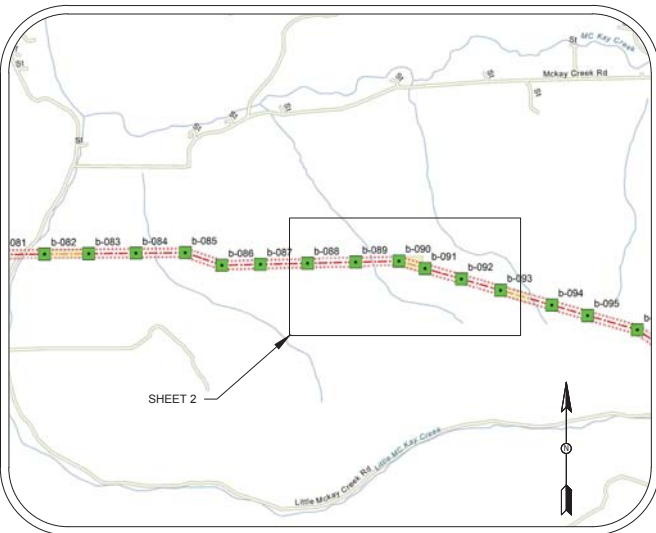
Idaho Power Company (IPC) is applying for a Site Certification from the Energy Facility Siting Council (EFSC). IPC has elected to follow "Path B" under ORS 504 (1)(b), which means that the site certificate binds state and local jurisdictions to the EFSC's action and requires them to issue permits, licenses, and certificates for construction and operations of the facility. The substantive criteria identified by each county from their county comprehensive plans and land use ordinances are taken into account as part of the site certification process.

**Table A-9. Stormwater Runoff to Streams**

Route/County	Corridor Length (miles)	Subbasin Name	Subbasin HUC	Total Disturbed Area (acres)	Intermittent		Perennial		303d	
					Disturbed Area (acres)	% Total Disturbed Area	Disturbed Area (acres)	% Total Disturbed Area	Disturbed Area (acres)	% Total Disturbed Area
Proposed Corridor										
Morrow	36.3	Middle Columbia-Lake Wallula	17070101	218.0	18.8	8.6	--	--	--	--
		Umatilla	17070103	312.2	103.7	33.2	8.2	2.6	0.1	<0.1
Umatilla	49.5	Umatilla	17070103	869.0	76.3	8.8	22.0	2.5	1.1	0.1
		Upper Grande Ronde	17060104	11.7	--	--	--	--	--	--
Union	39.8	Powder	17050203	193.9	18.6	9.6	4.0	2.1	0.3	0.1
		Umatilla	17070103	4.5	--	--	--	--	--	--
		Upper Grande Ronde	17060104	592.4	25.4	4.3	10.2	1.7	--	--
Baker	75.0	Brownlee Reservoir	17050201	39.6	10.3	25.9	9.2	23.3	--	--
		Burnt	17050202	648.1	68.7	10.6	66.1	10.2	45.7	7.1
		Powder	17050203	532.8	74.4	14.0	7.9	1.5	--	--
Malheur	73.8	Brownlee Reservoir	17050201	135.4	9.1	6.7	1.2	0.9	--	--
		Bully	17050118	148.8	16.4	11.0	2.9	2.0	1.3	0.9
		Lower Malheur	17050117	329.4	59.4	18.0	<0.1	<0.1	2.3	0.7
		Lower Owyhee	17050110	251.7	42.4	16.8	2.1	0.8	6.5	2.6
		Middle Snake-Succor	17050103	229.3	51.9	22.6	2.2	1.0	--	--
		Willow	17050119	227.5	20.1	8.8	10.5	4.6	10.5	4.6
Owyhee	23.8	Middle Snake-Succor	17050103	540.0	104.0	19.3	8.1	1.5	6.0	1.1
Total	298.2			5,284.3	699.6	13.2	154.8	2.9	73.7	1.4
Double Mountain Alternate										
Malheur	7.4	Bully	17050118	0.7	--	--	<0.1	4.9	--	--
		Lower Malheur	17050117	124.9	44.8	35.9	--	--	--	--
		Lower Owyhee	17050110	14.7	6.0	41.1	--	--	--	--
Total	7.4			140.3	50.9	36.3	<0.1	4.9	--	--



# BOARDMAN TO HEMINGWAY 500 kV PROJECT EROSION AND SEDIMENT CONTROL PLANS



## VICINITY MAP

### PROJECT LOCATION:

THE PROJECT CORRIDOR BEGINS NEAR BOARDMAN IN MORROW COUNTY, OREGON AND ENDS AT HEMINGWAY SUBSTATION, LOCATED IN OWYHEE COUNTY, IDAHO.

### ATTENTION EXCAVATORS:

OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THESE RULES FROM THE CENTER BY CALLING 503-232-1987. IF YOU HAVE ANY QUESTIONS ABOUT THE RULES, YOU MAY CONTACT THE CENTER. YOU MUST NOTIFY THE CENTER AT LEAST TWO BUSINESS DAYS, BEFORE COMMENCING AN EXCAVATION. CALL 503-246-6699.

### OWNER

IDAHO POWER COMPANY  
1221 WEST IDAHO STREET  
BOISE, ID 83702

### OWNER'S ENGINEER

PIKE ENERGY SOLUTIONS, LLC  
700 NE MULTNOMAH ST., SUITE 500  
PORTLAND, OR 97232  
503-937-2000

### CONTRACTOR

TO BE DETERMINED

### NARRATIVE

IDAHO POWER IS PROPOSING TO CONSTRUCT AND OPERATE A NEW, APPROXIMATELY 304-MILE-LONG, ELECTRIC TRANSMISSION LINE BETWEEN NORTHEASTERN OREGON AND SOUTHWESTERN IDAHO KNOWN AS THE BOARDMAN TO HEMINGWAY (B2H) PROJECT. THIS OVERHEAD 500-KV LINE WILL CONNECT THE GRASSLAND SUBSTATION LOCATED NEAR BOARDMAN, OREGON TO THE HEMINGWAY SUBSTATION NEAR MELBA, IDAHO. THE LINE WILL CROSS FEDERAL, STATE, AND PRIVATE LANDS IN SIX COUNTIES IN OREGON AND IDAHO.

THIS ESCP (FIVE SHEETS INCLUDING THIS TITLE SHEET) WAS DEVELOPED AS A REPRESENTATIVE SAMPLE OF A 1-MILE SECTION OF THE B2H PROJECT ROUTE. THIS SECTION OF THE PROJECT PORTRAYS A REPRESENTATIVE SAMPLE OF EXISTING CONDITIONS (E.G. TOPOGRAPHIC, SURFACE DRAINAGE, AND SOIL/GEOLOGIC) AND FEATURES OF THE PROPOSED TRANSMISSION LINE PROJECT.

THE PROPOSED TRANSMISSION LINE CORRIDOR RIGHT OF WAY WIDTH IS 250 FEET. THE TRAVELED WIDTH OF ACCESS ROADS WILL RANGE FROM 16 TO 20 FEET (WITH A TOTAL DISTURBANCE WIDTH OF 25 FEET IN MOST AREAS). SHEET 2 SHOWS PROPOSED EXISTING AND NEW ACCESS ROADS WITHIN A 25-FOOT WIDE CORRIDOR OF DISTURBANCE. THE PROPOSED TRANSMISSION LINE WITHIN A 250-FOOT WIDE RIGHT OF WAY, PROPOSED STRUCTURES (I.E., TOWERS) WITHIN 250-FOOT SQUARE CONSTRUCTION WORK AREA, A PROPOSED LINE PULLING AND TENSIONING SITE, AND THE LOCATIONS OF PROPOSED SILT FENCES, ROCK FORD STREAM CROSSINGS, WATERBARS AND OTHER EROSION AND SEDIMENT CONTROL MEASURES. PRESENTED ON SEPARATE SHEETS ARE DETAILS OF EROSION AND SEDIMENT CONTROL MEASURES AS WELL AS EXAMPLES OF STRUCTURE WORK AREAS AND ACCESS ROADS. WORK AREAS ARE TO BE RESTORED TO THEIR ORIGINAL CONDITION AND USE, OR AS AGREED TO BY LANDOWNERS. ROW AREAS WILL BE MAINTAINED AS PER IPC VEGETATION MANAGEMENT PLAN AND ROW MAINTENANCE STANDARDS.

### NATURE OF CONSTRUCTION ACTIVITY AND ESTIMATED TIME TABLE

CONSTRUCTION TO BUILD A 500 kV TRANSMISSION LINE  
DISTURBED AREA  
STRUCTURE LOCATIONS ~5.5 ACRES\*  
ACCESS ROADS ~8.3 ACRES\*  
TOTAL DISTURBED AREA = 13.8 ACRES\*  
PULLING AND TENSIONING SITES ~4.9 ACRES\*  
WORK AREAS ~ 0.0 ACRES\*  
TOTAL RIGHT-OF-WAY AREA ~38.4 ACRES\*  
SITE SOIL CLASSIFICATION:

STRUCTURE	DESCRIPTION	AVERAGE SLOPE
b-088	GURDANE SILTY CLAY/LOAM	7%-25%
b-089	GURDANE SILTY CLAY/LOAM	7%-25%
b-090	GURDANE-ROCKLY COMPLEX	2%-20%
b-091	GURDANE-ROCKLY COMPLEX	2%-20%
b-092	GURDANE SILTY CLAY/LOAM	25%-45%
b-093	GURDANE SILTY CLAY/LOAM	25%-45%

ON-SITE SOILS HAVE A MODERATE TO HIGH EROSION  
POTENTIAL.\*  
ALL FILL MATERIAL SHALL BE GENERATED ON-SITE OR IMPORTED  
FROM PERMITTED LOCAL QUARRIES.

### RECEIVING WATER BODIES:\*

UNNAMED TRIBUTARY TO MCKAY CREEK\*

\* NOTE: INFORMATION IS SPECIFIED ONLY TO THIS EXAMPLE MILE-LONG SEGMENT OF THE BOARDMAN TO HEMINGWAY 500 kV PROJECT. A FULL TABULATION CONDITIONS FOR ALL APPLICABLE SEGMENTS WILL BE PRESENTED AS A SUPPLEMENT TO THIS ESCP.

THE PERMITTEE IS REQUIRED TO MEET ALL THE CONDITIONS OF THE 1200C PERMIT. THIS ESCP AND GENERAL CONDITIONS HAVE BEEN DEVELOPED TO FACILITATE COMPLIANCE WITH THE 1200C PERMIT REQUIREMENTS. IN CASES OF DISCREPANCIES OR OMISSIONS, THE 1200C PERMIT REQUIREMENTS SUPERCEDE REQUIREMENTS OF THIS PLAN.

### SHEET INDEX EROSION AND SEDIMENT CONTROL PLANS

1 OF 5 EROSION AND SEDIMENT CONTROL TITLE SHEET  
2 OF 5 EROSION AND SEDIMENT CONTROL PLAN  
3 OF 5 EROSION AND SEDIMENT CONTROL DETAILS A  
4 OF 5 EROSION AND SEDIMENT CONTROL DETAILS B  
5 OF 5 EROSION AND SEDIMENT CONTROL DETAILS C

### GENERAL NOTES:

- ONLY CLEAR AND GRUB FOR INSTALLATION OF EROSION CONTROL MEASURES PRIOR TO MASS CLEARING.
- NO CLEARING SHALL BE ALLOWED WITHOUT THE INSTALLATION OF THE APPROVED EROSION CONTROL MEASURES.
- THE MINIMUM MEASURES INCLUDE TEMPORARY CONSTRUCTION ENTRANCES, WATERBARS ON NEW (AND IMPROVED EXISTING) ROADS, AND PERIMETER EROSION CONTROL MEASURES (SEEDING OF NEW DISTURBED CUT AND FILL SLOPES). ADDITIONAL MEASURES (I.E. STRUCTURAL BMPs) WILL BE APPLIED AS NEEDED AND DETAILED IN THIS ESCP.
- THE EROSION AND SEDIMENT CONTROL INSPECTOR MUST PERFORM DAILY INSPECTIONS OF THE BMPs AND DISCHARGE OUTFALLS WHEN RAINFALL AND RUNOFF OCCUR.
- ALL ESCP CONTROLS AND PRACTICES MUST BE INSPECTED VISUALLY ONCE TO ENSURE THAT BMPs ARE IN WORKING ORDER PRIOR TO THE SITE BECOMING INACTIVE OR IN ANTICIPATION OF SITE INACCESSIBILITY AND MUST BE INSPECTED VISUALLY ONCE EVERY TWO (2) WEEKS DURING INACTIVE PERIODS GREATER THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS.
- DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. SEED MIX MUST BE APPROPRIATE TO SEASON AND SITE CONDITIONS, PREFERABLY NATIVE, AND FREE OF NOXIOUS WEEDS. CONSULT LOCAL AGRONOMIST OR EROSION CONTROL SPECIALISTS FOR SEED MIXES.
- PROVIDE PERMANENT EROSION CONTROL MEASURES ON ALL EXPOSED AREAS. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AS EXPOSED AREAS BECOME STABILIZED, UNLESS DOING SO CONFLICTS WITH LOCAL REQUIREMENTS. PROPERLY DISPOSE OF CONSTRUCTION MATERIALS AND WASTE, INCLUDING SEDIMENT RETAINED BY TEMPORARY BMPs.
- STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED.
- TOPSOIL AND ALL EXCESS SOIL GENERATED BY GRADING ACTIVITIES SHALL BE STOCKPILED SEPARATELY AND CONTAINED WITH AN APPROPRIATE BMP TO PREVENT OFFSITE SEDIMENTATION.
- CARE SHOULD BE TAKEN TO NOT MIX THE UNDERLYING SOIL AND THE TOPSOIL.
- ALL DISTURBED AREAS TO RECEIVE LAYER OF TOPSOIL, SUFFICIENT IN DEPTH TO PROVIDE ADEQUATE GERMINATION OF PERMANENT SEED.
- VEGETATIVE BUFFER STRIPS SHALL BE UTILIZED TO REMOVE SEDIMENT AND OTHER POLLUTANTS FROM RUNOFF, WHERE EFFECTIVE. MINIMUM WIDTH OF THE VEGETATIVE BUFFER STRIP SHALL BE 10 FEET.
- STRUCTURAL BMPs WILL BE INSTALLED IN ANY LOCATION WITH GROUND DISTURBANCE WITHIN 50 FEET OF A WATER BODY. IF THE AREA BELOW THE DISTURBANCE IS SLOPED STEEPER THAN 5% OR CONTAINS LESS THAN 50% VEGETATIVE COVER, THE CONSTRUCTION CONTRACTOR SHALL TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ON TO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT AS MAY BE REQUIRED.
- CONCRETE TRUCK WASHOUTS SHALL BE LOCATED PRIOR TO COMMENCEMENT OF ANY CONCRETE WORK.
- CONCRETE WASHOUTS SHALL BE LOCATED AT EACH STRUCTURE PAD, OR A CENTRAL LOCATION SERVING MULTIPLE STRUCTURE PADS.
- DISTURBANCES ON SLOPES SHALL BE MANAGED BY THE USE OF VEGETATIVE BUFFER STRIPS. STRUCTURAL BMPs (FIBER ROLLS, COMPOST ROLLS OR EROSION CONTROL MATTING, ETC.) WILL BE APPLIED FOR ADDITIONAL PROTECTION.
- PULLING AND TENSIONING SITES FOR THE 500-KV TRANSMISSION LINE CONSTRUCTION WILL BE REQUIRED APPROXIMATELY EVERY 1 TO 2 MILES ALONG THE RIGHT-OF-WAY AND WILL REQUIRE APPROXIMATELY 5 ACRES AT EACH END OF THE WIRE SECTION TO ACCOMMODATE REQUIRED EQUIPMENT.
- A TABLE HAS BEEN DEVELOPED NOTING THE TYPICAL CONSTRUCTION DETAIL FOR THE MAJORITY OF THE STRUCTURE PADS.
- ACCESS ROADS SHALL MATCH ONE OF THE TYPICAL DETAILS UNLESS SPECIFICALLY NOTED.
- SEE 2005 DEQ ESC MANUAL FOR BMP RATIONALE STATEMENTS.

### REQUIRED EROSION AND SEDIMENT CONTROL PLAN DRAWING STANDARD NOTES:

- HOLD A PRE-CONSTRUCTION MEETING OF PROJECT CONSTRUCTION PERSONNEL (INCLUDING THE INSPECTOR) TO DISCUSS EROSION AND SEDIMENT CONTROL MEASURES AND CONSTRUCTION LIMITS. (SCHEDULE A.8.C.I.(3))
- ALL PERMIT REGISTRANTS MUST IMPLEMENT THE ESCP. FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT. (SCHEDULE A.8.A)
- RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. DURING INACTIVE PERIODS OF GREATER THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS, RETAIN THE ESCP AT THE CONSTRUCTION SITE OR AT ANOTHER LOCATION. (SCHEDULE B.2.A)
- THE ESCP MEASURES SHOWN ON THIS PLAN ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, UPGRADE THESE MEASURES AS NEEDED TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL EROSION AND SEDIMENT CONTROL REGULATIONS. (SCHEDULE A.8.C.I.(1)(C))
- SUBMISSION OF ALL ESCP REVISIONS IS NOT REQUIRED. SUBMITTAL OF THE ESCP REVISIONS IS ONLY UNDER SPECIFIC CONDITIONS. (SCHEDULE A.12.C.II)
- PHASE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION. (SCHEDULE A.8.C.I.(1)(D))
- IDENTIFY, MARK, AND PROTECT (BY FENCING OFF OR OTHER MEANS) CRITICAL RIPARIAN AREAS AND VEGETATION INCLUDING IMPORTANT TREES AND ASSOCIATED ROOTING ZONES, AND VEGETATION AREAS TO BE PRESERVED. IDENTIFY VEGETATIVE BUFFER ZONES BETWEEN THE SITE AND SENSITIVE AREAS (E.G., WETLANDS), AND OTHER AREAS TO BE PRESERVED, ESPECIALLY IN PERIMETER AREAS. (SCHEDULE A.8.C.I.(1) & (2))
- PRESERVE EXISTING VEGETATION AND RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. (SCHEDULE A.7.B.III.(1))
- EROSION AND SEDIMENT CONTROL MEASURES INCLUDING PERIMETER SEDIMENT CONTROL MUST BE IN PLACE BEFORE VEGETATION IS DISTURBED AND MUST REMAIN IN PLACE AND BE MAINTAINED, REPAIRED, AND PROMPTLY IMPLEMENTED FOLLOWING PROCEDURES ESTABLISHED FOR THE DURATION OF CONSTRUCTION, INCLUDING PROTECTION FOR ACTIVE STORM DRAIN INLETS AND CATCH BASINS AND APPROPRIATE NON-STORMWATER POLLUTION CONTROLS. (SCHEDULE A.7.D.I AND A.8.C)
- ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK. (SCHEDULE A.8.C.I.(6))
- APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES AND FOR ALL ROADWAYS INCLUDING GRAVEL ROADWAYS. (SCHEDULE A.8.C.I.(2))
- ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS. (SCHEDULE A.8.C.I.(7))
- PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMPs SUCH AS: GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL AND UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPs MUST BE IN PLACE PRIOR TO LAND-DISTURBING ACTIVITIES. (SCHEDULE A.7.D.II.(1) AND A.8.C.I(4))
- WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE. (SCHEDULE A.7.D.II.(3))
- USE BMPs TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS, VEHICLE AND EQUIPMENT FUELING, MAINTENANCE, AND STORAGE; OTHER CLEANING AND MAINTENANCE ACTIVITIES; AND WASTE HANDLING ACTIVITIES. THESE POLLUTANTS INCLUDE FUEL, HYDRAULIC FLUID, AND OTHER OILS FROM VEHICLES AND MACHINERY, AS WELL AS DEBRIS, LEFTOVER PAINTS, SOLVENTS, AND GLUES FROM CONSTRUCTION OPERATIONS. (SCHEDULE A.7.E.I.(2))
- USE WATER OR A SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL. (SCHEDULE A.7.B.III)
- THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITHIN ANY WATERWAY RIPARIAN ZONE. (SCHEDULE A.9.B.III)
- IF A STORMWATER TREATMENT SYSTEM (FOR EXAMPLE, FLOCCULATION, FILTRATION, ETC.) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION OF INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVICE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATING THE TREATMENT SYSTEM. OBTAIN PLAN APPROVAL BEFORE OPERATING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS. (SCHEDULE A.9.D)
- TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED. THE REGISTRANT IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR. (SCHEDULE A.7.B)
- CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND CREATION OF BARE GROUND DURING WET WEATHER. (SCHEDULE A.7.A.I)
- SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL. (SCHEDULE A.9.C.I)
- OTHER SEDIMENT BARRIERS (SUCH AS BIOBAGS): REMOVE SEDIMENT BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT AND BEFORE BMP REMOVAL. (SCHEDULE A.9.C.II)
- SEDIMENT BASINS AND SEDIMENT TRAPS: REMOVE TRAPPED SEDIMENTS BEFORE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT AND AT COMPLETION OF PROJECT. (SCHEDULE A.9.C.III & IV)
- WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-SITU CLEAN UP OF SEDIMENT SHALL BE PERFORMED ACCORDING TO THE OREGON DIVISION OF STATE LANDS REQUIRED TIMEFRAME. (SCHEDULE A.9.B.I)
- THE INTENTIONAL WASHING OF SEDIMENT INTO STORM SEWERS OR DRAINAGE WAYS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING AND MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS. (SCHEDULE A.9.B.II)
- THE ENTIRE SITE MUST BE TEMPORARILY STABILIZED USING VEGETATION OR A HEAVY MULCH LAYER. TEMPORARY SEEDING, OR OTHER METHOD SHOULD ALL CONSTRUCTION ACTIVITIES CEASE FOR 30 DAYS OR MORE. (SCHEDULE A.7.F.I)
- PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE WITH A COVERING OF BROWN STRAW AND A TACKIFIER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE. (SCHEDULE A.7.F.II)
- THE DESIGNATED EROSION AND SEDIMENT CONTROL INSPECTOR MUST PERFORM DAILY INSPECTIONS OF THE BMPs AND DISCHARGE OUTFALLS WHEN RAINFALL AND RUNOFF OCCUR. RECORD THE INSPECTIONS AND OBSERVATIONS IN A LOG THAT IS ON SITE. (SCHEDULE B.1.B.II)
- ALL ESCP CONTROLS AND PRACTICES MUST BE INSPECTED VISUALLY ONCE TO ENSURE THAT BMPs ARE IN WORKING ORDER PRIOR TO THE SITE BECOMING INACTIVE OR IN ANTICIPATION OF SITE INACCESSIBILITY AND MUST BE INSPECTED VISUALLY ONCE EVERY TWO (2) WEEKS DURING INACTIVE PERIODS GREATER THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS. (SCHEDULE B.1.B.(2) & (3))
- IF PRACTICAL, INSPECTIONS MUST OCCUR DAILY AT A RELEVANT AND ACCESSIBLE DISCHARGE POINT OR DOWNSTREAM LOCATION DURING PERIODS IN WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER. (SCHEDULE B.1.B.(4))
- DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED. (SCHEDULE A.7.B.III)
- PROVIDE PERMANENT EROSION CONTROL MEASURES ON ALL EXPOSED AREAS. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AS EXPOSED AREAS BECOME STABILIZED, UNLESS DOING SO CONFLICTS WITH LOCAL REQUIREMENTS. PROPERLY DISPOSE OF CONSTRUCTION MATERIALS AND WASTE, INCLUDING SEDIMENT RETAINED BY TEMPORARY BMPs. (SCHEDULE A.8.C.III)

BMP MATRIX FOR CONSTRUCTION PHASES REFER TO DEQ GUIDANCE MANUAL FOR A COMPREHENSIVE LIST OF AVAILABLE BMPs.					
BMPs	CLEARING & GRADING	UTILITY INSTALLATION	FINAL STABILIZATION	"WET WEATHER (OCT. 1 - MAY 31st)"	POTENTIAL DISCHARGE TO TMDL and 303(d)
EROSION PREVENTION					
PRESERVE NATURAL VEGETATION	** X	X	X	X	X
GROUND COVER		X	X	X	X
HYDRAULIC APPLICATIONS			X	X	X
PLASTIC SHEETING		X		X	X
MATTING			X	X	X
DUST CONTROL	** X	X	X		X
TEMPORARY/ PERMANENT SEEDING		X	X	X	X
BUFFER ZONE	** X	X	X	X	X
SEDIMENT CONTROL					
SILT FENCE (PERIMETER)	** X		X	X	X
SILT FENCE (INTERIOR)			X	X	X
STRAW WATTLES	X			X	X
FILTER BERM	X	X		X	X
INLET PROTECTION	X	X		X	X
DEWATERING	X	X		X	X
SEDIMENT TRAP	X	X		X	X
RUN OFF CONTROL					
CONSTRUCTION ENTRANCE	** X	X	X	X	X
PIPE SLOPE DRAIN	X	X	X	X	X
OUTLET PROTECTION	X	X	X	X	X
SURFACE ROUGHENING	X	X	X		X
CHECK DAMS	X	X	X	X	X
WATERBARS	** X	X	X	X	X
POLLUTION PREVENTION					
PROPER SIGNAGE	** X	X	X	X	X
HAZ WASTE MGMT	** X	X	X	X	X
SPILL KIT ON-SITE	** X	X	X	X	X
CONCRETE WASHOUT AREA		X	X	X	X
** SIGNIFIES BMP THAT WILL BE INSTALLED PRIOR TO ANY GROUND DISTURBING ACTIVITY.					
SCHEDULE:	YEARS 1-2	YEARS 1-3	YEARS 2-3	YEARS 1-3	YEARS 1-3

## PRELIMINARY

### PERMITTEE'S SITE INSPECTOR:

COMPANY/AGENCY: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
FAX: \_\_\_\_\_  
E-MAIL: \_\_\_\_\_  
DESCRIPTION OF EXPERIENCE: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

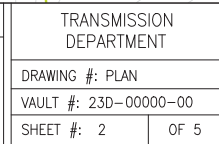
( MUST HAVE ADEQUATE CERTIFICATION OR TRAINING IN EROSION CONTROL OR AT  
LEAST 200HRS ON JOB EXPERIENCE SPECIFIC TO EROSION CONTROL )

INSPECTION FREQUENCY:			
SITE CONDITION		MINIMUM FREQUENCY	
1	ACTIVE PERIOD	DAILY WHEN STORMWATER RUNOFF, INCLUDING RUNOFF FROM SNOWMELT, IS OCCURRING. EVERY 2 WEEKS IN DRY CONDITIONS.	
2	PRIOR TO THE SITE BECOMING INACTIVE OR IN ANTICIPATION OF SITE INACCESSIBILITY.	ONCE TO ENSURE THAT EROSION AND SEDIMENT CONTROL MEASURES ARE IN WORKING ORDER. ANY NECESSARY MAINTENANCE AND REPAIR MUST BE MADE PRIOR TO LEAVING THE SITE.	
3	INACTIVE PERIODS GREATER THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS.	ONCE EVERY TWO (2) WEEKS AND AFTER STORMS TOTALING 0.25 INCH OR MORE.	
4	PERIODS DURING WHICH THE SITE IS ACCESSIBLE DUE TO INCLEMENT WEATHER.	IF PRACTICAL, INSPECTIONS MUST OCCUR DAILY AT A RELEVANT AND ACCESSIBLE DISCHARGE POINT OR DOWNSTREAM LOCATION.	

