## Does the wetland being rated meet any of the criteria below?

IN 28

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

| Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating | YES | NO |
|---|---|---|
| **A1.** *Has the wetland been documented as a habitat for any Federally listed Threatened or Endangered plant or animal species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database. | | ✓ |
| **A2.** *Has the wetland been documented as habitat for any State listed Threatened or Endangered plant or animal species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. | | ✓ |
| **A3.** Does the wetland contain individuals of **Priority species** listed by the WDFW for the state? | | ✓ |
| **A4.** Does the wetland have a **local significance** in addition to its functions. For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance. | | ✓ |

## To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 20 for more detailed instructions on classifying wetlands.

## Classification of Vegetated Wetlands for Eastern Washington

**Wetland Name:** W28 **Date:** 5/2/2006

1. Does the wetland **meet both** of the following criteria?
   ___The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) where at least 20 acres (8 ha) are permanently inundated (ponded or flooded);
   ___At least 30% of the open water area is deeper than 3 m (10 ft)?

   NO – go to Step 2 **YES** – The wetland class is **Lake-fringe (lacustrine fringe)**

2. Does the wetland **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**?
   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 <3ft diameter and less than a foot deep).*

   NO - go to Step 3 **YES** – The wetland class is **Slope**

3. Is the wetland in a valley or stream channel where it gets inundated by overbank flooding from that stream or river? In general, the flooding should occur at least once every ten years to answer "yes." *The wetland can contain depressions that are filled with water when the river is not flooding.*

   NO - go to Step 4 **YES** – The wetland class is **Riverine**

4. Is the wetland in a topographic depression, outside areas that are inundated by overbank flooding, in which water ponds, or is saturated to the surface, at some time of the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

   NO – go to Step 5 **YES** – The wetland class is **Depressional**

5. Your wetland seems to be difficult to classify. 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. Sometimes we find characteristics of several different hydrogeomorphic classes within one wetland boundary. If you have a wetland with several HGM classes present within its boundaries use the following table to identify the appropriate class to use for the rating system. 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 being rated.

| HGM Classes Within One Delineated Wetland Boundary | Class to Use in Rating if area of this class > 10% total |
|---|---|
| Slope + Riverine | Riverine |
| Slope + Depressional | Depressional |
| Slope + Lake-fringe | Lake-fringe |
| Depressional + Riverine (riverine is within boundary of depression) | Depressional |
| Depressional + Lake-fringe | Depressional |

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

W28

| S | Slope Wetlands | Points |
|---|---|---|
| | WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality | |
| S | **S 1.0 Does the wetland have the <u>potential</u> to improve water quality? *(see p.56)*** | |
| S | S 1.1 Characteristics of average slope of wetland:<br>Slope is1% or less *(a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance)* points = 3<br>Slope is between 1% and 2% points = ~~2~~<br>Slope is more than 2% but less than 5% points = 1<br>Slope is 5% or greater points = 0 | 2 |
| S | S 1.2 The soil 2 inches below the surface is clay, organic, or smells anoxic (hydrogen sulfide or rotten eggs).<br>YES = 3 points NO = 0 points | 0 |
| S | S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants:<br>*Choose the points appropriate for the description that best fit conditions in the wetland. Dense vegetation means you have trouble seeing the soil surface.*<br>Dense, ungrazed, herbaceous vegetation > 90% of the wetland area points = 6<br>Dense, ungrazed, herbaceous vegetation > 1/2 of area points = 3<br>Dense, woody, vegetation > ½ of area points = 2<br>Dense, ungrazed, herbaceous vegetation > 1/4 of area points = 1<br>Does not meet any of the criteria above for herbaceous vegetation points = 0 | 6 |
| S | **Total for S 1** *Add the points in the boxes above* | 8 |
| S | **S 2.0 Does the wetland have the <u>opportunity</u> to improve water quality? *(see p.58)***<br>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants.*<br>— Grazing in the wetland or within 150ft<br>— Wetland is a groundwater seep within the Reclamation Area<br>— Untreated stormwater flows through the wetland<br>— Tilled fields or orchards within 150 feet of wetland<br>— Residential, urban areas, or golf courses are within 150 ft upslope of wetland<br>— Other_____<br>**YES** multiplier is 2 **NO** multiplier is **1** | multiplier 2 |
| S | **<u>TOTAL</u> - Water Quality Functions** Multiply the score from S1 by the multiplier in S2<br>***Record score on p. 1 of field form*** | 16 |

W28

| S | Slope Wetlands | Points |
|---|---|---|
| | HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation | |
| S | **S 3.0 Does the wetland have the <u>potential</u> to reduce flooding and stream erosion?** ***(see p.59)*** | |
| S | S 3.1 Characteristics of vegetation that reduce the velocity of surface flows during storms. *Choose the points appropriate for the description that best fit conditions in the wetland.*<br>Dense, uncut, **rigid** vegetation covers > 90% of the area of the wetland. (stems of plants should be thick enough (usually > 1/8in), or dense enough, to remain erect during surface flows) points = (6)<br>Dense, uncut, **rigid** vegetation > 1/2 – 90% area of wetland points = 3<br>Dense, uncut, **rigid** vegetation > 1/4 – 1/2 area points = 1<br>More than 1/4 of area is grazed, mowed, tilled or vegetation is not rigid points = 0 | 6 |
| S | S 3.2 Characteristics of slope wetland that holds back small amounts of flood flows:<br>The slope wetland has small surface depressions that can retain water over at least 10% of its area. YES points = 2<br>NO points = (0) | 0 |
| S | **Total for S3** *Add the points in the boxes above* | 6 |
| S | **S 4. 0 Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** ***(see p.61)***<br>*Answer NO if the major source of water is irrigation return flow (e.g. a seep that is on the downstream side of a dam or at the base of an irrigated field.*<br>Answer YES if the wetland is in a landscape position where the reduction in water velocity it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. *Note which of the following conditions apply.*<br>— Wetland has surface runoff that can cause flooding problems downgradient<br>— Other_____<br>**YES** multiplier is (2) **NO** multiplier is **1** | multiplier 2 |
| S | **TOTAL - Hydrologic Functions** Multiply the score from S3 by the multiplier in S4<br>***Record score on p. 1 of field form*** | 12 |

**Comments**

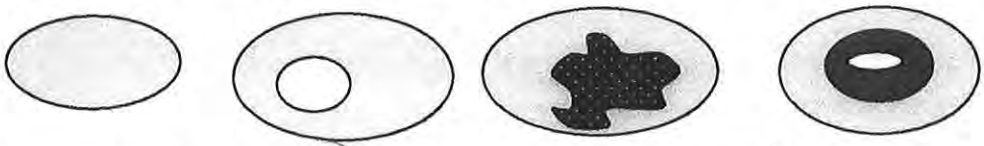
W 28

| ***These questions apply to wetlands of all HGM classes.*** | **Points** |
|---|---|
| HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat | |
| **H 1. Does the wetland have the <u>potential</u> to provide habitat for many species?** | |
| H 1.1 <u>Vegetation structure</u> ***(see p.62)***<br>*Check the types of vegetation present if the type covers more than 10% of the area of the wetland or ¼ acre.*<br>____Aquatic bed<br>____Emergent plants 0-12 inches high (0 – 30 cm)<br>____Emergent plants >12 – 40 inches high (>30 – 100cm)<br>____Emergent plants > 40 inches high (> 100 cm)<br>____Scrub/shrub (areas where shrubs have >30% cover)<br>____Forested (areas where trees have >30% cover)<br>*Add the number of vegetation types that qualify. If you have:*<br>4-6 types *record* points = 3<br>3 types points = 2<br>2 types points = 1<br>1 type points = 0 | 1 |
| H 1.2. Is one of the vegetation types "aquatic bed?" ***(see p .64)***<br>YES = 1 point NO = 0 points | 0 |
| H 1.3. <u>Surface Water</u> ***(see p.65)***<br>H 1.3.1 Does the wetland have areas of "open" water (without emergent or shrub plants) over at least ¼ acre or 10% of its area during the spring (March – early June) OR in early fall (August – end of September)? *Note: answer YES for Lake-fringe wetlands*<br>YES = 3 points & **go to H 1.4** NO = go to H 1.3.2<br>H 1.3.2 Does the wetland have an intermittent or permanent stream within its boundaries, or along one side, that has an unvegetated bottom (*answer yes only if H 1.3.1 is NO*)?<br>YES = 3 points NO = 0 points | 3 |
| H 1.4. <u>Richness of Plant Species</u> ***(see p. 66)***<br>Count the number of plant species in the wetland that cover at least 10 ft$^2$. (*different patches of the same species can be combined to meet the size threshold)*<br>*You do not have to name the species.*<br>*Do not include Eurasean Milfoil, reed canarygrass, purple loosestrife, Russian Olive, Phragmites ,Canadian Thistle, Yellow-flag Iris, and Salt Cedar (Tamarisk)*<br>If you counted: > 9 species points = 2<br>4-9 species points = 1<br># of species ____ < 4 species points = 0 points | 4 |

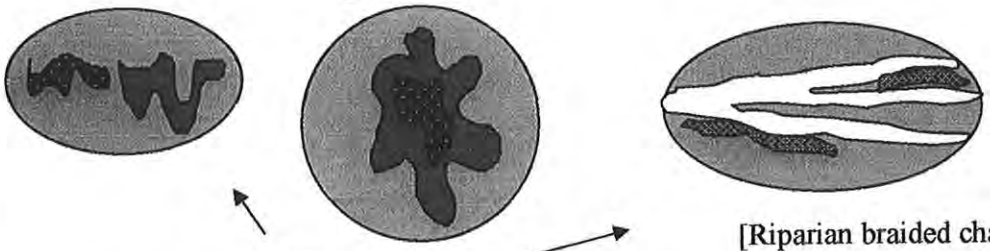
W28

H 1.5. Interspersion of habitats *(see p. 67)*

Decided from the diagrams below whether interspersion between types of vegetation (described in H 1.1), or vegetation types and un-vegetated areas (can include open water or mudflats) is high, medium, low, or none.



None = 0 points  Low = 1 point  Moderate = 2 points



[Riparian braided channel]

High = 3 points

NOTE: If you have four or more vegetation types or three vegetation types and open water the rating is always "high".

1

H 1.6. Special Habitat Features: *(see p. 68)*

*Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.*

____Loose rocks larger than 4" **or** large, downed, woody debris (>4in. diameter) within the area of surface ponding or in stream.

____Cattails or bulrushes are present within the wetland.

__1__Standing snags (diameter at the bottom > 4 inches) in the wetland or within 30 m (100 ft) of the edge.

some woody debri in lower

____Emergent or shrub vegetation in areas that are permanently inundated/ponded. *The presence of "yellow flag" Iris is a good indicator of vegetation in areas permanently ponded.*

Behind homestead

____Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) OR signs of recent beaver activity

____Invasive species cover less than 20% in each stratum of vegetation

*Maximum score possible = 6*

1

**TOTAL** Potential to provide habitat
*Add the scores in the column above*

Total 6

**Comments**

v 28

| **H 2.0 Does the wetland have the opportunity to provide habitat for many species?** | |
|---|---|
| H 2.1 Buffers ***(see p. 71)***<br>*Choose the description that best represents condition of buffer of wetland. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."*<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No developed areas within undisturbed part of buffer. **(relatively undisturbed also means no-grazing)** **Points = 5**<br>— 330 ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. **Points = 4**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **Points = 4**<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . **Points = 3**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. **Points = 3**<br>**If buffer does not meet any of the criteria above**<br>— No paved areas (except paved trails) or buildings within 80ft (25 m) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— No paved areas or buildings within 170ft (50m) of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— Heavy grazing in buffer. **Points = 1**<br>— Vegetated buffers are <6.6ft wide (2m) for more than 95% of the circumference (e.g . tilled fields, paving, basalt bedrock extend to edge of wetland). **Points = 0**<br>— Buffer does not meet any of the criteria above. **Points = 1** | 1 |
| H 2.2 Wet Corridors ***(see p. 72)***<br>H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor at least ¼ mile long with surface water or flowing water throughout most of the year (> 9 months/yr)? (*dams, heavily used gravel roads, paved roads, fields tilled to edge of stream, or pasture to edge of stream are considered breaks in the corridor*).<br>YES = 4 points (go to H 2.3) NO = go to H 2.2.2<br>H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken, vegetated corridor, at least ¼ mile long with water flowing seasonally, **OR** a lake-fringe wetland without a "wet" corridor, **OR** a riverine wetland without a surface channel connecting to the stream?<br>YES = 2 points (go to H 2.3) NO go to H 2.2.3<br>H 2.2.3 Is the wetland within a 1/2 mile of any permanent stream, seasonal stream, or lake (*do not include man-made ditches*)?<br>YES = 1 point NO = 0 points | 1 |

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H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see p. 74)***
Which of the following priority habitats are within 330ft (100m) of the wetland?
*(see text for a more detailed description of these priority habitats)*

__1__**Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

____**Aspen Stands:** Pure or mixed stands of aspen greater than 2 acres.

____**Cliffs:** Greater than 25 ft high and occurring below 5000 ft.

____**Old-growth forests:** (east of Cascade crest): In general, stands will be >150 years of age, with 10 trees/acrethat are > 21 in dbh, and 1 - 3 snags/acre > 12-14 in diameter.

