

**SOIL**

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-19	10YR 2/2	100	_____	_____	_____	_____	Sandy loam	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F7)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**  
 Type: No restrictive layer observed.  
 Depth (Inches): \_\_\_\_\_

**Hydric Soils Present?**      Yes       No

Remarks: Soils do not support hydric soil characteristics; no redox features or odor.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Google Earth aerial photos, soil survey, NWI maps, and topographic map reviewed.

Remarks: Wetland hydrology is not supported at this site. Soils do not appear to stay saturated into the growing season; appearing well drained.

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Ring Lake Estates City/County: Medical Lake/Spokane Sampling Date: 4/6/21  
 Applicant/Owner: S. Emtman State: WA Sampling Point: 7  
 Investigator(s): S. Gilmore Section, Township, Range: Sec 19, T24N, R41E  
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR): Columbia/ Snake River Plateau Lat: 47°33'45.15"N Long: 117°41'15.96"W Datum: WGS84  
 Soil Map Unit Name: Cocolalla ashy silt loam NWI classification: Emergent  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Remarks: <u>Test site on northeast side of a ponded area near the northwest corner of the property..</u>					

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	1 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	1 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	100 (A/B)
4. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
<b>Sapling/Shrub Stratum (Plot size: _____)</b>					
1. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
2. _____	_____	_____	_____	Total % Cover of :	Multiply by:
3. _____	_____	_____	_____	OBL species _____	x1 = _____
4. _____	_____	_____	_____	FACW species _____	x2 = _____
5. _____	_____	_____	_____	FAC species _____	x3 = _____
50% = _____, 20% = _____	_____	= Total Cover		FACU species _____	x4 = _____
				UPL species _____	x5 = _____
				Column Totals: _____ (A)	_____ (B)
				Prevalence Index = B/A = <u>2.2</u>	
<b>Herb Stratum (Plot size: 20' x 20')</b>					
1. <u>Softstem bulrush (Schoenoplectus tabernaemontani)</u>	100	yes	OBL	<b>Hydrophytic Vegetation Indicators:</b>	
2. _____	_____	_____	_____	<input checked="" type="checkbox"/> Dominance Test is >50%	
3. _____	_____	_____	_____	<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
4. _____	_____	_____	_____	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
5. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
6. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
50% = <u>50</u> , 20% = <u>20</u>	100	= Total Cover		<b>Hydrophytic Vegetation Present?</b>	
<b>Woody Vine Stratum (Plot size: _____)</b>					
1. _____	_____	_____	_____	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
2. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust <u>0</u>			
Remarks: <u>Hydrophytic vegetation is supported at this test site.</u>					

**SOIL**

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-21	7.5YR 2.5/1	90	5YR 3/4	10	C	M	Sandy loam	
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**  
 Type: No restrictive layer observed.  
 Depth (Inches): \_\_\_\_\_

**Hydric Soils Present?**      Yes       No

Remarks: Soils support hydric soil characteristics.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)	
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	

**Field Observations:**

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>~15" from top of pit</u>	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>To top of pit</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Google Earth aerial photos, soil survey, NWI maps, and topographic map reviewed.

Remarks: Wetland hydrology is supported at this site. Wetland area has ponded surface water. Surrounded by uplands of snowberry on rocky slopes.

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Ring Lake Estates City/County: Medical Lake/Spokane Sampling Date: 4/6/21  
 Applicant/Owner: S. Emtman State: WA Sampling Point: 8  
 Investigator(s): S. Gilmore Section, Township, Range: Sec 19, T24N, R41E  
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR): Columbia/ Snake River Plateau Lat: 47°33'45.29"N Long: 117°41'15.98"W Datum: WGS84  
 Soil Map Unit Name: Rocky-Fourmound complex NWI classification: Emergent  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: <u>Test site near TS 7, northeast side of open water near the northwest side of the property.</u>					

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	1 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	1 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	100 (A/B)
4. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				<b>Prevalence Index worksheet:</b>	
1. _____	_____	_____	_____	Total % Cover of :	Multiply by:
2. _____	_____	_____	_____	OBL species _____	x1 = _____
3. _____	_____	_____	_____	FACW species _____	x2 = _____
4. _____	_____	_____	_____	FAC species _____	x3 = _____
5. _____	_____	_____	_____	FACU species _____	x4 = _____
50% = _____, 20% = _____	_____	= Total Cover		UPL species _____	x5 = _____
<b>Herb Stratum (Plot size: 20' x 20')</b>				Column Totals: _____ (A)	_____ (B)
1. <u>Reed canarygrass (<i>Phalaris arundinacea</i>)</u>	100	yes	FACW	Prevalence Index = B/A = _____	
2. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
3. _____	_____	_____	_____	<input checked="" type="checkbox"/> Dominance Test is >50%	
4. _____	_____	_____	_____	<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
5. _____	_____	_____	_____	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
6. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
7. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
8. _____	_____	_____	_____		
50% = <u>50</u> , 20% = <u>20</u>	100	= Total Cover		<b>Hydrophytic Vegetation Present?</b>	
<b>Woody Vine Stratum (Plot size: _____)</b>				Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>				
Remarks: <u>Hydrophytic vegetation is supported at this test site. Last year's Canada thistle present, did not count in vegetative stratum. Snowberry on adjacent uplands.</u>					

**SOIL**

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-19	10YR 2/2	100	_____	_____	_____	_____	Sandy loam	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b> Type: <u>No restrictive layer observed.</u> Depth (Inches): _____	<b>Hydric Soils Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks: Soils do not support hydric soil characteristics; no redox features or odor.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Surface Water Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? (includes capillary fringe)      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Google Earth aerial photos, soil survey, NWI maps, and topographic map reviewed.

Remarks: Wetland hydrology is not supported at this site. Soils do not appear to stay saturated into the growing season; appearing well drained.

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Ring Lake Estates City/County: Medical Lake/Spokane Sampling Date: 4/6/21  
 Applicant/Owner: S. Emtman State: WA Sampling Point: 9  
 Investigator(s): S. Gilmore Section, Township, Range: Sec 19, T24N, R41E  
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR): Columbia/ Snake River Plateau Lat: 47°33'45.15"N Long: 117°41'15.96"W Datum: WGS84  
 Soil Map Unit Name: Rocky-Fourmound complex NWI classification: Emergent  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks: <u>Test site on northwest side of a ponded area near the northwest corner of the property.</u>					

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:																
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover		<b>Prevalence Index worksheet:</b>  <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">Total % Cover of :</td> <td style="text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.2</u></td> </tr> </table>	Total % Cover of :	Multiply by:	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species _____	x3 = _____	FACU species _____	x4 = _____	UPL species _____	x5 = _____	Column Totals: _____ (A)	_____ (B)	Prevalence Index = B/A = <u>2.2</u>	
Total % Cover of :	Multiply by:																			
OBL species _____	x1 = _____																			
FACW species _____	x2 = _____																			
FAC species _____	x3 = _____																			
FACU species _____	x4 = _____																			
UPL species _____	x5 = _____																			
Column Totals: _____ (A)	_____ (B)																			
Prevalence Index = B/A = <u>2.2</u>																				
<b>Sapling/Shrub Stratum (Plot size: _____)</b>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
<b>Herb Stratum (Plot size: 20' x 20')</b>																				
1. <u>Softstem bulrush (Schoenoplectus tabernaemontani)</u>	<u>100</u>	<u>yes</u>	<u>OBL</u>																	
2. <u>Reed canarygrass (Phalaris arundinacea)</u>	<u>50</u>	<u>yes</u>	<u>FACW</u>																	
3. <u>Cattail (Typha latifolia)</u>	<u>50</u>	<u>yes</u>	<u>OBL</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
50% = <u>100</u> , 20% = <u>40</u>	<u>200</u>	= Total Cover																		
<b>Woody Vine Stratum (Plot size: _____)</b>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>																			
<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																				
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																				
Remarks: <u>Hydrophytic vegetation is supported at this test site.</u>																				

**SOIL**

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-21	7.5YR 2.5/1	95	5YR 3/4	5	C	M	Sandy loam	
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b> Type: <u>No restrictive layer observed.</u> Depth (Inches): _____	<b>Hydric Soils Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	--

Remarks: Soils support hydric soil characteristics.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present?      Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>~20" from top of pit</u>	
Saturation Present? (includes capillary fringe)    Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>To top of pit</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Google Earth aerial photos, soil survey, NWI maps, and topographic map reviewed.

Remarks: Wetland hydrology is supported at this site. Wetland area has ponded surface water. Surrounded by uplands of snowberry on rocky slopes.

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Ring Lake Estates City/County: Medical Lake/Spokane Sampling Date: 4/6/21  
 Applicant/Owner: S. Emtman State: WA Sampling Point: 10  
 Investigator(s): S. Gilmore Section, Township, Range: Sec 19, T24N, R41E  
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR): Columbia/ Snake River Plateau Lat: 47°33'46.82"N Long: 117°41'13.15"W Datum: WGS84  
 Soil Map Unit Name: Rocky-Fourmound complex NWI classification: Emergent  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>		
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: <u>Test site near TS 9, northwest side of open water near the northwest side of the property.</u>					

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	1 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	2 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	50 (A/B)
4. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
<b>Sapling/Shrub Stratum (Plot size: 20' x 20')</b>					
1. <u>Snowberry (<i>Symphoricarpos albus</i>)</u>	50	yes	FACU	<b>Prevalence Index worksheet:</b>	
2. _____	_____	_____	_____	Total % Cover of :	Multiply by:
3. _____	_____	_____	_____	OBL species _____	x1 = _____
4. _____	_____	_____	_____	FACW species <u>100</u>	x2 = <u>200</u>
5. _____	_____	_____	_____	FAC species _____	x3 = _____
50% = <u>25</u> , 20% = <u>10</u>	50	= Total Cover		FACU species <u>50</u>	x4 = <u>200</u>
<b>Herb Stratum (Plot size: 20' x 20')</b>					
1. <u>Reed canarygrass (<i>Phalaris arundinacea</i>)</u>	100	yes	FACW	UPL species _____	x5 = _____
2. _____	_____	_____	_____	Column Totals: <u>150</u> (A)	<u>400</u> (B)
3. _____	_____	_____	_____	Prevalence Index = B/A = <u>2.7</u>	
4. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
5. _____	_____	_____	_____	<input type="checkbox"/> Dominance Test is >50%	
6. _____	_____	_____	_____	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
7. _____	_____	_____	_____	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
50% = <u>50</u> , 20% = <u>20</u>	100	= Total Cover		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
<b>Woody Vine Stratum (Plot size: _____)</b>					
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
2. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>				
Remarks: <u>Hydrophytic vegetation is supported at this test site.</u>					



**SOIL**

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-21	10YR 2/2	100	_____	_____	_____	_____	Sandy loam	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b>	
Type: <u>No restrictive layer observed.</u>	
Depth (Inches): _____	
	<b>Hydric Soils Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Remarks: Soils do not support hydric soil characteristics; no redox features or odor.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b>		
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Google Earth aerial photos, soil survey, NWI maps, and topographic map reviewed.

Remarks: Wetland hydrology is not supported at this site. Soils do not appear to stay saturated into the growing season; appearing well drained.

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Ring Lake Estates City/County: Medical Lake/Spokane Sampling Date: 4/6/21  
 Applicant/Owner: S. Emtman State: WA Sampling Point: 11  
 Investigator(s): S. Gilmore Section, Township, Range: Sec 19, T24N, R41E  
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR): Columbia/ Snake River Plateau Lat: 47°33'45.15"N Long: 117°41'15.96"W Datum: WGS84  
 Soil Map Unit Name: Rocky-Fourmound complex NWI classification: Emergent  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks: <u>Test site near the northwest portion of the property in a small depression.</u>					

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:																
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover		<b>Prevalence Index worksheet:</b>  <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">Total % Cover of :</td> <td style="text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.2</u></td> </tr> </table>	Total % Cover of :	Multiply by:	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species _____	x3 = _____	FACU species _____	x4 = _____	UPL species _____	x5 = _____	Column Totals: _____ (A)	_____ (B)	Prevalence Index = B/A = <u>2.2</u>	
Total % Cover of :	Multiply by:																			
OBL species _____	x1 = _____																			
FACW species _____	x2 = _____																			
FAC species _____	x3 = _____																			
FACU species _____	x4 = _____																			
UPL species _____	x5 = _____																			
Column Totals: _____ (A)	_____ (B)																			
Prevalence Index = B/A = <u>2.2</u>																				
<b>Sapling/Shrub Stratum (Plot size: _____)</b>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
<b>Herb Stratum (Plot size: 20' x 20')</b>																				
1. <u>Reed canarygrass (Phalaris arundinacea)</u>	<u>100</u>	<u>yes</u>	<u>OBL</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
50% = <u>50</u> , 20% = <u>20</u>	<u>100</u>	= Total Cover																		
<b>Woody Vine Stratum (Plot size: _____)</b>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>																			
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																				
Remarks: <u>Hydrophytic vegetation is supported at this test site.</u>																				

**SOIL**

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 2/2	90	10YR 4/1	10	D	M	Sandy loam	
6-20	10YR 2/2	50	10YR 5/2	50	D	M	Sandy loam	
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b> Type: <u>No restrictive layer observed.</u> Depth (Inches): _____	<b>Hydric Soils Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	--

Remarks: Soils support hydric soil characteristics.

**HYDROLOGY**

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe)    Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>at ~8" from top of pit</u>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Google Earth aerial photos, soil survey, NWI maps, and topographic map reviewed.

Remarks: Wetland hydrology is supported at this site. Wetland area did not have ponded water. Uplands in pines, rocky.

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Ring Lake Estates City/County: Medical Lake/Spokane Sampling Date: 4/6/21  
 Applicant/Owner: S. Emtman State: WA Sampling Point: 12  
 Investigator(s): S. Gilmore Section, Township, Range: Sec 19, T24N, R41E  
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR): Columbia/ Snake River Plateau Lat: 47°33'44.76"N Long: 117°41'9.34"W Datum: WGS84  
 Soil Map Unit Name: Rocky-Fourmound complex NWI classification: Emergent  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: <u>Test site near TS 11, near the northwest side of the property.</u>					

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	1 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	1 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	100 (A/B)
4. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				<b>Prevalence Index worksheet:</b>	
1. _____	_____	_____	_____	Total % Cover of :	Multiply by:
2. _____	_____	_____	_____	OBL species _____	x1 = _____
3. _____	_____	_____	_____	FACW species _____	x2 = _____
4. _____	_____	_____	_____	FAC species _____	x3 = _____
5. _____	_____	_____	_____	FACU species _____	x4 = _____
50% = _____, 20% = _____	_____	= Total Cover		UPL species _____	x5 = _____
<b>Herb Stratum (Plot size: 20' x 20')</b>				Column Totals: _____ (A)	_____ (B)
1. <u>Reed canarygrass (<i>Phalaris arundinacea</i>)</u>	100	yes	FACW	Prevalence Index = B/A = _____	
2. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
3. _____	_____	_____	_____	<input type="checkbox"/> Dominance Test is >50%	
4. _____	_____	_____	_____	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
5. _____	_____	_____	_____	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
6. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
7. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
8. _____	_____	_____	_____		
50% = <u>50</u> , 20% = <u>20</u>	100	= Total Cover		<b>Hydrophytic Vegetation Present?</b>	
<b>Woody Vine Stratum (Plot size: _____)</b>				Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>				
Remarks: <u>Hydrophytic vegetation is supported at this test site. Pine needle duff layer.</u>					

**SOIL**

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 2/2	100	_____	_____	_____	_____	Sandy loam	_____
10-20	10YR 3/2	100	_____	_____	_____	_____	Sandy loam	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F7)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**  
 Type: No restrictive layer observed.  
 Depth (Inches): \_\_\_\_\_

**Hydric Soils Present?**      Yes       No

Remarks: Soils do not support hydric soil characteristics; no redox features or odor.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present?    Yes     No     Depth (inches): \_\_\_\_\_

Water Table Present?    Yes     No     Depth (inches): \_\_\_\_\_

Saturation Present? (includes capillary fringe)    Yes     No     Depth (inches): \_\_\_\_\_

**Wetland Hydrology Present?**      Yes       No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Google Earth aerial photos, soil survey, NWI maps, and topographic map reviewed.

Remarks: Wetland hydrology is not supported at this site. Soils do not appear to stay saturated into the growing season; appearing well drained.

## RATING SUMMARY – Eastern Washington

Name of wetland (or ID #): Wetland 1 (Ring Lake Estates) Date of site visit: 4/6/2021

Rated by S. Gilmore Trained by Ecology?  Yes  No Date of training 10/2014

HGM Class used for rating Depressional Wetland has multiple HGM classes?  Y  N

**NOTE: Form is not complete without the figures requested (figures can be combined).**

Source of base aerial photo/map See report

**OVERALL WETLAND CATEGORY** II (based on functions  or special characteristics )

### 1. Category of wetland based on FUNCTIONS

- Category I – Total score = 22-27
- Category II – Total score = 19-21
- Category III – Total score = 16-18
- Category IV – Total score = 9-15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
Site Potential	H <input checked="" type="checkbox"/> M L	<input checked="" type="checkbox"/> H M L	H <input checked="" type="checkbox"/> M L	
Landscape Potential	H <input checked="" type="checkbox"/> M L	H M <input checked="" type="checkbox"/> L	H <input checked="" type="checkbox"/> M L	
Value	<input checked="" type="checkbox"/> H M L	H <input checked="" type="checkbox"/> M L	H <input checked="" type="checkbox"/> M L	<b>TOTAL</b>
<b>Score Based on Ratings</b>	7	6	6	19

**Score for each function based on three ratings (order of ratings is not important)**

- 9 = H,H,H
- 8 = H,H,M
- 7 = H,H,L
- 7 = H,M,M
- 6 = H,M,L
- 6 = M,M,M
- 5 = H,L,L
- 5 = M,M,L
- 4 = M,L,L
- 3 = L,L,L

### 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
	<i>Circle the appropriate category</i>
<b>Vernal Pools</b>	<b>II</b> <b>III</b>
<b>Alkali</b>	<b>I</b>
<b>Wetland of High Conservation Value</b>	<b>I</b>
<b>Bog and Calcareous Fens</b>	<b>I</b>
<b>Old Growth or Mature Forest – slow growing</b>	<b>I</b>
<b>Aspen Forest</b>	<b>I</b>
<b>Old Growth or Mature Forest – fast growing</b>	<b>II</b>
<b>Floodplain forest</b>	<b>II</b>
None of the above	✓

## Maps and figures required to answer questions correctly for Eastern Washington Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	D 1.3, H 1.1, H 1.5	See report
Hydroperiods (including area of open water for H 1.3)	D 1.4, H 1.2, H 1.3	
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	
Map of the contributing basin	D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	D 3.3	

## Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	
Hydroperiods	H 1.2, H 1.3	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	R 2.4	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of wetland vs. width of stream ( <i>can be added to another figure</i> )	R 4.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	R 3.2, R 3.3	

## Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	L 1.1, L 4.1, H 1.1, H 1.5	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	L 3.3	

## Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	
Hydroperiods	H 1.2, H 1.3	
Plant cover of <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of <b>dense, rigid</b> trees, shrubs, and herbaceous plants ( <i>can be added to figure above</i> )	S 4.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	S 3.3	

## HGM Classification of Wetland in Eastern Washington

For questions 1-4, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-4 apply, and go to Question 5.

1. Does the entire unit **meet both** of the following criteria?

The vegetated part of the wetland is on the water side of the Ordinary High Water Mark of a body of permanent open water (without any plants on the surface) that is at least 20 ac (8 ha) in size  
 At least 30% of the open water area is deeper than 10 ft (3 m)

**NO - go to 2**

**YES - The wetland class is Lake Fringe (Lacustrine Fringe)**

2. Does the entire wetland unit **meet all** of the following criteria?

The wetland is on a slope (*slope can be very gradual*),  
 The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks;  
 The water leaves the wetland **without being impounded**.

**NO - go to 3**

**YES - The wetland class is Slope**

**NOTE:** Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).

3. Does the entire wetland unit **meet all** of the following criteria?

The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river;  
 The overbank flooding occurs at least once every 10 years.

**NO - go to 4**

**YES - The wetland class is Riverine**

**NOTE:** The Riverine wetland can contain depressions that are filled with water when the river is not flooding.

4. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

**NO - go to 5**

**YES - The wetland class is Depressional**

5. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. **GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-4 APPLY TO DIFFERENT AREAS IN THE WETLAND UNIT** (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.



Wetland name or number Wetland 1

**NOTE:** Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the wetland unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM Class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine (the riverine portion is within the boundary of depression)	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine

*If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.*

**DEPRESSIONAL WETLANDS****Water Quality Functions** - Indicators that the site functions to improve water qualityPoints  
(only 1  
score per  
box)

D 1.0. Does the site have the potential to improve water quality?			
D 1.1. Characteristics of surface water outflows from the wetland:			
Wetland has no surface water outlet	points = 5		5
Wetland has an intermittently flowing outlet	points = 3		
Wetland has a highly constricted permanently flowing outlet	points = 3		
Wetland has a permanently flowing, unconstricted, surface outlet	points = 1		
D 1.2. <u>The soil 2 in below the surface (or duff layer)</u> is true clay or true organic (use NRCS definitions of soils)	YES = 3 NO = 0		0
D 1.3. <u>Characteristics of persistent vegetation</u> (Emergent, Scrub-shrub, and/or Forested Cowardin classes)			
Wetland has persistent, ungrazed, vegetation for $> \frac{2}{3}$ of area	points = 5		3
Wetland has persistent, ungrazed, vegetation from $\frac{1}{3}$ to $\frac{2}{3}$ of area	points = 3		
Wetland has persistent, ungrazed vegetation from $\frac{1}{10}$ to $< \frac{1}{3}$ of area	points = 1		
Wetland has persistent, ungrazed vegetation $< \frac{1}{10}$ of area	points = 0		
D 1.4. <u>Characteristics of seasonal ponding or inundation:</u> <i>This is the area of ponding that fluctuates every year. Do not count the area that is permanently ponded.</i>			
Area seasonally ponded is $> \frac{1}{2}$ total area of wetland	points = 3		3
Area seasonally ponded is $\frac{1}{4}$ - $\frac{1}{2}$ total area of wetland	points = 1		
Area seasonally ponded is $< \frac{1}{4}$ total area of wetland	points = 0		
Total for D 1	Add the points in the boxes above		11

**Rating of Site Potential** If score is: 12- 16 = H X 6- 11 = M 0- 5 = L

Record the rating on the first page

D 2.0. Does the landscape have the potential to support the water quality function of the site?			
D 2.1. Does the wetland receive stormwater discharges?	Yes = 1 No = 0		0
D 2.2. Is $> 10\%$ of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0		0
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0		0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1- D 2.3? Source <u>May have been grazing activities in past years</u>	Yes = 1 No = 0		1
Total for D 2	Add the points in the boxes above		1

**Rating of Landscape Potential** If score is: 3 or 4 = H X 1 or 2 = M 0 = L

Record the rating on the first page

D 3.0. Is the water quality improvement provided by the site valuable to society?			
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, or lake that is on the 303(d) list?	Yes = 1 No = 0		0
D 3.2. Is the wetland in a basin or sub-basin where water quality is an issue in some aquatic resource [303(d) list, eutrophic lakes, problems with nuisance and toxic algae]?	Yes = 1 No = 0		1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the drainage or basin in which the wetland is found)?	Yes = 2 No = 0		2
Total for D 3	Add the points in the boxes above		3

**Rating of Value** If score is: X 2-4 = H 1 = M 0 = L

Record the rating on the first page

**DEPRESSIONAL WETLANDS**Points  
(only 1 score  
per box)**Hydrologic Functions** - Indicators that the site functions to reduce flooding and erosion.

D 4.0. Does the site have the potential to reduce flooding and erosion?

D 4.1. Characteristics of surface water outflows from the wetland:

Wetland has no surface water outlet	points = 8	8
Wetland has an intermittently flowing outlet	points = 4	
Wetland has a highly constricted permanently flowing outlet	points = 4	
Wetland has a permanently flowing unconfined surface outlet	points = 0	
<i>(If outlet is a ditch and not permanently flowing treat wetland as "intermittently flowing")</i>		

D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or deepest part (if dry).

Seasonal ponding: > 3 ft above the lowest point in wetland or the surface of permanent ponding	points = 8	6
Seasonal ponding: 2 ft - < 3 ft above the lowest point in wetland or the surface of permanent ponding	points = 6	
The wetland is a headwater wetland	points = 4	
Seasonal ponding: 1 ft - < 2 ft	points = 4	
Seasonal ponding: 6 in - < 1 ft	points = 2	
Seasonal ponding: < 6 in or wetland has only saturated soils	points = 0	

Total for D 4

Add the points in the boxes above

14

**Rating of Site Potential** If score is:  12-16 = H  6-11 = M  0-5 = L

Record the rating on the first page

D 5.0. Does the landscape have the potential to support the hydrologic functions of the site?

D 5.1. Does the wetland receive stormwater discharges?	Yes = 1 No = 0	0
D 5.2. Is > 10% of the area within 150 ft of the wetland in a land use that generates runoff?	Yes = 1 No = 0	0
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses?	Yes = 1 No = 0	0
Total for D 5	Add the points in the boxes above	0

**Rating of Landscape Potential** If score is:  3 = H  1 or 2 = M  0 = L

Record the rating on the first page

D 6.0. Are the hydrologic functions provided by the site valuable to society?

D 6.1. The wetland is in a landscape that has flooding problems.Choose the description that best matches conditions around the wetland being rated. *Do not add points. Choose the highest score if more than one condition is met.*

The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds), AND

Flooding occurs in sub-basin that is immediately down-gradient of wetland	points = 2	1
Surface flooding problems are in a sub-basin farther down-gradient	points = 1	

The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood.

*Explain why* \_\_\_\_\_ points = 0

There are no problems with flooding downstream of the wetland points = 0

D 6.2. Has the site has been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0

0


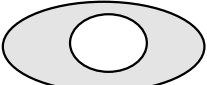
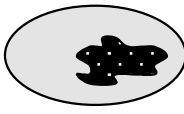
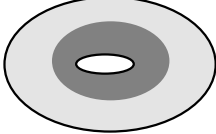
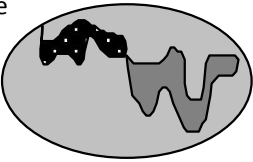
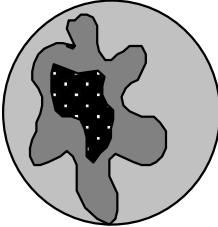
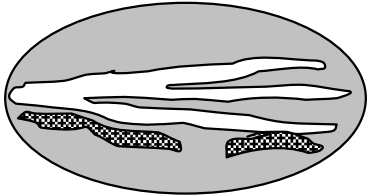
Total for D 6

Add the points in the boxes above

1

**Rating of Value** If score is:  2-4 = H  1 = M  0 = L

Record the rating on the first page

<b>These questions apply to wetlands of all HGM classes.</b>		(only 1 score per box)
<b>HABITAT FUNCTIONS - Indicators that site functions to provide important habitat</b>		
H 1.0. Does the wetland have the potential to provide habitat for many species?		
<p>H 1.1. Structure of the plant community:  <i>Check the Cowardin vegetation classes present and categories of emergent plants. Size threshold for each category is <math>\geq \frac{1}{4}</math> ac or <math>\geq 10\%</math> of the wetland if wetland is <math>&lt; 2.5</math> ac.</i></p> <p> <input type="checkbox"/> Aquatic bed  <input type="checkbox"/> Emergent plants 0-12 in (0-30 cm) high are the highest layer and have &gt; 30% cover  <input checked="" type="checkbox"/> Emergent plants &gt;12-40 in (&gt;30-100 cm) high are the highest layer with &gt;30% cover  <input checked="" type="checkbox"/> Emergent plants &gt; 40 in (&gt; 100 cm) high are the highest layer with &gt;30% cover  <input type="checkbox"/> Scrub-shrub (areas where shrubs have &gt;30% cover)  <input type="checkbox"/> Forested (areas where trees have &gt;30% cover)                 </p> <p style="text-align: right;">                     4 or more checks: points = 3                      3 checks: points = 2                      2 checks: points = 1                      1 check: points = 0                 </p>	1	
H 1.2. Is one of the vegetation types Aquatic Bed?	Yes = 1 No = 0	0
<p>H 1.3. <u>Surface water</u>                      H 1.3.1. Does the wetland have areas of open water (without emergent or shrub plants) over at least <math>\frac{1}{4}</math> ac <b>OR</b> 10% of its area during the March to early June <b>OR</b> in August to the end of September? <i>Answer YES for Lake Fringe wetlands.</i>                      Yes = 3 points &amp; go to H 1.4 No = go to H 1.3.2                      H 1.3.2. Does the wetland have an intermittent or permanent, and unvegetated stream within its boundaries, or along one side, over at least <math>\frac{1}{4}</math> ac or 10% of its area? <i>Answer yes only if H 1.3.1 is No.</i>                      Yes = 3 No = 0                 </p>		3
<p>H 1.4. <u>Richness of plant species</u>                      Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. <i>Different patches of the same species can be combined to meet the size threshold. You do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Russian olive, Phragmites, Canadian thistle, yellow-flag iris, and saltcedar (Tamarisk)</i>                      # of species <u>3</u> </p> <p style="text-align: right;">                     Scoring: &gt; 9 species: points = 2                      4-9 species: points = 1                      &lt; 4 species: points = 0                 </p>		0
<p>H 1.5. <u>Interspersion of habitats</u>                      Decide from the diagrams below whether interspersion among types of plant structures (described in H 1.1.), and unvegetated areas (open water or mudflats) is high, moderate, low, or none.                      Use map of Cowardin and emergent plant classes prepared for questions H 1.1 and map of open water from H 1.3. If you have four or more plant classes or three classes and open water, the rating is always high.                 </p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>None = 0 points</p> </div> <div style="text-align: center;">  <p>Low = 1 point</p> </div> <div style="text-align: center;">  <p>Moderate = 2 points</p> </div> <div style="text-align: center;">  <p>Moderate = 2 points</p> </div> </div> <p>All three diagrams in this row are <b>High = 3 points</b></p> <div style="display: flex; justify-content: space-around; align-items: center;">    </div> <p style="text-align: right; margin-right: 50px;">Riparian braided channels with 2 classes</p>		Figure__ see report  1

Wetland name or number Wetland 1

<p>H 1.6. <u>Special habitat features</u>  <i>Check the habitat features that are present in the wetland. The number of checks is the number of points.</i>  <input type="checkbox"/> Loose rocks larger than 4 in OR large, downed, woody debris (&gt; 4 in diameter) within the area of surface ponding or in stream.  <input checked="" type="checkbox"/> Cattails or bulrushes are present within the wetland.  <input checked="" type="checkbox"/> Standing snags (diameter at the bottom &gt; 4 in) in the wetland or within 30 m (100 ft) of the edge.  <input type="checkbox"/> Emergent or shrub vegetation in areas that are permanently inundated/ponded.  <input checked="" type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (&gt; 45 degree slope) OR signs of recent beaver activity  <input type="checkbox"/> Invasive species cover less than 20% in each stratum of vegetation (<i>canopy, sub-canopy, shrubs, herbaceous, moss/ground cover</i>)</p>	3
Total for H 1	Add the points in the boxes above 8

**Rating of Site Potential** If score is: 15-18 = H X 7-14 = M 0-6 = L Record the rating on the first page

H 2.0. Does the landscape have the potential to support habitat functions of the site?	
<p>H 2.1. Accessible habitat (only area of habitat abutting wetland). If total accessible habitat is:  <i>Calculate:</i> % undisturbed habitat <u>50</u> + [(% moderate and low intensity land uses)/2] <u>25</u> = <u>75</u> %            &gt; 1/3 (33.3%) of 1 km Polygon points = 3            20-33% of 1km Polygon points = 2            10-19% of 1km Polygon points = 1            &lt;10% of 1km Polygon points = 0</p>	1
<p>H 2.2. Undisturbed habitat in 1 km Polygon around wetland.  <i>Calculate:</i> % undisturbed habitat <u>40</u> + [(% moderate and low intensity land uses)/2] <u>20</u> = <u>60</u> %            Undisturbed habitat &gt; 50% of Polygon points = 3            Undisturbed habitat 10 - 50% and in 1-3 patches points = 2            Undisturbed habitat 10 - 50% and &gt; 3 patches points = 1            Undisturbed habitat &lt; 10% of Polygon points = 0</p>	1
<p>H 2.3. Land use intensity in 1 km Polygon:            &gt; 50% of Polygon is high intensity land use points = (- 2)            Does not meet criterion above points = 0</p>	0
<p>H 2.4. The wetland is in an area where annual rainfall is less than 12 in, and its water regime is not influenced by irrigation practices, dams, or water control structures. <i>Generally, this means outside boundaries of reclamation areas, irrigation districts, or reservoirs</i>            Yes = 3 No = 0</p>	0
Total for H 2	Add the points in the boxes above 2

**Rating of Landscape Potential** If score is: 4-9 = H X 1-3 = M < 1 = L Record the rating on the first page

H 3.0. Is the habitat provided by the site valuable to society?	
<p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose the highest score that applies to the wetland being rated</i>            Site meets ANY of the following criteria: points = 2  <input type="checkbox"/> It has 3 or more priority habitats within 100 m (see Appendix B)  <input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on state or federal lists)  <input type="checkbox"/> It is mapped as a location for an individual WDFW species  <input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources  <input checked="" type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan            Site has 1 or 2 priority habitats within 100 m (see Appendix B) points = 1            Site does not meet any of the criteria above points = 0</p>	1

**Rating of Value** If score is: 2 = H X 1 = M 0 = L Record the rating on the first page

**CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

**Please determine if the wetland meets the attributes described below and circle the appropriate category. NOTE: A wetland may meet the criteria for more than one set of special characteristics. Record all those that apply. NOTE: All wetlands should also be characterized based on their functions.**

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
<p><b>SC 1.0. Vernal pools</b>                      Is the wetland <b>less than 4000 ft<sup>2</sup></b>, and does it meet at least <b>two</b> of the following criteria?                      — Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input.                      — Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. <i>If you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.</i>                      — The soil in the wetland is shallow [<math>&lt; 1</math> ft (30 cm) deep] and is underlain by an impermeable layer such as basalt or clay.                      — Surface water is present for less than 120 days during the wet season.</p> <p style="text-align: right;">Yes – Go to <b>SC 1.1</b>    <b>No = Not a vernal pool</b></p> <p>SC 1.1. Is the vernal pool relatively undisturbed in February and March?                      Yes – Go to <b>SC 1.2</b>    <b>No = Not a vernal pool with special characteristics</b></p>	
<p>SC 1.2. Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 mi (other wetlands, rivers, lakes etc.)?                      Yes = <b>Category II</b>    No = <b>Category III</b></p>	<p><b>Cat. II</b> <b>Cat. III</b></p>
<p><b>SC 2.0. Alkali wetlands</b>                      Does the wetland meet <b>one</b> of the following criteria?                      — The wetland has a conductivity <math>&gt; 3.0</math> mS/cm.                      — The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as “alkali” species (see Table 4 for list of plants found in alkali systems).                      — If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt.</p> <p><b>OR</b> does the wetland unit meet two of the following three sub-criteria?                      — Salt encrustations around more than 75% of the edge of the wetland                      — More than <math>\frac{3}{4}</math> of the plant cover consists of species listed on Table 4                      — A pH above 9.0. All alkali wetlands have a high pH, but please note that some freshwater wetlands may also have a high pH. Thus, pH alone is not a good indicator of alkali wetlands.</p> <p style="text-align: right;">Yes = <b>Category I</b>    <b>No = Not an alkali wetland</b></p>	<p><b>Cat. I</b></p>
<p><b>SC 3.0. Wetlands of High Conservation Value (WHCV)</b>                      SC 3.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?                      Yes – Go to <b>SC 3.2</b>    No – Go to <b>SC 3.3</b>                      SC 3.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?                      Yes = <b>Category I</b>    No = <b>Not a WHCV</b>                      SC 3.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?  <a href="http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</a>                      Yes – <b>Contact WNHP/WDNR and go to SC 3.4</b>    No = <b>Not a WHCV</b>                      SC 3.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and it is listed on their website?                      Yes = <b>Category I</b>    <b>No = Not a WHCV</b></p>	<p><b>Cat. I</b></p>

<p><b>SC 4.0 Bogs and Calcareous Fens</b>                  Does the wetland (or any part of the wetland unit) meet both the criteria for soils and vegetation in bogs or calcareous fens? <i>Use the key below to identify if the wetland is a bog or calcareous fen. If you answer yes you will still need to rate the wetland based on its functions.</i></p> <p>SC 4.1. Does an area within the wetland have organic soil horizons (i.e., layers of organic soil), either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? <i>See Appendix C for a field key to identify organic soils.</i>                  Yes – Go to <b>SC 4.3</b> No – Go to <b>SC 4.2</b></p> <p>SC 4.2. Does an area within the wetland have organic soils, either peats or mucks, that are less than 16 in deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?                  Yes – Go to <b>SC 4.3</b> No = <b>Is not a bog for rating</b></p> <p>SC 4.3. Does an area within the wetland have more than 70% cover of mosses at ground level AND at least 30% of the total plant cover consists of species in Table 5?                  Yes = <b>Category I bog</b> No – Go to <b>SC 4.4</b>  <b>NOTE:</b> If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 5 are present, the wetland is a bog.</p> <p>SC 4.4. Is an area with peats or mucks forested (&gt; 30% cover) with subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 5 provide more than 30% of the cover under the canopy?                  Yes = <b>Category I bog</b> No – Go to <b>SC 4.5</b></p> <p>SC 4.5. Do the species listed in Table 6 comprise at least 20% of the total plant cover within an area of peats and mucks?                  Yes = <b>Is a Calcareous Fen for purpose of rating</b> No – Go to <b>SC 4.6</b></p> <p>SC 4.6. Do the species listed in Table 6 comprise at least 10% of the total plant cover in an area of peats and mucks, AND one of the two following conditions is met:                  — Marl deposits [calcium carbonate (CaCO<sub>3</sub>) precipitate] occur on the soil surface or plant stems                  — The pH of free water is ≥ 6.8 AND electrical conductivity is ≥ 200 uS/cm at multiple locations within the wetland                  Yes = <b>Is a Category I calcareous fen</b> No = <b>Is not a calcareous fen</b></p>	<p>Cat. I</p> <p>Cat. I</p>
<p><b>SC 5.0. Forested Wetlands</b>                  Does the wetland have an area of forest rooted within its boundary that meets <b>at least one</b> of the following three criteria? <i>(Continue only if you have identified that a forested class is present in question H 1.1)</i></p> <ul style="list-style-type: none"> <li>— The wetland is within the 100 year floodplain of a river or stream</li> <li>— Aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species</li> <li>— There is at least ¼ ac of trees (even in wetlands smaller than 2.5 ac) that are “mature” or “old-growth” according to the definitions for these priority habitats developed by WDFW <i>(see definitions in question H3.1)</i></li> </ul> <p>Yes – Go to <b>SC 5.1</b> No = <b>Not a forested wetland with special characteristics</b></p> <p>SC 5.1. Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees <i>(see Table 7)?</i>                  Yes = <b>Category I</b> No – Go to <b>SC 5.2</b></p> <p>SC 5.2. Does the wetland have areas where aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species?                  Yes = <b>Category I</b> No – Go to <b>SC 5.3</b></p> <p>SC 5.3. Does the wetland have at least ¼ acre with a forest canopy where more than 50% of the tree species (by cover) are fast growing species <i>(see Table 7)?</i>                  Yes = <b>Category II</b> No – Go to <b>SC 5.4</b></p> <p>SC 5.4. Is the forested component of the wetland within the 100 year floodplain of a river or stream?                  Yes = <b>Category II</b> No = <b>Not a forested wetland with special characteristics</b></p>	<p>Cat. I</p> <p>Cat. I</p> <p>Cat. II</p> <p>Cat. II</p>
<p><b>Category of wetland based on Special Characteristics</b>                  Choose the highest rating if wetland falls into several categories                  If you answered No for all types, enter “Not Applicable” on Summary Form</p>	<p>N/A</p>

## RATING SUMMARY – Eastern Washington

Name of wetland (or ID #): Wetland 2 (Ring Lake Estates) Date of site visit: 4/6/2021

Rated by S. Gilmore Trained by Ecology?  Yes  No Date of training 10/2014

HGM Class used for rating Depressional Wetland has multiple HGM classes?  Y  N

**NOTE: Form is not complete without the figures requested (figures can be combined).**

Source of base aerial photo/map See report

**OVERALL WETLAND CATEGORY** I (based on functions  or special characteristics )

### 1. Category of wetland based on FUNCTIONS

- Category I** – Total score = 22-27
- Category II** – Total score = 19-21
- Category III** – Total score = 16-18
- Category IV** – Total score = 9-15

FUNCTION	Improving Water Quality	Hydrologic	Habitat
<i>Circle the appropriate ratings</i>			
Site Potential	H M L	H M L	H M L
Landscape Potential	H M L	H M L	H M L
Value	H M L	H M L	H M L
<b>Score Based on Ratings</b>			<b>TOTAL</b>

**Score for each function based on three ratings (order of ratings is not important)**

- 9 = H,H,H
- 8 = H,H,M
- 7 = H,H,L
- 7 = H,M,M
- 6 = H,M,L
- 6 = M,M,M
- 5 = H,L,L
- 5 = M,M,L
- 4 = M,L,L
- 3 = L,L,L

### 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
	<i>Circle the appropriate category</i>
<b>Vernal Pools</b>	<b>II III</b>
<b>Alkali</b>	<b>I</b>
<b>Wetland of High Conservation Value</b>	<b>I</b>
<b>Bog and Calcareous Fens</b>	<b>I</b>
<b>Old Growth or Mature Forest – slow growing</b>	<b>I</b>
<b>Aspen Forest</b>	<b>I</b>
<b>Old Growth or Mature Forest – fast growing</b>	<b>II</b>
<b>Floodplain forest</b>	<b>II</b>
None of the above	



## Maps and figures required to answer questions correctly for Eastern Washington Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	D 1.3, H 1.1, H 1.5	See report
Hydroperiods (including area of open water for H 1.3)	D 1.4, H 1.2, H 1.3	
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	
Map of the contributing basin	D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	D 3.3	

### Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	
Hydroperiods	H 1.2, H 1.3	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	R 2.4	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of wetland vs. width of stream ( <i>can be added to another figure</i> )	R 4.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	R 3.2, R 3.3	

### Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	L 1.1, L 4.1, H 1.1, H 1.5	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	L 3.3	

### Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	
Hydroperiods	H 1.2, H 1.3	
Plant cover of <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of <b>dense, rigid</b> trees, shrubs, and herbaceous plants ( <i>can be added to figure above</i> )	S 4.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	S 3.3	

## HGM Classification of Wetland in Eastern Washington

For questions 1-4, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-4 apply, and go to Question 5.

1. Does the entire unit **meet both** of the following criteria?
- The vegetated part of the wetland is on the water side of the Ordinary High Water Mark of a body of permanent open water (without any plants on the surface) that is at least 20 ac (8 ha) in size
  - At least 30% of the open water area is deeper than 10 ft (3 m)

NO - go to 2

YES - The wetland class is **Lake Fringe** (Lacustrine Fringe)

2. Does the entire wetland unit **meet all** of the following criteria?
- The wetland is on a slope (*slope can be very gradual*),
  - The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks;
  - The water leaves the wetland **without being impounded**.

NO - go to 3

YES - The wetland class is **Slope**

**NOTE:** Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).

3. Does the entire wetland unit **meet all** of the following criteria?
- The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river;
  - The overbank flooding occurs at least once every 10 years.

NO - go to 4

YES - The wetland class is **Riverine**

**NOTE:** The Riverine wetland can contain depressions that are filled with water when the river is not flooding.

4. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

NO - go to 5

YES - The wetland class is **Depressional**

5. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. **GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-4 APPLY TO DIFFERENT AREAS IN THE WETLAND UNIT** (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

Wetland name or number Wetland 2

**NOTE:** Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the wetland unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM Class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine (the riverine portion is within the boundary of depression)	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine

*If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.*

**DEPRESSIONAL WETLANDS****Water Quality Functions** - Indicators that the site functions to improve water qualityPoints  
(only 1  
score per  
box)

D 1.0. Does the site have the potential to improve water quality?		
D 1.1. Characteristics of surface water outflows from the wetland:		
Wetland has no surface water outlet	points = 5	5
Wetland has an intermittently flowing outlet	points = 3	
Wetland has a highly constricted permanently flowing outlet	points = 3	
Wetland has a permanently flowing, unconstricted, surface outlet	points = 1	
D 1.2. <u>The soil 2 in below the surface (or duff layer)</u> is true clay or true organic (use NRCS definitions of soils)	YES = 3 NO = 0	0
D 1.3. Characteristics of persistent vegetation (Emergent, Scrub-shrub, and/or Forested Cowardin classes)		
Wetland has persistent, ungrazed, vegetation for $> \frac{2}{3}$ of area	points = 5	3
Wetland has persistent, ungrazed, vegetation from $\frac{1}{3}$ to $\frac{2}{3}$ of area	points = 3	
Wetland has persistent, ungrazed vegetation from $\frac{1}{10}$ to $< \frac{1}{3}$ of area	points = 1	
Wetland has persistent, ungrazed vegetation $< \frac{1}{10}$ of area	points = 0	
D 1.4. Characteristics of seasonal ponding or inundation:		
<i>This is the area of ponding that fluctuates every year. Do not count the area that is permanently ponded.</i>		
Area seasonally ponded is $> \frac{1}{2}$ total area of wetland	points = 3	3
Area seasonally ponded is $\frac{1}{4}$ - $\frac{1}{2}$ total area of wetland	points = 1	
Area seasonally ponded is $< \frac{1}{4}$ total area of wetland	points = 0	
Total for D 1	Add the points in the boxes above	11

**Rating of Site Potential** If score is: 12- 16 = H X 6- 11 = M 0- 5 = L

Record the rating on the first page

D 2.0. Does the landscape have the potential to support the water quality function of the site?		
D 2.1. Does the wetland receive stormwater discharges?	Yes = 1 No = 0	1
D 2.2. Is $> 10\%$ of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1- D 2.3? Source <u>Receives roadway runoff</u>	Yes = 1 No = 0	1
Total for D 2	Add the points in the boxes above	3

**Rating of Landscape Potential** If score is: X 3 or 4 = H 1 or 2 = M 0 = L

Record the rating on the first page

D 3.0. Is the water quality improvement provided by the site valuable to society?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, or lake that is on the 303(d) list?	Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where water quality is an issue in some aquatic resource [303(d) list, eutrophic lakes, problems with nuisance and toxic algae]?	Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the drainage or basin in which the wetland is found)?	Yes = 2 No = 0	2
Total for D 3	Add the points in the boxes above	3

**Rating of Value** If score is: X 2-4 = H 1 = M 0 = L

Record the rating on the first page

**DEPRESSIONAL WETLANDS**

Points  
(only 1 score  
per box)

**Hydrologic Functions** - Indicators that the site functions to reduce flooding and erosion.

D 4.0. Does the site have the potential to reduce flooding and erosion?

D 4.1. Characteristics of surface water outflows from the wetland:

- |   |            |          |
|---|------------|----------|
| Wetland has no surface water outlet   | points = 8 | <b>8</b> |
| Wetland has an intermittently flowing outlet  | points = 4 |          |
| Wetland has a highly constricted permanently flowing outlet   | points = 4 |          |
| Wetland has a permanently flowing unconfined surface outlet   | points = 0 |          |
| <i>(If outlet is a ditch and not permanently flowing treat wetland as "intermittently flowing")</i> |            |          |

D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or deepest part (if dry).

- |   |            |          |
|---|------------|----------|
| Seasonal ponding: > 3 ft above the lowest point in wetland or the surface of permanent ponding        | points = 8 | <b>4</b> |
| Seasonal ponding: 2 ft - < 3 ft above the lowest point in wetland or the surface of permanent ponding | points = 6 |          |
| The wetland is a headwater wetland  | points = 4 |          |
| Seasonal ponding: 1 ft - < 2 ft   | points = 4 |          |
| Seasonal ponding: 6 in - < 1 ft   | points = 2 |          |
| Seasonal ponding: < 6 in or wetland has only saturated soils  | points = 0 |          |

Total for D 4 Add the points in the boxes above

**12**

**Rating of Site Potential** If score is:  12-16 = H  6-11 = M  0-5 = L

*Record the rating on the first page*

D 5.0. Does the landscape have the potential to support the hydrologic functions of the site?

D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0

**1**

D 5.2. Is > 10% of the area within 150 ft of the wetland in a land use that generates runoff? Yes = 1 No = 0

**0**

D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses? Yes = 1 No = 0

**0**

Total for D 5 Add the points in the boxes above

**1**

**Rating of Landscape Potential** If score is:  3 = H  1 or 2 = M  0 = L

*Record the rating on the first page*

D 6.0. Are the hydrologic functions provided by the site valuable to society?

D 6.1. The wetland is in a landscape that has flooding problems.

Choose the description that best matches conditions around the wetland being rated. *Do not add points. Choose the highest score if more than one condition is met.*

The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds), AND

- |   |            |          |
|---|------------|----------|
| Flooding occurs in sub-basin that is immediately down-gradient of wetland | points = 2 | <b>1</b> |
| Surface flooding problems are in a sub-basin farther down-gradient        | points = 1 |          |

The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood.

*Explain why* \_\_\_\_\_ points = 0

There are no problems with flooding downstream of the wetland points = 0

D 6.2. Has the site has been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0


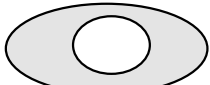
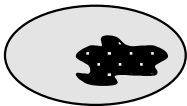
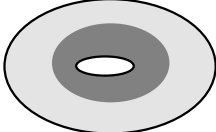
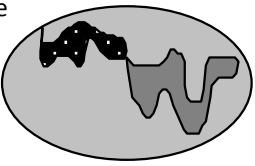
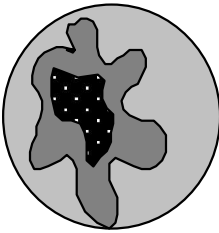
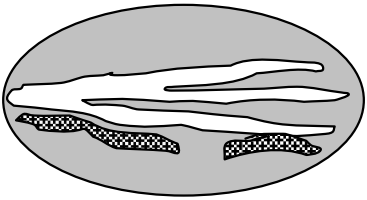
**0**

Total for D 6 Add the points in the boxes above

**1**

**Rating of Value** If score is:  2-4 = H  1 = M  0 = L

*Record the rating on the first page*

These questions apply to wetlands of all HGM classes.		(only 1 score per box)
<b>HABITAT FUNCTIONS</b> - Indicators that site functions to provide important habitat		
H 1.0. Does the wetland have the potential to provide habitat for many species?		
<p>H 1.1. Structure of the plant community:  <i>Check the Cowardin vegetation classes present and categories of emergent plants. Size threshold for each category is <math>\geq 1/4</math> ac or <math>\geq 10\%</math> of the wetland if wetland is <math>&lt; 2.5</math> ac.</i></p> <p><input type="checkbox"/> Aquatic bed</p> <p><input type="checkbox"/> Emergent plants 0-12 in (0-30 cm) high are the highest layer and have <math>&gt; 30\%</math> cover</p> <p><input checked="" type="checkbox"/> Emergent plants &gt;12-40 in (<math>&gt;30</math>-100 cm) high are the highest layer with <math>&gt;30\%</math> cover</p> <p><input checked="" type="checkbox"/> Emergent plants <math>&gt; 40</math> in (<math>&gt; 100</math> cm) high are the highest layer with <math>&gt;30\%</math> cover</p> <p><input type="checkbox"/> Scrub-shrub (areas where shrubs have <math>&gt;30\%</math> cover)      4 or more checks: points = 3</p> <p><input checked="" type="checkbox"/> Forested (areas where trees have <math>&gt;30\%</math> cover)      3 checks: points = 2</p> <p style="text-align: right;">2 checks: points = 1</p> <p style="text-align: right;">1 check: points = 0</p>		2
H 1.2. Is one of the vegetation types Aquatic Bed?      Yes = 1 No = 0		0
<p>H 1.3. <u>Surface water</u></p> <p>H 1.3.1. Does the wetland have areas of open water (without emergent or shrub plants) over at least <math>1/4</math> ac <b>OR</b> 10% of its area during the March to early June <b>OR</b> in August to the end of September? <b>Answer YES for Lake Fringe wetlands.</b>                      Yes = 3 points &amp; go to H 1.4 No = go to H 1.3.2</p> <p>H 1.3.2. Does the wetland have an intermittent or permanent, and unvegetated stream within its boundaries, or along one side, over at least <math>1/4</math> ac or 10% of its area? <b>Answer yes only if H 1.3.1 is No.</b>                      Yes = 3 No = 0</p>		3
<p>H 1.4. <u>Richness of plant species</u></p> <p>Count the number of plant species in the wetland that cover at least <math>10 \text{ ft}^2</math>. <i>Different patches of the same species can be combined to meet the size threshold. You do not have to name the species.</i>  <i>Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Russian olive, Phragmites, Canadian thistle, yellow-flag iris, and saltcedar (Tamarisk)</i></p> <p># of species <u>5</u></p> <p style="text-align: right;">Scoring: <math>&gt; 9</math> species: points = 2                      4-9 species: points = 1  <math>&lt; 4</math> species: points = 0</p>		1
<p>H 1.5. <u>Interspersion of habitats</u></p> <p>Decide from the diagrams below whether interspersion among types of plant structures (described in H 1.1), and unvegetated areas (open water or mudflats) is high, moderate, low, or none.</p> <p><i>Use map of Cowardin and emergent plant classes prepared for questions H 1.1 and map of open water from H 1.3. If you have four or more plant classes or three classes and open water, the rating is always high.</i></p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">   <b>None = 0 points</b> </div> <div style="text-align: center;">   <b>Low = 1 point</b> </div> <div style="text-align: center;">   <b>Moderate = 2 points</b> </div> <div style="text-align: center;">   <b>Moderate = 2 points</b> </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">   <b>High = 3 points</b> </div> <div style="text-align: center;">   <b>High = 3 points</b> </div> <div style="text-align: center;">                       Riparian braided channels with 2 classes                 </div> </div>		2
H 1.5. Interspersion of habitats		Figure__ see report

Wetland name or number Wetland 2

<p>H 1.6. <u>Special habitat features</u>  <i>Check the habitat features that are present in the wetland. The number of checks is the number of points.</i>  <input checked="" type="checkbox"/> Loose rocks larger than 4 in OR large, downed, woody debris (&gt; 4 in diameter) within the area of surface ponding or in stream.  <input type="checkbox"/> Cattails or bulrushes are present within the wetland.  <input checked="" type="checkbox"/> Standing snags (diameter at the bottom &gt; 4 in) in the wetland or within 30 m (100 ft) of the edge.  <input type="checkbox"/> Emergent or shrub vegetation in areas that are permanently inundated/ponded.  <input checked="" type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (&gt; 45 degree slope) OR signs of recent beaver activity  <input type="checkbox"/> Invasive species cover less than 20% in each stratum of vegetation (<i>canopy, sub-canopy, shrubs, herbaceous, moss/ground cover</i>)</p>	3
Total for H 1	Add the points in the boxes above
11	

**Rating of Site Potential** If score is: 15-18 = H x 7-14 = M 0-6 = L Record the rating on the first page

H 2.0. Does the landscape have the potential to support habitat functions of the site?		
<p>H 2.1. Accessible habitat (only area of habitat abutting wetland). If total accessible habitat is:  <i>Calculate:</i> % undisturbed habitat <u>60</u> + [(% moderate and low intensity land uses)/2] <u>20</u> = <u>80</u> %            &gt; 1/3 (33.3%) of 1 km Polygon points = 3            20-33% of 1km Polygon points = 2            10-19% of 1km Polygon points = 1            &lt;10% of 1km Polygon points = 0</p>	1	
<p>H 2.2. Undisturbed habitat in 1 km Polygon around wetland.  <i>Calculate:</i> % undisturbed habitat <u>30</u> + [(% moderate and low intensity land uses)/2] <u>30</u> = <u>60</u> %            Undisturbed habitat &gt; 50% of Polygon points = 3            Undisturbed habitat 10 - 50% and in 1-3 patches points = 2            Undisturbed habitat 10 - 50% and &gt; 3 patches points = 1            Undisturbed habitat &lt; 10% of Polygon points = 0</p>	1	
<p>H 2.3. Land use intensity in 1 km Polygon:            &gt; 50% of Polygon is high intensity land use points = (- 2)            Does not meet criterion above points = 0</p>	0	
<p>H 2.4. The wetland is in an area where annual rainfall is less than 12 in, and its water regime is not influenced by irrigation practices, dams, or water control structures. <i>Generally, this means outside boundaries of reclamation areas, irrigation districts, or reservoirs</i>            Yes = 3 No = 0</p>	0	
Total for H 2	Add the points in the boxes above	2

**Rating of Landscape Potential** If score is: 4-9 = H x 1-3 = M < 1 = L Record the rating on the first page

H 3.0. Is the habitat provided by the site valuable to society?		
<p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose the highest score that applies to the wetland being rated</i>            Site meets ANY of the following criteria: points = 2  <input type="checkbox"/> It has 3 or more priority habitats within 100 m (see Appendix B)  <input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on state or federal lists)  <input type="checkbox"/> It is mapped as a location for an individual WDFW species  <input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources  <input checked="" type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan            Site has 1 or 2 priority habitats within 100 m (see Appendix B) points = 1            Site does not meet any of the criteria above points = 0</p>	1	

**Rating of Value** If score is: 2 = H x 1 = M 0 = L Record the rating on the first page

**CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

**Please determine if the wetland meets the attributes described below and circle the appropriate category. NOTE: A wetland may meet the criteria for more than one set of special characteristics. Record all those that apply. NOTE: All wetlands should also be characterized based on their functions.**

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
<p><b>SC 1.0. Vernal pools</b>                      Is the wetland <b>less than 4000 ft<sup>2</sup></b>, and does it meet at least <b>two</b> of the following criteria?                      — Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input.                      — Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. <i>If you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.</i>                      — The soil in the wetland is shallow [<math>&lt; 1</math> ft (30 cm) deep] and is underlain by an impermeable layer such as basalt or clay.                      — Surface water is present for less than 120 days during the wet season.</p> <p style="text-align: right;">Yes – Go to <b>SC 1.1</b>    No = <b>Not a vernal pool</b></p> <p>SC 1.1. Is the vernal pool relatively undisturbed in February and March?                      Yes – Go to <b>SC 1.2</b>    No = <b>Not a vernal pool with special characteristics</b></p>	
<p>SC 1.2. Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 mi (other wetlands, rivers, lakes etc.)?                      Yes = <b>Category II</b>    No = <b>Category III</b></p>	<p><b>Cat. II</b> <b>Cat. III</b></p>
<p><b>SC 2.0. Alkali wetlands</b>                      Does the wetland meet <b>one</b> of the following criteria?                      — The wetland has a conductivity <math>&gt; 3.0</math> mS/cm.                      — The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as “alkali” species (see Table 4 for list of plants found in alkali systems).                      — If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt.  <b>OR</b> does the wetland unit meet two of the following three sub-criteria?                      — Salt encrustations around more than 75% of the edge of the wetland                      — More than <math>\frac{3}{4}</math> of the plant cover consists of species listed on Table 4                      — A pH above 9.0. All alkali wetlands have a high pH, but please note that some freshwater wetlands may also have a high pH. Thus, pH alone is not a good indicator of alkali wetlands.</p> <p style="text-align: right;">Yes = <b>Category I</b>    No = <b>Not an alkali wetland</b></p>	<p><b>Cat. I</b></p>
<p><b>SC 3.0. Wetlands of High Conservation Value (WHCV)</b>                      SC 3.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?                      Yes – Go to <b>SC 3.2</b>    No – Go to <b>SC 3.3</b>                      SC 3.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?                      Yes = <b>Category I</b>    No = <b>Not a WHCV</b>                      SC 3.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?  <a href="http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</a>                      Yes – <b>Contact WNHP/WDNR and go to SC 3.4</b>    No = <b>Not a WHCV</b>                      SC 3.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and it is listed on their website?                      Yes = <b>Category I</b>    No = <b>Not a WHCV</b></p>	<p><b>Cat. I</b></p>



<p><b>SC 4.0 Bogs and Calcareous Fens</b>                  Does the wetland (or any part of the wetland unit) meet both the criteria for soils and vegetation in bogs or calcareous fens? <i>Use the key below to identify if the wetland is a bog or calcareous fen. If you answer yes you will still need to rate the wetland based on its functions.</i></p> <p>SC 4.1. Does an area within the wetland have organic soil horizons (i.e., layers of organic soil), either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? <i>See Appendix C for a field key to identify organic soils.</i>                  Yes – Go to <b>SC 4.3</b> No – Go to <b>SC 4.2</b></p> <p>SC 4.2. Does an area within the wetland have organic soils, either peats or mucks, that are less than 16 in deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?                  Yes – Go to <b>SC 4.3</b> No = <b>Is not a bog for rating</b></p> <p>SC 4.3. Does an area within the wetland have more than 70% cover of mosses at ground level AND at least 30% of the total plant cover consists of species in Table 5?                  Yes = <b>Category I bog</b> No – Go to <b>SC 4.4</b>  <b>NOTE:</b> If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 5 are present, the wetland is a bog.</p> <p>SC 4.4. Is an area with peats or mucks forested (&gt; 30% cover) with subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 5 provide more than 30% of the cover under the canopy?                  Yes = <b>Category I bog</b> No – Go to <b>SC 4.5</b></p> <p>SC 4.5. Do the species listed in Table 6 comprise at least 20% of the total plant cover within an area of peats and mucks?                  Yes = <b>Is a Calcareous Fen for purpose of rating</b> No – Go to <b>SC 4.6</b></p> <p>SC 4.6. Do the species listed in Table 6 comprise at least 10% of the total plant cover in an area of peats and mucks, AND one of the two following conditions is met:                  — Marl deposits [calcium carbonate (CaCO<sub>3</sub>) precipitate] occur on the soil surface or plant stems                  — The pH of free water is ≥ 6.8 AND electrical conductivity is ≥ 200 uS/cm at multiple locations within the wetland                  Yes = <b>Is a Category I calcareous fen</b> No = <b>Is not a calcareous fen</b></p>	<p>Cat. I</p> <p>Cat. I</p>
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<p><b>SC 5.0. Forested Wetlands</b>                  Does the wetland have an area of forest rooted within its boundary that meets <b>at least one</b> of the following three criteria? (<i>Continue only if you have identified that a forested class is present in question H 1.1</i>)</p> <ul style="list-style-type: none"> <li>— The wetland is within the 100 year floodplain of a river or stream</li> <li><input checked="" type="checkbox"/> Aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species</li> <li>— There is at least ¼ ac of trees (even in wetlands smaller than 2.5 ac) that are “mature” or “old-growth” according to the definitions for these priority habitats developed by WDFW (<i>see definitions in question H3.1</i>)</li> </ul> <p>Yes – Go to <b>SC 5.1</b> No = <b>Not a forested wetland with special characteristics</b></p> <p>SC 5.1. Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees (<i>see Table 7</i>)?                  Yes = <b>Category I</b> No – Go to <b>SC 5.2</b></p> <p>SC 5.2. Does the wetland have areas where aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species?                  Yes = <b>Category I</b> No – Go to <b>SC 5.3</b></p> <p>SC 5.3. Does the wetland have at least ¼ acre with a forest canopy where more than 50% of the tree species (by cover) are fast growing species (<i>see Table 7</i>)?                  Yes = <b>Category II</b> No – Go to <b>SC 5.4</b></p> <p>SC 5.4. Is the forested component of the wetland within the 100 year floodplain of a river or stream?                  Yes = <b>Category II</b> No = <b>Not a forested wetland with special characteristics</b></p> <p><b>Category of wetland based on Special Characteristics</b>                  Choose the highest rating if wetland falls into several categories                  If you answered No for all types, enter “Not Applicable” on Summary Form</p>	<p>Cat. I</p> <p>Cat. I</p> <p>Cat. II</p> <p>Cat. II</p>
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## RATING SUMMARY – Eastern Washington

Name of wetland (or ID #): Wetland 3 (Ring Lake Estates) Date of site visit: 4/6/2021

Rated by S. Gilmore Trained by Ecology?  Yes  No Date of training 10/2014

HGM Class used for rating Depressional Wetland has multiple HGM classes?  Y  N

**NOTE: Form is not complete without the figures requested (figures can be combined).**

Source of base aerial photo/map See report

**OVERALL WETLAND CATEGORY** II (based on functions  or special characteristics )

### 1. Category of wetland based on FUNCTIONS

- Category I – Total score = 22-27
- Category II – Total score = 19-21
- Category III – Total score = 16-18
- Category IV – Total score = 9-15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
Site Potential	H <input checked="" type="checkbox"/> M L	<input checked="" type="checkbox"/> M L	H <input checked="" type="checkbox"/> L	
Landscape Potential	<input checked="" type="checkbox"/> M L	H <input checked="" type="checkbox"/> L	H <input checked="" type="checkbox"/> L	
Value	<input checked="" type="checkbox"/> M L	H <input checked="" type="checkbox"/> L	H <input checked="" type="checkbox"/> L	<b>TOTAL</b>
<b>Score Based on Ratings</b>	8	7	6	21

**Score for each function based on three ratings (order of ratings is not important)**

- 9 = H,H,H
- 8 = H,H,M
- 7 = H,H,L
- 7 = H,M,M
- 6 = H,M,L
- 6 = M,M,M
- 5 = H,L,L
- 5 = M,M,L
- 4 = M,L,L
- 3 = L,L,L

### 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
	<i>Circle the appropriate category</i>
<b>Vernal Pools</b>	<b>II      III</b>
<b>Alkali</b>	<b>I</b>
<b>Wetland of High Conservation Value</b>	<b>I</b>
<b>Bog and Calcareous Fens</b>	<b>I</b>
<b>Old Growth or Mature Forest – slow growing</b>	<b>I</b>
<b>Aspen Forest</b>	<b>I</b>
<b>Old Growth or Mature Forest – fast growing</b>	<b>II</b>
<b>Floodplain forest</b>	<b>II</b>
None of the above	✓

## Maps and figures required to answer questions correctly for Eastern Washington Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	D 1.3, H 1.1, H 1.5	See report
Hydroperiods (including area of open water for H 1.3)	D 1.4, H 1.2, H 1.3	
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	
Map of the contributing basin	D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	D 3.3	

## Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	
Hydroperiods	H 1.2, H 1.3	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	R 2.4	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of wetland vs. width of stream ( <i>can be added to another figure</i> )	R 4.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	R 3.2, R 3.3	

## Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	L 1.1, L 4.1, H 1.1, H 1.5	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	L 3.3	

## Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	
Hydroperiods	H 1.2, H 1.3	
Plant cover of <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of <b>dense, rigid</b> trees, shrubs, and herbaceous plants ( <i>can be added to figure above</i> )	S 4.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	S 3.3	

## HGM Classification of Wetland in Eastern Washington

For questions 1-4, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-4 apply, and go to Question 5.

1. Does the entire unit **meet both** of the following criteria?

The vegetated part of the wetland is on the water side of the Ordinary High Water Mark of a body of permanent open water (without any plants on the surface) that is at least 20 ac (8 ha) in size  
 At least 30% of the open water area is deeper than 10 ft (3 m)

**NO - go to 2**

**YES - The wetland class is Lake Fringe (Lacustrine Fringe)**

2. Does the entire wetland unit **meet all** of the following criteria?

The wetland is on a slope (*slope can be very gradual*),  
 The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks;  
 The water leaves the wetland **without being impounded**.

**NO - go to 3**

**YES - The wetland class is Slope**

**NOTE:** Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).

3. Does the entire wetland unit **meet all** of the following criteria?

The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river;  
 The overbank flooding occurs at least once every 10 years.

**NO - go to 4**

**YES - The wetland class is Riverine**

**NOTE:** The Riverine wetland can contain depressions that are filled with water when the river is not flooding.

4. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

**NO - go to 5**

**YES - The wetland class is Depressional**

5. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. **GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-4 APPLY TO DIFFERENT AREAS IN THE WETLAND UNIT** (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

Wetland name or number Wetland 3

**NOTE:** Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the wetland unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM Class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine (the riverine portion is within the boundary of depression)	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine

*If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.*

<b>DEPRESSIONAL WETLANDS</b>		Points (only 1 score per box)
<b>Water Quality Functions</b> - Indicators that the site functions to improve water quality		
D 1.0. Does the site have the potential to improve water quality?		
D 1.1. Characteristics of surface water outflows from the wetland:		
Wetland has no surface water outlet	points = 5	5
Wetland has an intermittently flowing outlet	points = 3	
Wetland has a highly constricted permanently flowing outlet	points = 3	
Wetland has a permanently flowing, unconstricted, surface outlet	points = 1	
D 1.2. <u>The soil 2 in below the surface (or duff layer)</u> is true clay or true organic (use NRCS definitions of soils)	YES = 3 NO = 0	0
D 1.3. <u>Characteristics of persistent vegetation</u> (Emergent, Scrub-shrub, and/or Forested Cowardin classes)		
Wetland has persistent, ungrazed, vegetation for $> \frac{2}{3}$ of area	points = 5	3
Wetland has persistent, ungrazed, vegetation from $\frac{1}{3}$ to $\frac{2}{3}$ of area	points = 3	
Wetland has persistent, ungrazed vegetation from $\frac{1}{10}$ to $< \frac{1}{3}$ of area	points = 1	
Wetland has persistent, ungrazed vegetation $< \frac{1}{10}$ of area	points = 0	
D 1.4. <u>Characteristics of seasonal ponding or inundation:</u> <i>This is the area of ponding that fluctuates every year. Do not count the area that is permanently ponded.</i>		
Area seasonally ponded is $> \frac{1}{2}$ total area of wetland	points = 3	3
Area seasonally ponded is $\frac{1}{4}$ - $\frac{1}{2}$ total area of wetland	points = 1	
Area seasonally ponded is $< \frac{1}{4}$ total area of wetland	points = 0	
Total for D 1	Add the points in the boxes above	11

**Rating of Site Potential** If score is: 12- 16 = H X 6- 11 = M 0- 5 = L *Record the rating on the first page*

D 2.0. Does the landscape have the potential to support the water quality function of the site?		
D 2.1. Does the wetland receive stormwater discharges?	Yes = 1 No = 0	1
D 2.2. Is $> 10\%$ of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1- D 2.3? Source <u>Receives</u> roadway runoff	Yes = 1 No = 0	1
Total for D 2	Add the points in the boxes above	3

**Rating of Landscape Potential** If score is: X 3 or 4 = H 1 or 2 = M 0 = L *Record the rating on the first page*

D 3.0. Is the water quality improvement provided by the site valuable to society?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, or lake that is on the 303(d) list?	Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where water quality is an issue in some aquatic resource [303(d) list, eutrophic lakes, problems with nuisance and toxic algae]?	Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the drainage or basin in which the wetland is found)?	Yes = 2 No = 0	2
Total for D 3	Add the points in the boxes above	3

**Rating of Value** If score is: X 2-4 = H 1 = M 0 = L *Record the rating on the first page*

**DEPRESSIONAL WETLANDS**

Points  
(only 1 score  
per box)

**Hydrologic Functions** - Indicators that the site functions to reduce flooding and erosion.

D 4.0. Does the site have the potential to reduce flooding and erosion?

D 4.1. Characteristics of surface water outflows from the wetland:

- |   |            |          |
|---|------------|----------|
| Wetland has no surface water outlet   | points = 8 | <b>8</b> |
| Wetland has an intermittently flowing outlet  | points = 4 |          |
| Wetland has a highly constricted permanently flowing outlet   | points = 4 |          |
| Wetland has a permanently flowing unconfined surface outlet   | points = 0 |          |
| <i>(If outlet is a ditch and not permanently flowing treat wetland as "intermittently flowing")</i> |            |          |

D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or deepest part (if dry).

- |   |            |          |
|---|------------|----------|
| Seasonal ponding: > 3 ft above the lowest point in wetland or the surface of permanent ponding        | points = 8 | <b>4</b> |
| Seasonal ponding: 2 ft - < 3 ft above the lowest point in wetland or the surface of permanent ponding | points = 6 |          |
| The wetland is a headwater wetland  | points = 4 |          |
| Seasonal ponding: 1 ft - < 2 ft   | points = 4 |          |
| Seasonal ponding: 6 in - < 1 ft   | points = 2 |          |
| Seasonal ponding: < 6 in or wetland has only saturated soils  | points = 0 |          |

Total for D 4 Add the points in the boxes above **12**

**Rating of Site Potential** If score is:  12-16 = H  6-11 = M  0-5 = L *Record the rating on the first page*

D 5.0. Does the landscape have the potential to support the hydrologic functions of the site?

D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0 **1**

D 5.2. Is > 10% of the area within 150 ft of the wetland in a land use that generates runoff? Yes = 1 No = 0 **0**

D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses? Yes = 1 No = 0 **0**

Total for D 5 Add the points in the boxes above **1**

**Rating of Landscape Potential** If score is:  3 = H  1 or 2 = M  0 = L *Record the rating on the first page*

D 6.0. Are the hydrologic functions provided by the site valuable to society?

D 6.1. The wetland is in a landscape that has flooding problems.

Choose the description that best matches conditions around the wetland being rated. *Do not add points. Choose the highest score if more than one condition is met.*

The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds), AND

- |   |            |          |
|---|------------|----------|
| Flooding occurs in sub-basin that is immediately down-gradient of wetland | points = 2 | <b>1</b> |
| Surface flooding problems are in a sub-basin farther down-gradient        | points = 1 |          |

The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood.

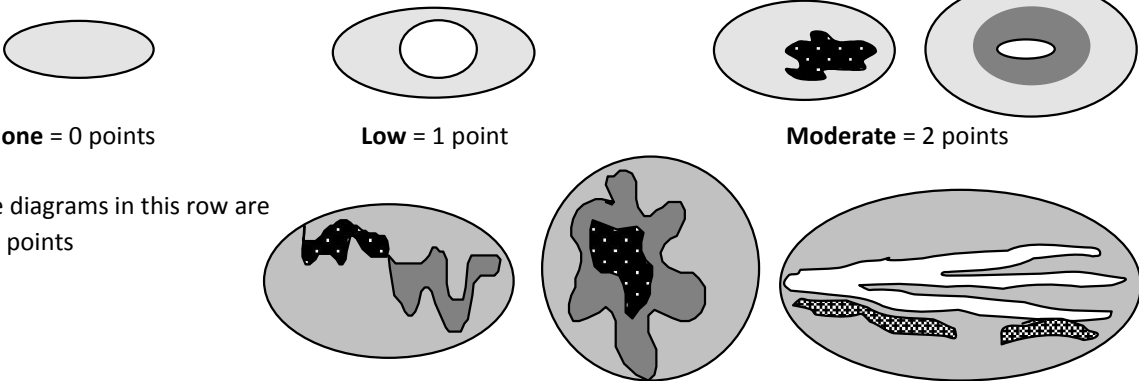
*Explain why* \_\_\_\_\_ points = 0

There are no problems with flooding downstream of the wetland points = 0

D 6.2. Has the site has been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0 **0**

Total for D 6 Add the points in the boxes above **1**

**Rating of Value** If score is:  2-4 = H  1 = M  0 = L *Record the rating on the first page*

<p style="text-align: center;"><b>These questions apply to wetlands of all HGM classes.</b></p> <p><b>HABITAT FUNCTIONS</b> - Indicators that site functions to provide important habitat</p>		(only 1 score per box)
<p>H 1.0. Does the wetland have the potential to provide habitat for many species?</p>		
<p>H 1.1. Structure of the plant community:  <i>Check the Cowardin vegetation classes present and categories of emergent plants. Size threshold for each category is <math>\geq \frac{1}{4}</math> ac or <math>\geq 10\%</math> of the wetland if wetland is <math>&lt; 2.5</math> ac.</i></p> <p> <input type="checkbox"/> Aquatic bed  <input type="checkbox"/> Emergent plants 0-12 in (0-30 cm) high are the highest layer and have &gt; 30% cover  <input checked="" type="checkbox"/> Emergent plants &gt;12-40 in (&gt;30-100 cm) high are the highest layer with &gt;30% cover  <input checked="" type="checkbox"/> Emergent plants &gt; 40 in (&gt; 100 cm) high are the highest layer with &gt;30% cover  <input checked="" type="checkbox"/> Scrub-shrub (areas where shrubs have &gt;30% cover)  <input type="checkbox"/> Forested (areas where trees have &gt;30% cover)                 </p>	<p>4 or more checks: points = 3                      3 checks: points = 2                      2 checks: points = 1                      1 check: points = 0</p>	2
<p>H 1.2. Is one of the vegetation types Aquatic Bed?</p>	<p>Yes = 1 No = 0</p>	0
<p>H 1.3. <u>Surface water</u></p> <p>H 1.3.1. Does the wetland have areas of open water (without emergent or shrub plants) over at least <math>\frac{1}{4}</math> ac <b>OR</b> 10% of its area during the March to early June <b>OR</b> in August to the end of September? <i>Answer YES for Lake Fringe wetlands.</i></p> <p>H 1.3.2. Does the wetland have an intermittent or permanent, and unvegetated stream within its boundaries, or along one side, over at least <math>\frac{1}{4}</math> ac or 10% of its area? <i>Answer yes only if H 1.3.1 is No.</i></p>	<p>Yes = 3 points &amp; go to H 1.4 No = go to H 1.3.2                      Yes = 3 No = 0</p>	3
<p>H 1.4. <u>Richness of plant species</u></p> <p>Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. <i>Different patches of the same species can be combined to meet the size threshold. You do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Russian olive, Phragmites, Canadian thistle, yellow-flag iris, and saltcedar (Tamarisk)</i></p> <p># of species <u>6</u></p>	<p>Scoring: &gt; 9 species: points = 2                      4-9 species: points = 1                      &lt; 4 species: points = 0</p>	1
<p>H 1.5. <u>Interspersion of habitats</u></p> <p>Decide from the diagrams below whether interspersions among types of plant structures (described in H 1.1), and unvegetated areas (open water or mudflats) is high, moderate, low, or none.</p> <p><i>Use map of Cowardin and emergent plant classes prepared for questions H 1.1 and map of open water from H 1.3. If you have four or more plant classes or three classes and open water, the rating is always high.</i></p>	 <p>None = 0 points                      Low = 1 point                      Moderate = 2 points</p> <p>All three diagrams in this row are  <b>High = 3 points</b></p> <p style="text-align: right;">Riparian braided channels with 2 classes</p>	<p>Figure__ see report</p> <p style="text-align: center;">2</p>



<b>H 1.6. Special habitat features</b> <i>Check the habitat features that are present in the wetland. The number of checks is the number of points.</i> <input checked="" type="checkbox"/> Loose rocks larger than 4 in OR large, downed, woody debris (> 4 in diameter) within the area of surface ponding or in stream. <input checked="" type="checkbox"/> Cattails or bulrushes are present within the wetland. <input checked="" type="checkbox"/> Standing snags (diameter at the bottom > 4 in) in the wetland or within 30 m (100 ft) of the edge. <input type="checkbox"/> Emergent or shrub vegetation in areas that are permanently inundated/ponded. <input checked="" type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 45 degree slope) OR signs of recent beaver activity <input type="checkbox"/> Invasive species cover less than 20% in each stratum of vegetation ( <i>canopy, sub-canopy, shrubs, herbaceous, moss/ground cover</i> )		4
Total for H 1	Add the points in the boxes above	12

**Rating of Site Potential** If score is: 15-18 = H x 7-14 = M 0-6 = L Record the rating on the first page

<b>H 2.0. Does the landscape have the potential to support habitat functions of the site?</b>		
<b>H 2.1. Accessible habitat (only area of habitat abutting wetland). If total accessible habitat is:</b> <i>Calculate:</i> % undisturbed habitat <u>50</u> + [(% moderate and low intensity land uses)/2] <u>25</u> = <u>75</u> % > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1km Polygon points = 2 10-19% of 1km Polygon points = 1 <10% of 1km Polygon points = 0		1
<b>H 2.2. Undisturbed habitat in 1 km Polygon around wetland.</b> <i>Calculate:</i> % undisturbed habitat <u>30</u> + [(% moderate and low intensity land uses)/2] <u>30</u> = <u>60</u> % Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches points = 2 Undisturbed habitat 10 - 50% and > 3 patches points = 1 Undisturbed habitat < 10% of Polygon points = 0		1
<b>H 2.3. Land use intensity in 1 km Polygon:</b> > 50% of Polygon is high intensity land use points = (- 2) Does not meet criterion above points = 0		0
<b>H 2.4. The wetland is in an area where annual rainfall is less than 12 in, and its water regime is not influenced by irrigation practices, dams, or water control structures. Generally, this means outside boundaries of reclamation areas, irrigation districts, or reservoirs</b> Yes = 3 No = 0		0
Total for H 2	Add the points in the boxes above	2

**Rating of Landscape Potential** If score is: 4-9 = H x 1-3 = M < 1 = L Record the rating on the first page

<b>H 3.0. Is the habitat provided by the site valuable to society?</b>		
<b>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose the highest score that applies to the wetland being rated</b> Site meets ANY of the following criteria: points = 2 — It has 3 or more priority habitats within 100 m (see Appendix B) — It provides habitat for Threatened or Endangered species (any plant or animal on state or federal lists) — It is mapped as a location for an individual WDFW species — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources <input checked="" type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats within 100 m (see Appendix B) points = 1 Site does not meet any of the criteria above points = 0		1

**Rating of Value** If score is: 2 = H x 1 = M 0 = L Record the rating on the first page

**CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

**Please determine if the wetland meets the attributes described below and circle the appropriate category. NOTE: A wetland may meet the criteria for more than one set of special characteristics. Record all those that apply. NOTE: All wetlands should also be characterized based on their functions.**

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
<p><b>SC 1.0. Vernal pools</b></p> <p>Is the wetland <b>less than 4000 ft<sup>2</sup></b>, and does it meet at least <b>two</b> of the following criteria?</p> <ul style="list-style-type: none"> <li>— Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input.</li> <li>— Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. <i>If you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.</i></li> <li>— The soil in the wetland is shallow [<math>&lt; 1</math> ft (30 cm) deep] and is underlain by an impermeable layer such as basalt or clay.</li> <li>— Surface water is present for less than 120 days during the wet season.</li> </ul> <p style="text-align: right;">Yes – Go to <b>SC 1.1</b>    No = <b>Not a vernal pool</b></p> <p>SC 1.1. Is the vernal pool relatively undisturbed in February and March?  <span style="float: right;">Yes – Go to <b>SC 1.2</b>    No = <b>Not a vernal pool with special characteristics</b></span></p>	
<p>SC 1.2. Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 mi (other wetlands, rivers, lakes etc.)?  <span style="float: right;">Yes = <b>Category II</b>    No = <b>Category III</b></span></p>	<p><b>Cat. II</b> <b>Cat. III</b></p>
<p><b>SC 2.0. Alkali wetlands</b></p> <p>Does the wetland meet <b>one</b> of the following criteria?</p> <ul style="list-style-type: none"> <li>— The wetland has a conductivity <math>&gt; 3.0</math> mS/cm.</li> <li>— The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as “alkali” species (see Table 4 for list of plants found in alkali systems).</li> <li>— If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt.</li> </ul> <p><b>OR</b> does the wetland unit meet two of the following three sub-criteria?</p> <ul style="list-style-type: none"> <li>— Salt encrustations around more than 75% of the edge of the wetland</li> <li>— More than <math>\frac{3}{4}</math> of the plant cover consists of species listed on Table 4</li> <li>— A pH above 9.0. All alkali wetlands have a high pH, but please note that some freshwater wetlands may also have a high pH. Thus, pH alone is not a good indicator of alkali wetlands.</li> </ul> <p style="text-align: right;">Yes = <b>Category I</b>    No = <b>Not an alkali wetland</b></p>	<p><b>Cat. I</b></p>
<p><b>SC 3.0. Wetlands of High Conservation Value (WHCV)</b></p> <p>SC 3.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?  <span style="float: right;">Yes – Go to <b>SC 3.2</b>    No – Go to <b>SC 3.3</b></span></p> <p>SC 3.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?  <span style="float: right;">Yes = <b>Category I</b>    No = <b>Not a WHCV</b></span></p> <p>SC 3.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?  <a href="http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</a>  <span style="float: right;">Yes – <b>Contact WNHP/WDNR and go to SC 3.4</b>    No = <b>Not a WHCV</b></span></p> <p>SC 3.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and it is listed on their website?  <span style="float: right;">Yes = <b>Category I</b>    No = <b>Not a WHCV</b></span></p>	<p><b>Cat. I</b></p>

<p><b>SC 4.0 Bogs and Calcareous Fens</b>                  Does the wetland (or any part of the wetland unit) meet both the criteria for soils and vegetation in bogs or calcareous fens? <i>Use the key below to identify if the wetland is a bog or calcareous fen. If you answer yes you will still need to rate the wetland based on its functions.</i></p> <p>SC 4.1. Does an area within the wetland have organic soil horizons (i.e., layers of organic soil), either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? <i>See Appendix C for a field key to identify organic soils.</i>                  Yes – Go to <b>SC 4.3</b> No – Go to <b>SC 4.2</b></p> <p>SC 4.2. Does an area within the wetland have organic soils, either peats or mucks, that are less than 16 in deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?                  Yes – Go to <b>SC 4.3</b> No = <b>Is not a bog for rating</b></p> <p>SC 4.3. Does an area within the wetland have more than 70% cover of mosses at ground level AND at least 30% of the total plant cover consists of species in Table 5?                  Yes = <b>Category I bog</b> No – Go to <b>SC 4.4</b>  <b>NOTE:</b> If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 5 are present, the wetland is a bog.</p> <p>SC 4.4. Is an area with peats or mucks forested (&gt; 30% cover) with subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 5 provide more than 30% of the cover under the canopy?                  Yes = <b>Category I bog</b> No – Go to <b>SC 4.5</b></p> <p>SC 4.5. Do the species listed in Table 6 comprise at least 20% of the total plant cover within an area of peats and mucks?                  Yes = <b>Is a Calcareous Fen for purpose of rating</b> No – Go to <b>SC 4.6</b></p> <p>SC 4.6. Do the species listed in Table 6 comprise at least 10% of the total plant cover in an area of peats and mucks, AND one of the two following conditions is met:                  — Marl deposits [calcium carbonate (CaCO<sub>3</sub>) precipitate] occur on the soil surface or plant stems                  — The pH of free water is ≥ 6.8 AND electrical conductivity is ≥ 200 uS/cm at multiple locations within the wetland                  Yes = <b>Is a Category I calcareous fen</b> No = <b>Is not a calcareous fen</b></p>	<p>Cat. I</p> <p>Cat. I</p>
<p><b>SC 5.0. Forested Wetlands</b>                  Does the wetland have an area of forest rooted within its boundary that meets <b>at least one</b> of the following three criteria? (<i>Continue only if you have identified that a forested class is present in question H 1.1</i>)</p> <ul style="list-style-type: none"> <li>— The wetland is within the 100 year floodplain of a river or stream</li> <li>— Aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species</li> <li>— There is at least ¼ ac of trees (even in wetlands smaller than 2.5 ac) that are “mature” or “old-growth” according to the definitions for these priority habitats developed by WDFW (<i>see definitions in question H3.1</i>)</li> </ul> <p>Yes – Go to <b>SC 5.1</b> No = <b>Not a forested wetland with special characteristics</b></p> <p>SC 5.1. Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees (<i>see Table 7</i>)?                  Yes = <b>Category I</b> No – Go to <b>SC 5.2</b></p> <p>SC 5.2. Does the wetland have areas where aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species?                  Yes = <b>Category I</b> No – Go to <b>SC 5.3</b></p> <p>SC 5.3. Does the wetland have at least ¼ acre with a forest canopy where more than 50% of the tree species (by cover) are fast growing species (<i>see Table 7</i>)?                  Yes = <b>Category II</b> No – Go to <b>SC 5.4</b></p> <p>SC 5.4. Is the forested component of the wetland within the 100 year floodplain of a river or stream?                  Yes = <b>Category II</b> No = <b>Not a forested wetland with special characteristic</b></p>	<p>Cat. I</p> <p>Cat. I</p> <p>Cat. II</p> <p>Cat. II</p>
<p><b>Category of wetland based on Special Characteristics</b>                  Choose the highest rating if wetland falls into several categories                  If you answered No for all types, enter “Not Applicable” on Summary Form</p>	<p>N/A</p>

## RATING SUMMARY – Eastern Washington

Name of wetland (or ID #): Wetland 4 (Ring Lake Estates) Date of site visit: 4/6/2021  
 Rated by S. Gilmore Trained by Ecology?  Yes  No Date of training 10/2014  
 HGM Class used for rating Depressional Wetland has multiple HGM classes?  Y  N

**NOTE: Form is not complete without the figures requested (figures can be combined).**  
 Source of base aerial photo/map See report

**OVERALL WETLAND CATEGORY** II (based on functions  or special characteristics )

### 1. Category of wetland based on FUNCTIONS

- Category I** – Total score = 22-27  
 **Category II** – Total score = 19-21  
 **Category III** – Total score = 16-18  
 **Category IV** – Total score = 9-15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
Site Potential	H <input checked="" type="checkbox"/> M L	<input checked="" type="checkbox"/> M L	H <input checked="" type="checkbox"/> L	
Landscape Potential	<input checked="" type="checkbox"/> M L	H <input checked="" type="checkbox"/> L	H <input checked="" type="checkbox"/> L	
Value	<input checked="" type="checkbox"/> M L	H <input checked="" type="checkbox"/> L	H <input checked="" type="checkbox"/> L	<b>TOTAL</b>
<b>Score Based on Ratings</b>	8	7	6	21

**Score for each function based on three ratings (order of ratings is not important)**

- 9 = H,H,H
- 8 = H,H,M
- 7 = H,H,L
- 7 = H,M,M
- 6 = H,M,L
- 6 = M,M,M
- 5 = H,L,L
- 5 = M,M,L
- 4 = M,L,L
- 3 = L,L,L

### 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
	<i>Circle the appropriate category</i>
<b>Vernal Pools</b>	<b>II</b> <b>III</b>
<b>Alkali</b>	<b>I</b>
<b>Wetland of High Conservation Value</b>	<b>I</b>
<b>Bog and Calcareous Fens</b>	<b>I</b>
<b>Old Growth or Mature Forest – slow growing</b>	<b>I</b>
<b>Aspen Forest</b>	<b>I</b>
<b>Old Growth or Mature Forest – fast growing</b>	<b>II</b>
<b>Floodplain forest</b>	<b>II</b>
None of the above	✓

## Maps and figures required to answer questions correctly for Eastern Washington Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	D 1.3, H 1.1, H 1.5	See report
Hydroperiods (including area of open water for H 1.3)	D 1.4, H 1.2, H 1.3	
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	
Map of the contributing basin	D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	D 3.3	

## Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	
Hydroperiods	H 1.2, H 1.3	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	R 2.4	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of wetland vs. width of stream ( <i>can be added to another figure</i> )	R 4.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	R 3.2, R 3.3	

## Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	L 1.1, L 4.1, H 1.1, H 1.5	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	L 3.3	

## Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	
Hydroperiods	H 1.2, H 1.3	
Plant cover of <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of <b>dense, rigid</b> trees, shrubs, and herbaceous plants ( <i>can be added to figure above</i> )	S 4.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	S 3.3	

## HGM Classification of Wetland in Eastern Washington

For questions 1-4, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-4 apply, and go to Question 5.

1. Does the entire unit **meet both** of the following criteria?  
 The vegetated part of the wetland is on the water side of the Ordinary High Water Mark of a body of permanent open water (without any plants on the surface) that is at least 20 ac (8 ha) in size  
 At least 30% of the open water area is deeper than 10 ft (3 m)  
**NO - go to 2** **YES -** The wetland class is **Lake Fringe** (Lacustrine Fringe)
  
2. Does the entire wetland unit **meet all** of the following criteria?  
 The wetland is on a slope (*slope can be very gradual*),  
 The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks;  
 The water leaves the wetland **without being impounded**.  
**NO - go to 3** **YES -** The wetland class is **Slope**  
**NOTE:** Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).
  
3. Does the entire wetland unit **meet all** of the following criteria?  
 The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river;  
 The overbank flooding occurs at least once every 10 years.  
**NO - go to 4** **YES -** The wetland class is **Riverine**  
**NOTE:** The Riverine wetland can contain depressions that are filled with water when the river is not flooding.
  
4. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*  
**NO - go to 5** **YES -** The wetland class is **Depressional**
  
5. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. **GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-4 APPLY TO DIFFERENT AREAS IN THE WETLAND UNIT** (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

Wetland name or number Wetland 4

**NOTE:** Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the wetland unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM Class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine (the riverine portion is within the boundary of depression)	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine

*If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.*

**DEPRESSIONAL WETLANDS****Water Quality Functions** - Indicators that the site functions to improve water qualityPoints  
(only 1  
score per  
box)

D 1.0. Does the site have the potential to improve water quality?		
D 1.1. Characteristics of surface water outflows from the wetland:		
Wetland has no surface water outlet	points = 5	5
Wetland has an intermittently flowing outlet	points = 3	
Wetland has a highly constricted permanently flowing outlet	points = 3	
Wetland has a permanently flowing, unconstricted, surface outlet	points = 1	
D 1.2. <u>The soil 2 in below the surface (or duff layer)</u> is true clay or true organic (use NRCS definitions of soils)	YES = 3 NO = 0	0
D 1.3. Characteristics of persistent vegetation (Emergent, Scrub-shrub, and/or Forested Cowardin classes)		
Wetland has persistent, ungrazed, vegetation for $> \frac{2}{3}$ of area	points = 5	3
Wetland has persistent, ungrazed, vegetation from $\frac{1}{3}$ to $\frac{2}{3}$ of area	points = 3	
Wetland has persistent, ungrazed vegetation from $\frac{1}{10}$ to $< \frac{1}{3}$ of area	points = 1	
Wetland has persistent, ungrazed vegetation $< \frac{1}{10}$ of area	points = 0	
D 1.4. Characteristics of seasonal ponding or inundation:		
<i>This is the area of ponding that fluctuates every year. Do not count the area that is permanently ponded.</i>		
Area seasonally ponded is $> \frac{1}{2}$ total area of wetland	points = 3	3
Area seasonally ponded is $\frac{1}{4}$ - $\frac{1}{2}$ total area of wetland	points = 1	
Area seasonally ponded is $< \frac{1}{4}$ total area of wetland	points = 0	
Total for D 1	Add the points in the boxes above	11

**Rating of Site Potential** If score is: 12- 16 = H X 6- 11 = M 0- 5 = L

Record the rating on the first page

D 2.0. Does the landscape have the potential to support the water quality function of the site?		
D 2.1. Does the wetland receive stormwater discharges?	Yes = 1 No = 0	1
D 2.2. Is $> 10\%$ of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1- D 2.3? Source <u>Receives roadway runoff</u>	Yes = 1 No = 0	1
Total for D 2	Add the points in the boxes above	3

**Rating of Landscape Potential** If score is: X 3 or 4 = H 1 or 2 = M 0 = L

Record the rating on the first page

D 3.0. Is the water quality improvement provided by the site valuable to society?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, or lake that is on the 303(d) list?	Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where water quality is an issue in some aquatic resource [303(d) list, eutrophic lakes, problems with nuisance and toxic algae]?	Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the drainage or basin in which the wetland is found)?	Yes = 2 No = 0	2
Total for D 3	Add the points in the boxes above	3

**Rating of Value** If score is: X 2-4 = H 1 = M 0 = L

Record the rating on the first page



**DEPRESSIONAL WETLANDS**

Points  
(only 1 score  
per box)

**Hydrologic Functions** - Indicators that the site functions to reduce flooding and erosion.

D 4.0. Does the site have the potential to reduce flooding and erosion?

D 4.1. Characteristics of surface water outflows from the wetland:

- |   |            |          |
|---|------------|----------|
| Wetland has no surface water outlet   | points = 8 | <b>8</b> |
| Wetland has an intermittently flowing outlet  | points = 4 |          |
| Wetland has a highly constricted permanently flowing outlet   | points = 4 |          |
| Wetland has a permanently flowing unconfined surface outlet   | points = 0 |          |
| <i>(If outlet is a ditch and not permanently flowing treat wetland as "intermittently flowing")</i> |            |          |

D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or deepest part (if dry).

- |   |            |          |
|---|------------|----------|
| Seasonal ponding: > 3 ft above the lowest point in wetland or the surface of permanent ponding        | points = 8 | <b>4</b> |
| Seasonal ponding: 2 ft - < 3 ft above the lowest point in wetland or the surface of permanent ponding | points = 6 |          |
| The wetland is a headwater wetland  | points = 4 |          |
| Seasonal ponding: 1 ft - < 2 ft   | points = 4 |          |
| Seasonal ponding: 6 in - < 1 ft   | points = 2 |          |
| Seasonal ponding: < 6 in or wetland has only saturated soils  | points = 0 |          |

Total for D 4 Add the points in the boxes above **12**

**Rating of Site Potential** If score is:  **12-16 = H**  **6-11 = M**  **0-5 = L** *Record the rating on the first page*

D 5.0. Does the landscape have the potential to support the hydrologic functions of the site?

D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0 **1**

D 5.2. Is > 10% of the area within 150 ft of the wetland in a land use that generates runoff? Yes = 1 No = 0 **0**

D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses? Yes = 1 No = 0 **0**

Total for D 5 Add the points in the boxes above **1**

**Rating of Landscape Potential** If score is:  **3 = H**  **1 or 2 = M**  **0 = L** *Record the rating on the first page*

D 6.0. Are the hydrologic functions provided by the site valuable to society?

D 6.1. The wetland is in a landscape that has flooding problems.

Choose the description that best matches conditions around the wetland being rated. *Do not add points. Choose the highest score if more than one condition is met.*

The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds), AND

- |   |            |          |
|---|------------|----------|
| Flooding occurs in sub-basin that is immediately down-gradient of wetland | points = 2 | <b>1</b> |
| Surface flooding problems are in a sub-basin farther down-gradient        | points = 1 |          |

The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood.


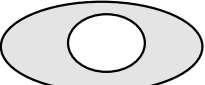
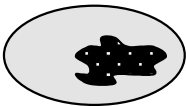
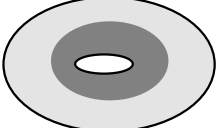
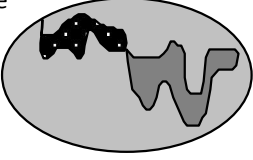
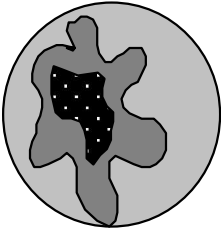
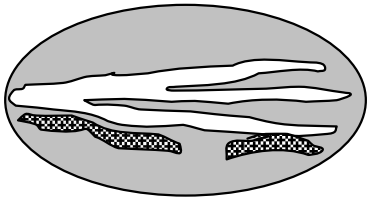
*Explain why* \_\_\_\_\_ points = 0

There are no problems with flooding downstream of the wetland points = 0

D 6.2. Has the site has been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0 **0**

Total for D 6 Add the points in the boxes above **1**

**Rating of Value** If score is:  **2-4 = H**  **1 = M**  **0 = L** *Record the rating on the first page*

These questions apply to wetlands of all HGM classes.		(only 1 score per box)
HABITAT FUNCTIONS - Indicators that site functions to provide important habitat		
H 1.0. Does the wetland have the potential to provide habitat for many species?		
<p>H 1.1. Structure of the plant community:  <i>Check the Cowardin vegetation classes present and categories of emergent plants. Size threshold for each category is <math>\geq \frac{1}{4}</math> ac or <math>\geq 10\%</math> of the wetland if wetland is <math>&lt; 2.5</math> ac.</i></p> <p><input type="checkbox"/> Aquatic bed</p> <p><input type="checkbox"/> Emergent plants 0-12 in (0-30 cm) high are the highest layer and have <math>&gt; 30\%</math> cover</p> <p><input checked="" type="checkbox"/> Emergent plants &gt;12-40 in (<math>&gt;30</math>-100 cm) high are the highest layer with <math>&gt;30\%</math> cover</p> <p><input checked="" type="checkbox"/> Emergent plants <math>&gt; 40</math> in (<math>&gt; 100</math> cm) high are the highest layer with <math>&gt;30\%</math> cover</p> <p><input checked="" type="checkbox"/> Scrub-shrub (areas where shrubs have <math>&gt;30\%</math> cover) <span style="float: right;">4 or more checks: points = 3</span></p> <p><input type="checkbox"/> Forested (areas where trees have <math>&gt;30\%</math> cover) <span style="float: right;">3 checks: points = 2</span></p> <p style="text-align: right;">2 checks: points = 1</p> <p style="text-align: right;">1 check: points = 0</p>		2
H 1.2. Is one of the vegetation types Aquatic Bed? <span style="float: right;">Yes = 1 No = 0</span>		0
<p>H 1.3. <u>Surface water</u></p> <p>H 1.3.1. Does the wetland have areas of open water (without emergent or shrub plants) over at least <math>\frac{1}{4}</math> ac <b>OR</b> 10% of its area during the March to early June <b>OR</b> in August to the end of September? <i>Answer YES for Lake Fringe wetlands.</i> <span style="float: right;">Yes = 3 points &amp; go to H 1.4 No = go to H 1.3.2</span></p> <p>H 1.3.2. Does the wetland have an intermittent or permanent, and unvegetated stream within its boundaries, or along one side, over at least <math>\frac{1}{4}</math> ac or 10% of its area? <i>Answer yes only if H 1.3.1 is No.</i> <span style="float: right;">Yes = 3 No = 0</span></p>		3
<p>H 1.4. <u>Richness of plant species</u></p> <p>Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. <i>Different patches of the same species can be combined to meet the size threshold. You do not have to name the species.</i></p> <p><i>Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Russian olive, Phragmites, Canadian thistle, yellow-flag iris, and saltcedar (Tamarisk)</i></p> <p># of species <u>6</u> <span style="float: right;">Scoring: <math>&gt; 9</math> species: points = 2</span></p> <p style="text-align: right;">4-9 species: points = 1</p> <p style="text-align: right;"><math>&lt; 4</math> species: points = 0</p>		1
<p>H 1.5. <u>Interspersion of habitats</u></p> <p>Decide from the diagrams below whether interspersion among types of plant structures (described in H 1.1), and unvegetated areas (open water or mudflats) is high, moderate, low, or none.</p> <p><i>Use map of Cowardin and emergent plant classes prepared for questions H 1.1 and map of open water from H 1.3. If you have four or more plant classes or three classes and open water, the rating is always high.</i></p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>None = 0 points</p> </div> <div style="text-align: center;">  <p>Low = 1 point</p> </div> <div style="text-align: center;">  <p>Moderate = 2 points</p> </div> <div style="text-align: center;">  </div> </div> <p>All three diagrams in this row are <b>High = 3 points</b></p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  <p>Riparian braided channels with 2 classes</p> </div> </div>		<p>Figure__ see report</p> <p style="text-align: center;">2</p>

Wetland name or number Wetland 4

<b>H 1.6. Special habitat features</b> <i>Check the habitat features that are present in the wetland. The number of checks is the number of points.</i> <input checked="" type="checkbox"/> Loose rocks larger than 4 in OR large, downed, woody debris (> 4 in diameter) within the area of surface ponding or in stream. <input checked="" type="checkbox"/> Cattails or bulrushes are present within the wetland. <input checked="" type="checkbox"/> Standing snags (diameter at the bottom > 4 in) in the wetland or within 30 m (100 ft) of the edge. <input type="checkbox"/> Emergent or shrub vegetation in areas that are permanently inundated/ponded. <input checked="" type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 45 degree slope) OR signs of recent beaver activity <input type="checkbox"/> Invasive species cover less than 20% in each stratum of vegetation ( <i>canopy, sub-canopy, shrubs, herbaceous, moss/ground cover</i> )		4
Total for H 1	Add the points in the boxes above	12

**Rating of Site Potential** If score is: 15-18 = H x 7-14 = M 0-6 = L Record the rating on the first page

<b>H 2.0. Does the landscape have the potential to support habitat functions of the site?</b>		
<b>H 2.1. Accessible habitat (only area of habitat abutting wetland). If total accessible habitat is:</b> <i>Calculate:</i> % undisturbed habitat <u>50</u> + [(% moderate and low intensity land uses)/2] <u>25</u> = <u>75</u> % > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1km Polygon points = 2 10-19% of 1km Polygon points = 1 <10% of 1km Polygon points = 0		1
<b>H 2.2. Undisturbed habitat in 1 km Polygon around wetland.</b> <i>Calculate:</i> % undisturbed habitat <u>30</u> + [(% moderate and low intensity land uses)/2] <u>30</u> = <u>60</u> % Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches points = 2 Undisturbed habitat 10 - 50% and > 3 patches points = 1 Undisturbed habitat < 10% of Polygon points = 0		1
<b>H 2.3. Land use intensity in 1 km Polygon:</b> > 50% of Polygon is high intensity land use points = (- 2) Does not meet criterion above points = 0		0
<b>H 2.4. The wetland is in an area where annual rainfall is less than 12 in, and its water regime is not influenced by irrigation practices, dams, or water control structures. Generally, this means outside boundaries of reclamation areas, irrigation districts, or reservoirs</b> Yes = 3 No = 0		0
Total for H 2	Add the points in the boxes above	2

**Rating of Landscape Potential** If score is: 4-9 = H x 1-3 = M < 1 = L Record the rating on the first page

<b>H 3.0. Is the habitat provided by the site valuable to society?</b>		
<b>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose the highest score that applies to the wetland being rated</b> Site meets ANY of the following criteria: points = 2 — It has 3 or more priority habitats within 100 m (see Appendix B) — It provides habitat for Threatened or Endangered species (any plant or animal on state or federal lists) — It is mapped as a location for an individual WDFW species — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources <input checked="" type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats within 100 m (see Appendix B) points = 1 Site does not meet any of the criteria above points = 0		1

**Rating of Value** If score is: 2 = H x 1 = M 0 = L Record the rating on the first page

**CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

**Please determine if the wetland meets the attributes described below and circle the appropriate category. NOTE: A wetland may meet the criteria for more than one set of special characteristics. Record all those that apply. NOTE: All wetlands should also be characterized based on their functions.**

Wetland Type <i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	Category
<p><b>SC 1.0. Vernal pools</b> Is the wetland <b>less than 4000 ft<sup>2</sup></b>, and does it meet at least <b>two</b> of the following criteria?  — Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input.  — Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. <i>If you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.</i>  — The soil in the wetland is shallow [<math>&lt; 1</math> ft (30 cm) deep] and is underlain by an impermeable layer such as basalt or clay.  — Surface water is present for less than 120 days during the wet season.  Yes – Go to <b>SC 1.1</b> No = <b>Not a vernal pool</b></p> <p>SC 1.1. Is the vernal pool relatively undisturbed in February and March?  Yes – Go to <b>SC 1.2</b> No = <b>Not a vernal pool with special characteristics</b></p>	
<p>SC 1.2. Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 mi (other wetlands, rivers, lakes etc.)?  Yes = <b>Category II</b> No = <b>Category III</b></p>	<p><b>Cat. II</b> <b>Cat. III</b></p>
<p><b>SC 2.0. Alkali wetlands</b> Does the wetland meet <b>one</b> of the following criteria?  — The wetland has a conductivity <math>&gt; 3.0</math> mS/cm.  — The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as “alkali” species (see Table 4 for list of plants found in alkali systems).  — If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt.  <b>OR</b> does the wetland unit meet two of the following three sub-criteria?  — Salt encrustations around more than 75% of the edge of the wetland  — More than <math>\frac{3}{4}</math> of the plant cover consists of species listed on Table 4  — A pH above 9.0. All alkali wetlands have a high pH, but please note that some freshwater wetlands may also have a high pH. Thus, pH alone is not a good indicator of alkali wetlands.  Yes = <b>Category I</b> No = <b>Not an alkali wetland</b></p>	<p><b>Cat. I</b></p>
<p><b>SC 3.0. Wetlands of High Conservation Value (WHCV)</b>  SC 3.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?  Yes – Go to <b>SC 3.2</b> No – Go to <b>SC 3.3</b>  SC 3.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?  Yes = <b>Category I</b> No = <b>Not a WHCV</b>  SC 3.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?  <a href="http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</a>  Yes – <b>Contact WNHP/WDNR and go to SC 3.4</b> No = <b>Not a WHCV</b>  SC 3.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and it is listed on their website?  Yes = <b>Category I</b> No = <b>Not a WHCV</b></p>	<p><b>Cat. I</b></p>

<p><b>SC 4.0 Bogs and Calcareous Fens</b>                  Does the wetland (or any part of the wetland unit) meet both the criteria for soils and vegetation in bogs or calcareous fens? <i>Use the key below to identify if the wetland is a bog or calcareous fen. If you answer yes you will still need to rate the wetland based on its functions.</i></p> <p>SC 4.1. Does an area within the wetland have organic soil horizons (i.e., layers of organic soil), either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? <i>See Appendix C for a field key to identify organic soils.</i>                  Yes – Go to <b>SC 4.3</b> No – Go to <b>SC 4.2</b></p> <p>SC 4.2. Does an area within the wetland have organic soils, either peats or mucks, that are less than 16 in deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?                  Yes – Go to <b>SC 4.3</b> No = <b>Is not a bog for rating</b></p> <p>SC 4.3. Does an area within the wetland have more than 70% cover of mosses at ground level AND at least 30% of the total plant cover consists of species in Table 5?                  Yes = <b>Category I bog</b> No – Go to <b>SC 4.4</b>  <b>NOTE:</b> If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 5 are present, the wetland is a bog.</p> <p>SC 4.4. Is an area with peats or mucks forested (&gt; 30% cover) with subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 5 provide more than 30% of the cover under the canopy?                  Yes = <b>Category I bog</b> No – Go to <b>SC 4.5</b></p> <p>SC 4.5. Do the species listed in Table 6 comprise at least 20% of the total plant cover within an area of peats and mucks?                  Yes = <b>Is a Calcareous Fen for purpose of rating</b> No – Go to <b>SC 4.6</b></p> <p>SC 4.6. Do the species listed in Table 6 comprise at least 10% of the total plant cover in an area of peats and mucks, AND one of the two following conditions is met:                  — Marl deposits [calcium carbonate (CaCO<sub>3</sub>) precipitate] occur on the soil surface or plant stems                  — The pH of free water is ≥ 6.8 AND electrical conductivity is ≥ 200 uS/cm at multiple locations within the wetland                  Yes = <b>Is a Category I calcareous fen</b> No = <b>Is not a calcareous fen</b></p>	<p>Cat. I</p> <p>Cat. I</p>
<p><b>SC 5.0. Forested Wetlands</b>                  Does the wetland have an area of forest rooted within its boundary that meets <b>at least one</b> of the following three criteria? <i>(Continue only if you have identified that a forested class is present in question H 1.1)</i></p> <ul style="list-style-type: none"> <li>— The wetland is within the 100 year floodplain of a river or stream</li> <li>— Aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species</li> <li>— There is at least ¼ ac of trees (even in wetlands smaller than 2.5 ac) that are “mature” or “old-growth” according to the definitions for these priority habitats developed by WDFW <i>(see definitions in question H3.1)</i></li> </ul> <p>Yes – Go to <b>SC 5.1</b> No = <b>Not a forested wetland with special characteristics</b></p> <p>SC 5.1. Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees <i>(see Table 7)?</i>                  Yes = <b>Category I</b> No – Go to <b>SC 5.2</b></p> <p>SC 5.2. Does the wetland have areas where aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species?                  Yes = <b>Category I</b> No – Go to <b>SC 5.3</b></p> <p>SC 5.3. Does the wetland have at least ¼ acre with a forest canopy where more than 50% of the tree species (by cover) are fast growing species <i>(see Table 7)?</i>                  Yes = <b>Category II</b> No – Go to <b>SC 5.4</b></p> <p>SC 5.4. Is the forested component of the wetland within the 100 year floodplain of a river or stream?                  Yes = <b>Category II</b> No = <b>Not a forested wetland with special characteristic</b></p>	<p>Cat. I</p> <p>Cat. I</p> <p>Cat. II</p> <p>Cat. II</p>
<p><b>Category of wetland based on Special Characteristics</b>                  Choose the highest rating if wetland falls into several categories                  If you answered No for all types, enter “Not Applicable” on Summary Form</p>	<p>N/A</p>

## RATING SUMMARY – Eastern Washington

Name of wetland (or ID #): Wetland 5 (Ring Lake Estates) Date of site visit: 4/6/2021

Rated by S. Gilmore Trained by Ecology?  Yes  No Date of training 10/2014

HGM Class used for rating Depressional Wetland has multiple HGM classes?  Y  N

**NOTE: Form is not complete without the figures requested (figures can be combined).**

Source of base aerial photo/map See report

**OVERALL WETLAND CATEGORY** III (based on functions  or special characteristics )

### 1. Category of wetland based on FUNCTIONS

**Category I** – Total score = 22-27

**Category II** – Total score = 19-21

**Category III** – Total score = 16-18

**Category IV** – Total score = 9-15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
Site Potential	H <input checked="" type="checkbox"/> M L	H <input checked="" type="checkbox"/> M L	H M <input checked="" type="checkbox"/> L	
Landscape Potential	H M <input checked="" type="checkbox"/> L	H M <input checked="" type="checkbox"/> L	H <input checked="" type="checkbox"/> M L	
Value	<input checked="" type="checkbox"/> H M L	H <input checked="" type="checkbox"/> M L	H <input checked="" type="checkbox"/> M L	<b>TOTAL</b>
<b>Score Based on Ratings</b>	6	5	5	16

**Score for each function based on three ratings (order of ratings is not important)**

- 9 = H,H,H
- 8 = H,H,M
- 7 = H,H,L
- 7 = H,M,M
- 6 = H,M,L
- 6 = M,M,M
- 5 = H,L,L
- 5 = M,M,L
- 4 = M,L,L
- 3 = L,L,L

### 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY	
	<i>Circle the appropriate category</i>	
<b>Vernal Pools</b>	<b>II</b>	<b>III</b>
<b>Alkali</b>	<b>I</b>	
<b>Wetland of High Conservation Value</b>	<b>I</b>	
<b>Bog and Calcareous Fens</b>	<b>I</b>	
<b>Old Growth or Mature Forest – slow growing</b>	<b>I</b>	
<b>Aspen Forest</b>	<b>I</b>	
<b>Old Growth or Mature Forest – fast growing</b>	<b>II</b>	
<b>Floodplain forest</b>	<b>II</b>	
None of the above	✓	

## Maps and figures required to answer questions correctly for Eastern Washington Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	D 1.3, H 1.1, H 1.5	See report
Hydroperiods (including area of open water for H 1.3)	D 1.4, H 1.2, H 1.3	
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	
Map of the contributing basin	D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	D 3.3	

## Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	
Hydroperiods	H 1.2, H 1.3	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	R 2.4	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of wetland vs. width of stream ( <i>can be added to another figure</i> )	R 4.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	R 3.2, R 3.3	

## Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	L 1.1, L 4.1, H 1.1, H 1.5	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	L 3.3	

## Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	
Hydroperiods	H 1.2, H 1.3	
Plant cover of <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of <b>dense, rigid</b> trees, shrubs, and herbaceous plants ( <i>can be added to figure above</i> )	S 4.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	S 3.3	

## HGM Classification of Wetland in Eastern Washington

For questions 1-4, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-4 apply, and go to Question 5.

1. Does the entire unit **meet both** of the following criteria?  
 The vegetated part of the wetland is on the water side of the Ordinary High Water Mark of a body of permanent open water (without any plants on the surface) that is at least 20 ac (8 ha) in size  
 At least 30% of the open water area is deeper than 10 ft (3 m)  
**NO - go to 2** **YES -** The wetland class is **Lake Fringe** (Lacustrine Fringe)
  
2. Does the entire wetland unit **meet all** of the following criteria?  
 The wetland is on a slope (*slope can be very gradual*),  
 The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks;  
 The water leaves the wetland **without being impounded**.  
**NO - go to 3** **YES -** The wetland class is **Slope**  
**NOTE:** Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).
  
3. Does the entire wetland unit **meet all** of the following criteria?  
 The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river;  
 The overbank flooding occurs at least once every 10 years.  
**NO - go to 4** **YES -** The wetland class is **Riverine**  
**NOTE:** The Riverine wetland can contain depressions that are filled with water when the river is not flooding.
  
4. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*  
**NO - go to 5** **YES -** The wetland class is **Depressional**
  
5. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. **GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-4 APPLY TO DIFFERENT AREAS IN THE WETLAND UNIT** (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.



Wetland name or number Wetland 5

**NOTE:** Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the wetland unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM Class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine (the riverine portion is within the boundary of depression)	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine

*If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.*

<b>DEPRESSIONAL WETLANDS</b>		Points (only 1 score per box)
<b>Water Quality Functions</b> - Indicators that the site functions to improve water quality		
D 1.0. Does the site have the potential to improve water quality?		
D 1.1. Characteristics of surface water outflows from the wetland:		
Wetland has no surface water outlet	points = 5	5
Wetland has an intermittently flowing outlet	points = 3	
Wetland has a highly constricted permanently flowing outlet	points = 3	
Wetland has a permanently flowing, unconstricted, surface outlet	points = 1	
D 1.2. <u>The soil 2 in below the surface (or duff layer)</u> is true clay or true organic (use NRCS definitions of soils)	YES = 3 NO = 0	0
D 1.3. <u>Characteristics of persistent vegetation</u> (Emergent, Scrub-shrub, and/or Forested Cowardin classes)		
Wetland has persistent, ungrazed, vegetation for $> \frac{2}{3}$ of area	points = 5	5
Wetland has persistent, ungrazed, vegetation from $\frac{1}{3}$ to $\frac{2}{3}$ of area	points = 3	
Wetland has persistent, ungrazed vegetation from $\frac{1}{10}$ to $< \frac{1}{3}$ of area	points = 1	
Wetland has persistent, ungrazed vegetation $< \frac{1}{10}$ of area	points = 0	
D 1.4. <u>Characteristics of seasonal ponding or inundation:</u> <i>This is the area of ponding that fluctuates every year. Do not count the area that is permanently ponded.</i>		
Area seasonally ponded is $> \frac{1}{2}$ total area of wetland	points = 3	0
Area seasonally ponded is $\frac{1}{4}$ - $\frac{1}{2}$ total area of wetland	points = 1	
Area seasonally ponded is $< \frac{1}{4}$ total area of wetland	points = 0	
Total for D 1	Add the points in the boxes above	10

**Rating of Site Potential** If score is: 12- 16 = H X 6- 11 = M 0- 5 = L *Record the rating on the first page*

D 2.0. Does the landscape have the potential to support the water quality function of the site?		
D 2.1. Does the wetland receive stormwater discharges?	Yes = 1 No = 0	0
D 2.2. Is $> 10\%$ of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	0
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1- D 2.3? Source _____	Yes = 1 No = 0	0
Total for D 2	Add the points in the boxes above	0

**Rating of Landscape Potential** If score is: 3 or 4 = H 1 or 2 = M X 0 = L *Record the rating on the first page*

D 3.0. Is the water quality improvement provided by the site valuable to society?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, or lake that is on the 303(d) list?	Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where water quality is an issue in some aquatic resource [303(d) list, eutrophic lakes, problems with nuisance and toxic algae]?	Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the drainage or basin in which the wetland is found)?	Yes = 2 No = 0	2
Total for D 3	Add the points in the boxes above	3

**Rating of Value** If score is: X 2-4 = H 1 = M 0 = L *Record the rating on the first page*

**DEPRESSIONAL WETLANDS**

Points  
(only 1 score  
per box)

**Hydrologic Functions** - Indicators that the site functions to reduce flooding and erosion.

D 4.0. Does the site have the potential to reduce flooding and erosion?

D 4.1. Characteristics of surface water outflows from the wetland:

- |   |            |          |
|---|------------|----------|
| Wetland has no surface water outlet   | points = 8 | <b>8</b> |
| Wetland has an intermittently flowing outlet  | points = 4 |          |
| Wetland has a highly constricted permanently flowing outlet   | points = 4 |          |
| Wetland has a permanently flowing unconfined surface outlet   | points = 0 |          |
| <i>(If outlet is a ditch and not permanently flowing treat wetland as "intermittently flowing")</i> |            |          |

D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or deepest part (if dry).

- |   |            |          |
|---|------------|----------|
| Seasonal ponding: > 3 ft above the lowest point in wetland or the surface of permanent ponding        | points = 8 | <b>0</b> |
| Seasonal ponding: 2 ft - < 3 ft above the lowest point in wetland or the surface of permanent ponding | points = 6 |          |
| The wetland is a headwater wetland  | points = 4 |          |
| Seasonal ponding: 1 ft - < 2 ft   | points = 4 |          |
| Seasonal ponding: 6 in - < 1 ft   | points = 2 |          |
| Seasonal ponding: < 6 in or wetland has only saturated soils  | points = 0 |          |

Total for D 4 Add the points in the boxes above **8**

**Rating of Site Potential** If score is: 12-16 = H X 6-11 = M 0-5 = L *Record the rating on the first page*

D 5.0. Does the landscape have the potential to support the hydrologic functions of the site?

D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0 **0**

D 5.2. Is > 10% of the area within 150 ft of the wetland in a land use that generates runoff? Yes = 1 No = 0 **0**

D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses? Yes = 1 No = 0 **0**

Total for D 5 Add the points in the boxes above **0**

**Rating of Landscape Potential** If score is: 3 = H 1 or 2 = M X 0 = L *Record the rating on the first page*

D 6.0. Are the hydrologic functions provided by the site valuable to society?

D 6.1. The wetland is in a landscape that has flooding problems.

Choose the description that best matches conditions around the wetland being rated. *Do not add points. Choose the highest score if more than one condition is met.*

The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds), AND

- |   |            |          |
|---|------------|----------|
| Flooding occurs in sub-basin that is immediately down-gradient of wetland | points = 2 | <b>1</b> |
| Surface flooding problems are in a sub-basin farther down-gradient        | points = 1 |          |

The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood.


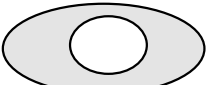
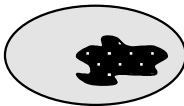
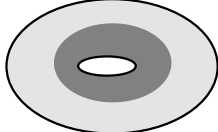
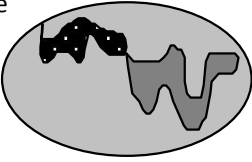
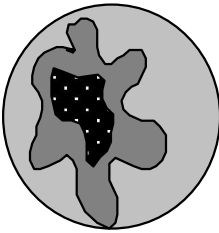
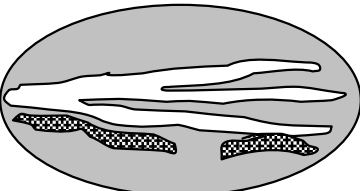
*Explain why* \_\_\_\_\_ points = 0

There are no problems with flooding downstream of the wetland points = 0

D 6.2. Has the site has been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0 **0**

Total for D 6 Add the points in the boxes above **1**

**Rating of Value** If score is: 2-4 = H X 1 = M 0 = L *Record the rating on the first page*

<b>These questions apply to wetlands of all HGM classes.</b>		(only 1 score per box)
<b>HABITAT FUNCTIONS</b> - Indicators that site functions to provide important habitat		
<b>H 1.0.</b> Does the wetland have the potential to provide habitat for many species?		
<p>H 1.1. Structure of the plant community:  <i>Check the Cowardin vegetation classes present and categories of emergent plants. Size threshold for each category is &gt;= ¼ ac or &gt;= 10% of the wetland if wetland is &lt; 2.5 ac.</i></p> <p><input type="checkbox"/> Aquatic bed</p> <p><input type="checkbox"/> Emergent plants 0-12 in (0-30 cm) high are the highest layer and have &gt; 30% cover</p> <p><input checked="" type="checkbox"/> Emergent plants &gt;12-40 in (&gt;30-100 cm) high are the highest layer with &gt;30% cover</p> <p><input checked="" type="checkbox"/> Emergent plants &gt; 40 in (&gt; 100 cm) high are the highest layer with &gt;30% cover</p> <p><input type="checkbox"/> Scrub-shrub (areas where shrubs have &gt;30% cover) 4 or more checks: points = 3</p> <p><input type="checkbox"/> Forested (areas where trees have &gt;30% cover) 3 checks: points = 2 2 checks: points = 1 1 check: points = 0</p>		1
H 1.2. Is one of the vegetation types Aquatic Bed? Yes = 1 No = 0		0
<p>H 1.3. <u>Surface water</u></p> <p>H 1.3.1. Does the wetland have areas of open water (without emergent or shrub plants) over at least ¼ ac <b>OR</b> 10% of its area during the March to early June <b>OR</b> in August to the end of September? <i>Answer YES for Lake Fringe wetlands.</i> Yes = 3 points &amp; go to H 1.4 No = go to H 1.3.2</p> <p>H 1.3.2. Does the wetland have an intermittent or permanent, and unvegetated stream within its boundaries, or along one side, over at least ¼ ac or 10% of its area? <i>Answer yes only if H 1.3.1 is No.</i> Yes = 3 No = 0</p>		0
<p>H 1.4. <u>Richness of plant species</u></p> <p>Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. <i>Different patches of the same species can be combined to meet the size threshold. You do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Russian olive, Phragmites, Canadian thistle, yellow-flag iris, and saltcedar (Tamarisk)</i></p> <p><i># of species</i> <u>2</u></p> <p style="text-align: right;">Scoring: &gt; 9 species: points = 2 4-9 species: points = 1 &lt; 4 species: points = 0</p>		0
<p>H 1.5. <u>Interspersion of habitats</u></p> <p>Decide from the diagrams below whether interspersion among types of plant structures (described in H 1.1), and unvegetated areas (open water or mudflats) is high, moderate, low, or none.</p> <p><i>Use map of Cowardin and emergent plant classes prepared for questions H 1.1 and map of open water from H 1.3. If you have four or more plant classes or three classes and open water, the rating is always high.</i></p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p><b>None = 0 points</b></p> </div> <div style="text-align: center;">  <p><b>Low = 1 point</b></p> </div> <div style="text-align: center;">  <p style="text-align: center;"><b>Moderate = 2 points</b></p> </div> <div style="text-align: center;">  </div> </div> <p>All three diagrams in this row are <b>High = 3 points</b></p> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;">    </div> <p style="text-align: center;">Riparian braided channels with 2 classes</p>		Figure__ see report  0

Wetland name or number Wetland 5

<b>H 1.6. Special habitat features</b> <i>Check the habitat features that are present in the wetland. The number of checks is the number of points.</i> <input type="checkbox"/> Loose rocks larger than 4 in OR large, downed, woody debris (> 4 in diameter) within the area of surface ponding or in stream. <input type="checkbox"/> Cattails or bulrushes are present within the wetland. <input type="checkbox"/> Standing snags (diameter at the bottom > 4 in) in the wetland or within 30 m (100 ft) of the edge. <input type="checkbox"/> Emergent or shrub vegetation in areas that are permanently inundated/ponded. <input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 45 degree slope) OR signs of recent beaver activity <input type="checkbox"/> Invasive species cover less than 20% in each stratum of vegetation ( <i>canopy, sub-canopy, shrubs, herbaceous, moss/ground cover</i> )		0
Total for H 1	Add the points in the boxes above	1

**Rating of Site Potential** If score is: 15-18 = H 7-14 = M X 0-6 = L Record the rating on the first page

<b>H 2.0. Does the landscape have the potential to support habitat functions of the site?</b>		
<b>H 2.1. Accessible habitat (only area of habitat abutting wetland). If total accessible habitat is:</b> <i>Calculate:</i> % undisturbed habitat $\frac{100}{3} + [(\% \text{ moderate and low intensity land uses})/2]$ $\frac{0}{3} = 33.3\%$ % > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1km Polygon points = 2 10-19% of 1km Polygon points = 1 <10% of 1km Polygon points = 0		0
<b>H 2.2. Undisturbed habitat in 1 km Polygon around wetland.</b> <i>Calculate:</i> % undisturbed habitat $\frac{30}{2} + [(\% \text{ moderate and low intensity land uses})/2]$ $\frac{30}{2} = 60\%$ % Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches points = 2 Undisturbed habitat 10 - 50% and > 3 patches points = 1 Undisturbed habitat < 10% of Polygon points = 0		1
<b>H 2.3. Land use intensity in 1 km Polygon:</b> > 50% of Polygon is high intensity land use points = (-2) Does not meet criterion above points = 0		0
<b>H 2.4. The wetland is in an area where annual rainfall is less than 12 in, and its water regime is not influenced by irrigation practices, dams, or water control structures. Generally, this means outside boundaries of reclamation areas, irrigation districts, or reservoirs</b> Yes = 3 No = 0		0
Total for H 2	Add the points in the boxes above	1

**Rating of Landscape Potential** If score is: 4-9 = H X 1-3 = M < 1 = L Record the rating on the first page

<b>H 3.0. Is the habitat provided by the site valuable to society?</b>		
<b>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose the highest score that applies to the wetland being rated</b> Site meets ANY of the following criteria: points = 2 <input type="checkbox"/> It has 3 or more priority habitats within 100 m (see Appendix B) <input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on state or federal lists) <input type="checkbox"/> It is mapped as a location for an individual WDFW species <input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources <input checked="" type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats within 100 m (see Appendix B) points = 1 Site does not meet any of the criteria above points = 0		1

**Rating of Value** If score is: 2 = H X 1 = M 0 = L Record the rating on the first page

**CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

**Please determine if the wetland meets the attributes described below and circle the appropriate category. NOTE: A wetland may meet the criteria for more than one set of special characteristics. Record all those that apply. NOTE: All wetlands should also be characterized based on their functions.**

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
<p><b>SC 1.0. Vernal pools</b></p> <p>Is the wetland <b>less than 4000 ft<sup>2</sup></b>, and does it meet at least <b>two</b> of the following criteria?</p> <ul style="list-style-type: none"> <li>— Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input.</li> <li>— Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. <i>If you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.</i></li> <li>— The soil in the wetland is shallow [<math>&lt; 1</math> ft (30 cm) deep] and is underlain by an impermeable layer such as basalt or clay.</li> <li>— Surface water is present for less than 120 days during the wet season.</li> </ul> <p style="text-align: right;">Yes – Go to <b>SC 1.1</b>    No = <b>Not a vernal pool</b></p> <p>SC 1.1. Is the vernal pool relatively undisturbed in February and March?  <span style="float: right;">Yes – Go to <b>SC 1.2</b>    No = <b>Not a vernal pool with special characteristics</b></span></p>	
<p>SC 1.2. Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 mi (other wetlands, rivers, lakes etc.)?  <span style="float: right;">Yes = <b>Category II</b>    No = <b>Category III</b></span></p>	<p><b>Cat. II</b> <b>Cat. III</b></p>
<p><b>SC 2.0. Alkali wetlands</b></p> <p>Does the wetland meet <b>one</b> of the following criteria?</p> <ul style="list-style-type: none"> <li>— The wetland has a conductivity <math>&gt; 3.0</math> mS/cm.</li> <li>— The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as “alkali” species (see Table 4 for list of plants found in alkali systems).</li> <li>— If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt.</li> </ul> <p><b>OR</b> does the wetland unit meet two of the following three sub-criteria?</p> <ul style="list-style-type: none"> <li>— Salt encrustations around more than 75% of the edge of the wetland</li> <li>— More than <math>\frac{3}{4}</math> of the plant cover consists of species listed on Table 4</li> <li>— A pH above 9.0. All alkali wetlands have a high pH, but please note that some freshwater wetlands may also have a high pH. Thus, pH alone is not a good indicator of alkali wetlands.</li> </ul> <p style="text-align: right;">Yes = <b>Category I</b>    No = <b>Not an alkali wetland</b></p>	<p><b>Cat. I</b></p>
<p><b>SC 3.0. Wetlands of High Conservation Value (WHCV)</b></p> <p>SC 3.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?  <span style="float: right;">Yes – Go to <b>SC 3.2</b>    No – Go to <b>SC 3.3</b></span></p> <p>SC 3.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?  <span style="float: right;">Yes = <b>Category I</b>    No = <b>Not a WHCV</b></span></p> <p>SC 3.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?  <a href="http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</a>  <span style="float: right;">Yes – <b>Contact WNHP/WDNR and go to SC 3.4</b>    No = <b>Not a WHCV</b></span></p> <p>SC 3.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and it is listed on their website?  <span style="float: right;">Yes = <b>Category I</b>    No = <b>Not a WHCV</b></span></p>	<p><b>Cat. I</b></p>

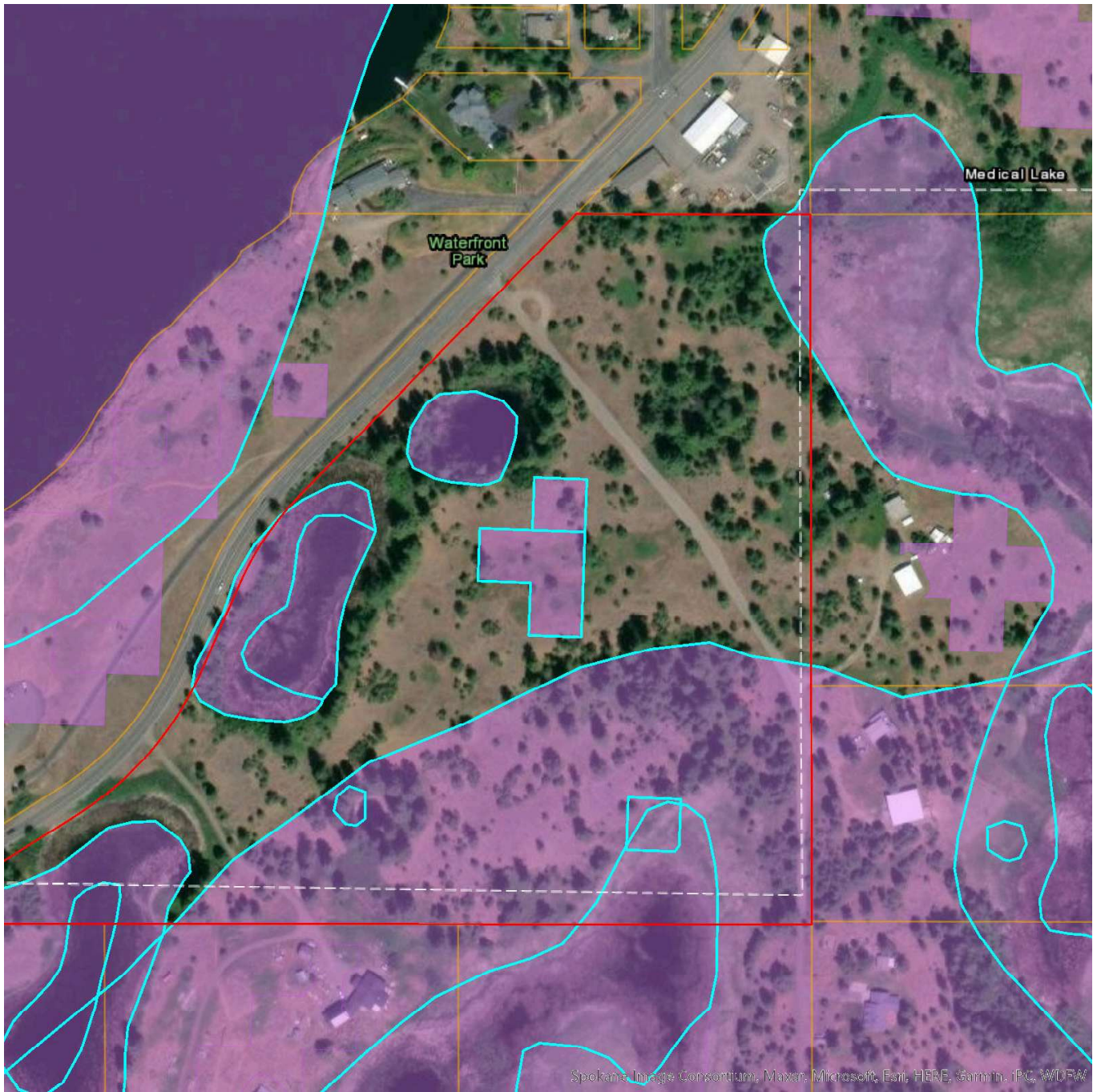
<p><b>SC 4.0 Bogs and Calcareous Fens</b>                  Does the wetland (or any part of the wetland unit) meet both the criteria for soils and vegetation in bogs or calcareous fens? <i>Use the key below to identify if the wetland is a bog or calcareous fen. If you answer yes you will still need to rate the wetland based on its functions.</i></p> <p>SC 4.1. Does an area within the wetland have organic soil horizons (i.e., layers of organic soil), either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? <i>See Appendix C for a field key to identify organic soils.</i>                  Yes – Go to <b>SC 4.3</b> No – Go to <b>SC 4.2</b></p> <p>SC 4.2. Does an area within the wetland have organic soils, either peats or mucks, that are less than 16 in deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?                  Yes – Go to <b>SC 4.3</b> No = <b>Is not a bog for rating</b></p> <p>SC 4.3. Does an area within the wetland have more than 70% cover of mosses at ground level AND at least 30% of the total plant cover consists of species in Table 5?                  Yes = <b>Category I bog</b> No – Go to <b>SC 4.4</b>  <b>NOTE:</b> If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 5 are present, the wetland is a bog.</p> <p>SC 4.4. Is an area with peats or mucks forested (&gt; 30% cover) with subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 5 provide more than 30% of the cover under the canopy?                  Yes = <b>Category I bog</b> No – Go to <b>SC 4.5</b></p> <p>SC 4.5. Do the species listed in Table 6 comprise at least 20% of the total plant cover within an area of peats and mucks?                  Yes = <b>Is a Calcareous Fen for purpose of rating</b> No – Go to <b>SC 4.6</b></p> <p>SC 4.6. Do the species listed in Table 6 comprise at least 10% of the total plant cover in an area of peats and mucks, AND one of the two following conditions is met:                  — Marl deposits [calcium carbonate (CaCO<sub>3</sub>) precipitate] occur on the soil surface or plant stems                  — The pH of free water is ≥ 6.8 AND electrical conductivity is ≥ 200 uS/cm at multiple locations within the wetland                  Yes = <b>Is a Category I calcareous fen</b> No = <b>Is not a calcareous fen</b></p>	<p>Cat. I</p> <p>Cat. I</p>
<p><b>SC 5.0. Forested Wetlands</b>                  Does the wetland have an area of forest rooted within its boundary that meets <b>at least one</b> of the following three criteria? (<i>Continue only if you have identified that a forested class is present in question H 1.1</i>)</p> <ul style="list-style-type: none"> <li>— The wetland is within the 100 year floodplain of a river or stream</li> <li>— Aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species</li> <li>— There is at least ¼ ac of trees (even in wetlands smaller than 2.5 ac) that are “mature” or “old-growth” according to the definitions for these priority habitats developed by WDFW (<i>see definitions in question H3.1</i>)</li> </ul> <p>Yes – Go to <b>SC 5.1</b> No = <b>Not a forested wetland with special characteristics</b></p> <p>SC 5.1. Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees (<i>see Table 7</i>)?                  Yes = <b>Category I</b> No – Go to <b>SC 5.2</b></p> <p>SC 5.2. Does the wetland have areas where aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species?                  Yes = <b>Category I</b> No – Go to <b>SC 5.3</b></p> <p>SC 5.3. Does the wetland have at least ¼ acre with a forest canopy where more than 50% of the tree species (by cover) are fast growing species (<i>see Table 7</i>)?                  Yes = <b>Category II</b> No – Go to <b>SC 5.4</b></p> <p>SC 5.4. Is the forested component of the wetland within the 100 year floodplain of a river or stream?                  Yes = <b>Category II</b> No = <b>Not a forested wetland with special characteristics</b></p>	<p>Cat. I</p> <p>Cat. I</p> <p>Cat. II</p> <p>Cat. II</p>
<p><b>Category of wetland based on Special Characteristics</b>                  Choose the highest rating if wetland falls into several categories                  If you answered No for all types, enter “Not Applicable” on Summary Form</p>	<p>N/A</p>

## **Appendix C. WDFW PHS Report**





# Priority Habitats and Species on the Web



Report Date: 10/30/2024, Parcel ID: [14192.0002](#)

## PHS Species/Habitats Overview:

Occurrence Name	Federal Status	State Status	Sensitive Location
Wetlands	N/A	N/A	No
Freshwater Pond	N/A	N/A	No
Freshwater Emergent Wetland	N/A	N/A	No
Shrubsteppe	N/A	N/A	No

PHS Species/Habitats Details:

Wetlands	
Priority Area	Aquatic Habitat
Site Name	MEDICAL LAKE WETLANDS
Accuracy	1/4 mile (Quarter Section)
Notes	WATERFOWL CONCENTRATION AREAS ASSOCIATED WITH WETLANDS AND OPEN WATER USED DURING MIGRATION AND BREEDING. TIGER SALAMANDER OCCURENCE DOCUMENTED. GREAT BLUE HERON NESTING AND FORAGING. PAINTED TURTLE OCCURENCE DOCUMENTED. FURBEARER USE.
Source Record	903119
Source Dataset	PHSREGION
Source Name	HICKMAN, JERRY
Source Entity	WA Dept. of Fish and Wildlife
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	<a href="http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html">http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html</a>
Geometry Type	Polygons

Freshwater Pond	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Pond - NWI Code: PAB3H
Source Dataset	NWIIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	<a href="http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html">http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html</a>
Geometry Type	Polygons

Freshwater Pond	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Pond - NWI Code: PAB3H
Source Dataset	NWIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	<a href="http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html">http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html</a>
Geometry Type	Polygons

Freshwater Pond	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Pond - NWI Code: PAB3H
Source Dataset	NWIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	<a href="http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html">http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html</a>
Geometry Type	Polygons

Freshwater Emergent Wetland	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Emergent Wetland - NWI Code: PEM1C
Source Dataset	NWIIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	<a href="http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html">http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html</a>
Geometry Type	Polygons

Freshwater Emergent Wetland	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Emergent Wetland - NWI Code: PEM1C
Source Dataset	NWIIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	<a href="http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html">http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html</a>
Geometry Type	Polygons

Freshwater Emergent Wetland	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Emergent Wetland - NWI Code: PEM1F
Source Dataset	NWIIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	<a href="http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html">http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html</a>
Geometry Type	Polygons

Freshwater Emergent Wetland	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Emergent Wetland - NWI Code: PEM1C
Source Dataset	NWIIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	<a href="http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html">http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html</a>
Geometry Type	Polygons

<b>Freshwater Emergent Wetland</b>	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Emergent Wetland - NWI Code: PEM1C
Source Dataset	NWIVetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	<a href="http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html">http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html</a>
Geometry Type	Polygons

<b>Shrubsteppe</b>	
Priority Area	Habitat Feature
Site Name	Spokane County Presumptive Shrubsteppe
Accuracy	NA
Notes	General location of Shrubsteppe. Confirm or refute with site-scale info. WDFW recommends using site-scale info to inform site-scale land use decisions. Expect that on-the-ground conditions (e.g., boundaries) will vary from the map.
Source Record	920846
Source Name	Keith Folkerts, WDFW
Source Entity	WA Dept. of Fish and Wildlife
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS LISTED OCCURRENCE
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
Geometry Type	Polygons

Shrubsteppe	
Priority Area	Habitat Feature
Site Name	Spokane County Presumptive Shrubsteppe
Accuracy	NA
Notes	General location of Shrubsteppe. Confirm or refute with site-scale info. WDFW recommends using site-scale info to inform site-scale land use decisions. Expect that on-the-ground conditions (e.g., boundaries) will vary from the map.
Source Record	920846
Source Name	Keith Folkerts, WDFW
Source Entity	WA Dept. of Fish and Wildlife
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS LISTED OCCURRENCE
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
Geometry Type	Polygons

Shrubsteppe	
Priority Area	Habitat Feature
Site Name	Spokane County Shrubsteppe
Accuracy	NA
Notes	General location of Shrubsteppe. Confirm or refute with site-scale info. WDFW recommends using site-scale info to inform site-scale land use decisions. Expect that on-the-ground conditions (e.g., boundaries) will vary from the map.
Source Record	920847
Source Name	Keith Folkerts, WDFW
Source Entity	WA Dept. of Fish and Wildlife
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS LISTED OCCURRENCE
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
Geometry Type	Polygons

DISCLAIMER. This report includes information that the Washington Department of Fish and Wildlife (WDFW) maintains in a central computer database. It is not an attempt to provide you with an official agency response as to the impacts of your project on fish and wildlife. This information only documents the location of fish and wildlife resources to the best of our knowledge. It is not a complete inventory and it is important to note that fish and wildlife resources may occur in areas not currently known to WDFW biologists, or in areas for which comprehensive surveys have not been conducted. Site specific surveys are frequently necessary to rule out the presence of priority resources. Locations of fish and wildlife resources are subject to variation caused by disturbance, changes in season and weather, and other factors. WDFW does not recommend using reports more than six months old.

## RATING SUMMARY – Eastern Washington

Name of wetland (or ID #): Wetland 2 (Ring Lake Estates) Date of site visit: 4/6/2021

Rated by S. Gilmore Trained by Ecology?  Yes  No Date of training 10/2014

HGM Class used for rating Depressional Wetland has multiple HGM classes?  Y  N

**NOTE: Form is not complete without the figures requested (figures can be combined).**

Source of base aerial photo/map See report

**OVERALL WETLAND CATEGORY** I (based on functions  or special characteristics )

### 1. Category of wetland based on FUNCTIONS

- Category I – Total score = 22-27
- Category II – Total score = 19-21
- Category III – Total score = 16-18
- Category IV – Total score = 9-15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
Site Potential	H <input checked="" type="checkbox"/> M L	<input checked="" type="checkbox"/> H M L	H <input checked="" type="checkbox"/> M L	
Landscape Potential	<input checked="" type="checkbox"/> H M L	H <input checked="" type="checkbox"/> M L	H <input checked="" type="checkbox"/> M L	
Value	<input checked="" type="checkbox"/> H M L	H <input checked="" type="checkbox"/> M L	H <input checked="" type="checkbox"/> M L	<b>TOTAL</b>
<b>Score Based on Ratings</b>	8	7	6	21

**Score for each function based on three ratings (order of ratings is not important)**

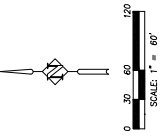
- 9 = H,H,H
- 8 = H,H,M
- 7 = H,H,L
- 7 = H,M,M
- 6 = H,M,L
- 6 = M,M,M
- 5 = H,L,L
- 5 = M,M,L
- 4 = M,L,L
- 3 = L,L,L

### 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
	<i>Circle the appropriate category</i>
Vernal Pools	<b>II</b> <b>III</b>
Alkali	<b>I</b>
Wetland of High Conservation Value	<b>I</b>
Bog and Calcareous Fens	<b>I</b>
Old Growth or Mature Forest – slow growing	<b>I</b>
Aspen Forest	<input checked="" type="checkbox"/> <b>I</b>
Old Growth or Mature Forest – fast growing	<b>II</b>
Floodplain forest	<b>II</b>
None of the above	



# PHASING EXHIBIT



PHASE 1 SHALL INCLUDE OFFSITE SANITARY AND WATER APPROX. 1400 L.F.

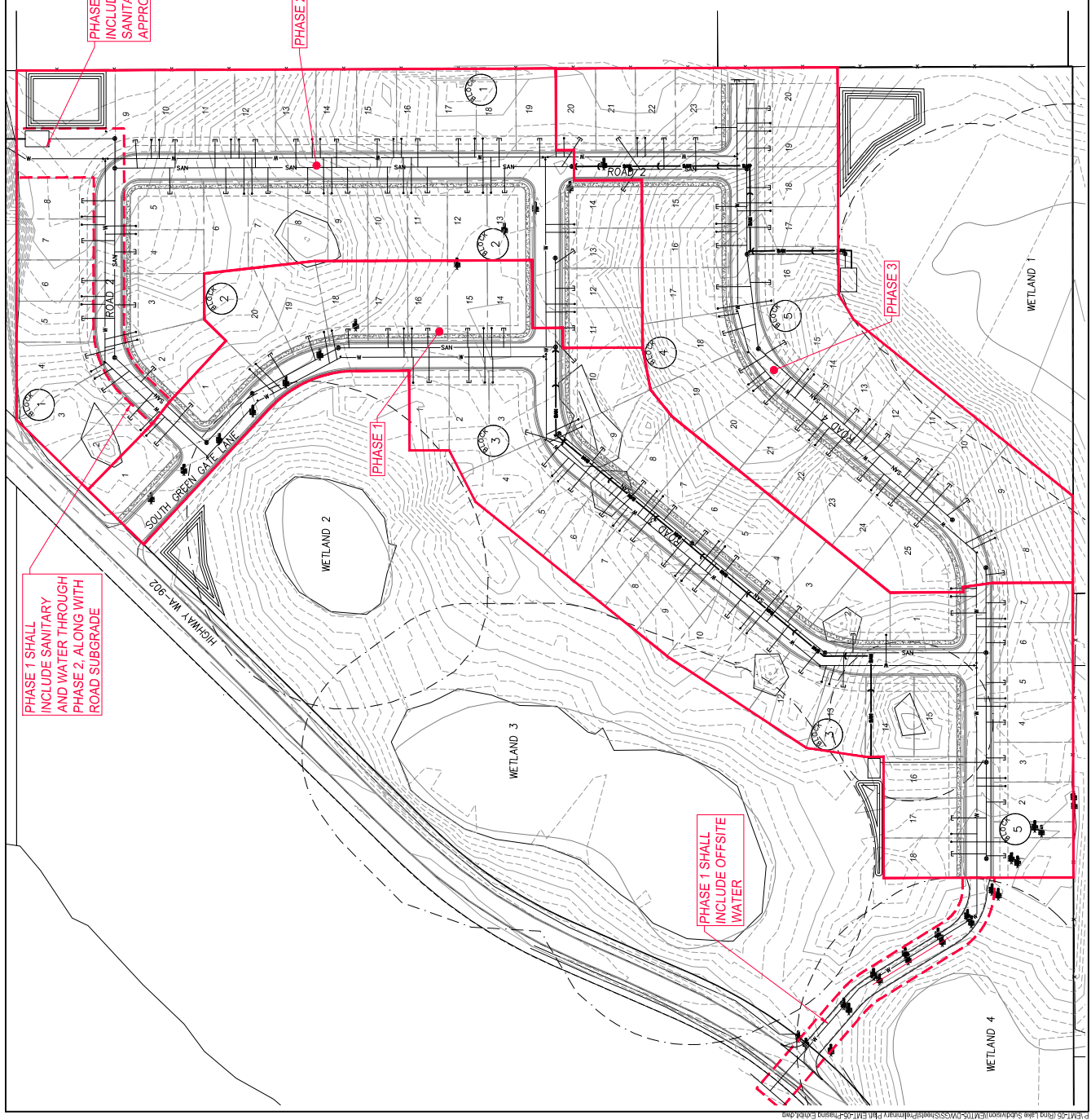
PHASE 1 SHALL INCLUDE SANITARY AND WATER THROUGH PHASE 2, ALONG WITH ROAD SUBGRADE

PHASE 2

PHASE 1

PHASE 3

PHASE 1 SHALL INCLUDE OFFSITE WATER



SHEET  
RING LAKE ESTATES PRELIMINARY PLAT  
MEDICAL LAKE, WA

**SYNTIER**  
Engineering, Inc.  
416 SE Hickory Dr Suite C Ringlake, WA 99163  
www.syntier.com 509.336.6163

DESIGNED	TSA/JTC
DRAWN	JTC
CHECKED	SAS
DATE	OCTOBER 18, 2024

DATE	NO.	DESCRIPTION

SHEET NO.  
**EXHIBIT**  
JOB NO. EMP-05

## Preliminary Plat

The Ring Lake Estates project will consist of subdividing approximately 31.2 acres into 106 single-family lots. The parcel is currently zoned as R-1, but this project will also be a Planned Unit Development to allow for smaller lot sizes to accommodate for the large portion of the existing parcel that is covered by several different wetlands.

The site will be accessed off of the existing Highway 902 by way of S Green Gate Lane, which will be improved to a paved road with curb and sidewalk consistent with Medical Lake Standards. There will be a secondary emergency access gravel road that will be accessed further south on Highway 902.

There will be three sanitary sewer lift stations and associated force mains that will be built in conjunction with this project in order to connect to the existing sanitary system. A domestic water line will also be constructed and will tie into the existing system. There are two possible locations where the proposed sewer and water will connect. The first location is near the intersection of South Lake Drive, South Jefferson Street, and Highway 902 and the second location is to the east of the project at the termination of the existing Jim Darby Dr. There will also be three stormwater combination treatment and detention facilities located in different portions of the site to accommodate the amount of impervious area that will be constructed.

The site has 5 wetlands that vary from Category 1-3 located along the west edge and in the southeast corner of the site that make up for approximate 20 acres of the site. Of the 5 wetlands and their associated buffers, one will have no impacts to either the wetland or the buffer; 3 wetlands will have no impacts, but the buffers will be adjusted for buffer averaging; and the final wetland will be completely removed and mitigated per MLMC Section 17.10.090 Section H. A wetland mitigation report has been performed, please reference for more information.

## MLMC 15.12.100 Approval Criteria

This project will help improve the public health, safety, and general welfare for the community by providing connectivity for several of the properties that neighbor this parcel. By improving South Green Gate Lane to a paved road consistent with Medical Lake Standards and expanding the local street network, it will provide a more reliable means of access for the rural homes to the east of the project, which are fairly remote. This project will also provide appropriate provisions for those that will live within the subdivision by providing fully paved roads with curb and sidewalk, as well as stormwater detention and treatment and utilities consistent with the requirements of the City of Medical Lake. Approximately half of the land area included in this project will be considered open space to accommodate for the existing wetlands. A geotechnical engineering evaluation will be performed prior to construction to identify any areas where soil or topographical conditions could present hazards or will require special precautions. In addition, there will be an opportunity for the water system to close a much needed loop from the termination of Jim Darby Dr. to the water line extending south to Lakeland Village. This connection will provide redundancy in the water system, which increases the reliability of the City of Medical Lakes water system for the southwest portion of town.

## Planned Unit Development

There is one MLMC standard that Planned Unit Developments (PUD) can utilize that aren't consistent with the underlying R-1 zoning that this project will be planning to make use of. In Section 11.20.035(2-A) it states that within a PUD, private streets are allowed to construct sidewalks on only one side of the roadway. The proposed roadways otherwise are consistent with the requirements of the City of Medical Lake. There are two standards that this project would be looking to alter from the standard. The first is found in section 17.16.060(1-A), where the minimum lot size is listed 6,000 square feet and we are proposing to reduce the minimum lot size to 5,000 square feet. In section 17.16.020 – Essential Use Declaration, it lists the essential function of the R-1 zoning to provide one single-family dwelling unit per lot with a minimum lot size of 6,000 square feet or 7.3 dwelling units per acre. With this development, there will be 106 single-family lots across approximately 31.2 acres, which corresponds to 3.4 dwelling units per acre, even with the 5,000 square foot minimum lot size. The second standard that would be altered would be Section 17.16.060(1-B), which lists the minimum lot width as 60 feet at the building line. The proposed lot width for most of the lots is 50 feet. The minimum lot depths, setback, and coverage will be in compliance with the underlying zoning.

## MLMC 17.34.010 Approval Criteria

- a. For 106 proposed lots, 212 off-street adjacent parking stalls will be required. These parking stalls will be accounted for in either driveways or garages located within the lots. For 212 parking stalls, 18 bicycle rack spots will be required and will be placed in several central locations throughout the site.
- b. All roads will be private, but will be built to public standards for the paving, curbs, and utilities. The one exception to this is that sidewalk will only be built on one side of the road, as listed above and allowed under MLMC Section 11.20.035(2-A).
- c. The maximum building coverage, yard requirements, and maximum height shall be consistent with the underlying R-1 zoning.
- d. The building setbacks for the exterior boundary will be consistent with R-1 front yard setback.

## Critical Areas

For the 5 wetlands that are within the project boundary, a wetland mitigation report has been prepared. The mitigation efforts will only be summarized here. Across the 5 wetlands, there are 3.96 acres of wetland area. The combined area for the 5 wetland buffers covers 10.12 acres of land.

For this project, the buffer area will be reduced by 38,570 square feet, but will be increased by 40,280 square feet as shown in the mitigation report. The buffers for the wetlands will be enhanced by planting additional native trees and shrubs.

One wetland is being proposed to be removed and is a Category 3, which requires an 8:1 mitigation ratio. This mitigation will consist of 9,760 square feet of enhancement. A total of 100 plantings (100-square feet per planting) will be installed in the enhancement area and all proposed mitigation plants will be native to Spokane County.

See the wetland mitigation report for more information.

## MLMC 17.10.060 Approval Criteria

- a. The development extents have been limited, as much as feasible, to the portions of the parcel that do not fall within the wetlands or their buffers. The layouts of the roads and lots have been arranged so that the minimal amount of developed area falls within the buffer areas while still maintaining the requirements for the road and lot sizes. For two of the wetland buffers that will require mitigation, the woody vegetation within the buffers was damaged as a result of a fire, so the mitigation efforts will actually restore habitat and the water quality functions of those two wetland buffers.
- b. To minimize the impacts of the proposed development on the wetlands and buffers the project is proposing to:
  1. Direct lights away from the wetland.
  2. Enhance the existing buffers for wetlands 1, 2 and 3, which will be impacted the most by this development to help minimize neighboring sounds.
  3. Collect, detain, and treat all runoff from impervious surfaces in a local stormwater management system before being released into the wetlands. The ponds that discharge into the wetlands will be installed with flow spreading devices to minimize the impacts to the wetlands and buffers to better mimic the natural sheet flow of the existing conditions.
  4. Wetlands will not be dewatered.
  5. Establish covenants so that the use of pesticides will be limited within 150 feet of the wetland (unless otherwise needed for the treatment of invasive species as outlined in any future mitigation or management plans).
  6. Direct flow from lawns to the proposed streets to be collected, detained, and then treated. Where this is not possible, small treatment areas will be constructed and flow will be directed to the treatment areas prior to release into the wetlands.
  7. Place the wetlands and buffers within their own tracts to better help with conservation efforts.
  8. Lots adjacent to wetland buffers will be required to install fencing or dense vegetation.

9. Implement dust management by site watering during construction. This will be part of the best management practices (BMPs).
- c. The proposed enhancement area is located between the wetland and the proposed development, resulting in improvements to the overall wetland habitat by reducing disturbances. This will also provide a more continuous buffer from the development along the west side of the property. The wetland buffers will be mitigated with plants that will be native to Spokane County. The compensatory mitigation is designed to achieve the functions as soon as practicable, will be in-kind and on-site and sufficient to maintain the functions of the critical area.
- d. The buffer areas that will be impacted will be replaced by an area larger than the area that will be impacted. The proposed mitigation for these buffers will also be improving the state of the existing buffer, which was damaged during a fire. The location of the buffer mitigation will also provide for a more continuous buffer across the wetlands on the west side of the property. The wetland that is being impacted will be mitigated at an 8:1 ratio based on the wetland footprint.
- e. The proposed mitigation efforts will provide a more continuous and healthy wetland and buffer area and will prevent any threats to the public, health, safety, or welfare on or off the site.
- f. Performance Standards
  1. Fish and Wildlife Habitat Conservation Areas Section 17.10.070.C
    - i. Avoidance, minimization, and compensatory mitigation measures were outlined in A, B, and C of this list. Wetland habitats and associated wetland buffers will be protected to the largest extent that is practical.
  2. Frequently Flooded Areas, section 17.10.080.D
    - i. Special flood hazard areas will not be affected by the proposed project.
  3. Wetlands Section 17.10.090.F
    - i. Avoidance, minimization and compensatory mitigation measures will ensure no net loss of wetland or buffer functions shall occur as a result of the proposed Project.
    - ii. Any lost function will be replaced by restoration or enhancement measures.
    - iii. All development and clearing will be avoided in the critical habitat areas, and when avoidable, functions will be restored and enhanced.
    - iv. Signage will be placed in critical areas.

See Wetland Mitigation Report for more information.

## Project Introduction

The Ring Lake Estates Subdivision project is proposing to develop a portion of a 31.2-acre, R3 zoned parcel (Parcel No. 14192.0002) located in Medical Lake, into a 106-lot subdivision. A portion of the parcel is taken up by several different wetlands. The extents of these wetlands is displayed on the Preliminary Site Plan within Appendix 1. The project is located in the NW ¼ of Section 19, T24N, R41E, W.M. The project is located at the intersection of Highway 902 and S. Green Gate Ln. The Medical Lake Maintenance Department is located to the north of the site, while to the south and east of the project, there are sporadic residential homes, see Appendix 1. The site will be accessed off of Highway 902 onto S. Green Gate Ln., see Appendix 1, Preliminary Site Plan.

## Trip Generation

Land Use Code 210 for Single-Family Detached Housing from the Trip Generation Manual (ITE, 11<sup>th</sup> Edition, 2021) was used to determine the weekday and peak hour traffic counts for this site. Based on this use code and the number of residences, the weekday is estimated to have 1000 trips, the AM Peak Hour is estimated to have 74 trips and the PM Peak Hour is estimated to have 100 trips (see attached for the Trip Generation Manual Land Use Codes), these values are shown in Table 1. The WSDOT Traffic Count Database System (TCDS) provided an existing traffic count in both directions for SR 902 as 3,006 total trips per day. See Appendix 2 for ITE Land Use Codes.

**Table 1: Trip Generation Rates**

	Land Use Code (Trips)	Entering (%)	Entering (Trips)	Exiting (%)	Exiting (Trips)
<b>Weekday</b>	1000	50	500	50	500
<b>AM Peak Hour Trips</b>	74	25	19	75	55
<b>PM Peak Hour Trips</b>	100	63	63	37	37

## Conclusion

These results are intended for the use of City of Medical Lake staff to determine if transportation improvements or strategies to accommodate the impacts of development are necessary and if the public facilities and services necessary to support development are adequate to serve the development at the time the development is available for occupancy as explained in the Medical Lake Municipal Code 16.02.



55 E Lincoln Rd, Ste 101  
Spokane, WA, 99208  
509-467-1550

**APPENDIX 1 – MAPS**

OVERALL ROAD AND SURFACING PLAN  
RING LAKE ESTATES PRELIMINARY PLAT  
MEDICAL LAKE, WA

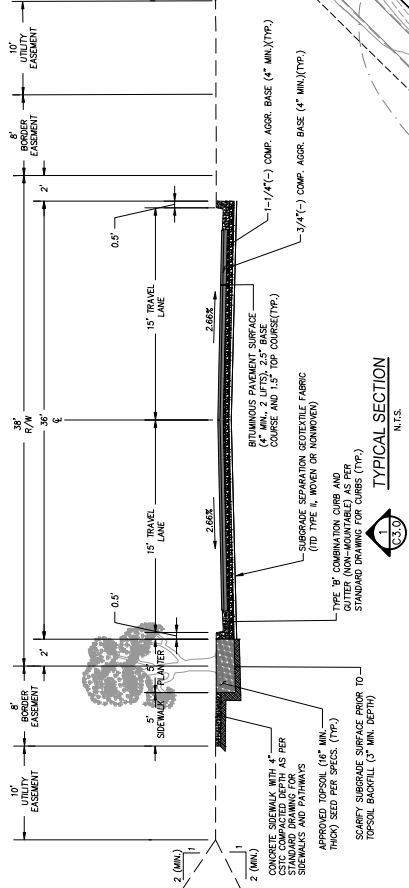
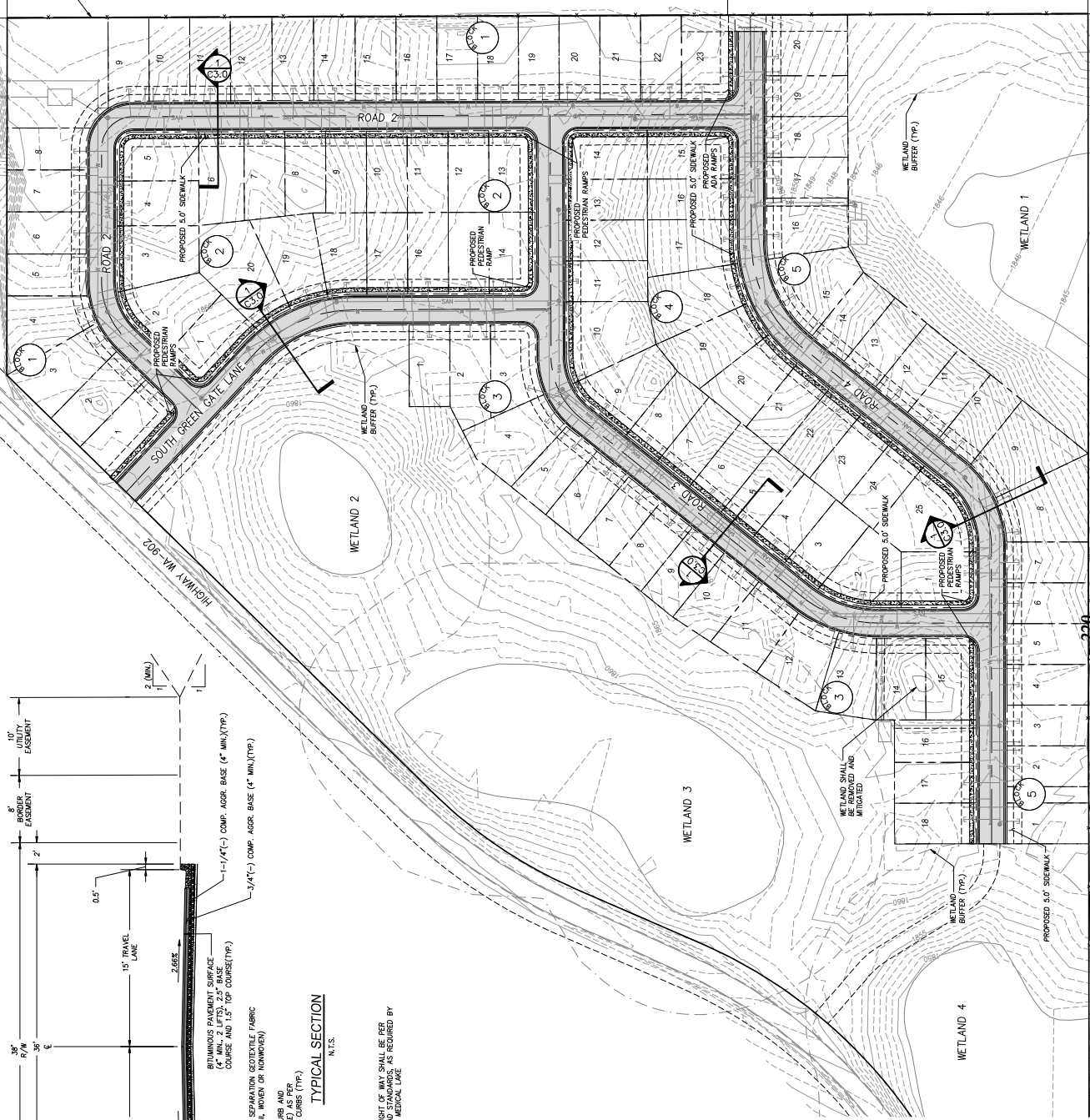
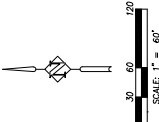
**SYNTERR**  
Engineering, Inc.  
415 SE Rockford Dr. Suite C, Medical Lake, WA 99163  
www.synterra.com 509.338.6183



DESIGNED: TMS/LTC  
DRAWN: JTC  
CHECKED: SAS  
DATE: OCTOBER 18, 2024

DATE	NO.	DESCRIPTION

SHEET NO.: **C3.0**  
5 of 7  
JOB NO.: EMT-05



**NOTE:**  
ALL ROAD RIGHT OF WAY SHALL BE PER  
PRIVATE ROAD STANDARDS AS REQUIRED BY  
THE CITY OF MEDICAL LAKE

DATE PLOTTED: 10/18/24 10:58 AM





55 E Lincoln Rd, Ste 101  
Spokane, WA, 99208  
509-467-1550

**APPENDIX 2 – ITE LAND USE CODES**

# Single-Family Detached Housing (210)

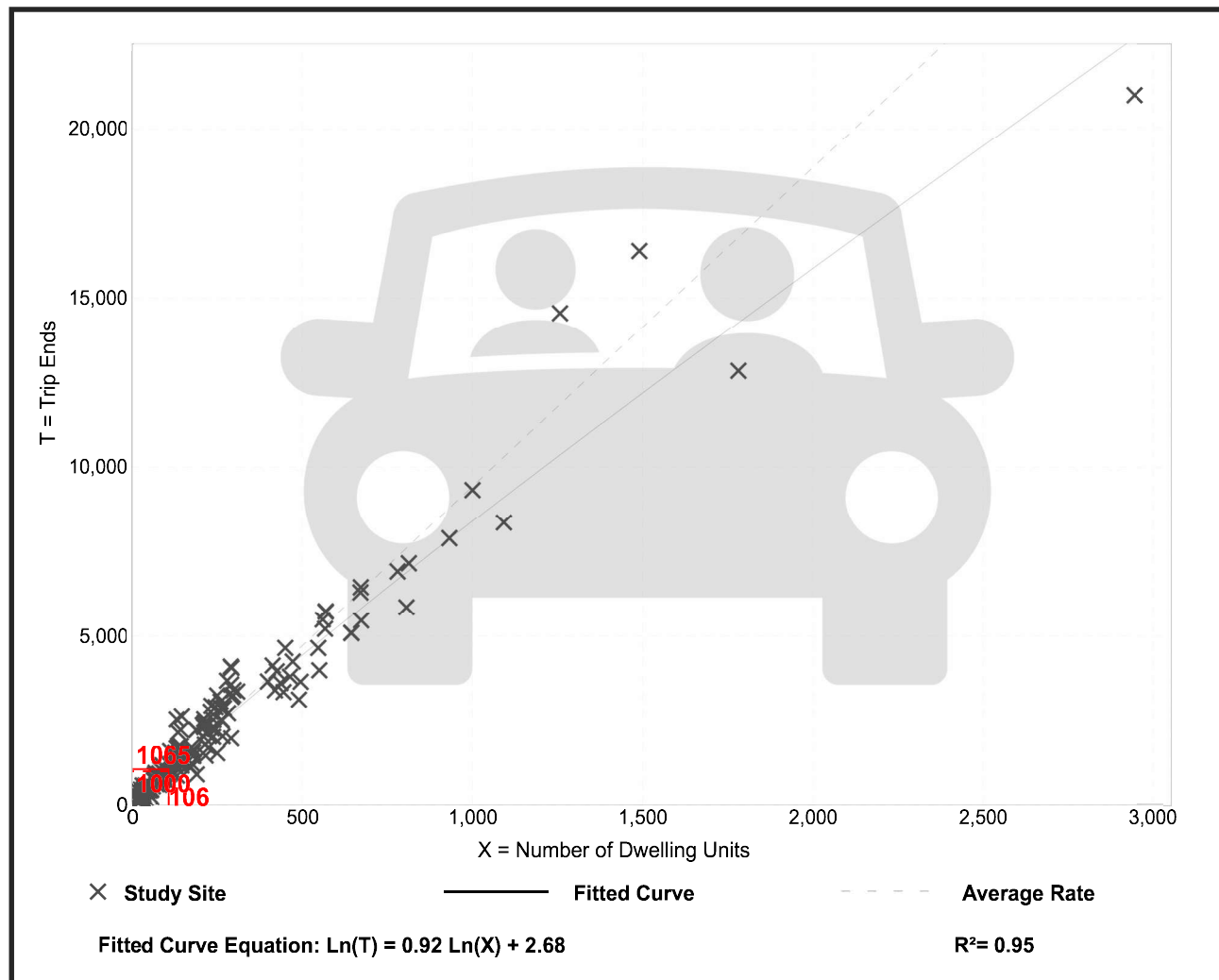
Vehicle Trip Ends vs: Dwelling Units  
On a: Weekday

Setting/Location: General Urban/Suburban  
Number of Studies: 174  
Avg. Num. of Dwelling Units: 246  
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.43	4.45 - 22.61	2.13

## Data Plot and Equation



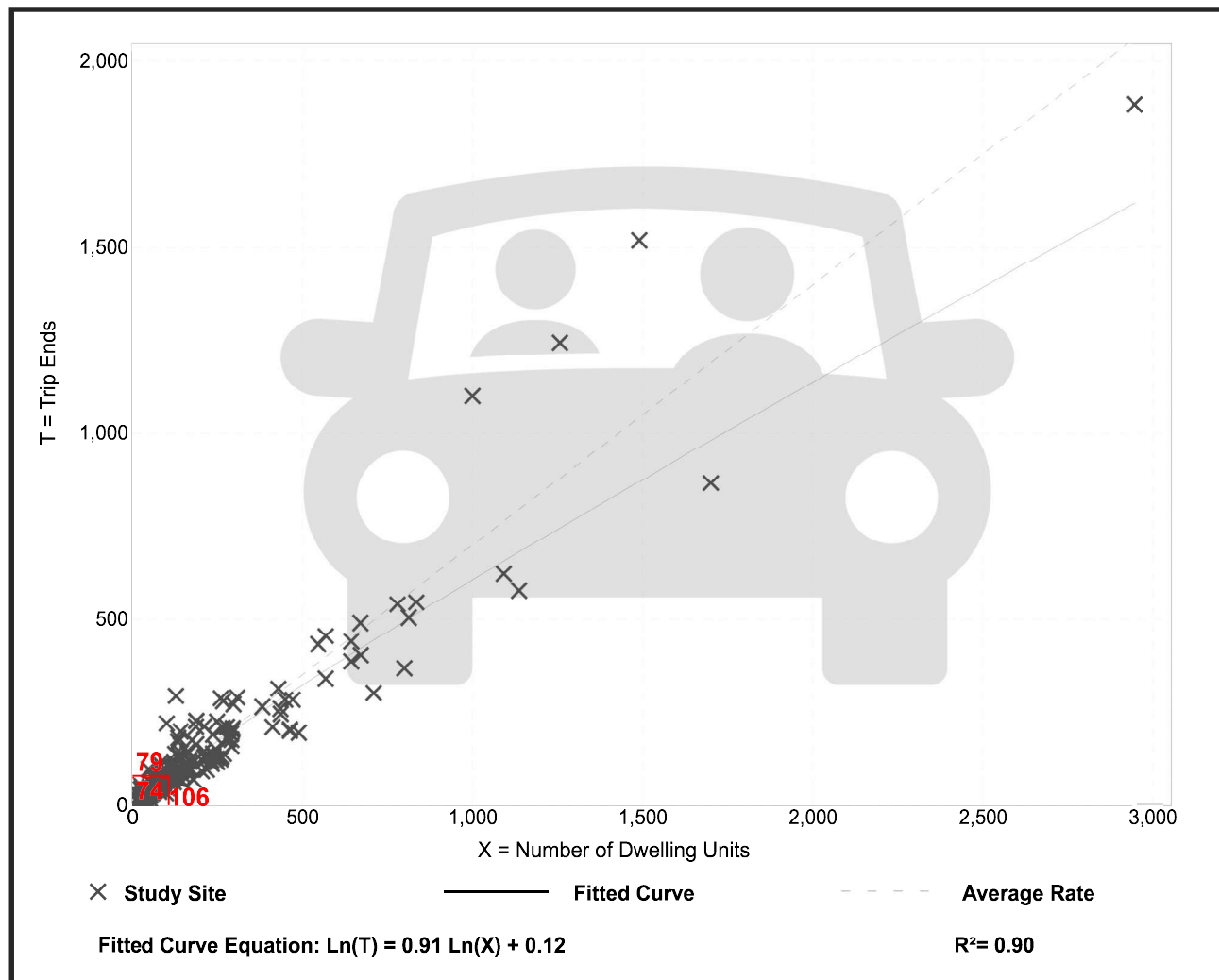
# Single-Family Detached Housing (210)

**Vehicle Trip Ends vs: Dwelling Units**  
**On a: Weekday,**  
**Peak Hour of Adjacent Street Traffic,**  
**One Hour Between 7 and 9 a.m.**  
**Setting/Location: General Urban/Suburban**  
 Number of Studies: 192  
 Avg. Num. of Dwelling Units: 226  
 Directional Distribution: 25% entering, 75% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.70	0.27 - 2.27	0.24

## Data Plot and Equation



# Single-Family Detached Housing (210)

**Vehicle Trip Ends vs: Dwelling Units**  
**On a: Weekday,**  
**Peak Hour of Adjacent Street Traffic,**  
**One Hour Between 4 and 6 p.m.**

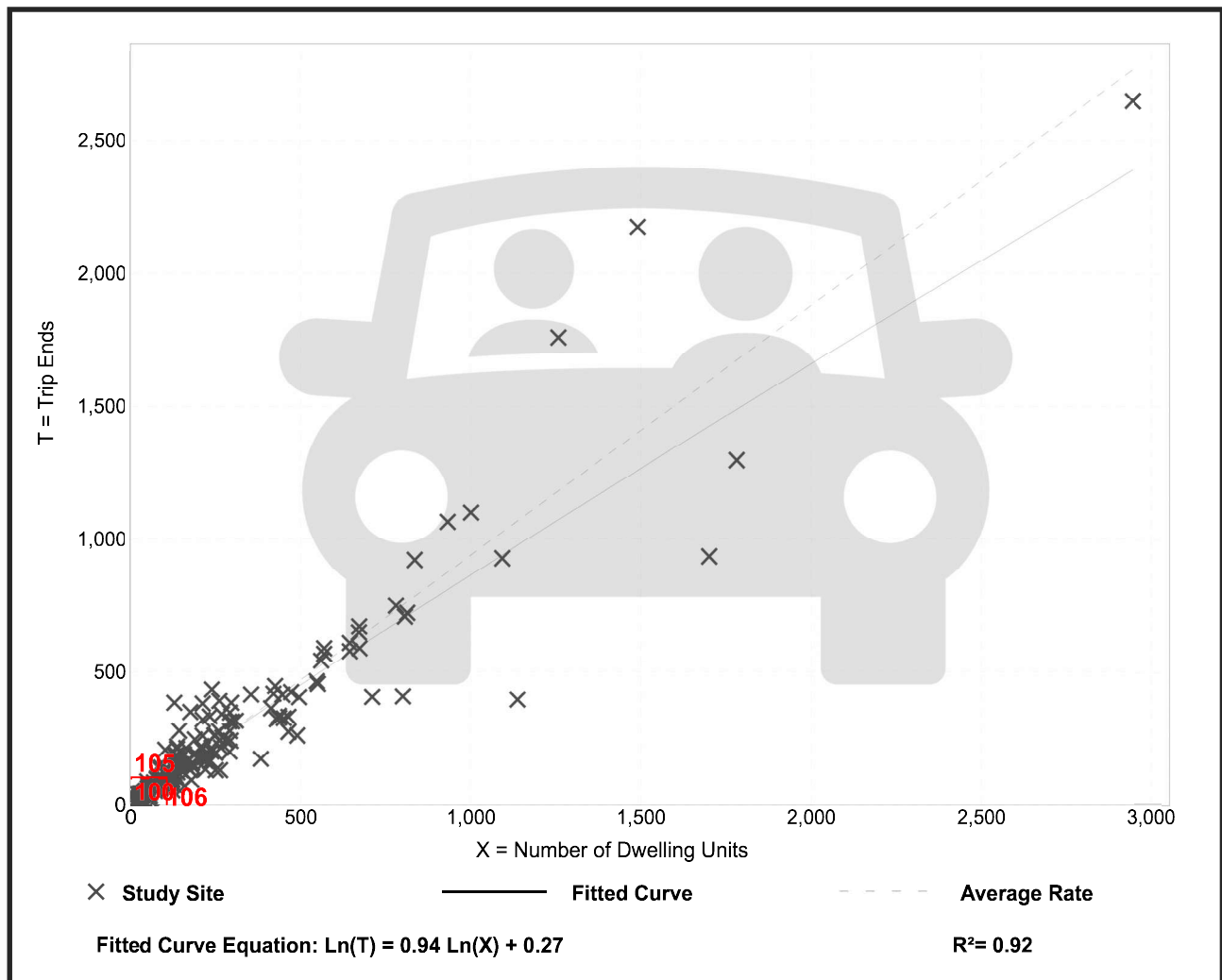
**Setting/Location: General Urban/Suburban**

Number of Studies: 208  
 Avg. Num. of Dwelling Units: 248  
 Directional Distribution: 63% entering, 37% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.94	0.35 - 2.98	0.31

## Data Plot and Equation





City of Medical Lake  
124 S Lefevre Street  
PO Box 369  
Medical Lake, WA 99022-0369  
509-565-5000

November 18, 2024

Tom Stirling  
SynTier Engineering, Inc.  
405 SE Brelsford Dr., Suite C  
Pullman, WA 99163

RE: Letter of Incompleteness for application LU 2024-025 PP PU CA, Ring Lake Estates

Dear Mr. Stirling,

You submitted an application for Ring Lake Estates on October 22, 2024. The submittal included the correct fee, 6 paper copies of a preliminary plat, an electronic copy of a wetland delineation report, and an electronic copy of a phasing plan.

This letter is to inform you that application LU 2024-025 (Preliminary Plat, Planned Unit Development, and Critical Area Permit) has been deemed incomplete. To complete the application, please submit two paper copies and an electronic copy the following:

Application form:

1. The Land Use Review Application form that was emailed to you on 10/22/2024.

SEPA:

2. A completed SEPA checklist. The checklist can be found on the Department of Ecology website at <https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance>.

Preliminary Plat:

1. A written description of the proposal, including the phasing plan;
2. Two paper copies of the phasing plan.
3. An electronic copy of the preliminary plat;
4. A trip generation letter; and
5. A written response to the approval criteria of MLMC Section 15.12.100 – Factors to be Considered; (the criteria was included in an email sent to you on 10/22/24)