\* HOLD A PRE-CON MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE EC INSPECTOR.  
\* ALL INSPECTIONS MUST BE MADE IN ACCORDANCE WITH DEQ 1200 C PERMIT REQUIREMENTS.  
\* INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ 1200 C PERMIT REQUIREMENTS.  
\* CHANGES TO THE APPROVED ESC PLAN MUST BE SUBMITTED TO DEQ IN THE FORM OF AN ACTION PLAN.

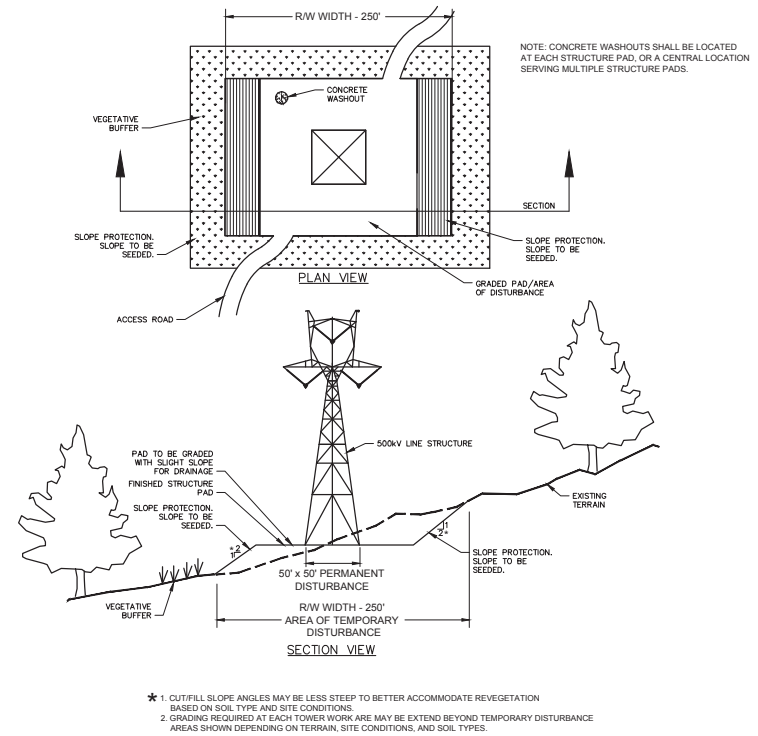
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0	B2H EROSION AND SEDIMENT CONTROL PLANS - DRAFT	10-10-11	DKR	KTM	CAH							DESIGNER: KTM	10-10-11	BOARDMAN TO HEMINGWAY 500KV LINE #XXX EROSION AND SEDIMENT CONTROL PLANS	DRAWING #: TITLE SHEET VAULT #: 23D-00000-00 SHEET #: 1 OF 5
1	REVISE	11-22-11	DKR	KTM	KTM							DRAFTER: CAH	10-10-11		
2	REVISED FOR DRAFT 1200-C APPLICATION	3-30-12			KHK							C.E.G. DKR	10-10-11		
												SCALE: NTS	HORZ.		
													VERT.		

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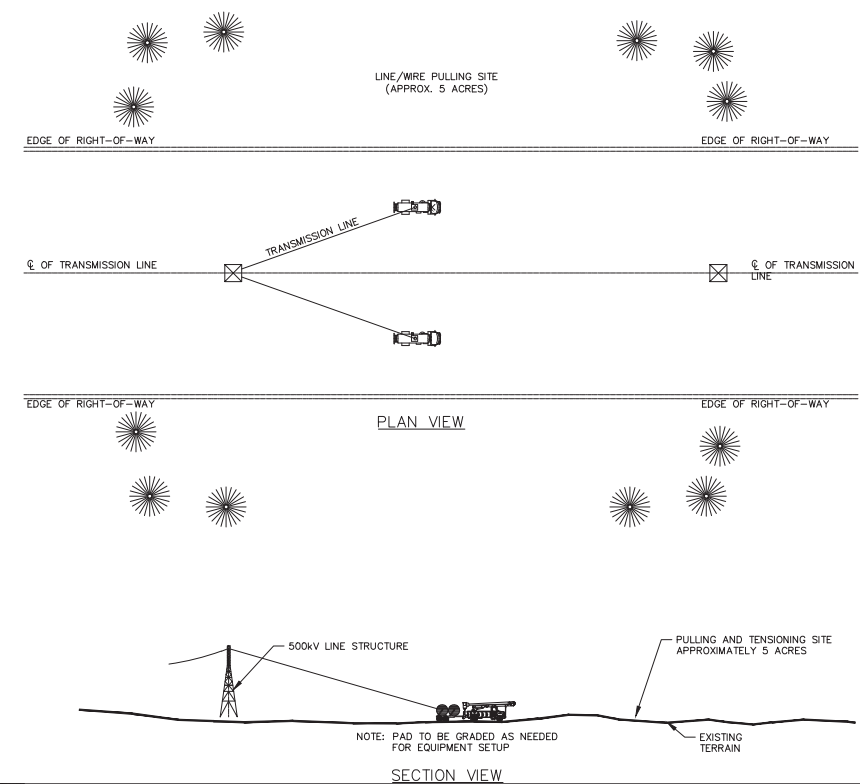








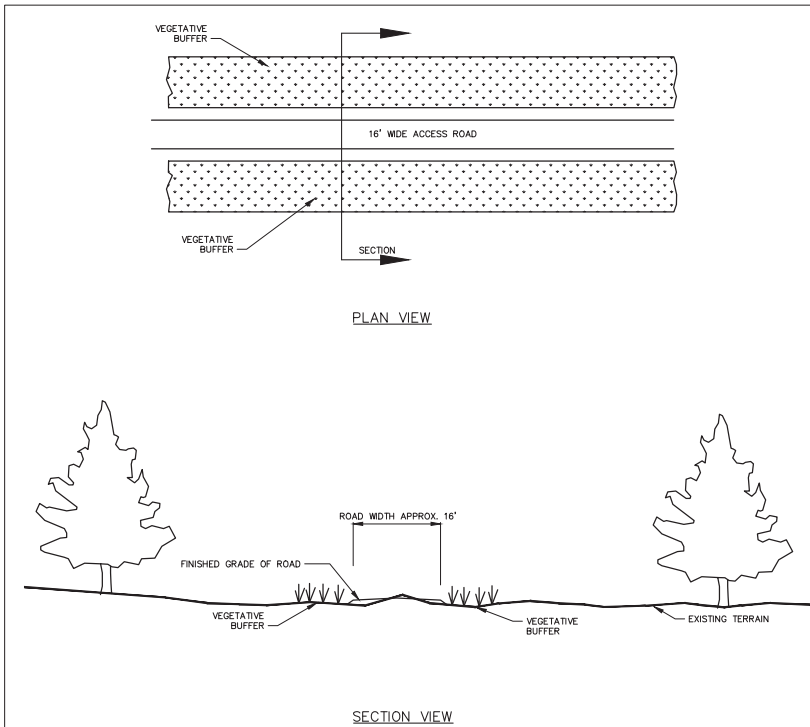
5  
4 TYPICAL STRUCTURE SITE-ALTERNATE 4



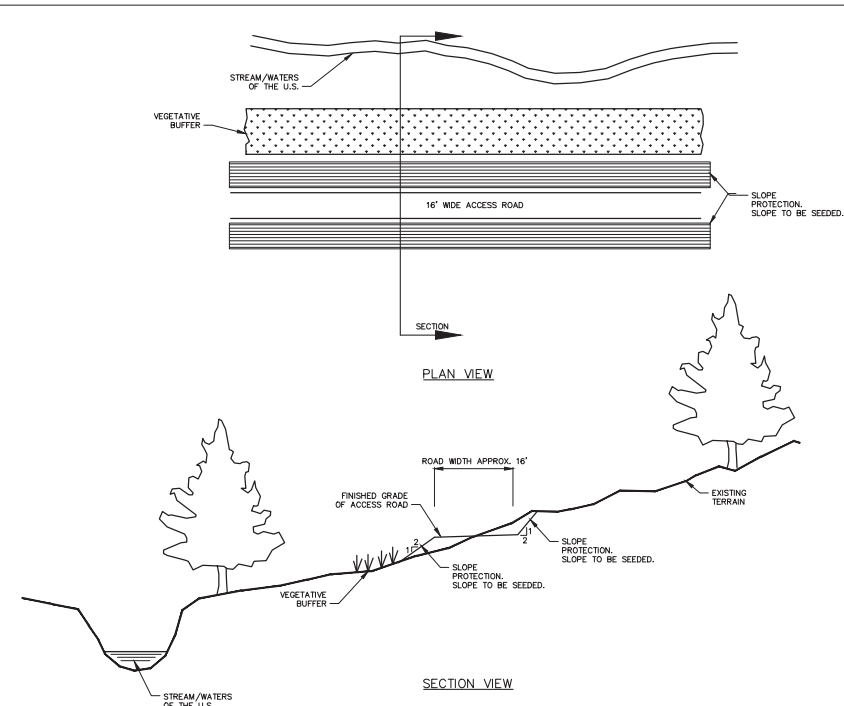
6  
4 PULLING AND TENSIONING SITE

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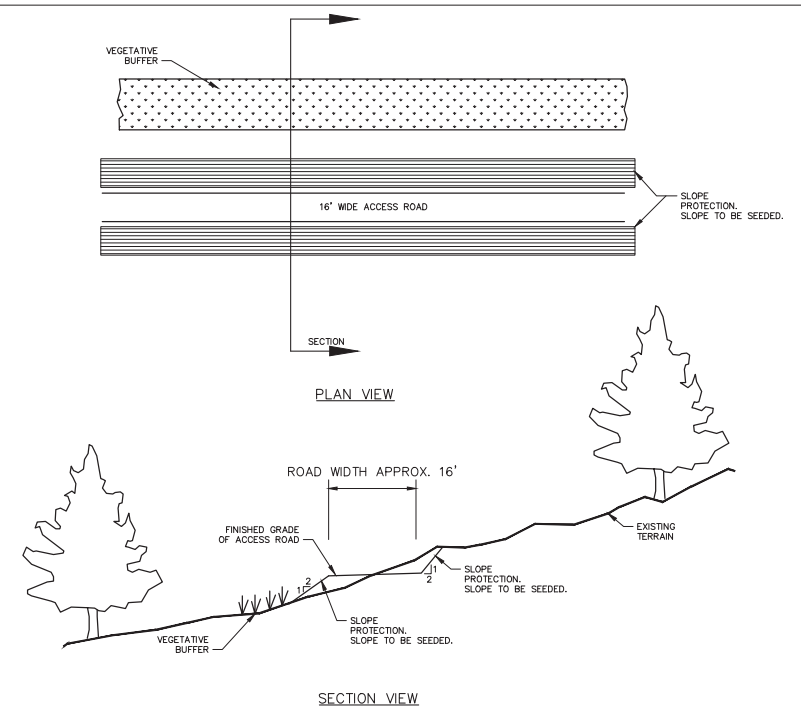
# PRELIMINARY



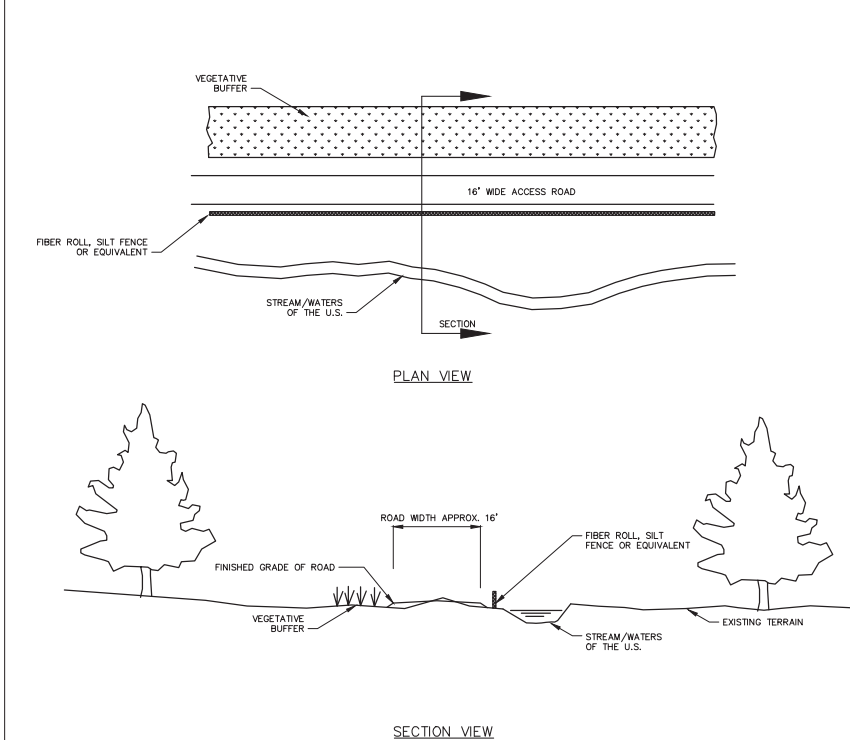
## 1/5 TYPICAL ACCESS ROAD INSTALLATION



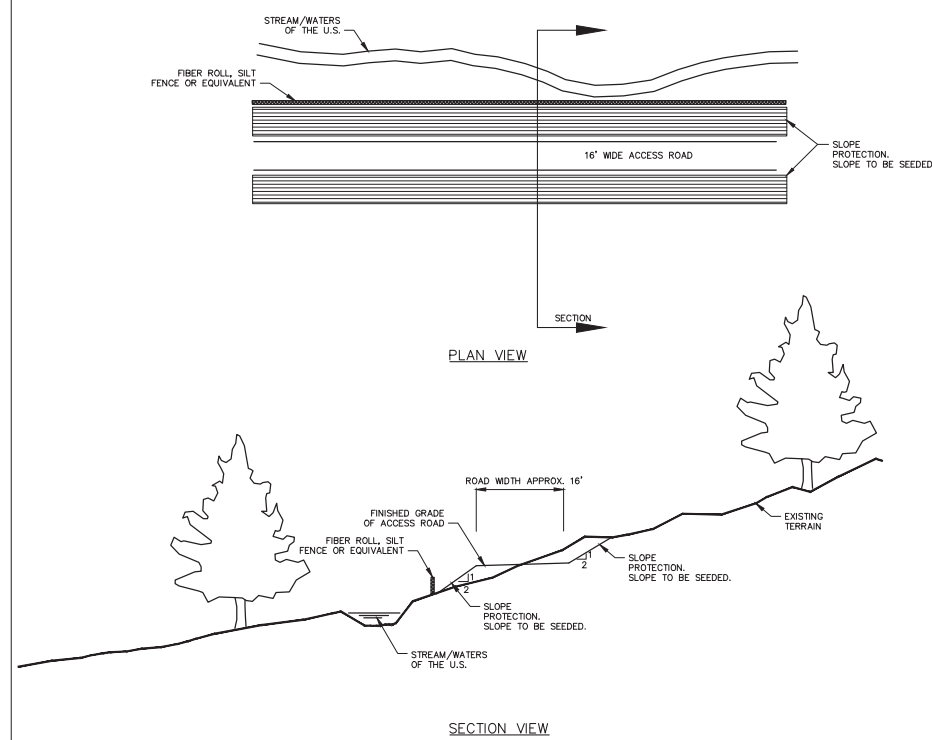
**3**  
**5** TYPICAL ACCESS ROAD INSTALLATION-ALTERNATE 2



**5** TYPICAL ACCESS ROAD INSTALLATION-ALTERNATE 4



**2**  
**5** TYPICAL ACCESS ROAD INSTALLATION-ALTERNATE 1



**4**  
**5** TYPICAL ACCESS ROAD INSTALLATION-ALTERNATE 3

## WATERBAR INSTALLATION FREQUENCY

SLOPE (%)	SPACING (FT)
<5%	125
5 TO 10	100
10 TO 20	75
20 TO 35	50
>35	25

# PRELIMINARY

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	0	BZH EROSION AND SEDIMENT CONTROL PLANS – DRAFT	10-10-11	DKR	KTM	CAH							DESIGNER: KTM	10-10-11		DRAWING #: DETAILS C VAULT #: 23D-00000-00 SHEET #: 5 OF 5	
	1	REVISE	11-22-11	DKR	KTM	KTM							DRAFTER: CAH	10-10-11			
													C.E.G. DKR	10-10-11			
													SCALE: NTS	HORZ.			
														VERT.			

## Attachment J-1

### Draft Removal-Fill Compensatory Wetland Non- Wetland Mitigation Plan

**Attachment J-1: Draft Removal-Fill Compensatory Wetland and Non-Wetland  
Mitigation Plan**

# **Boardman to Hemingway Transmission Line Project Compensatory Wetland and Non-Wetland Mitigation Plan**

*Prepared for:*



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April 2018

## TABLE OF CONTENTS

1.0	COMPENSATORY WETLAND AND NON-WETLAND MITIGATION PLAN OVERVIEW .....	1
1.1	Introduction and Background .....	1
1.2	Description of Compensatory Wetland and Non-Wetland Mitigation Plan .....	1
1.3	Ecological Goals and Objectives.....	1
1.4	Summary of Impacts and Mitigation.....	3
1.4.1	Summary of Wetland Impacts and Mitigation .....	3
1.4.2	Summary of Non-Wetland Impacts and Mitigation.....	4
1.5	Summary of Functions and Values Gains and Losses .....	5
1.5.1	Summary of Wetland Functions and Values Gains and Losses.....	5
1.5.2	Summary of Non-Wetland Functions and Values Gains and Losses .....	6
2.0	COMPENSATORY WETLAND AND NON-WETLAND MITIGATION SITE INFORMATION .....	6
2.1	Site Landowner Information .....	6
2.2	Physical Location Information .....	7
3.0	DESCRIPTION OF HOW THE CWNWMP ADDRESSES THE PRINCIPAL OBJECTIVES .....	7
3.1	Functions and Values Replacement .....	7
3.1.1	Wetland Function and Value Replacement.....	7
3.1.2	Non-Wetland Function and Value Replacement.....	7
3.2	Local Replacement of Locally Important Functions and Values .....	8
3.3	Self-Sustaining/Minimum Maintenance Needs.....	8
3.3.1	Wetland Self-Sustaining/Minimum Maintenance Needs .....	8
3.3.2	Non-Wetland Self-Sustaining/Minimum Maintenance Needs.....	8
3.4	Siting Considerations.....	8
3.5	Minimize Temporal Loss .....	9
4.0	COMPENSATORY WETLAND AND NON-WETLAND MITIGATION SITE EXISTING CONDITIONS .....	9
4.1	Wetland Delineation or Determination Results.....	9
4.2	Existing HGM and Cowardin Classes On-Site .....	9
4.3	Description of Existing and Proposed Hydrology .....	9
4.4	Existing Site Conditions .....	10
4.4.1	Existing Plant Communities.....	10
4.4.2	Existing Aquatic Communities .....	10
4.5	Site Constraints or Limitations .....	12
5.0	FUNCTIONS AND VALUES ASSESSMENT .....	12
5.1	Rationale for Method Used in Wetland Assessment .....	12
5.2	Summary of Expected Wetland Functions and Values Gains and Losses .....	12
5.3	Rationale for Method Used in Non-Wetland Assessment.....	14
5.4	Summary of Expected Non-Wetland Gains and Losses.....	14
5.5	Considerations to Address Expected Wetland and Non-Wetland Losses.....	15
6.0	COMPENSATORY WETLAND AND NON-WETLAND MITIGATION CONSTRUCTION MAPS AND DRAWINGS.....	15
6.1	Grading Plan Objectives .....	15
6.2	Planting List and Rationale .....	15

6.3	Construction Schedule.....	15
7.0	MONITORING PLAN.....	16
7.1	Proposed Performance Standards.....	16
7.2	Monitoring Methods.....	16
7.3	Monitoring Schedule.....	17
7.4	Rationale for Plot and Photo-Documentation Locations.....	17
8.0	LONG-TERM PROTECTION AND FINANCIAL SECURITY INSTRUMENTS.....	17
8.1	Description of Proposed Protection Instrument.....	17
8.2	Description of Proposed Financial Security Instruments.....	18
8.3	Long-Term Maintenance Plan.....	18
8.3.1	Noxious Weed and Invasive Species Management.....	18
8.3.2	Compatible Uses/Protection.....	18
8.3.3	Maintenance and Monitoring.....	19
8.4	Contingency Plan.....	19
8.4.1	Possible Modes of Failure.....	19

## TABLES

Table 1.	Wetland and Non-Wetland Mitigation Goals and Objectives.....	2
Table 2.	Wetland Mitigation Summary.....	4
Table 3.	Non-Wetland Mitigation Summary.....	5
Table 4.	Summary of Existing Non-Wetland Attributes, Functions, and Status.....	11
Table 5.	Representative ORWAP Wetland ID.....	12
Table 6.	Summary of Expected Wetland Functions and Values Gains and Losses.....	13
Table 7.	Summary of Permanent Non-Wetland Impact and Mitigation.....	14
Table 8.	Sample Plot Summary.....	17

## FIGURES

Figure 1.	Location and Vicinity Maps
Figure 2.	Tax Lot Map
Figure 3.	Aerial photograph
Figure 4.	Site Photographs
Figure 5.	Oregon Rapid Wetland Assessment Protocol Sites Location Map

## APPENDICES

Appendix A	Wetland and Non-Wetland Impacts Summary
Appendix B	Project Plan Sheets
Appendix C	Oregon Rapid Wetland Assessment Protocol Data Sheets
Appendix D	Draft Functional Assessment of Impacted Streams
Appendix E	Lease Agreement



## ACRONYMS

ASC	Application for Site Certificate
CWNWMP	Compensatory Wetland and Non-Wetland Mitigation Plan
DSL	Oregon Department of State Lands
ESA	Endangered Species Act
GRMW	Grande Ronde Model Watershed
HGM	hydrogeomorphic
HMS	Hassinger Mitigation Site
HUC	Hydrologic Unit Code
IPC	Idaho Power Company
JPA	Joint Permit Application
ODOE	Oregon Department of Energy
ORWAP	Oregon Rapid Wetland Assessment Protocol
PEM	Palustrine Emergent
PFO	Palustrine Forested
PSS	Palustrine Scrub-Shrub
Project	Boardman to Hemingway Transmission Line Project
USACE	U.S. Army Corps of Engineers

## **1.0 COMPENSATORY WETLAND AND NON-WETLAND MITIGATION PLAN OVERVIEW**

### **1.1 Introduction and Background**

Idaho Power Company (IPC) proposes to construct the Boardman to Hemingway Transmission Line Project (Project). In Oregon, Project will extend 296.6 miles from near Boardman, in Morrow County, Oregon, to the vicinity of the City of Nyssa, in Malheur County, Idaho. The Oregon portion of the Project is 270.8 miles in length. As described in detail in IPC's Application for Site Certificate (ASC) to the Oregon Energy Facility Siting Council, IPC anticipates small-scale wetland and non-wetland impacts from the Project across various wetland and waterway types, and in a number of hydrologic units. IPC is preparing a Joint Permit Application (JPA) for submission to the Oregon Department of State Lands (DSL) and the U.S. Army Corps of Engineers (USACE) to obtain removal/fill permits for impacts to wetland and non-wetland features associated with the Project.

The Project is anticipated to permanently impact approximately 0.538 acres of wetlands at 32 locations, and 5,914 linear feet (0.72 acres) of stream frontage at 175 locations. A summary of the wetland and non-wetland impact sites is provided in Appendix A.

See Figure 1, Location and Vicinity Maps; Figure 2, Tax Lot Map; Figure 3, Aerial Photograph; Figure 4, Site Photographs; and Figure 5, Oregon Rapid Wetland Assessment Protocol (ORWAP) Sites Location Map.

### **1.2 Description of Compensatory Wetland and Non-Wetland Mitigation Plan**

The purpose of this Compensatory Wetland and Non-Wetland Mitigation Plan (CWNWMP) is to provide mitigation for wetland and non-wetland impacts, which will occur at various sites along the Project's Proposed Route, through the creation of similar functioning wetlands and enhancement of existing wetlands at a single mitigation site in Union County, Oregon, referred to as the Hassinger Mitigation Site (HMS). A portion of the HMS area will be graded to increase hydrologic connectivity with Catherine Creek, covered with topsoil, seeded, and planted with native wetland species such as grasses, sedges, rushes, and woody wetland/riparian species adapted to site physical properties, soils, and hydrologic conditions.

Non-wetland habitat will be enhanced by constructing a high flow side channel between Catherine Creek and the existing oxbow located adjacent to the new wetlands, and by installing wood habitat structures in the oxbow. The side channel will allow for increased flow into the oxbow and will provide an off-channel velocity refuge during high flows, while the woody material structures will create additional fish habitat. The entire 8.54 acres will be protected from grazing and farming under a conservation easement.

### **1.3 Ecological Goals and Objectives**

The HMS encompasses approximately 8.54 acres adjacent to Catherine Creek in Union County, Oregon (see Figure 1, Location and Vicinity Maps). The HMS will involve creation of approximately 4.76 acres of seasonally flooded wetland habitat immediately adjacent to 1,080 linear feet of Catherine Creek, enhancement of 1.51 acres of existing wetland habitat, and construction of 810 linear feet of side channel that will provide an additional intermittent connection between Catherine Creek and the oxbow. Four woody debris structures will be

strategically located and constructed along approximately 432 feet of the existing oxbow to provide instream fish habitat.

The HMS will increase local wetland and non-wetland habitat, giving 3.66 acres of wetland mitigation credit and 2,322 linear feet (0.90 acres) of stream mitigation credit. These habitats are critical to many wetland and freshwater aquatic species, including Endangered Species Act (ESA)-listed spring Chinook salmon, summer steelhead, and bull trout that utilize the channel at various stages of their life cycles. Juvenile Chinook salmon and steelhead utilize Catherine Creek reaches for overwintering habitat where the HMS is located. Overwintering habitat has been identified in the *Draft Northeast Oregon Management Unit Plan for Spring/Summer Chinook and Steelhead Recovery Plan (2010)* as a habitat limitation. Due to their low survival rates during the winter months, overwintering habitat for juvenile Chinook salmon in Catherine Creek has recently become a high priority for the Grande Ronde Model Watershed (GRMW), which coordinates habitat restoration projects on both public and private lands within the Grande Ronde Basin. The reach of Catherine Creek for the HMS is also a migratory corridor for juvenile and adult fish of all three ESA-listed fish species.

The HMS will provide backwater and rearing habitat for aquatic species, an off-channel velocity refuge, and critical wetland habitat for a variety of bird species that utilize wetland habitat for breeding, rearing, nesting, and migratory rest stops. Local aquatic and terrestrial biodiversity will increase, improving resilience of the local ecosystem in response to disturbance (e.g., invasive species).

Ecological goals and objectives are categorized as wetland or non-wetland, and are summarized on Table 1.

**Table 1. Wetland and Non-Wetland Mitigation Goals and Objectives**

Component	Goal(s)	Objectives
Wetland	Create at least 4.76 acres of wetland and enhance approximately 1.45 acres of wetland at the HMS to replace lost functions and values of impacted wetlands.	Create a channel between Catherine Creek and the oxbow through the HMS to provide hydrologic connection at 1.5-year flow events and greater.
		Excavate the HMS to the specified grade of the engineered site design to increase floodplain connectivity.
		Plant the HMS with a wetland seed mix and wetland shrub and tree species to mitigate erosion, enhance sediment trapping, provide future recruitment of large wood and cover, and provide shading to reduce stream temperature.
Non-Wetland	1) Increase fish habitat.	Create a channel through the HMS connecting Catherine Creek and the oxbow, providing a high flow refuge for juvenile fish.
	2) Reduce stream temperature at or near the HMS.	Install four large wood structures in the oxbow to increase habitat complexity.
	3) Mitigate sedimentation of Catherine Creek.	Plant the HMS with a wetland seed mix and wetland shrub and tree species to mitigate erosion, enhance sediment trapping, provide future recruitment of large wood and cover, and provide shading to reduce stream temperature. This is also anticipated to increase volume and duration of cool water release during low flow periods typically observed during the late summer season, mitigating warmer stream temperatures.

## **1.4 Summary of Impacts and Mitigation**

This section summarizes the anticipated impacts to wetland and non-wetland resources occurring from construction and operation of the Project. Impacts associated with the Project will also be described in the JPA. Wetland mitigation associated with this CWNWMP is intended to meet federal and state regulatory requirements developed under the guidance of the DSL. As stated in *Chapter 8: Compensatory Mitigation for Wetlands and Tidal Waters of DSL's Guide to the Removal/ Fill Permit Process*, DSL rules and regulations meet USACE standards for wetland mitigation, which are based on the 2008 federal mitigation rule (33 Code of Federal Regulations). Oregon's stream mitigation regulations are currently under development by the USACE, U.S. Environmental Protection Agency, and Willamette Partnership. Non-wetland mitigation associated with this CWNWMP is intended to meet the DSL's interim draft guidance standards for stream mitigation.

### **1.4.1 Summary of Wetland Impacts and Mitigation**

The Project is anticipated to permanently impact approximately 0.538 acres of wetland habitat, encompassing 32 different sites ranging in size from approximately 0.001 acres to approximately 0.15 acres, averaging approximately 0.015 acres per site, thus requiring compensatory mitigation of this impact by creation, enhancement, and/or restoration of wetland habitat at another location (see Appendix A for impacted wetland data). Temporary wetland impacts associated with the Project are anticipated to be rectified within 24 months from the initial impact date and, therefore, are presumed not to require mitigation.

To mitigate for permanent impacts, approximately 6.21 total acres of wetlands will be created and enhanced adjacent to Catherine Creek in the Grande Ronde Basin of Union County, Oregon. This total will consist of creation of approximately 0.57 acres of Palustrine Forested (PFO), 1.69 acres of Palustrine Scrub-Shrub (PSS), and 2.50 acres of Palustrine Emergent (PEM) wetlands, and enhancement of approximately 1.45 acres of existing PEM wetland. Additionally, the construction of a side-channel between Catherine Creek and the oxbow will improve hydrologic connectivity, and the removal of invasive species is anticipated to improve the wetlands. Utilizing DSL's compensatory wetland mitigation ratios for created and enhanced wetlands, the combined acreages equate to 3.66 acres of wetland mitigation credit. Table 2 summarizes impacted wetland site acreages by hydrogeomorphic (HGM) and Cowardin classifications, along with mitigation acreages and credits.

Currently, the existing wetlands within the HMS have an over-abundance of weedy species such as reed canarygrass (*Phalaris arundinacea*), and a decreased presence of woody species. Establishment of surface flow hydrologic processes will reverse degraded hydrology and allow self-sustaining recruitment of native woody species at the site. These processes, in combination with invasive species removal and control measures, as well as planting and seeding of native wetland stock, will enhance the site by increasing wetland functions and values (see Section 6.0 for a functions and values assessment).

**Table 2. Wetland Mitigation Summary**

Site	Permanent Impact			Mitigation					
	Cowardin	HGM	Acres	Mitigation Method	Cowardin	HGM	Acres	Mitigation Ratio	Credits Gained
Impact Sites	PABFh	Unknown	0.029						
	PUSCh	Unknown	0.016						
		Unknown	0.049						
		RFT	0.016						
		Slope	0.162						
		Unknown	0.049						
	PEMA	Unknown	0.020						
	PEMB	Slope	0.029						
		Unknown	0.005						
	PEMC	Unknown	0.156						
	PEMFh	Depressional	0.004						
	PEMKx	Unknown	0.007						
	PFOA	Unknown	0.034*						
	PFOC	Unknown	0.011*						
HMS				create	PEM	RI	2.50	1.5:1	1.67
					PSS	RFT	1.69	1.5:1	1.13
					PFO	RFT	0.57	1.5:1	0.38
				enhance	PEM	RI	1.45	3:1	0.48
Total			0.538				6.21		3.66

PABFh = Palustrine Aquatic Bed, Semipermanently Flooded, Diked/Impounded

PEM=Palustrine Emergent

PEMA=Palustrine Emergent, Temporarily Flooded

PEMB=Palustrine Emergent, Saturated

PEMC=Palustrine Emergent, Seasonally Flooded

PEMKx=Palustrine Emergent, Artificially Flooded, Excavated

PFOA=Palustrine Forested, Temporarily Flooded

PFOC=Palustrine Forested, Seasonally Flooded

PSS=Palustrine Scrub-Shrub

PUSCh = Palustrine Unconsolidated Shoreline, Seasonally Flooded, Diked/Impounded

RFT = Riverine Flow-Through

RI = Riverine Impounding

\*Note, PFO wetland impact acreages are based on NWI mapping for two sites that have not been delineated on the ground. Based on desktop analysis, it is likely that these sites do not contain PFO wetlands, and that they will not be impacted.

#### 1.4.2 Summary of Non-Wetland Impacts and Mitigation

The Project construction and implementation is anticipated to permanently impact approximately 5,914 linear feet (0.72 acres) of stream habitat at 175 sites throughout the entire project corridor and associated transmission line access infrastructure (see Appendix A for impacted stream data).

To mitigate for these anticipated impacts, the HMS will incorporate in-stream aquatic habitat improvements along approximately 432 linear feet of stream channel within the oxbow at the

project site to create additional fish habitat, riparian planting along approximately 1,080 feet of Catherine Creek, and a high flow side channel (810 linear feet, 0.19 acres) will be constructed between Catherine Creek and the oxbow.

Table 3 provides a summary of permanently impacted non-wetland sites, and Appendix A provides specific site summary information for non-wetland impacts.

**Table 3. Non-Wetland Mitigation Summary**

Site	Permanent Impact				Mitigation			
	Stream Type	Number of Sites	Acres	Linear Feet	Stream Type		Acres <sup>1</sup>	Linear Feet
Project	Ephemeral	39	0.09	1402.48				
	Intermittent	111	0.47	3516.49				
	Perennial	25	0.16	994.95				
HMS					Intermittent		0.19	810
					Perennial	In-stream	0.71	432
						Riparian	n/a	1,080
Total		175	0.72	5914			0.90	2,322

<sup>1</sup> Assumed width of 10 feet for created intermittent side channel

The side channel will allow for increased connectivity between Catherine Creek, the oxbow, and the wetlands, as well as providing an off-channel velocity refuge for fish during high flows. The engineered log jams will be constructed of appropriately sized trees along with other woody debris, and will be designed to withstand flood flow events. The structures will protrude into the channel and create cover for fish from predators and will act as a food supply for fish by providing an environment in which macroinvertebrates can thrive. Trees will be pinned together and anchored with ballast rocks to ensure stability (see Plan Sheets in Appendix B for further details).

In addition to the direct physical improvements of in-stream habitat, the forested/scrub-shrub wetlands paralleling approximately 1,080 linear feet of Catherine Creek and the oxbow will improve the existing riparian habitat and provide additional shading and terrestrial nutrient inputs to the aquatic system.

These habitat improvements will provide essential habitat for ESA-listed spring Chinook salmon, summer steelhead, and bull trout. Adults and/or juveniles of all three species utilize the Catherine Creek system for spawning, overwintering habitat, and as a migratory corridor.

## 1.5 Summary of Functions and Values Gains and Losses

This section summarizes the function and value gains and losses anticipated for both wetland and non-wetland components of the Project construction and operation.

### 1.5.1 Summary of Wetland Functions and Values Gains and Losses

The project traverses four Hydrologic Unit Code (HUC) 6 basins, each having ORWAP data collected at a representative impacted wetland site. The HMS was also evaluated using ORWAP (see Appendix C). There will be a loss of wetland functions and values as a result of the proposed construction of the Project, with these losses offset by the anticipated gain in functions and values from the HMS.

The anticipated outcome of the HMS is to have no net loss of wetland function as a result of the proposed construction. The impacted sites total approximately 0.538 acres of wetland and 5,914

linear feet (0.72 acres) of non-wetland. The HMS provides approximately 3.66 acres of wetland mitigation credit and 2,322 linear feet (0.90 acres) of stream mitigation credit. For details of each attribute's function and value, please see Section 5.0.

### **1.5.2 Summary of Non-Wetland Functions and Values Gains and Losses**

There will be a loss of stream functions and values as a result of the proposed construction of the Project, with these losses offset by the anticipated gain in functions and values from the HMS. A draft functional assessment of streams proposed for permanent impacts is included in Appendix D. The anticipated outcome of the HMS is to have no net loss of stream function as a result of the proposed construction.

Stream function at the HMS is anticipated to be improved over the existing condition and provide a net gain in function on a regional scale. This improvement and gain is anticipated to be achieved by the following:

- Improved in-stream habitat, specifically benefiting ESA-listed spring Chinook salmon, summer steelhead, and bull trout.
- Improved hydrologic function of Catherine Creek with reconnection of the stream and floodplain, improved sediment trapping, surface water filtration, and riparian/wetland species recruitment to the site.
- Mitigation of sedimentation due to enhancement and creation of forested and scrub-shrub wetlands, thereby improving riparian function and bank stability.
- Improved thermal regulation of the stream channel due to increased channel shading provided from wetland tree and shrub species.

The Project traverses four HUC 6 basins and benefits of the above-listed functions are anticipated to be of greater ecological value than what would be produced with comparatively small, spatially isolated stream improvement projects completed over the large landscape of eastern Oregon. Stream values, such as the ecological benefit to ESA-listed spring Chinook salmon, summer steelhead, and bull trout, are also anticipated to increase. Again, values of the overall stream mitigation are likely to be greater than the net change in value associated with relatively small, isolated stream improvement and restoration projects. Additionally, since anadromous fish species do not occur in many of the impacted streams, the HMS is anticipated to provide a substantial net gain in both function and value of the non-wetland component for the region as a whole.

## **2.0 COMPENSATORY WETLAND AND NON-WETLAND MITIGATION SITE INFORMATION**

### **2.1 Site Landowner Information**

The HMS is located on Tax Lot 3200 of Township 2 South, Range 40 East, Section 19 NW/SW in Union County, Oregon, (see Figure 1, Location and Vicinity Maps, and Figure 2, Tax Lot Map). Landowner information is as follows:

Owner: John and Trudy Hassinger  
68333 Kerns Loop  
Cove, Oregon 97824  
Phone: (541) 975-5600

IPC will enter into a long-term (perpetual) lease with the owner for the use of the property as part of IPC's long-term maintenance plan (see Section 9.3). Based on a cooperative agreement, GRMW or another non-profit or non-governmental organization will be responsible for operation of the site and maintenance of the mitigation area. Contact information for IPC is as follows:

Contact: Zach Funkhouser  
Phone: 208-388-5375  
Fax: 208-388-6902  
E-mail: zfunkhouser@idahopower.com

## **2.2 Physical Location Information**

The HMS is located approximately 6.5 miles east of Oregon State Route 82, and 0.8 mile north of Booth Lane. The legal description is Township 2 South, Range 40 East, Section 19 NW/SW, in Tax Lot 3200. The center of the mitigation wetland is latitude 45.3775 and longitude -117.8878. Location and vicinity maps are shown on Figure 1, and an aerial photo of the proposed project site is shown on Figure 3.

## **3.0 DESCRIPTION OF HOW THE CWNWMP ADDRESSES THE PRINCIPAL OBJECTIVES**

### **3.1 Functions and Values Replacement**

The HMS will provide similar functions and values as the impacted wetlands and provide critically valuable habitat for ESA-listed spring Chinook salmon, summer steelhead, and bull trout. This section describes the replacement of impacted wetlands and non-wetland functions and values with the construction of the HMS.

#### **3.1.1 Wetland Function and Value Replacement**

The impacted wetlands are classified in the Cowardin system as Palustrine (Emergent, , Forested, Aquatic Bed, and Unconsolidated Shore) and in the HGM system as Depressional, Riverine, Slope, and unknown. Refer to Table 2 in Section 1 for a summary of specific impact site classifications and acreages.

The functions and values of the HMS are anticipated to be generally similar to the impacted areas, as the proposed created and enhanced wetlands at the HMS will be Palustrine (PES, PSS, and PFO), and Riverine. Refer to Table 2 for HMS wetland type and acreage summaries. The hydrologic regime under the proposed CWNWMP is anticipated to produce a period of inundation of at least 14 days, occurring approximately between April and June, during high flow and water table periods typically observed in early spring during the growing season.

#### **3.1.2 Non-Wetland Function and Value Replacement**

A total of 175 stream sites will be permanently impacted by the Project construction. Of these, 39 are ephemeral (0.09 acre, 1,402.48 linear feet), 111 are intermittent (0.47 acre, 3,516.49 linear feet), and 25 are perennial (0.16 acre, 994.95 linear feet), for a total impact of approximately 0.72 acres and 5914 linear feet.

The HMS will provide approximately 0.90 acres and 2,322 linear feet of stream mitigation to Catherine Creek, which is a perennial anadromous fish-bearing stream and a major tributary of the Grande Ronde River. ESA-listed spring Chinook salmon, summer steelhead, and bull trout are known to inhabit this stream system.



### **3.2 Local Replacement of Locally Important Functions and Values**

While the mitigation site is not located at the site of the wetland and non-wetland impacts, it is expected that improvements to stream habitat and wetland function of the HMS will provide greater benefit to the region in terms of overall watershed and stream health.

By consolidating the mitigation features into one larger site, the overall gain in value for the proposed wetland and non-wetland mitigation is likely to be greater than the net change in value that would occur with individual, relatively small and isolated mitigation projects along the Project alignment. Additionally, anadromous fish species do not occur in some of the impacted streams; thus, the HMS is anticipated to provide a substantial net gain for the region, in both function and value of the non-wetland component.

### **3.3 Self-Sustaining/Minimum Maintenance Needs**

This section describes the maintenance needs and requirements of wetland and non-wetland CWNWMP components.

#### **3.3.1 Wetland Self-Sustaining/Minimum Maintenance Needs**

The HMS will receive water input that currently sustains the existing wetlands; it will be graded so it will receive adequate surface and subsurface water to be self-sustaining. Additionally, the excavated channel between Catherine Creek and the oxbow through the HMS will provide a hydrologic connection at 1.5-year flow events and greater, providing for natural wetland vegetation recruitment and appropriate hydrology (seasonal flooding) for the created wetland types at the HMS during seasonal high flow events. Future maintenance needs may include periodic weed control.

#### **3.3.2 Non-Wetland Self-Sustaining/Minimum Maintenance Needs**

Stream and aquatic habitat improvements will require no maintenance, as the woody debris structures are designed to be maintenance-free and long-lasting. The excavated channel between Catherine Creek and the oxbow through the HMS will also be maintenance-free and will re-establish surface hydrologic connectivity that will provide for natural riparian vegetation recruitment. Future maintenance needs may include periodic weed control.

### **3.4 Siting Considerations**

The HMS has been sited and designed to maximize stream and wetland processes, functions, and existing ecological enhancement to the extent possible at a comparatively large mitigation site relative to impact sites.

IPC explored several mitigation options available to them, including an 80-acre parcel located in the Middle Snake HUC 4 watershed, a parcel located in Baker County, Oregon, and multiple restoration opportunities with the GRMW in the Upper Grande Ronde River Subbasin. The 80-acre parcel located in the Middle Snake HUC 4 watershed had potential as a floodplain restoration and water quality improvement project. The Baker County parcel is located in the Lower Snake HUC 4 watershed near Baker City, Oregon. Both of these properties are privately owned and mitigation plan development would lack the needed guidance of watershed scale needs, planning, and project implementation experience, such as that provided by an organization like the GRMW. In addition, neither site would provide benefit for ESA-listed fish species due to their location upstream of the Oxbow Dam on the Snake River. The Oxbow Dam blocks migration corridors historically utilized by native ESA-listed fish species.

The GRMW began coordinating restoration projects in 1994 within the Grande Ronde Basin. Projects have addressed nearly every component of watershed health including water quality, water quantity, in-stream habitat complexity, riparian condition, streambank stability, and fish passage. With this valuable resource available to aid in project planning, implementation, and management, IPC selected one of several mitigation project options through the GRMW. The preferred alternative was selected based on stream habitat and water quality enhancement potential and cost/benefit returns. This site provides ample mitigation opportunities for both wetland and non-wetland impacts associated with the construction of the Project and it will be implemented and managed with local watershed knowledge and experience provided by the GRMW.

### **3.5 Minimize Temporal Loss**

The mitigation area is anticipated to be created prior to or concurrently with construction of the Project, thereby, minimizing temporal loss of wetlands as a result of the project.

Within the HMS, impacts to existing wetlands that are to remain undisturbed will be minimized by marking existing wetland boundaries to limit equipment intrusion during excavation of created and enhanced wetlands. If existing wetlands outside the creation/enhancement mitigation area are temporarily disturbed, they will be restored by returning them to original contours and reseeded.

Construction of the wood habitat structures will occur prior to the creation and enhancement of the wetlands, and live stakes will be planted within the structures to restore the disturbed PSS wetland. No long-term adverse impacts are anticipated to the existing wetlands in the vicinity of the wood habitat structures.

## **4.0 COMPENSATORY WETLAND AND NON-WETLAND MITIGATION SITE EXISTING CONDITIONS**

### **4.1 Wetland Delineation or Determination Results**

Wetland delineations were conducted on the HMS on August 27 and 28, 2015, and October 21, 2015. A draft wetland delineation report describing 11 wetlands totaling 2.79 acres, and two waterways (Catherine Creek and an oxbow), was prepared on October 13, 2016. This final wetland delineation report was submitted in 2017 to the DSL for review. DSL issued a letter of concurrence dated November 1, 2017, regarding the findings of the 2015 wetland delineation.

### **4.2 Existing HGM and Cowardin Classes On-Site**

There are 11 existing wetlands in the wetland delineation study area, classified as PEM and PSS using the Cowardin classification system, and Depressional and Riverine using the HGM classification system.

Photographs of existing site conditions are shown on Figure 4.

### **4.3 Description of Existing and Proposed Hydrology**

The existing site receives hydrologic input from Catherine Creek as well as from precipitation. The site is currently inundated at approximately the 2-year flood event when the water over-tops the banks of Catherine Creek. Catherine Creek parallels the north edge of the site, running generally east before turning south into the oxbow that parallels the east edge of the site. The proposed wetland mitigation area is on the south side of Catherine Creek and west of the

oxbow. Catherine Creek is a perennial stream and a main tributary of the Grande Ronde River in the Upper Grande Ronde Subbasin, providing year-round surface flow and seasonal flooding potential, conducive to wetland habitat construction and restoration.

The HMS will enhance the hydrologic regime, as the site will have direct connection to the main creek channel during periods of high flow. A portion of the HMS area will be graded to create hydrologic connectivity through the site, and a high flow side channel between Catherine Creek and the existing oxbow will be constructed. The side channel will allow for increased flow into the oxbow and will provide an off-channel velocity refuge during high flows. The HMS will be graded to elevations similar to the existing wetlands on site to produce a wetland hydrologic regime for the newly created wetlands. The hydrologic regime under the proposed CWNWMP is anticipated to produce a period of inundation, on average, of at least 14 days, occurring approximately between April and June, during high flow and water table periods typically observed in early spring during the growing season.

#### **4.4 Existing Site Conditions**

##### **4.4.1 Existing Plant Communities**

The majority of the HMS area is currently unfarmed grassland. The existing upland and wetland plant communities identified in IPC's wetland delineation report consists of a variety of herbaceous, grass, and shrub species, both native and invasive. The predominant existing plant community identified in the wetland delineation consists of herbaceous vegetation across most of the site, including primarily reed canarygrass (*Phalaris arundinacea*), meadow foxtail (*Alopecurus pratensis*), and Sheldon's sedge (*Carex sheldonii*). A narrow band of woody vegetation, including willows (*Salix amygdaloides*, *S. exigua*) and red osier (*Cornus alba*) is located in the riparian zone along Catherine Creek and the oxbow.

##### **4.4.2 Existing Aquatic Communities**

The site borders Catherine Creek, a major perennial tributary of the Grande Ronde River, in the Upper Grande Ronde River Subbasin. This stream, along with the Grande Ronde River, is classified as Essential Salmonid Habitat by the Oregon Department of Fish and Wildlife and Essential Fish Habitat under the Magnuson-Stevens Act. Additionally, Catherine Creek, along with much of the Grande Ronde River Basin, is designated critical habitat for bull trout, spring Chinook salmon, and summer steelhead. Anadromous salmonid species and bull trout are protected under the ESA. Recovery plans for listed bull trout and salmonid species have been developed that seek to restore fish populations and their habitat to sustainable levels.

The *Draft Northeast Oregon Management Unit Plan for Spring/Summer Chinook and Steelhead* and the *Grande Ronde Subbasin Plan* both identify lower Catherine Creek as an important reach for overwintering juvenile spring Chinook salmon and summer steelhead. Habitat quantity and quality are both considered key limiting factors in lower Catherine Creek, where the HMS is located. Overwintering juvenile spring Chinook salmon prefer deep, slow velocity water near cover. This type of habitat is lacking in lower Catherine Creek due to anthropogenic influences. Historical accounts by early settlers indicate that lower Catherine Creek was a slow, deep, and meandering river with abundant riparian cover for fish. These accounts will help to guide stream mitigation efforts at the proposed mitigation site.

Existing non-wetland site conditions are summarized on Table 4; the concept is derived from Oregon's stream mitigation framework currently under development by USACE, the Environmental Protection Agency, and the Willamette Partnership. Table 4 was developed using Oregon Department of State Land's *Guidance for Assessing Stream Functions and Values*

under the Oregon Removal/Fill Program. Absence of an attribute status indicator in specific function rows indicates the attribute is not associated with that specific function.

Catherine Creek is a perennial stream system, and as such, the inclusion of this attribute in the summary is intended to indicate its effect on stream systems and the functions with which it corresponds. The base flow of the system will not change with the implementation of the proposed CWNWMP.

**Table 4. Summary of Existing Non-Wetland Attributes, Functions, and Status**

Function Attribute		Overbank Flow	Effective Discharge	Base Flow	Groundwater Flux	Bed Mobility	Sediment Character	Bank Stability	Hydraulic Variability	Stream Habitat	Riparian Structure and Composition	Aquatic Species' Structure and Composition	Water Quality	Water Temperature	Sedimentation
Functional Group	Function	Status													
Hydrologic Functions	Surface water storage	L		P							L				
	Sub/surface transfer				A						L				
	Flow variation	L	A	P	A						L				
Geomorphic Function	Sediment continuity	L	A			L		L							
	Substrate mobility	L	A			L	L		L						
Biological Functions	Maintain biodiversity										L	A			
	Create habitat	L	A	P		L	L	L	L	L	L	A			L
	Sustain trophic structure										L	A	L		
Chemical and Nutrient Functions	Nutrient cycling	L			A			L			L		L		
	Chemical regulation												L		
	Thermal regulation		A								L			L	

A = Adequate; L = Limited; P = Perennial

The following is an explanation of the “Adequate” status ratings for effective discharge, groundwater flux, and aquatic species structure and composition attributes indicated on Table 4:

- Effective discharge is currently produced by the stream, indicated by the seasonal variation in stream flow where spring flows generally transport the greatest volume of sediment. The functions of sediment continuity, substrate mobility, creation of habitat, and thermal regulation are limited by anthropogenic modifications of the channel, while natural flow variations remain relatively undisturbed.
- Groundwater flux of the system is currently adequate to sustain perennial flow of the stream, meeting both anthropogenic demands and wildlife habitat requirements, and contributes to nutrient cycling, flow variations, and subsurface transfer.
- Aquatic species, structure, and composition are adequately maintained within the local system, as the functions of biodiversity, trophic structure, and habitat are influenced to a greater degree by regional anthropogenic impacts, such as dam construction.

It is anticipated the attributes currently considered “Adequate”, as well as the attributes shown as “Limiting”, will be improved upon with the implementation of the proposed CWNWMP, thus contributing to the improved function of the stream system as a whole.

## 4.5 Site Constraints or Limitations

There are few constraints to performing habitat enhancement at the mitigation site. Much of the land around the site is actively managed for agriculture; however, the site itself has not been used for active agricultural purpose for several years. Other potential constraints are related to habitat, such as the persistent local threat of invasive species such as reed canarygrass and the potential browsing impact on new plantings from the existing wildlife population in the area.

Site preparation, including mechanical and chemical treatments, should significantly reduce the existing weed population. As part of the mitigation plan requirement, the site will no longer be used for farming practices. Browsing is anticipated to be a challenge to overcome; however, with the myriad of deer repellent products available, some of these could potentially be utilized in concert with adaptive management strategies.

## 5.0 FUNCTIONS AND VALUES ASSESSMENT

This section describes the rationale behind functions and values assessments of wetland and non-wetland components of this CWNWMP.

### 5.1 Rationale for Method Used in Wetland Assessment

Since the project area is not tidal or located in the Willamette Valley, ORWAP was used, as required by the DSL.

This analysis was conducted by IPC on representative wetland sites within the Project site boundary during 2011-2013 wetland delineations. Table 5 provides a summary of representative wetland sites where ORWAP data were gathered. See Appendix C for representative impact and mitigation sites ORWAP data. See Figure 5, ORWAP Site Locations.

**Table 5. Representative ORWAP Wetland ID**

ORWAP ID	Delineated Acres	Cowardin	HGM
BAPRO_594	0.5	PEM	Riverine Flow-through
MAL1-Alkaline	0.6	PEM	Slope
MAWLLCK-370	0.02	PSS	Riverine
BA_G_115&117	0.15	PEM	Riverine
BA_G_145	0.10	PEM	Slope
BA_G_148	0.15	PEM	Riverine
BA_G_210.1	0.03	PEM	Riverine
CloverCreek_2012	4.50	PEM	Slope
MA_G_207	1.90	PEM	Depressional
MA_G_228	0.03	PFO	Slope
MA_G_232.2	0.10	PEM	Riverine
MA_G_269	0.01	PFO	Riverine; Slope Valley
MA_G_269.2	0.01	PEM	Riverine
UM_G_82	0.20	PEM	Riverine
UM_G_105	2.00	PEM	Slope

### 5.2 Summary of Expected Wetland Functions and Values Gains and Losses

The functions and values of the existing wetlands and the predicted condition were evaluated using ORWAP. Table 6 presents a summary of the expected wetland functions and values gains and losses for the representative impact sites and the mitigation site.

**Table 6. Summary of Expected Wetland Functions and Values Gains and Losses**

Grouped Services		Impact Sites		Hassinger Mitigation Site (HMS)				
		PEM Representative Sites	PFO/PSS Representative Sites	PEM			PSS/PFO	
		Net Change <sup>1</sup>	Net Change <sup>1</sup>	Existing	Predicted <sup>2</sup>	Net Change		Net Change <sup>4</sup>
						Create <sup>3</sup>	Enhance	
Hydrologic Function	Function	-2.1	-0.9	3.8	3.5	3.5	-0.3	3.8
	Value	-3.3	-3.4	2.7	2.7	2.7	0.0	2.7
Water Quality	Function	-7.1	-7.6	5.3	5.1	5.1	-0.2	5.1
	Value	-5.5	-5.5	7.5	8.7	8.7	1.2	8.7
Carbon Sequestration	Function	-2.5	-2.6	2.4	2.8	2.8	0.4	2.8
Fish Support	Function	-3.7	-4.1	0.7	5.8	5.8	5.1	5.8
	Value	-4.1	-3.7	10.0	10.0	10.0	0.0	10.0
Aquatic Support	Function	-6.6	-6.8	7.3	7.6	7.6	0.3	7.7
	Value	-8.1	-8.0	8.7	8.7	8.7	0.0	8.7
Terrestrial Support	Function	-5.8	-5.6	4.9	5.5	5.5	0.6	6.9
	Value	-7.7	-7.9	8.0	10.0	10.0	2.0	10.0
Public Use and Recognition	Value	-1.6	-1.5	0.5	1.9	1.9	1.4	1.9
Provisioning Services	Value	-2.0	-2.00	0.0	0.0	0.0	0.0	0.0

<sup>1</sup> Predicted functions and values of the representative wetland impact sites are assumed to be 0, as the impacted sites they represent will no longer be wetlands. Many of the representative sites, as with the actual impact sites, are very small portions of larger wetlands, which will continue to function at current levels.

<sup>2</sup> Predicted values for created and enhanced PEM wetlands are assumed to be similar.

<sup>3</sup> Existing functions and values associated with the **created** PEM wetlands at the HMS are assumed to be 0 since these areas are currently upland.

<sup>4</sup> Existing functions and values associated with the **created** PSS and PFO wetlands at the HMS are assumed to be 0 since these areas are currently upland.

The apparent net loss of functions for hydrologic function and water quality is a result of the construction of the side channel within the mitigation site, causing the scores for water retention and sediment retention and stabilization to decrease. That the overall outcome of the proposed mitigation project is expected to increase the function and value of the site as a whole.

### 5.3 Rationale for Method Used in Non-Wetland Assessment

Oregon's stream mitigation framework is currently under development by USACE, Environmental Protection Agency, and Willamette Partnership. As such, the professional judgment and local expertise provided by the GRMW were utilized in assessing the stream function and values of the impact sites and HMS.

### 5.4 Summary of Expected Non-Wetland Gains and Losses

A quantification of stream impacts compared to stream mitigation is summarized on Table 7. This provides a basis for comparison and assessment of non-wetland impacts and mitigation.

**Table 7. Summary of Permanent Non-Wetland Impact and Mitigation**

Stream Type	Impact Sites		HMS	
	Total Area (acres)	Total Length (feet)	Area (acres)	Length (feet)
Ephemeral	0.09	1,402.48	n/a	n/a
Intermittent	0.47	3,516.49	810	0.19
Perennial	0.16	994.95	432	0.71
<b>Total</b>	<b>0.72</b>	<b>5,914</b>		

Impact sites associated with the Project construction and operation are comparatively small and occur predominantly on intermittent stream systems that are non-fish bearing. Conversely, the HMS equates to approximately 2,322 linear feet (0.90 acres) of enhanced and created stream habitat in a major anadromous fish habitat watershed. Many of the impact sites occur above a point where anadromous fish passage is blocked by the Oxbow Dam on the Snake River. Tributaries above this point of the Snake River system cannot provide for endangered anadromous fish migration. The volume of enhanced and created habitat and its location provide a major benefit to endangered species.

Stream functional groups, including hydrologic, geomorphic, biological, and chemical/nutrient functions, and their associated attributes, will be impacted predominantly on a temporary basis and subsequently restored to at least pre-disturbance function. The permanent impacts to stream function and value will be mitigated by implementation of best management practices, and construction practices involving work below the ordinary high water elevation will follow Oregon Department of Fish and Wildlife's in-water work guidelines. The Draft Stream Functional Analysis for the Project, prepared by IPC, is provided in Appendix D. This document was developed under the DSL's interim stream mitigation framework and summarizes the analysis of anticipated permanent stream impacts associated with the Project.

In summary, the losses to stream function and value will be minimal at the impact sites, all of which have low functional ratings. The magnitude of stream mitigation relative to stream impacts of the Project, along with the benefits provided for ESA-listed spring Chinook salmon, summer steelhead, and bull trout, equates to a net gain in ecological process and function in the region.

## **5.5 Considerations to Address Expected Wetland and Non-Wetland Losses**

All expected losses to the functions and values of the impacted wetlands and streams will be addressed at the HMS, through the creation and enhancement of similar wetland areas and enhancement of an anadromous fish-bearing stream.

## **6.0 COMPENSATORY WETLAND AND NON-WETLAND MITIGATION CONSTRUCTION MAPS AND DRAWINGS**

### **6.1 Grading Plan Objectives**

The Grading Plan's objectives are to grade HMS to an elevation sufficient to produce wetland hydrology, support wetland vegetation, and allow hydric soil preservation and development; and to construct a side channel to increase hydrologic connectivity between Catherine Creek, the oxbow, and the wetlands. A draft of the HMS design plans is provided in Appendix B. See Plan Sheet 3 for the wetland types, locations, and areas.

### **6.2 Planting List and Rationale**

A planting plan has been prepared and includes seeding and various types of permanent plantings to restore the site. Methods used will include woody species plantings (live stakes and container plants), wetland area seeding, and upland area seeding. Using a variety of species will ensure a diverse community.

Full details about the planting list are in the Planting Plan (Appendix B).

### **6.3 Construction Schedule**

The Project construction will begin once federal and state permitting processes have been completed. Project construction is anticipated to begin in 2020. The mitigation area is anticipated to be created prior to construction of the Project, or at the least, concurrently with construction impacts associated with transmission line wetland impacts.

Excavation of the HMS will be completed with excavators, dump trucks, and other heavy equipment, as appropriate, with excavated material stockpiled at an upland site for later use. Topsoil will be stockpiled separately to be reapplied before planting and seeding. Excess material will be disposed of on-site in an adjacent upland field as directed by the project engineer and landowner. The created wetlands will have substantial micro-topography to enhance biodiversity. A varied topography creates micro-habitat areas more suited to specific wetland vegetation.

When the desired subgrade elevation is achieved, the site will be covered with a minimum of 12 inches of topsoil, then seeded and planted. Site excavation will likely occur in the fall when water tables are at their lowest elevations to mitigate impacts of heavy equipment in saturated soil conditions, followed by seeding of grasses and planting of woody species. Sedge and rush species will be seeded in spring after high flows begin to subside.

Wood habitat structures will be constructed in the fall to coincide with lowest annual surface water elevations and the Oregon Department of Fish and Wildlife-recommended in-stream work window (July 1 to October 15) and before construction of the wetlands.



## **7.0 MONITORING PLAN**

### **7.1 Proposed Performance Standards**

The following criteria will be used to evaluate the success of the mitigation site:

#### **PEM Wetlands**

- The cover of native herbaceous species is at least 60 percent.
- The cover of invasive herbaceous species is no more than 10 percent.
- Bare substrate represents no more than 20 percent cover.
- By Year 3 and thereafter, there are at least 6 different native species. To qualify, a species must have at least 5 percent average cover in the habitat class and occur in at least 10 percent of the plots sampled.
- The Prevalence Index total for all strata is less than 3.0.

#### **PSS and PFO Wetlands**

- The cover of native herbaceous species is at least 60 percent.
- The cover of invasive herbaceous species is no more than 10 percent. After the site has matured to the stage when desirable canopy species reach 50 percent cover, the cover of invasive understory species may increase but may not exceed 30 percent.
- The cover of invasive shrub or tree species is no more than 10 percent.
- Bare substrate represents no more than 20 percent cover.
- By Year 3 and thereafter, there are at least 6 different native species. To qualify, a species must have at least 5 percent average cover in the habitat class, and occur in at least 10 percent of the plots sampled.
- Prevalence Index total for all strata is less than 3.0.
- The cover of native woody vegetation on the site is at least 50 percent. Native species volunteering on the site may be included, dead plants do not count.

By the end of the fifth year following construction, a minimum of 6.21 acres of created/enhanced wetlands should be present on the site, as determined using the criteria stated in the 1987 USACE *Wetland Delineation Manual* and 2008 *Arid West Regional Supplement*.

### **7.2 Monitoring Methods**

The following methods will be used to assess the condition of the mitigation site each year:

1. Permanent photo points will be established to provide an overall assessment of the created wetland. Additional photos may be taken as needed and included in the monitoring report.
2. Created and enhanced emergent wetland mitigation areas will be sampled using three 100-meter transects, each with ten 1-meter square meter plots. Plots will be evaluated for percent cover of all species present (Table 8).
3. Created scrub-shrub and forested wetland mitigation areas will be sampled with two 100-meter transects, each with five 50-square meter plots. Each of these large plots will also contain two additional randomly selected 1-square meter plots for sampling of herbaceous vegetation. Plots will be evaluated for percent cover of all species present.

4. Each year, a minimum of four test pits will be dug in the mitigation area (two in the emergent wetland area, and two in the created scrub-shrub and forested wetlands) and examined for the presence of saturation within the upper 12 inches, inundation, soil oxidation-reduction characteristics and other indicators of hydric soils and wetland hydrology, as outlined in the 1987 USACE *Wetland Delineation Manual* and the 2008 *Arid West Regional Supplement*.
5. The site will be delineated by the end of the fifth growing season following construction, to verify the size of the created/enhanced wetlands. This delineation will be conducted in accordance with the 1987 USACE *Wetland Delineation Manual* and the 2008 *Arid West Regional Supplement*.

**Table 8. Sample Plot Summary**

Vegetation Type	Acres	Number of Samples
Emergent	3.95	30
Shrub/Forested	2.26	10 plus 20 herbaceous

In addition to the above steps, an unobtrusive monitoring method of observation will be utilized to evaluate the use of created/restored habitat for ESA-listed spring Chinook salmon, summer steelhead, and bull trout fish species. Observations shall be conducted by the GRMW or other appropriate non-profit or non-governmental organization, who will prepare an annual report for submission to the Oregon Department of Fish and Wildlife and DSL on utilization and trends for a period of five years following project completion.

### **7.3 Monitoring Schedule**

A post-construction report will be provided, documenting the as-built condition of the site and establishing permanent photo points.

A minimum 5-year monitoring program is proposed for the HMS. Once annually, during the spring or early summer, the site will be visited and the conditions will be compared to the success criteria. The vegetation and notable conditions of the overall site will be recorded, and an annual monitoring report will be submitted to the DSL and USACE by December 31 of each year.

To determine whether the minimum acreage of wetlands has been created/enhanced, the site will be delineated no later than the fifth growing season following construction.

### **7.4 Rationale for Plot and Photo-Documentation Locations**

The sample plots will be located to provide a representative sampling of the vegetation in the mitigation areas, and the photo point locations will be placed to provide good views of the mitigation site as a whole, with closer details as needed. Chosen sampling methods, described in Section 7.2, meet the DSL Routine Monitoring Guidance for Vegetation standards for sample size based on vegetation type.

## **8.0 LONG-TERM PROTECTION AND FINANCIAL SECURITY INSTRUMENTS**

### **8.1 Description of Proposed Protection Instrument**

IPC will ensure long-term protection of the HMS through a conservation easement to provide perpetual protection and conservation of the mitigation wetlands' and waterways' functions and

values, and wetland habitat improvement management of the property. IPC is currently in negotiations with the Site Landowner (Section 2.1) for a possible option agreement.

## **8.2 Description of Proposed Financial Security Instruments**

IPC's ASC for the Project includes evidence demonstrating that IPC has both the organizational expertise (ASC Exhibit D) and the financial capability (ASC Exhibit M) to construct and operate the facility in compliance with the terms of its Site Certificate, which will include a condition requiring implementation of the CWNWMP as approved by the Oregon Department of Energy (ODOE) and DSL. The GRMW or other appropriate non-governmental organization will provide for the long-term maintenance of the site with funding provided by IPC.

## **8.3 Long-Term Maintenance Plan**

The HMS will be maintained and monitored by the GRMW or other appropriate non-profit or non-governmental organization as part of its agreement with IPC. As the site certificate holder, IPC is responsible for site certificate compliance, and will review the ongoing maintenance and monitoring activities at the HMS. IPC will review annual monitoring reports for completeness and will submit the reports to ODOE. IPC would reserve the right to terminate the arrangement with the non-profit organization if maintenance and monitoring activities are not in compliance with permit requirements.

The responsible third-party organization will be responsible for weed control or other remedial measures required at the HMS.

The restoration seeding and planting of the HMS is designed to mimic site conditions of local wetlands. It is expected the natural seed bank will establish in Years 1 and 2 following construction.

Hydrology of the HMS will be the same as the flow that sustains the existing wetlands but will be enhanced by grading a portion of the site to create hydrologic connectivity through the site and by constructing a high flow side channel between Catherine Creek and the oxbow. Beneficial uses and functions of the site, including wildlife habitat and water quality, are anticipated to improve as a result of this project.

### **8.3.1 Noxious Weed and Invasive Species Management**

The GRMW or other appropriate non-profit or non-governmental organization will be responsible for controlling weeds in the HMS. Each year the site will be monitored for noxious and invasive species. The responsible organization will follow the recommendations of a licensed applicator to control weeds within the area.

### **8.3.2 Compatible Uses/Protection**

Due to the isolation and private ownership of the site, it will be accessible only to the landowner, the GRMW, and others with explicit landowner permission. There will be limited, if any, public access. Limited access provides protection from potential damage from trespassing. The landowner will maintain control of access to the site but will grant the DSL and ODOE access to the site to conduct review and monitoring activities when requested.

The landowner may use the site for general enjoyment, but may not use the HMS area for agricultural activities. This includes livestock grazing or any other activities not consistent with the goals of this CWNWMP. The site will provide ecological benefits including those related to water quality and wildlife habitat.

### **8.3.3 Maintenance and Monitoring**

The GRMW or other appropriate non-profit or non-governmental organization will be responsible for all monitoring activities of the HMS, including providing annual monitoring reports (up to five years) to the DSL and Oregon Department of Fish and Wildlife and the delineation of the HMS area no later than Year 5. The Monitoring Plan and associated methods are outlined in Section 7.0 of this CWNWMP.

Similarly, the GRMW or other appropriate non-profit or non-governmental organization will be responsible for all maintenance activities at the HMS. Maintenance activities may include reseeding, replanting, and weed control.

All costs associated with maintenance activities that pertain to the HMS area are the responsibility of IPC.

## **8.4 Contingency Plan**

In the event post-construction monitoring finds the HMS is not meeting identified restoration goals, corrective action will be implemented. IPC will be responsible for financing and implementing contingency plans in the event that wetland and non-wetland establishment is not meeting anticipated Project goals.

An investigation of the Project will be conducted to identify causes and appropriate mitigation action to meet Project goals. Analysis will include site factors and conditions such as soil, hydrology, variable climatic factors of the preceding year, stream flow characteristics, water table characteristics, and design and construction review including seeding and planting methods, condition of selected seed crop and planting sources, planting and seeding plan, and construction design and oversight during Project implementation. Corrective actions may include, but are not limited to:

1. Identifying limiting factor(s) in meeting Project goals.
2. Implementing appropriate mitigation measures to improve the Project's success, including but not limited to:
  - a. Grading the site to a lower elevation to create hydrologic connectivity through the site.
  - b. Constructing an additional high flow side channel between Catherine Creek and the existing oxbow to enhance hydrology.
  - c. Replanting and/or seeding areas not meeting vegetation cover parameters.
  - d. Implementing an irrigation system to improve successful wetland vegetation establishment.
  - e. Implementing aggressive weed control methods.
  - f. Constructing a water control structure between the oxbow and the main creek channel to sustain adequate water table elevations for wetland hydrology to persist throughout the growing season and during low flow periods.
3. Increasing the monitoring frequency to identify lingering issues and Project success after mitigation action has been implemented.

### **8.4.1 Possible Modes of Failure**

Possible modes of failure include natural events beyond the control and liability of parties involved in the CWNWMP and implementation. An example of such an event would be

catastrophic flooding associated with extreme precipitation and/or spring snow melt (e.g., 25- to 100-year event) that could potentially scour all planted wetland vegetation or damage wood structures. Seasonal climatic factors such as extreme cold, heat, and/or precipitation during the growing season or post planting and seeding could cause irreparable damage to the seed and planting crop.

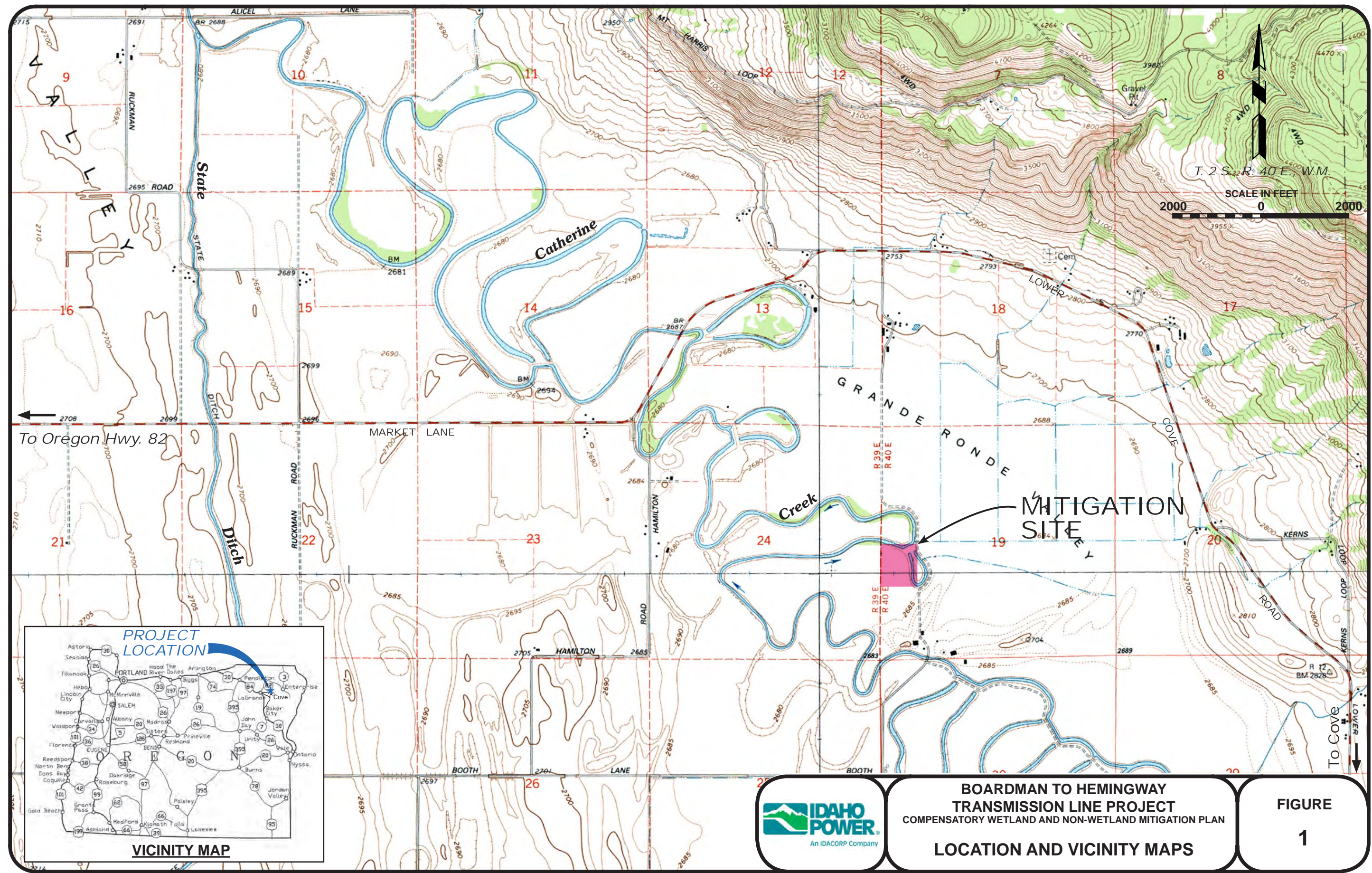
An appropriate budget strictly for the purpose of implementing contingency plans, developed in cooperation between the GRMW and IPC, will be included in the overall project budget. Financial assurance for contingency planning is from the same source as the entire Project.

## FIGURES

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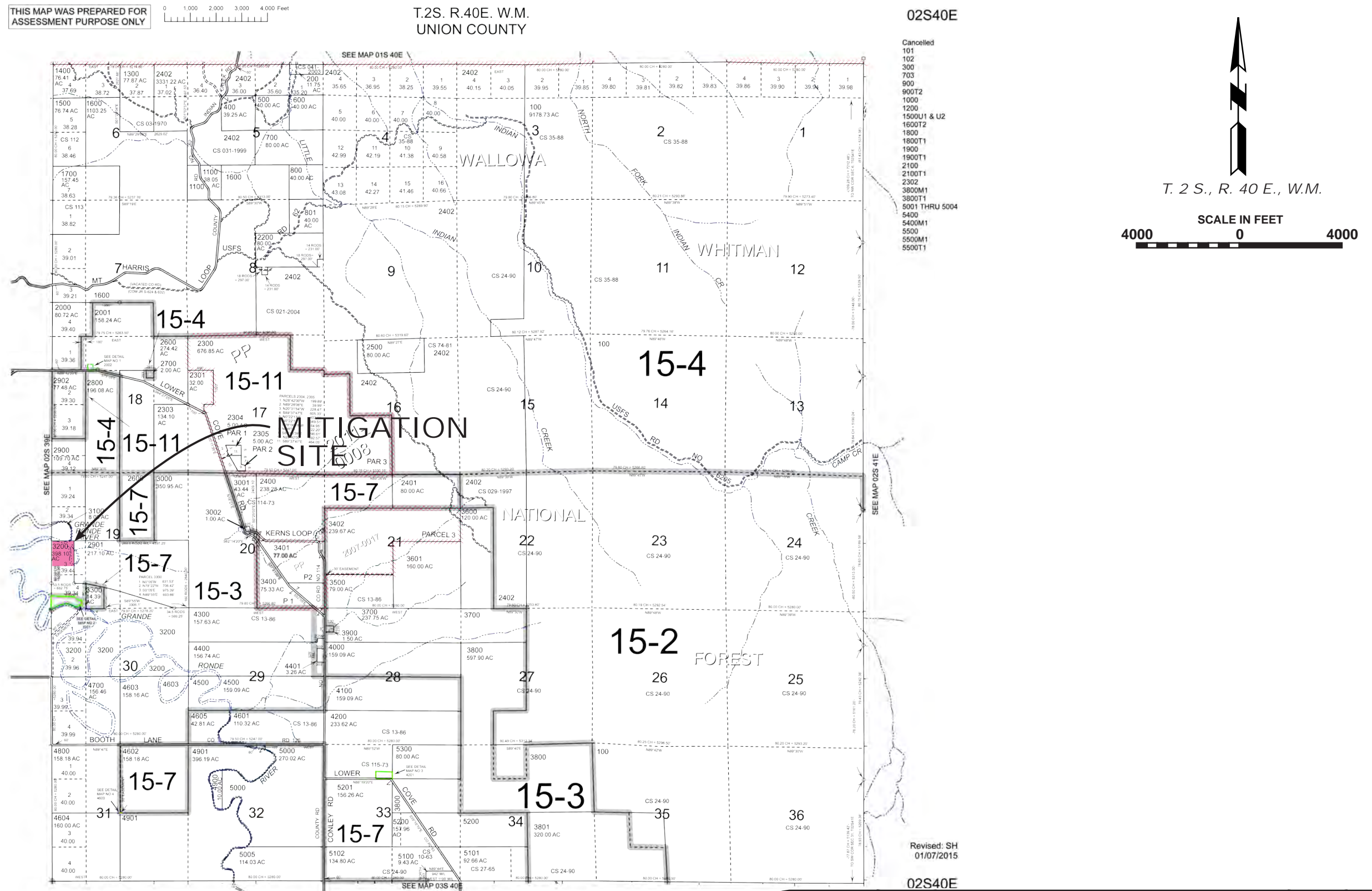
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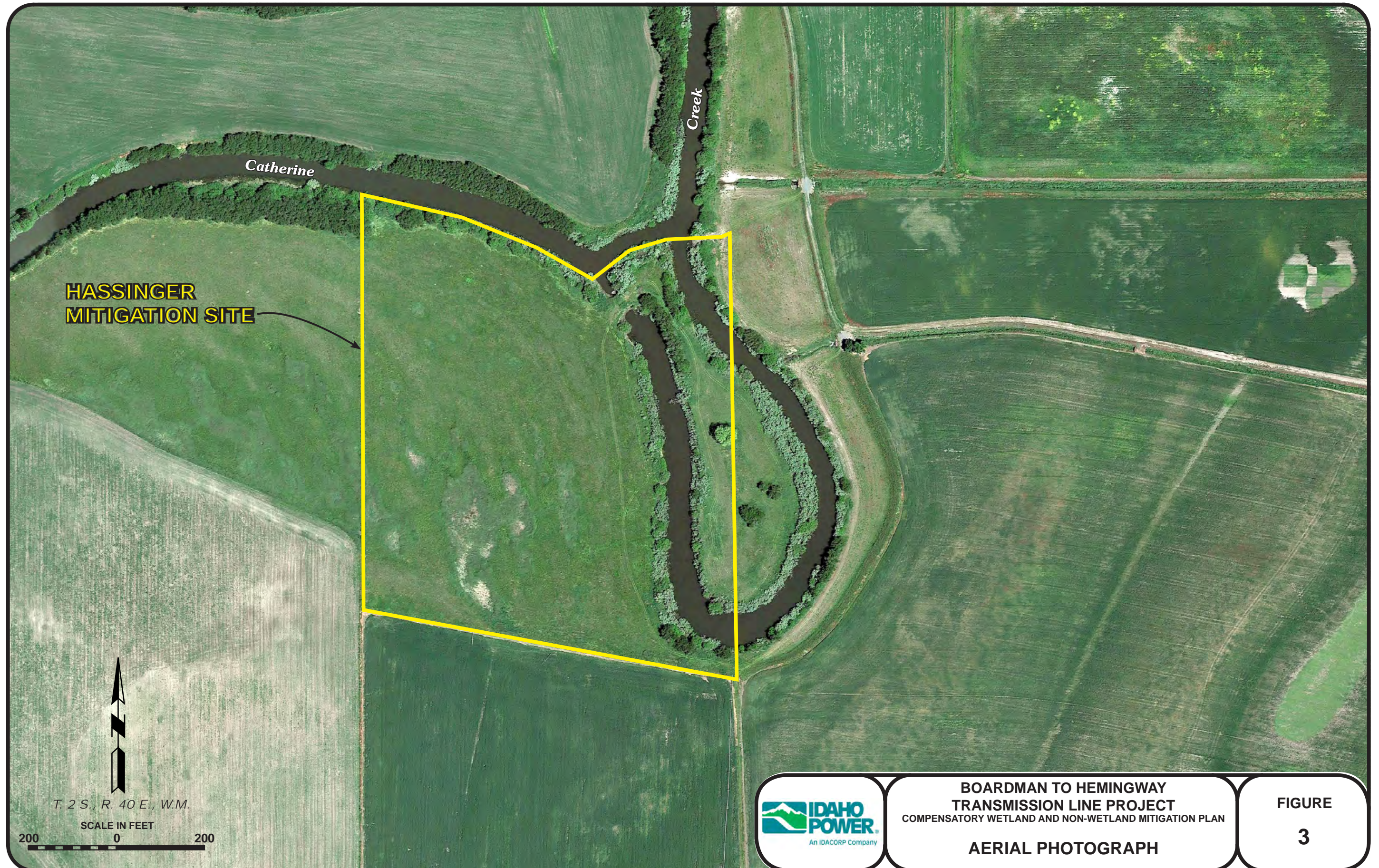


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**PHOTOGRAPH 1 - Looking north to south. Photograph taken by Will Rice on October 23, 2015.**



**PHOTOGRAPH 2 - Looking east to west across the proposed mitigation site. Photograph taken by Will Rice on October 23, 2015.**



**PHOTOGRAPH 3 - Looking south to north along the west side of the oxbow. Photograph taken by Will Rice on October 23, 2015.**

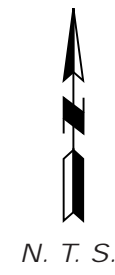


**PHOTOGRAPH 4 - Looking northwest at the south bank of Catherine Creek. Photograph taken by Will Rice on October 23, 2015.**



**PHOTOGRAPH 5 - Monitoring Well No. 1. Photograph taken by Sue Brady on October 23, 2015.**





**LEGEND**  
 ORWAP SITES  
 MITIGATION SITE

**BOARDMAN TO HEMINGWAY  
TRANSMISSION LINE PROJECT**  
 COMPENSATORY WETLAND AND NON-WETLAND MITIGATION PLAN

**ORWAP SITES LOCATION MAP**

**FIGURE**  
**5**

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## **APPENDIX A**

### **WETLAND AND NON-WETLAND IMPACTS SUMMARY**

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**Table A-1. Summary of Wetland Impacts**

Wetland Type	HGM Class	Disturbance Type	
		Operation (Permanent Impacts)	Construction (Temporary Impacts)
PABFh	Unknown	0.0295	0.0336
PEM	Riverine Flow Through	0.0162	0.0371
	Slope	0.1623	0.2780
	Unknown	0.0486	0.7644
PEMA	Unknown	0.0199	0.4781
PEMB	Slope	0.0294	0.0647
	Unknown	0.0053	0.0061
PEMC	Unknown	0.1559	0.5101
PEMFh	Depressional	0.0030	0.0062
PEMKCx	Unknown	0.0068	0.0078
PFOA	Unknown	0.0339	0.0387
PFOC	Unknown	0.0108	0.0122
PSSA	Unknown	0.0000	25.2027
PUSAh	Unknown	0.0000	0.0552
PUSCh	Unknown	0.0159	0.0180
<b>Grand Total</b>		<b>0.5375</b>	<b>27.5136</b>



**Table A-2. Summary of Permanent Stream Impacts**

<b>Flow Duration</b>	<b>Features Impacted</b>	<b>Total Acres</b>	<b>Stream Length Impacts (Feet)</b>
Perennial	25	0.16	1,402.48
Intermittent	111	0.47	3,516.49
Ephemeral	39	0.09	994.95
<b>Grand Total</b>	<b>175</b>	<b>0.72</b>	<b>5,913.92</b>

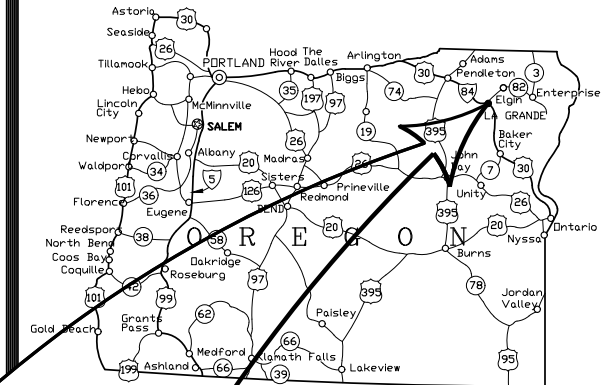
**APPENDIX B**  
**OREGON RAPID WETLAND ASSESSMENT PROTOCOL**  
**DATA SHEETS**

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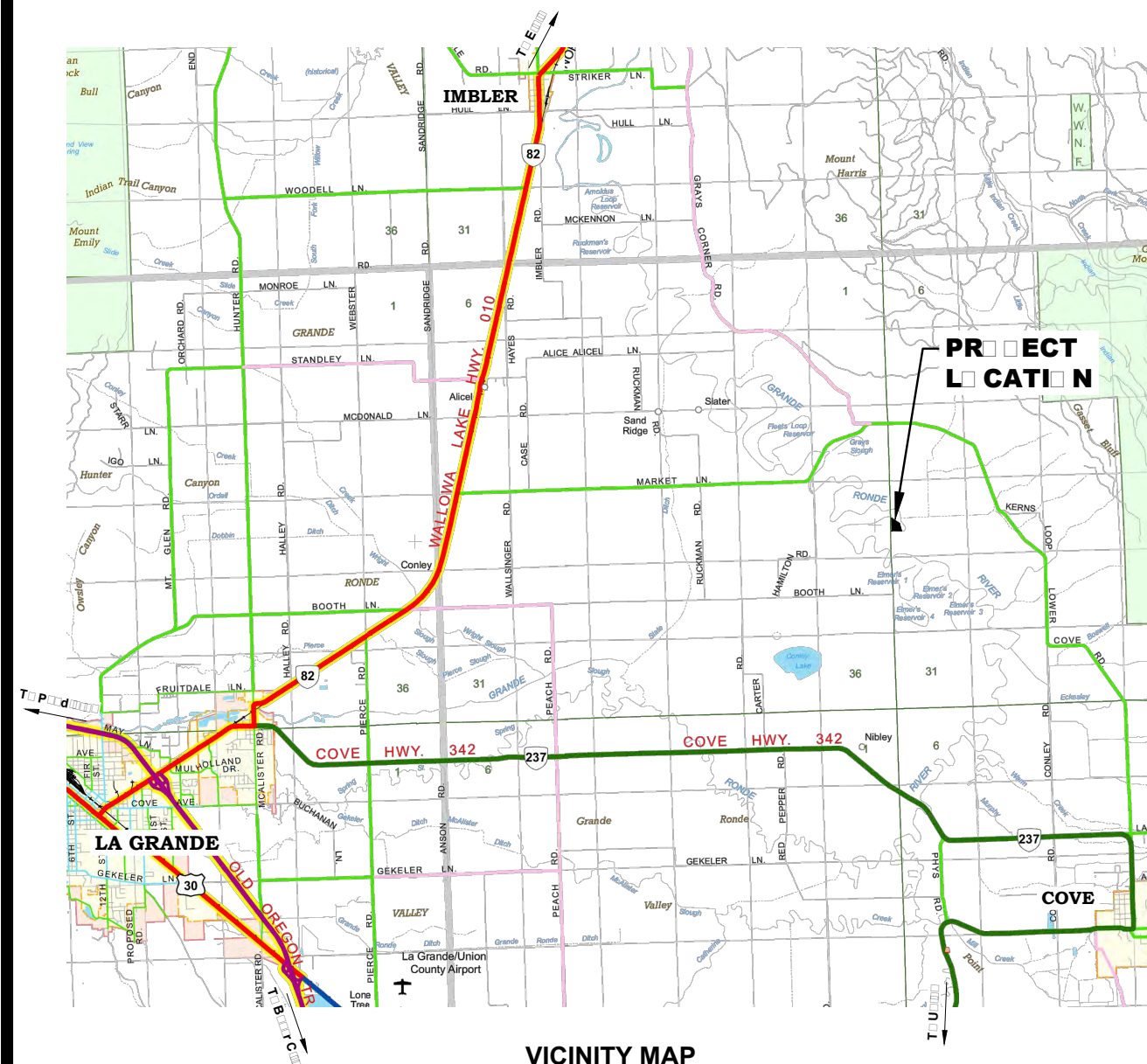
# BOARDMAN TO HEMINGWAY TRANSMISSION LINE PROJECT COMPENSATORY WETLAND AND NON-WETLAND MITIGATION PLAN

UNION COUNTY, OREGON  
TOWNSHIP 36E SECTION 33 AND TOWNSHIP 36E SECTION 34



## INDE

- COVER
- 1. LEGEND AND EXISTING SITE PLAN
- 2. PROPOSED SITE PLAN
- 3. GRADING PLAN
- 4. WETLAND MITIGATION SECTIONS
- 5. WOOD HABITAT STRUCTURE
- 6. PLANTING PLAN
- 7. PLANTING DETAILS
- 8. SITE ACCESS AND STAGING PLAN



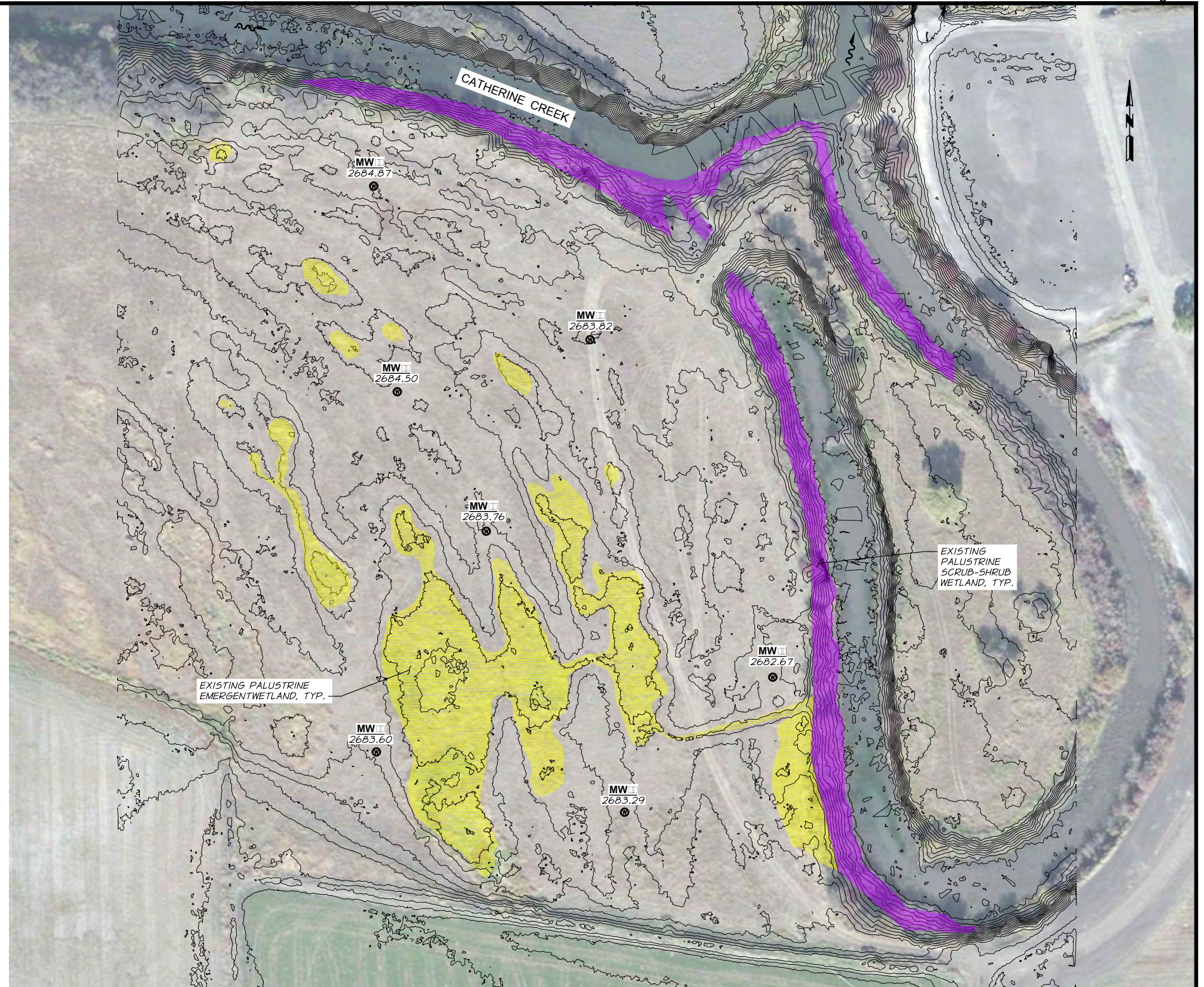
**VICINITY MAP**  
*N.T.S.*

**FOR REVIEW ONLY**  
**NOT FOR CONSTRUCTION**



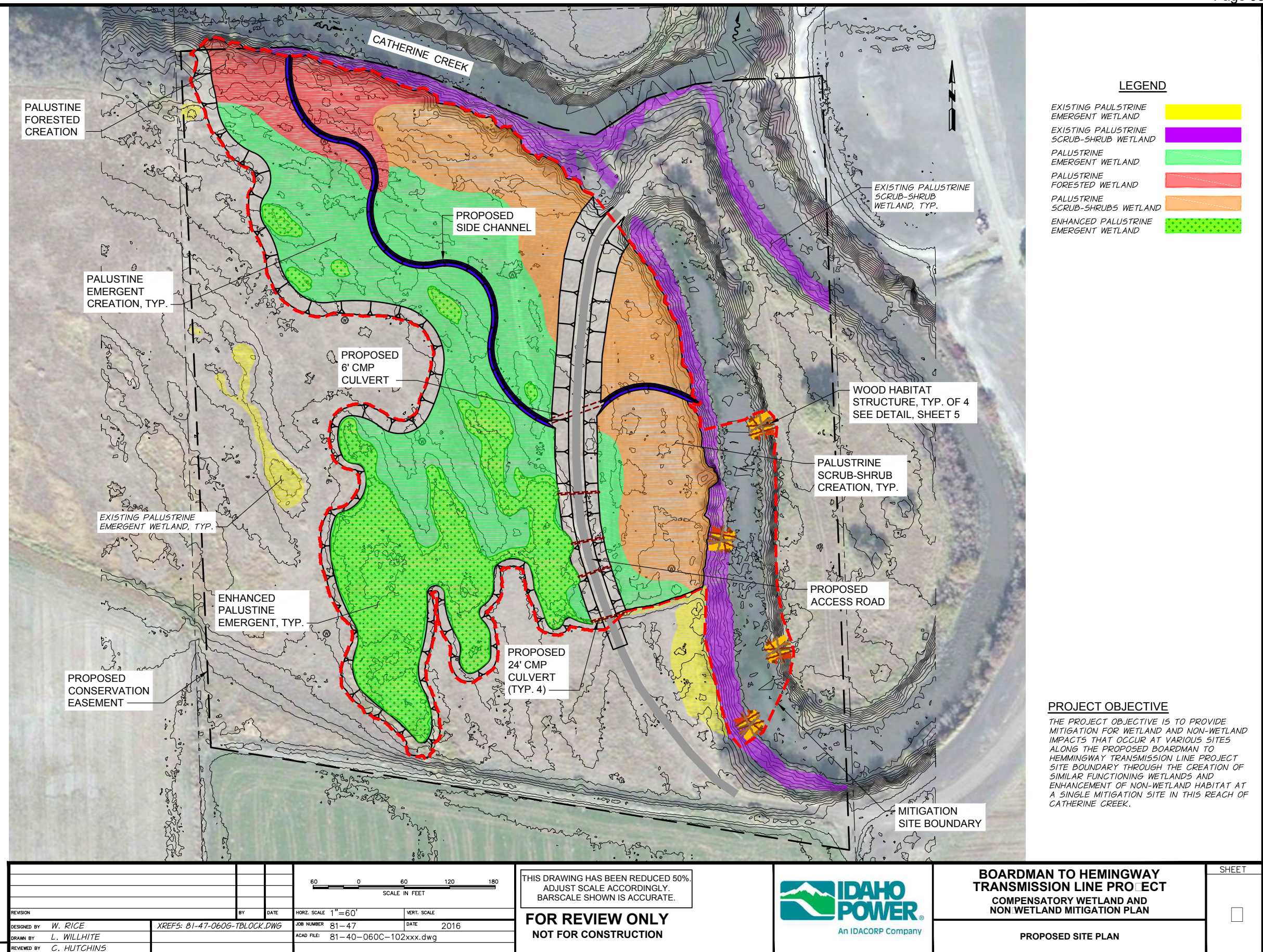


## SHEET



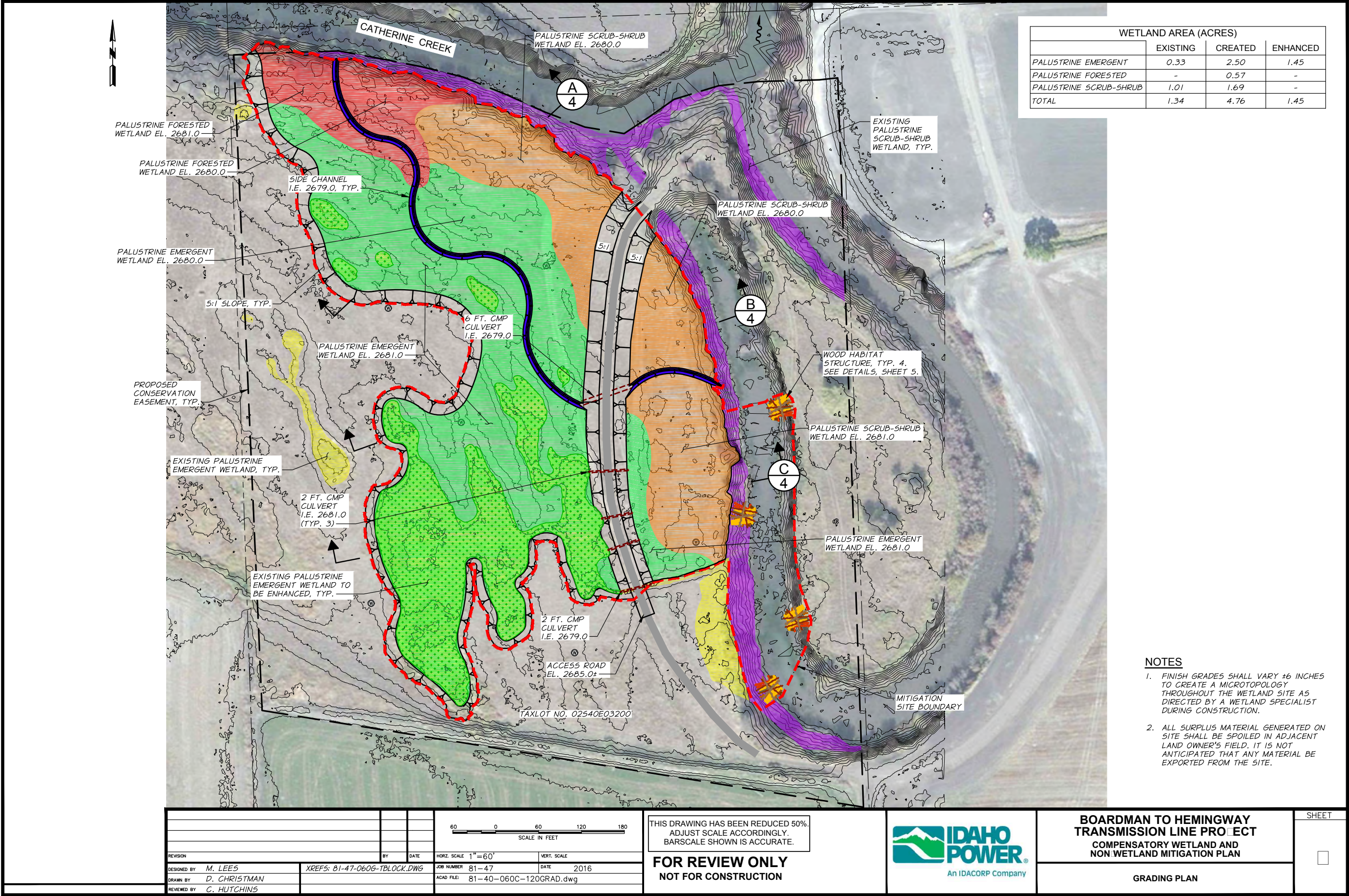


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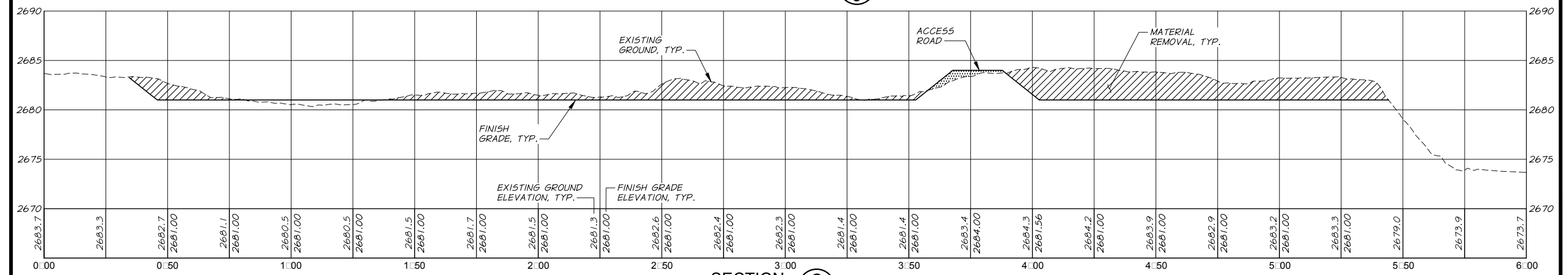
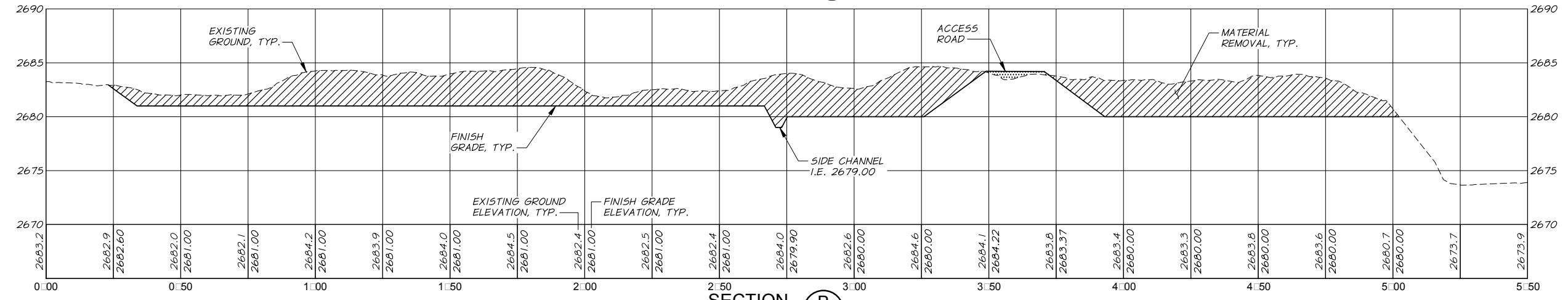
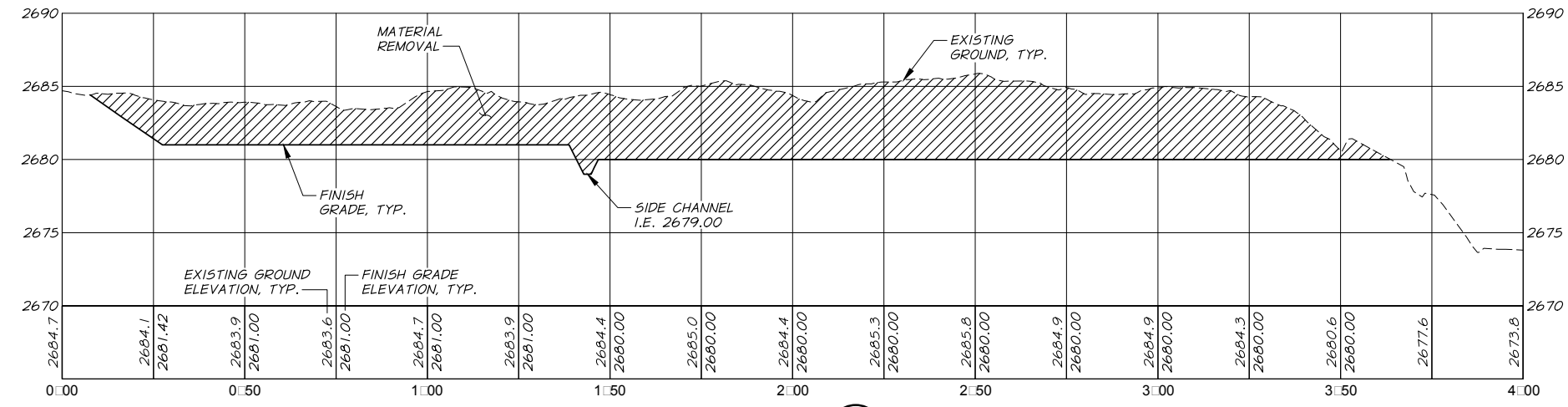



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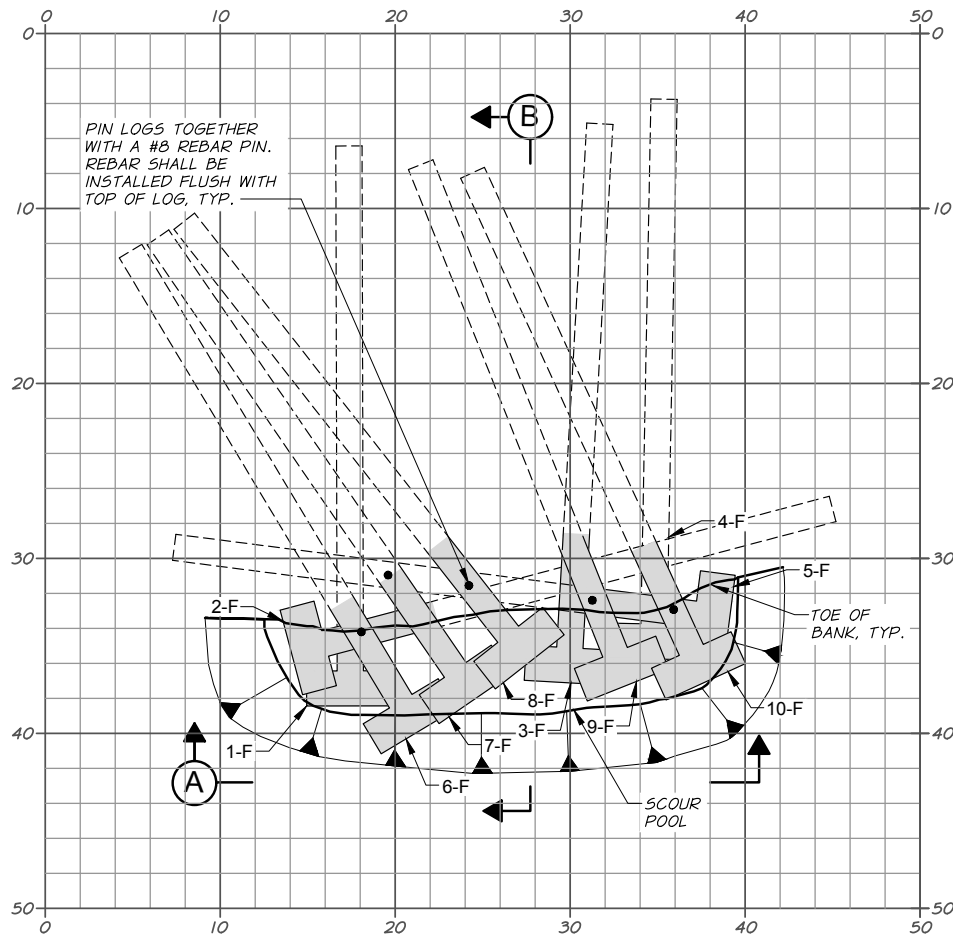


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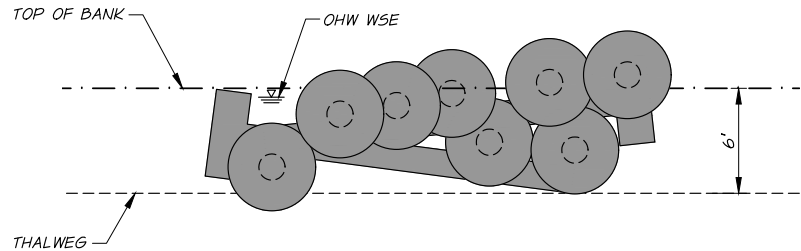
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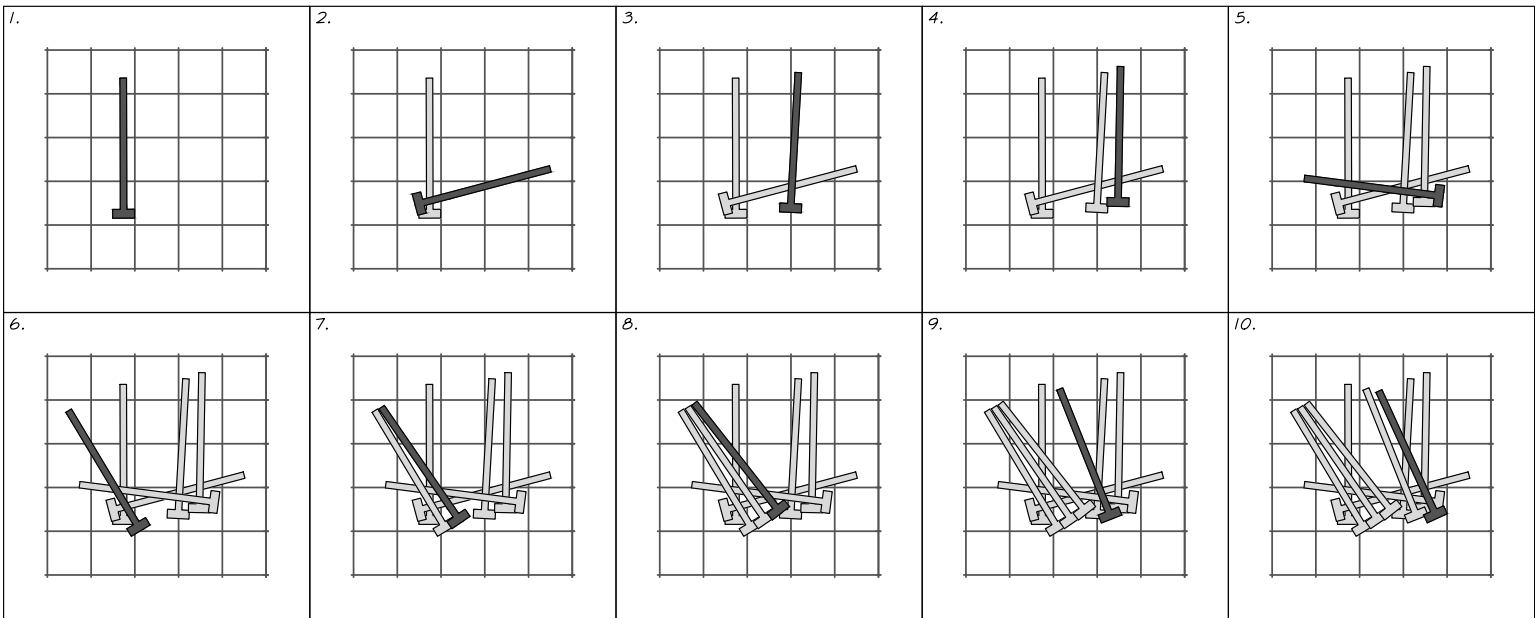
SMALL WOOD HABITAT STRUCTURE

SCALE: 1"=5'



SECTION A

SCALE: 1"=5'



SMALL WOOD HABITAT STRUCTURE  
LOG PLACEMENT SEQUENCING

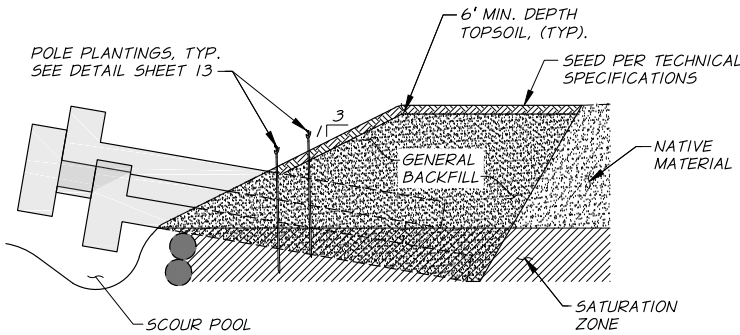
SCALE: 1"=20'

SMALL WOOD HABITAT STRUCTURE MATERIAL SCHEDULE			
LOG	DESCRIPTION	QTY. EACH	TOTAL QTY. FOR 4 STRUCTURES
TREE TYPE B	JUNIPER 20 FT. X 10"-14" DBH W/ RW	4	16
LOG TYPE F	30 FT. X 18"-24" DBH W/ 5' DIA. RW	10	40
RACKING MATERIAL C	10-20 FT. X 6"-10" DBH	10 *	40
REBAR PIN	#8	5	20

\* IN ADDITION TO THE RACKING MATERIAL, THE CONTRACTOR SHALL IMPORT THE TOPS AND LIMBS OF THE LOG TYPES D, AND E, AND USE THIS AS SLASH.

CONSTRUCTION NOTES

- CONTRACTOR SHALL BACKFILL AROUND LOGS WITH A COMBINATION OF GENERAL BACKFILL AND RACKING MATERIAL.
- PROVIDE RACKING MATERIAL BETWEEN EACH LAYER AS DIRECTED BY THE ENGINEER.
- CONTRACTOR SHALL APPLY WATER TO THE BACKFILL PERIODICALLY FOR COMPACTION AND TO FORCE MATERIAL INTO VOIDS.
- FOR ALL LOGS KEYED INTO BANKS MORE THAN TWO THIRDS OF THE LENGTH MUST BE BURIED.
- TOP OF BACKFILL AREA SHALL BE COVERED WITH TOPSOIL WITH A MINIMUM THICKNESS OF 6".
- FINAL INSTALLATION OF THE SMALL WOOD HABITAT STRUCTURE SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
- DETAILS SHOWN ARE FOR RIVER RIGHT SITUATION. RIVER LEFT INSTALLATION TO BE MIRRORED.
- AT REBAR PIN LOCATIONS, THE CONTRACTOR SHALL DRILL A PILOT HOLE APPROXIMATELY 7/8" DIAMETER. THE PIN SHALL BE DRIVEN THROUGH THE HOLE FITTING SNUGLY AND LEAVING NO VOID SPACE BETWEEN THE PIN AND THE PILOT HOLE.
- ALL SAWCUT ENDS OF LOGS SHALL BE CHEWED OR FRAYED PRIOR TO PLACEMENT.
- CONTRACTOR SHALL EXCAVATE POOLS SHOWN UNDER THE DIRECTION OF THE ENGINEER.



SECTION B

SCALE: 1"=5'

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REVIEWED BY	C. HUTCHINS					

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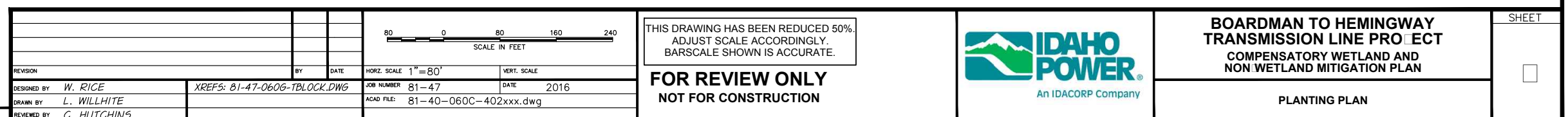
BOARDMAN TO HEMINGWAY  
TRANSMISSION LINE PROJECT  
COMPENSATORY WETLAND AND  
NON WETLAND MITIGATION PLAN

WOOD HABITAT STRUCTURE

SHEET



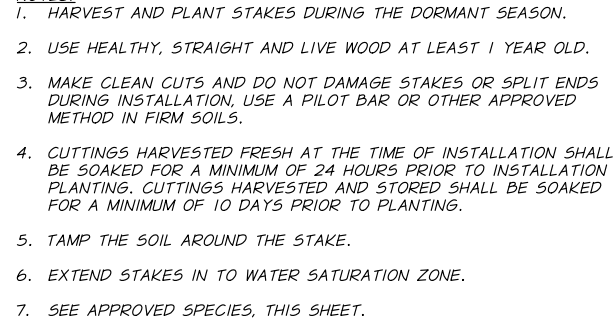




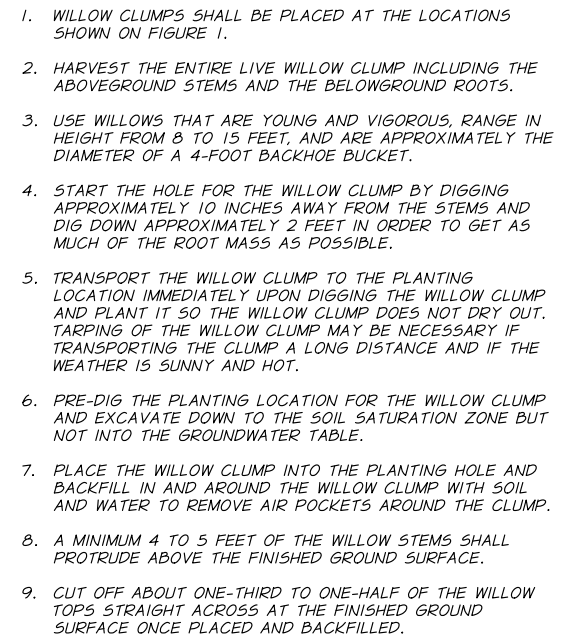





1. PRIOR TO INSTALLATION OF CONTAINER PLANT, CLEANLY PRUNE ANY BROKEN BRANCHES AND SCARIFY OUTER 1" OF ROOTBALL. CLEANLY PRUNE BROKEN, DEAD, OR DISEASED ROOTS. ROOTBOUND PLANTS SHALL BE REJECTED.
2. EXCAVATE CIRCULAR PLANTING HOLE WITH VERTICAL SIDES. SCARIFY SIDES AND BOTTOM OF PLANTING HOLE.
3. PLACE ROOTBALL ON UNDISTURBED NATIVE SOIL AT BASE OF PLANTING HOLE AND SPREAD ROOTS OUT TO SIDES OF HOLE. CLEANLY TRIM ANY ROOTS THAT ARE TOO LONG TO LAY STRAIGHT IN PLANTING HOLE. PLANTS SHALL BE UPRIGHT, PLUMB, AND TOP OF ROOTBALL SHALL BE EVEN WITH FINISH GRADE. WHEN PLANTING ON SLOPES, CREATE LEVEL PLANTING SURFACE TO ENSURE COVER OF ROOTS ON DOWNHILL SIDE OF PLANT.
4. BACKFILL PLANTING HOLE WITH SOIL EXCAVATED FROM PLANTING HOLE AND TAMP SOIL AROUND ROOTS. ANY TRASH OR DEBRIS FOUND IN EXCAVATED SOIL SHALL NOT BE USED TO BACKFILL THE PLANTING HOLE. BACKFILL SOIL SHALL MAKE GOOD CONTACT WITH THE ROOTBALL, LEAVING NO VOIDS.
5. PLANTS SHALL BE PLANTED IN CLUSTERS USING TYPICAL SPACING SHOWN ON THE SCHEDULE WHILE OTHER AREAS ARE LEFT UNPLANTED TO ALLOW FOR DISTRIBUTION OF THE PLANTS THROUGHOUT THE PLANTING AREA.
6. WITHIN 4 HOURS OF PLANT INSTALLATION, THOROUGHLY WATER IN EACH INSTALLED PLANT.



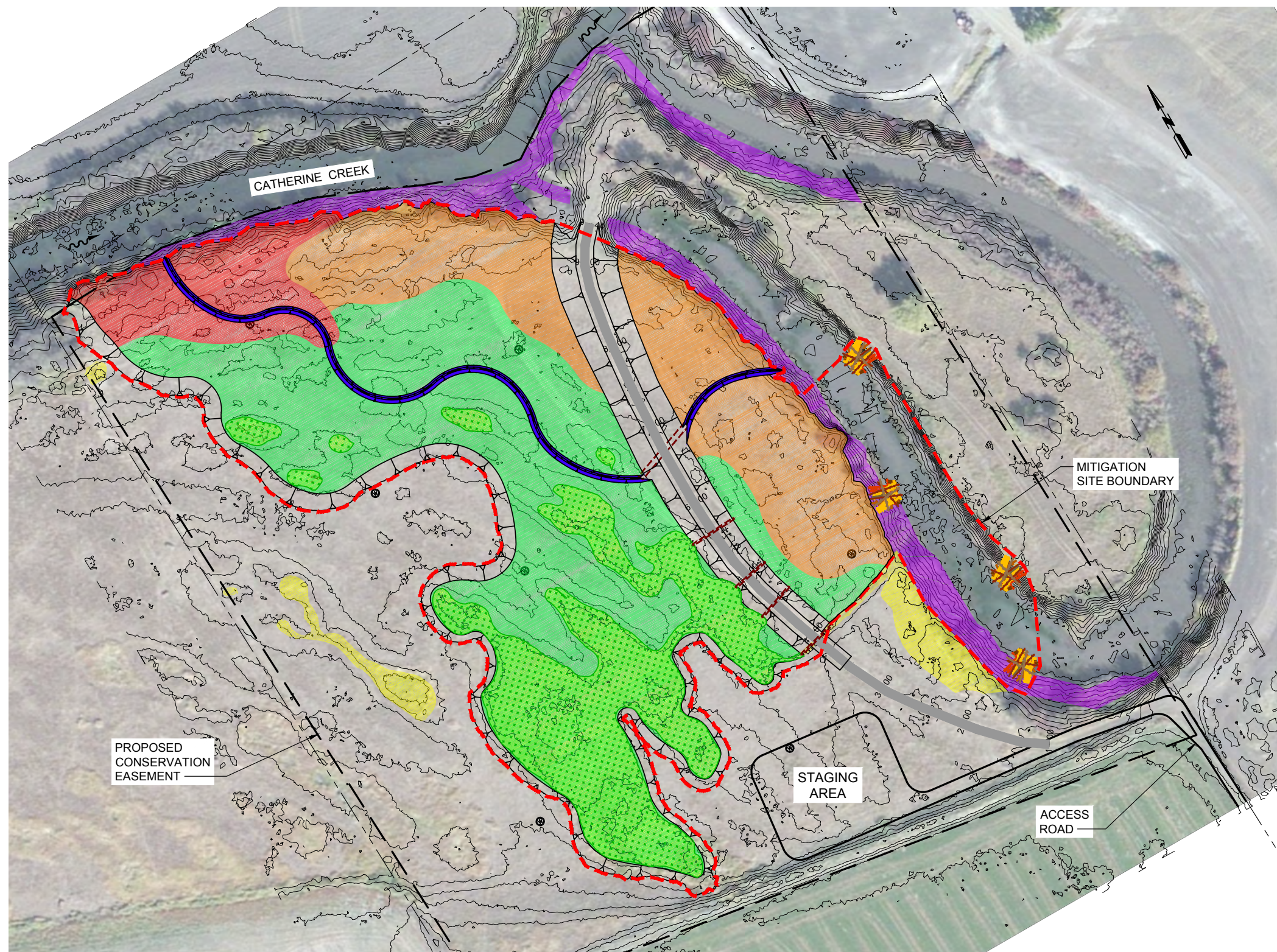
- *SALIX EXIGUA* (COYOTE WILLOW)
- *SALIX LASIOLEPSIS* (ARROYO WILLOW)
- *CORNUS SERICEA* (REDOSIER DOGWOOD)



N.T.S.

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REVIEWED BY C. HUTCHINS										SITE ACCESS AND STAGING PLAN		<div></div>	



## Attachment J-2

### Draft Removal-Fill Temp Impacts Draft Site Rehabilitation Plan

**Attachment J-2: Draft Removal-Fill Temporary Impacts, Draft Site Rehabilitation  
Plan**

# **Site Rehabilitation Plan**

## **Boardman to Hemingway Transmission Line Project**

*Prepared by:*



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April 2018

## TABLE OF CONTENTS

1.0	INTRODUCTION .....	1
1.1	Purpose .....	1
1.2	Goals and Objectives .....	2
2.0	REHABILITATION PLAN .....	2
2.1	Site Preparation .....	2
2.2	Site Restoration .....	3
2.3	Seed Planting Methods .....	4
2.4	Seed and Plant Mixes by Ecoregion .....	4
2.5	Best Management Practices .....	7
3.0	DRAFT MONITORING PLAN .....	8
3.1	Performance Standards for Rehabilitation .....	8
3.2	Monitoring Schedule and Methodology .....	9
3.3	Reporting and Documentation .....	9
4.0	MAINTENANCE PLAN .....	9
5.0	CONTINGENCY PLAN .....	9
6.0	REPORTING .....	9
7.0	PLAN UPDATES .....	10
8.0	REFERENCES .....	10

## LIST OF TABLES

Table 1.	Precipitation and Land Cover and Land Use for Study Area by Ecoregion .....	5
Table 2.	Native Plants Documented During Delineations .....	7



## **1.0 INTRODUCTION**

Idaho Power Company (IPC) is proposing to construct and operate approximately 296.6 miles of new transmission line known as the Boardman to Hemingway Transmission Line Project (Project). The Project will include a 500-kilovolt (kV) single-circuit line, rebuilding of a portion of a 230-kV transmission line, rebuilding of a 138-kV transmission line, and a removal of a portion of an existing 69-kV transmission line between Boardman, Oregon, and the Hemingway Substation (located approximately 30 miles southwest of Boise, Idaho). The Project includes ground-disturbing activities associated with the construction of above-ground, single- and double-circuit transmission lines involving towers, access roads, multi-use areas, light-duty fly yards, pulling and tensioning sites as well as associated stations, communication stations, and electrical supply distribution lines.

The Project area, or Site Boundary, as defined in Oregon Administrative Rule (OAR) 345-001-0010(55) includes "the perimeter of the site of a proposed energy facility, its related or supporting facilities, all temporary laydown and staging areas, and all corridors and micrositing corridors proposed by the applicant." The Site Boundary for this Project includes the following facilities in Oregon:

- The Proposed Route, consisting of 270.8 miles of new 500-kV electric transmission line, removal of 12 miles of existing 69-kV transmission line, rebuilding of 0.9 mile of a 230-kV transmission line, and rebuilding of 1.1 miles of an existing 138-kV transmission line;
- Four alternatives that each could replace a portion of the Proposed Route, including the West of Bombing Range Road Alternative 1 (3.7 miles), West of Bombing Range Road Alternative 2 (3.7 miles), Morgan Lake Alternative (18.5 miles), and Double Mountain Alternative (7.4 miles);
- One proposed 20-acre station (Longhorn Station);
- Ten communication station sites of less than ¼ acre each and two alternative communication station sites;
- Permanent access roads for the Proposed Route, including 206.3 miles of new roads and 223.2 miles of existing roads requiring substantial modification, and for the Alternative Routes, including 30.2 miles of new roads and 22.7 miles of existing roads requiring substantial modification; and
- Thirty-one temporary multi-use areas and 299 pulling and tensioning sites of which four will have light-duty fly yards within the pulling and tensioning sites.

Construction of the Project will result in temporary impacts to waters of the state. This site rehabilitation plan presents goals and objectives, jurisdictional authority, implementation, and follow-through methods for restoring temporary wetland impacts. Temporary impacts to wetlands include construction activities that do not result in permanent removal or fill, such as construction of laydown areas, staging areas, or temporary contouring allowing for access of equipment.

### **1.1 Purpose**

Rules regulating the rehabilitation of temporary wetland impacts are provided in OAR 141-085-0715: Mitigation for Temporary Impacts (ODSL 2011).

This OAR provides that a rehabilitation plan should be designed to:

- Re-establish the pre-existing contours of the site;

- Re-establish the pre-existing vegetation community; and
- Provide for rapid site stabilization to prevent erosion.

The Oregon Department of State Lands (ODSL) further provides rehabilitation guidelines for temporary impacts in *A Guide to the Removal-Fill Permit Process* (ODSL 2016). The rehabilitation plan should include a grading plan and list of seeds and plants to be utilized, as applicable. A monitoring plan (including monitoring method, criteria and duration) must also be included to confirm successful re-establishment of the wetland and vegetation. Temporary impacts that are rectified within 24 months from the date the impacts generally occurred do not require compensatory mitigation; however, site rehabilitation and monitoring is required (ODSL 2011b).

## **1.2 Goals and Objectives**

The primary goal of the Plan is to assist IPC and its contractors in restoring wetland habitat affected by temporary impacts within 24 months of disturbance. This goal is established pursuant to the definitions of OAR 141-085-0510, which states:

- "Temporary Impacts" are adverse impacts to waters of this state that are rectified within 24-months from the date the impact occurred; and
- "Wetland Restoration" means to re-establish a former wetland.

The Plan provides measures that will be implemented prior to and during construction with the objective of minimizing wetland habitat impacts. It also provides details and measures that will be implemented following construction with the objectives of reestablishing, maintaining and monitoring wetlands temporarily impacted by construction.

## **2.0 REHABILITATION PLAN**

IPC will begin rehabilitation of disturbed sites as soon as practicable after construction is completed. The Plan is applicable to all temporary wetland impacts along the transmission ROW, laydown areas, staging areas, temporary construction areas, and access roads in Oregon. Measures to be implemented to ensure successful rehabilitation include topsoil and subsoil segregation and stockpiling during construction, cleanup, appropriate surface recontouring, soil erosion control, seedbed preparation, application of ecologically site-specific seed mixes, planting, weed abatement, and monitoring.

### **2.1 Site Preparation**

As part of the reclamation process, IPC will prepare the seedbed to facilitate the restoration of vegetation to pre-construction conditions. Construction activities within sites identified as temporary impacts shall not exceed two construction seasons, and rehabilitation of temporary impacts will be completed within 24 months of the initiation of impacts.

Initial construction activities include marking wetland boundaries clearly with high visible flagging and signs, installing temporary sediment controls, segregating and stockpiling topsoil, and grading for safe construction passage. Dense stands of noxious and invasive weeds will be treated with approved herbicides prior to vegetation clearing.

Prior to construction, topsoil will be stockpiled and separated from subsoil. IPC will minimize the length of time that topsoil is stockpiled. Surface soil thickness will vary throughout the construction area, depending on soil type; however, the top 1 foot of wetland topsoil shall be

preserved to the greatest extent feasible. Surface topsoil containing the seed reservoir and existing vegetation will be scraped and stored. The topsoil/vegetation mixture will not be mixed with underlying subsoil horizons. Oregon-certified weed-free erosion control blankets and/or certified weed-free straw bales will be used to contain and limit erosion at the stockpiles as needed. Surface soil and sub-surface soils will be replaced in the proper order during cleanup and final grading operations.

## **2.2 Site Restoration**

Restoration will include cleanup, soil decompaction, topsoil replacement, surface grading/contouring, installation of soil erosion and sediment control measures, and seedbed preparation. Compacted soils would typically be associated with the access roads and along the transmission ROW, staging areas, laydown areas, temporary construction areas, and access roads. Subsoil decompaction will occur prior to surface soil replacement as necessary to reduce soil bulk density. Identified locations will be decompacted to a minimum depth of 6–12 inches.

The stockpiled topsoil/vegetation mixture will be re-spread after re-contouring is completed. In wetlands, the segregated top 1 foot of topsoil will be restored to its original location. The topsoil/vegetation mixture will provide seeds, vegetative propagules, and soil microbiota to facilitate vegetation establishment in temporary construction areas.

The transmission ROW, staging areas, laydown areas and other temporary construction areas, will be graded and contoured to blend within the surrounding landscape. Temporary roads used for pulling and tensioning of conductors and other construction activities and structure construction pads will be revegetated but not re-contoured unless they were subject to temporary fill or removal. Topsoil will be blended across the construction corridor, creating a roughened surface to capture precipitation, decrease erosion, and provide micro-habitats for plant establishment. Contouring will emphasize restoration of existing drainage and landform patterns, to the greatest extent practicable.

Seedbed preparation will consist of grading/contouring, decompacting soils, and restoring surface soil as described above. Specific wetland Best Management Practices (BMPs) referenced in this plan will be employed in wetland areas to avoid rutting and damage from equipment. The seedbed will be firm but not compacted.

Soil erosion and sediment control will occur through establishing desirable wetland vegetation and adjacent upland/riparian vegetation using measures such as mulch, erosion and control blankets. The Project will establish a desirable wetland plant cover as quickly as possible to minimize soil erosion and control sedimentation. Mulch, certified weed-free erosion control blankets and sediment logs, and certified weed-free straw bales, and/or water bars may also be used as appropriate.

In general, the following construction BMPs for erosion and sediment control shall be followed:

- Exposed soils shall be stabilized during and after construction in order to prevent erosion and sedimentation.
- Filter bags, sediment fences, sediment traps or catch basins, leave strips or berms, or other measures shall be used to prevent movement of soil into waterways and wetlands.
- Compost berms, impervious materials or other equally effective methods, shall be used to protect stockpiled soil during rain events or when the stockpile site is not moved or reshaped for more than 48 hours.

- Where vegetation is used for erosion control on slopes steeper than 2:1, a tackified seed mulch shall be used so the seed does not wash away before germination and rooting.
- Dredged or other excavated material shall be placed on upland areas having stable slopes and shall be prevented from eroding back into waterways and wetlands.
- Erosion control measures shall be inspected and maintained as necessary to ensure their continued effectiveness until soils become stabilized.
- All erosion control structures shall be removed when the project is complete and soils are stabilized and vegetated.

A specific list of the type and timing for each BMP is described in the Erosion and Sediment Control Plan included as an attachment to Exhibit I.

Soil amendments are intended to minimize soil erosion and subsequent sedimentation, conserve soil moisture, provide cover, and moderate temperatures to facilitate the germination of seeds.

## **2.3 Seed Planting Methods**

Each site scheduled for rehabilitation will be evaluated to determine the most cost-effective means of establishing a suitable suite of plants as rapidly as possible. This evaluation will include a determination of how the site needs to be prepared to receive seeds and live plants, as well as what species to plant on the site. Planting will be done at the appropriate time of year to facilitate seed germination, based on weather conditions and the time of year when construction-related ground disturbance occurs. Choice of planting methods will be based on site-specific factors such as slope, erosion potential and the size of the site in need of revegetation. Disturbed ground may require chemical or mechanical weed control before weeds have a chance to go to seed.

Drill and broadcasting seeding techniques will be used. Seeding will be done after ground-disturbing activities are complete and at the appropriate time of year (preferably in the fall or, if fall is not an option, the spring). If there is a lag time between the end of ground-disturbing activities and seeding, BMPs from the SWPPP will be implemented. Drill seeding will be the primary method for seeding. Drill seeding uses specialized equipment such as a rangeland seeder. The advantages of drill seeding are efficiency at placing seed at the proper soil depth and economy of bulk seed. Its disadvantages are terrain limitations such as slopes greater than 15 percent and rocky soils. Slopes that cannot be drill seeded will be broadcast seeded. Broadcast seeding distributes the seed on top of the soil surface using a hand-held spreader, all-terrain vehicle–mounted cyclone-type seed spreader, or seed blower. Broadcast seed is not as efficient as drill seeding because in this method seeds are not buried in the soil, and it requires approximately twice the bulk seed. Area where broadcast seeding is used will be hand-raked, or a harrow will be used to cover the seed.

Hydro-seeding and hydro-mulching will not be used in wetland areas or near water bodies. Should the water levels in the restoration areas rise above the hydro-seeded/mulched area prior to seed germination and establishment, the mulch, binder, and seed will float and wash away.

## **2.4 Seed and Plant Mixes by Ecoregion**

The following sections provide information about each ecoregion crossed by the Project, and provide suggested species for use in planting mixes for each one. Each ecoregion has different

climate and soil characteristics, requiring seed mixes and plants that will thrive under the site conditions. Species lists for planting presented here are not intended to be either exhaustive or limiting. They represent only a small fraction of species that may be suitable for use in the ecoregions and on a site by site basis.

The Project, from Boardman to Hemingway, crosses four Level III ecoregions, which can be further divided into ten Level IV ecoregions (Thorson *et al.* 2003). Table 1 describes these ecoregions.

**Table 1. Precipitation and Land Cover and Land Use for Study Area by Ecoregion**

<b>Ecoregion III</b>	<b>Ecoregion IV</b>	<b>Precipitation-Mean Annual (inches)</b>	<b>Land Cover and Land Use</b>
Columbia Plateau	10e, Pleistocene Lake Basins	7 to 10	Mostly cropland; some grassland. Non-irrigated winter wheat is grown using the crop– fallow rotation method. Irrigated land grows winter wheat, alfalfa, and barley.
Columbia Plateau	10c, Umatilla Plateau	9 to 15	Mostly cropland; some grassland. Non-irrigated winter wheat is grown using the crop– fallow rotation method. Irrigated land grows winter wheat, alfalfa, and barley.
Columbia Plateau	10n, Umatilla Dissected Uplands	15 to 25	Mostly grass-covered rangeland and wildlife habitat; on higher elevation, north-facing slopes: forest.
Blue Mountains	11c, Maritime-Influenced Zone	20 to 40 97 to 116	Forested. Logging, grazing, wildlife habitat, and recreation.
Blue Mountains	11l, Mesic Forest Zone	30-60. Mostly snow. Snow persists late into spring.	Forested. Logging, woodland livestock grazing, wildlife habitat, and recreation.
Blue Mountains	11k, Blue Mountain Basins	Wallowa and Grande Ronde valleys: 13-25. Baker Valley: 10-16.	Irrigated pastureland, cropland, recreation, and commercial, residential, and rural residential development. Principal crops: alfalfa, peas, winter wheat, and grass seed. Most wetlands on floodplains have been drained for agriculture.
Blue Mountains	11i, Continental Zone Foothills	9 to 18	Shrub- and grass-covered. Livestock grazing and wildlife habitat.
Snake River Plain	12j, Unwooded Alkaline Foothills	9 to 12	Shrub- and grass-covered rangeland and wildlife habitat; some irrigated hayland and pastureland near rivers.
Snake River Plain	12a, Treasure Valley	8 to 11	Irrigated cropland, pastureland, shrubland, grassland, and residential and commercial development. Primary crops: wheat, sugar beets, potatoes, onions, and alfalfa.

<b>Ecoregion III</b>	<b>Ecoregion IV</b>	<b>Precipitation- Mean Annual (inches)</b>	<b>Land Cover and Land Use</b>
Northern Basin and Range	80f, Owyhee Uplands and Canyons	8 to 14	Mostly brush- and grass-covered rangeland and wildlife habitat; some hay and small grain farming. Cheatgrass has replaced depleted bunchgrasses in overgrazed areas.

Adapted from Thorson et al. 2003.

Note: For the purpose of this table, which is to summarize climatic and vegetation information on a broad scale, study area can be considered synonymous with site boundary.

In Morrow County, nearly 80 percent of the study area is contained in ecoregion 10e, the Pleistocene Lake Basins of the Columbia Plateau. While roughly 20 percent of the eastern portion of the project is contained in ecoregion 10c, Umatilla Plateau.

In Umatilla County, the majority (approximately 60 percent) of the study area is contained in 10c, Umatilla Plateau of the Columbia Plateau, while 15 percent is in 10n, Umatilla Dissected Uplands of the Columbia Plateau, 15 percent is in 11c, Maritime-Influenced Zone of the Blue Mountains and less than 10 percent is in 11l, Mesic Forest Zone of the Blue Mountains.

In Union County, the study area is located entirely in the Level III Blue Mountains Ecoregion. The majority (approximately 49 percent) of the study area is contained in 11c, Maritime-Influenced Zone, 20 percent is in 11l, Mesic Forest Zone, 18 percent is in 11i, Continental Zone Foothills, and 13 percent is in 11k, Blue Mountain Basins.

In Baker County, the study area is located within the Level III Blue Mountains Ecoregion and the Level III Snake River Plain Ecoregion. The majority (approximately 93%) of the study area is contained in 11i, Continental Zone Foothills, and 3 percent is in 11k, Blue Mountain Basins of the Blue Mountains Ecoregions, while 4 percent is in 12j, Unwooded Alkaline Foothills of the Snake River Plain Ecoregion.

In Malheur County, the study area is located within the Level III Blue Mountains Ecoregion, Level III Snake River Plain Ecoregion, and the Level III Northern Basin and Range Ecoregion. Approximately 25 percent of the study area is contained in 11i, Continental Zone Foothills of the Blue Mountains Ecoregions, while 10 percent is in the 12a Treasure Valley and 35 percent is in 12j, Unwooded Alkaline Foothills of the Snake River Plain Ecoregion. The remaining 30 percent of the study area in Malheur County is located within 80f, Owyhee Uplands and Canyons of the Northern Basin and Range Ecoregion.

Table 2 shows the native shrubs and herbs that were documented during the 2012 wetland delineations by county that may be used for site revegetation. The choice of seed mixtures will be dependent on the existing vegetation types, the availability of commercial, weed-free live seed at the time of seeding, and landowner approval.

**Table 2. Native Plants Documented During Delineations**

Scientific Name	Common Name	Stratum	Wetland Indicator Status	County
<i>Salix exigua</i>	narrow-leaf willow	Shrub	OBL	Umatilla
<i>Bidens cernua</i>	nodding burr-marigold	Herb	FACW	Baker
<i>Calamagrostis canadensis</i>	bluejoint	Herb	FACW	Baker, Umatilla
<i>Carex nebrascensis</i>	Nebraska sedge	Herb	OBL	Union, Baker, Umatilla
<i>Deschampsia cespitosa</i>	tufted hairgrass	Herb	FACW	Baker
<i>Distichlis spicata</i>	coastal saltgrass	Herb	FACW	Malheur
<i>Eleocharis palustris</i>	common spike-rush	Herb	OBL	Union, Baker, Malheur, Umatilla
<i>Hordeum brachyantherum</i>	meadow barley	Herb	FACW	Malheur
<i>Hordeum jubatum</i>	fox-tail barley	Herb	FAC	Malheur
<i>Juncus balticus</i>	baltic rush	Herb	OBL	Union, Baker, Malheur
<i>Juncus patens</i>	spreading rush	Herb	FACW	Umatilla
<i>Juncus torreyi</i>	Torrey's rush	Herb	FACW	Baker, Malheur
<i>Mimulus guttatus</i>	seep monkey flower	Herb	OBL	Malheur
<i>Ranunculus aquatilis</i>	white water-crowfoot	Herb	OBL	Baker
<i>Ranunculus sceleratus</i>	cursed buttercup	Herb	OBL	Baker
<i>Schoenoplectus acutus</i>	hard-stem club-rush	Herb	OBL	Malheur
<i>Schoenoplectus americanus</i>	chair-maker's club-rush	Herb	OBL	Baker
<i>Schoenoplectus maritimus</i>	saltmarsh club-rush	Herb	OBL	Malheur
<i>Schoenoplectus tabernaemontani</i>	soft-stem club-rush	Herb	OBL	Morrow

## 2.5 Best Management Practices

Pertinent BMPs for wetland rehabilitation are included here for reference.

- Minimize the length of time that topsoil is segregated.
- Limit the operation of construction equipment within wetlands to that needed for clearing, facility installation, and restoration.
- Limit pulling of tree stumps and grading activities in wetlands to directly over the transmission line, except where necessary to ensure safety.



- Limit grading impacts in saturated or standing-water wetlands and/or in wetlands where rutting may occur by using low ground-weight construction equipment or by operating normal equipment on prefabricated timber or terra mats.
- Segregate the top 1 foot of topsoil from the area disturbed, except in areas where standing water is present or soils are saturated or frozen. Immediately after cleanup, restore the segregated topsoil to its original location.
- Prohibit storage of hazardous materials, chemicals, fuels, and lubricating oils within 100 feet of a wetland boundary unless infeasible.
- Prohibit the refueling of equipment within 100 feet of wetlands unless infeasible.
- Establish stable surface and drainage conditions and the use of erosion control devices to minimize soil erosion and sedimentation. Sediment barriers shall be installed prior to initial disturbance in wetlands and adjacent uplands to prevent sediment transport into the wetland.
- Re-establish terrain compatible with the surrounding landscape.
- Use native plant species for revegetation.

### **3.0 DRAFT MONITORING PLAN**

The purpose of monitoring is to evaluate vegetative survival and establishment, soil moisture, sustaining hydrology, and occurrence of noxious weeds and to identify corrective measures that may be required to ensure successful restoration

#### **3.1 Performance Standards for Rehabilitation**

**Goal 1:** Restore wetland hydrology.

- **Objective 1:** Restore pre-construction soil contours.
- **Performance standard 1:** Restored soil contours match existing contours of undisturbed soil surface adjacent to the disturbance site.
- **Objective 2:** Restore pre-construction soil texture.
- **Performance standard 1:** Restored soil has drainage characteristics like undisturbed soil adjacent to the disturbance site; e.g., does not exhibit inappropriate ponding characteristic of compacted soil.

**Goal 2:** Establish wetland vegetation similar to the native plant component of the temporarily impacted wetlands.

- **Objective 1:** Achieve similar densities of native vegetation at the temporary impact site as were present pre-construction.
- **Performance standard 1:** Meet or exceed woody stem counts per acre as determined from pre-disturbance conditions.
- **Performance standard 2:** Three years post-construction, vegetation communities will have relative cover of tree, shrub and herbaceous species within ten percent of similar adjacent or nearby wetlands.

### **3.2 Monitoring Schedule and Methodology**

IPC will monitor temporary impact sites for three years. In years 1, 2, and 3, vegetation will be monitored using guidance described in the ODSL's *Routine Monitoring Guidance for Vegetation*. Monitoring events will occur annually during the growing season.

### **3.3 Reporting and Documentation**

IPC will provide a post-construction report demonstrating as-built conditions 90 days from Project completion. It will include representative photographs of completed restoration areas demonstrating pre-impact conditions have been reestablished, documentation of plant and seed materials received from the commercial sources, documentation of soil amendments used, and a summary of pertinent issues encountered during the implementation of the Plan.

For annual reporting, IPC will document the monitoring results in an annual report. Annual reports are described in Section 6.0, below.

## **4.0 MAINTENANCE PLAN**

Maintenance of plantings and seeded areas during the establishment period (i.e., the 24 months following construction) is an essential component of the rehabilitation plan, especially for areas receiving less than 20 inches of average annual precipitation. The objectives of post-installation maintenance are to prevent soil erosion, ensure establishment of trees and shrubs, and remove non-native vegetation that could inhibit native herbaceous plant establishment.

After each monitoring visit, a qualified investigator will report to the Project proponent regarding the revegetation progress of each restored site. The investigator will make recommendations for reseeding or other remedial measures for sites that are not showing sufficient progress toward achieving revegetation success. Appropriate action to meet the objectives of this revegetation plan will be made.

## **5.0 CONTINGENCY PLAN**

Where initial restoration and plant establishment efforts fail to meet plant establishment standards, reseeding, replanting, live cuttings, and/or transplanting may be required to ensure restoration success. Contingency measures that may be implemented include:

- Harvesting and transplanting herbaceous plugs, shrubs, and trees;
- Live cutting collection, storage, and planting; and
- Planting of commercially grown herbaceous plugs or potted shrubs and trees.

Given the 24-month timeframe associated with rehabilitation of temporary impacts, IPC will make a determination of the requirement for contingency measures at the end of the first growing season based on monitoring results.

## **6.0 REPORTING**

IPC will document the monitoring results in an annual report. It is expected that a single annual report will be prepared for the entire Project length, and that this report will be submitted to each of the applicable federal or state agencies. The reports will provide a summary of Project reclamation activities and observations, progress towards or achievement of success, identify

any specific problem areas along the Project, and will include recommendations for additional corrective actions if necessary.

## **7.0 PLAN UPDATES**

Once IPC has received a Site Certificate from the State of Oregon and necessary authorizations from the federal agencies, it will do final engineering on the final Project location. At this time, IPC will prepare a final Site Rehabilitation Plan for submittal to state and federal agencies. The final Site Rehabilitation Plan will be updated prior to the submittal of the JPA.

## **8.0 REFERENCES**

ODSL (Oregon Department of State Lands). 2009. Routine Monitoring Guidance for Vegetation. Available at:

[http://www.oregon.gov/dsl/WW/Documents/dsl\\_routine\\_monitoring\\_guidance.pdf](http://www.oregon.gov/dsl/WW/Documents/dsl_routine_monitoring_guidance.pdf).

ODSL. 2011. Oregon State Archives. Oregon Administrative Rules. Division 85. Administrative Rules Governing the Issuance and Enforcement of Removal-Fill Authorizations within Waters of Oregon Including Wetlands. Available at:

[http://arcweb.sos.state.or.us/pages/rules/oars\\_100/oar\\_141/141\\_085.html](http://arcweb.sos.state.or.us/pages/rules/oars_100/oar_141/141_085.html).

ODSL. 2016. A Guide to the Removal-Fill Permit Process. Available at:

[http://www.oregon.gov/dsl/WW/Documents/Removal\\_Fill\\_Guide.pdf](http://www.oregon.gov/dsl/WW/Documents/Removal_Fill_Guide.pdf).

Thorson, T.D., S.A. Bryce, D.A. Lammers, A.J. Woods, J.M. Omernik, J. Kagan, D.E. Pater, and J.A. Comstock. 2003. Ecoregions of Oregon (color poster with figure, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (figure scale 1:1,500,000). Available online at <https://www.epa.gov/eco-research/ecoregion-download-files-state-region-10>

## **Appendix T, Compensatory Wetland and Non-Wetland Mitigation Plan**

A draft compensatory wetland and non-wetland mitigation plan is attached as a separate document.

The Stream Functional Assessment Methodology is attached to the draft Compensatory Wetland and Non-Wetland Mitigation Plan.

## Attachment J-3

### Removal Fill Permit Conditions

**Attachment J-3: Removal Fill Permit Conditions**

Department of State Lands  
775 Summer Street, Suite 100  
Salem, OR 97301-1279  
☎ 503-986-5200

Permit No.:	<b>61621-RF</b>
Permit Type:	<b>Removal/Fill</b>
Waterway:	<b>Many various wetlands/waters</b>
County:	<b>Morrow, Umatilla, Union, Baker, Malheur</b>
Expiration Date:	<b><i>(To be determined when the permit is issued.)</i></b>

***Idaho Power Company***

**IS AUTHORIZED IN ACCORDANCE WITH ORS 196.800 TO 196.990 TO PERFORM THE OPERATIONS DESCRIBED IN THE REFERENCED APPLICATION, SUBJECT TO THE SPECIAL CONDITIONS LISTED ON ATTACHMENT A AND TO THE FOLLOWING GENERAL CONDITIONS:**

1. This permit does not authorize trespass on the lands of others. The permit holder must obtain all necessary access permits or rights-of-way before entering lands owned by another.
2. This permit does not authorize any work that is not in compliance with local zoning or other local, state, or federal regulation pertaining to the operations authorized by this permit. The permit holder is responsible for obtaining the necessary approvals and permits before proceeding under this permit.
3. All work done under this permit must comply with Oregon Administrative Rules, Chapter 340; Standards of Quality for Public Waters of Oregon. Specific water quality provisions for this project are set forth on Attachment A.
4. Violations of the terms and conditions of this permit are subject to administrative and/or legal action, which may result in revocation of the permit or damages. The permit holder is responsible for the activities of all contractors or other operators involved in work done at the site or under this permit.
5. Employees of the Department of State Lands (DSL) and all duly authorized representatives of the Director must be permitted access to the project area at all reasonable times for the purpose of inspecting work performed under this permit.
6. In issuing this permit, DSL makes no representation regarding the quality or adequacy of the permitted project design, materials, construction, or maintenance, except to approve the project's design and materials, as set forth in the permit application, as satisfying the resource protection, scenic, safety, recreation, and public access requirements of ORS Chapters 196, 390, and related administrative rules.
7. Permittee must defend and hold harmless the State of Oregon, and its officers, agents and employees from any claim, suit, or action for property damage or personal injury or death arising out of the design, material, construction, or maintenance of the permitted improvements.
8. Authorization from the U.S. Army Corps of Engineers may also be required.

**NOTICE:** If removal is from state-owned submerged and submersible land, the permittee must comply with leasing and royalty provisions of ORS 274.530. If the project involves creation of new lands by filling on state-owned submerged or submersible lands, you must comply with ORS 274.905 to 274.940 if you want a transfer of title; public rights to such filled lands are not extinguished by issuance of this permit. This permit does not relieve the permittee of an obligation to secure appropriate leases from DSL, to conduct activities on state-owned submerged or submersible lands. Failure to comply with these requirements may result in civil or criminal liability. For more information about these requirements, please contact Department of State Lands, 503-986-5200.

Kirk Jarvie, Southern Operations Manager  
Aquatic Resource Management  
Oregon Department of State Lands

**Authorized Signature**

## ATTACHMENT A

**Permit Holder: Idaho Power Company**

**Project Name: Boardman to Hemmingway Transmission Line Project (B2H)**

**Special Conditions for Removal/Fill Permit No. 61621-RF**

### **READ AND BECOME FAMILIAR WITH CONDITIONS OF YOUR PERMIT.**

The project site may be inspected by the Department of State Lands (DSL) as part of our monitoring program. A copy of this permit must be available at the work site whenever authorized operations are being conducted.

1. **Responsible Party:** By signature on the application, Dave Wymond is acting as the representative of Idaho Power Company (IPC). By proceeding under this permit, Idaho Power Company agrees to comply with and fulfill all terms and conditions of this permit, unless the permit is officially transferred to another party as approved by the Energy Facility Siting Council (EFSC) in consultation with DSL.
2. **Authorization to Conduct Removal and/or Fill:** This permit authorizes removal and fill of material in various locations in Morrow, Umatilla, Union, Baker and Malheur counties as referenced in the Application for Site Certificate (ASC), Exhibit J, Tables C1A and C2A, maps (Appendices C1-C165), with a final date of September 2018 and summarized as follows:

#### **Summary of Authorized Wetland Impacts**

Wetland #	Permanent			Temporary		
	Acres	Removal (cy)	Fill (cy)	Acres	Removal (cy)	Fill (cy)
See ASC, Exhibit J, Table O-1A	0.211	545	576	0.386	622	622
<b>Total:</b>	<b>0.211</b>	<b>545</b>	<b>576</b>	<b>0.386</b>	<b>622</b>	<b>622</b>

#### **Summary of Authorized Waterway Impacts**

Waterway Name	Permanent			Temporary		
	Linear Ft. /Acres	Removal (cy)	Fill (cy)	Linear Ft. /Acres	Removal (cy)	Fill (cy)
See ASC, Exhibit J, Table O-2A	526/0.071	129	88	887/0.125	206	206
<b>Total:</b>	<b>526/0.071</b>	<b>129</b>	<b>88</b>	<b>887/0.125</b>	<b>206</b>	<b>206</b>

This permit also authorizes removal and fill activities necessary to complete the required compensatory mitigation. In the event information in the application conflicts with these permit conditions, the permit conditions prevail. See ASC, Exhibit J, JPA, Compensatory Mitigation Plan Figure 1 for project location.

3. **Impacts to Areas Where Access has not been Granted (Data-Gap):** This permit allows for removal and fill impacts only within wetlands and other waters of the state that the applicant has had access to, had a delineation and received a concurrence from the Department. When permission to enter the Data-Gap areas is received, an updated wetland delineation will be



Attachment A  
61621-RF  
Page 3 of 12

provided to the Department (DSL) for review. After ODOE receipt of a concurrence from the Department, and after review of a revised removal-fill permit application with updated impacts, ODOE by delegation from EFSC, in consultation with DSL, will update the permit regarding the additional impacts.

4. **Work Period in Jurisdictional Areas:** Fill or removal activities below the ordinary high water elevation of waterways listed in ASC, Exhibit J, Table O-2A must be conducted during the Oregon Department of Fish and Wildlife (ODFW) recommended in-water -work periods, unless otherwise coordinated with ODFW and approved in writing by ODOE and DSL. If fish eggs are observed within the project area, work must cease, and DSL contacted immediately.
5. **Changes to the Project or Inconsistent Requirements from Other Permits:** It is the permittee's responsibility to ensure that all state, federal and local permits are consistent and compatible with the final approved project plans and the project as executed. Any changes made in project design, implementation or operating conditions to comply with conditions imposed by other permits resulting in removal-fill activity must be approved by EFSC in consultation with DSL prior to implementation.
6. **DSL May Halt or Modify:** DSL retains the authority to temporarily halt or modify the project or require rectification in case of unforeseen adverse effects to aquatic resources or permit non-compliance.
7. **DSL May Modify Conditions Upon Permit Renewal:** EFSC and ODOE upon delegation from EFSC, in consultation with DSL retains the authority to modify conditions upon renewal, as appropriate, pursuant to the applicable rules in effect at the time of the request for renewal or to protect waters of this state.

**Pre-Construction**

8. **Stormwater Management Approval Required Before Beginning Work:** Prior to the start of construction, the permittee must obtain a National Pollution Discharge Elimination System (NPDES) permit from the Oregon Department of Environmental Quality (DEQ), if one is required by DEQ.
9. **Authorization to Use Property for Linear Projects:** For linear facility projects, the removal-fill activity cannot occur until the person obtains:
  - a. The landowner's consent;
  - b. A right, title or interest with respect to the property, that is sufficient to undertake the removal or fill activity; or
  - c. A court order or judgment authorizing the use of the property
10. **Pre-construction Resource Area Fencing or Flagging:** Prior to any site grading, the boundaries of the avoided wetlands, waterways, and riparian areas adjacent to the project site must be surrounded by noticeable construction fencing or flagging. The marked areas must be maintained during construction of the project and be removed immediately upon project completion.

### **General Construction Conditions**

11. **Water Quality Certification:** The Department of Environmental Quality (DEQ) may evaluate this project for a Clean Water Act Section 401 Water Quality Certification (WQC). If the evaluation results in issuance of a Section 401 WQC, that turbidity condition will govern any allowable turbidity exceedance and monitoring requirements.
12. **Erosion Control Methods:** The following erosion control measures (and others as appropriate) must be installed prior to construction and maintained during and after construction as appropriate, to prevent erosion and minimize movement of soil into waters of this state.
- All exposed soils must be stabilized during and after construction to prevent erosion and sedimentation.
  - Filter bags, sediment fences, sediment traps or catch basins, leave strips or berms, or other measures must be used to prevent movement of soil into waterways and wetlands.
  - To prevent erosion, use of compost berms, impervious materials or other equally effective methods, must be used to protect soil stockpiled during rain events or when the stockpile site is not moved or reshaped for more than 48 hours.
  - Unless part of the authorized permanent fill, all construction access points through, and staging areas in, riparian and wetland areas must use removable pads or mats to prevent soil compaction. However, in some wetland areas under dry summer conditions, this requirement may be waived upon approval by DSL. At project completion, disturbed areas with soil exposed by construction activities must be stabilized by mulching and native vegetative plantings/seeding. Sterile grass may be used instead of native vegetation for temporary sediment control. If soils are to remain exposed more than seven days after completion of the work, they must be covered with erosion control pads, mats or similar erosion control devices until vegetative stabilization is installed.
  - Where vegetation is used for erosion control on slopes steeper than 2:1, a tackified seed mulch must be used so the seed does not wash away before germination and rooting.
  - Dredged or other excavated material must be placed on upland areas having stable slopes and must be prevented from eroding back into waterways and wetlands.
  - Erosion control measures must be inspected and maintained as necessary to ensure their continued effectiveness until soils become stabilized.
  - All erosion control structures must be removed when the project is complete, and soils are stabilized and vegetated.
13. **Hazardous, Toxic, and Waste Material Handling:** Petroleum products, chemicals, fresh cement, sandblasted material and chipped paint, wood treated with leachable preservatives or other deleterious waste materials must not be allowed to enter waters of this state. Machinery refueling is to occur at least 150 feet from waters of this state and confined in a designated area to prevent spillage into waters of this state. Barges must have containment system to effectively prevent petroleum products or other deleterious material from entering waters of this state. Project-related spills into waters of this state or onto land with a potential to enter waters of this state must be reported to the Oregon Emergency Response System (OERS) at 1-800-452-0311.
14. **Archaeological Resources:** If any archaeological resources, artifacts or human remains are encountered during construction, all construction activity must immediately cease. The State Historic Preservation Office must be contacted at 503-986-0674. You may be contacted by a

Attachment A  
61621-RF  
Page 5 of 12

Tribal representative if it is determined by an affected Tribe that the project could affect Tribal cultural or archeological resources.

15. **Construction Corridor:** There must be no removal of vegetation or heavy equipment operating or traversing outside the designated construction corridor or footprint (Appendices C1-C165).
16. **Hazards to Recreation, Navigation or Fishing:** The activity must be timed so as not to unreasonably interfere with or create a hazard to recreational or commercial navigation or fishing.
17. **Operation of Equipment in the Water:** Heavy equipment may be positioned on or traverse the area below ordinary high water only when the area is free of flowing or standing water or if the area is isolated from the waterway and aquatic organism salvage is completed, as described in the application. All machinery operated below ordinary high water (OHW) elevation must use vegetable-based hydraulic fluids, be steam cleaned and inspected for leaks prior to each use, and be diapered to prevent leakage of fuels, oils, or other fluids below OHW elevation. Any equipment found to be leaking fluids must be immediately removed from and kept out of OHW until repaired. Equipment staging, cleaning, maintenance, refueling, and fuel storage must be at least 150 feet from OHW and wetlands to prevent contaminants from entering waters of the state.
18. **Work Area Isolation:** Within perennial streams or when water is present in intermittent streams, the work area must be isolated from the water during construction by using a coffer dam or similar structure in accordance with the work area isolation plan in the application. All structures and materials used to isolate the work area must be removed immediately following construction and water flow returned to pre-construction conditions.
19. **Fish Salvage Required:** Fish must be salvaged from the isolation area. Permits from NOAA Fisheries and Oregon Department of Fish and Wildlife, Fish Research are required to salvage fish. Fish salvage permit information may be obtained by contacting ODFW Fish Research at 503-947-6254 or [Fish.Research@state.or.us](mailto:Fish.Research@state.or.us).
20. **Fish Passage Required:** The project must meet Oregon Department of Fish and Wildlife requirements for fish passage.
21. **Raising or Redirecting Water:** The project must not cause water to rise or be redirected and result in damage to structures or property on the project site as well as adjacent, nearby, upstream, and downstream of the project site.
22. **Temporary Ground Disturbances:** All temporarily disturbed areas must be returned to original ground contours at project completion.

### **Riprap Placement**

23. **Riprap Placement Methods:** Riprap/rock must be placed under the following conditions:
  - a. Only clean, erosion resistant rock from an upland source must be used as riprap. No broken concrete or asphalt must be used.
  - b. Riprap rock must be placed in a manner that does not increase the upland surface area.
  - c. Riprap must be placed in a way as to minimize impacts to the active stream channel.

Attachment A  
61621-RF  
Page 6 of 12

- d. Gravel or filter fabric should be placed behind the riprap rock, including the toe trench rock, as a filter blanket.
- e. All riprap rock must be placed, not dumped, from above the bank line.

**24. Riprap Must Be Covered:** Riprap above ordinary high water elevation must be covered and the voids filled with soil, gravel, and / or mulch sufficient to allow the performance standards to be achieved and wildlife to move across it naturally.

### **Rectification of Temporary Impacts**

**25. Site Rectification Required for Temporary Wetland Impacts:** Site rectification for temporary impacts to 0.386 acre of wetland and 887 linear feet of other waters must be conducted according to the Site Rehabilitation Plan in the application. Failure to rectify the site may result in additional compensatory mitigation.

**26. Pre-construction Elevations Must Be Restored Within the Same Construction Season:** Construction activities within areas identified as temporary impact must not exceed two construction seasons and rectification of temporary impacts must be completed within 24 months of the initiation of impacts. However, if the temporary impact only requires one construction season, re-establishment of pre-construction contours must be completed within that same construction season, before the onset of fall rains.

**27. Woody Vegetation Planting Required:** Planting of native woody vegetation must be completed before the next growing season after re-establishment of the pre-construction contours.

**28. Rectification Monitoring Report(s) Required:** A post-construction rectification report demonstrating as-built conditions and discussing any variation from the approved plan must be provided to DSL and ODOE within 90 days of revegetation. The post-construction rectification report must include:

- a. Photos from fixed photo points. This should clearly show the site conditions.
- b. A narrative that describes any deviation from the approved rectification plan.

### **Compensatory Mitigation**

**The following conditions apply to the actions proposed in the final compensatory mitigation plan, dated September, 2018.**

**29. Acreage and Type:** Mitigation must be conducted according to the minimum acreages and methods described in the table below.

**Summary of Wetland Mitigation**

<b>Acres</b>	<b>Credits</b>	<b>Cowardin, HGM Class</b>	<b>Method</b>
2.5	1.67	riverine flow-through, Palustrine Emergent (PEM)	creation
1.69	1.13	riverine flow-through, Palustrine Scrub-shrub (PSS)	creation
0.57	0.38	riverine flow-through, Palustrine Forested (PFO)	creation
1.45	0.48	riverine flow-through, Palustrine Emergent (PEM)	enhancement
<b>6.21</b>	<b>3.66</b>	<b>Wetland Mitigation Totals</b>	

Attachment A  
61621-RF  
Page 7 of 12

### Summary of Waterway Mitigation

Linear Feet		Action	Method
432		In water structure placement	enhancement
1080		Riparian planting	enhancement
810		New channel construction	creation
<b>1322</b>		<b>Waterway Total</b>	

30. **Mitigation Site Location:** The mitigation must be conducted off-site. The center-point of the mitigation site is 45.3775 degrees Latitude, -117.8878 degrees Longitude. The current legal description is Township 2 South, Range 40 East, Section 19CB, in Tax Lot 3200. as shown on ASC, Exhibit J, JPA, Compensatory Wetland Mitigation Plan, Figure 1.
31. **Timing of Mitigation Site Grading:** Mitigation site grading must be completed prior to or within the same construction season as the commencement of the wetland impacts.
32. **Signs Required:** Signs must be posted along the mitigation site perimeter stating that the area behind the sign is a protected site.
33. **Long-term Protection of the Mitigation Site - Deed Restriction:** The mitigation site must be protected in perpetuity by recording the approved Declaration of Covenants and Restrictions and Access Easement (Protection Instrument) on the deed of the property. The protection instrument must be approved and signed by DSL prior to recording with Union County. A copy of the recorded instrument must be sent to DSL and ODOE with the post-construction report.
34. **Long-term Protection of the Mitigation Site - Conservation Easement:** The mitigation site must be protected in perpetuity by conveying an approved Conservation Easement to Grande Ronde Model Watershed or another non-profit or non-governmental organization. The protection instrument must be approved and signed by DSL prior to recording with Union County. A copy of the recorded easement must be sent to DSL and ODOE with the post-construction report.
35. **GIS Data:** A georeferenced shapefile (.shp) must be submitted to DSL prior to mitigation site release that documents the spatial extent of the mitigation site(s), including buffers. The shapefile must conform to the Oregon Lambert (Intl. Feet) projection.
36. **Long-term Maintenance Required:** Long-term site maintenance is required as described in the Compensatory Mitigation Plan in the application.

### Monitoring and Reporting Requirements

37. **Post-Construction Report Required:** A post-construction report demonstrating as-built conditions and discussing any variation from the approved plan must be provided to DSL and ODOE within 90 days of revegetation. The post-construction report must include:
- c. A scaled drawing, accurate to 1-foot elevation, clearly showing the following:
    - 1. Finished contours of the site.
    - 2. Current tax lot and right-of-way boundaries.
    - 3. Photo point locations.
  - d. Photos from fixed photo points. This should clearly show the site conditions, and any signage, and fencing required.
  - e. A narrative that describes any deviation from the approved mitigation plan.



Attachment A  
61621-RF  
Page 8 of 12

- f. A copy of the recorded deed restriction or conservation easement.

**38. Annual Monitoring Reports Required:** Monitoring is required until DSL has officially released the site from further monitoring when the site has met all success criteria as determined by DSL. The permittee must monitor the site to determine whether the site is meeting performance standards for a minimum period of 5 growing seasons after completion of all the initial plantings. Annual monitoring reports are required and are due by December 31, with a copy sent to ODOE. Failure to submit the required monitoring report by the due date may result in an extension of the monitoring period, forfeiture of the financial security and/or enforcement action.

**39. Extension of the Monitoring Period:** The monitoring period may be extended, at the discretion of DSL, for failure of the site to meet performance standards for the final two consecutive years without corrective or remedial actions (such as irrigation, significant weed/invasive plants treatment or replanting) or when needed to evaluate corrective or remedial actions.

**40. Contents of the Annual Monitoring Report:** The annual monitoring report must include the following information:

- a. Completed Monitoring Report Cover Sheet, which includes permit number, permit holder name, monitoring date, report year, performance standards, and a determination of whether the site is meeting performance standards.
- b. Site location map(s) that clearly shows the impact site and mitigation site boundaries.
- c. Site Plan that clearly shows at least the following.
  - 1. The area seeded, with the square foot area listed.
  - 2. The area planted with trees and shrubs, with the square foot area listed.
  - 3. Current tax lot and right-of-way boundaries.
  - 4. Permanent monitoring plot locations that correspond to the data collected and fixed photo-points. These points should be overlaid on the as-built map.
  - 5. PEM, PSS, PFO, riparian areas, and buffer clearly identified separately and the area (square foot or acreage) of each noted.
  - 6. Creation, restoration, enhancement, and preservation areas identified separately, with the area of each listed.
- d. A brief narrative that describes maintenance activities and recommendations to meet success criteria. This includes when irrigation occurred and when the above ground portion of the irrigation system was or will be removed from the site.
- e. Data collected to support the conclusions related to the status of the site relative to the performance standards listed in this permit (include summary/analysis in the report and raw data in the appendix). Data should be submitted using the DSL Mitigation Monitoring Vegetation Spreadsheet or presented in a similar format as described in DSL's Routine Monitoring Guidance for Vegetation.
- f. Photos from fixed photo points (include in the appendix).
- g. Other information necessary or required to document compliance with the performance standards listed in this permit.
- h. A post-construction functional assessment by the end of the monitoring period.

**41. Corrective Action May Be Required:** DSL retains the authority require corrective action in the event the performance standards are not accomplished at any time within the monitoring period.

### **Performance Standards**

**To be deemed successful, the mitigation areas including buffers must meet the following performance standards, as determined by DSL:**

42. **Establishment of Permanent Monitoring Locations Required:** Permanent plot locations must be established during the first annual monitoring in sufficient number and locations to be representative of the site. The permanent plot locations must be clearly marked on the ground.
43. **Wetland Acreage Required:** The site will have a minimum acreage as shown in the Acreage and Type table above, as determined by a Wetland Delineation Light with data collected during spring of a year when precipitation has been near normal, vegetation has been established, and irrigation has been removed for at least two years. Acreage must be documented on a printed map and in a GIS shapefile (.shp) including attribute information for each unique wetland polygon identifying the size as well as HGM and Cowardin classes.

### ***Herbaceous Wetlands***

44. **Native Species Cover:** The cover of native species, as defined in the USDA Plants Database, in the herbaceous stratum is at least 60%.
45. **Invasive Species Cover:** The cover of invasive species is no more than 10%. A plant species should automatically be labeled as invasive if it appears on the current Oregon Department of Agriculture noxious weed list, plus known problem species including *Phalaris arundinacea*, *Mentha pulegium*, *Holcus lanatus*, *Anthoxanthum odoratum*, and the last crop plant if it is non-native. Non-native plants should be labeled as such if they are listed as non-native on the USDA Plants Database. Beginning in Year 2 of monitoring, DSL will consider a non-native plant species invasive if it comprises more than 15% cover in 10% or more of the sample plots in any habitat class and increases in cover or frequency from the previous monitoring period. Plants that meet this definition will be considered invasive for all successive years of monitoring.
46. **Bare Substrate Cover:** Bare substrate represents no more than 20% cover.
47. **Species Diversity:** By Year 3 and thereafter, there are at least 6 different native species. To qualify, a species must have at least 5% average cover in the habitat class and occur in at least 10% of the plots sampled.
48. **Moisture Prevalence Index:** Prevalence Index is <3.0.

### ***Shrub-dominated and Forested Wetlands***

49. **Native Species Cover:** The cover of native species, as defined in the USDA Plants Database, in the herbaceous stratum is at least 60%.
50. **Invasive Species Cover:** The cover of invasive species is no more than 10%. A plant species should automatically be labeled as invasive if it appears on the current Oregon Department of Agriculture noxious weed list, plus known problem species including *Phalaris arundinacea*, *Mentha pulegium*, *Holcus lanatus*, *Anthoxanthum odoratum*, and the last crop plant if it is non-

Attachment A  
61621-RF  
Page 10 of 12

native. Non-native plants should be labeled as such if they are listed as non-native on the USDA Plants Database. Beginning in Year 2 of monitoring, DSL will consider a non-native plant species invasive if it comprises more than 15% cover in 10% or more of the sample plots in any habitat class and increases in cover or frequency from the previous monitoring period. Plants that meet this definition will be considered invasive for all successive years of monitoring. After the site has matured to the stage when desirable canopy species reach 50% cover, the cover of invasive understory species may increase but may not exceed 30%.

**51. Bare Substrate Cover:** Bare substrate represents no more than 20% cover.

**52. Woody Vegetation:** The density of woody vegetation is at least 1,600 live native plants (shrubs) and/or stems (trees) per acre OR the cover of native woody vegetation on the site is at least 50%. Native species volunteering on the site may be included, dead plants do not count, and the standard must be achieved for 2 years without irrigation.

**53. Species Diversity:** By Year 3 and thereafter, there are at least 6 different native species. To qualify, a species must have at least 5% average cover in the habitat class and occur in at least 10% of the plots sampled.

**54. Moisture Prevalence Index:** Prevalence Index total for all strata is <3.0.

### ***Riparian Areas***

**55. Native Species Cover:** The cover of native species, as defined in the USDA Plants Database, in the herbaceous stratum is at least 60%.

**56. Invasive Species Cover:** The cover of invasive species is no more than 10%. A plant species should automatically be labeled as invasive if it appears on the current Oregon Department of Agriculture noxious weed list, plus known problem species including *Phalaris arundinacea*, *Mentha pulegium*, *Holcus lanatus*, *Anthoxanthum odoratum*, and the last crop plant if it is non-native. Non-native plants should be labeled as such if they are listed as non-native on the USDA Plants Database. Beginning in Year 2 of monitoring, DSL will consider a non-native plant species invasive if it comprises more than 15% cover in 10% or more of the sample plots in any habitat class and increases in cover or frequency from the previous monitoring period. Plants that meet this definition should be considered invasive for all successive years of monitoring. After the site has matured to the stage when desirable canopy species reach 50% cover, the cover of invasive understory species may increase but may not exceed 30%.

**57. Woody Vegetation:** The density of woody vegetation is at least 1,600 live native plants (shrubs) and/or stems (trees) per acre OR the cover of native woody vegetation on the site is at least 50%. Native species volunteering on the site may be included, dead plants do not count, and the standard must be achieved for 2 years without irrigation.

### **Financial Security**

**58. Financial Security Required:** A performance bond (financial security) in the amount of \$15,078 has been provided to DSL to ensure completion of compensatory mitigation in accordance with the conditions of this permit. Failure to keep the performance bond continuously in effect through the date of full performance of all the permit holder's obligations hereunder will constitute a

Attachment A  
61621-RF  
Page 11 of 12

violation and default of this permit by permit holder. If at any time DSL is notified that the performance bond is to be canceled or not renewed, and a replacement financial security is not in place before the termination date, DSL may declare the permit holder to be in breach or default of its performance obligation under this permit. DSL may claim the full unreleased portion of the penal sum of the financial security, which the holder must pay to DSL with 20 days after delivery of written notice to the holder of such financial security of such breach of default by permit holder.

**59. Incremental Release of the Financial Security:** The permit holder must file a written request with the agency for release of portions of this financial security. Portions of the financial security may be released at the discretion of DSL, based on the following schedule:

- a. 25% release upon approval of the post-construction report, site protection instrument recorded, and first growing season monitoring report showing site constructed as approved by DSL.
- b. 25% release upon demonstration that the required acreages of wetland have been confirmed by delineation of wetland hydrology and hydrophytic vegetation, and the site is meeting all applicable performance standards after two growing seasons.
- c. 50% release upon approval of the final monitoring report and demonstrated success of the mitigation project based on the performance standards listed in this permit. All performance standards must be met for the final two consecutive years without irrigation, substantial weed or invasive species treatment, or replanting.

### Monitoring and Reporting Schedule

Report	Requirements	Schedule	Financial Surety Release Schedule
Post-Construction	Post-construction report  Recorded Protection Instrument	90 days after completion of revegetation	
First Annual Report	Establishment of permanent monitoring locations  Vegetation performance standards  Demonstration that wetland hydrology has been accomplished  Evidence that water rights are secured, or are not required	After one growing season of all proposed plantings	25% upon approval of the first annual monitoring report and post-construction report.  Site protection instrument recorded.
Second Annual Report	Vegetation performance standards	After two growing seasons	
Third and Fourth Annual Reports	Vegetation performance standards  Actual acreage achieved by HGM and Cowardin class <sup>1</sup> .	After three and four growing seasons, respectively. One "light delineation" should be completed during spring of a year when precipitation has been near	Up to 25% of original amount upon achieving wetland acreage confirmed by delineation of wetland hydrology and wetland vegetation, and

Attachment A  
61621-RF  
Page 12 of 12

Report	Requirements	Schedule	Financial Surety Release Schedule
		normal and no irrigation has been in use during the previous two years	meeting all applicable performance standards
Fifth Annual Report (or final report if the monitoring period has been extended)	Vegetation performance standards  Functional assessment <sup>1,2</sup>	After five growing seasons	Final 50% release upon meeting all performance standards. The performance standards must be met for the final two consecutive years without corrective or remedial actions (such as irrigation, significant weed/invasive plants treatment or replanting)

<sup>1</sup>These requirements may be fulfilled any time during the monitoring period but must be received by DSL no later than the fifth annual monitoring.

<sup>2</sup>Functional assessments must meet the standards and requirements in OAR 141-085-0685. The same assessment method used for the pre-mitigation site functional assessment should be used for monitoring purposes, unless otherwise approved by DSL.