____**Mature forests:** Stands with average diameters exceeding 21 in dbh; crown cover may be less that 100%; decay, 80 - 160 years old east of the Cascade crest.

____**Prairies and Steppe:** Relatively undisturbed areas (as indicated by dominance of native plants) where grasses and/or forbs form the natural climax plant community.

____**Shrub-steppe:** Tracts of land consisting of plant communities with one or more layers of perennial grasses and a conspicuous but discontinuous layer of shrubs.

____**Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft, composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

____**Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages

____**Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.

____**Urban Natural Open Space**: A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other *priority habitats*, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.

____**Aspen Stands:** Pure or mixed stands of aspen greater than 0.8 ha (2 acres).

If wetland has **2 or more** Priority Habitats = **4 points**
If wetland has **1** Priority Habitat = **2 points**
No Priority habitats = 0 points

2

**Comments**

N28

| | |
|---|---|
| H 2.4 Landscape *(choose the **one** description of the landscape around the wetland that best fits)* ***(see p. 76)***<br>— The wetland is in an area where annual rainfall is less than 12 inches, and its water regime is not influenced by irrigation practices, dams, or water control structures. *(Generally, this means outside boundaries of reclamation areas, irrigation district, or reservoirs)* points = 5<br>— There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing in the connection or an open water connection along a lake shore without heavy boat traffic are OK, but connections should NOT be bisected by paved roads, fill, fields, heavy boat traffic or other development). points = 5<br>— There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed? points = 2<br>— There is at least 1 wetland within ½ mile. points = 1<br>— Does not meet any of the four criteria above points = 0 | 2 |
| **H 2.** TOTAL Score - opportunity for providing habitat *Add the scores in the column above* | 6 |
| **H 3.0 Does the wetland have indicators that its ability to provide habitat is reduced?** | |
| H 3.1 Indicator of reduced habitat functions ***(see p. 75)***<br>Do the areas of open water in the wetland have a resident population of carp (see text for indicators of the presence of carp)? *(NOTE: This question does not apply to reservoirs with water levels controlled by dams, such as the reservoirs on the Columbia and Snake Rivers)*<br>YES = **- 5 points** NO = 0 points | *Points will be subtracted* |
| **Total Score for Habitat Functions** – *add the points for H 1, H 2, and H 3 and record the result on p. 1*<br>10 + 6 + 0 | 16 |

**Comments**

W28

# 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.***

| **Wetland Type**<br>*Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.* | Category |
|---|---|
| **SC 1.0 Vernal pools** ***(see p. 79)***<br>Is the wetland **less than 4000 ft²**, and does it meet at least **two** of the following criteria?<br>— Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input<br>— Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *NOTE: If you find perennial, "obligate", wetland plants the wetland is probably NOT a vernal pool*<br>— The soil in the wetland are shallow (<1ft deep (30 cm)) and is underlain by an impermeable layer such as basalt or clay.<br>— Surface water is present for less than 120 days during the "wet" season.<br>YES = Go to SC 1.1 NO - *not a vernal pool*<br>SC 1.1 Is the vernal pool relatively undisturbed in February and March?<br>YES = Go to SC 1.2 NO - *categorize based on functions* | |
| SC 1.2 Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 miles (other wetlands, rivers, lakes etc.)?<br>YES = Category II NO = Category III | **Cat. II**<br>**Cat. III** |
| **SC 2.0 Alkali wetlands** ***(see p. 81)***<br>Does the wetland meets **one** of the following two criteria?<br>— The wetland has a conductivity > 3.0 mS/cm.<br>— The wetland has a conductivity between 2.0 - 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 2 for list of plants found in alkali systems).<br>— 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.<br>**OR** does the wetland meets two of the following three sub-criteria?<br>— Salt encrustations around more than 80% of the edge of the wetland<br>— More than ¾ of the plant cover consists of species listed on Table 2<br>— 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.<br>YES = Category I NO - *categorize based on functions* | **Cat. I** |

W 2-8

**SC 3.0 Natural Heritage Wetlands** ***(see p. 81)***

Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.

SC 3.1 Is the wetland being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)* S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ___

YES____ – contact WNHP/DNR (see p. 79) and go to SC 3.2 (NO) ___

SC 3.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? **Cat. I**

YES = Category I NO ____

**SC 4.0 Bogs** ***(see p. 82)***

Does the wetland (or part of the wetland) meet both the criteria for soils and vegetation in bogs. *Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.*

SC 4.1. Does the wetland have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)?

Yes - go to SC 4.3 (No) - go to SC 4.2

SC 4.2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond??

Yes - go to SC 4.3 (No) - Is not a bog for rating

SC 4.3. Does the wetland have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?

Yes – Category I bog No - go to Q. 4.4 **Cat. I**

*NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.*

SC 4.4. Is the wetland forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover)?* **Cat. I**

Yes – Category I bog (No) - *categorize based on functions*

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| | |
|---|---|
| **SC 5.0 Forested Wetlands** *(see p. 85)*<br>Does the wetland have an area of forest (*you should have identified a forested class, if present, in question H 1.1*) rooted within its boundary that meet **at least one** of the following three criteria?<br>— The wetland is within the "100 year" floodplain of a river or stream<br>— aspen (*Populus tremuloides*) are a dominant or co-dominant of the "woody" vegetation. (*Dominants means it represents at least 50% of the cover of woody species, co-dominant means it represents at least 20% of the total cover of woody species*)<br>— There is at least ¼ acre of trees (even in wetlands smaller than 2.5 acres) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW *(see p. 83)*<br>YES = go to SC 5.1 NO - *categorize based on functions* | |
| 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<br>Slow growing trees are: western red cedar (*Thuja plicata*), Alaska yellow cedar (*Chamaecyparis nootkatensis*), pine spp. mostly "white" pine (*Pinus monticola*), western hemlock (*Tsuga heterophylla*), Englemann spruce (*Picea engelmannii*).<br>YES = Category I NO = go to SC 5.2 | **Cat. I** |
| SC 5.2 Does the wetland have aspen (*Populus tremuloides*) as a dominant or co-dominant species in the category of woody species?<br>YES = Category I NO = go to SC 5.3 | **Cat. I** |
| SC 5.3 Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are fast growing species.<br>Fast growing species are:<br>Alders – red (*Alnus rubra*), thin-leaf (*A. tenuifolia*)<br>Cottonwoods – narrow-leaf (*Populus angustifolia*), black (*P. balsamifera*)<br>Willows- peach-leaf (*Salix amygdaloides*), Sitka (*S. sitchensis*), Pacific (*S. lasiandra*), Aspen - (*Populus tremuloides*), Water Birch (*Betula occidentalis*)<br>YES = Category II NO = go to SC 5.5 | **Cat. II** |
| SC 5.5 Is the forested component of the wetland within the "100 year floodplain" of a river or stream?<br>YES = Category II NO - *categorize based on functions* | **Cat. II** |
| **Category of wetland based on Special Characteristics**<br>*Choose the "highest" rating if wetland falls into several categories.*<br>If you answered NO for all types enter "Not Applicable" on p.1 | N/A |

# WETLAND RATING FORM – EASTERN WASHINGTON

**Wetland Name:** Wetland 29 **Date:** 5/3/2006 updated 4/3/2012

Name of wetland (if known): Thorn Creek Rd to Moscow

Location: SEC: ___ TWNSHP: __ RNGE: ___ (attach map with outline of wetland to rating form) (MAP in Report)

Person(s) Rating Wetland: S. Gilmore Affiliation: RPU Date of site visit: 2004+2005

## SUMMARY OF RATING updated MAP 2014

**Category based on FUNCTIONS provided by wetland**

**I___ II___ III__✓ IV___**

| |
|---|
| Category I = Score >70 |
| Category II = Score 51-69 |
| Category III = Score 30-50 |
| Category IV = Score < 30 |

| | |
|---|---|
| Score for "Water Quality" Functions | 18 |
| Score for Hydrologic Functions | 12 |
| Score for Habitat Functions | 9 |
| **TOTAL score for functions** | 39 |

**Category based on SPECIAL CHARACTERISTICS of wetland**

**I___ II___ III___ Does not Apply ✓**

**Final Category (choose the "highest" category from above)** III

**Check the appropriate type and class of wetland being rated.**

| Wetland Type | | Wetland Class | |
|---|---|---|---|
| Vernal Pool | | Depressional | ✓ |
| Alkali | | Riverine | |
| Natural Heritage Wetland | | Lake-fringe | |
| Bog | | Slope | |
| Forest | | | |
| None of the above | ✓ | | |

## Does the wetland being rated meet any of the criteria below?

W29

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

| Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating | YES | NO |
|---|---|---|
| **A1**. *Has the wetland been documented as a habitat for any Federally listed Threatened or Endangered plant or animal species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database. | | ✓ |
| **A2**. *Has the wetland been documented as habitat for any State listed Threatened or Endangered plant or animal species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. | | ✓ |
| **A3.** Does the wetland contain individuals of **Priority species** listed by the WDFW for the state? | | ✓ |
| **A4**. Does the wetland have a **local significance** in addition to its functions. For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance. | | ✓ |

**<u>To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.</u>**

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 20 for more detailed instructions on classifying wetlands.

## Classification of Vegetated Wetlands for Eastern Washington

**Wetland Name:** W29 **Date:** 5/3/2006 updated 4/3/2012

1. Does the wetland **meet both** of the following criteria?
   ___The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) where at least 20 acres (8 ha) are permanently inundated (ponded or flooded);
   ___At least 30% of the open water area is deeper than 3 m (10 ft)?

   NO – go to Step 2 **YES** – The wetland class is **Lake-fringe (lacustrine fringe)**

2. Does the wetland **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**?
   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 <3ft diameter and less than a foot deep).*

   NO - go to Step 3 **YES** – The wetland class is **Slope**

3. Is the wetland in a valley or stream channel where it gets inundated by overbank flooding from that stream or river? In general, the flooding should occur at least once every ten years to answer "yes." *The wetland can contain depressions that are filled with water when the river is not flooding.*

   NO - go to Step 4 **YES** – The wetland class is **Riverine**

4. Is the wetland in a topographic depression, outside areas that are inundated by overbank flooding, in which water ponds, or is saturated to the surface, at some time of the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

   NO – go to Step 5 **YES** – The wetland class is **Depressional** ponded area @ top of wall

5. Your wetland seems to be difficult to classify. 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. Sometimes we find characteristics of several different hydrogeomorphic classes within one wetland boundary. If you have a wetland with several HGM classes present within its boundaries use the following table to identify the appropriate class to use for the rating system. 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 being rated.

| HGM Classes Within One Delineated Wetland Boundary | Class to Use in Rating if area of this class > 10% total |
|---|---|
| Slope + Riverine | Riverine |
| Slope + Depressional | Depressional |
| Slope + Lake-fringe | Lake-fringe |
| Depressional + Riverine (riverine is within boundary of depression) | Depressional |
| Depressional + Lake-fringe | Depressional |

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

W29

| D | **Depressional Wetlands** | **Points** |
|---|---|---|
| | WATER QUALITY FUNCTIONS - Indicators that the wetland functions to improve water quality | |
| D | **D 1.0 Does the wetland have the potential to improve water quality?** ***(see p. 32 in text)*** | |
| D | D 1.1 Characteristics of surface water flows out of the wetland:<br>Wetland has no surface water outlet - points = 5<br>Wetland has an intermittently flowing , or highly constricted, outlet – points = (3)<br>Wetland has a permanently flowing surface outlet – points = 1 | 3 |
| D | D 1.2 The soil 2 inches below the surface is clay, organic, or smells anoxic (hydrogen sulfide or rotten eggs).<br>YES points = 3<br>NO points = (0) | 0 |
| D | D 1.3 Characteristics of persistent vegetation **(emergent, shrub, and/or forest)**:<br>Wetland has persistent, ungrazed, vegetation for > 2/3 of area points = (5)<br>Wetland has persistent, ungrazed, vegetation from 1/3 to 2/3 of area points = 3<br>Wetland has persistent, ungrazed vegetation from 1/10 to < 1/3 of area points = 1<br>Wetland has persistent, ungrazed vegetation <1/10 of area points = 0 | 5 |
| D | D 1.4 Characteristics of seasonal ponding or inundation.<br>*This is the area of ponding that fluctuates every year. Do not count the area that is permanently ponded.*<br>Area seasonally ponded is > ½ total area of wetland points = 3<br>Area seasonally ponded is ¼ - ½ total area of wetland points = (1)<br>Area seasonally ponded is < ¼ total area of wetland points = 0<br>NOTE: *See text for indicators of seasonal and permanent inundation/flooding.* | 1 |
| D | **Total for D 1** *Add the points in the boxes above* | 9 |
| D | **D 2.0 Does the wetland have the opportunity to improve water quality?** ***(see p.38)***<br>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. *Note which of the following conditions provide the sources of pollutants.*<br>— Grazing in the wetland or within 150ft<br>— Wetland intercepts groundwater within the Reclamation Area<br>✓ Untreated stormwater flows into wetland<br>✓ Tilled fields or orchards within 150 feet of wetland<br>✓ Water from a stream or culvert flows into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging<br>— Residential, urban areas, golf courses are within 150 ft of wetland<br>— Other_____<br>**YES** multiplier is (2) **NO** multiplier is **1** | multiplier 2 |
| D | **TOTAL - Water Quality Functions** Multiply the score from D1 by the multiplier in D2<br>***Record score on p. 1 of field form*** | 18 |

W287

| D | Depressional Wetlands | Points |
|---|---|---|
| | HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream erosion | |
| D | **D 3.0 Does the wetland have the <u>potential</u> to reduce flooding and stream erosion? *(see p. 39)*** | |
| D | D 3.1 Characteristics of surface water flows out of the wetland:<br>Wetland has no surface water outlet — points = 8<br>Wetland has an intermittently flowing, or highly constricted, outlet — points = (4)<br>Wetland has a permanently flowing surface outlet — points = 0 | 4 |
| D | D 3.2 Depth of storage during wet periods:<br>*Estimate the height of ponding above the surface of the wetland (see text for description of measuring height). In wetlands with permanent ponding, the surface is the lowest elevation of "permanent" water)*<br>Marks of ponding are at least 3 ft above the surface — points = 8<br>The wetland is a "headwater" wetland" *(see p. 39)* — points = 6<br>Marks are 2 ft to < 3 ft from surface — points = 6<br>Marks are 1 ft to < 2 ft from surface — points = 4<br>Marks are 6 in to < 1 ft from surface — points = 2<br>No marks above 6 in. or wetland has only saturated soils — points = (0)<br>ponded area different than shrub wetland | 2 |
| D | **Total for D 3** *Add the points in the boxes above* | 6 |
| D | **D 4.0 Does the wetland have the <u>opportunity</u> to reduce flooding and erosion? *(see p. 42)***<br>*Answer NO if the major source of water is groundwater, irrigation return flow, or water levels in the wetland are controlled by a reservoir.*<br>Answer YES if the wetland is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows.<br>*Note which of the following conditions apply.*<br>— Wetland is in a headwater of a river or stream that has flooding problems<br>— Wetland drains to a river or stream that has flooding problems<br>— Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems<br>— Other_____<br>**YES** multiplier is (2) **NO** multiplier is **1** | multiplier 2 |
| D | **TOTAL - Hydrologic Functions** Multiply the score from D3 by the multiplier in D4<br>***Record score on p. 1 of field form*** | 12 |

**Comments**

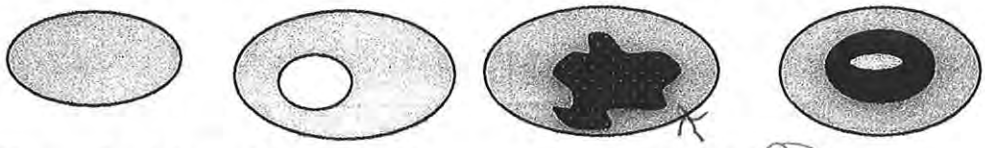
W 29

| *These questions apply to wetlands of all HGM classes.* | Points |
|---|---|
| HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat | |
| **H 1. Does the wetland have the <u>potential</u> to provide habitat for many species?** | |
| H 1.1 <u>Vegetation structure</u> ***(see p.62)***<br>*Check the types of vegetation present if the type covers more than 10% of the area of the wetland or ¼ acre.*<br>____Aquatic bed<br>____Emergent plants 0-12 inches high (0 – 30 cm)<br>____Emergent plants >12 – 40 inches high (>30 – 100cm)<br>____Emergent plants > 40 inches high (> 100 cm)<br>____Scrub/shrub (areas where shrubs have >30% cover)<br>____Forested (areas where trees have >30% cover)<br>*Add the number of vegetation types that qualify. If you have:*<br>4-6 types *record* points = 3<br>3 types points = 2<br>2 types points = 1<br>1 type points = 0 | 0 |
| H 1.2. Is one of the vegetation types "aquatic bed?" ***(see p .64)***<br>YES = 1 point NO = 0 points | 0 |
| H 1.3. <u>Surface Water</u> ***(see p.65)***<br>H 1.3.1 Does the wetland have areas of "open" water (without emergent or shrub plants) over at least ¼ acre or 10% of its area during the spring (March – early June) OR in early fall (August – end of September)? *Note: answer YES for Lake-fringe wetlands*<br>YES = 3 points & **go to H 1.4** NO = go to H 1.3.2<br>H 1.3.2 Does the wetland have an intermittent or permanent stream within its boundaries, or along one side, that has an unvegetated bottom (*answer yes only if H 1.3.1 is NO*)?<br>TRibutary<br>YES = 3 points NO = 0 points | 3 |
| H 1.4. <u>Richness of Plant Species</u> ***(see p. 66)***<br>Count the number of plant species in the wetland that cover at least 10 ft$^2$. (*different patches of the same species can be combined to meet the size threshold)*<br>*You do not have to name the species.*<br>*Do not include Eurasean Milfoil, reed canarygrass, purple loosestrife, Russian Olive, Phragmites ,Canadian Thistle, Yellow-flag Iris, and Salt Cedar (Tamarisk)*<br>If you counted: > 9 species points = 2<br>4-9 species points = 1<br># of species ____ < 4 species points = 0 points | 0 |

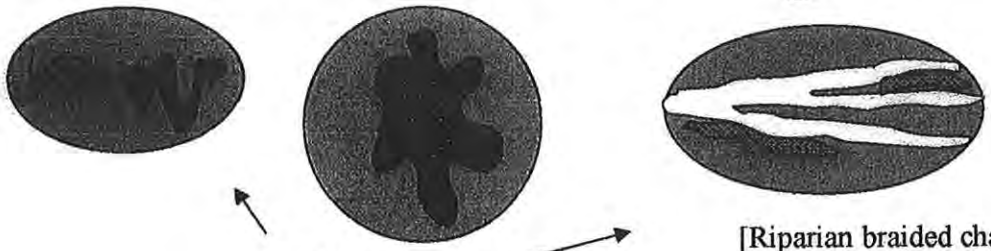
wra

H 1.5. Interspersion of habitats *(see p. 67)*

Decided from the diagrams below whether interspersion between types of vegetation (described in H 1.1), or vegetation types and un-vegetated areas (can include open water or mudflats) is high, medium, low, or none.



None = 0 points  Low = 1 point  Moderate = 2 points



[Riparian braided channel]

High = 3 points

NOTE: If you have four or more vegetation types or three vegetation types and open water the rating is always "high".

2

H 1.6. Special Habitat Features: *(see p. 68)*

*Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.*

____Loose rocks larger than 4" **or** large, downed, woody debris (>4in. diameter) within the area of surface ponding or in stream.

____Cattails or bulrushes are present within the wetland.

____Standing snags (diameter at the bottom > 4 inches) in the wetland or within 30 m (100 ft) of the edge.

__1__Emergent or shrub vegetation in areas that are permanently inundated/ponded. *The presence of "yellow flag" Iris is a good indicator of vegetation in areas permanently ponded.*

____Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) OR signs of recent beaver activity

____Invasive species cover less than 20% in each stratum of vegetation

*Maximum score possible = 6*

1

**TOTAL** Potential to provide habitat
*Add the scores in the column above*

6

**Comments**

WR9

| **H 2.0 Does the wetland have the opportunity to provide habitat for many species?** | |
|---|---|
| H 2.1 Buffers ***(see p. 71)***<br>*Choose the description that best represents condition of buffer of wetland. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."*<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No developed areas within undisturbed part of buffer. **(relatively undisturbed also means no-grazing)** **Points = 5**<br>— 330 ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. **Points = 4**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **Points = 4**<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . **Points = 3**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. **Points = 3**<br>**If buffer does not meet any of the criteria above**<br>— No paved areas (except paved trails) or buildings within 80ft (25 m) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— No paved areas or buildings within 170ft (50m) of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— Heavy grazing in buffer. **Points = 1**<br>— Vegetated buffers are <6.6ft wide (2m) for more than 95% of the circumference (e.g . tilled fields, paving, basalt bedrock extend to edge of wetland). **Points = 0**<br>— Buffer does not meet any of the criteria above. **Points = 1** | 0 |
| H 2.2 Wet Corridors ***(see p. 72)***<br>H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor at least ¼ mile long with surface water or flowing water throughout most of the year (> 9 months/yr)? (*dams, heavily used gravel roads, paved roads, fields tilled to edge of stream, or pasture to edge of stream are considered breaks in the corridor*).<br>YES = 4 points (go to H 2.3) NO = go to H 2.2.2<br>H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken, vegetated corridor, at least ¼ mile long with water flowing seasonally, **OR** a lake-fringe wetland without a "wet" corridor, **OR** a riverine wetland without a surface channel connecting to the stream?<br>YES = 2 points (go to H 2.3) NO go to H 2.2.3<br>H 2.2.3 Is the wetland within a 1/2 mile of any permanent stream, seasonal stream, or lake (*do not include man-made ditches*)?<br>YES = 1 point NO = 0 points | 1 |

W29

| | |
|---|---|
| H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see p. 74)***<br>Which of the following priority habitats are within 330ft (100m) of the wetland?<br>*(see text for a more detailed description of these priority habitats)*<br>____**Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.<br>____**Aspen Stands:** Pure or mixed stands of aspen greater than 2 acres.<br>____**Cliffs:** Greater than 25 ft high and occurring below 5000 ft.<br>____**Old-growth forests:** (east of Cascade crest): In general, stands will be >150 years of age, with 10 trees/acrethat are > 21 in dbh, and 1 - 3 snags/acre > 12-14 in diameter.<br>____**Mature forests:** Stands with average diameters exceeding 21 in dbh; crown cover may be less that 100%; decay, 80 - 160 years old east of the Cascade crest.<br>____**Prairies and Steppe:** Relatively undisturbed areas (as indicated by dominance of native plants) where grasses and/or forbs form the natural climax plant community.<br>____**Shrub-steppe:** Tracts of land consisting of plant communities with one or more layers of perennial grasses and a conspicuous but discontinuous layer of shrubs.<br>____**Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft, composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.<br>____**Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages<br>____**Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.<br>____**Urban Natural Open Space**: A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other *priority habitats*, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.<br>____**Aspen Stands:** Pure or mixed stands of aspen greater than 0.8 ha (2 acres).<br><br>If wetland has **2 or more** Priority Habitats = **4 points**<br>If wetland has **1** Priority Habitat = **2 points**<br>No Priority habitats = 0 points | 0 |

**Comments**

W 29

| | |
|---|---|
| H 2.4 Landscape *(choose the **one** description of the landscape around the wetland that best fits)* ***(see p. 76)***<br>— The wetland is in an area where annual rainfall is less than 12 inches, and its water regime is not influenced by irrigation practices, dams, or water control structures. *(Generally, this means outside boundaries of reclamation areas, irrigation district, or reservoirs)* points = 5<br>— There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing in the connection or an open water connection along a lake shore without heavy boat traffic are OK, but connections should NOT be bisected by paved roads, fill, fields, heavy boat traffic or other development). points = 5<br>✓ There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed? points = 2<br>— There is at least 1 wetland within ½ mile. points = 1<br>— Does not meet any of the four criteria above points = 0 | 2 |
| **H 2.** TOTAL Score - opportunity for providing habitat *Add the scores in the column above* | 3 |
| **H 3.0 Does the wetland have indicators that its ability to provide habitat is reduced?** | |
| H 3.1 Indicator of reduced habitat functions ***(see p. 75)***<br>Do the areas of open water in the wetland have a resident population of carp (see text for indicators of the presence of carp)? *(NOTE: This question does not apply to reservoirs with water levels controlled by dams, such as the reservoirs on the Columbia and Snake Rivers)*<br>YES = **- 5 points** NO = 0 points | *Points will be subtracted*<br>0 |
| **Total Score for Habitat Functions** – *add the points for H 1, H 2, and H 3 and record the result on p. 1*<br>6 + 3 | 9 |

**Comments**

WZ9

# 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.***

| **Wetland Type**<br>*Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.* | Category |
|---|---|
| **SC 1.0 Vernal pools** ***(see p. 79)***<br>Is the wetland **less than 4000 ft²**, and does it meet at least **two** of the following criteria?<br>— Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input<br>— Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *NOTE: If you find perennial, "obligate", wetland plants the wetland is probably NOT a vernal pool*<br>— The soil in the wetland are shallow (<1ft deep (30 cm)) and is underlain by an impermeable layer such as basalt or clay.<br>— Surface water is present for less than 120 days during the "wet" season.<br>YES = Go to SC 1.1 NO - *not a vernal pool*<br>SC 1.1 Is the vernal pool relatively undisturbed in February and March?<br>YES = Go to SC 1.2 NO - *categorize based on functions* | |
| SC 1.2 Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 miles (other wetlands, rivers, lakes etc.)?<br>YES = Category II NO = Category III | **Cat. II**<br>**Cat. III** |
| **SC 2.0 Alkali wetlands** ***(see p. 81)***<br>Does the wetland meets **one** of the following two criteria?<br>— The wetland has a conductivity > 3.0 mS/cm.<br>— The wetland has a conductivity between 2.0 - 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 2 for list of plants found in alkali systems).<br>— 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.<br>**OR** does the wetland meets two of the following three sub-criteria?<br>— Salt encrustations around more than 80% of the edge of the wetland<br>— More than ¾ of the plant cover consists of species listed on Table 2<br>— 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.<br>YES = Category I NO - *categorize based on functions* | **Cat. I** |

W29

**SC 3.0 Natural Heritage Wetlands** ***(see p. 81)***

Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.

SC 3.1 Is the wetland being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)* S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ___

YES____ – contact WNHP/DNR (see p. 79) and go to SC 3.2 NO ___

SC 3.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? **Cat. I**

YES = Category I NO ____

**SC 4.0 Bogs** ***(see p. 82)***

Does the wetland (or part of the wetland) meet both the criteria for soils and vegetation in bogs. *Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.*

SC 4.1. Does the wetland have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)?

Yes - go to SC 4.3 No - go to SC 4.2

SC 4.2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond??

Yes - go to SC 4.3 No - Is not a bog for rating

SC 4.3. Does the wetland have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?

Yes – Category I bog No - go to Q. 4.4 **Cat. I**

*NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.*

SC 4.4. Is the wetland forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover)?* **Cat. I**

Yes – Category I bog No - *categorize based on functions*

W29

**SC 5.0 Forested Wetlands** *(see p. 85)*

Does the wetland have an area of forest (*you should have identified a forested class, if present, in question H 1.1*) rooted within its boundary that meet **at least one** of the following three criteria?

— The wetland is within the "100 year" floodplain of a river or stream

— aspen (*Populus tremuloides*) are a dominant or co-dominant of the "woody" vegetation. (*Dominants means it represents at least 50% of the cover of woody species, co-dominant means it represents at least 20% of the total cover of woody species*)

— There is at least ¼ acre of trees (even in wetlands smaller than 2.5 acres) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW *(see p. 83)*

YES = go to SC 5.1 NO - *categorize based on functions*

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

Slow growing trees are: western red cedar (*Thuja plicata*), Alaska yellow cedar (*Chamaecyparis nootkatensis*), pine spp. mostly "white" pine (*Pinus monticola*), western hemlock (*Tsuga heterophylla*), Englemann spruce (*Picea engelmannii*).

YES = Category I NO = go to SC 5.2 **Cat. I**

SC 5.2 Does the wetland have aspen (*Populus tremuloides*) as a dominant or co-dominant species in the category of woody species?

YES = Category I NO = go to SC 5.3 **Cat. I**

SC 5.3 Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are fast growing species.

Fast growing species are:

Alders – red (*Alnus rubra*), thin-leaf (*A. tenuifolia*)

Cottonwoods – narrow-leaf (*Populus angustifolia*), black (*P. balsamifera*)

Willows- peach-leaf (*Salix amygdaloides*), Sitka (*S. sitchensis*), Pacific (*S. lasiandra*), Aspen - (*Populus tremuloides*), Water Birch (*Betula occidentalis*)

YES = Category II NO = go to SC 5.5 **Cat. II**

SC 5.5 Is the forested component of the wetland within the "100 year floodplain" of a river or stream?

YES = Category II NO - *categorize based on functions* **Cat. II**

**Category of wetland based on Special Characteristics**

*Choose the "highest" rating if wetland falls into several categories.*

If you answered NO for all types enter "Not Applicable" on p.1

N/A

Wetland name or number W30

# WETLAND RATING FORM – EASTERN WASHINGTON

Version 2 - Updated June 2006 to increase accuracy and reproducibility among users
Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Thorncreek Road + Moscow Date of site visit: 2004-2005

Rated by S. Gilmore Trained by Ecology? Yes ✓ No ___ Date of training 2007

SEC: ___ TWNSHP: ____ RNGE: ____ Is S/T/R in Appendix D? Yes___ No ✓

**Map of wetland unit: Figure 2 of 4 Estimated size ~1 Ac**

## SUMMARY OF RATING

### Category based on FUNCTIONS provided by wetland

**I___ II___ III ✓ IV___**

| |
|---|
| Category I = Score >=70 |
| Category II = Score 51-69 |
| Category III = Score 30-50 |
| Category IV = Score < 30 |

| | |
|---|---|
| Score for "Water Quality" Functions | 16 |
| Score for Hydrologic Functions | 8 |
| Score for Habitat Functions | 8 |
| **TOTAL score for functions** | 32 |

### Category based on SPECIAL CHARACTERISTICS of wetland

**I___ II___ III___ Does not Apply ✓**

**Final Category (choose the "highest" category from above)** III

**Summary of basic information about the wetland unit**

| Wetland Type | | Wetland Class | |
|---|---|---|---|
| Vernal Pool | | Depressional | ✓ |
| Alkali | | Riverine | |
| Natural Heritage Wetland | | Lake-fringe | |
| Bog | | Slope | |
| Forest | | | |
| None of the above | ✓ | Check if unit has multiple HGM classes present | ✓ |

Wetland name or number 30

## Does the wetland being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

| Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating | YES | NO |
|---|---|---|
| SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered* ***animal or plant*** *species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database. | | ✓ |
| SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered* ***animal*** *species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form). | | ✓ |
| SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?* | | ✓ |
| SP4. *Does the wetland unit have a local significance in addition to its functions*? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance. | | ✓ |

## To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 20 for more detailed instructions on classifying wetlands.

Wetland name or number 30

## Classification of Vegetated Wetlands for Eastern Washington

**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 1-7 apply, and go to Question 8.**

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

___The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

___At least 30% of the open water area is deeper than 3 m (10 ft)?

NO – go to Step 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**?

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 <3ft diameter and less than a foot deep).*

NO - go to Step 3 **YES** – The wetland class is **Slope**

**3.** Is the entire wetland unit in a valley or stream channel where it gets inundated by overbank flooding from that stream or river? In general, the flooding should occur at least once every ten years to answer "yes." *The wetland can contain depressions that are filled with water when the river is not flooding.*

NO - go to Step 4 **YES** – The wetland class is **Riverine**

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

NO – go to Step 5 **YES** – The wetland class is **Depressional** Does pond water in center areas

**5.** Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. 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 1-7 APPLY TO DIFFERENT AREAS IN THE 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 your wetland. 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 class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

Wetland name or number 30

| HGM Classes Within One Delineated Wetland Boundary | Class to Use for Rating |
|---|---|
| Slope + Riverine | Riverine |
| Slope + Depressional | Depressional ✓ |
| Slope + Lake-fringe | Lake-fringe |
| Depressional + Riverine (riverine is within boundary of depression) | Depressional |
| Depressional + Lake-fringe | Depressional |

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

Wetland name or number 30

| D | Depressional Wetlands<br>WATER QUALITY FUNCTIONS - Indicators that the wetland functions to improve water quality | Points (only 1 score per box) |
|---|---|---|
| D | **D 1.0 Does the wetland unit have the potential to improve water quality?** | *(see p. 38)* |
| D | D 1.1 Characteristics of surface water flows out of the wetland unit:<br>Wetland has no surface water outlet - points = 5<br>Wetland has an intermittently flowing outlet points = (3)<br>Wetland has a highly constricted permanently flowing outlet points = 3<br>Wetland has a permanently flowing surface outlet points = 1 | 3 |
| D | D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic *(use NRCS definitions of soil types)*<br>YES points = 3<br>NO points = (0) | 0 |
| D | D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)<br>Wetland has persistent, ungrazed, vegetation for > 2/3 of area points = (5)<br>Wetland has persistent, ungrazed, vegetation from 1/3 to 2/3 of area points = 3<br>Wetland has persistent, ungrazed vegetation from 1/10 to < 1/3 of area points = 1<br>Wetland has persistent, ungrazed vegetation <1/10 of area points = 0<br>Map of Cowardin vegetation classes | Figure ___<br>5 |
| D | D 1.4 Characteristics of seasonal ponding or inundation.<br>*This is the area of ponding that fluctuates every year. Do not count the area that is permanently ponded.*<br>Area seasonally ponded is > ½ total area of wetland points = 3<br>Area seasonally ponded is ¼ - ½ total area of wetland points = 1<br>Area seasonally ponded is < ¼ total area of wetland points = (0)<br>NOTE: *See text for indicators of seasonal and permanent inundation/flooding.*<br>Map of Hydroperiods | Figure ___<br>0 |
| D | **Total for D 1** *Add the points in the boxes above* | 8 |
| D | **D 2. Does the wetland unit have the opportunity to improve water quality?**<br>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.*<br>— Grazing in the wetland or within 150 ft<br>✓ Untreated stormwater discharges to wetland<br>✓ Tilled fields or orchards within 150 ft of wetland<br>✓ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging<br>— Residential, urban areas, golf courses are within 150 ft of wetland<br>— Wetland is fed by groundwater high in phosphorus or nitrogen<br>— Other_____<br>**YES** multiplier is (2) **NO** multiplier is **1** | multiplier<br>2 |
| D | **TOTAL - Water Quality Functions** Multiply the score from D1 by the multiplier in D2<br>***Record score on p. 1 of field form*** | 16 |

Wetland name or number 30

| D | Depressional Wetlands<br>HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream erosion | Points (only 1 score per box) |
|---|---|---|
| D | **D 3.0 Does the wetland unit have the potential to reduce flooding and stream erosion?** | *(see p. 39)* |
| D | D 3.1 Characteristics of surface water flows out of the wetland unit:<br>Wetland has no surface water outlet — points = 8<br>Wetland has an intermittently flowing outlet — points = (4)<br>Wetland has a highly constricted permanently flowing outlet — points = 4<br>Wetland has a permanently flowing surface outlet — points = 0 | 4 |
| D | D 3.2 Depth of storage during wet periods:<br>*Estimate the height of ponding above the surface of the wetland (see text for description of measuring height). In wetlands with permanent ponding, the surface is the lowest elevation of "permanent" water)*<br>Marks of ponding are at least 3 ft above the surface — points = 8<br>The wetland is a "headwater" wetland" *(see p. 39)* — points = 6<br>Marks are 2 ft to < 3 ft from surface — points = 6<br>Marks are 1 ft to < 2 ft from surface — points = 4<br>Marks are 6 in to < 1 ft from surface — points = 2<br>No marks above 6 in. or wetland has only saturated soils — points = (0) | 0 |
| D | **Total for D 3** *Add the points in the boxes above* | 4 |
| D | **D 4.0 Does the wetland unit have the opportunity to reduce flooding and erosion?**<br>*Answer NO if the major source of water is groundwater, irrigation return flow, or water levels in the wetland are controlled by a reservoir.*<br>Answer YES if the wetland is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. *Note which of the following conditions apply.*<br>— Wetland is in a headwater of a river or stream that has flooding problems<br>— Wetland drains to a river or stream that has flooding problems<br>— Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems<br>— Other_____<br>**YES** multiplier is (2) **NO** multiplier is **1** | *(see p. 42)*<br>multiplier 2 |
| D | **TOTAL - Hydrologic Functions** Multiply the score from D3 by the multiplier in D4<br>***Record score on p. 1 of field form*** | 8 |

**Comments**

Wetland name or number 30

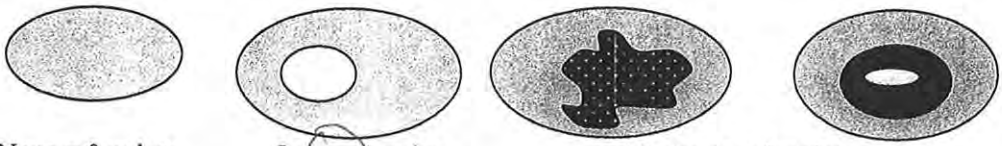
| *These questions apply to wetlands of all HGM classes.* HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat | Points (only 1 score per box) |
|---|---|
| **H 1. Does the wetland unit have the potential to provide habitat for many species?** | |
| H 1.1 Categories of vegetation structure *(see p.62)*<br>*Check the vegetation classes (as defined by Cowardin) and heights of emergents present. Size threshold for each class or height category is ¼ acre or more than 10% of the area if unit is < 2.5 acres.*<br>___Aquatic bed<br>___Emergent plants 0-12 in. (0 – 30 cm) high are the highest layer and have > 30% cover<br>_/_Emergent plants >12 – 40 in.(>30 – 100cm) high are the highest layer with >30% cover<br>___Emergent plants > 40 in.(> 100cm) high are the highest layer with >30% cover<br>___Scrub/shrub (areas where shrubs have >30% cover)<br>___Forested (areas where trees have >30% cover)<br>*Add the number of vegetation types that qualify. If you have:*<br>Reed canarygrass<br>4-6 types points = 3<br>3 types points = 2<br>2 types points = 1<br>1 type points = 0<br>Map of Cowardin vegetation classes and areas with different heights of emergents | Figure ___<br>0 |
| H 1.2. Is one of the vegetation types "aquatic bed?" *(see p .64)*<br>YES = 1 point NO = 0 points | 0 |
| H 1.3. Surface Water *(see p.65)*<br>H 1.3.1 Does the unit have areas of "open" water (without herbaceous or shrub plants) over at least ¼ acre or 10% of its area during the spring (March – early June) OR in early fall (August – end of September)? *Note: answer YES for Lake-fringe wetlands*<br>YES = 3 points & **go to H 1.4** NO = go to H 1.3.2<br>H 1.3.2 Does the unit have an intermittent or permanent stream within its boundaries, or along one side, over at least ¼ acre or 10% of its area, AND that has an unvegetated bottom (*answer yes only if H 1.3.1 is NO*)?<br>YES = 3 points NO = 0 points<br>Map showing areas of open water | Figure ___<br>3 |
| H 1.4. Richness of Plant Species *(see p. 66)*<br>Count the number of plant species in the wetland that cover at least 10 ft$^2$. (*different patches of the same species can be combined to meet the size threshold)*<br>*You do not have to name the species.*<br>*Do not include Eurasean Milfoil, reed canarygrass, purple loosestrife, Russian Olive, Phragmites ,Canadian Thistle, Yellow-flag Iris, and Salt Cedar (Tamarisk)*<br>If you counted: > 9 species points = 2<br>4-9 species points = 1<br># of species ____ < 4 species points = 0 points<br>*List species below if you wish* | 0 |

Wetland name or number 30

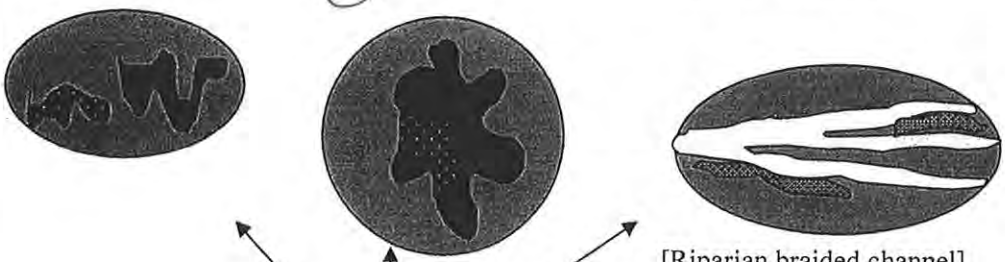
H 1.5. Interspersion of habitats *(see p. 67)*

Decided from the diagrams below whether interspersion between categories of vegetation (described in H 1.1), or categories and un-vegetated areas (can include open water or mudflats) is high, medium, low, or none.

**Figure** ___



None = 0 points Low = 1 point Moderate = 2 points



[Riparian braided channel]

High = 3 points

NOTE: If you have four or more vegetation categories or three vegetation categories and open water the rating is always "high". Use maps from H1.1 and H1.3

1

H 1.6. Special Habitat Features: *(see p. 68)*

*Check the habitat features that are present in the wetland unit. The number of checks is the number of points you put into the next column.*

____Loose rocks larger than 4" **or** large, downed, woody debris (>4in. diameter) within the area of surface ponding or in stream.

____Cattails or bulrushes are present within the unit.

____Standing snags (diameter at the bottom > 4 inches) in the wetland unit or within 30 m (100ft) of the edge.

____Emergent or shrub vegetation in areas that are permanently inundated/ponded. *The presence of "yellow flag" Iris is a good indicator of vegetation in areas permanently ponded.*

____Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) OR signs of recent beaver activity

____ Invasive species cover less than 20% in each stratum of vegetation *(canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)*

*Maximum score possible = 6*

0

**TOTAL** Potential to provide habitat
*Add the scores in the column above*

4

**Comments**

Wetland name or number 30

**H 2.0 Does the wetland have the opportunity to provide habitat for many species?**

H 2.1 Buffers *(see p. 71)*

*Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed." Relatively undisturbed also means no grazing, no landscaping, no daily human use, and no structures or paving within undisturbed part of buffer.*

— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference **Points = 5**

— 330 ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. **Points = 4**

— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **Points = 4**

— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . **Points = 3**

— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. **Points = 3**

**If buffer does not meet any of the criteria above**

— No paved areas (except paved trails) or buildings within 80ft (25 m) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**

— No paved areas or buildings within 170ft (50m) of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**

— Heavy grazing in buffer. **Points = 1**

— Vegetated buffers are <6.6ft wide (2m) for more than 95% of the circumference (e.g . tilled fields, paving, basalt bedrock extend to edge of wetland). **Points = 0**

— Buffer does not meet any of the criteria above. **Points = 1**

Aerial photo showing buffers

Figure ___

0

H 2.2 Wet Corridors *(see p. 72)*

H 2.2.1 Is the wetland unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor at least ¼ mile long with surface water or flowing water throughout most of the year (> 9 months/yr)? (*dams, heavily used gravel roads, paved roads, fields tilled to edge of stream, or pasture to edge of stream are considered breaks in the corridor*).

YES = 4 points (go to H 2.3) NO = go to H 2.2.2

H 2.2.2 Is the unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor, at least ¼ mile long with water flowing seasonally, **OR** a lake-fringe wetland without a "wet" corridor, **OR** a riverine wetland without a surface channel connecting to the stream?

YES = 2 points (go to H 2.3) NO go to H 2.2.3

2

H 2.2.3 Is the wetland within a 1/2 mile of any permanent stream, seasonal stream, or lake (*do not include man-made ditches*)?

YES = 1 point NO = 0 points

Wetland name or number 30

| | |
|---|---|
| H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm )***<br>Which of the following priority habitats are within 330ft (100m) of the wetland unit? *NOTE: the connections to the habitats can be disturbed.*<br>____**Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).<br>____**Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).<br>____ **Eastside Steppe:** Non-forested vegetation type dominated by broadleaf herbaceous flora ((*full description of herbaceous species found here are in WDFW PHS report p. 153*).<br>____**Old-growth/Mature forests (east of Cascade crest):** (*full descriptions in WDFW PHS report p. 157*). Old-growth: Stands are > 150 yrs in age; may be variable in tree species composition and structural characteristics due to the influence of fire, climate, and soils. Mature: Stands 80 – 160 yrs old. Decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.<br>____**Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).<br>____ **Juniper Savannah**: All juniper woodlands (*SE part of state only; check map*)<br>____ **Shrub-steppe**: A nonforested vegetation type consisting of one or more layers of perennial bunchgrasses and a conspicuous but discontinuous layer of shrubs (see Eastside Steppe for sites with little or no shrub cover).<br>____**Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.<br>____Inland Dunes This placeholder is for a new priority habitat that will capture areas known as Inland Dunes. A definition will be developed later in Fall 2008. *(check WDFW web site)*<br>____**Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.<br>____**Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.<br>____**Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.<br>____**Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.<br>____**Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 30 cm (12 in) in eastern Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.<br>If wetland has **2 or more** Priority Habitats = **4 points**<br>If wetland has **1** Priority Habitat = **2 points**<br>No Priority habitats = **0 points**<br>*Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)* | 0 |

Wetland name or number 30

| | |
|---|---|
| H 2.4 Landscape *(choose the **one** description of the landscape around the wetland that best fits)* ***(see p. 76)*** | |
| — The wetland unit is in an area where annual rainfall is less than 12 inches, and its water regime is not influenced by irrigation practices, dams, or water control structures. (*Generally, this means outside boundaries of reclamation areas, irrigation district, or reservoirs* ) **points = 5** | |
| — There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing in the connection or an open water connection along a lake shore without heavy boat traffic are OK, but connections should NOT be bisected by paved roads, fill, fields, heavy boat traffic or other development) **points = 5** | |
| ✓ There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed? **points = (2)** | |
| — There is at least 1 wetland within ½ mile. **points = 1** | |
| — Does not meet any of the four criteria above **points = 0** | 2 |
| **H 2.** TOTAL Score - opportunity for providing habitat *Add the scores in the column above* | 4 |
| **H 3.0 Does the wetland unit have indicators that its ability to provide habitat is reduced?** | |
| H 3.1 Indicator of reduced habitat functions ***(see p. 75)*** Do the areas of open water in the wetland unit have a resident population of carp (see text for indicators of the presence of carp)? *(NOTE: This question does not apply to reservoirs with water levels controlled by dams, such as the reservoirs on the Columbia and Snake Rivers)* YES = **- 5 points** NO = 0 points | *Points will be subtracted* 0 |
| **Total Score for Habitat Functions** – *add the points for H 1, H 2, and H 3 and record the result on p. 1* 4+4 | 8 |

**Comments**

Wetland name or number 30

# CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

***Please determine if the wetland unit 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 units should also be characterized based on their functions.***

| **Wetland Type**<br>*Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.* | Category |
|---|---|
| **SC 1.0 Vernal pools** *(see p. 79)*<br>Is the wetland unit **less than 4000 ft²**, and does it meet at least **two** of the following criteria?<br>— Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input<br>— Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *NOTE: If you find perennial, "obligate", wetland plants the wetland is probably NOT a vernal pool*<br>— The soil in the wetland are shallow (<1ft deep (30 cm)) and is underlain by an impermeable layer such as basalt or clay.<br>— Surface water is present for less than 120 days during the "wet" season.<br>YES = Go to SC 1.1 (NO) *not a vernal pool*<br>SC 1.1 Is the vernal pool relatively undisturbed in February and March?<br>YES = Go to SC 1.2 (NO) *not a vernal pool with special characteristics* | |
| SC 1.2 Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 miles (other wetlands, rivers, lakes etc.)?<br>YES = Category II (NO) = Category III | **Cat. II**<br>**Cat. III** |
| **SC 2.0 Alkali wetlands** *(see p. 81)*<br>Does the wetland unit meets **one** of the following two criteria?<br>— The wetland has a conductivity > 3.0 mS/cm.<br>— The wetland has a conductivity between 2.0 - 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 2 for list of plants found in alkali systems).<br>— 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.<br>**OR** does the wetland unit meets two of the following three sub-criteria?<br>— Salt encrustations around more than 80% of the edge of the wetland<br>— More than ¾ of the plant cover consists of species listed on Table 2<br>— 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.<br>YES = Category I (NO) *not an alkali wetland* | **Cat. I** |

Wetland name or number 30

| | |
|---|---|
| **SC 3.0 Natural Heritage Wetlands** *(see p. 81)*<br>Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.<br>SC 3.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)*<br>S/T/R information from Appendix D ___ or accessed from WNHP/DNR database ___<br>YES____ – contact WNHP/DNR (see p. 79) and go to SC 3.2 (NO)___<br>SC 3.2 Has DNR identified the wetland unit as a high quality undisturbed wetland or as or as a site with state threatened, endangered, or sensitive plant species?<br>YES = Category I (NO) *–not a natural heritage wetland* | **Cat. I** |
| **SC 4.0 Bogs** *(see p. 82)*<br>Does the wetland unit **(or any part of the wetland unit)** meet both the criteria for soils and vegetation in bogs. *Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.*<br>SC 4.1. Does the wetland unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)?<br>Yes - go to SC 4.3 (No) - go to SC 4.2<br>SC 4.2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond??<br>Yes - go to SC 4.3 (No) - *Is not a bog for rating*<br>SC 4.3. Does the wetland unit have more than 70% cover of mosses at ground level in any area within its boundaries, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?<br>Yes – Category I bog No - go to Q. 4.4<br>*NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.*<br>SC 4.4. Is the unit, or any part of it, forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover)?*<br>Yes – Category I bog (NO) | **Cat. I**<br><br>**Cat. I** |

Wetland name or number 30

| | |
|---|---|
| **SC 5.0 Forested Wetlands** *(see p. 85)*<br>Does the wetland unit have an area of forest (*you should have identified a forested class, if present, in question H 1.1*) rooted within its boundary that meet **at least one** of the following three criteria?<br>— The wetland is within the "100 year" floodplain of a river or stream<br>— aspen (*Populus tremuloides*) are a dominant or co-dominant of the "woody" vegetation. (*Dominants means it represents at least 50% of the cover of woody species, co-dominant means it represents at least 20% of the total cover of woody species*)<br>— There is at least ¼ acre of trees (even in wetlands smaller than 2.5 acres) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW *(see p. 83)*<br>YES = go to SC 5.1 NO *–not a forested wetland with special characteristics* | |
| SC 5.1 Does the wetland unit have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees<br>Slow growing trees are: western red cedar (*Thuja plicata*), Alaska yellow cedar (*Chamaecyparis nootkatensis*), pine spp. mostly "white" pine (*Pinus monticola*), western hemlock (*Tsuga heterophylla*), Englemann spruce (*Picea engelmannii*).<br>YES = Category I NO = go to SC 5.2 | **Cat. I** |
| SC 5.2 Does the unit have areas where aspen (*Populus tremuloides*) are a dominant or co-dominant species?<br>YES = Category I NO = go to SC 5.3 | **Cat. I** |
| SC 5.3 Does the wetland unit have areas with a forest canopy where more than 50% of the tree species (by cover) are fast growing species.<br>Fast growing species are:<br>Alders – red (*Alnus rubra*), thin-leaf (*A. tenuifolia*)<br>Cottonwoods – narrow-leaf (*Populus angustifolia*), black (*P. balsamifera*)<br>Willows- peach-leaf (*Salix amygdaloides*), Sitka (*S. sitchensis*), Pacific (*S. lasiandra*), Aspen - (*Populus tremuloides*), Water Birch (*Betula occidentalis*)<br>YES = Category II NO = go to SC 5.5 | **Cat. II** |
| SC 5.5 Is the forested component of the wetland within the "100 year floodplain" of a river or stream?<br>YES = Category II | **Cat. II** |
| **Category of wetland based on Special Characteristics**<br>*Choose the "highest" rating if wetland falls into several categories.*<br>If you answered NO for all types enter "Not Applicable" on p. 1 | N/A |

# WETLAND RATING FORM – EASTERN WASHINGTON

**Wetland Name:** Wetland 31 **Date:** 5/3/2006

Name of wetland (if known): Thorn Creek Rd to Moscow (MAP in REPORT)

Location: SEC: ___ TWNSHP: __ RNGE: __ (attach map with outline of wetland to rating form)

Person(s) Rating Wetland: S. Gilmore Affiliation: RPU Date of site visit: 2004+2005

## SUMMARY OF RATING

Updated map 2014

**Category based on FUNCTIONS provided by wetland**

**I___ II___ III___ IV✓**

| Category I = Score >70<br>Category II = Score 51-69<br>Category III = Score 30-50<br>Category IV = Score < 30 | Score for "Water Quality" Functions | 10 |
|---|---|---|
| | Score for Hydrologic Functions | 6 |
| | Score for Habitat Functions | 5 |
| | **TOTAL score for functions** | 21 |

**Category based on SPECIAL CHARACTERISTICS of wetland**

**I___ II___ III___ Does not Apply✓**

**Final Category (choose the "highest" category from above)** IV

**Check the appropriate type and class of wetland being rated.**

| Wetland Type | | Wetland Class | |
|---|---|---|---|
| Vernal Pool | | Depressional | |
| Alkali | | Riverine | |
| Natural Heritage Wetland | | Lake-fringe | |
| Bog | | Slope | ✓ |
| Forest | | | |
| None of the above | ✓ | | |

## Does the wetland being rated meet any of the criteria below? W31

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

| Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating | YES | NO |
|---|---|---|
| **A1.** *Has the wetland been documented as a habitat for any Federally listed Threatened or Endangered plant or animal species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database. | | ✓ |
| **A2.** *Has the wetland been documented as habitat for any State listed Threatened or Endangered plant or animal species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. | | ✓ |
| **A3.** Does the wetland contain individuals of **Priority species** listed by the WDFW for the state? | | ✓ |
| **A4.** Does the wetland have a **local significance** in addition to its functions. For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance. | | ✓ |

## To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 20 for more detailed instructions on classifying wetlands.

## Classification of Vegetated Wetlands for Eastern Washington

**Wetland Name:** W31 **Date:** 5/3/2006

1. Does the wetland **meet both** of the following criteria?
   ___The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) where at least 20 acres (8 ha) are permanently inundated (ponded or flooded);
   ___At least 30% of the open water area is deeper than 3 m (10 ft)?

   (NO) – go to Step 2 **YES** – The wetland class is **Lake-fringe (lacustrine fringe)**

2. Does the wetland **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**?
   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 <3ft diameter and less than a foot deep).*

   NO - go to Step 3 (YES) – The wetland class is **Slope**

3. Is the wetland in a valley or stream channel where it gets inundated by overbank flooding from that stream or river? In general, the flooding should occur at least once every ten years to answer "yes." *The wetland can contain depressions that are filled with water when the river is not flooding.*

   (NO) - go to Step 4 **YES** – The wetland class is **Riverine**

4. Is the wetland in a topographic depression, outside areas that are inundated by overbank flooding, in which water ponds, or is saturated to the surface, at some time of the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

   (NO) – go to Step 5 **YES** – The wetland class is **Depressional**

5. Your wetland seems to be difficult to classify. 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. Sometimes we find characteristics of several different hydrogeomorphic classes within one wetland boundary. If you have a wetland with several HGM classes present within its boundaries use the following table to identify the appropriate class to use for the rating system. 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 being rated.

| HGM Classes Within One Delineated Wetland Boundary | Class to Use in Rating if area of this class > 10% total |
|---|---|
| Slope + Riverine | Riverine |
| Slope + Depressional | Depressional |
| Slope + Lake-fringe | Lake-fringe |
| Depressional + Riverine (riverine is within boundary of depression) | Depressional |
| Depressional + Lake-fringe | Depressional |

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

W31

| S | Slope Wetlands | Points |
|---|---|---|
| | WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality | |
| S | **S 1.0 Does the wetland have the potential to improve water quality? *(see p.56)*** | |
| S | S 1.1 Characteristics of average slope of wetland:<br>Slope is1% or less *(a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance)* points = 3<br>Slope is between 1% and 2% points = (2)<br>Slope is more than 2% but less than 5% points = 1<br>Slope is 5% or greater points = 0 | 2 |
| S | S 1.2 The soil 2 inches below the surface is clay, organic, or smells anoxic (hydrogen sulfide or rotten eggs).<br>YES = 3 points NO = (0) points | 0 |
| S | S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants:<br>*Choose the points appropriate for the description that best fit conditions in the wetland. Dense vegetation means you have trouble seeing the soil surface.*<br>Dense, ungrazed, herbaceous vegetation > 90% of the wetland area points = 6<br>Dense, ungrazed, herbaceous vegetation > 1/2 of area points = (3)<br>Dense, woody, vegetation > ½ of area points = 2<br>Dense, ungrazed, herbaceous vegetation > 1/4 of area points = 1<br>Does not meet any of the criteria above for herbaceous vegetation points = 0 | 3 |
| S | **Total for S 1** *Add the points in the boxes above* | 5 |
| S | **S 2.0 Does the wetland have the opportunity to improve water quality? *(see p.58)***<br>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants.*<br>— Grazing in the wetland or within 150ft<br>— Wetland is a groundwater seep within the Reclamation Area<br>✓ Untreated stormwater flows through the wetland<br>✓ Tilled fields or orchards within 150 feet of wetland<br>— Residential, urban areas, or golf courses are within 150 ft upslope of wetland<br>— Other _____<br>**YES** multiplier is (2) **NO** multiplier is **1** | multiplier<br>2 |
| S | **TOTAL - Water Quality Functions** Multiply the score from S1 by the multiplier in S2<br>***Record score on p. 1 of field form*** | 10 |

| S | Slope Wetlands | Points |
|---|---|---|
| | HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation | |
| S | **S 3.0 Does the wetland have the potential to reduce flooding and stream erosion? *(see p.59)*** | |
| S | S 3.1 Characteristics of vegetation that reduce the velocity of surface flows during storms. *Choose the points appropriate for the description that best fit conditions in the wetland.*<br>Dense, uncut, **rigid** vegetation covers > 90% of the area of the wetland. (stems of plants should be thick enough (usually > 1/8in), or dense enough, to remain erect during surface flows) points = 6<br>Dense, uncut, **rigid** vegetation > 1/2 – 90% area of wetland points = (3)<br>Dense, uncut, **rigid** vegetation > 1/4 – 1/2 area points = 1<br>More than 1/4 of area is grazed, mowed, tilled or vegetation is not rigid points = 0 | 3 |
| S | S 3.2 Characteristics of slope wetland that holds back small amounts of flood flows:<br>The slope wetland has small surface depressions that can retain water over at least 10% of its area. YES points = 2<br>NO points = 0 | 0 |
| S | **Total for S3** *Add the points in the boxes above* | 3 |
| S | **S 4. 0 Does the wetland have the opportunity to reduce flooding and erosion? *(see p.61)***<br>*Answer NO if the major source of water is irrigation return flow (e.g. a seep that is on the downstream side of a dam or at the base of an irrigated field.*<br>Answer YES if the wetland is in a landscape position where the reduction in water velocity it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. *Note which of the following conditions apply.*<br>✓ Wetland has surface runoff that can cause flooding problems downgradient<br>— Other_____<br>**YES** multiplier is **2** **NO** multiplier is **1** | multiplier<br>2 |
| S | **TOTAL - Hydrologic Functions** Multiply the score from S3 by the multiplier in S4<br>***Record score on p. 1 of field form*** | 6 |

**Comments**

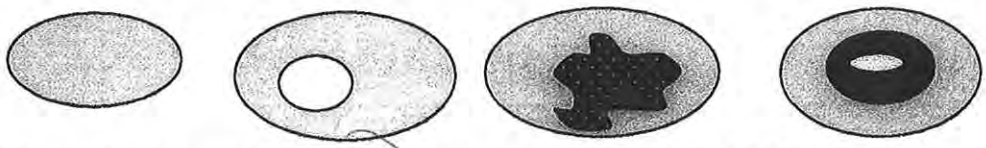
W31

| *These questions apply to wetlands of all HGM classes.* | Points |
|---|---|
| HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat | |
| **H 1. Does the wetland have the potential to provide habitat for many species?** | |
| H 1.1 Vegetation structure ***(see p.62)*** | |
| *Check the types of vegetation present if the type covers more than 10% of the area of the wetland or ¼ acre.* | |
| ____Aquatic bed | |
| ___/Emergent plants 0-12 inches high (0 – 30 cm) | |
| ___/Emergent plants >12 – 40 inches high (>30 – 100cm) | |
| ____Emergent plants > 40 inches high (> 100 cm) | |
| ____Scrub/shrub (areas where shrubs have >30% cover) Soft rush + reed canarygrass | |
| ____Forested (areas where trees have >30% cover) | |
| *Add the number of vegetation types that qualify. If you have:* | |
| 4-6 types *record* points = 3 | |
| 3 types points = 2 | |
| 2 types points = (1) | 1 |
| 1 type points = 0 | |
| H 1.2. Is one of the vegetation types "aquatic bed?" ***(see p .64)*** | |
| YES = 1 point NO = 0 points | 0 |
| H 1.3. Surface Water ***(see p.65)*** | |
| H 1.3.1 Does the wetland have areas of "open" water (without emergent or shrub plants) over at least ¼ acre or 10% of its area during the spring (March – early June) OR in early fall (August – end of September)? *Note: answer YES for Lake-fringe wetlands* | |
| YES = 3 points & **go to H 1.4** (NO) = go to H 1.3.2 | |
| H 1.3.2 Does the wetland have an intermittent or permanent stream within its boundaries, or along one side, that has an unvegetated bottom (*answer yes only if H 1.3.1 is NO*)? | |
| YES = 3 points (NO) = 0 points | 0 |
| H 1.4. Richness of Plant Species ***(see p. 66)*** | |
| Count the number of plant species in the wetland that cover at least 10 ft$^2$. (*different patches of the same species can be combined to meet the size threshold)* | |
| *You do not have to name the species.* | |
| *Do not include Eurasean Milfoil, reed canarygrass, purple loosestrife, Russian Olive, Phragmites ,Canadian Thistle, Yellow-flag Iris, and Salt Cedar (Tamarisk)* | |
| If you counted: > 9 species points = 2 | |
| 4-9 species points = 1 | 0 |
| # of species ____ < 4 species points = 0 points | |

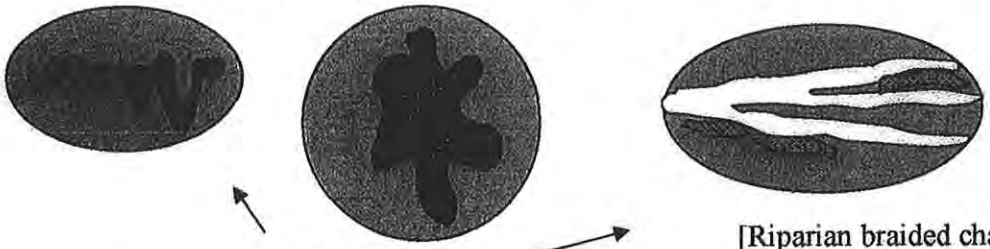
W31

H 1.5. Interspersion of habitats *(see p. 67)*

Decided from the diagrams below whether interspersion between types of vegetation (described in H 1.1), or vegetation types and un-vegetated areas (can include open water or mudflats) is high, medium, low, or none.



None = 0 points  Low = 1 point  Moderate = 2 points



High = 3 points  [Riparian braided channel]

NOTE: If you have four or more vegetation types or three vegetation types and open water the rating is always "high".

1

H 1.6. Special Habitat Features: *(see p. 68)*

*Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.*

____Loose rocks larger than 4" **or** large, downed, woody debris (>4in. diameter) within the area of surface ponding or in stream.

____Cattails or bulrushes are present within the wetland.

____Standing snags (diameter at the bottom > 4 inches) in the wetland or within 30 m (100 ft) of the edge.

____Emergent or shrub vegetation in areas that are permanently inundated/ponded. *The presence of "yellow flag" Iris is a good indicator of vegetation in areas permanently ponded.*

____Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) OR signs of recent beaver activity

____ Invasive species cover less than 20% in each stratum of vegetation

*Maximum score possible = 6*

0

**TOTAL** Potential to provide habitat
*Add the scores in the column above*

01

**Comments**

W31

| **H 2.0 Does the wetland have the opportunity to provide habitat for many species?** | |
|---|---|
| H 2.1 Buffers ***(see p. 71)***<br>*Choose the description that best represents condition of buffer of wetland. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."*<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No developed areas within undisturbed part of buffer. **(relatively undisturbed also means no-grazing)** **Points = 5**<br>— 330 ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. **Points = 4**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **Points = 4**<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . **Points = 3**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. **Points = 3**<br>**If buffer does not meet any of the criteria above**<br>— No paved areas (except paved trails) or buildings within 80ft (25 m) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— No paved areas or buildings within 170ft (50m) of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— Heavy grazing in buffer. **Points = 1**<br>— Vegetated buffers are <6.6ft wide (2m) for more than 95% of the circumference (e.g . tilled fields, paving, basalt bedrock extend to edge of wetland). **Points = 0**<br>— Buffer does not meet any of the criteria above. **Points = 1** | 0 |
| H 2.2 Wet Corridors ***(see p. 72)***<br>H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor at least ¼ mile long with surface water or flowing water throughout most of the year (> 9 months/yr)? (*dams, heavily used gravel roads, paved roads, fields tilled to edge of stream, or pasture to edge of stream are considered breaks in the corridor*).<br>YES = 4 points (go to H 2.3) NO = go to H 2.2.2<br>H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken, vegetated corridor, at least ¼ mile long with water flowing seasonally, **OR** a lake-fringe wetland without a "wet" corridor, **OR** a riverine wetland without a surface channel connecting to the stream?<br>YES = 2 points (go to H 2.3) NO go to H 2.2.3<br>H 2.2.3 Is the wetland within a 1/2 mile of any permanent stream, seasonal stream, or lake (*do not include man-made ditches*)?<br>YES = 1 point NO = 0 points | 1 |

W 31

| | |
|---|---|
| H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see p. 74)***<br>Which of the following priority habitats are within 330ft (100m) of the wetland?<br>*(see text for a more detailed description of these priority habitats)*<br>____**Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.<br>____**Aspen Stands:** Pure or mixed stands of aspen greater than 2 acres.<br>____**Cliffs:** Greater than 25 ft high and occurring below 5000 ft.<br>____**Old-growth forests:** (east of Cascade crest): In general, stands will be >150 years of age, with 10 trees/acrethat are > 21 in dbh, and 1 - 3 snags/acre > 12-14 in diameter.<br>____**Mature forests:** Stands with average diameters exceeding 21 in dbh; crown cover may be less that 100%; decay, 80 - 160 years old east of the Cascade crest.<br>____**Prairies and Steppe:** Relatively undisturbed areas (as indicated by dominance of native plants) where grasses and/or forbs form the natural climax plant community.<br>____**Shrub-steppe:** Tracts of land consisting of plant communities with one or more layers of perennial grasses and a conspicuous but discontinuous layer of shrubs.<br>____**Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft, composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.<br>____**Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages<br>____**Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.<br>____**Urban Natural Open Space**: A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other *priority habitats*, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.<br>____**Aspen Stands:** Pure or mixed stands of aspen greater than 0.8 ha (2 acres).<br><br>If wetland has **2 or more** Priority Habitats = **4 points**<br>If wetland has **1** Priority Habitat = **2 points**<br>No Priority habitats = 0 points | 0 |

**Comments**

W31

| | |
|---|---|
| H 2.4 Landscape *(choose the **one** description of the landscape around the wetland that best fits)* ***(see p. 76)***<br>— The wetland is in an area where annual rainfall is less than 12 inches, and its water regime is not influenced by irrigation practices, dams, or water control structures. *(Generally, this means outside boundaries of reclamation areas, irrigation district, or reservoirs)* points = 5<br>— There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing in the connection or an open water connection along a lake shore without heavy boat traffic are OK, but connections should NOT be bisected by paved roads, fill, fields, heavy boat traffic or other development). points = 5<br>✓ There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed? points = (2)<br>— There is at least 1 wetland within ½ mile. points = 1<br>— Does not meet any of the four criteria above points = 0 | 2 |
| **H 2.** TOTAL Score - opportunity for providing habitat *Add the scores in the column above* | 3 |
| **H 3.0 Does the wetland have indicators that its ability to provide habitat is reduced?** | |
| H 3.1 Indicator of reduced habitat functions ***(see p. 75)***<br>Do the areas of open water in the wetland have a resident population of carp (see text for indicators of the presence of carp)? *(NOTE: This question does not apply to reservoirs with water levels controlled by dams, such as the reservoirs on the Columbia and Snake Rivers)*<br>YES = **- 5 points** NO = 0 points | *Points will be subtracted*<br>0 |
| **Total Score for Habitat Functions** – *add the points for H 1, H 2, and H 3 and record the result on p. 1*<br>2+3+0 | 5 |

**Comments**

## CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS W31

***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.***

| **Wetland Type**<br>*Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.* | Category |
|---|---|
| **SC 1.0 Vernal pools** ***(see p. 79)***<br><br>Is the wetland **less than 4000 ft²**, and does it meet at least **two** of the following criteria?<br>— Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input<br>— Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *NOTE: If you find perennial, "obligate", wetland plants the wetland is probably NOT a vernal pool*<br>— The soil in the wetland are shallow (<1ft deep (30 cm)) and is underlain by an impermeable layer such as basalt or clay.<br>— Surface water is present for less than 120 days during the "wet" season.<br>YES = Go to SC 1.1 NO - *not a vernal pool*<br><br>SC 1.1 Is the vernal pool relatively undisturbed in February and March?<br>YES = Go to SC 1.2 NO - *categorize based on functions* | |
| SC 1.2 Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 miles (other wetlands, rivers, lakes etc.)?<br>YES = Category II NO = Category III | **Cat. II**<br>**Cat. III** |
| **SC 2.0 Alkali wetlands** ***(see p. 81)***<br><br>Does the wetland meets **one** of the following two criteria?<br>— The wetland has a conductivity > 3.0 mS/cm.<br>— The wetland has a conductivity between 2.0 - 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 2 for list of plants found in alkali systems).<br>— 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.<br><br>**OR** does the wetland meets two of the following three sub-criteria?<br>— Salt encrustations around more than 80% of the edge of the wetland<br>— More than ¾ of the plant cover consists of species listed on Table 2<br>— 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.<br><br>YES = Category I NO - *categorize based on functions* | **Cat. I** |

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**SC 3.0 Natural Heritage Wetlands** ***(see p. 81)***

Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.

SC 3.1 Is the wetland being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)* S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ___

YES____ – contact WNHP/DNR (see p. 79) and go to SC 3.2 NO ___

SC 3.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? **Cat. I**

YES = Category I NO ____

**SC 4.0 Bogs** ***(see p. 82)***

Does the wetland (or part of the wetland) meet both the criteria for soils and vegetation in bogs. *Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.*

SC 4.1. Does the wetland have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)?

Yes - go to SC 4.3 No - go to SC 4.2

SC 4.2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond??

Yes - go to SC 4.3 No - Is not a bog for rating

SC 4.3. Does the wetland have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?

Yes – Category I bog No - go to Q. 4.4 **Cat. I**

*NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.*

SC 4.4. Is the wetland forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover)?* **Cat. I**

Yes – Category I bog No - *categorize based on functions*

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**SC 5.0 Forested Wetlands** *(see p. 85)*

Does the wetland have an area of forest (*you should have identified a forested class, if present, in question H 1.1*) rooted within its boundary that meet **at least one** of the following three criteria?

— The wetland is within the "100 year" floodplain of a river or stream

— aspen (*Populus tremuloides*) are a dominant or co-dominant of the "woody" vegetation. (*Dominants means it represents at least 50% of the cover of woody species, co-dominant means it represents at least 20% of the total cover of woody species*)

— There is at least ¼ acre of trees (even in wetlands smaller than 2.5 acres) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW *(see p. 83)*

YES = go to SC 5.1 NO - *categorize based on functions*

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

Slow growing trees are: western red cedar (*Thuja plicata*), Alaska yellow cedar (*Chamaecyparis nootkatensis*), pine spp. mostly "white" pine (*Pinus monticola*), western hemlock (*Tsuga heterophylla*), Englemann spruce (*Picea engelmannii*).

YES = Category I NO = go to SC 5.2 **Cat. I**

SC 5.2 Does the wetland have aspen (*Populus tremuloides*) as a dominant or co-dominant species in the category of woody species? **Cat. I**

YES = Category I NO = go to SC 5.3

SC 5.3 Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are fast growing species.

Fast growing species are:

Alders – red (*Alnus rubra*), thin-leaf (*A. tenuifolia*)

Cottonwoods – narrow-leaf (*Populus angustifolia*), black (*P. balsamifera*)

Willows- peach-leaf (*Salix amygdaloides*), Sitka (*S. sitchensis*), Pacific (*S. lasiandra*), Aspen - (*Populus tremuloides*), Water Birch (*Betula occidentalis*)

YES = Category II NO = go to SC 5.5 **Cat. II**

SC 5.5 Is the forested component of the wetland within the "100 year floodplain" of a river or stream?

YES = Category II NO - *categorize based on functions* **Cat. II**

**Category of wetland based on Special Characteristics**

*Choose the "highest" rating if wetland falls into several categories.*

If you answered NO for all types enter "Not Applicable" on p.1

N/A

# WETLAND RATING FORM – EASTERN WASHINGTON

**Wetland Name:** Wetland 32 **Date:** 5/3/2006

Name of wetland (if known): Thorn Creek Rd to Moscow

Location: SEC: ___ TWNSHP: __ RNGE: ___ (attach map with outline of wetland to rating form) (MAP in Report)

Person(s) Rating Wetland: S. Gilmore Affiliation: RPU Date of site visit: 2004+2005

## SUMMARY OF RATING

updated MAP 2 of 4
3 of 4

**Category based on FUNCTIONS provided by wetland**

**I___ II___ III_✓_ IV___**

| |
|---|
| Category I = Score >70 |
| Category II = Score 51-69 |
| Category III = Score 30-50 |
| Category IV = Score < 30 |

| | |
|---|---|
| Score for "Water Quality" Functions | 18 |
| Score for Hydrologic Functions | 12 |
| Score for Habitat Functions | 15 |
| **TOTAL score for functions** | 45 |

**Category based on SPECIAL CHARACTERISTICS of wetland**

**I___ II___ III___ Does not Apply_✓_**

**Final Category (choose the "highest" category from above)** III

**Check the appropriate type and class of wetland being rated.**

| Wetland Type | | Wetland Class | |
|---|---|---|---|
| Vernal Pool | | Depressional | ✓ |
| Alkali | | Riverine | |
| Natural Heritage Wetland | | Lake-fringe | |
| Bog | | Slope | |
| Forest | | | |
| None of the above | ✓ | | |

W32

**Does the wetland being rated meet any of the criteria below?**

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

| Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating | YES | NO |
|---|---|---|
| **A1**. *Has the wetland been documented as a habitat for any Federally listed Threatened or Endangered plant or animal species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database. | | ✓ |
| **A2**. *Has the wetland been documented as habitat for any State listed Threatened or Endangered plant or animal species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. | | ✓ |
| **A3.** Does the wetland contain individuals of **Priority species** listed by the WDFW for the state? | | ✓ |
| **A4**. Does the wetland have a **local significance** in addition to its functions. For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance. | | ✓ |

**To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.**

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 20 for more detailed instructions on classifying wetlands.

## Classification of Vegetated Wetlands for Eastern Washington

**Wetland Name:** W32 **Date:** 5/3/2006 updated 4/3/2012

1. Does the wetland **meet both** of the following criteria?
   ___The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) where at least 20 acres (8 ha) are permanently inundated (ponded or flooded);
   ___At least 30% of the open water area is deeper than 3 m (10 ft)?

   NO – go to Step 2 **YES** – The wetland class is **Lake-fringe (lacustrine fringe)**

2. Does the wetland **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**?
   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 <3ft diameter and less than a foot deep).*

   NO - go to Step 3 **YES** – The wetland class is **Slope**

3. Is the wetland in a valley or stream channel where it gets inundated by overbank flooding from that stream or river? In general, the flooding should occur at least once every ten years to answer "yes." *The wetland can contain depressions that are filled with water when the river is not flooding.*

   NO - go to Step 4 **YES** – The wetland class is **Riverine**

4. Is the wetland in a topographic depression, outside areas that are inundated by overbank flooding, in which water ponds, or is saturated to the surface, at some time of the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

   NO – go to Step 5 **YES** – The wetland class is **Depressional**

5. Your wetland seems to be difficult to classify. 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. Sometimes we find characteristics of several different hydrogeomorphic classes within one wetland boundary. If you have a wetland with several HGM classes present within its boundaries use the following table to identify the appropriate class to use for the rating system. 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 being rated.

| HGM Classes Within One Delineated Wetland Boundary | Class to Use in Rating if area of this class > 10% total |
|---|---|
| Slope + Riverine | Riverine |
| Slope + Depressional | Depressional |
| Slope + Lake-fringe | Lake-fringe |
| Depressional + Riverine (riverine is within boundary of depression) | Depressional |
| Depressional + Lake-fringe | Depressional |

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

W.32

| D | Depressional Wetlands | Points |
|---|---|---|
| | WATER QUALITY FUNCTIONS - Indicators that the wetland functions to improve water quality | |
| D | **D 1.0 Does the wetland have the potential to improve water quality?** ***(see p. 32 in text)*** | |
| D | D 1.1 Characteristics of surface water flows out of the wetland:<br>Wetland has no surface water outlet - points = 5<br>Wetland has an intermittently flowing , or highly constricted, outlet – points = (3)<br>Wetland has a permanently flowing surface outlet – points = 1 | 3 |
| D | D 1.2 The soil 2 inches below the surface is clay, organic, or smells anoxic (hydrogen sulfide or rotten eggs).<br>YES points = 3<br>NO points = (0) | 0 |
| D | D 1.3 Characteristics of persistent vegetation **(emergent, shrub, and/or forest)**:<br>Wetland has persistent, ungrazed, vegetation for > 2/3 of area points = (5)<br>Wetland has persistent, ungrazed, vegetation from 1/3 to 2/3 of area points = 3<br>Wetland has persistent, ungrazed vegetation from 1/10 to < 1/3 of area points = 1<br>Wetland has persistent, ungrazed vegetation <1/10 of area points = 0 | 5 |
| D | D 1.4 Characteristics of seasonal ponding or inundation.<br>*This is the area of ponding that fluctuates every year. Do not count the area that is permanently ponded.*<br>Area seasonally ponded is > ½ total area of wetland points = 3<br>Area seasonally ponded is ¼ - ½ total area of wetland points = (1)<br>Area seasonally ponded is < ¼ total area of wetland points = 0<br>NOTE: *See text for indicators of seasonal and permanent inundation/flooding.* | 1 |
| D | **Total for D 1** *Add the points in the boxes above* | 9 |
| D | **D 2.0 Does the wetland have the opportunity to improve water quality?** ***(see p.38)***<br>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. *Note which of the following conditions provide the sources of pollutants.*<br>— Grazing in the wetland or within 150ft<br>— Wetland intercepts groundwater within the Reclamation Area<br>— Untreated stormwater flows into wetland<br>— Tilled fields or orchards within 150 feet of wetland<br>— Water from a stream or culvert flows into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging<br>— Residential, urban areas, golf courses are within 150 ft of wetland<br>— Other_____<br>**YES** multiplier is (2) **NO** multiplier is **1** | multiplier 2 |
| D | **TOTAL - Water Quality Functions** Multiply the score from D1 by the multiplier in D2<br>***Record score on p. 1 of field form*** | |

W32

| D | Depressional Wetlands | Points |
|---|---|---|
| | HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream erosion | |
| D | **D 3.0 Does the wetland have the <u>potential</u> to reduce flooding and stream erosion? *(see p. 39)*** | |
| D | D 3.1 Characteristics of surface water flows out of the wetland:<br>Wetland has no surface water outlet — points = 8<br>Wetland has an intermittently flowing, or highly constricted, outlet — points = (4)<br>Wetland has a permanently flowing surface outlet — points = 0 | 4 |
| D | D 3.2 Depth of storage during wet periods:<br>*Estimate the height of ponding above the surface of the wetland (see text for description of measuring height). In wetlands with permanent ponding, the surface is the lowest elevation of "permanent" water)*<br>Marks of ponding are at least 3 ft above the surface — points = 8<br>The wetland is a "headwater" wetland" *(see p. 39)* — points = 6<br>Marks are 2 ft to < 3 ft from surface — points = 6<br>Marks are 1 ft to < 2 ft from surface — points = 4<br>Marks are 6 in to < 1 ft from surface — points = (2)<br>No marks above 6 in. or wetland has only saturated soils — points = 0 | 2 |
| D | **Total for D 3** *Add the points in the boxes above* | 6 |
| D | **D 4.0 Does the wetland have the <u>opportunity</u> to reduce flooding and erosion? *(see p. 42)***<br>*Answer NO if the major source of water is groundwater, irrigation return flow, or water levels in the wetland are controlled by a reservoir.*<br>Answer YES if the wetland is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows.<br>*Note which of the following conditions apply.*<br>— Wetland is in a headwater of a river or stream that has flooding problems<br>— Wetland drains to a river or stream that has flooding problems<br>— Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems<br>— Other _____<br>**YES** multiplier is **2** **NO** multiplier is **1** | multiplier 2 |
| D | **TOTAL - Hydrologic Functions** Multiply the score from D3 by the multiplier in D4<br>***Record score on p. 1 of field form*** | 12 |

**Comments**

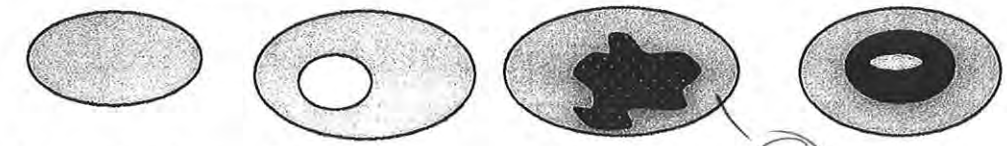
W32

| *These questions apply to wetlands of all HGM classes.* | Points |
|---|---|
| HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat | |
| **H 1. Does the wetland have the <u>potential</u> to provide habitat for many species?** | |
| H 1.1 <u>Vegetation structure</u> ***(see p.62)***<br>*Check the types of vegetation present if the type covers more than 10% of the area of the wetland or ¼ acre.*<br>____Aquatic bed<br>____Emergent plants 0-12 inches high (0 – 30 cm)<br>__/__Emergent plants >12 – 40 inches high (>30 – 100cm)<br>____Emergent plants > 40 inches high (> 100 cm)<br>__/__Scrub/shrub (areas where shrubs have >30% cover)<br>____Forested (areas where trees have >30% cover)<br>*Add the number of vegetation types that qualify. If you have:*<br>4-6 types *record* points = 3<br>3 types points = 2<br>2 types points = (1)<br>1 type points = 0 | 1 |
| H 1.2. Is one of the vegetation types "aquatic bed?" ***(see p .64)***<br>YES = 1 point NO = (0) points | 0 |
| H 1.3. <u>Surface Water</u> ***(see p.65)***<br>H 1.3.1 Does the wetland have areas of "open" water (without emergent or shrub plants) over at least ¼ acre or 10% of its area during the spring (March – early June) OR in early fall (August – end of September)? *Note: answer YES for Lake-fringe wetlands*<br>YES = 3 points & **go to H 1.4** (NO) = go to H 1.3.2<br>H 1.3.2 Does the wetland have an intermittent or permanent stream within its boundaries, or along one side, that has an unvegetated bottom (*answer yes only if H 1.3.1 is NO*)?<br>(YES) = 3 points NO = 0 points | 3 |
| H 1.4. <u>Richness of Plant Species</u> ***(see p. 66)***<br>Count the number of plant species in the wetland that cover at least 10 ft$^2$. (*different patches of the same species can be combined to meet the size threshold)*<br>*You do not have to name the species.*<br>*Do not include Eurasean Milfoil, reed canarygrass, purple loosestrife, Russian Olive, Phragmites ,Canadian Thistle, