LEGEND

- RAILROAD
- TAXLOT BOUNDARY
- STUDY AREA
- ROADWAYS

400 0 400
SCALE IN FEET

anderson perry & associates, inc.

WALLOWA UNION RAILROAD AUTHORITY
JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
WETLAND DELINEATION REPORT

TAX LOT MAP

FIGURE
2A

\\LGSVR6\gisprojects\NortheastOregonEconomicDevelopmentDistrict\1199-581_JosephBrnchRailWTrail\WDR_Taxlots01.mxd, 10/3/2016, 2:22:19 PM, DMC

LEGEND

- RAILROAD
- TAXLOT BOUNDARY
- STUDY AREA
- ROADWAYS

400 0 400
SCALE IN FEET

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WALLOWA UNION RAILROAD AUTHORITY
JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
WETLAND DELINEATION REPORT

TAX LOT MAP

FIGURE
2B

\\LGSVR6\gisprojects\NortheastOregonEconomicDevelopmentDistrict\1199-581_JosephBrnchRailWTrailWDR_Taxlots02.mxd, 10/3/2016, 2:22:56 PM, DMC

SEE FIGURE 2B
SEE BELOW
SEE ABOVE
RUSSELL LANE
MULLEN LANE
SAMPLES DRIVE
AIRWAY ROAD
WARNOCK DRIVE
KIEL DRIVE
ALDER STREET
PARK STREET
MILL STREET
PINE STREET
WALLOWA LAKE HIGHWAY
02S4519001000
02S4519001200
02S453000400
02S453000600
02S453000800
02S4530001101
02S453000802
02S4530001000
02S4519001100
02S453000401
02S453000501
02S453000502
02S442500902
02S442400500
02S442400600
02S442500100
02S442500800
02S442500900
02S442500901
02S442500801
02S4425001000
02S4425001001
02S442500700
02S4530001102
02S4530001403
02S4530001406
02S4530001407
02S4530001409
02S4530001405
02S4530001404
02S4530001400
02S4530001408
02S4530001402
02S4530001300
02S4530001200
02S4530001100
02S4530001401
02S453000603
02S453000602
02S453000607
02S453000605
02S453000801
02S453000701
02S453000604
02S4530001700
02S4530002000
02S4530002100
02S4530002200
02S4530002201
02S4530002202
02S4530001800
02S4530001600
02S4530001500
02S4531001700
02S4531001600
02S4531001702
02S443600100
02S443600200
02S442500700
02S442500100
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02S4530DB901
02S4530DA300
02S4530DA700
02S4530DA504
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02S4530DD1200
02S4530DC300
02S4530DC201
02S4530DD902
02S4530DD901
02S4530DD904
02S4530DD600
02S4530DD603
02S4530DD400
02S4530DD300
02S4530DD601
02S4530DD602
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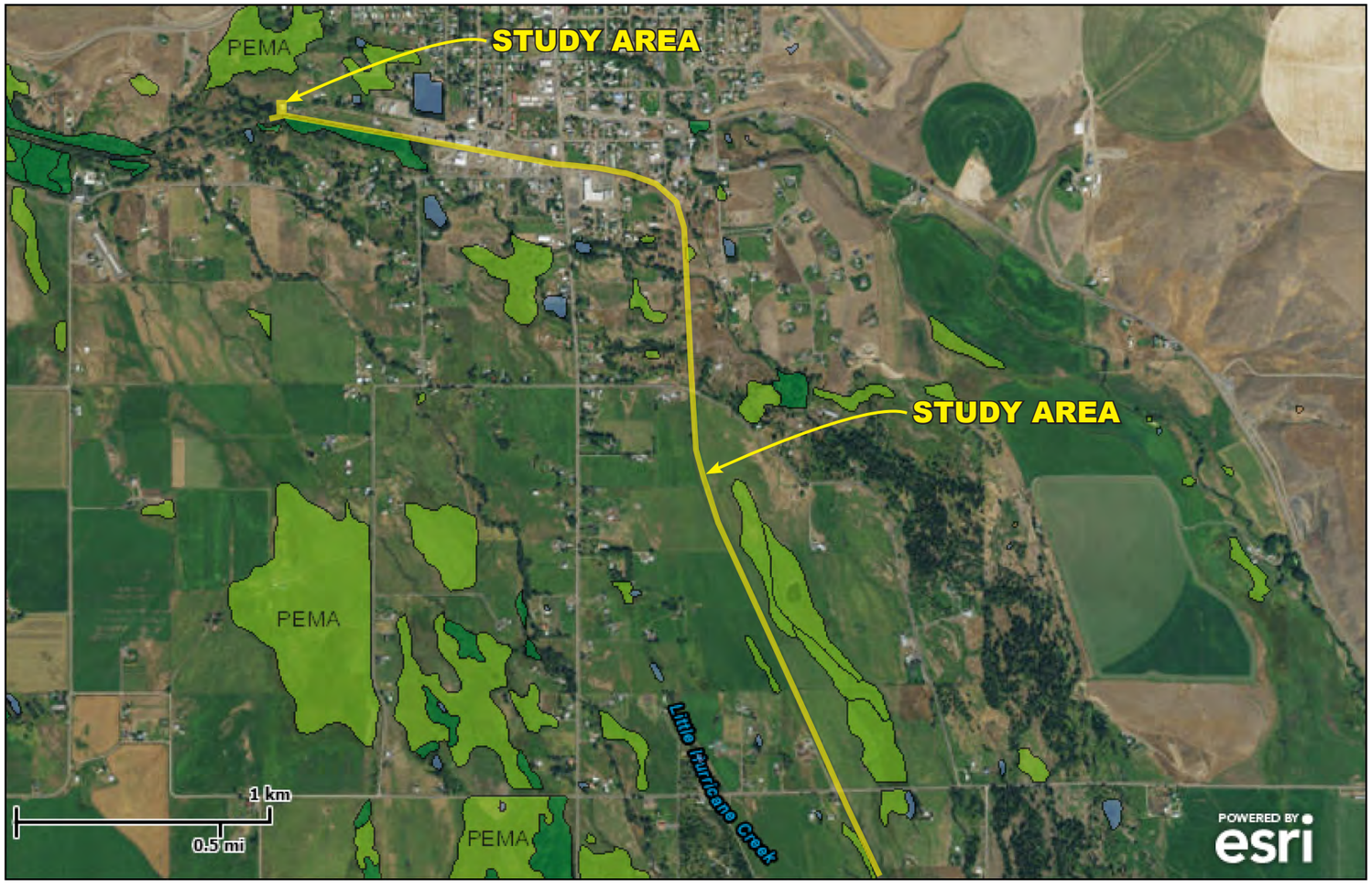
02S4530DD141

U.S. Fish and Wildlife Service

National Wetlands Inventory

Oct. 3, 2016



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

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WALLOWA UNION RAILROAD AUTHORITY
JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
WETLAND DELINEATION REPORT

NATIONAL WETLANDS INVENTORY MAP 1

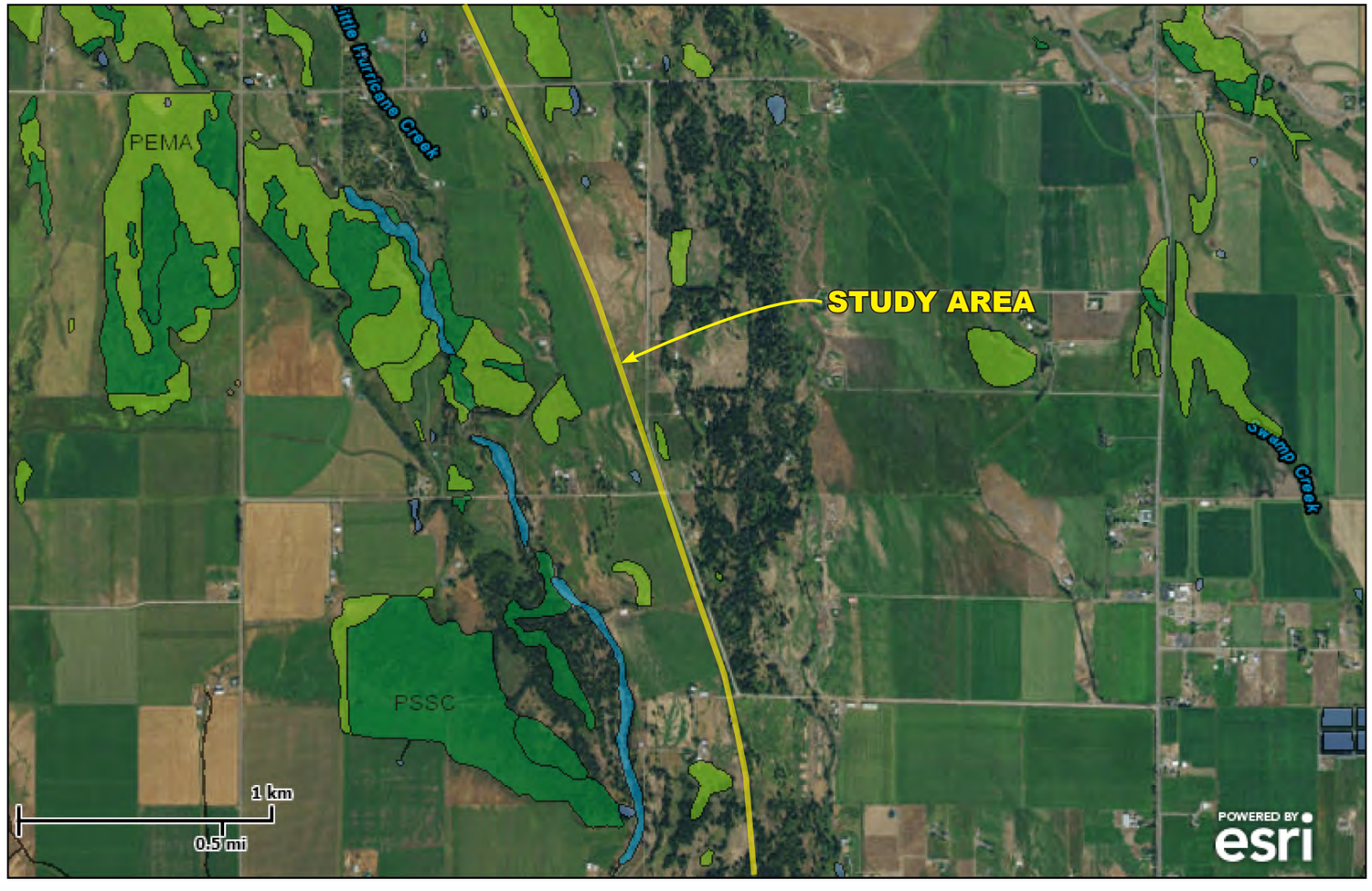
FIGURE 3A

Job# 1199-581-023 Oct. 3, 2016 lbauer

U.S. Fish and Wildlife Service

National Wetlands Inventory

Oct. 3, 2016



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
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- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

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WALLOWA UNION RAILROAD AUTHORITY
JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
WETLAND DELINEATION REPORT

NATIONAL WETLANDS INVENTORY MAP 2

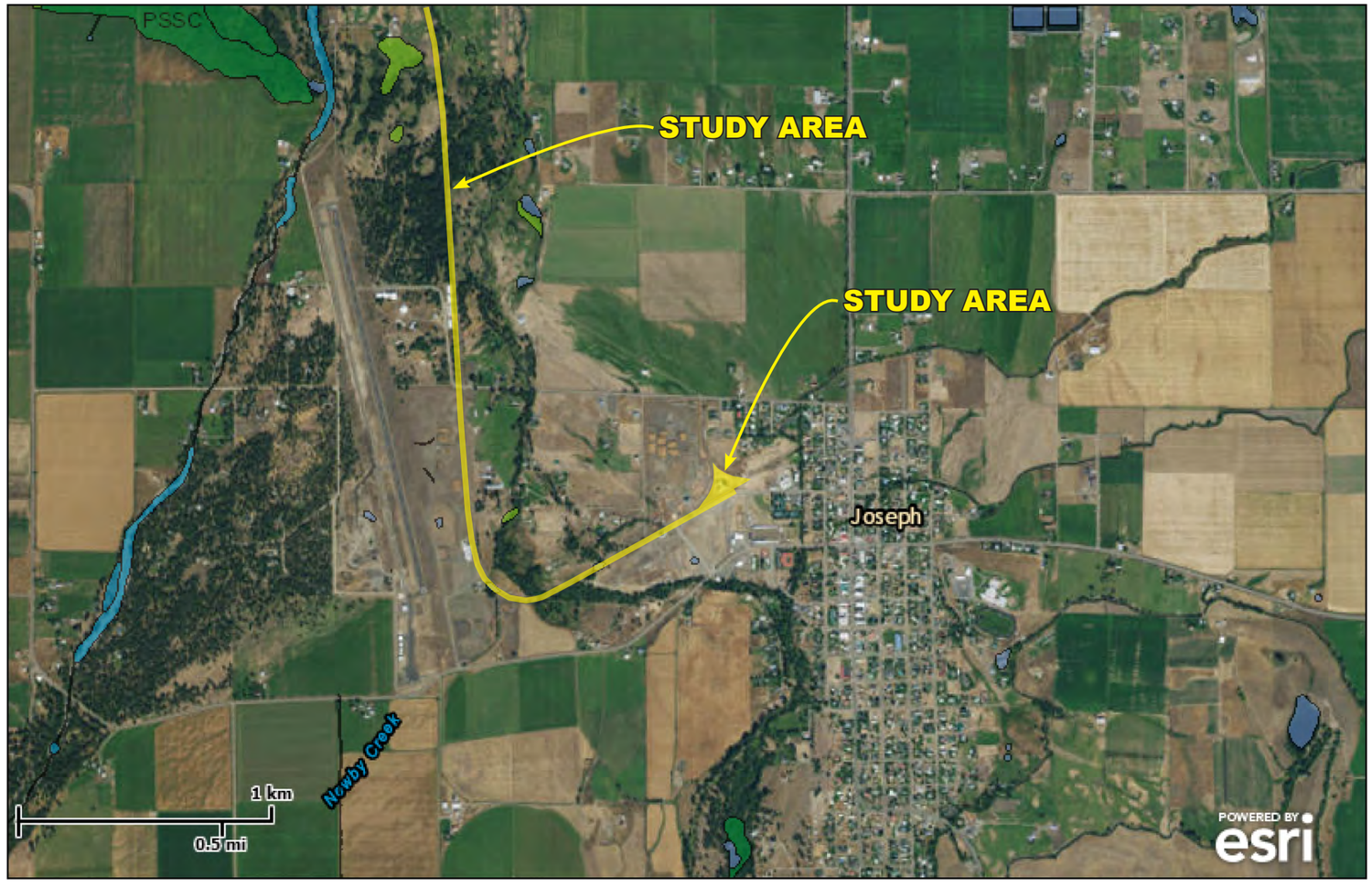
FIGURE
3B

Job# 1199-581-023 Oct. 3, 2016 lbauer

U.S. Fish and Wildlife Service

National Wetlands Inventory

Oct. 3, 2016



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

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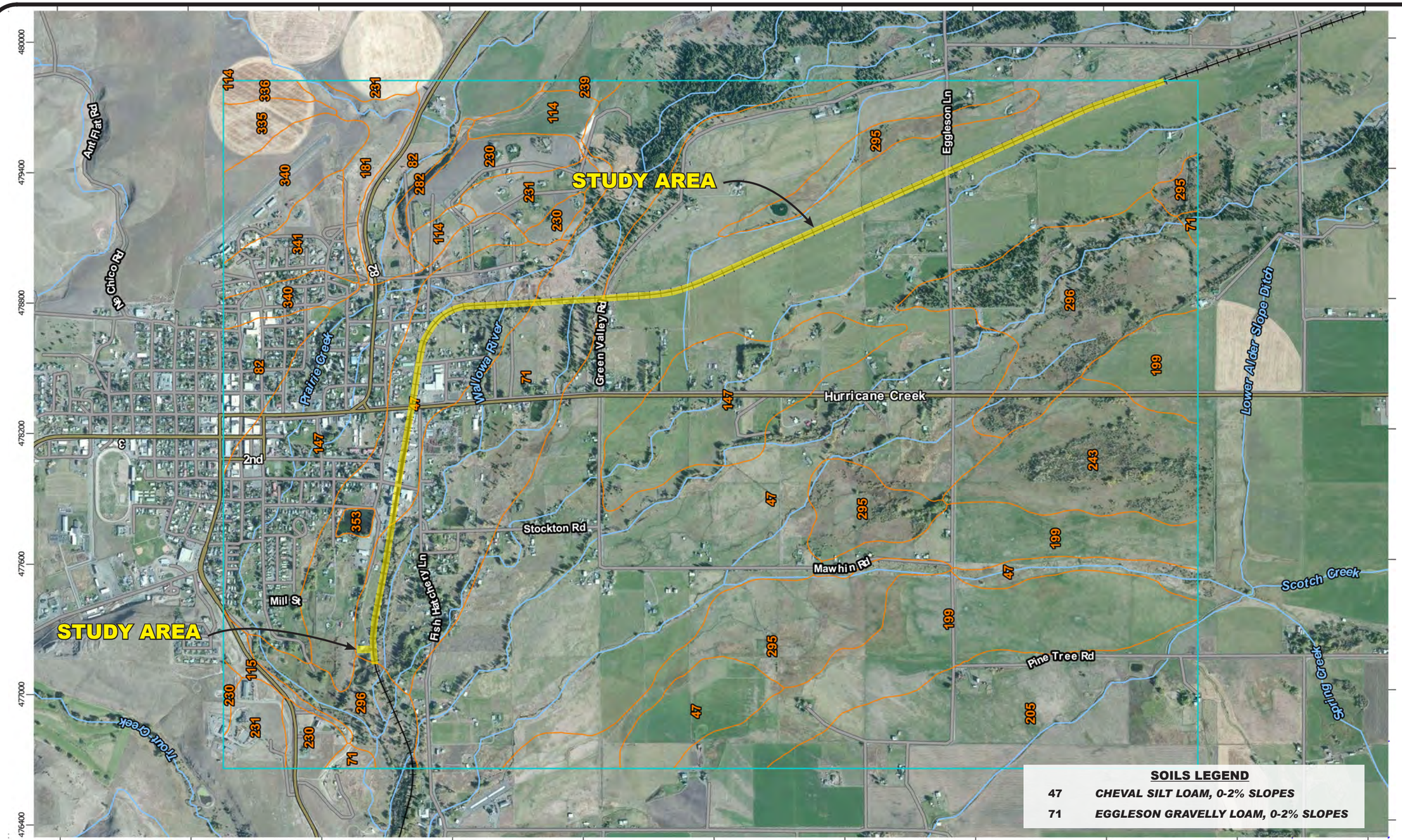
JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
WETLAND DELINEATION REPORT

NATIONAL WETLANDS INVENTORY MAP 3

FIGURE
3C

Job# 1199-581-023 Oct. 3, 2016 lbauer



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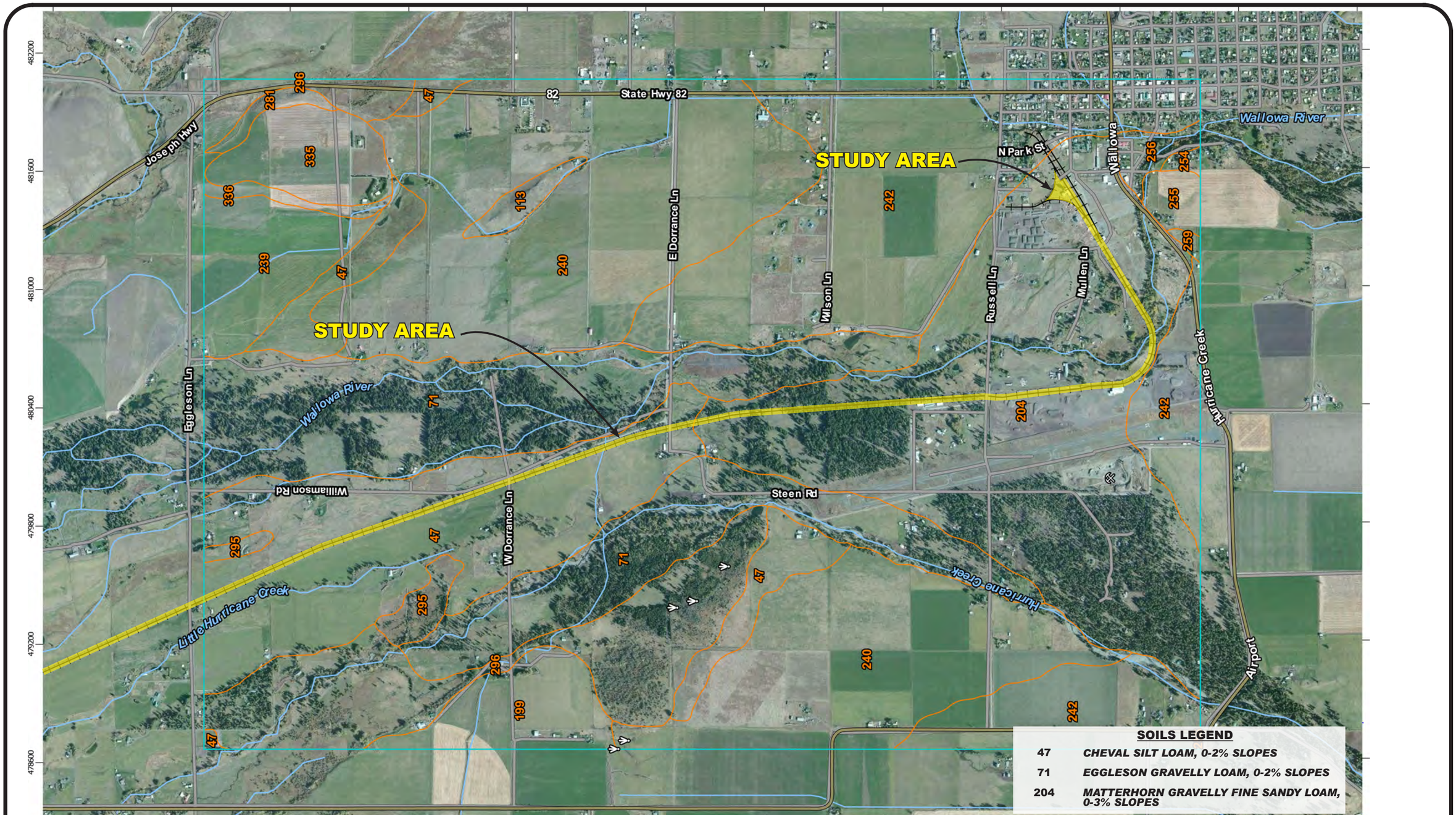
JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
WETLAND DELINEATION REPORT

SOILS MAP 1

FIGURE
4A

Job# 1199-581-023 Oct. 3, 2016 lbauer



Meters: 0 250 500 1000 1500

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

USDA Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

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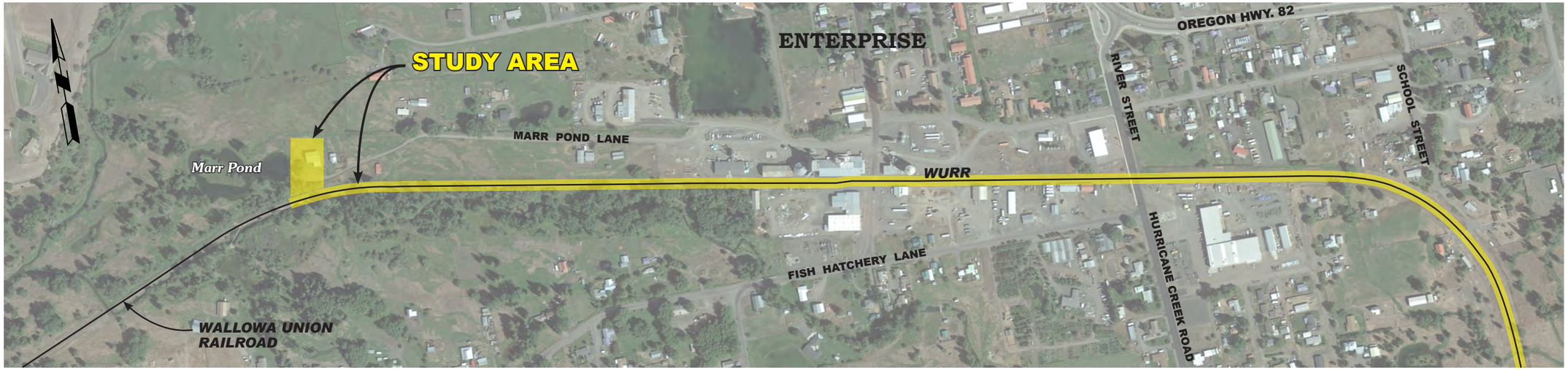
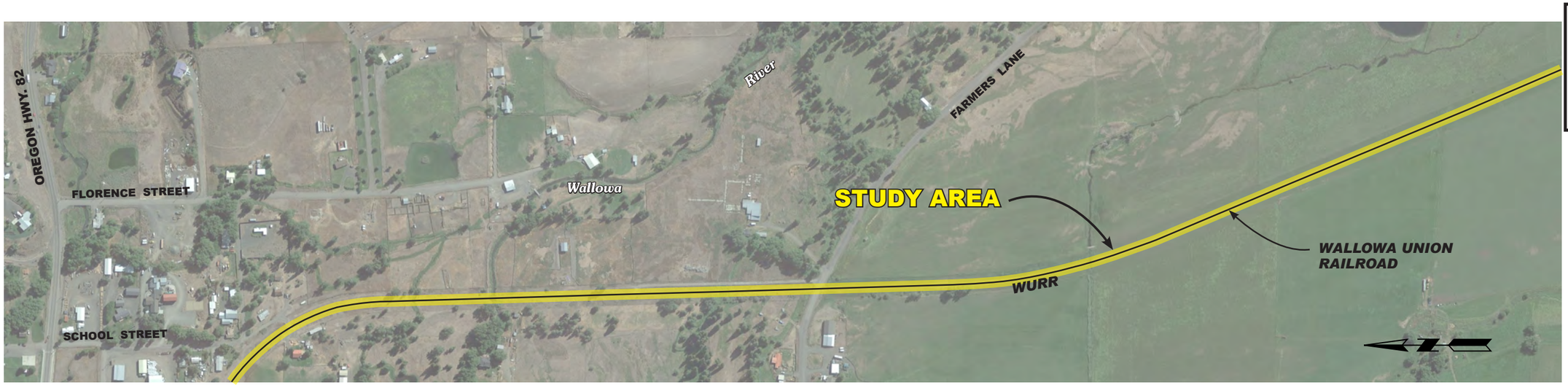
WALLOWA UNION RAILROAD AUTHORITY
JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
WETLAND DELINEATION REPORT

SOILS MAP 2

FIGURE
4B

Job# 1199-581-023 Oct. 3, 2016 lbauer





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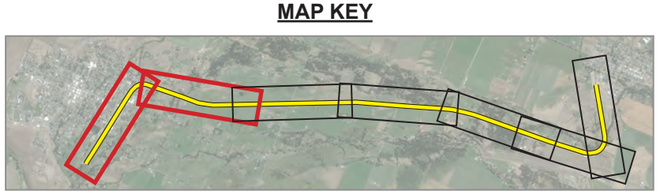

T. 2 S., R. 44-45 E., W.M.

SCALE IN FEET

500 0 500

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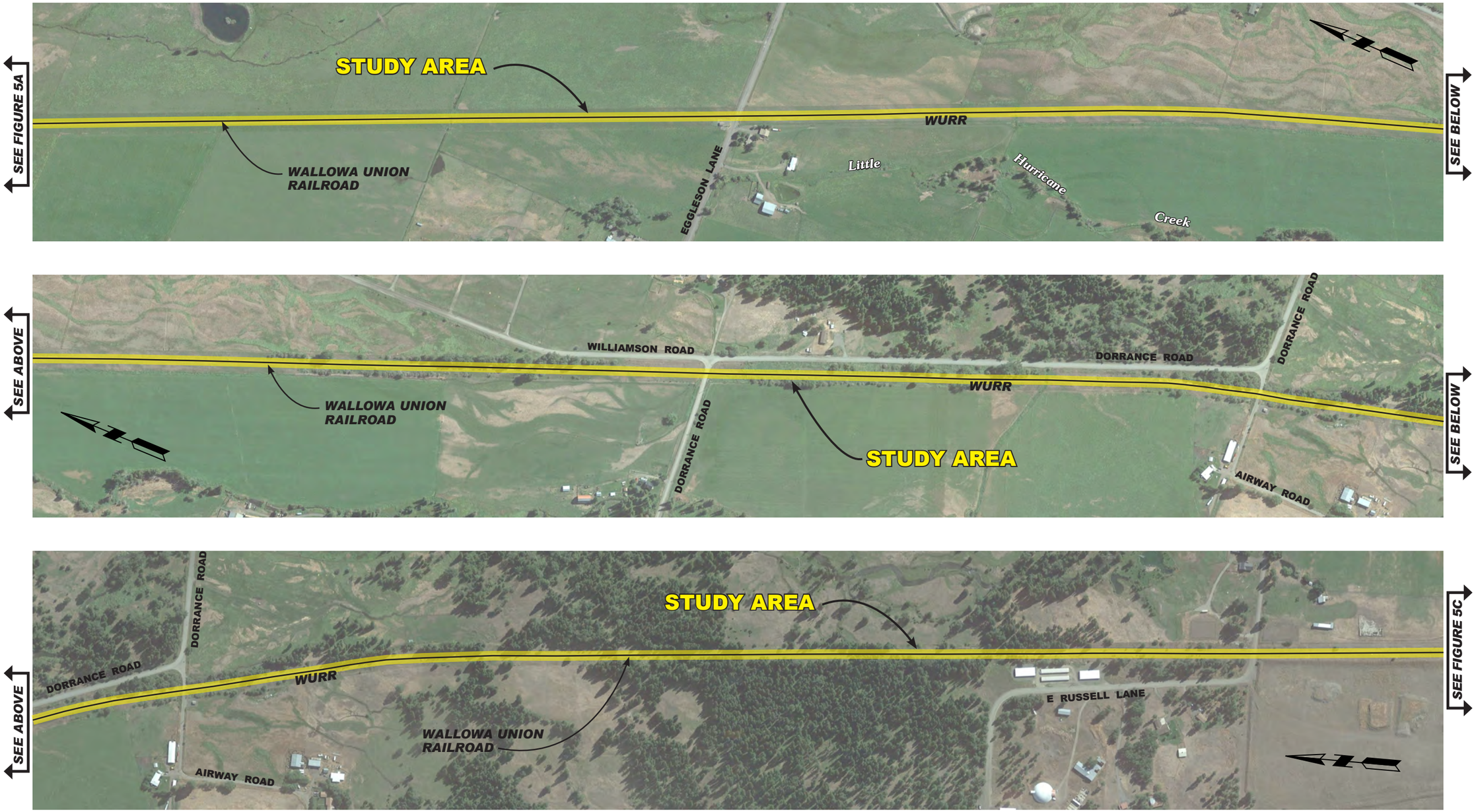
WALLOWA UNION RAILROAD AUTHORITY
JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
WETLAND DELINEATION REPORT

AERIAL PHOTOGRAPH 1

FIGURE
5A

Job# 1199-581-023 Sep. 30, 2016 lbauer



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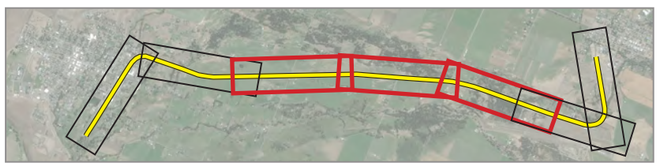

T. 2 S., R. 44-45 E., W.M.

SCALE IN FEET

500 0 500

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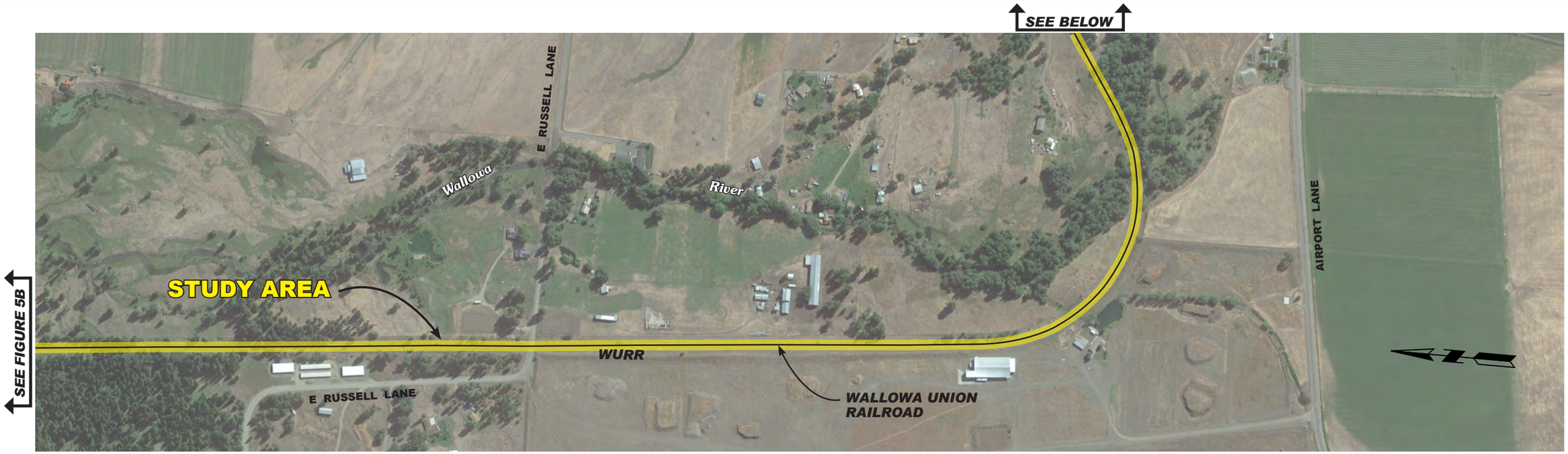
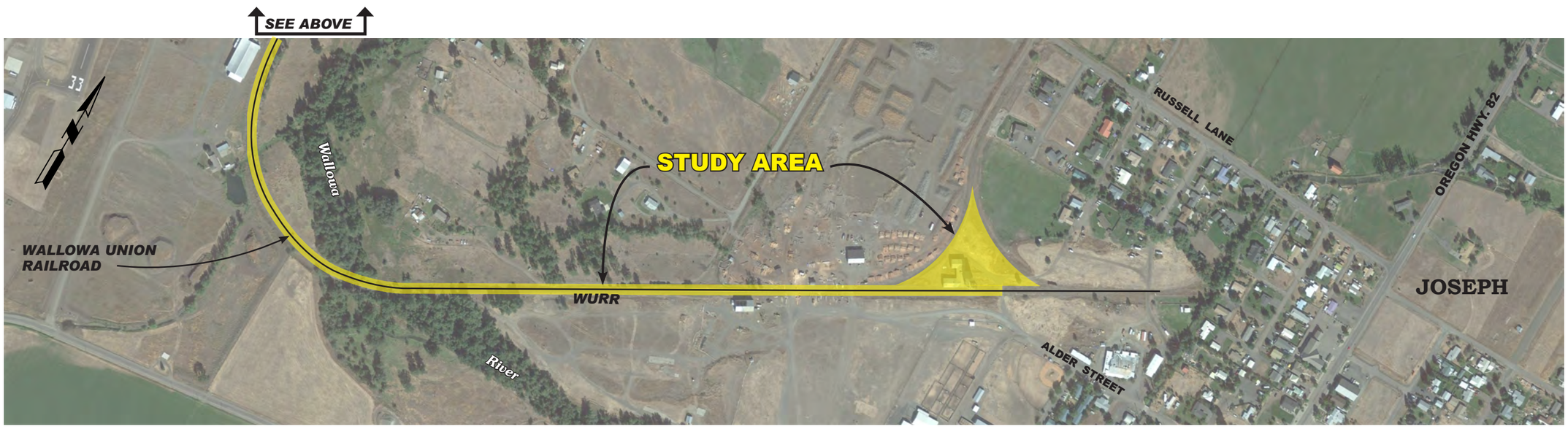
WALLOWA UNION RAILROAD AUTHORITY
JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
WETLAND DELINEATION REPORT

AERIAL PHOTOGRAPH 2

FIGURE
5B

Job# 1199-581-023 Sep. 30, 2016 lbauer





MAP KEY

T. 2 S., R. 44-45 E., W.M.

SCALE IN FEET

500 0 500

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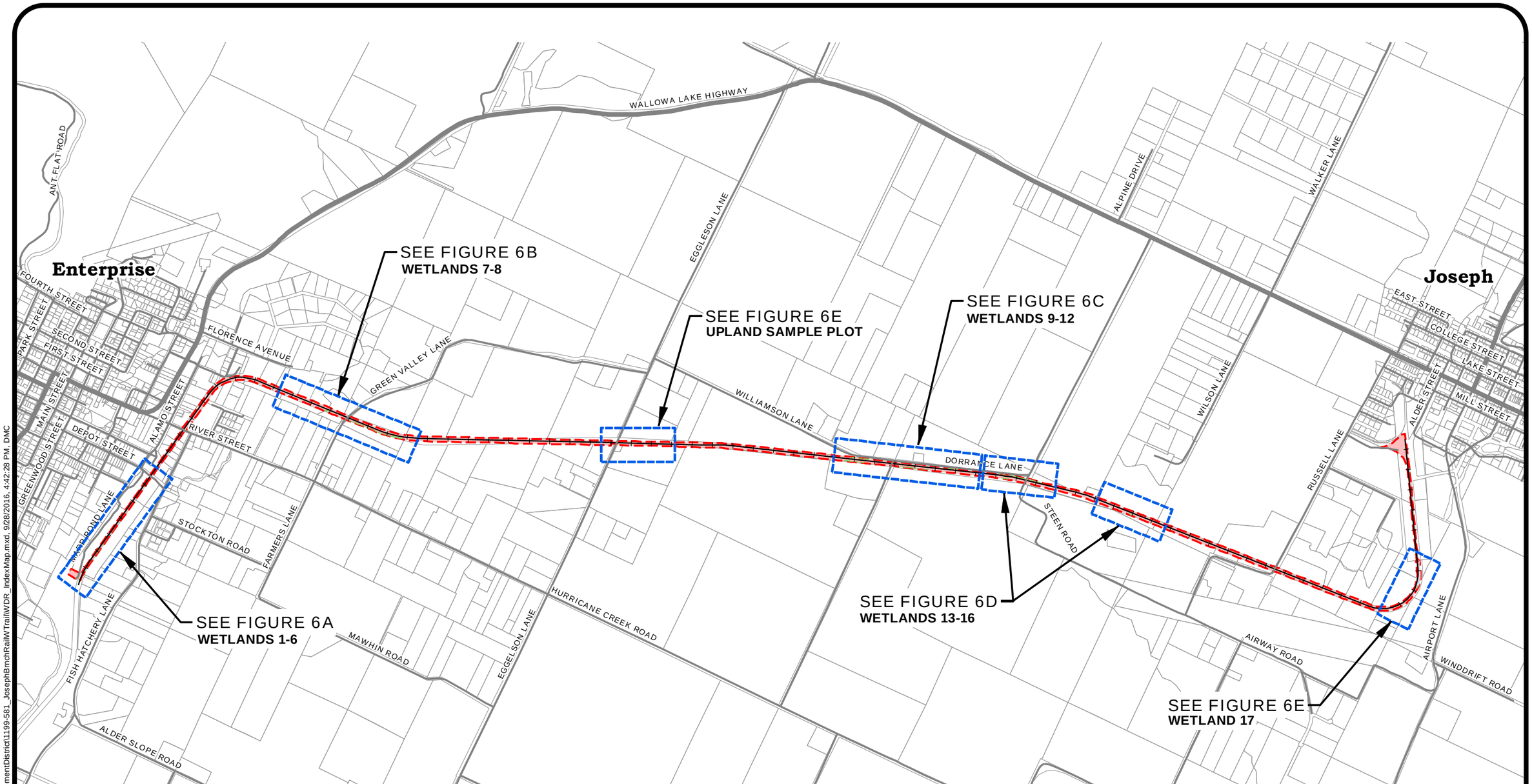
WALLOWA UNION RAILROAD AUTHORITY
JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
WETLAND DELINEATION REPORT

AERIAL PHOTOGRAPH 3

FIGURE
5C

Job# 1199-581-023 Sep. 30, 2016 lbauer



LEGEND

- RAILROAD
- STUDY AREA
- TAXLOT BOUNDARY

NOTES

1. STUDY AREA BOUNDARY, WETLAND BOUNDARY, SAMPLE PLOT LOCATIONS, PHOTO POINT LOCATIONS, AND OHWE SURVEYED WITH RESOURCE-GRADE GPS UNIT TO SUB-METER STANDARDS.
2. TAXLOT BOUNDARIES SHOWN ARE PROVIDED BY WALLOWA COUNTY GIS SERVICES AND MAY NOT REFLECT ACTUAL BOUNDARY LOCATIONS.

2,000 0 2,000
SCALE IN FEET

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WALLOWA UNION RAILROAD AUTHORITY
JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
WETLAND DELINEATION REPORT

WETLAND DELINEATION MAP
PROJECT OVERVIEW

FIGURE
6

\\LGSVR6\gisprojects\NortheastOregonEconomicDevelopmentDistrict\1199-581_JosephBrnchRailWTrail\WDR_IndexMap.mxd, 9/28/2016, 4:42:28 PM, DMC

LEGEND

- SAMPLE PLOT
- PHOTO POINT
- WETLAND AREA BOUNDARY
- ORDINARY HIGH WATER
- RAILROAD
- WATERWAY WITHIN STUDY AREA
- WETLAND WITHIN STUDY AREA
- STUDY AREA
- TAXLOT BOUNDARY

100 0 100
SCALE IN FEET

SEE FIGURE 6 FOR TYPICAL NOTES

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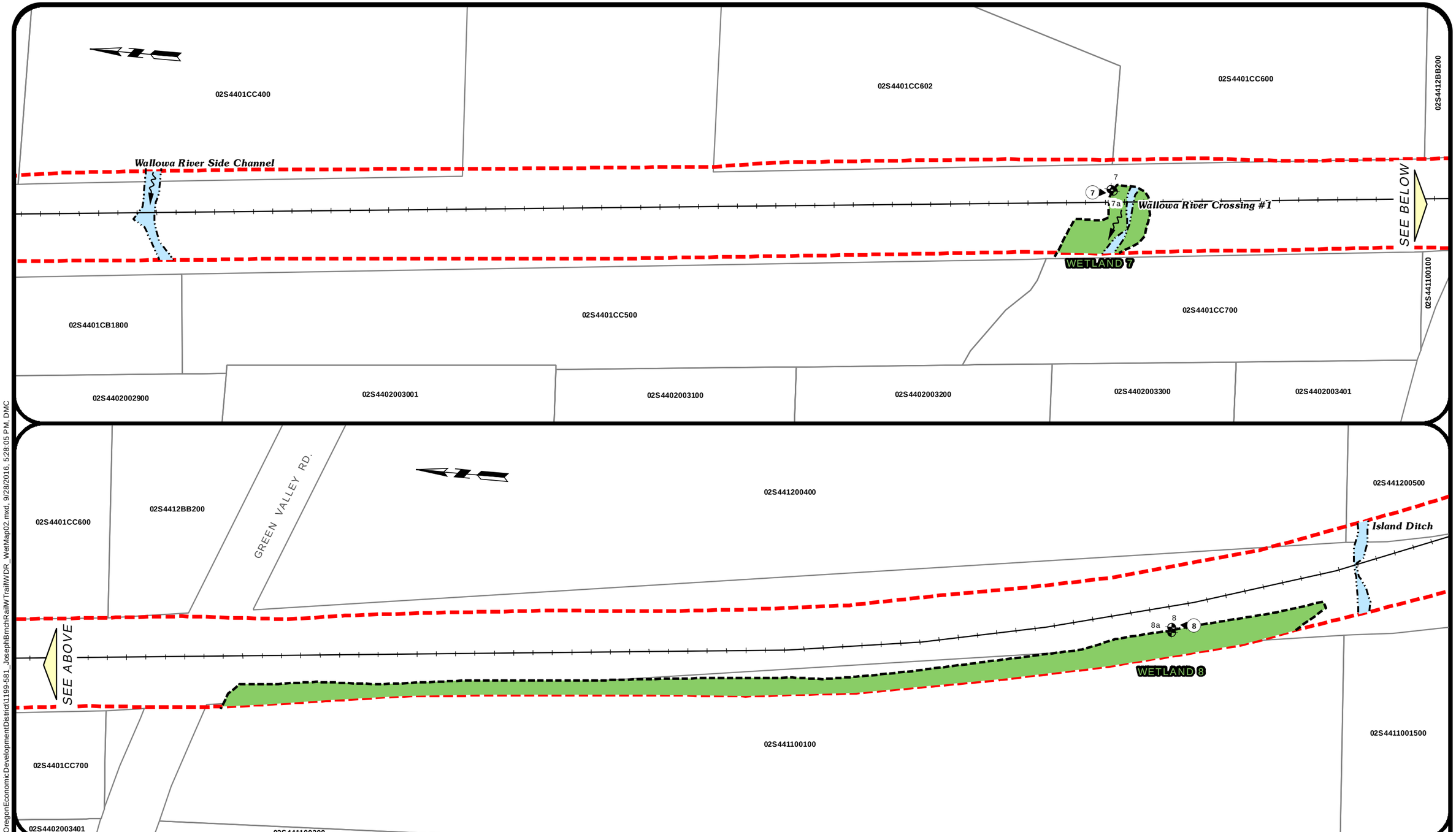
WALLOWA UNION RAILROAD AUTHORITY
JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
WETLAND DELINEATION REPORT

WETLAND DELINEATION MAP
WETLANDS 1-6

FIGURE
6A

\\LGSVR6\gisprojects\NortheastOregonEconomicDevelopmentDistrict\1199-581_JosephBrnchRailWTrailWDR_WetMap01.mxd, 9/29/2016, 7:48:07 AM, DMC



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LEGEND

- SAMPLE PLOT
- PHOTO POINT
- WETLAND AREA BOUNDARY
- ORDINARY HIGH WATER
- RAILROAD
- WATERWAY WITHIN STUDY AREA
- WETLAND WITHIN STUDY AREA
- STUDY AREA
- TAXLOT BOUNDARY

100 0 100
SCALE IN FEET

SEE FIGURE 6 FOR TYPICAL NOTES

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WALLOWA UNION RAILROAD AUTHORITY
JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
WETLAND DELINEATION REPORT

WETLAND DELINEATION MAP WETLANDS 7-8

FIGURE

6B

LEGEND

- SAMPLE PLOT
- PHOTO POINT
- WETLAND AREA BOUNDARY
- ORDINARY HIGH WATER
- RAILROAD
- WATERWAY WITHIN STUDY AREA
- WETLAND WITHIN STUDY AREA
- STUDY AREA
- TAXLOT BOUNDARY

100 0 100
SCALE IN FEET

SEE FIGURE 6 FOR TYPICAL NOTES

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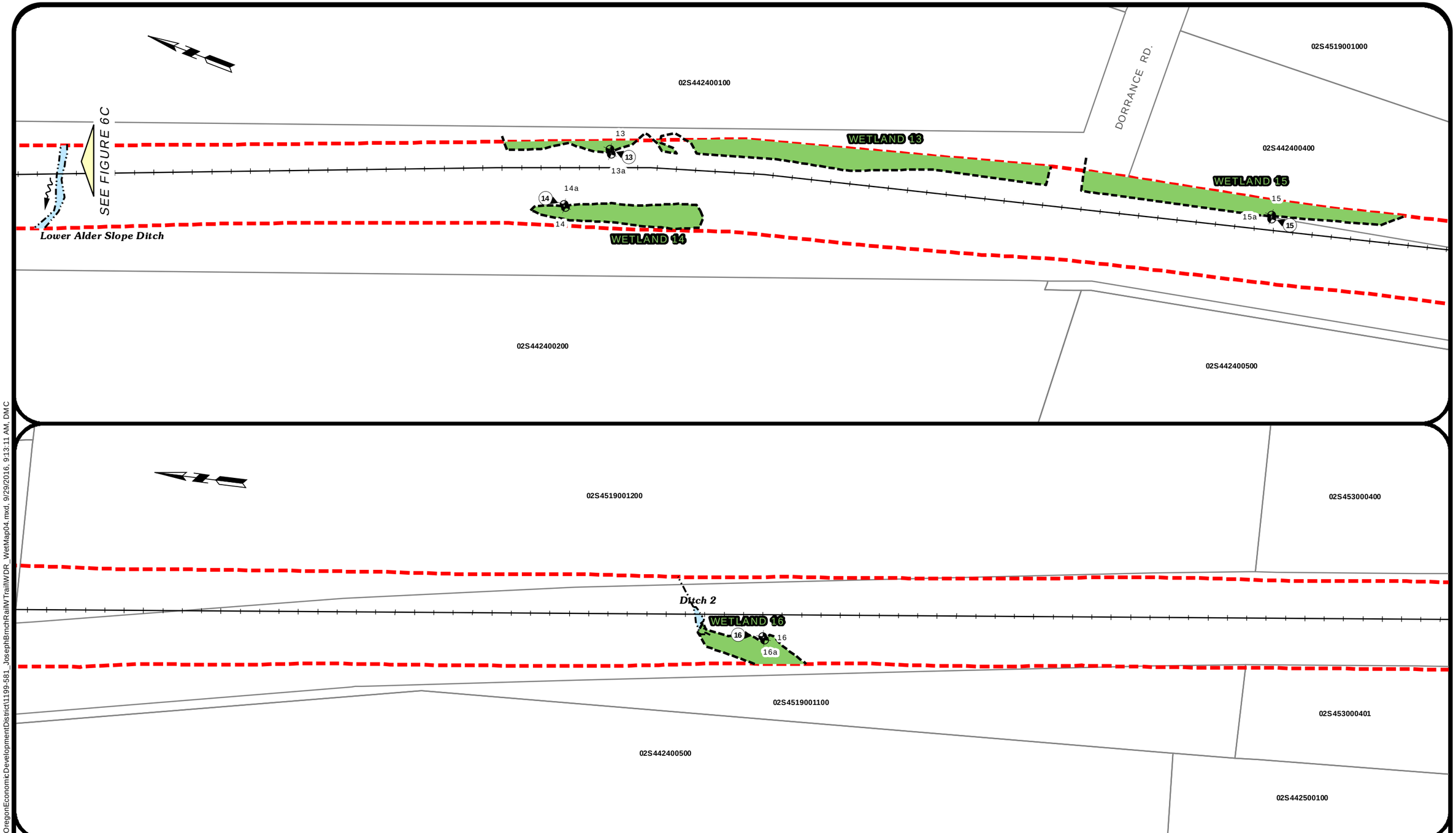
JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
WETLAND DELINEATION REPORT

WETLAND DELINEATION MAP
WETLANDS 9-12

FIGURE
6C

\\LGSVR6\gisprojects\NortheastOregonEconomicDevelopmentDistrict\1199-581_JosephBrnchRailWTrailWDR_WetMap03.mxd, 9/29/2016, 8:33:34 AM, DMC



LEGEND

- SAMPLE PLOT
- PHOTO POINT
- WETLAND AREA BOUNDARY
- ORDINARY HIGH WATER
- RAILROAD
- WATERWAY WITHIN STUDY AREA
- WETLAND WITHIN STUDY AREA
- STUDY AREA
- TAXLOT BOUNDARY

100 0 100
SCALE IN FEET

SEE FIGURE 6 FOR TYPICAL NOTES

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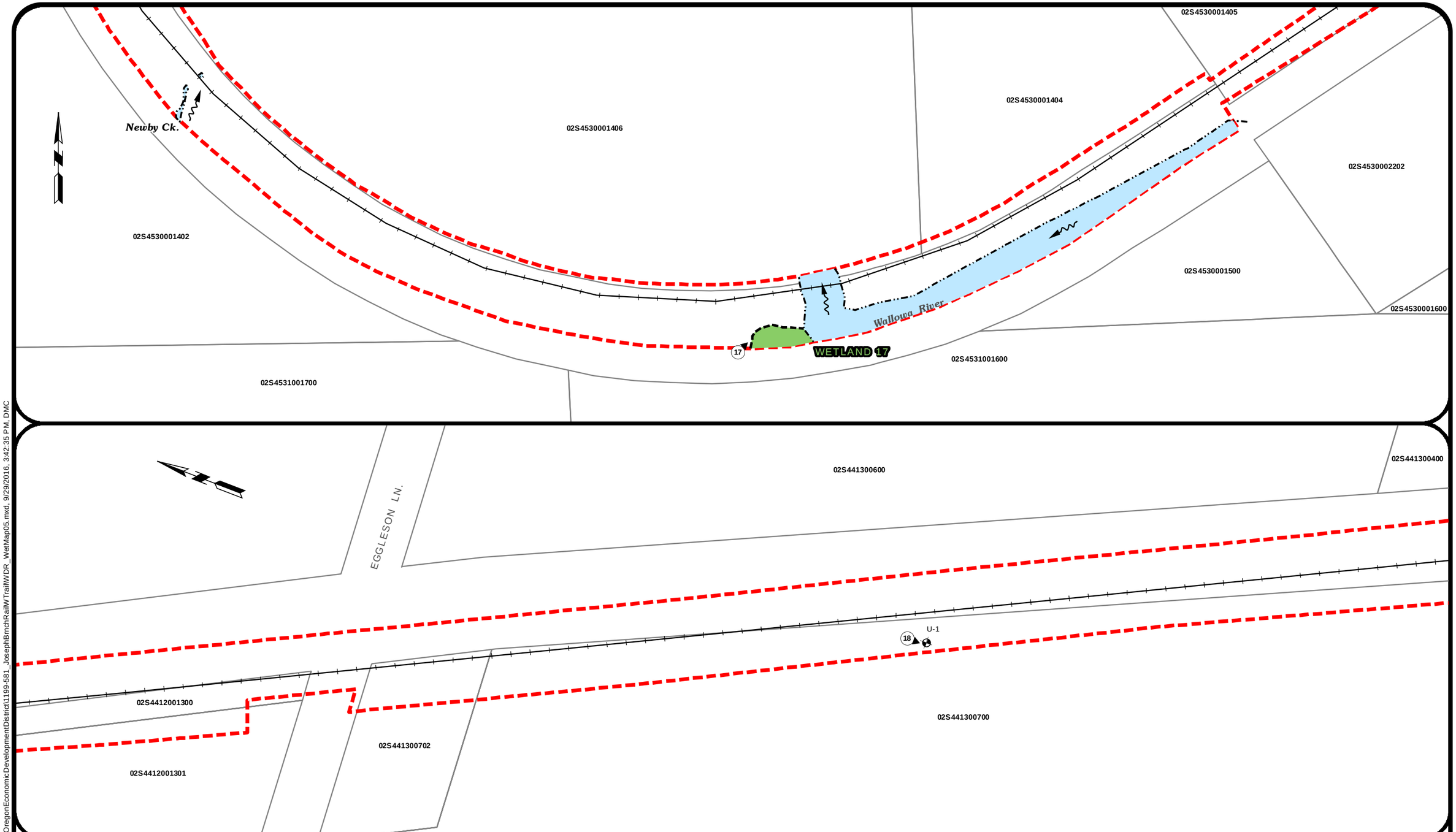
WALLOWA UNION RAILROAD AUTHORITY
JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
WETLAND DELINEATION REPORT

WETLAND DELINEATION MAP
WETLANDS 13-16

FIGURE
6D

\\LGSVR6\gisprojects\NortheastOregonEconomicDevelopmentDistrict\1199-581_JosephBrnchRailWTrail\WDR_WetMap04.mxd, 9/29/2016, 9:13:11 AM, DMC



LEGEND

- SAMPLE PLOT
- PHOTO POINT
- WETLAND AREA BOUNDARY
- ORDINARY HIGH WATER
- RAILROAD
- WATERWAY WITHIN STUDY AREA
- WETLAND WITHIN STUDY AREA
- STUDY AREA
- TAXLOT BOUNDARY

100 0 100
SCALE IN FEET

SEE FIGURE 6 FOR TYPICAL NOTES

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WALLOWA UNION RAILROAD AUTHORITY
JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
WETLAND DELINEATION REPORT

WETLAND DELINEATION MAP
WETLAND 17

FIGURE
6E

\\LGSVR6\gisprojects\NortheastOregonEconomicDevelopmentDistrict\1199-581_JosephBrnchRailWTrailWDR_WetMap05.mxd, 9/29/2016, 3:42:35 PM, DMC

APPENDIX B
Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/20/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 1
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 3
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.42001200 Long: -117.29079990 Datum: WGS84
Soil Map Unit Name: Eggleson gravelly loam, 0-2% slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation X, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland?** Yes
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 25m^2)			
1. Alnus incana	20	Yes	FACW
2. Rosa woodsii	5	No	FACU
3.			
4.			
5.			
Total Cover = 25			
Herb Stratum (Plot size: 4m^2)			
1. Dactylis glomerata	25	Yes	FACU
2. Phalaris arundinacea	25	Yes	FACW
3. Poa pratensis	25	Yes	FAC
4. Juncus balticus	25	Yes	FACW
5.			
6.			
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			

% Bare Ground in Herb Stratum: 0
% Cover of Biotic Crust: 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	70	x 2 =	140
FAC species	25	x 3 =	75
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals:	125 (A)		335 (B)

Prevalence Index = B/A = 2.68

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2	100		0			Silty Clay Loam	
2-11	10YR 2/2	95	10YR 4/6	5	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
_X_ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
_X_ High Water Table (A2)
_X_ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 11
Saturation Present? Yes Depth (inches): 6
(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/20/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 1a
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 3
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.42001670 Long: -117.29079570 Datum: WGS84
Soil Map Unit Name: Eggleson gravelly loam, 0-2% slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation X, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland?** No
Remarks:	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
5.			
Total Cover = 0			
Herb Stratum (Plot size: 4m^2)			
1. Dactylis glomerata	40	Yes	FACU
2. Poa pratensis	30	Yes	FAC
3. Leucanthemum vulgare	10	No	UPL
4. Bromus vulgaris	10	No	FACU
5.			
6.			
7.			
8.			
Total Cover = 90			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			
% Bare Ground in Herb Stratum: 10			
% Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	50	x 4 =	200
UPL species	10	x 5 =	50
Column Totals:	90 (A)		340 (B)

Prevalence Index = B/A = 3.78

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point 1a

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/2	100		0			Silty Clay Loam	
5-19	10YR 3/2	100		0			Silty Clay Loam	
19-23	10YR 3/1	95	10YR 4/6	5	C	M	Sandy Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches): 23
Saturation Present? Yes Depth (inches): 15
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/20/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 2
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 3
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.42016210 Long: -117.29128960 Datum: WGS84
Soil Map Unit Name: Eggleson gravelly loam, 0-2% slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland?** Yes
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 25m^2)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiandra	20	Yes	FACW
2.			
3.			
4.			
Total Cover = 20			
Sapling/Shrub Stratum (Plot size: 25m^2)			
1. Alnus incana	60	Yes	FACW
2.			
3.			
4.			
5.			
Total Cover = 60			
Herb Stratum (Plot size: 4m^2)			
1. Myosotis discolor	30	Yes	FACW
2. Solanum dulcamara	30	Yes	FAC
3. Scirpus microcarpus	30	Yes	OBL
4.			
5.			
6.			
7.			
8.			
Total Cover = 90			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			

% Bare Ground in Herb Stratum: 10
% Cover of Biotic Crust: 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	110	x 2 =	220
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	170 (A)		340 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:
_X_ Dominance Test is >50%
_X_ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/2	90	10YR 4/6	10	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
_X_ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
_X_ High Water Table (A2)
_X_ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 8
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/20/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 2a
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 3
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.42017300 Long: -117.29129500 Datum: WGS84
Soil Map Unit Name: Eggleson gravelly loam, 0-2% slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

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

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 25m^2) 1. Salix lasiandra 2. 3. 4. Total Cover = 40	40	Yes	FACW
Sapling/Shrub Stratum (Plot size: 25m^2) 1. Alnus incana 2. 3. 4. 5. Total Cover = 30	30	Yes	FACW
Herb Stratum (Plot size: 4m^2) 1. Solanum dulcamara 2. 3. 4. 5. 6. 7. 8. Total Cover = 20	20	Yes	FAC
Woody Vine Stratum (Plot size: 0) 1. 2. Total Cover = 0 % Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	70	x 2 =	140
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	90 (A)		200 (B)

Prevalence Index = B/A = 2.22

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 2a

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-24	10YR 3/3	100		0			Silty Clay Loam	60% gravel

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/20/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 3
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 3
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.42071400 Long: -117.29115340 Datum: WGS84
Soil Map Unit Name: Eggleson gravelly loam, 0-2% slopes NWI classification: PFOA
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland?** Yes
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
5.			
Total Cover = 0			
Herb Stratum (Plot size: 4m^2)			
1. Carex nebrascensis	50	Yes	OBL
2. Alopecurus pratensis	45	Yes	FACW
3. Cirsium arvense	5	No	FACU
4.			
5.			
6.			
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			
% Bare Ground in Herb Stratum: 0			
% Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	50	x 1 =	50
FACW species	45	x 2 =	90
FAC species	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	100 (A)		160 (B)

Prevalence Index = B/A = 1.60

Hydrophytic Vegetation Indicators:
_X_ Dominance Test is >50%
_X_ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 3

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/2	100		0			Silty Clay Loam	
4-15	10YR 2/2	90	10YR 4/6	10	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
_X_ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
_X_ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 15
Saturation Present? Yes Depth (inches): 9
(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/20/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 3a
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 3
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.42069410 Long: -117.29115140 Datum: WGS84
Soil Map Unit Name: Eggleson gravelly loam, 0-2% slopes NWI classification: PFOA
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

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

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 0) 1. 2. 3. 4. Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0) 1. 2. 3. 4. 5. Total Cover = 0			
Herb Stratum (Plot size: 4m^2) 1. Alopecurus pratensis 2. Carex nebrascensis 3. Cirsium arvense 4. 5. 6. 7. 8. Total Cover = 100	 80 10 10	 Yes No No	 FACW OBL FACU
Woody Vine Stratum (Plot size: 0) 1. 2. Total Cover = 0 % Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	80	x 2 =	160
FAC species	0	x 3 =	0
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	100 (A)		210 (B)

Prevalence Index = B/A = 2.10

Hydrophytic Vegetation Indicators:
_X_ Dominance Test is >50%
_X_ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 3a

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 3/2	100		0			Silty Clay Loam	
9-17	10YR 3/1	100		0			Silty Clay Loam	
17-23	10YR 3/1	95	10YR 4/4	5	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 22
Saturation Present? Yes Depth (inches): 18
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/20/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 4
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 2
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.42015270 Long: -117.29084300 Datum: WGS84
Soil Map Unit Name: Eggleson gravelly loam, 0-2% slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation X, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland?** Yes
Remarks: grazed	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
5.			
Total Cover = 0			
Herb Stratum (Plot size: 4m^2)			
1. Juncus balticus	40	Yes	FACW
2. Dactylis glomerata	5	No	FACU
3. Ranunculus uncinatus	25	Yes	FAC
4. Rumex crispus	10	Yes	FAC
5. Poa palustris	10	Yes	FAC
6. Carex nebrascensis	10	Yes	OBL
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			

% Bare Ground in Herb Stratum: 0
% Cover of Biotic Crust: 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	40	x 2 =	80
FAC species	45	x 3 =	135
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	100 (A)		245 (B)

Prevalence Index = B/A = 2.45

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 4

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/2	90	10YR 4/6	5	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
_X_ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

_X_ Surface Water (A1)
_X_ High Water Table (A2)
_X_ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? Yes Depth (inches): 2
Water Table Present? Yes Depth (inches): 0
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/20/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 4a
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 2
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.42014640 Long: -117.29084200 Datum: WGS84
Soil Map Unit Name: Eggleson gravelly loam, 0-2% slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation X, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland?** No
Remarks: grazed	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
5.			
Total Cover = 0			
Herb Stratum (Plot size: 4m^2)			
1. Poa palustris	60	Yes	FAC
2. Juncus arcticus	20	Yes	FACW
3. Dactylis glomerata	20	Yes	
4.			
5.			
6.			
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			
% Bare Ground in Herb Stratum: 0			
% Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	60	x 3 =	180
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	80 (A)		220 (B)

Prevalence Index = B/A = 2.75

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 4a

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/2	100		0			Silty Clay Loam	10% gravel
10-25	10YR 3/2	100					Silty Clay Loam	50% gravel

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/20/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 5
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 2
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.41997740 Long: -117.28916470 Datum: WGS84
Soil Map Unit Name: Eggleson gravelly loam, 0-2% slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland?** Yes
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
5.			
Total Cover = 0			
Herb Stratum (Plot size: 4m^2)			
1. Carex nebrascensis	60	Yes	OBL
2. Poa palustris	20	Yes	FAC
3. Ranunculus uncinatus	10	No	FAC
4. Juncus balticus	10	No	FACW
5.			
6.			
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			
% Bare Ground in Herb Stratum: 0			
% Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	60	x 1 =	60
FACW species	10	x 2 =	20
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		170 (B)

Prevalence Index = B/A = 1.70

Hydrophytic Vegetation Indicators:
_X_ Dominance Test is >50%
_X_ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 5

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2/2	97	10YR 4/6	3	C	M	Sandy Clay Loam	
9-15	10YR 2/2	90	10Y 4/6	10	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
_X_ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

_X_ Surface Water (A1)
_X_ High Water Table (A2)
_X_ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? Yes Depth (inches): 1
Water Table Present? Yes Depth (inches): 0
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/20/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 5a
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 2
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.41996910 Long: -117.28916430 Datum: WGS84
Soil Map Unit Name: Eggleson gravelly loam, 0-2% slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland?** No
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
5.			
Total Cover = 0			
Herb Stratum (Plot size: 4m^2)			
1. Dactylis glomerata	40	Yes	FACU
2. Ranunculus uncinatus	20	Yes	FAC
3. Leucanthemum vulgare	20	Yes	UPL
4. Poa palustris	20	Yes	FAC
5.			
6.			
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			
% Bare Ground in Herb Stratum: 0			
% Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	40	x 3 =	120
FACU species	40	x 4 =	160
UPL species	20	x 5 =	100
Column Totals:	100 (A)		380 (B)

Prevalence Index = B/A = 3.80

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point 5a

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 3/2	100		0			Sandy Clay Loam	
11-24	10YR 3/3	100		0			Sandy Clay Loam	20% gravel

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 14
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/20/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 6
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 2
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.41980330 Long: -117.28768810 Datum: WGS84
Soil Map Unit Name: Eggleson gravelly loam, 0-2% slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland?** Yes
Remarks:	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 0) 1. 2. 3. 4. Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0) 1. 2. 3. 4. 5. Total Cover = 0			
Herb Stratum (Plot size: 4m^2) 1. Juncus balticus 2. Carex nebrascensis 3. 4. 5. 6. 7. 8. Total Cover = 100	 80 20	 Yes Yes	 FACW OBL
Woody Vine Stratum (Plot size: 0) 1. 2. Total Cover = 0 % Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	80	x 2 =	160
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		180 (B)

Prevalence Index = B/A = 1.80

Hydrophytic Vegetation Indicators:
_X_ Dominance Test is >50%
_X_ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 3/2	95	10YR 4/6	5	C	M	Silty Clay Loam	
9-18	10YR 3/1	95	10YR 4/6	5	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
_X_ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
_X_ High Water Table (A2)
_X_ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 10
Saturation Present? Yes Depth (inches): 7
(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/20/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 6a
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 2
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.41979190 Long: -117.28768820 Datum: WGS84
Soil Map Unit Name: Eggleson gravelly loam, 0-2% slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
5.			
Total Cover = 0			
Herb Stratum (Plot size: 4m^2)			
1. Poa palustris	30	Yes	FAC
2. Carex nebrascensis	30	Yes	OBL
3. Juncus balticus	20	Yes	FACW
4. Dactylis glomerata	10	No	UPL
5. Ranunculus uncinatus	10	No	FAC
6.			
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			

% Bare Ground in Herb Stratum: 0
% Cover of Biotic Crust: 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	20	x 2 =	40
FAC species	40	x 3 =	120
FACU species	0	x 4 =	0
UPL species	10	x 5 =	50
Column Totals:	100 (A)		240 (B)

Prevalence Index = B/A = 2.40

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 6a

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-13	10YR 3/3	100		0			Silty Clay Loam	
13-26	10YR 3/2	99	10YR 4/6	1	C	M	Sandy Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 20
Saturation Present? Yes Depth (inches): 14
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/20/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 7
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 1
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.41167190 Long: -117.27071350 Datum: WGS84
Soil Map Unit Name: Eggleson gravelly loam, 0-2% slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland?** Yes
Remarks:	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 0) 1. 2. 3. 4. Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0) 1. 2. 3. 4. 5. Total Cover = 0			
Herb Stratum (Plot size: 4m^2) 1. Phalaris arundinacea 2. 3. 4. 5. 6. 7. 8. Total Cover = 100	100	Yes	FACW
Woody Vine Stratum (Plot size: 0) 1. 2. Total Cover = 0 % Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		200 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:
_X_ Dominance Test is >50%
_X_ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/2	90	10YR 4/6	10	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
_X_ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
_X_ High Water Table (A2)
_X_ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 0
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/20/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 7a
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 1
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.41168330 Long: -117.27070580 Datum: WGS84
Soil Map Unit Name: Eggleson gravelly loam, 0-2% slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

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

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 0) 1. 2. 3. 4. Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0) 1. 2. 3. 4. 5. Total Cover = 0			
Herb Stratum (Plot size: 4m^2) 1. Phalaris arundinacea 2. 3. 4. 5. 6. 7. 8. Total Cover = 100	100	Yes	FACW
Woody Vine Stratum (Plot size: 0) 1. 2. Total Cover = 0 % Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		200 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:
_X_ Dominance Test is >50%
_X_ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 7a

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/2	95	10YR 4/6	5	C	M	Silty Clay Loam	
10-17	10YR 2/2	99	10YR 4/6	1	C	M	Silty Clay Loam	
17-25	10YR 2/2	100					Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 19
Saturation Present? Yes Depth (inches): 15
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/20/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 8
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 12
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.40762410 Long: -117.27036550 Datum: WGS84
Soil Map Unit Name: Cheval silt loam, 0 to 2 percent slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland?** Yes
Remarks:	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
5.			
Total Cover = 0			
Herb Stratum (Plot size: 4m^2)			
1. Carex nebrascensis	30	Yes	OBL
2. Juncus balticus	20	Yes	FACW
3. Alopecurus pratensis	30	Yes	FACW
4. Poa pratensis	20	Yes	FAC
5.			
6.			
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			
% Bare Ground in Herb Stratum: 0			
% Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	50	x 2 =	100
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		190 (B)

Prevalence Index = B/A = 1.90

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 8

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	95	10YR 4/6	5	C	M	Silty Clay Loam	
6-15	10YR 2/2	97	10YR 4/6	3	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
_X_ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 14
Saturation Present? Yes Depth (inches): 9
(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/20/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 8a
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 12
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.40762710 Long: -117.27034490 Datum: WGS84
Soil Map Unit Name: Cheval silt loam, 0 to 2 percent slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

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

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 0) 1. 2. 3. 4. Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0) 1. 2. 3. 4. 5. Total Cover = 0			
Herb Stratum (Plot size: 4m^2) 1. Alopecurus pratensis 2. Carex nebrascensis 3. Juncus balticus 4. Poa pratensis 5. 6. 7. 8. Total Cover = 100	 40 10 20 30	 Yes No Yes No	 FAC OBL FACW FAC
Woody Vine Stratum (Plot size: 0) 1. 2. Total Cover = 0 % Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	20	x 2 =	40
FAC species	70	x 3 =	210
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		260 (B)

Prevalence Index = B/A = 2.60

Hydrophytic Vegetation Indicators:
_X_ Dominance Test is >50%
_X_ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 8a

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/2	100		0			Silty Clay Loam	
5-17	10YR 3/3	98	10YR 4/6	2	C	M	Sandy Clay Loam	
17-25	10YR 3/3	100		0			Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 20
Saturation Present? Yes Depth (inches): 15
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/21/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 9
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 13
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.38339630 Long: -117.25605730 Datum: WGS84
Soil Map Unit Name: Cheval silt loam, 0 to 2 percent slopes NWI classification: PEM1Cx
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland?** Yes
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
5.			
Total Cover = 0			
Herb Stratum (Plot size: 4m^2)			
1. Juncus balticus	80	Yes	FACW
2. Carex bebbii	10	No	OBL
3. Poa pratensis	10	No	FAC
4.			
5.			
6.			
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			

% Bare Ground in Herb Stratum: 0
% Cover of Biotic Crust: 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	80	x 2 =	160
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		200 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:
_X_ Dominance Test is >50%
_X_ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 9

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/2	100		0			Silty Clay Loam	
4-14	10YR 2/2	90	10YR 4/6	10	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
_X_ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
_X_ High Water Table (A2)
_X_ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 10
Saturation Present? Yes Depth (inches): 6
(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/21/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 9a
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 13
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.38340010 Long: -117.25604370 Datum: WGS84
Soil Map Unit Name: Cheval silt loam, 0 to 2 percent slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

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

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 0) 1. 2. 3. 4. Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0) 1. 2. 3. 4. 5. Total Cover = 0			
Herb Stratum (Plot size: 4m^2) 1. Poa palustris 2. Juncus balticus 3. Verbascum thapsus 4. Ranunculus repens 5. 6. 7. 8. Total Cover = 100	 70 20 5 5	 Yes Yes No No	 FAC FACW FACU FAC
Woody Vine Stratum (Plot size: 0) 1. 2. Total Cover = 0 % Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	75	x 3 =	225
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	100 (A)		285 (B)

Prevalence Index = B/A = 2.85

Hydrophytic Vegetation Indicators:
_X_ Dominance Test is >50%
_X_ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 9a

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	100		0			Silty Clay Loam	
8-16	10YR 2/2	100		0			Silty Clay Loam	
16-25	10YR 2/2	97	10YR 4/6	3	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches): 20
Saturation Present? Yes Depth (inches): 15
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/21/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 10
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 13
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.38394670 Long: -117.25610760 Datum: WGS84
Soil Map Unit Name: Cheval silt loam, 0 to 2 percent slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland?** Yes
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
5.			
Total Cover = 0			
Herb Stratum (Plot size: 4m^2)			
1. Juncus balticus	25	Yes	FACW
2. Lolium perenne	10	Yes	FAC
3. Mentha aquatica	20	Yes	FACW
4. Rumex crispus	5	No	FAC
5. Poa palustris	20	Yes	FAC
6. Carex aquatilis	20	Yes	OBL
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			

% Bare Ground in Herb Stratum: 0
% Cover of Biotic Crust: 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	45	x 2 =	90
FAC species	35	x 3 =	105
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		215 (B)

Prevalence Index = B/A = 2.15

Hydrophytic Vegetation Indicators:
_X_ Dominance Test is >50%
_X_ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 10

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/1	100		0			Silty Clay Loam	
3-15	10YR 2/2	95	10YR 4/6	5	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
_X_ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

_X_ Surface Water (A1)
_X_ High Water Table (A2)
_X_ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? Yes Depth (inches): 0.5
Water Table Present? Yes Depth (inches): 0
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/21/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 10a
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 13
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.38393510 Long: -117.25613500 Datum: WGS84
Soil Map Unit Name: Cheval silt loam, 0 to 2 percent slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
5.			
Total Cover = 0			
Herb Stratum (Plot size: 4m^2)			
1. Poa palustris	40	Yes	FAC
2. Juncus balticus	20	Yes	FACW
3. Lolium perenne	10	No	FAC
4. Rumex crispus	10	No	FAC
5. Dactylis glomerata	20	Yes	FACU
6.			
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			
% Bare Ground in Herb Stratum: 0			
% Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	60	x 3 =	180
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	100 (A)		300 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 10a

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2	100		0			Silty Clay Loam	
2-10	10YR 3/2	100		0			Silty Clay Loam	
17-25	10YR 3/2	95	10YR 4/6	5	C	M	Silty Clay Loam	
10-17	10YR 3/2	99	10YR 4/4	1	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 18
Saturation Present? Yes Depth (inches): 13
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/21/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 11
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 24
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.38089850 Long: -117.25482350 Datum: WGS84
Soil Map Unit Name: Cheval silt loam, 0 to 2 percent slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland?** Yes
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
5.			
Total Cover = 0			
Herb Stratum (Plot size: 4m^2)			
1. Carex aquatilis	30	Yes	OBL
2. Juncus balticus	30	Yes	FACW
3. Poa palustris	20	Yes	FAC
4. Mentha aquatica	5	No	FACW
5. Alopecurus pratensis	10	No	FACW
6. Ranunculus uncinatus	5		
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			

% Bare Ground in Herb Stratum: 0
% Cover of Biotic Crust: 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	45	x 2 =	90
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	95 (A)		180 (B)

Prevalence Index = B/A = 1.89

Hydrophytic Vegetation Indicators:
_X_ Dominance Test is >50%
_X_ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 11

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2/2	95	10YR 4/6	5	C	M	Silty Clay Loam	
9-16	10YR 3/2	95	10YR 4/6	5	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
_X_ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
_X_ High Water Table (A2)
_X_ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 8
Saturation Present? Yes Depth (inches): 4
(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/21/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 11a
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 24
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.38089910 Long: -117.25480960 Datum: WGS84
Soil Map Unit Name: Cheval silt loam, 0 to 2 percent slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

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

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 0) 1. 2. 3. 4. Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0) 1. 2. 3. 4. 5. Total Cover = 0			
Herb Stratum (Plot size: 4m^2) 1. Poa palustris	40	Yes	FAC
2. Alopecurus pratensis	40	Yes	FACW
3. Juncus balticus	10	No	FACW
4. Cirsium arvense	5	No	FACU
5. Ranunculus uncinatus	5	No	FAC
6. 7. 8. Total Cover = 100			
Woody Vine Stratum (Plot size: 0) 1. 2. Total Cover = 0			

% Bare Ground in Herb Stratum: 0
% Cover of Biotic Crust: 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	50	x 2 =	100
FAC species	45	x 3 =	135
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	100 (A)		255 (B)

Prevalence Index = B/A = 2.55

Hydrophytic Vegetation Indicators:
_X_ Dominance Test is >50%
_X_ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 11a

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 3/2	100		0			Silty Clay Loam	
11-25	10YR 3/2	97	10YR 4/6	3	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 24
Saturation Present? Yes Depth (inches): 16
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/21/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 12
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 24
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.37885970 Long: -117.25359120 Datum: WGS84
Soil Map Unit Name: Cheval silt loam, 0 to 2 percent slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland?** Yes
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
5.			
Total Cover = 0			
Herb Stratum (Plot size: 4m^2)			
1. Carex aquatilis	25	Yes	OBL
2. Carex nebrascensis	25	Yes	OBL
3. Phalaris arundinacea	20	Yes	FACW
4. Juncus balticus	20	Yes	FACW
5. Poa palustris	10	No	FAC
6.			
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			
% Bare Ground in Herb Stratum: 0			
% Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	50	x 1 =	50
FACW species	40	x 2 =	80
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		160 (B)

Prevalence Index = B/A = 1.60

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 12

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 2/2	95	10YR 4/6	5	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
_X_ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
_X_ High Water Table (A2)
_X_ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 11
Saturation Present? Yes Depth (inches): 6
(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/21/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 12a
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 24
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.37885870 Long: -117.25360750 Datum: WGS84
Soil Map Unit Name: Cheval silt loam, 0 to 2 percent slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

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

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 0) 1. 2. 3. 4. Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0) 1. 2. 3. 4. 5. Total Cover = 0			
Herb Stratum (Plot size: 4m^2) 1. Phalaris arundinacea	30	Yes	FACW
2. Poa palustris	30	Yes	FAC
3. Poa pratensis	30	Yes	FAC
4. Dipsacus fullonum	10	No	FAC
5. 6. 7. 8. Total Cover = 100			
Woody Vine Stratum (Plot size: 0) 1. 2. Total Cover = 0 % Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	70	x 3 =	210
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		270 (B)

Prevalence Index = B/A = 2.70

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 12a

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	100		0			Silty Clay Loam	
10-26	10YR 3/3	98	10YR 4/6	2	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 25
Saturation Present? Yes Depth (inches): 18
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/21/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 13
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 24
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.37591170 Long: -117.25210170 Datum: WGS84
Soil Map Unit Name: Cheval silt loam, 0 to 2 percent slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland?** Yes
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
5.			
Total Cover = 0			
Herb Stratum (Plot size: 4m^2)			
1. Carex aquatilis	80	Yes	OBL
2. Phalaris arundinacea	10	Yes	FACW
3. Juncus balticus	10	Yes	FACW
4.			
5.			
6.			
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			
% Bare Ground in Herb Stratum: 0			
% Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	80	x 1 =	80
FACW species	20	x 2 =	40
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		120 (B)

Prevalence Index = B/A = 1.20

Hydrophytic Vegetation Indicators:
_X_ Dominance Test is >50%
_X_ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 13

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 3/2	95	10YR 4/6	5	C	M	Silty Clay Loam	
7-18	10YR 3/1	95	10YR 4/6	5	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
_X_ High Water Table (A2)
_X_ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 10
Saturation Present? Yes Depth (inches): 5
(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/21/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 13a
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 24
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.37590670 Long: -117.25211670 Datum: WGS84
Soil Map Unit Name: Cheval silt loam, 0 to 2 percent slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

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

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 0) 1. 2. 3. 4. Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0) 1. 2. 3. 4. 5. Total Cover = 0			
Herb Stratum (Plot size: 4m^2) 1. Phalaris arundinacea 2. Poa palustris 3. Dipsacus fullonum 4. Carex nebrascensis 5. 6. 7. 8. Total Cover = 100	 40 40 10 10	 Yes Yes No No	 FACW FAC FAC OBL
Woody Vine Stratum (Plot size: 0) 1. 2. Total Cover = 0 % Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	40	x 2 =	80
FAC species	50	x 3 =	150
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		240 (B)

Prevalence Index = B/A = 2.40

Hydrophytic Vegetation Indicators:
_X_ Dominance Test is >50%
_X_ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 13a

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/3	100		0			Silty Clay Loam	
6-19	10YR 3/2	100		0			Silty Clay Loam	
16-25	10YR 3/2	97	10YR 4/6	3	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 22
Saturation Present? Yes Depth (inches): 18
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/21/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 14
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 24
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.37599330 Long: -117.25238160 Datum: WGS84
Soil Map Unit Name: Cheval silt loam, 0 to 2 percent slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland?** Yes
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
5.			
Total Cover = 0			
Herb Stratum (Plot size: 4m^2)			
1. Phalaris arundinacea	10	No	FACW
2. Carex aquatilis	30	Yes	OBL
3. Juncus balticus	30	Yes	FACW
4. Dipsacus fullonum	10	No	FAC
5. Poa palustris	20	Yes	FAC
6.			
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			
% Bare Ground in Herb Stratum: 0			
% Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	40	x 2 =	80
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		200 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 14

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/2	95	10YR 4/6	5	C	M	Silty Clay Loam	
5-13	10YR 3/2	95	10YR 4/6	5	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
_X_ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
_X_ High Water Table (A2)
_X_ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 11
Saturation Present? Yes Depth (inches): 6
(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/21/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 14a
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 24
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.37599700 Long: -117.25236440 Datum: WGS84
Soil Map Unit Name: Cheval silt loam, 0 to 2 percent slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
5.			
Total Cover = 0			
Herb Stratum (Plot size: 4m^2)			
1. Phalaris arundinacea	20	Yes	FACW
2. Dipsacus fullonum	10	No	FAC
3. Cirsium arvense	20	Yes	FACU
4. Poa palustris	40	Yes	FAC
5. Juncus balticus	10	No	FACW
6.			
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			
% Bare Ground in Herb Stratum: 0			
% Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	50	x 3 =	150
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	100 (A)		290 (B)

Prevalence Index = B/A = 2.90

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 14a

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 3/2	100		0			Silty Clay Loam	
11-18	10YR 2/2	100		0			Silty Clay Loam	
18-26	10YR 2/2	95	10YR 4/6	5	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 26
Saturation Present? Yes Depth (inches): 18
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/21/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 15
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 24
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.37401480 Long: -117.25146550 Datum: WGS84
Soil Map Unit Name: Cheval silt loam, 0 to 2 percent slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland?** Yes
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 25m^2)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus incana	20	Yes	FACW
2.			
3.			
4.			
Total Cover = 20			
Sapling/Shrub Stratum (Plot size: 0)			
1. Rosa woodsii	10	No	FACU
2.			
3.			
4.			
5.			
Total Cover = 10			
Herb Stratum (Plot size: 4m^2)			
1. Phalaris arundinacea	20	Yes	FACW
2. Carex aquatilis	20	Yes	OBL
3. Carex nebrascensis	20	Yes	OBL
4. Ranunculus uncinatus	15	No	FAC
5. Dipsacus fullonum	5	No	FAC
6. Poa palustris	20	Yes	FAC
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			

% Bare Ground in Herb Stratum: 0
% Cover of Biotic Crust: 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	40	x 2 =	80
FAC species	40	x 3 =	120
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	130 (A)		280 (B)

Prevalence Index = B/A = 2.15

Hydrophytic Vegetation Indicators:
_X_ Dominance Test is >50%
_X_ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 15

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	95	10YR 4/6	5	C	M	Silty Clay Loam	
8-15	10YR 2/2	95	10YR 4/6	5	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
_X_ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
_X_ High Water Table (A2)
_X_ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 11
Saturation Present? Yes Depth (inches): 8
(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/21/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 15a
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 24
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.37400750 Long: -117.25147840 Datum: WGS84
Soil Map Unit Name: Cheval silt loam, 0 to 2 percent slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
5.			
Total Cover = 0			
Herb Stratum (Plot size: 4m^2)			
1. Phalaris arundinacea	20	Yes	FACW
2. Dipsacus fullonum	20	Yes	FAC
3. Poa palustris	20	Yes	FAC
4. Cirsium arvense	20	Yes	FACU
5. Dactylis glomerata	20	Yes	FACU
6.			
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			
% Bare Ground in Herb Stratum: 0			
% Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	40	x 3 =	120
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	100 (A)		320 (B)

Prevalence Index = B/A = 3.20

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 15a

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-15	10YR 3/3	100		0			Silty Clay Loam	
15-23	10YR 3/2	100		0			Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 21
Saturation Present? Yes Depth (inches): 16
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/21/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 16
Investigator(s): Sue Brady Section, Township, Range: T2S R45E Sec 19
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.36853000 Long: -117.25055100 Datum: WGS84
Soil Map Unit Name: Matterhorn gravelly fine sandy loam, 0 to 3 percent slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland?** Yes
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus incana	70	Yes	FACW
2.			
3.			
4.			
Total Cover = 70			
Sapling/Shrub Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
5.			
Total Cover = 0			
Herb Stratum (Plot size: 4m^2)			
1. Poa palustris	60	Yes	FAC
2. Ranunculus uncinatus	20	Yes	FAC
3. Cirsium arvense	10	No	FACU
4. Equisetum arvense	10	No	FAC
5.			
6.			
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			

% Bare Ground in Herb Stratum: 0
% Cover of Biotic Crust: 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	70	x 2 =	140
FAC species	90	x 3 =	270
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	170 (A)		450 (B)

Prevalence Index = B/A = 2.65

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 16

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/2	99	10YR 4/6	1	C	M	Silty Clay Loam	
4-10	10YR 2/2	90	10YR 4/6	10	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
_X_ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
_X_ High Water Table (A2)
_X_ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 10
Saturation Present? Yes Depth (inches): 5
(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/21/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 16a
Investigator(s): Sue Brady Section, Township, Range: T2S R45E Sec 19
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.36851800 Long: -117.25051760 Datum: WGS84
Soil Map Unit Name: Matterhorn gravelly fine sandy loam, 0 to 3 percent slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus incana	30	Yes	FACW
2.			
3.			
4.			
Total Cover = 30			
Sapling/Shrub Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
5.			
Total Cover = 0			
Herb Stratum (Plot size: 4m^2)			
1. Poa palustris	60	Yes	FAC
2. Ranunculus uncinatus	10	No	FAC
3. Equisetum arvense	10	No	FAC
4. Cirsium arvense	10	No	FACU
5. Cynoglossum officinale	10	No	FACU
6.			
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			

% Bare Ground in Herb Stratum: 0
% Cover of Biotic Crust: 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	80	x 3 =	240
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	130 (A)		380 (B)

Prevalence Index = B/A = 2.92

Hydrophytic Vegetation Indicators:
_X_ Dominance Test is >50%
_X_ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 16a

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	100		0			Silty Clay Loam	
10-19	10YR 3/2	95	10YR 4/4	5	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
_X_ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 19
Saturation Present? Yes Depth (inches): 14
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/22/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 17
Investigator(s): Sue Brady Section, Township, Range: T2S R45E Sec 30
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.35228470 Long: -117.24597520 Datum: WGS84
Soil Map Unit Name: Matterhorn gravelly fine sandy loam, 0 to 3 percent slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland?** Yes
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
5.			
Total Cover = 0			
Herb Stratum (Plot size: 4m^2)			
1. Sorghum halepense	25	Yes	FACU
2. Phalaris arundinacea	50	Yes	FACW
3. Dipsacus fullonum	5	No	FAC
4. Juncus balticus	20	Yes	FACW
5.			
6.			
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			
% Bare Ground in Herb Stratum: 0			
% Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	70	x 2 =	140
FAC species	5	x 3 =	15
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column Totals:	100 (A)		255 (B)

Prevalence Index = B/A = 2.55

Hydrophytic Vegetation Indicators:
_X_ Dominance Test is >50%
_X_ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point 17

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 3/2	90	10YR 4/6	10	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
_X_ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
_X_ High Water Table (A2)
_X_ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 11
Saturation Present? Yes Depth (inches): 6
(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/22/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: 17a
Investigator(s): Sue Brady Section, Township, Range: T2S R45E Sec 30
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.35228230 Long: -117.24598430 Datum: WGS84
Soil Map Unit Name: Matterhorn gravelly fine sandy loam, 0 to 3 percent slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland?** No
Remarks:	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 0) 1. 2. 3. 4. Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0) 1. 2. 3. 4. 5. Total Cover = 0			
Herb Stratum (Plot size: 4m^2) 1. Sorghum halepense 2. Phalaris arundinacea 3. Juncus balticus 4. Dipsacus fullonum 5. 6. 7. 8. Total Cover = 100	 40 40 10 10	 Yes Yes No No	 FACU FACW FACW FAC
Woody Vine Stratum (Plot size: 0) 1. 2. Total Cover = 0 % Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	50	x 2 =	100
FAC species	10	x 3 =	30
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	100 (A)		290 (B)

Prevalence Index = B/A = 2.90

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
_X_ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point 17a

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 3/2	100					Silty Clay Loam	
14-24	10YR 3/2	98	10YR 4/6	2	C	M	Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 21
Saturation Present? Yes Depth (inches): 15
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RwT Joseph Enterprise City/County: Wallowa Sampling Date: 06/20/2016
Applicant/Owner: NEOEDD State: OR Sampling Point: U-1
Investigator(s): Sue Brady Section, Township, Range: T2S R44E Sec 12
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Columbia/Snake River Plateau (LRR B) Lat: 45.40762710 Long: -117.27034490 Datum: WGS84
Soil Map Unit Name: Cheval silt loam, 0 to 2 percent slopes NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland?** No
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 0)			
1.			
2.			
3.			
4.			
5.			
Total Cover = 0			
Herb Stratum (Plot size: 0)			
1. Alopecurus pratensis	10	No	FAC
2. Juncus balticus	20	Yes	FACW
3. Poa pratensis	60	Yes	FAC
4. Leucanthemum vulgare	10	No	UPL
5.			
6.			
7.			
8.			
Total Cover = 100			
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
Total Cover = 0			

% Bare Ground in Herb Stratum: 0
% Cover of Biotic Crust: 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	70	x 3 =	210
FACU species	0	x 4 =	0
UPL species	10	x 5 =	50
Column Totals:	100 (A)		300 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
_X_ Prevalence Index is ≤ 3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point U-1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/2	100		0			Silty Clay Loam	
5-17	10YR 3/3	98	10YR 4/6	2	C	M	Sandy Clay Loam	
17-25	10YR 3/3	100		0			Silty Clay Loam	

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

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

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)

___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)

___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (two or more required)

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

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 20
Saturation Present? Yes Depth (inches): 15
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

APPENDIX C
Ground-Level Color Photographs

PHOTOGRAPH 1 - Wetland 1 looking east at Plots 1 and 1A. Photograph taken by Sue Brady on June 20, 2016.

PHOTOGRAPH 2 - Wetland 2 looking north at Plots 2 and 2A. Photograph taken by Sue Brady on June 20, 2016.

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WALLOWA UNION RAILROAD AUTHORITY
JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
WETLAND DELINEATION REPORT

SITE PHOTOGRAPHS 1

APPENDIX

C

Job# 1199-581-023 Sep. 30, 2016 lbauer

PHOTOGRAPH 3 - Wetland 3 looking north at Plots 3 and 3A. Photograph taken by Sue Brady on June 20, 2016.

PHOTOGRAPH 4 - Wetland 4 looking east at Plots 4 and 4A. Photograph taken by Sue Brady on June 20, 2016.

PHOTOGRAPH 5 - Wetland 5 looking east at Plots 5 and 5A. Photograph taken by Sue Brady on June 20, 2016.

PHOTOGRAPH 6 - Wetland 6 looking west at Plots 6 and 6A. Photograph taken by Sue Brady on June 20, 2016.

PHOTOGRAPH 7 - Wetland 7 looking north at Plots 7 and 7A. Photograph taken by Sue Brady on June 20, 2016.

PHOTOGRAPH 8 - Wetland 8 looking north at Plots 8 and 8A. Photograph taken by Sue Brady on June 20, 2016.

PHOTOGRAPH 9 - Wetland 9 looking north at Plots 9 and 9A. Photograph taken by Sue Brady on June 21, 2016.

PHOTOGRAPH 10 - Wetland 10 looking south at Plots 10 and 10A. Photograph taken by Sue Brady on June 21, 2016.

PHOTOGRAPH 11 - Wetland 11 looking north at Plots 11 and 11A. Photograph taken by Sue Brady on June 21, 2016.

PHOTOGRAPH 12 - Wetland 12 looking north at Plots 12 and 12A. Photograph taken by Sue Brady on June 21, 2016.

PHOTOGRAPH 13 - Wetland 13 looking north at Plots 13 and 13A. Photograph taken by Sue Brady on June 21, 2016.

PHOTOGRAPH 14 - Wetland 14 looking south at Plots 14 and 14A. Photograph taken by Sue Brady on June 21, 2016.

PHOTOGRAPH 15 - Wetland 15 looking north at Plots 15 and 15A. Photograph taken by Sue Brady on June 21, 2016.

PHOTOGRAPH 16 - Wetland 16 looking south at Plots 16 and 16A. Photograph taken by Sue Brady on June 21, 2016.

PHOTOGRAPH 17 - Wetland 17 looking northeast at Plots 17 and 17A. Photograph taken by Sue Brady on June 22, 2016.

PHOTOGRAPH 18 - Upland area looking south at Plot U-1. Photograph taken by Sue Brady on June 20, 2016.

APPENDIX D
Additional Tables and Information

USDA Field Office Climate Data

WETS Station : ENTERPRISE 20 NNE, OR2678 Creation Date: 07/26/2016
Latitude: 4543 Longitude: 11709 Elevation: 03280
State FIPS/County(FIPS): 41063 County Name: Wallowa
Start yr. - 1971 End yr. - 2000

Month	Temperature (Degrees F.) avg daily max	avg daily min	avg	Precipitation (Inches) avg	30% chance will have less than	more than	avg # of days w/.1 or more	avg total snow fall
January	36.4	16.7	26.6	1.70	1.10	2.04	6	8.9
February	43.0	20.7	31.9	1.47	0.93	1.77	5	5.4
March	51.0	25.0	38.0	1.66	1.24	1.95	6	2.4
April	59.4	29.9	44.7	1.94	1.25	2.34	7	0.2
May	67.3	35.4	51.4	2.25	1.57	2.67	7	0.0
June	75.5	40.7	58.1	1.95	1.35	2.32	6	0.0
July	85.1	43.4	64.3	1.30	0.54	1.58	3	0.0
August	86.1	42.3	64.2	1.15	0.25	1.34	3	0.0
September	77.0	35.3	56.2	1.13	0.34	1.44	3	0.0
October	63.8	28.6	46.2	1.19	0.59	1.49	4	0.0
November	45.4	24.4	34.9	2.16	1.48	2.57	7	4.3
December	36.3	17.2	26.8	1.90	1.11	2.30	6	6.9
Annual	-----	-----	-----	------	17.92	21.39	--	----
Average	60.5	30.0	45.3	------	------	------	--	----
Average	-----	-----	-----	19.80	------	------	64	26.5

GROWING SEASON DATES

Probability	Temperature 24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	5/ 7 to 9/24 140 days	5/30 to 9/11 103 days	6/28 to 8/27 59 days
70 percent *	4/30 to 10/ 1 153 days	5/23 to 9/18 117 days	6/23 to 9/ 1 69 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

USDA Field Office Climate Data

WETS Station : LA GRANDE, OR4622 Creation Date: 07/24/2016
Latitude: 4519 Longitude: 11804 Elevation: 02755
State FIPS/County(FIPS): 41061 County Name: Union
Start yr. - 1971 End yr. - 2000

Month	Temperature (Degrees F.) avg daily max	avg daily min	avg	Precipitation (Inches) avg	30% chance will have less than	more than	avg # of days w/.1 or more	avg total snow fall
January	37.3	23.1	30.2	1.83	1.14	2.21	5	7.9
February	42.8	26.4	34.6	1.32	0.82	1.59	4	2.9
March	50.3	30.5	40.4	1.50	1.06	1.78	5	1.5
April	57.7	35.1	46.4	1.58	0.98	1.91	5	0.4
May	66.2	41.8	54.0	1.90	1.29	2.27	6	0.0
June	74.9	48.3	61.6	1.53	1.04	1.82	5	0.0
July	84.7	53.0	68.9	0.70	0.29	0.86	2	0.0
August	85.0	51.8	68.4	0.86	0.23	1.03	2	0.0
September	75.6	43.5	59.6	0.84	0.24	1.03	3	0.0
October	62.6	35.4	49.0	1.26	0.70	1.55	4	0.1
November	45.6	29.8	37.7	2.22	1.40	2.68	6	2.5
December	38.2	24.2	31.2	1.94	1.06	2.37	6	6.1
Annual	-----	-----	-----	------	15.57	19.08	--	----
Average	60.1	36.9	48.5	------	------	------	--	----
Average	-----	-----	-----	17.48	------	------	52	22.7

GROWING SEASON DATES

Probability	Temperature 24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	4/ 6 to 10/23 199 days	4/26 to 10/ 7 164 days	5/16 to 9/21 128 days
70 percent *	4/ 1 to 10/28 209 days	4/21 to 10/12 174 days	5/10 to 9/27 140 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

Climatological Data for LA GRANDE, OR - June 2016

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2016-06-01	79	46	62.5	4.3	2	0	0.00	0.0	0
2016-06-02	85	54	69.5	11.1	0	5	0.00	0.0	0
2016-06-03	70	49	59.5	0.9	5	0	M	M	M
2016-06-04	85	52	68.5	9.7	0	4	M	M	M
2016-06-05	92	55	73.5	14.5	0	9	M	M	M
2016-06-06	95	49	72.0	12.7	0	7	0.00	0.0	0
2016-06-07	95	59	77.0	17.5	0	12	0.00	0.0	0
2016-06-08	96	63	79.5	19.8	0	15	0.00	0.0	0
2016-06-09	87	51	69.0	9.1	0	4	0.00	0.0	0
2016-06-10	78	51	64.5	4.3	0	0	0.00	0.0	0
2016-06-11	60	45	52.5	-7.9	12	0	S	M	M
2016-06-12	67	44	55.5	-5.1	9	0	M	M	M
2016-06-13	76	38	57.0	-3.9	8	0	0.15A	0.0	0
2016-06-14	73	44	58.5	-2.6	6	0	0.08	0.0	0
2016-06-15	55	42	48.5	-12.9	16	0	0.08	0.0	0
2016-06-16	60	38	49.0	-12.7	16	0	0.25	0.0	0
2016-06-17	56	40	48.0	-13.9	17	0	0.27	0.0	0
2016-06-18	60	44	52.0	-10.2	13	0	S	M	M
2016-06-19	73	38	55.5	-7.0	9	0	M	M	M
2016-06-20	74	38	56.0	-6.8	9	0	0.26A	0.0	0
2016-06-21	83	52	67.5	4.5	0	3	0.00	0.0	0
2016-06-22	77	45	61.0	-2.3	4	0	0.00	0.0	0
2016-06-23	86	55	70.5	6.9	0	6	0.00	0.0	0
2016-06-24	77	48	62.5	-1.4	2	0	0.08	0.0	0
2016-06-25	68	42	55.0	-9.2	10	0	0.00	0.0	0
2016-06-26	79	47	63.0	-1.5	2	0	0.00	0.0	0
2016-06-27	88	53	70.5	5.7	0	6	0.00	0.0	0
2016-06-28	92	62	77.0	11.9	0	12	0.00	0.0	0
2016-06-29	93	62	77.5	12.0	0	13	0.00	0.0	0
2016-06-30	93	62	77.5	11.7	0	13	0.00	0.0	0
Sum	2352	1468	-	-	140	109	1.17	0.0	-
Average	78.4	48.9	63.7	2.0	-	-	-	-	0.0
Normal	74.7	48.7	61.7	-	149	50	1.54	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time). Observation times may have changed during this period.
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am, unknown
Snowfall : unknown
Snow Depth : 8am

Sum to date: 1.09

Climatological Data for LA GRANDE, OR - May 2016

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2016-05-01	63	44	53.5	3.1	11	0	M	M	M
2016-05-02	72	39	55.5	4.8	9	0	0.00	0.0	0
2016-05-03	78	40	59.0	8.0	6	0	0.00	0.0	0
2016-05-04	80	51	65.5	14.3	0	1	0.00	0.0	0
2016-05-05	77	50	63.5	12.0	1	0	0.00	0.0	0
2016-05-06	77	51	64.0	12.2	1	0	0.55	0.0	0
2016-05-07	77	52	64.5	12.4	0	0	M	M	M
2016-05-08	74	45	59.5	7.1	5	0	M	M	M
2016-05-09	77	40	58.5	5.8	6	0	0.00	0.0	0
2016-05-10	61	38	49.5	-3.4	15	0	0.00	0.0	0
2016-05-11	64	34	49.0	-4.2	16	0	0.00	0.0	0
2016-05-12	72	44	58.0	4.5	7	0	0.00	0.0	0
2016-05-13	81	45	63.0	9.2	2	0	0.00	0.0	0
2016-05-14	63	50	56.5	2.5	8	0	M	M	M
2016-05-15	56	48	52.0	-2.3	13	0	M	M	M
2016-05-16	82	47	64.5	10.0	0	0	M	M	0
2016-05-17	66	42	54.0	-0.8	11	0	0.00	0.0	0
2016-05-18	76	48	62.0	7.0	3	0	0.00	0.0	0
2016-05-19	59	39	49.0	-6.3	16	0	M	M	M
2016-05-20	82	39	60.5	5.0	4	0	0.00	0.0	0
2016-05-21	58	39	48.5	-7.3	16	0	M	M	M
2016-05-22	59	42	50.5	-5.5	14	0	M	M	M
2016-05-23	63	42	52.5	-3.7	12	0	M	M	0
2016-05-24	62	43	52.5	-4.0	12	0	0.00	0.0	0
2016-05-25	69	46	57.5	0.8	7	0	0.00	0.0	0
2016-05-26	72	47	59.5	2.6	5	0	0.00	0.0	0
2016-05-27	69	44	56.5	-0.6	8	0	0.00	0.0	0
2016-05-28	M	M	M	M	M	M	M	M	M
2016-05-29	75	47	61.0	3.4	4	0	M	M	M
2016-05-30	74	46	60.0	2.2	5	0	M	M	M
2016-05-31	75	40	57.5	-0.5	7	0	0.00	0.0	0
Sum	2113	1322	-	-	224	1	0.55	0.0	-
Average	70.4	44.1	57.3	2.9	-	-	-	-	0.0
Normal	66.7	42.1	54.4	-	339	11	1.99	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 7am
Min Temperature : 7am
Precipitation : 7am
Snowfall : 7am
Snow Depth : 7am

Climatological Data for LA GRANDE, OR - April 2016

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2016-04-01	68	33	50.5	6.6	14	0	0.00	0.0	0
2016-04-02	M	M	M	M	M	M	S	M	M
2016-04-03	M	M	M	M	M	M	M	M	M
2016-04-04	74	36	55.0	10.6	10	0	0.03A	0.0	0
2016-04-05	52	38	45.0	0.4	20	0	0.10	0.0	0
2016-04-06	58	32	45.0	0.3	20	0	0.00	0.0	0
2016-04-07	71	36	53.5	8.6	11	0	0.00	0.0	0
2016-04-08	78	38	58.0	12.9	7	0	0.00	0.0	0
2016-04-09	80	41	60.5	15.2	4	0	M	M	M
2016-04-10	75	46	60.5	15.1	4	0	M	M	M
2016-04-11	83	41	62.0	16.4	3	0	0.00	0.0	0
2016-04-12	77	47	62.0	16.2	3	0	0.01	M	M
2016-04-13	56	38	47.0	1.0	18	0	0.20	0.0	0
2016-04-14	57	38	47.5	1.3	17	0	0.15	0.0	0
2016-04-15	53	36	44.5	-1.9	20	0	0.17	0.0	0
2016-04-16	59	33	46.0	-0.6	19	0	M	M	M
2016-04-17	66	30	48.0	1.2	17	0	M	M	M
2016-04-18	74	30	52.0	5.0	13	0	0.00	0.0	0
2016-04-19	76	38	57.0	9.7	8	0	0.00	0.0	0
2016-04-20	81	39	60.0	12.5	5	0	0.00	0.0	0
2016-04-21	82	44	63.0	15.3	2	0	0.00	0.0	0
2016-04-22	80	52	66.0	18.0	0	1	0.00	0.0	0
2016-04-23	64	46	55.0	6.8	10	0	S	M	M
2016-04-24	57	40	48.5	0.0	16	0	M	M	M
2016-04-25	74	37	55.5	6.7	9	0	0.02A	0.0	0
2016-04-26	74	37	55.5	6.5	9	0	0.00	0.0	0
2016-04-27	64	40	52.0	2.7	13	0	0.05	0.0	0
2016-04-28	57	40	48.5	-1.1	16	0	0.00	0.0	0
2016-04-29	66	46	56.0	6.2	9	0	0.00	0.0	0
2016-04-30	53	46	49.5	-0.6	15	0	M	M	M
Sum	1909	1098	-	-	312	1	0.73	0.0	-
Average	68.2	39.2	53.7	7.0	-	-	-	-	0.0
Normal	58.3	35.1	46.7	-	549	0	1.58	0.1	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time). Observation times may have changed during this period.
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am, unknown
Snowfall : unknown
Snow Depth : 8am

Climatological Data for LA GRANDE, OR - March 2016

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2016-03-01	52	30	41.0	3.7	24	0	0.03	0.0	0
2016-03-02	52	32	42.0	4.4	23	0	0.22	0.0	0
2016-03-03	53	38	45.5	7.7	19	0	0.01	0.0	0
2016-03-04	53	29	41.0	2.9	24	0	0.00	0.0	0
2016-03-05	58	29	43.5	5.2	21	0	S	M	M
2016-03-06	58	48	53.0	14.4	12	0	M	M	M
2016-03-07	58	34	46.0	7.2	19	0	0.08A	0.0	0
2016-03-08	53	30	41.5	2.4	23	0	0.00	0.0	0
2016-03-09	49	34	41.5	2.2	23	0	0.10	M	M
2016-03-10	51	34	42.5	2.9	22	0	0.30	M	M
2016-03-11	53	33	43.0	3.2	22	0	0.17	M	M
2016-03-12	51	32	41.5	1.4	23	0	S	0.0	0
2016-03-13	53	32	42.5	2.2	22	0	M	0.0	0
2016-03-14	50	33	41.5	1.0	23	0	0.24A	0.0	0
2016-03-15	46	31	38.5	-2.2	26	0	0.10	0.5	0
2016-03-16	46	31	38.5	-2.5	26	0	0.06	0.0	0
2016-03-17	47	33	40.0	-1.2	25	0	0.08	0.0	0
2016-03-18	50	22	36.0	-5.4	29	0	0.00	0.0	0
2016-03-19	52	28	40.0	-1.6	25	0	S	M	M
2016-03-20	59	34	46.5	4.7	18	0	M	M	M
2016-03-21	63	30	46.5	4.5	18	0	0.17A	0.0	0
2016-03-22	58	37	47.5	5.3	17	0	0.20	0.0	0
2016-03-23	45	37	41.0	-1.4	24	0	0.02	0.0	0
2016-03-24	55	39	47.0	4.4	18	0	0.12	0.0	0
2016-03-25	48	37	42.5	-0.2	22	0	0.01	M	M
2016-03-26	46	24	35.0	-7.9	30	0	S	0.0	0
2016-03-27	52	32	42.0	-1.1	23	0	M	0.0	0
2016-03-28	51	34	42.5	-0.8	22	0	0.25A	0.0	0
2016-03-29	47	35	41.0	-2.4	24	0	0.00	0.0	0
2016-03-30	54	33	43.5	-0.1	21	0	0.00	0.0	0
2016-03-31	64	36	50.0	6.2	15	0	0.00	0.0	0
Sum	1627	1021	-	-	683	0	2.16	0.5	-
Average	52.5	32.9	42.7	1.9	-	-	-	-	0.0
Normal	51.2	30.4	40.8	-	750	0	1.46	1.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time). Observation times may have changed during this period.
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am, unknown
Snowfall : unknown
Snow Depth : 8am

Climatological Data for LA GRANDE, OR - February 2016

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2016-02-01	44	25	34.5	1.9	30	0	M	M	0
2016-02-02	38	20	29.0	-3.6	36	0	0.00	0.0	0
2016-02-03	38	19	28.5	-4.2	36	0	0.00	0.0	0
2016-02-04	37	27	32.0	-0.8	33	0	0.06	1.0	1
2016-02-05	34	27	30.5	-2.4	34	0	0.43	1.0	1
2016-02-06	42	27	34.5	1.5	30	0	M	M	M
2016-02-07	43	30	36.5	3.4	28	0	M	M	M
2016-02-08	48	26	37.0	3.8	28	0	0.00	0.0	0
2016-02-09	M	M	M	M	M	M	M	M	M
2016-02-10	45	28	36.5	3.0	28	0	0.00	0.0	0
2016-02-11	46	32	39.0	5.4	26	0	0.00	0.0	0
2016-02-12	49	37	43.0	9.2	22	0	0.00	0.0	0
2016-02-13	51	33	42.0	8.1	23	0	0.00	0.0	0
2016-02-14	M	M	M	M	M	M	M	M	M
2016-02-15	50	36	43.0	8.8	22	0	M	0.0	0
2016-02-16	58	35	46.5	12.1	18	0	M	M	0
2016-02-17	54	40	47.0	12.4	18	0	0.00	0.0	0
2016-02-18	56	35	45.5	10.7	19	0	0.35	0.0	0
2016-02-19	52	33	42.5	7.5	22	0	0.10	0.0	0
2016-02-20	50	26	38.0	2.8	27	0	0.00	0.0	0
2016-02-21	45	23	34.0	-1.4	31	0	0.00	0.0	0
2016-02-22	48	32	40.0	4.4	25	0	0.00	0.0	0
2016-02-23	50	21	35.5	-0.4	29	0	0.00	0.0	0
2016-02-24	50	21	35.5	-0.6	29	0	0.00	0.0	0
2016-02-25	54	25	39.5	3.2	25	0	0.00	0.0	0
2016-02-26	57	29	43.0	6.4	22	0	0.00	0.0	0
2016-02-27	53	32	42.5	5.7	22	0	M	M	M
2016-02-28	52	30	41.0	3.9	24	0	M	M	M
2016-02-29	56	26	41.0	3.8	24	0	M	M	0
Sum	1300	775	-	-	711	0	0.94	2.0	-
Average	48.1	28.7	38.4	4.0	-	-	-	-	0.1
Normal	42.9	25.9	34.4	-	857	0	1.14	2.3	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Snow Depth : 8am
Precipitation : 8am
Snowfall : 8am

Climatological Data for LA GRANDE, OR - January 2016

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2016-01-01	22	10	16.0	-14.3	49	0	0.00	0.0	0
2016-01-02	24	3	13.5	-16.9	51	0	0.00	0.0	0
2016-01-03	36	24	30.0	-0.5	35	0	0.00	0.0	0
2016-01-04	39	M	M	M	M	M	0.00	0.0	0
2016-01-05	41	37	39.0	8.4	26	0	0.00	0.0	0
2016-01-06	44	37	40.5	9.8	24	0	0.00	0.0	0
2016-01-07	46	26	36.0	5.2	29	0	0.00	0.0	0
2016-01-08	38	30	34.0	3.1	31	0	0.00	0.0	0
2016-01-09	31	19	25.0	-6.0	40	0	M	M	M
2016-01-10	33	30	31.5	0.5	33	0	M	M	M
2016-01-11	40	19	29.5	-1.6	35	0	0.00	0.0	0
2016-01-12	33	28	30.5	-0.7	34	0	0.00	0.0	0
2016-01-13	38	29	33.5	2.2	31	0	0.00	0.0	0
2016-01-14	40	26	33.0	1.6	32	0	0.12	0.0	0
2016-01-15	40	29	34.5	3.1	30	0	0.02	0.0	0
2016-01-16	37	27	32.0	0.5	33	0	S	M	M
2016-01-17	37	26	31.5	-0.1	33	0	M	M	M
2016-01-18	41	31	36.0	4.4	29	0	M	M	M
2016-01-19	46	26	36.0	4.3	29	0	0.20A	0.0	0
2016-01-20	41	35	38.0	6.2	27	0	0.15	0.0	0
2016-01-21	47	37	42.0	10.2	23	0	0.01	0.0	0
2016-01-22	44	39	41.5	9.6	23	0	0.00	0.0	0
2016-01-23	48	34	41.0	9.0	24	0	S	M	M
2016-01-24	47	25	36.0	4.0	29	0	M	M	M
2016-01-25	48	22	35.0	2.9	30	0	0.08A	0.0	0
2016-01-26	42	23	32.5	0.3	32	0	0.00	0.0	0
2016-01-27	47	28	37.5	5.3	27	0	0.00	0.0	0
2016-01-28	43	35	39.0	6.7	26	0	0.00	0.0	0
2016-01-29	38	27	32.5	0.2	32	0	0.11	0.0	0
2016-01-30	42	26	34.0	1.6	31	0	M	M	M
2016-01-31	35	27	31.0	-1.5	34	0	M	M	M
Sum	1228	815	-	-	942	0	0.69	0.0	-
Average	39.6	27.2	33.4	2.0	-	-	-	-	0.0
Normal	38.4	24.5	31.4	-	1040	0	1.63	3.4	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time). Observation times may have changed during this period.
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am, unknown
Snowfall : unknown
Snow Depth : 8am

Climatological Data for LA GRANDE, OR - December 2015

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2015-12-01	24	15	19.5	-13.3	45	0	0.00	0.0	0
2015-12-02	30	15	22.5	-10.1	42	0	0.02	0.1	T
2015-12-03	38	25	31.5	-0.8	33	0	0.00	0.0	0
2015-12-04	44	35	39.5	7.4	25	0	0.10	0.0	0
2015-12-05	45	26	35.5	3.7	29	0	S	0.0	0
2015-12-06	43	25	34.0	2.4	31	0	M	0.0	0
2015-12-07	47	37	42.0	10.6	23	0	0.45A	0.0	0
2015-12-08	55	40	47.5	16.3	17	0	0.38	0.0	0
2015-12-09	55	44	49.5	18.5	15	0	0.11	0.0	0
2015-12-10	51	33	42.0	11.1	23	0	0.21	0.0	0
2015-12-11	50	32	41.0	10.3	24	0	0.00	0.0	0
2015-12-12	45	32	38.5	7.9	26	0	S	M	M
2015-12-13	38	34	36.0	5.6	29	0	M	M	M
2015-12-14	45	32	38.5	8.2	26	0	0.40A	0.5	0
2015-12-15	37	32	34.5	4.3	30	0	0.00	0.0	0
2015-12-16	40	29	34.5	4.4	30	0	0.06	0.0	0
2015-12-17	33	14	23.5	-6.6	41	0	0.02	M	M
2015-12-18	39	14	26.5	-3.5	38	0	0.14	0.5	0
2015-12-19	43	22	32.5	2.5	32	0	M	0.0	0
2015-12-20	36	19	27.5	-2.4	37	0	M	0.0	0
2015-12-21	34	29	31.5	1.6	33	0	0.43	T	T
2015-12-22	44	31	37.5	7.6	27	0	0.06	0.0	0
2015-12-23	39	28	33.5	3.6	31	0	0.05	0.5	1
2015-12-24	36	23	29.5	-0.4	35	0	0.04	0.0	0
2015-12-25	28	13	20.5	-9.4	44	0	0.00	M	M
2015-12-26	27	12	19.5	-10.5	45	0	0.00	M	M
2015-12-27	26	21	23.5	-6.5	41	0	0.00	M	M
2015-12-28	34	21	27.5	-2.6	37	0	0.06	1.0	1
2015-12-29	28	21	24.5	-5.6	40	0	0.01	0.0	0
2015-12-30	28	23	25.5	-4.7	39	0	0.03	0.5	1
2015-12-31	32	15	23.5	-6.7	41	0	0.00	0.0	0
Sum	1194	792	-	-	1009	0	2.57	3.1	-
Average	38.5	25.5	32.0	1.3	-	-	-	-	0.1
Normal	37.6	23.7	30.7	-	1065	0	1.66	3.2	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time). Observation times may have changed during this period.
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am, unknown
Snowfall : unknown
Snow Depth : 8am

Climatological Data for LA GRANDE, OR - November 2015

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2015-11-01	60	37	48.5	5.3	16	0	0.68A	M	M
2015-11-02	66	33	49.5	6.7	15	0	0.00	0.0	0
2015-11-03	51	36	43.5	1.0	21	0	0.04	0.0	0
2015-11-04	51	32	41.5	-0.6	23	0	0.00	0.0	0
2015-11-05	48	27	37.5	-4.3	27	0	0.04	0.0	0
2015-11-06	43	35	39.0	-2.4	26	0	0.30	0.0	0
2015-11-07	51	34	42.5	1.4	22	0	S	M	M
2015-11-08	51	37	44.0	3.3	21	0	M	M	M
2015-11-09	52	34	43.0	2.6	22	0	0.15A	0.0	0
2015-11-10	52	34	43.0	3.0	22	0	0.05	0.0	0
2015-11-11	46	30	38.0	-1.6	27	0	S	M	M
2015-11-12	46	29	37.5	-1.8	27	0	0.04A	0.0	0
2015-11-13	45	32	38.5	-0.4	26	0	0.04	0.0	0
2015-11-14	47	29	38.0	-0.5	27	0	S	M	M
2015-11-15	51	47	49.0	10.8	16	0	M	M	M
2015-11-16	54	31	42.5	4.7	22	0	0.09A	0.0	0
2015-11-17	42	31	36.5	-1.0	28	0	0.30	0.8	1
2015-11-18	53	33	43.0	5.9	22	0	0.00	0.0	0
2015-11-19	46	30	38.0	1.3	27	0	0.35	1.0	0
2015-11-20	46	29	37.5	1.1	27	0	0.30	M	M
2015-11-21	38	14	26.0	-10.0	39	0	0.00	0.0	0
2015-11-22	43	17	30.0	-5.7	35	0	0.00	0.0	0
2015-11-23	46	14	30.0	-5.3	35	0	0.00	0.0	0
2015-11-24	46	34	40.0	5.0	25	0	0.02	0.0	0
2015-11-25	35	25	30.0	-4.7	35	0	0.05	0.0	0
2015-11-26	38	17	27.5	-6.8	37	0	M	M	M
2015-11-27	34	13	23.5	-10.5	41	0	M	M	M
2015-11-28	37	13	25.0	-8.7	40	0	M	M	M
2015-11-29	28	10	19.0	-14.4	46	0	M	M	M
2015-11-30	38	10	24.0	-9.1	41	0	0.00	0.0	0
Sum	1384	827	-	-	838	0	1.77	1.8	-
Average	46.1	27.6	36.9	-1.1	-	-	-	-	0.1
Normal	46.2	29.9	38.0	-	808	0	2.03	1.5	-

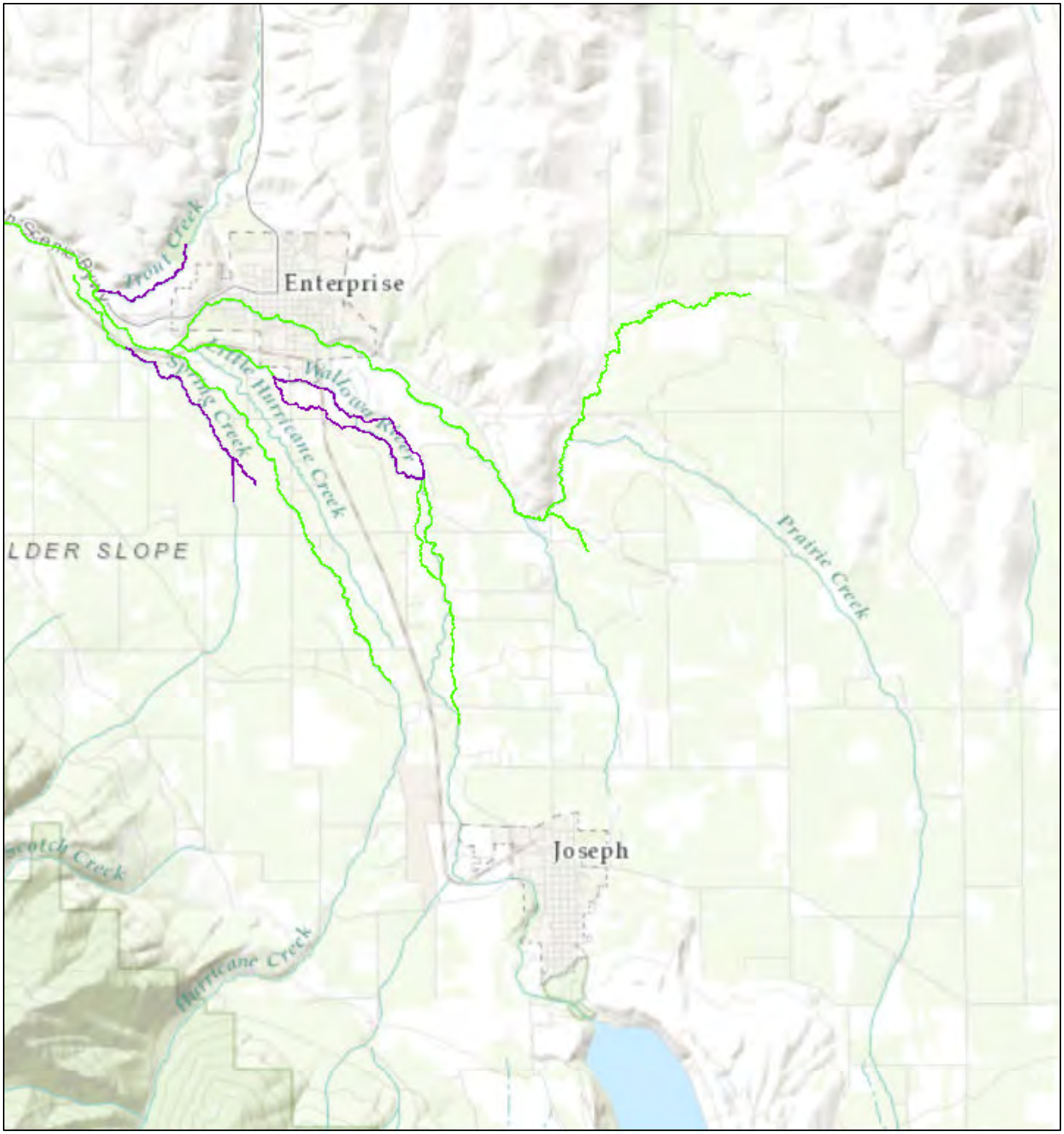
Observations for each day cover the 24 hours ending at the time given below (Local Standard Time). Observation times may have changed during this period.
Max Temperature : 8am
Min Temperature : 8am
Precipitation : unknown, 8am
Snowfall : unknown
Snow Depth : 8am

Climatological Data for LA GRANDE, OR - October 2015

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2015-10-01	76	45	60.5	6.3	4	0	0.00	0.0	0
2015-10-02	75	47	61.0	7.2	4	0	0.00	0.0	0
2015-10-03	74	51	62.5	9.1	2	0	M	M	M
2015-10-04	70	50	60.0	7.0	5	0	M	M	M
2015-10-05	74	36	55.0	2.3	10	0	0.00	0.0	0
2015-10-06	72	37	54.5	2.2	10	0	0.00	0.0	0
2015-10-07	79	39	59.0	7.1	6	0	0.01	0.0	0
2015-10-08	65	51	58.0	6.4	7	0	0.05	0.0	0
2015-10-09	72	46	59.0	7.8	6	0	0.00	0.0	0
2015-10-10	86	45	65.5	14.7	0	1	M	M	M
2015-10-11	67	40	53.5	3.0	11	0	M	M	M
2015-10-12	86	38	62.0	11.9	3	0	0.00	0.0	0
2015-10-13	77	39	58.0	8.3	7	0	0.00	0.0	0
2015-10-14	77	40	58.5	9.1	6	0	0.00	0.0	0
2015-10-15	74	38	56.0	7.0	9	0	0.00	0.0	0
2015-10-16	72	37	54.5	5.8	10	0	0.00	0.0	0
2015-10-17	79	40	59.5	11.2	5	0	S	M	M
2015-10-18	63	53	58.0	10.0	7	0	M	M	M
2015-10-19	79	39	59.0	11.4	6	0	0.17A	0.0	0
2015-10-20	58	49	53.5	6.2	11	0	0.02	0.0	0
2015-10-21	66	32	49.0	2.0	16	0	0.00	0.0	0
2015-10-22	68	35	51.5	4.9	13	0	0.00	0.0	0
2015-10-23	64	29	46.5	0.2	18	0	0.00	0.0	0
2015-10-24	57	29	43.0	-2.9	22	0	S	M	M
2015-10-25	61	39	50.0	4.4	15	0	M	M	M
2015-10-26	69	34	51.5	6.3	13	0	0.05A	0.0	0
2015-10-27	55	31	43.0	-1.9	22	0	0.05	0.0	0
2015-10-28	60	31	45.5	0.9	19	0	0.00	0.0	0
2015-10-29	58	37	47.5	3.3	17	0	0.28	0.0	0
2015-10-30	59	37	48.0	4.1	17	0	0.09	0.0	0
2015-10-31	66	45	55.5	12.0	9	0	S	M	M
Sum	2158	1239	-	-	310	1	0.72	0.0	-
Average	69.6	40.0	54.8	6.1	-	-	-	-	0.0
Normal	62.3	35.2	48.7	-	504	0	1.29	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time). Observation times may have changed during this period.
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am, unknown
Snowfall : unknown
Snow Depth : 8am

StreamNet



July 28, 2016

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0 0.75 1.5 3 mi

0 1.5 3 6 km

Spring Chinook

- Migration only
- Rearing and migration
- Spawning and rearing
- Unknown

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Data was compiled by the StreamNet project (http://www.streamnet.org),

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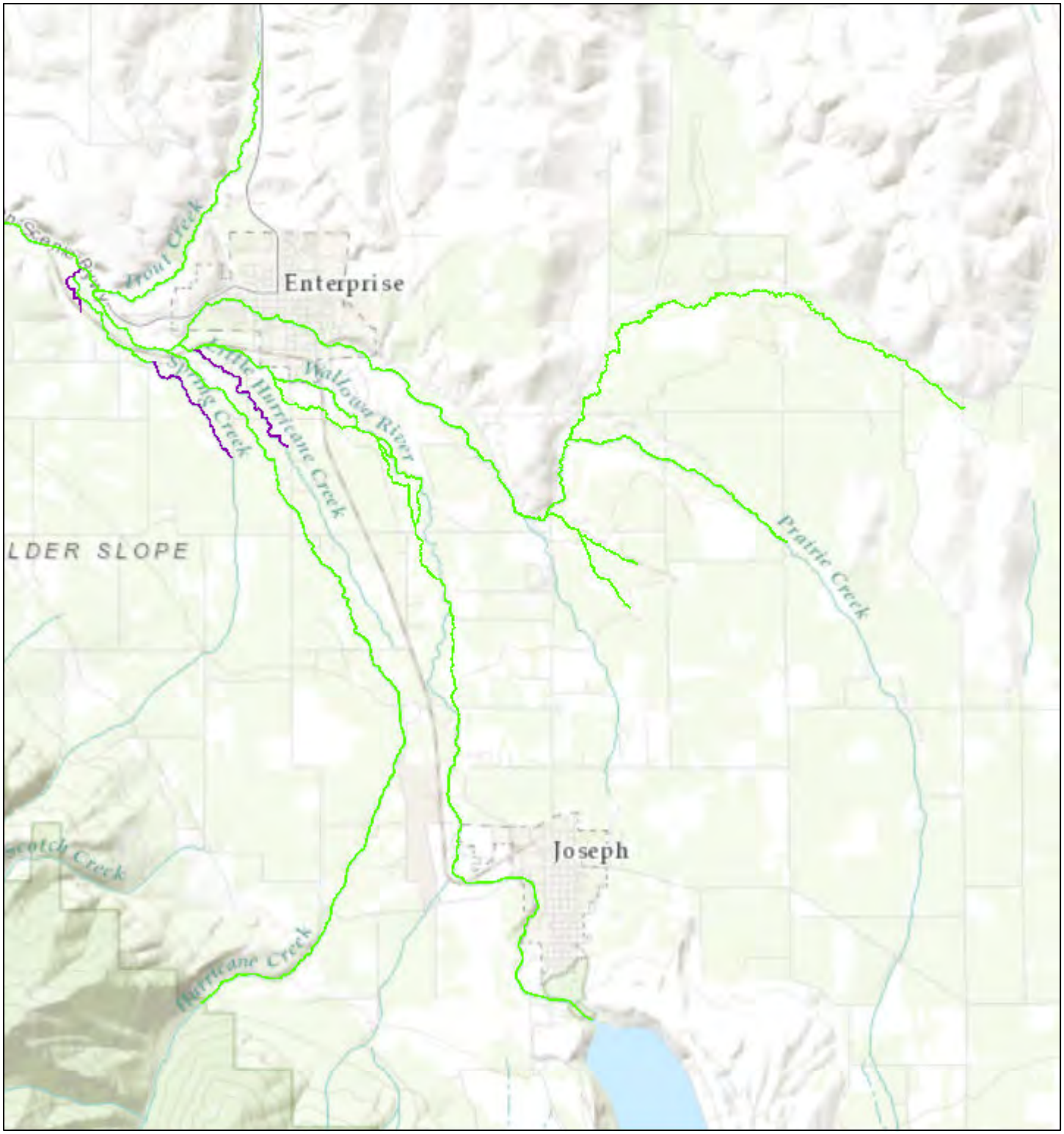

July 28, 2016

1:110,242

0 0.75 1.5 3 mi

0 1.5 3 6 km

Summer Steelhead

- Migration only
- Rearing and migration
- Spawning and rearing
- Unknown

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
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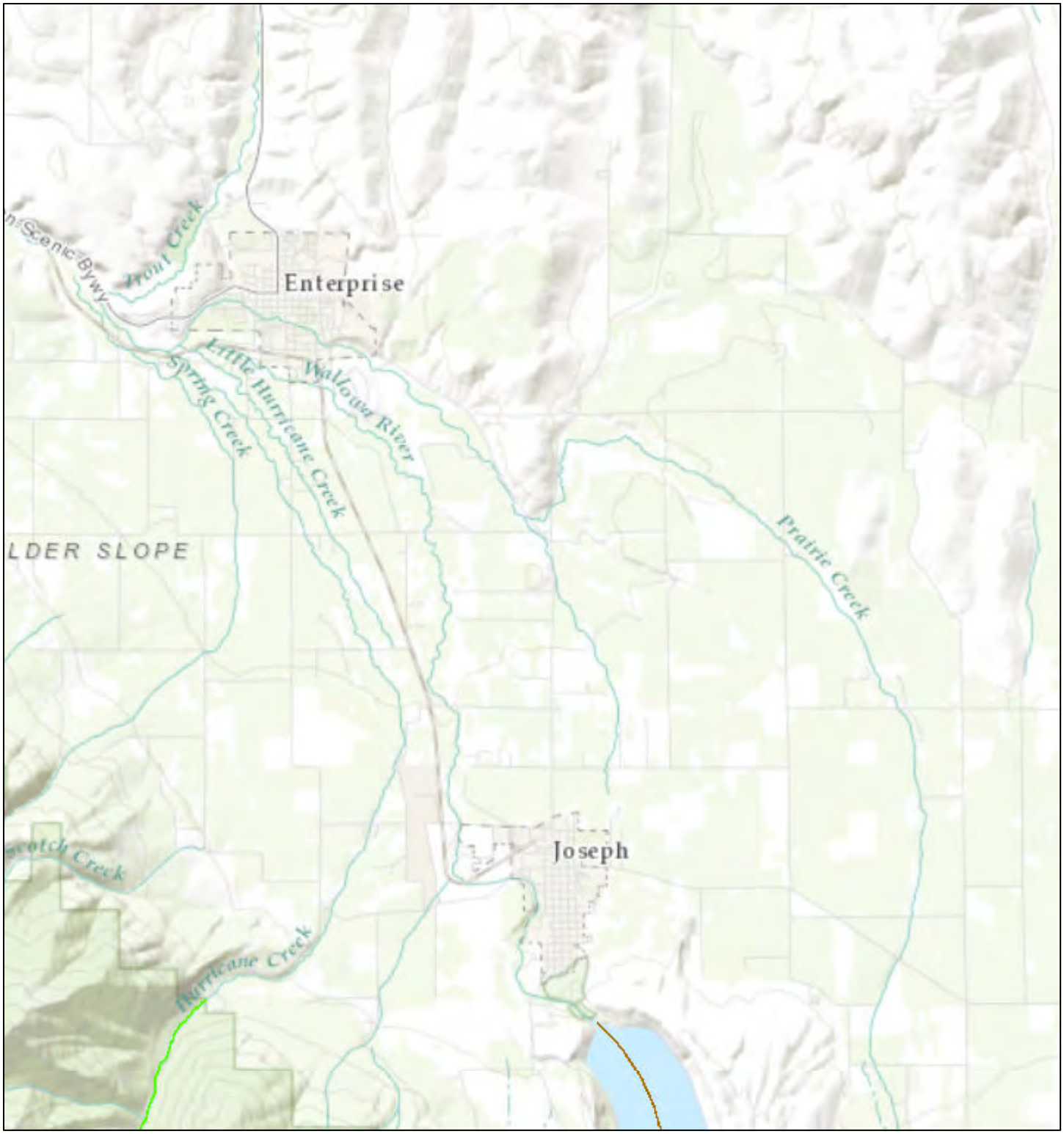

July 28, 2016

1:110,242

0 0.75 1.5 3 mi

0 1.5 3 6 km

Bull Trout

- Foraging
- Migration only
- Nodal (adult residence)
- Rearing and migration
- Spawning and rearing
- Year-round use
- Unknown

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Data was compiled by the StreamNet project (http://www.streamnet.org),

web user
StreamNet, Pacific States Marine Fisheries Commission

APPENDIX E
Literature Citations and References

Literature Citations and References

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WALLOWA UNION RAILROAD

CORRIDOR AND JOSEPH BRANCH TRAIL

MANAGEMENT, SIGNAGE, AND MAINTENANCE PLAN

THIRD DRAFT

Prepared by:

The Wallowa Union Railroad Authority (WURA)

and the

Joseph Branch Trail Consortium

and

Community Volunteers

November 1, 2016

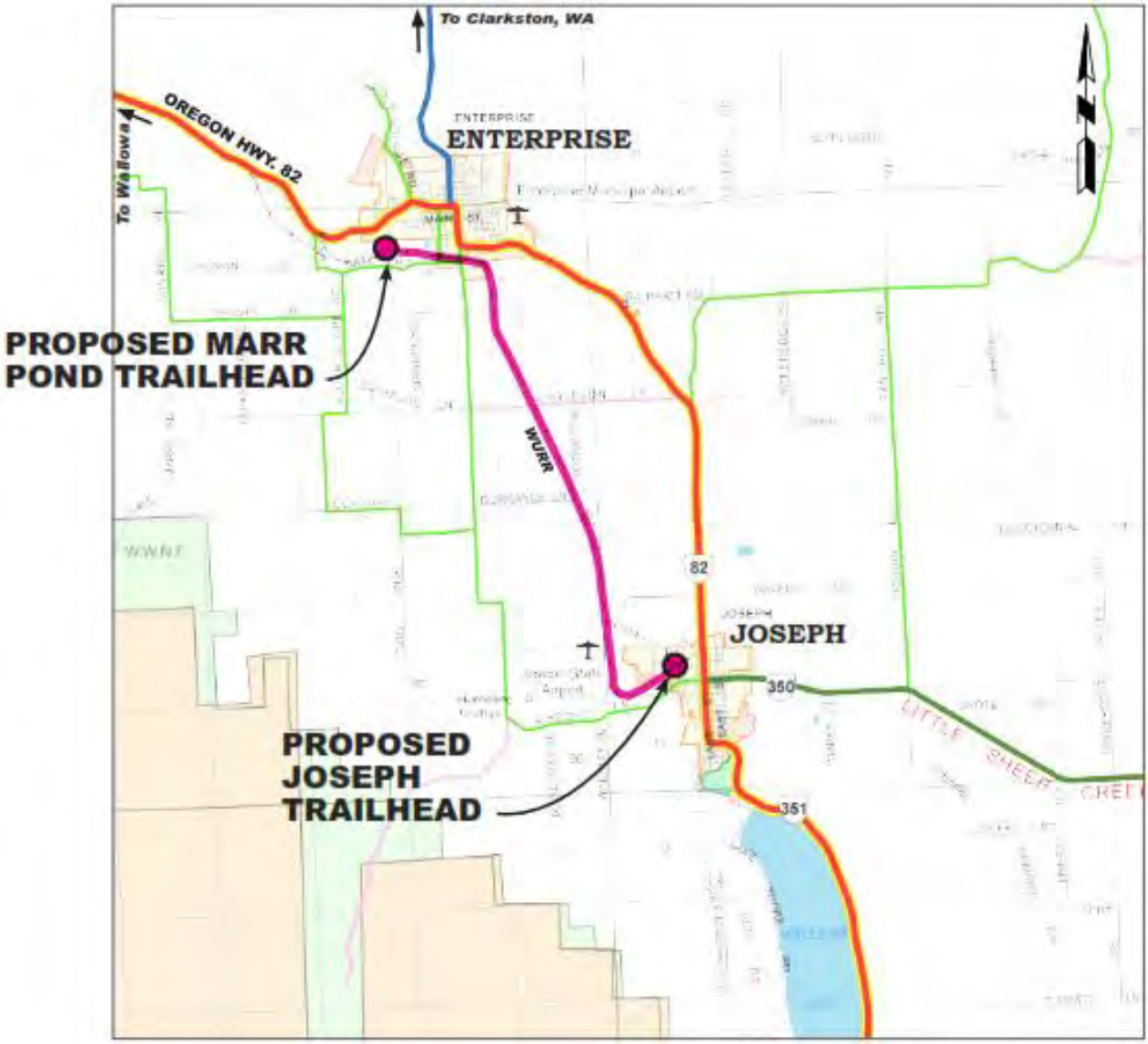
TABLE OF CONTENTS
MANAGEMENT, SIGNAGE, AND MAINTENANCE PLAN
FOR THE
JOSEPH BRANCH TRAIL

Section	Title	Page
	Table of Contents	**2**
	Trail Project Location Map	**5**
	Proposed Trailhead Location Maps	**6**
	Executive Summary	**7**
1	**Mission, Vision, Ownership, Trail Users**	**8**
1.1	Mission Statement	8
1.2	Vision Statement	8
1.3	Ownership	8
1.4	Trail Users	8
2	**Trail Design and Operating Principles**	**9**
2.1	Design Principles	9
2.2	Operating Principles	10
3	**Operating Policies**	**11**
3.1	Trail Rules and Signage Advisory Committee	11
3.2	Hours of Operation	11
3.3	Dogs	12
3.4	Farming Practices	13
3.5	Grazing	13
3.6	Weed Control	13
3.7	Farm Road Crossings	13
3.8	Farm Gates	13
3.9	Fences	14
3.10	Policing and Public Safety	14
3.11	Liability	15
3.12	Trespass	16
3.13	Litter	16
3.14	No Smoking	16
3.15	No Camping	17
3.16	No Hunting	17

Section	Title	Page
3.17	Rail and Trail Safety	17
4	**Polices Addressing Landowner and Trail User Concerns**	**17**
5	**Trail Facilities**	**18**
5.1	Parking Facilities	18
5.2	Bollards	18
5.3	Bike Racks	18
5.4	Benches, Tables and Shelters	18
5.5	Restroom Facilities	18
5.6	Information Kiosks	18
5.7	Facilities Considerations for Persons with Disabilities	19
6	**Citizen Requests, Concerns, Complaints, and Suggestions**	**19**
7	**Trail Development Documentation**	**20**
8	**Project Construction Funding**	**20**
9	**Signage**	**20**
9.1	Signage and Education Programs	20
9.2	Typical Trail Etiquette Signs	20
10	**Trail Maintenance**	**21**
10.1	Infrastructure Protection	21
10.2	Railroad Infrastructure Maintenance	21
10.3	Maintenance Costs	21
10.4	Maintenance Funding	22
10.5	Trail Maintenance Recommendations	22
10.6	Trail Inspections	23
10.7	Vegetation Management	23
10.8	Ditches, Culverts, and Bridges	24
10.9	Trail Surfaces and Trial Bed	24
10.10	Emergency Maintenance	24
10.11	Trail Closures	24
10.12	Bollards and Control Barriers	24
10.13	Cross Country Skiing Track Setting	25

APPENDIX

Section	Title	Page(s)
A	Expectations for a Developed Recreation Trail	27
	Rationale for the Joseph Branch Trail	27
B	Related Connecting Trail Development in Northeast Oregon	30
	Wallowa Lake to Joseph Trail Segment	30
	Circuit Trail Development—Wallowa Mt. Scenic Loop	30
C	Joseph Branch Trail Development Segments and Environmental Considerations	31
	Environmental Considerations Joseph to Enterprise Segment	31
	Wildlife Impacts	32
	Contamination from Railroad Operations	33
	Cultural Resources	34
D	Railroad and Trail Development History	36
E	Economic Impact	38
	Consequences of Not Constructing the Trail	38
	Property Values	39
F	Partnerships	40
	Partnerships and Trail Management Planning	40
	Public Involvement	40
G	Governance Structure	41
	Railroad Authority's Responsibilities	41
	Joseph Branch Trail Consortium's Responsibilities	42
	Local Government Involvement	43
	Reporting Organizations	43
H	Adjacent Landowner Relations	44
	Mitigation of Landowner Concerns	45
	Concerns and Example Mitigation Strategies	46
I	Complaint/Suggestion Form	47
J	Example Maintenance Activities Form	48
K	Adjacent Property Owner Field Notes	49



PROPOSED PILOT PROJECT LOCATION

SCALE IN FEET
8000 0 8000

PROPOSED MARR POND TRAILHEAD

PROPOSED JOSEPH TRAILHEAD

Executive Summary (The Executive Summary will be prepared in a subsequent plan draft.)

The *Wallowa Union Railroad Business Plan, Joseph Branch Rail-with-Trail Concept Plan, and* right-of-way scoping information provided by Anderson Perry & Associates serve as the basis for this *Management, Signage, and Maintenance Plan.* The draft plan is based on the following assumptions:

1. Wallowa Union Railroad Authority (WURA) retains ownership of the railroad and its assets.
2. The WURA board of directors has complete oversight over the management of the Joseph Branch Trail.
3. The WURA board of directors may contact out the management of the trail with organizations focused on trail financing, development, and management, including maintenance and public education activities.
4. The Joseph Branch Trail Consortium (JBTC) may or may not be one of the organizations contracted with for trail management and maintenance, but will continue to assist WURA with public relations, education, and other support roles outlined in the *Plan*.
5. The *Plan* is a fluid document that will undergo significant modification as the trail is developed and placed in service.

Please review the content of this document in terms of:

1. Which policy statements need revision (eliminate, strengthen, change emphasis, etc.)
2. What policy statements are missing and must be added?
3. What procedures need to be changed from the adjacent landowner's, the general public's, trail user groups', and WURA's perspective?
4. What procedures are missing that should be added?

We will continue to edit and add material to the Plan through discussions with the citizen's advisory committee, public meetings and communications, and discussions. Comments and editing suggestions received will be called to the attention of the WURA board of directors.

Our proposed timeline for the initial review of the document by the citizen advisory committee and the general public is:

- Citizen committee review of the second draft of the *Plan* completed and comments received by October 15, 2016.
- Plan edited and planed on www.josephbranchtrail.com website and printed copies in Wallowa County and Union County libraries, city halls, and county commission offices for review by the public without Internet access on Monday, October 17, 2016.
- Public meeting on Tuesday, October 25, 21016 to gather public comment. The meeting will be held at Toma's Conference Room, 309 S. River Street, Enterprise, OR 97828
- Closing of the first public comment period on Friday, October 28, 2016.
- Third draft version

Terry Edvalson (tedvalson@eoni.com)
Joseph Branch Trail Consortium Project Manager
Cell: 541.377.6355

Section 1, Mission, Vision, Ownership, and Trail Users

1.1 Mission Statement

The mission of the Wallowa Union Railroad Authority (WURA), as defined in the *Intergovernmental Agreement and Wallowa-Union Railroad Authority Charter*, is to pursue the ownership, maintenance, repair, modernization, and operation of the Elgin-Joseph Rail Line. The WURA board of directors' intention is to undertake activities that maximize the benefits of the railroad's assets for the public good.

1.2 Vision Statement

An active rail line connects to the national rail network is available for rail operations to support all forms of economic development in Wallowa and Union counties. The railroad right of way is used as an active public transportation corridor that supports multiple uses and opportunities for development of commerce and recreational activities for the benefit of communities and residents of northeastern Oregon.

1.3 Ownership

Title to the Wallowa Union Railroad Transportation Corridor properties and equipment will remain with the WURA board of directors. Any leases or other agreements that allow others to use, operate, or control uses within the railroad corridor will be constructed to allow WURA to reassign or regain full control of the corridor if those persons allowed an interest are deemed to be in default of a clearly defined set of goals, or are otherwise acting contrary to the public interest.

1.4 Trail Users

The Joseph Branch Trail is being developed to address the interests of three distinct user audiences:

a. Wallowa County and Union County Residents: Trail segments near and between communities will be used by local residents for daily exercise, a safe off-road place for children to play and families and the elderly to walk and socialize, and for hiking and cycling between towns for shopping and commuting to work.

b. Casual Tourists: Visitors who travel by automobile or recreational vehicle, mostly families, who come to Northeast Oregon to camp currently congregate around Wallowa Lake and Joseph and often come equipped with children and bicycles. These visitors will use the connecting trails described in other sections of this *Plan* to explore the area beyond Wallowa Lake and Joseph for recreation and shopping. The trail system will be used for walking and cycling near and between communities.

c. Adventure Tourists: Visitors who are touring cyclist and hikers are part of a growing market of travelers who seek long-distance looped routes connecting to multiple trails for vacation activities. They may travel in supported in large supported tour groups (Cycle Oregon), in small supported groups, or independently. Completion of the community to community Joseph Branch Trail between Wallowa and Union counties will provide an off-Highway 82 option for riding and hiking (including European-style trail hiking between communities).

Trail users will find a rural rail-with-trail which will provide an environment so all users can enjoy the recreational benefits, nature, and scenic Wallowa Valley and adjoining federal and State of Oregon lands to the fullest extent possible. Multiple recreation activities may include: walking, hiking, cycling, equestrian, cross country skiing, and other non-motorized compatible forms of recreation by individuals, families, and organized groups.

Section 2, Design and Operating Principles

2.1 Trail Design Principles

The WURA board of directors will consider the following design principles in the decisions regarding trail placement and development within the right of way:

a. impacts that the trail could have on existing and future uses within and adjacent to the rail corridor;

b. the design of the trail in each segment will not impact future railroad uses to haul freight, conduct track and roadbed reconstruction and maintenance, and other operations and transportation related purposes;

c. mitigation of concerns identified by WURA, adjacent landowners, the communities of Joseph and Enterprise, right-of-way users, and organizations and agencies with interest in the railroad and trail;

d. accommodation of tourism and economic development locally and within the region, including the Joseph Branch Railriders, the Eagle Cap Excursion Train, Joseph Branch Trail users, as well as future activities approved by the Railroad Authority;

e. provision of recreation opportunities for local residents of all ages, and within the context of the envisioned multimodal Wallowa Mountain Loop system (Hells Canyon Scenic Byway), access to public lands, and connection to the Nez Perce National Historic Trail;

f. uses of the trail anticipated by local community members;

g. mitigation of archeological, wetlands, Wallowa River, irrigation ditches, and other environmental constraints;

h. physical and environmental conditions and constraints within the rail the railroad right-of-way;

i. options and strategies for funding and scheduling the cost of scoping, surveying, conceptual design, engineering design, and construction of trail segments;

j. development and testing of the ongoing maintenance plan for each trail segment;

k. engagement of a broad cross section of Wallowa and Union county residents in developing and maintaining each trail segment; and

l. opportunities for engaging local primary, secondary, and higher education institutions in trail development and management efforts, providing students community-based learning experiences.

2.2 Operating Principles

Wallowa Union Railroad operations are governed by the rules and policies of the U.S. Department of Transportation, Federal Railroad Administration, and Oregon Department of Transportation, Railroad Division. All uses of the railroad right of way must be in compliance with the rules and policies of these agencies and WURA's policies and operating procedures. Both rail and trail uses of the Transportation Corridor should be supportive on one another. No action will be taken to eliminate existing or potential rail use.

a. The WURA board of directors must approve any use of the right of way with uses specified in right of access, use agreements, license agreements, contracts, or leases that describe the terms, conditions, and limitations of the allowed uses.

b. WURA is the owner of the railroad corridor assets, including land, track, equipment, and buildings and is responsible for their management and maintenance.

c. The Joseph Branch Trail's operation and maintenance is the responsibility of the WURA board of directors. The WURA board of directors may enter into agreements, contracts, or leases for management, operation, and maintenance of the trail.

d. The Joseph Branch Trail will be designed to protect the operational needs of the railroad and the safety of trail users with appropriate setbacks and distance from the track centerline.

e. The current uses of the railroad right of way by the Eagle Cap Excursion Train and Joseph Branch Railriders are at low speed and present minimal risk to persons using an adjacent non-motorized recreational trail.

f. Trail and railroad crossings must be designed to meet the operational needs of the railroad, both in present and future conditions. Trail bridges will be constructed to meet required separation requirements from train operations.

g. The Railroad Authority will require that maintenance, safety, and other access needs of the railroad and trail users be considered in the alignment of the trail, trailheads, bridges, and trail facilities at access points along its length.

h. Trailheads and other access points must provide for parking and other facilities that support anticipated uses to limit the possibility of persons trespassing or littering on adjacent private property.

i. The Railroad Authority will require organizations engaged in trail management and maintenance activities to furnish proof of liability insurance for trail operations.

j. The Railroad Authority will work closely with trail advocates, adjacent landowners, and the general public in determining the approved Joseph Branch Trail design and operating parameters.

k. Eminent domain will not be considered as a strategy in acquiring property for trail development.

Section 3, Operating Policies

Operating policies have been developed in response to concerns, comments, and suggestions proposed by participants in public planning meetings, responses to surveys, correspondence received from persons with concerns about the trail, and discussions during individual landowner interviews. *(See interview forms Page 50 Appendix K.)* The policies will be reviewed regarding their effectiveness, reasonableness, and practicality in their application when the trail is placed in operation.

3.1 Trail Rules and Signage Advisory Committee

It is anticipated the trail will be used by inter-generational walkers, hikers, bicyclists, cross country skiers, and equestrians, depending on how the trail is developed. Each group will have different expectations of how the trail should be managed for safe use.

A rules committee with representatives from trail user groups and adjacent landowners will be convened to periodically review the *Management, Signage, and Maintenance Plan*. They are charged with drafting specific signage suggestions for the Joseph to Marr Pond trail segment. The committee's recommendations will be presented to the WURA board of directors for review and to the general public in workshops to invite reactions and suggestions prior to adoption.

3.2 Hours of Operation

In order to avoid conflicts with neighbors, establishment of time for day use of the corridor, and strict enforcement measures will be necessary for special events. To accommodate events hosted by the local organizations, the trail may be closed for a short time to other recreation activities during events (and preparations for them) to make these events possible.

The Joseph Branch Trail will be open for use 24 hours a day, seven days per week, 52 weeks per year, without any planned restrictions except those noted below:

a. Walking/hiking/jogging are unrestricted year around use, except as noted below.

b. Americans with Disabilities Act accessibility is restricted by trail conditions, when suitable hardened surface for wheel use is difficult, primarily in the winter because of ice and snow.

c. Bicycles are unrestricted year around use though winter conditions will dictate riders exercise special caution.

d. Horses will be restricted to lessen trail damage when the surface is soft because of weather.

e. Snowshoeing and cross country skiing are unrestricted use when snow conditions permit.

f. If necessary, the trail may be closed for its entirety or certain sections maybe closed due to floods, periods of extreme fire danger, and other natural events. The trail may also be closed at certain times during the year to ensure the integrity of the trail surface is maintained and to prevent it from being damaged while the trial is wet. During these closures notices will be posted at trailheads and trail access points.

g. The trail may be closed for short periods for community organizations to host special events authorized by the WURA board or the trail manager.

h. Motorized vehicle uses of the trail, except for farming, emergency response, and railroad and trail maintenance uses by authorized personnel, is restricted at all times by Federal Railroad Administration regulation and WURA policy.

Note: Restricted hours of trail operation have been suggested by adjacent property owners concerned about losing their privacy, public safety, littering, etc. Policy options for WURA's consideration include:

- ***unrestricted hours***
- ***sunup to sunset set times that would include use during early morning and post sunset use (6 a.m. to 10 p.m.)***
- ***start with unrestricted hours and curtail use if problems are identified***

---

i. Competitive events managed by local organizations for fundraising purposes will be encouraged, if compatible with general trail uses. These events will require prior approval of the trail operator who will issue a non-renewable, time limited permit for an event. Competitive events and commercial use of the trail will require coordination by the trail operator with corridor users.

3.3 Dogs

Some trail users, primarily walkers and hikers, will bring their dog(s) with them. Unleashed dogs may pose a threat not only to other trail users, but also to livestock or poultry on private land adjacent to the trail. Frightened livestock can run into fences or other obstacles causing injury and sometimes death. Consequently, a leash rule will be imposed on dogs using the trail. Fees may be imposed by the WURA board of directors for use of the trail for special events to cover extra ordinary trail maintenance expenses.

The issue of livestock guard dogs on adjacent private lands menacing or attacking passing trail users was raised as a concern during *Concept Plan* development and public meetings. It is expected adjacent landowners with dogs will confine their dogs to their properties. Signage will inform trail users about the purposes and behavior of livestock dogs, how to act around them, and the rights of property owners to shoot dogs that trespass.

Note: Dogs on the trail is a concern to adjacent landowners and some cyclists. Comments regarding allowing dogs have ranged from allowing dogs on leashes to absolutely no dogs allowed on the trail. Possible policy choices for the WURA board of directors include:

1. ***Allow dogs on leashes and provide signage, dog waste bag dispensers and garbage cans at each access point for litter collection.***
2. ***Allow dogs on the trail for a specified period of time (six months to a year to determine if dogs are a problem. Analyze observations (feces on or beside the trail, complaints regarding dogs harassing farm animals, dog bite reports, etc.).***

3. ***Do not allow dogs on or off leashes on the trail from the very beginning.***

3.4 Farming Practices

Agriculture is a valued part of the region's economy and community traditions. The trail presents an opportunity to use signage and special events to share information with trail users about local agriculture, it's history and current contributions to area communities. Signage can also provide those not familiar with agricultural practices a better understanding of the activities and role of agriculture in the local economy.

The WURA board of directors and users of the Joseph Branch Trail recognize the rights of farmers and ranchers to carry on agricultural practices, including the use chemicals. Normal farm practices are not static. They change as new species of crops and/or livestock appear, or new farming practices are developed.

3.5 Grazing

Grazing as a means of weed control has been allowed by the WURA board of directors on portions of the railroad right of way when it is not in use for train and Joseph Branch Railriders. Grazing on the right of way will not be allowed during construction and when the trail is placed in operation, both for the safety of trail users and farm animals.

3.6 Weed Control

The trail operator selected by WURA and organizations using the trail (e.g. Joseph Branch Railriders, Friends of the Joseph Branch, Joseph Branch Trail Consortium) will be required to commit to work with WURA and adjacent landowners to implement noxious weed control in the right of way as a condition of the *Trail Management, Signage, and Maintenance Plan* and in accordance with Oregon noxious weed statutes. County Weed Control Manager will be asked to work with WURA and its partners to prepare an annual weed control plan for the right of way.

Adjacent landowners can report noxious weed problems in the railroad right of way needing attention to the trail manager.

3.7 Farm Road Crossings

Existing private road crossings where property owners own land on both sides of the right of way will be preserved and these property owners will have the use of the crossing during and after the trail is built. Access to land-locked portions of properties will also be preserved. Farm use of existing crossings will take precedence over recreational use of the trail and will transfer to future owners of a property. New farm road crossings must be approved by the WURA board of directors.

3.8 Farm Gates

Gates across the trail at farm road crossings will be allowed to isolate the trail when necessary to facilitate the safe movement of animals and farm equipment. When not in use for the aforementioned purposes, gates will be left in a position to allow the free transit of recreational trail users.

3.9 Fences

It is the responsibility of the railroad to erect and maintain fences, crossings, gates and cattle guards according to *ORS* Section 608.310. The WURA board of directors, as it has a very limited operations budget, has an agreement with property owners that when a fence is in need of repair, the railroad will purchase the fencing materials and the landowner will install the fencing. The repair of fences damaged by cattle or other farm animals are the responsibility of the landowner. Dog-proof fencing may be installed in areas where dogs on the trail are proven to be a nuisance.

A few adjacent landowners have encroached on the right of way by adding or moving fences. A survey will determine which fences may need to be relocated to allow adequate space in the right of way to construct a trail. From a public relations perspective, moving the fencing could present a contentious adjacent landowner issue. It is recognized farming activities were allowed in the right of way by the Railroad Authority as a weed control method. Relocating fences encroaching on the right of way be included as a construction costs of the trail. After trail construction is complete, new fences encroaching on the right of way will be removed at landowners' expense.

3.10 Policing and Public Safety

As more and more Oregonians and visitors to the state participate in multiple recreation activities there is a need for recreation education and law enforcement. WURA and organizations supporting the development of the trail have a responsibility to address public education, signage, and public outreach to reduce violation of laws, policies, and regulations and to ensure they are properly and adequately enforced.

WURA and its partners will strive to educate their members, the general public, and visitors to Oregon of the laws, rules, and regulations that govern the use of the Joseph Branch Trail. This will be done through brochures; outreach to members through various means; signs at entry points and along the trail; and general public outreach and education.

The trail operator will create a volunteer monitoring team to monitor the trail and to be of assistance to trail users. Periodic monitoring of trail use will help reduce illegal actions. Cameras may be placed along the trail in strategic spots to collect information about trail usage and document problem locations. Signs will be posted to inform trail users that cameras may be in use for surveillance purposes.

Nationally-based research shows that recreational trails experience few reported incidents requiring police intervention. Most, and the number is small, of incidents requiring police intervention involve the illegal use of motorized vehicles on non-motorized trails, litter, and unleashed pets.

Good trail design promotes safe public trails, including:

a. Natural Surveillance: Keeping trail corridor maintained so that people can be easily seen by other users, staff, adjacent landowners and anyone who may pass by the trail or trailhead.

b. Natural Access Control: The trail is fenced from adjacent farm land and has limited controlled ingress and egress points along the trail. Persons outside these areas will look out of place.

c. Territoriality: Private lands can be posted to inform trespassers they are not welcome on a property. Signage can also be used to explain the dangers of farming operations, including the dangers of interacting with farm animals and livestock dogs, to show that someone owns and cares about their privacy and property.

d. Maintenance: Maintained trails promote community pride of ownership and increases the number of regular trail users. The more people who use facilities the way they were intended, the safer those areas are going to be. Railroads report that there is significantly less dumping and other littering on properties where there are accompanying trails.

The following public safety agencies are the primary sources for law enforcement and emergency response for the Joseph Branch Trail:

Wallowa County Sheriff

The Wallowa County Justice Center
104 West Greenwood Street
Enterprise, Oregon 97828
Telephone: 541-426-3131 or
dial 911 for any emergency
Fax: 541-426-4685
E-mail: wcsheriff@co.wallowa.or.us

Union County Sheriff

Union County Sheriff's Office
1109 K Avenue
La Grande, Oregon 97850
Telephone: 541-963-1017 or
dial 911 for any emergency
E-mail: sheriff@union-county.org

The Bureau of Land Management has River Rangers who patrol portions of the Grand Ronde and Wallowa Rivers. The Oregon State Police also patrol section of the railroad and river corridors.

3.11 Liability

Fear of being sued or being held liable for injuries sustained by recreationists and/or trespassers on their land was a concern expressed by landowners in public workshops, meetings, and in responses to the two surveys administered in preparation of the *Joseph Branch Rail-with-Trail Concept Plan*. The exposure to liability by landowners from recreationists depends on whether the person is invited on to the private property, is on the property for a public or business purpose, or is trespassing.

While it is believed landowners with property adjacent to the railroad are immune from for persons harmed while trespassing on their property, circumstances do vary and situations can be different. We advise each landowner to review the pertinent *Oregon Revised Statutes* (*ORS*) in their entirety and, if they have questions, consult an attorney. The texts of relevant statutes are available on the Internet.

ORS 105.682 explains that Oregon's legislature's policy is to encourage the use of private land for recreational purposes. To do this they have established policies to absolve landowners for liability for any personal injury, death or property damage that arises out of the use of land for recreational purposes. *ORS* 105.688 clarifies immunities provided in *ORS* Section 105.682 applies only if the landowner does not charge for permission to use the land or transfers an easement to a public body to use the land. Protection is lost if fees are charged for access to a property for recreation purposes.

ORS 105.655 defines "Charge", (admission price or fee), "Land" (agricultural land, rangeland, forest land, and lands adjacent to bodies of water, roads, water courses private buildings, machinery or equipment), "Owner" and "Recreational purposes" (list of recreational activities).

ORS 105.700 defines notice and their form that must be posted to deny right of way to private property and damages that may be recovered from persons who trespass. There is no specific signage language prescribed.

3.12 Trespass

Although experience with other recreational trails shows that a trail with regular public use deters illegal trespass, education of the user public about the need to respect the rights of private landowners is important to prevent trespass on private land. Fencing or barriers may be placed at ungated locations with the potential for illegal access. Signs will be posted at all junctures and private roads and trails, indicating the adjacent property is private and trespass is not permitted.

Oregon's trespassing definition and penalties are found in *ORS* Section 164 under the Burglary and Criminal Trespass section. Trespassing occurs when someone enters and remains unlawfully on a property or premise when they don't have permission to do so. Trespassers are afforded scant legal protection. Generally, a landowner has no duty to maintain the land for the safety of trespassers.

Trespassers can be found guilty of crimes of varying degrees based on the type of property and situation. Damages that can be recovered are defined. It is the intent of the WURA board of directors to monitor user counts and trespass reports made to public safety officers and the trail manager.

3.13 Litter

Litter from irresponsible trail users can damage equipment and injure livestock. Illegal garbage dumping is a concern of many rural property owners, particularly on property remote from their home site. Trail users will be educated to use the trash receptacles at trailheads and trail access points and to practice pack it in, pack it out.

Litter management will include trash receptacles at trailheads in Joseph and Enterprise and at designated access points along the trail with regular trash removal as a requirement of the *Trail Management Plan.* Youth and trail user support groups will be organized to adopt trail segments and periodically patrol the right of way for trash pickup and other light maintenance activities.

Trash and other debris will be picked up and disposed of when found during inspections. Materials picked up will be reported for entering into the trail maintenance database when discovered during a non-trail inspection trail visit. This information will be reported for trail maintenance planning and for use in public relations/education campaigns.

3.14 No Smoking

The trail is a public recreation area and no smoking will be allowed at any time to protect the health and safety of all trail users and to reduce the potential for grass and forest fires.

3.15 No Camping

Camping is not permitted in public transportation right of ways in Wallowa County and Union County. There are nearby camp grounds for cyclists and hikers at Oregon Department of Parks and Recreation, Forest Service, and commercial camp grounds. Information about camp sites is available from Forest Service, Chambers of Commerce, and from visitor industry service providers throughout the counties and on the Internet.

3.16 No Hunting

There will be no hunting on or from the trail. The trail may be used to access public lands for hunting.

3.17 Rail and Trail Safety

The dangers posed by railroad operations to pedestrians, cyclists, and motorists are well known. Measures taken across the country where trails share rights-of-way with operating railroads, have proven effective in protecting trail users. Trail users will not be allowed to use the roadbed (area between the tracks) as physical dangers exist on the railroad even when trains are not running. Bridges without deck planking and safety rails are off limits. Signage and notices will be posted regarding train and Railriders' operations and maintenance schedules to inform trail users of potential dangerous situations and how to exercise appropriate caution.

The Eagle Cap Excursion Train's currently low operating speeds are determined by track, roadbed, and bridge conditions. It is possible future demand will result in improved railroad infrastructure that could result in trains being able to operate at higher speeds. Changes in train operating speeds will consider the trail's proximity to the track and other factors that could present a danger to trail users. Mitigation strategies will be presented and considered by WURA in regulating train operations speeds and trail user activities.

Section 4, Policies Addressing Landowner and Trail User Concerns

Permission will be obtained from private landowners to implement any control techniques on their land that are required for railroad and trail maintenance, weed control, or other management purposes. Landowners who request individual interviews will be contacted and interviewed during the planning and construction processes to determine:

a. the on-the-ground perspective of the landowner's issues and concerns about the trail;

b. the approximate distance of residences, farm buildings, and equipment storage buildings and areas from the trail and to understand loss of privacy concerns;

c. if there are special attractions on a property that might attract trespassers or for someone to seek permission to enter the property;

d. possible easy access points to the landowner's property from the trail and county roads that create a potential for trespass;

e. clarification of concerns expressed on their response forms or other correspondence specific to their property—are there special circumstances that might amplify the possibility of a concern being realized;

f. the use(s) of the property immediately alongside the railroad right of way and timing of uses that might be impacted by the trail; and

g. the landowner's opinions about the range of mitigation strategies available to ameliorate his/her expressed concerns. (The possible mitigation discussion is not a commitment to undertake a specific mitigation activity, but an attempt to solicit suggestions for the property in question.)

Section 5, Trail Facilities

5.1 Parking Facilities

Suitable public parking facilities will be located at the City of Joseph and Marr Pond trailheads. Parking spaces will also be located at access points along the trail. The goal of providing adequate parking at access points along the trail is to ensure that trail users' vehicles do not encroach on private property.

Parking will be monitored by trail volunteers and city and county governments consulted to determine steps that need to be taken to meet trail parking user needs, as well as address illegal parking on public roadways and unauthorized parking on private property.

5.2 Bollards

Bollards will be installed to control unauthorized motor vehicle access**.** Other barriers may be considered if unauthorized vehicle use becomes troublesome. Public safety, railroad maintenance, rural irrigation ditch, Enterprise City water line, and trail maintenance personnel will be able to remove barriers to access the trail when necessary.

5.3 Bike Racks

Bike racks will be installed at trailheads and may be added at other trail access points as use of the trail grows.

5.5 Benches, Tables, and Sun/Rain Shelters

Benches and tables are planned for the trailheads. Shelters may be added as demand grows. Benches for resting are planned at road crossing locations. If made available, they will be placed to minimize impacts on the privacy of adjacent landowners.

5.6 Restroom facilities

Pit toilets are planned for the trailheads. Flush toilets and potable water will be the preferred alternative if sewer hookups and potable water can be made available at the trailheads at a reasonable cost. The cities of Joseph and Enterprise and the Oregon Department of Fish and Wildlife and will be consulted regarding restroom development possibilities.

5.7 Information Kiosks

Information kiosks will be installed at each trailhead for posting of trail rules, maps, notices, educational and information signage, and for local chambers of commerce to post information. A secure suggestion

box will be located at the kiosks for users to offer comments/complaints/and raise trail-related issues. Suggestion boxes will be checked weekly for user's comments which will be responded to by the trail manager.

5.8 Facilities Considerations for Persons with Disabilities

The Eagle Cap Excursion Train services between Elgin and Minam, with a possible extension to the City of Wallowa, offers a means to afford persons of all ages and abilities a unique opportunity to travel through the Grande Ronde River and Wallowa River Canyons and view portions of Wild and Scenic Rivers. The Elgin Depot and Eagle Cap Excursion Train are handicapped accessible. Other trailhead facilities will be developed to conform to Americans with Disabilities Act (ADA) of 1990 standards to insure facilities are handicapped accessible.

Trail surfaces will be hard packed gravel/dirt/composite surfaces navigable by persons using crutches, wheel chairs, and other devices to meet ADA standards.

Section 6, Citizen Requests, Concerns, Complaints, and Suggestions

The following procedures will be used to document citizen requests, concerns, complaints, and suggestions:

- The trail manager will collect requests, concerns, complaints, and suggestions and report tham to the WURA board. The report will include the nature of each request, concern, complaint, or suggestions and how it was dealt with or a request for a decision if the matter requires a policy decision.
- The WURA board of directors generally meets monthly in overseeing the planning, development, and operation of the trail. The meetings are held on alternate months at the Elgin Depot and the City of Wallowa at the Senior Center, beginning at 5 p.m.
- It will be the citizens' responsibility to submit their issues in writing, either placed in a kiosk suggestion box, mailed, e-mailed, to:

  Trail Manager (To be designated)
  Address
  Address
  Phone
  E-mail

- The procedure for filing a request, concern, or complaint will be posted on the trail website. An example form for filing a request is included in Appendix B. Receipt of a request, concern, or complaint will be entered into an issues database and forwarded to the co-chairs of the Railroad Authority for any required action, if the matter cannot be resolved by the trail manager.
- The citizen filing the request, concern, or complaint will be notified the issue has been received, and if not resolved, when it will be considered at a WURA board of directors' meeting. The citizen filing the complaint may be asked to provide additional information. The trail manager may seek a discussion with other parties involved or impacted by an issue and, if necessary, request an extension for more time to consider an issue and seek resolution. If the matter is not resolved, the trail manager will seek a decision from the WURA board of directors at a regularly scheduled meeting.

The WURA board of directors will review all requests, concerns, complaints, and suggestions as a basis for consideration in changes in policies and procedures. To build public trust and transparency in operations and management, all such correspondence, electronic and hard copy, will be posted on the trail website for public review.

Section 7, Trail Development Documentation

The *Joseph Branch Rail-with- Trail Concept Plan,* the *Wallowa Union Railroad Authority Joseph Branch Trail and Corridor Management and Maintenance Plan,* and engineering studies and designs, environmental permitting documents and related background studies, and other documents used in trail design and construction, future development plans, trail maintenance plans, and use agreements and contracts used in developing the model Joseph to Marr Pond trail segment will be retained by the WURA board of directors. The documents will be used as the basis for planning, funding, and constructing other trail segments.

The WURA board of directors will consult with partner organizations, trail users, local governments, and state agencies in making decisions about the order in which other trail segments will be developed. By December 31, 2017, a decision will be made regarding the second trail development segment for planning and funding purposes.

Section 8, Project Construction Funding

Preliminary costs for building each segment of the Joseph Branch Trail is estimated in *the Joseph Branch Rail-with-Trail Concept Plan.* These estimates are benchmark numbers only and require multiple decisions be made about trail design to arrive at more exact construction planning costs.

The Consortium will work with the WURA, the trail management contractor selected by the Railroad Authority, communities, and other organizations in an effort to find any and all available options for grants that have potential for developing matching funds to be used in acquiring federal and state financing for trail development and maintenance. The Consortium will also conduct a public fund development campaign to accumulate funds needed for matching potential federal, state, and foundation funding programs.

Section 9, Signage

9.1 Signage and Educational Programs

Studies of other trails report that with good signage, educational programs presenting the rules of trail use, and appropriate support facilities there is very little littering, crime, or other disruptions that occur to impact adjacent landowners.

Signage on the pilot project segment from Joseph to Enterprise will be designed to promote good citizenship and trail manners. Educational outreach in the schools and community to talk about trail use and manners will be a responsibility of the Consortium. Good trail management practices result in trail users understanding that adjacent properties are not “public rest stops” and trespassing is not legal or socially acceptable. Instead, they understand restrooms and other amenities are provided at reasonable intervals along the trail by the trial operator or businesses catering to the public. Signage will include maps that indicate distances between communities for wayfinding and trip planning purposes.

The trail presents an opportunity to use signage to educate recreationists not familiar with good farming practices, giving them a better understanding of food-to-table realities and the importance of agriculture to Northeast Oregonians' heritage, life style, and rural economies.

9.2 Typical Trail Etiquette Signs

- Treat all trail users with respect and courtesy regardless of their sport, speed or skill level.
- Stay to the right and pass on the left. Anticipate other trail users around corners or in blind spots.
- Stay on the trail. Do not use shortcuts or cross private land.
- Learn to use appropriate hand signals when bicycling.
- Respect trail closures. Obey posted signs and travel only on open trails.
- Carry out all litter, including all pet waste.
- Cyclists yield to horseback riders and hikers. Hikers yield to horses. When encountering a horse, speak in a calm, pleasant tone so the horse hears a human voice. Expect the rider to advise you, as they know the horse best. Example Sign:
- Dogs must be kept on an maximum 8 foot leash at all times on the trails.
- Leave flowers and plants for others to enjoy. Do not pull bark or limbs off of trees.
- Stay off the railroad tracks. Only cross the tracks at designated trail crossings.
- No geocaching allowed.

Trail signage designs developed by the Rules Committee to promote safety, address local conditions, and to take advantage of historic and environmental education opportunities will be discussed in public workshops.

Section 10, Trail Maintenance

10.1 Infrastructure Protection

WURA will protect its infrastructure (railroad infrastructure consists of the earthworks, structures, and track that are commonly associated with a railroad) in planning for other uses within the corridor.

10.2 Railroad Infrastructure Maintenance

In planning for trail construction an assessment will be made of the need to maintain and restore railroad culverts, clear brush, bolster bridge abutments, and deal with other infrastructure issues of concern in order to construct the Joseph Branch Trail. This work will be undertaken to limit further deterioration of the right-of-way infrastructure. This work includes prevention of washouts, rock falls, other water-caused problems, and the intrusion of vegetation, including the potential of falling trees in the right of way.

Since construction of a completed trail is some years in the future, the development of a detailed trail maintenance plan can only be theorized. The *Concept Plan*'s estimate of maintenance costs is also theoretical with a range of potential costs based on trail surface decisions and other factors.

The development of a detailed maintenance plan will be completed after the adoption of the final design and before construction of each trail segment. WURA will take direct responsibility for day-to-

day trail maintenance standards and requirements and/or developing a contractual arrangement with another organization or organizations for trail maintenance. Trail maintenance, of necessity, will include fundraising, development and management of volunteers, and developing and fostering relationships with trail users, city and county governments, and potential funding sources.

Factors that will be considered in the maintenance plan include:

a. the condition of the right of way, track and ties, roadbed, and the interface with the placement of the trail infrastructure;

b. requirements of access to the road bed, ties, and track for future maintenance or reconstruction;

c. the presence of agricultural activities (farm animals and equipment) in and across the right of way of the trail surface;

d. the needs of emergency responders and law enforcement personnel to access the trail for medical, search and rescue, or law enforcement purposes; and

e. trail maintenance funding sources, sources of labor and equipment for maintenance and reconnaissance activities.

The Consortium will work with its members, adjacent landowners, other community organizations, clubs, trail users and members of the general public to determine how trail maintenance activity resources may be found and applied. One emphasis of the review of the draft management plan in community workshops, with local governments, and user groups will be to gather information about how different community resources can be organized for accomplishing trail maintenance activities over the long term.

10.3 Maintenance Funding

The Joseph Branch Trail Consortium, as the citizen advocacy group supporting the trail, will work with the WURA board of directors, a trail management contractor selected by the WURA board of directors, county and city governments, and local user and community groups to help raise funds locally and from foundations supporting recreational trails to pay annual costs to maintain various trail segments. A volunteer-based maintenance cadre of trail users will be developed to assist with fundraising and organizing trail maintenance activities, including the training of volunteers. Organizations will also be challenged to adopt a mile of trail and be responsible for raising funds and carrying out maintenance on their adopted trail segment. State and federal grants will be sought to address specific high-cost maintenance issues.

It is anticipated trail maintenance costs will be minimal initially, but increase with use and weathering. During the initial period of low-maintenance funds will be solicited to build a maintenance reserve on which to draw for unexpected expenses. An annual trail maintenance budget for each segment of the trail will be prepared and approved by the WURA board of directors as a function of the required annual budgeting process.

10.4 Trail Maintenance Recommendations

A draft Trail Maintenance Schedule in Appendix J lists tasks and their scheduling that represents a minimal level of maintenance and repair that should be accomplished on the Joseph to Marr Pond model trail segment. The actual schedule will be developed over the course of the first year of use based on frequent reconnaissance reports on trail conditions and usage. It is assumed for purposes of the draft plan discussion that trailhead maintenance tasks will be accomplished by Oregon Department of Fish and Wildlife staff members, and community volunteers.

10.5 Trail Inspections

Once each trail segment is complete and open for use, frequent physical inspections of the trail are critical to judge the impact of users, weather, farming practices, and other factors on the trail. A team of trail volunteers can be trained to make the inspections.

The recommended procedure for inspections is to travel the trail slowly, recording a log of trail condition details using either GIS positioning or established mile marker references. Inspections will report: user activities; trash, tree blow downs; vandalism; fence problems; signage problems; weed problems; trail surface conditions; culverts and bridge conditions; standing/flowing water that might cause erosion; ditch and culvert cleaning needs; intrusion of tree roots, saplings and other vegetation; and other problems that will be identified. The inspection log information will be loaded into a database for developing regular operational reports and a maintenance history for each trail segment.

The goal of the frequent and regular inspections is to identify and resolve problems before they become serious and expensive. The information in the log will be useful in developing maintenance budgets, predicting future maintenance needs and schedules, and trends in needs for law enforcement.

In addition to regular trail inspections, Eastern Oregon University's computer science faculty will be approached to create a smart phone application that trail users can use for reporting trail conditions in real time. The application should provide a means for user identified problems to be reported and problems to be dealt with expeditiously. The user report could be a response to a check list identifying the problem(s), location, with a request that they send an accompanying photo.

10.6 Vegetation Management

Adjacent landowners are concerned that trail users, particularly equestrian uses, will spread invasive weeds along the right of way to their adjacent properties. An annual integrated weed control program will be established and procedures for eradication established in compliance with county weed ordinances. County weed control managers, adjacent landowners, and trail users will be consulted in developing and carrying out the annual plan.

When the application of an herbicide is planned as part of the weed control program, signage will be placed at trailheads and other trail access points at least 24 hours in advance of the application notifying the public of the weed control schedule. A news release of the planned application will be sent to the local media outlets.

Where needed, parts of the right of way disturbed during trail construction will be revegetated with plant recommended by the County Weed Control staff to prevent erosion and to make it more difficult for noxious weeds to become established. Advice will be sought from the Cooperative Extension

Service, Weed Control staff, and botanists regarding easy to maintain ground cover appropriate for trail use.

It could be possible that mowing of trail shoulders may be necessary periodically to control vegetation.

10.7 Ditches, Culverts, and Bridges

Regular inspections of ditches, culverts, and bridges will be made to identify cleaning needs to remove debris and silt that will plug or otherwise cause washouts, flooding, or other problems. Logging a record of when and where debris and silting accumulate will help develop a regular maintenance schedule to prevent future problems.

The trail will be designed to minimize possible water damage to the trail surface, and to reduce erosion and sedimentation and dumping of water on adjacent private or other lands, while attempting to maintain natural drainage patterns.

10.8 Trail Surfaces and Trail Bed

The trail surfaces and shoulders will be maintained is a safe condition with regrading and rebuilding of the surfaces and shoulders as needed. Storage of construction materials and equipment will not be allowed within the right of way.

10.9 Emergency Maintenance

Weekly reconnaissance of the trail, supplemented by trail user smart phone reports, is recommended for the rapid identification of problems and to facilitate solutions. Procedures will be developed for the communication necessary to initiate action on emergency situations once the nature of the maintenance force and leadership structure are required.

10.10 Trail Closures

The trail will be closed during emergency situations and when use of the trail will cause the surface to be damaged because of weather conditions. Reports from trail inspections will help develop standards for when trail closures are required to protect the surface from weather-related damage.

10.11 Bollards and Control Barriers

Bollards and other necessary barriers will be placed at trail access points to discourage the illegal use of ATVs, motorcycles, snowmobiles, and other motor-powered vehicles that will cause damage to the trail. The exception is the movement of farm equipment across the trail. The barriers will be removable for railroad maintenance and response to emergency purposes.

The bollards and barriers will be inspected monthly to make certain the security locks are working and can be removed quickly to allow access to authorized personnel.

10.12 Cross Country Skiing Track Setting

It is expected the trail will be used year around. Cross country skiing and snow shoeing will be popular when there is adequate snow coverage. Whether to use track setting equipment for cross country skiing using a snow mobile will be a decision made at a later date.

APPENDIX

The following sections provide background information about past and present efforts to develop a 63-mile non-motorized, multiuse Joseph Branch recreational trail between Joseph and Elgin, Oregon.

Appendix A

Expectations for a Developed Recreational Trail

The WURA board of directors view the railroad right of way as a public asset to be developed in partnership with communities through which it passes; and with agencies, organizations and individuals with an interest in promoting its use for public benefit. The Eagle Cap Excursion Train has operated since 2003 by the Friends of the Joseph Branch. Joseph Branch Railriders has operated since 2014 by Oregon East Cycling. Both railroad-based activities attract visitors to northeastern Oregon.

In 2012, the Joseph Branch Trail Consortium encouraged the WURA board of directors to revisit consideration of the development of a non-motorized recreational trail from Joseph to Elgin, Oregon. The trail concept was promoted as having potential to create economic and quality of life benefits for residents of northeastern Oregon. These benefits include: health and recreational benefits; expanded quality of life amenities to be enjoyed by residents and visitors; new services to support tourism activities; community development opportunities; small business stabilization and expansion; multidisciplinary education and career development opportunities; and potential expansion of regional arts and cultural programs connections.

The first trail segment project development between Joseph and Marr Pond near Enterprise has the potential to be a model for designing and testing the process of trail development to be applied to the development of other trail segments. The model project efforts include developing and testing a management and maintenance plan and other agreements for detailed planning, financing, construction, and management of this and other trail segments.

The proposed trail from Joseph to Marr Pond in the railroad right of way begins in Joseph at the end of the rail corridor, including the wye, and ends at the northern terminus near Enterprise at the Marr Pond property owned by the Oregon Department of Fish and Wildlife. The railroad right of way passes through the communities of Joseph and Enterprise. County roads and city streets which cross the right of way provide additional trail access points. Trailheads developments and community access points to the trail are on WURA, Wallowa County, or State of Oregon property.

Rationale for the Joseph Branch Trail

Tourism has been identified as one of the cornerstones of a multi-faceted economic and community development effort throughout Northeastern Oregon. The trail will bolster tourism by adding a significant new asset to the region's recreation opportunities, including improved access to federal and state lands. The trail will spur new businesses and events to be enjoyed by visitors and residents alike.

The *Joseph Branch Rail-with-Trail Concept Plan* documents the potential of the trail as a new amenity helping to save and create jobs, expand and connect existing recreational opportunities, and revitalize community downtown areas through an estimated increase in visitor direct trail-related spending of over $400,000 annually. Economic impacts are also expected from increases in the length of visitors' stays and dollars spent in Northeast Oregon, the number of jobs directly related to trail activities, and the trail's use as a transportation corridor connecting Northeastern Oregon communities in new ways. A survey conducted by the Wallowa County Chamber of Commerce in September 2016 found 85 percent of the chamber members support construction of the trail.

The trail will be used by residents and visitors pursuing year around outdoor activities. It will provide a venue for organizations to hold special events, a place for families to safely ride bicycles with their children, and a place for those senior citizens unable to access wilderness trails to recreate and socialize. Input from the elderly suggested a trail for social hikes is an important need for healthy living. Ten percent of respondents to two surveys administered in developing the *Concept Plan* indicate they will use the trail daily between Joseph and Enterprise for commuting.

The WURA board of directors has limited resources for managing and maintaining the railroad. Partnerships developed for railroad corridor use and maintenance presents the best possibility of preserving and developing the right of way and infrastructure for future use. Freight service on the line was discontinued with the closing of Wallowa County's lumber mills, but can be restarted in response to demand and completing deferred track maintenance.

The Eagle Cap Excursion Train presently operates on a seasonal schedule between Elgin and Minam. The City of Wallowa has requested excursion train service be reinstituted from Wallowa to Minam. The community is interested in working with the Railroad Authority to expedite bridge, track, and other repairs necessary to allow the trains to operate from Wallowa to Minam.

The Nez Perce Homeland board of directors has offered the use of their property and facilities near the City of Wallowa as a future trailhead. A surplus highway bridge has been installed between the City of Wallowa and the Homeland property for cyclist, pedestrian, and equestrian use.

The Joseph Branch Railriders continues to expand ridership on the Joseph to Enterprise route, added a popular Minam to Wallowa route, and has extended the number of operating days and season length. A number of tourists report they have come to Wallowa County specifically for the Railrider experience. Over 6,000 riders, residents and visitors, rode the railbikes during the 2016 operating season.

While there are multiple trails on federal lands in Wallowa County and Union County, the use most trails is seasonal with snow limiting winter use. The ruggedness of trails in the Wallowa- Whitman National Forest can make use difficult for the very young and the elderly. It is recognized that the federal government, as a majority landowner in Northeast Oregon is a major economic driver. The Railroad Authority has a strong interest that Congress fund fire suppression through FEMA allowing the US Forest Service funding be used to adequately fund road, trail, and facilities maintenance. The failure of Congress in its stewardship of the Nation's natural resources for fire control, harvest management, and recreation purposes will result in significant damage to the rural recreation economy and continued erosion of the forest products industry.

There is a need for off-road trails for safe cycling, hiking, and other recreational activities within Wallowa County and between Wallowa and Union counties. There are generally no or very narrow shoulders on county roads, the roads are of varying surface types, and are not maintained for cycling, walking, or hiking. Traffic volume and speeds on Oregon Highway 82 discourage cycling and walking for recreation. Hurricane Creek Road needs to be striped, signed, and speeds reduced to enhance safety. Many of the identified road cycling routes in the county can be daunting to the average cyclist and are not child, family, or elderly friendly.

The Cycle Oregon route planner in a discussion of tour cycling in Wallowa County stated he would not recommend riding on Highway 82 in Wallowa County because of safety concerns (traffic speed and volume and road width) without the support provided by large group tours. Cycle Oregon with its 2,000

plus riders, support vehicles, public safety escorts, and publicity provides a presence and safety buffer that individual and small groups of riders don’t have.

Appendix B

Related Connecting Trail Developments in Northeast Oregon

Wallowa Lake to Joseph--Enterprise Trail Segment Connectivity

The Oregon Department of Transportation (ODOT) has completed a feasibility study for a trail to connect the south end of Wallowa Lake to the north end of the Lake in the Chief Joseph Monument Area. ODOT has FY 2017 funding in place to construct an off-highway trail along Highway 82 from the Chief Joseph Monument area at the north end of Wallowa Lake to the City of Joseph.

The City of Joseph's transportation plan includes a connection to the Joseph Branch Trailhead to be constructed on railroad property behind the Chief Joseph Rodeo grounds. Trails accessing the Eagle Cap Wilderness area are located at Wallowa Lake. Connections to the Joseph Branch Trail are included in the City of Enterprise's bicycle/pedestrian transportation plan.

The Nez Perce National Historic Trail connects to the Joseph Branch Trail in the City of Joseph. A connecting route within the community and signage needs will be identified in collaboration with the City of Joseph, Oregon Department of Transportation, US Forest Service and National Park Service.

Circuit Trail Development—Wallowa Mountain Scenic Loop

The Joseph Branch Trail, as it is extended, will connect the host communities along the trail to the 134-mile loop Grande Tour Scenic Bikeway passing through communities in Union and Baker counties, and linking back to Joseph via the Hells Canyon Scenic Byway. This will create a world class circuit cycling adventure trail that also connects to the Nez Perce National Historic Trail in Joseph. The Nez Perce trail extends from Joseph in Oregon across Idaho to 40 miles from the Canadian border in Montana. The Nez Perce National Historic Trail is managed by the U.S. Forest Service. Its development plan recognizes the Joseph Branch Trail from Joseph to Minam as a side trail. The trail with its connecting scenic highways and bikeways will promote and increase access to federal lands.

Appendix C

Trail Development Segments and Environmental Considerations

Trail Segments

The Oregon Parks and Recreation Department and Eastern Oregon University completed an analysis of the physical conditions in the railroad corridor that helped focus public discussion on trail development options.

The WURA board of directors, following the recommendation in the *Concept Plan*, made the decision to develop one trail segment as a model process to determine best practices to be pursued in a multiyear effort to develop additional segments of the 63-mile trail. The first trail segment selected for development is from the City of Joseph to Marr Pond near the City of Enterprise. It is anticipated the next trrail segments to be developed may be from Elgin to Lookingglass and Lookingglass to Minam, opening the Grande Ronde River and Wallowa River Corridors and adjacent federal and state public for a wider range of recreational purposes. The final decision regarding trail segment development strategies will be made by the WURA board of directors.

Recommended Joseph Branch Trail Segments *(Not in priority order)*					
Segment	**Segment Length/Miles**	**Constrained/ Miles**	**Bridges**	**Culverts**	**Road Crossings**
Elgin to Lookingglass	13	6.22	6	71	7
Lookingglass to Minam	13	5.24	4	58	4
Minam to Wallowa	13	2.55	4	35	15
Wallowa to Lostine	8	0.11	12	26	16
Lostine to Enterprise	10	1.6	8	9	23
Enterprise to Joseph	6	0.42	10	13	14
Totals	**63**	**16**	**44**	**212**	**79**

Each trail segment has unique characteristics and may be developed differently, based on user interests and potential uses along its relatively flat course. The Joseph to Marr Pond trail segment, when connected by trails being developed from Wallowa Lake to Joseph by the Oregon Department of Transportation, becomes a major alternative non-motorized route for residents and visitors. The Elgin to Lookingglass and Lookingglass to Minam sections offer improved Wild and Scenic river access for hiking, fishing, hunting, and camping, now only easily accessible for parts of the year by floating the Grand Ronde and Wallowa rivers or hiking on or alongside the railroad tracks.

Environmental Considerations Joseph to Enterprise Segment

The rail line crosses the Wallowa River in two places between Joseph and Marr Pond. In addition, Lower Alder Slope Ditch, Island Ditch, and several unnamed ditches and river side channels cross under the rail alignment. The Wallowa River is a perennial waterway and originates in the Wallow Mountains, and it flows generally northwest to join the Grande Ronde River approximately 40 miles downstream of the Joseph to Marr Pond project area.

Anderson Perry & Associates in their scoping of the Joseph to Marr Pond segment found 17 wetlands totally 2.07 acres, most are not found on the National Wetland Inventory map. The wetlands are located at the toe of the railroad embankment and are either confined by an adjacent berm or extend into the adjacent agricultural field or river floodplain.

Environmental permits required for construction and maintenance of the Joseph Branch Trail were identified in the trail corridor scoping by the Anderson Perry & Associates report. The permits will be sought in the surveying, environmental permitting, and design engineering project pre-construction planning activities.

a. The USFS is working toward the goal of balancing forest recreational use with resource management. The Joseph Branch Trail providing connectivity to federal land will contribute to the discussion of balancing management and recreation uses. Designated trails are effective in preserving habitat and roadless areas as they provide a place for people to safely enjoy access to publicly-owned recreational lands.

b. The Joseph Branch trail will positively impact aquatic organism passage because numerous culverts in the railroad corridor are in various stages of disrepair. Out-of-date or poorly maintained culverts can impair the passage of fish and other aquatic organisms. By constructing the trail and repairing culverts, the trail will provide improved passage for aquatic animals. Wildlife habitat and connectivity will be improved by repairing culverts and irrigation ditches, which are currently leaking water away from habitat areas.

c. Runoff from poorly maintained irrigation ditches will be remediated in some locations along the trail. Additionally, gravel portions of the trail will aid in water infiltration. These improvements are anticipated to decrease turbidity and improve water quality.

d. Trail construction specifications will be designed to have a low impact on the surrounding environment to meet, possibly exceed, minimum environmental protection requirements in the areas of habitat enhancement and local sourcing materials.

e. If the project requires mitigation for impacts to wetlands and waterbodies, the Marr Pond Trailhead site could be used as a mitigation area.

Wildlife Impacts

Wetlands, wildlife habitat, and fish bearing streams will be identified during the environmental permitting process prior to trail construction. Specific plans for maintenance activities in these areas will be established in consultation with the Oregon Department of Fish and Wildlife and required consultations with other agencies.

Environment: The habitat along the right of way is not "pristine", rather it is a disturbed area that has been drastically modified by heavy equipment and consists largely of borrow pits and a man-made berm or roadbed cuts through hillsides with a rock bed placed under the tracks. As such it is similar to the habitats on adjacent agricultural lands in the valley, and much worse quality habitat than what surrounds it where it flows through the Wallowa and Grand Ronde canyons.

Displacement: There may be some displacement of deer along the right of way as a result of increased use, these are mostly white-tailed deer whose populations are robust and there is plenty of habitat on adjacent lands. Oregon Department of Fish and Wildlife (ODFW) staff note that many valley landowners would to prefer to have fewer deer. ODFW staff also explained the right of way is not an essential wildlife corridor because it is composed of habitats similar to lands on either side and it does not connect otherwise isolated habitats. While big game do use the right of way, it is not a corridor in the sense that it connects isolated areas of other habitat.

While the right-of-way does provide forage for wildlife, the proposed project will not likely change the production of forage or the use by wildlife there. One can argue It is possible that forage provided by the right of way eases big game feeding pressure on adjacent lands. Another argument might be that the forage provided in the right of way actually increases that forage pressure on adjacent lands by allowing the big game populations to be higher than they would otherwise be.

Indicator Species: Indicator species are those that can be monitored to document overall ecosystem changes that would affect a larger group of other species. Whatever indicator species might occur on the right of way are not especially useful because the existing ecosystem along the right of way is no longer natural and is not threatened.

Strategy Species or Sensitive Species: Strategy and sensitive species are the wildlife that are considered rare or declining in number and which ODFW wants to try and manage for higher populations. While the Western Toad and Western Painted Turtle are considered strategy species by ODFW, the right of way is not considered especially good habitat for them. The painted turtle requires marshy ponds, and while the toad can lay eggs their tadpoles can grow up in shallow water found in borrow ditches, the proposed project is unlikely to change the structure of the borrow ditches significantly. None of the other strategy species use the right of way in any significant way.

Birds: The proposed project is not likely to significantly affect nesting birds along the right of way. Those that nest in the brushy areas will still do so, and the killdeer will still nest on the gravel berms. Killdeer will nest on shoulder of busy highways and busy parking lots.

ODFW reports the Joseph Branch Trail Project between Joseph and Marr Pond is proposed for already disturbed land and will not adversely impact wildlife and particularly not any Sensitive/Strategy Species.

Contamination from Railroad Operations

The Northeast Oregon Economic Development District (NEOEDD) Brownfield Study identified three sites along the trail corridor which are listed on the Oregon Environmental Cleanup Site Information database.

The first site is Site #4771, the Minam Richfield Station. This site was added to the database based on a 1960 Oregon History Project photo. The site was adjacent to Hwy. 82 and the railroad. The highway previously was routed along the river and went under the railroad on an approach to crossing the Wallowa River. The highway was rebuilt and a substantial amount of fill was added to bring the highway up to the same level as the railroad. The Minam Richfield Station site is therefore covered with a substantial amount of fill dirt.

The second site is Site #4904, the UPRR Diesel Spill. In 1984, there was a train derailment at milepost 64.25 in which 2,500-3,500 gallons of diesel were released with approximately 1,205 gallons recovered during the response action. We will be attempting to identify witnesses who can tell us something about the spill and recovery.

The third site is Site #2790, the Enterprise Roundhouse. In 2001, a citizen complaint resulted in the site being added to the ECSI database. The complaint indicated potential groundwater contamination from a diesel release related to a former roundhouse operation.

Landowners have not been formerly approached about their willingness to allow assessment activities for any of the sites. One member of the WURA governing board was interested in learning more about the UPRR diesel spill on site #4904. NEOEDD will attempt to gather more data on that site.

Guidance/recommendations from EPA on the advisability of conducting Phase I or II assessments on any of these sites has been sought. There will not be any land transactions happening associated with the trail, so that will not compel anyone to conduct an assessment. However, if the eventual goal is to have people traveling – walking, bicycling, etc. – along or over these sites, it would be prudent to know if there would be a public health benefit in conducting an assessment.

Another brownfield consideration is related to historic building use. There are historic buildings located in each downtown adjacent to the proposed rail-with-trail. The downtown assessment will consider historic building use/reuse as a component of the assessment process.

Oregon Department of Environmental Quality (DEQ) staff members report there may be miscellaneous solvents or hydrocarbons present at very low to nearly undetectable levels in the right of way, as well as, potentially, residual appropriately-applied pesticide. The regular grading of the right of way by Union Pacific and other minor disturbances over time would have turned the soil and created an environment for hydrocarbon materials to evaporate.

David Anderson, DEQ Spills Manager, noted that railroad companies such as Union Pacifc and Burlington Norther & Santa Fe Railway where even very minor oil and/or chemical spills occur are immediately addressed. WURA is subject to the same expectations and likely has managed its asset accordingly.

Cultural Resources

The Oregon Archaeological Records Remote Access database was checked for previously recorded cultural resources within the vicinity of the project. One cultural resource inventory was conducted in or directly adjacent to the railroad corridor in the project area and resulted in the discovery of no cultural resources. An archaeological inventory consisting of a pedestrian survey was conducted on June 6 and 7, 2016. One archaeological site consisting of historic building rubble was recorded and

recommended as not eligible for the National Register of Historic Places. One aboveground historic property was also recorded, consisting of the historic Joseph Branch of the Oregon Railroad and Navigation Company Railroad (now known as the Wallowa Union Railroad).

Appendix D

Railroad and Trail Development History

Efforts to develop a trail in the WURA-owned railroad right of way is not a new endeavor. Various past efforts have faced resistance, primarily from adjacent landowners. The present trail development effort began in the spring of 2012. It is expected to take at least a decade to complete the entire 63-mile trail between Joseph and Elgin, Oregon.

Railroad and Trail Development History Through October 2016

1908 The rail line (milepost 21 to 83.58) linking Elgin and Joseph, Oregon was placed in service to the region in 1908 by the Union Pacific Railroad. *(Mileage on the railroad is measured from La Grande.)*

1993 The Idaho Northern & Pacific Railroad Company (IN&P) purchased the line from Union Pacific Railroad.

1994 IN&P announced it was considering abandoning the rail line from Elgin to Joseph while continuing to operate from La Grande to Elgin.

1997 Oregon State Parks Commission began negotiations with IN&P to purchase the railroad right of way for use as a trail.

2000 Trail advisory committees were formed in Union County and Wallowa County to explore the use of the right of way as a trail. In October 2000 members of the advisory committee took a rail tour of the route and were surprised to learn that the tracks were in much better condition than they had been described and were useable for train traffic with minimal improvement.

2000 Wallowa County held an economic summit called *Future Search* to come up with a project to improve the economy. The outcome was a commitment to save the railroad for present and future uses. Developing a recreational trail in the railroad corridor was identified as a potential community and economic development opportunity.

2001 IN&P called for bids to remove the rails and ties from Elgin to Joseph. They had rejected the State Parks offer of $1.2 million to purchase the line. Bid price for the salvage value was $2 million. Wallowa County said track removal was in violation of the salmon recovery plan and they would need to go through the public hearing process to get a permit to remove the track and ties. Wallowa County stopped the process after IN&P had begun removing rails in Joseph.

2001 Speaker of the Oregon House of Representatives, Mark Simmons from Elgin, announced the legislature approved $2 million for the purchase of the line, which was used as down payment of the ultimate agreed purchase price of $6.5 million for the right of way, track improvements, and rolling stock from IN&P. The balance of the purchase price came from loans and grants from the Oregon Economic Development Department. The two

counties formed the Wallowa Union Railroad Authority to jointly own and operate the line.

2002 The first lumber train rolled out of Wallowa on the WURR.

2002 The Friends of the Joseph Branch, a 501 (c)(3) corporation, was formed to promote the use and history of the rail line.

2003 The first excursion train was run on the line from Elgin to Joseph operated by Friends of the Joseph Branch.

2012 The Wallowa Union Historic Trail Consortium, a 501(c)(3) non-profit corporation, was formed (name was changed in 2013 to the Joseph Branch Trail Consortium) to promote the planning and construction of a non-motorized multiuse recreational trail adjacent to the rail in the right of way, a rail-with-trail.

2013 The Consortium worked with the WURA board of directors to develop and agreement with the Oregon State Parks Department and Eastern Oregon University to develop a concept plan for developing a trail beside the rail from Elgin to Joseph.

2014 Oregon East Cycling began operating the Joseph Branch Railriders (pedaled four-wheel units operated on rails) concession between Joseph and Enterprise as a popular tourist activity. In 2015 a Minam to Wallowa ride was added.

2015 WURA accepted the *Joseph Branch Rail-with-Trail Concept Plan*.

2016 WURA adopted the recommendation of the Consortium board of directors and agreed to develop a model project trail segment between Joseph and Enterprise, Oregon.

2016 WURA submitted an application sponsored by the USFS and BLM for construction funds provided by the Federal Access to Public Lands program. A site visit by Federal Highway Administration, Oregon Department of Transportation, and Oregon Association of Counties evaluation team was conducted on September 28, 2016.

Appendix E

Economic Impact

The *Joseph Branch Rail-with-Trail Concept Plan* predicts the trail will have a positive economic impact on the communities through which it passes during and post construction. These estimates will be used as benchmarks in judging and reporting construction and post-construction economic impacts.

The Railroad Authority and partners will work with chambers of commerce, economic and community development organizations, and local governments along the trail to measure economic impacts as each trail segment is placed in service. Travel Oregon's annual economic surveys, chambers of commerce, trail-related businesses, Oregon Parks and Recreation, US Forest Service, and Bureau of Land Management data will also be considered in judging economic impacts.

Consequences of Not Constructing the Trail

If the Joseph Branch Trail is not constructed, there will continue to be a gap in connections to scenic bikeways and byways being developed elsewhere in Oregon and the Pacific Northwest. Development of trail-related recreational amenities necessary to attract visitors and potential new residents to Northeast Oregon would not take place. Other related recreational trail development efforts will not realize their potential positive economic and social impacts, including:

a. Benefits expected as a result of Oregon Department of Transportation (ODOT) developing the Wallowa Lake non-motorized trail to connect the Wallowa Lake State Park to the City of Joseph planned by ODOT will not be realized.

b. The Nez Perce National Historic Trail Development Plan for the Joseph Branch Trail as a side trail from Joseph to the Minam area through Enterprise, Lostine, Wallowa, and Elgin will not be realized.

c. Links to the Grande Tour Scenic Bikeway from Elgin to La Grande and Baker City and to the eventual Wallowa Mountain Loop (Hells Canyon Scenic Byway) will not be established.

d. Cyclists on the bikeway from Baker City to Halfway and to Joseph via Forest Road 39, components of the Hells Canyon Scenic Byway Joseph will continue to be dependent on Highway 82 with its unsafe conditions for cyclists and pedestrians.

e. ODOT plans to construct a multi-use, non-motorized trail along the Grande Ronde River corridor from Riverside Park in La Grande to the Interstate 84 Spring Creek area. This trail will eliminate a major barrier to long-distance cycling through the Grande Ronde River canyon. When completed, this off-road trail will provide a connection from the Grande Tour Scenic Bikeway and the Wallowa Mountain Loop/(Hells Canyon Scenic Byway to the Old Oregon Scenic Bikeway and other Central and Eastern Oregon bikeways, creating an internationally significant travel industry amenity. Without the Joseph Branch Trail, this route will be less valuable.

Property Values

In national studies of effects of recreational trails on nearby property values and quality of life, based on survey questions presented to them. Eighty to 95 percent of trail neighbors indicate they feel the trail has either no effect or a positive effect on their property value and made it easier to sell their property. An indication of a trail adding value is that advertisements offering properties for sale will generally include a property's proximity to trails.

Appendix F

Partnerships

The WURA board of directors has and will continue to actively pursue partnerships in the effort to develop the Joseph Branch Trail.

The WURA board of directors and the trail operator will establish partnerships and volunteer agreements with communities and recreation users to help maintain the recreation trail segments between communities from Joseph to Elgin.

Public Involvement in Trail Management Planning

A Joseph Branch Trail Review Committee will be formed to consult with the Railroad Authority to work out details of the *Management, Signage, and Maintenance Plan*. Adjacent landowners and the general public will have multiple opportunities to make comments about the *Plan's* content and policies

Public involvement is welcome and sought throughout the Joseph Branch Trail development effort. Involvement can be through participation in meetings and workshops, serving as a member of trail development committees, or through comment on the M*anagement Plan*. Meetings and workshops will be advertised. An e-mail notification system will provide individuals information who have requested they be notified of meetings, events, and when new information is posted on the project website for review.

The Public will be able to view the *Management and Maintenance Plan* on the Consortium's website (www.josephbranchtrail.org) and be able to make comments via e-mail to the project manager. Comments will become part of the public record. In addition, the public will have the opportunity to review and comment on *Management, Signage, and Maintenance Plan* amendments undertaken annually from the original adoption date of the plan or as otherwise required by the WURA board of directors.

Procedures for calling attention to issues and concerns during construction and when the trail is placed in service are covered in this Management Plan.

Appendix G

Governance Structure

WURA is an intergovernmental organization formed according to *Oregon Revised Statute* 190. The board is composed of nine members: a county commissioner from each county and three board members appointed by each county board of commissioners and one member appointed jointly by the Wallowa County and Union County boards of commissioners.

Organizations utilizing the railroad right of way will be required to report annually to the URA board of directors regarding their activities during each calendar year. The report may include: days and dates of operation; services and activities provided; number of persons served; evaluation of services and activities; problems, concerns, and issues dealt with; quality of life and economic impacts; and other information collection specific to the reporting organization. The Railroad Authority will not require financial data generated by for profit enterprises be reported. If reported voluntarily, financial information will be kept confidential.

Railroad Authorities Responsibilities

As owner of the rail corridor, WURA, is the project lead and will make decisions pertaining to the trail segment development between Joseph and Enterprise. The WURA board of directors in carrying out its programmatic, financial, and fiduciary responsibilities will:

a. determine if the model trail project moves forward and if other trail segments are to be developed based on the results of the model project planning, financing, construction experience, and trail operations and use;

b. provide technical information regarding railroad operations, conditions of the rail bed, any easements and covenants regarding use of the right of way, and other rail-related coordination concerns in support of the trail development project;

c. ensure rail infrastructure between Elgin and Joseph will be rehabilitated and maintained as necessary to meet rail services operating requirements as dictated by demand and available resources;

d. ensure the rehabilitation and maintenance of rail infrastructure conforms to applicable Federal Railroad Administration's and Oregon's Railroad Division's safety standards;

e. allow the Friends of the Joseph Branch volunteers the freedom to make the daily business decisions necessary to ensure that the Eagle Cap Excursion Train services can be operated with a schedule and services that accommodates a variety of opportunities to attract local resident and tourist ridership;

f. allow Oregon East Cycling the freedom to make the daily business decisions necessary to ensure the Joseph Branch Railriders can be operated with a schedule and services that accommodates a variety of opportunities to attract and serve local resident and tourist ridership;

g. monitor operations of the Eagle Cap Excursion Train and Joseph Branch Railriders to ensure they are operated in a safe manner within the framework of applicable Federal Railroad Administration and Oregon Railroad Division policy and regulations;

h. identify legal and ownership information and technical information about the rail corridor and right of way;

i. exclude eminent domain as an option in trail planning and development efforts;

e. help facilitate communication with adjacent landowners, potential trail- and rail-related businesses and local community groups in order to resolve possible right of way use scheduling or other potential areas of operations conflicts;

j. work with local governments and partner organizations on trial development principles and the scope of work, detailing an agreed upon approach for implementing specific trail model project segment development strategies and activities;

k. provide guidance in the application of Federal Railroad Administration, State of Oregon Railroad Division, and other regulatory agency rules governing the design, construction, and operation of the trail; and

l. monitor activities and uses within the railroad corridor to determine they are an allowable use are in compliance with and within the framework of agreements, leases, and contracts.

Joseph Branch Trail Consortium Responsibilities

Research documents successful rail-with-trails are supported by a successful railroad operation as the trail host. The Consortium will provide the Railroad Authority planning and staff support to develop documents, organize public meetings, make contacts with adjacent landowners, and prepare grant and other documents for, financing and constructing the Joseph to Marr Pond trail segment. Consortium efforts include, but are not limited to:

a. carrying out agreed upon scope of work necessary to plan, fund, and construct the Joseph to Enterprise trail segment, including trailheads, other amenities, and mitigation strategies (the scope of work is posted on the www.josephbranchtrail.com website and will be updated on a regular basis to report trail development progress made and problems encountered);

b. working closely with various communities of to ensure their interests, opportunities, and concerns are identified and considered in the effort to plan, finance, construct, and operate the model trail project;

c. fostering partnerships developed in the concept planning phase and recruiting new partners to expand the number of individuals, organizations, and agencies with and interest in an supportive of trail development efforts; and

d. preparing and presenting Joseph Branch Trail development assessment reports to the WURA board of directors, project funding partners, and the general public at agreed upon intervals.

Local Government Involvement

All communities in Wallowa County and Union County were consulted and agreed to the formation of the Wallowa Union Railroad Authority as an intergovernmental organization as authorized by *ORS* 190. City councils were most recently polled to allow a change in the operating charter to approve a quorum of five rather than seven members to conduct WURA's business.

City councils of communities directly on the railroad right of way (Elgin, Wallowa, Enterprise, and Joseph) passed resolutions in 2015 encouraging the Railroad Authority to pursue development of the Joseph Branch Trail. Cities will be asked to appoint representatives to serve on the Joseph Branch Trail Review Committee to ensure community interests are being considered in the development of the *Management and Maintenance Plans*. City governments will be consulted in planning for trailheads and access points in the context of community bike/pedestrian and other relevant plans.

County and city planning documents that mention the Joseph Branch Trail segment between Joseph and Enterprise include:

a. *The Joseph Branch Rail-with-Trail Concept Plan*
b. *Wallowa County Bide/Pedestrian Plan*
c. *Wallowa County Transportation Plan*
d. *City of Joseph Bike/Pedestrian Plan*
e. *City of Enterprise Transportation Plan*
f. *1999 La Grande-Wallowa Lake (Oregon Highway 82) Corridor Plan*

City councils and community organizations will be asked to consider applying for specialized grant funds for which they are eligible in order to help develop and maintain trailheads and other trail facilities within their communities. Consortium volunteers and staff members will provide technical support when requested.

City governments may wish to upgrade the recommended trail surface materials in and near their communities. If a city is interested in a surface other than that planned by the Railroad Authority, such as asphalt pavement instead of compacted gravel, the Railroad Authority and Joseph Branch Trail Consortium volunteers will work with the cities in order to accomplish their goals. These changes can be made with a written agreement between the cities and the Railroad Authority. The added costs of installation and future maintenance will be the citird' responsibility, and will be part of the the written agreement.

Nothing in this plan shall limit the ability of a municipality to establish stricter standards, through the adoption of municipal ordinances for the use of the trail within the boundaries of the municipality. However, permitted legal uses during permitted operating hours shall not be prohibited by a municipal ordinance.

Reporting Organizations

The Friends of the Joseph Branch, Consortium, and Oregon East Cycling are the current organizations involved in activities using or proposing to use portions of the right of way. These organizations, as well as any new organizations authorized to use railroad assets, will be required to report to WURA on the preceding year's activities at a regular board meeting in January or February following.

Appendix H

Adjacent Landowner Relations

WURA, the JBTC, and Friends of the Joseph Branch, and Oregon East Cycling clearly understand any successful rail-with-trail development in the Joseph Branch railroad corridor must consider the interests of adjacent landowners. Past practice in the railroad corridor when it was in Union Pacific's and IN&P's private ownership as an active railway corridor discouraged trespassing. Properties intersected by the railroad rarely had to deal with people passing close to their homes, barns, fields or livestock. The main disruptions from the railroad corridor came from the trains themselves, and occasional railway maintenance personnel.

The railroad corridor is now owned and managed by WURA as a public asset. WURA's board of directors is charged with making the best use of the corridor to support the economies of the counties. The railroad tracks will be preserved in place to support future economic development opportunities.

The *Joseph Branch Rail-with-Trail Concept Plan* was undertaken in 2013-2015 to determine if a trail in the corridor was physically, politically, and financially feasible and would contribute the economy and quality of life in Northeast Oregon. The study found that a rail-with-trail is feasible and will enhance the economy and quality of life in the region.

To ensure that the interests of adjacent landowners are considered during the development of the model trail project between Joseph and Marr Pond and in the development of other trail segments, the WURA board of directors and Consortium board of directors are committed to the following process:

a. Meetings and workshops specifically for adjacent landowners will be held to identify issues, concerns, and opportunities specific to individual properties.

b. Meetings and workshops for the General Public was held on explain the project's scope of work that will be undertaken in the development of a trail segment.

c. Meetings with landowners who have requested individual meetings/interviews took place during August, September, and October, of 2016. The discussions were held to review conditions in the railroad right of way, proposed management policies, and concerns and issues regarding trail design and the interface with their property.

d. Periodic reminders will be sent to individual landowners to remind them of the opportunity to schedule individual interviews to discuss their concerns related to their properties.

e. Periodic drop in sessions will be offered for landowners to meet with project staff regarding their concern.

Mitigation of Landowner Concerns

Landowners will have multiple opportunities to bring their concerns regarding construction of the trail to the attention of the WURA board of directors. Their concerns and issues regarding the impact of the trail on their individual properties will be recorded. Mitigation possibilities that address specific concerns and issues will be discussed with the landowners and brought to the attention of the WURA board of directors by a not yet designated trail manager, with recommendations for possible mitigation actions at monthly board of directors' meetings.

CONCERNS AND EXAMPLE MITIGATION STRATEGIES	
Adjacent landowners and members of the public have raised concerns regarding possible problems a trail might bring to their communities and have a negative impact on their lives. Studies show trails with good management plans and public support are viewed as an important community amenity. Trail research reports can be found on the Internet. One independent library of recreational trail studies is *http://headwaterseconomics.org/trail/* .	
CONCERNS	**EXAMPLE POSSIBLE MITIGATION STRATEGIES**
Dogs	1. Signage: Leashes Required, Pickup Waste (Provide plastic bags, convenient disposal locations) 2. Dog fencing to separate trail from adjacent properties 3. Develop leash enforcement standards with local governments
Privacy	1. Landscape plantings to shield nearby homes from trail 2. Trespass signage 3. Hours of operation
Trespassing	1. Signage: Respect Private Property, Posted, No Trespassing 2. Signage: Legal consequences of trespass 3. Signage: Farm Operations Safety (equipment and animals)
Public Safety	1. Public safety response plan(s) established and practiced with law enforcement agencies (State Police, Sheriff, City Police, Federal Agency Public Safety agencies) and other organizations, including fire departments, medical emergency and search and rescue responders. 2. Signage specifying how trail users and landowners can contact public safety agencies and trail managers to report problems and concerns. 3. Limit camping to designated areas along the trail
Lack of Response to Problems	1. Reporting protocols published with telephone and e-mail contact information 2. Problems data recorded and responses reported to public/elected officials
Hours of Operation	1. Reach community consensus on trail use hours. Some trails have fixed hours of operation, others use a fixed time before and after sunrise/sunset
Trash and Litter	1. Pack it in, take it out rule/with signage 2. Regular litter patrols by volunteer "Trail Rangers" 3. Youth group(s) projects 4. Adopt a trail segment strategy 5. Trash receptacles at trailheads and other access points with regular service to maintain 6. Community pride education campaign
Fencing	1. It is the responsibility of the railroad and trail management to provide fencing. It is expected landowner will repair damage caused by their livestock.
Fire Hazards	1. Signage and Enforcement: No smoking or alcoholic beverages allowed on trail
Unauthorized Motor Vehicle Use	1. Barriers at trail access points to restrict unauthorized motor vehicle use. 2. Signage and enforcement with penalties

APPENDIX I

Complaint/Suggestion Form

Joseph Branch Trail Complaint Form

Date: _____

Name: _____

Address: _____

_____

_____

Telephone Number: _____

E-mail: _____

Description of Complaint/Issue/Suggestion:

_____
_____
_____
_____
_____ (*Please use other side or another sheet if necessary*)

Place this form in a kiosk suggestion box or mail to:

JBTC
700 H Avenue
La Grande, OR 97850
Or send the information by e-mail to tedvalson@eoni.com.

Please check whether you would rather receive replies to your complaint via

☐ Postal mail (*please provide address in the space above*)

☐ Electronic mail (*please provide e-mail address in the space above*)

You will receive a reply acknowledgement of receipt of the complaint/issue/ suggestion from the trail manager within seven days of its receipt.

APPENDIX J

EXAMPLE MAINTENACE ACTIVITIES SCHEDULE EXAMPLE					
Maintenance Task	Frequency	Who	Equipment	Comment	Cost
1. Trail Inspection	Weekly	Volunteer	Bicycle		
2. Empty trash	As needed				
3. Update Trail Conditions Log	Daily	Volunteer	Computer		
4. Repair trail surface	As needed				
5. Add surface material	As needed				
6. Clear trail of trash/debris	As needed				
7. Clear blow-downs, debris	As needed				
8. Weed survey	Monthly				
9. Inspect ditches for debris, erosion	Monthly				
10. Inspect culverts for blockage, vegetation, siltation	Monthly				
11. Inspect kiosks areas, post notices, etc.	Daily				
12. Leaf removal from trail/ditches	Annual				
13. Weed removal/control	Specified in annual weed plan				
Report problems to trail manager for scheduling work parties and equipment to remove debris, litter, and trash if action cannot be accomplished by the volunteer.					

APPENDIX K

ADJACENT PROPERTY FIELD NOTES

CONTACT INFORMATION
Name:
Address:
Telephone:
E-mail:

PROPERTY DESCRIPTION
Map Number:
Tax Lot:
Acreage:
Approximate Right of Way Frontage:
Contact:

Conditions			Number	Conditions	Yes	No	Number
Distance Track to Fence Line:				Guard Dogs			
Distance Fence Line to Fence Line:				Farming in Right of Way			
	Yes	No		Farm Animals			
Farm Road Crossing				Other:			
Gates Across Track							
Culvert(s)							
Bridge(s)							

Concerns/Issues	Yes	No	Concerns/Issues	Yes	No
Insurance			Weeds		
Property Values			Dogs off Leash		
Security/Crime			Farming Practice Issues		
Litter			Weed Control		
Trespass			Fencing Problems		
Loss of Privacy			Other:		
Other:			Other:		

Questions/Notes/Mitigation Possibilities:

_____
_____
_____
_____
_____
_____
_____
_____
_____ *(Please use other side if more space is*

Property Owner Interview Form
(Interviewer to record responses.)

Q-1 You have sent your concerns and issues statement to be included in the public record. (*Show the property owner what we have in the record.*) Are there any other concerns or issues you would like to address at this time?

Q-2 What are the approximate distances of buildings and equipment storage areas on your property from the trail? *(Have property owner place the buildings and equipment area locations on the tax map. Accept whatever unit of measure the property owner uses.)*

a. Residence(s) 1. _____ 2. _____
b. Barn _____
c. Equipment Storage Building(s) 1. _____ 2. _____
d. Shop Building(s) 1. _____ 2. _____
e. Other Building(s) (Describe use _____
f. Equipment Storage Area _____

Q-3 Is or will equipment ever be stored in a field near the trail?

a. _____ Yes
b. _____ No *(If no, go to Q-5)*

Q-4 If yes, when

a. _____ Always
b. _____ Only when working in the field

Q-5 Are there special attractions on your property that might cause people to trespass or seek permission to come on to your property? (An example: People wanting to cross your property to get to the Wallowa River for fishing.)

a. _____ Yes
b. _____ No *(If no, to to Q-7)*

Q-6 If yes, please describe the attraction or attractions. _____
_____
_____
_____

_____

Q-7 Have you had problems with people trespassing on your property in the past?

a. _____Yes
b. _____ No (if no, go to Q-9)

Q-8 If yes, how frequently and for what reasons, if you know?

_____
_____
_____
_____

Q-9 What are the possible easy access points to your property from the proposed trail and county roads that create a potential for trespass?

_____
_____
_____
_____

Q-10 Have you been a victim of crime on your property because of trespass?

a. _____ Yes
b. _____ No (*If no, go to Q-12.)*

Q-11 If yes, what was the crime(s) and when did it/they occur?

_____
_____
_____
_____

Q-12 How are the fields (or your yard) immediately alongside the railroad right of way used generally?
Spring:_____
_____
Summer:_____
_____
Fall:_____
_____
Winter: _____
_____

Q-13 What is the condition of your fences along the railroad right of way at this time?

a. _____ Excellent
b. _____ Good
c. _____ Fair
d. _____ Poor (*If the property owner suggests the condition of fencing is poor*, *Q-14*.)

Q-14. Are there specific problems with your fencing you would like us to call to the attention of the Railroad Authority?

_____
_____
_____
_____

Q-15 Does your property presently receive water runoff from the railroad right of way that causes you problems?

a. _____ Yes
b. _____ No (*If no, go to Q-17.*)

Q-16 If yes, please indicate the location of the water flow problem on the tax map.

_____
_____
_____
_____

Q-17 Are there irrigation ditches that cross under the railroad track and potentially the trail that cause you concern?

a. _____ Yes
b. _____ No (*If no, go to Q-19)*

Q-18 Please indicate the location of the irrigation ditch on the tax lot map and explain your concern .

_____
_____
_____
_____

Q-19 Your concerns and issues noted on your response form or in other correspondence or in comments at meetings to be included in the public record are: *(Fill out check list prior to the interview session. Don't read the entire list to the property owner. Only deal with those issues he/she has raised.)*

a. ____ Loss of privacy
b. ____ Hours of operation
c. ____ Dogs
d. ____ Trespass
e. _____ Liability
f. ____ Littering
g. _____ Crime
h. _____ Hazing or upsetting livestock
i. _____ Spreading of noxious weeds

j. _____ Misunderstanding of farming practices
k. _____ Potential water intrusion from trail on to property
l. _____ Disruption or negative changes in irrigation ditches/sources
m. _____ Other (*Please specify*) _____
_____

Q-20 Have any of these concerns or issues been adequately addressed in any of the public trail meetings you have attended or by other information you have come across?

Public Meetings
a. _____ Yes
b. _____ No

Other Information Source
c. ____ Chieftain
d. _____ Observer
e. _____ Friends or Relatives
f. ____ Other (specify:_____
_____

Q-21 In looking at the example mitigation strategies on the handout if just handed you, would any of these strategies work to ease your concerns or issues? If not, are there other strategies available that might ameliorate your concerns? *(Examples: 1. Only allow dogs on leashes, require that dog owners be responsible for picking up after their dogs, close the trail entirely to dogs if their presence on the trail is determined to be a problem.)*

Concern	Record Other Mitigation Strategies Suggestions
a. Loss of privacy	
b. Hours of operation	
c. Dogs	
d. Trespass	
e. Liability	
f. Littering	
g. Crime	
h. Hazing or upsetting Livestock	

Concern	Record Other Mitigation Strategies Suggestions
i. Potential water intrusion from trail on to property	
j. Disruption or negative changes in irrigation ditches/sources	
k. Other	

Q-22 Would you or a member of your household be willing to serve on the committee to review and comment on the Trail Management and Maintenance Plan?

a. _____ Yes
b. _____ No

If yes, indicate they will be sent a copy of the draft plan that will be modified after the Railroad Authority board finishes their review. I expect their review to be completed sometime in September.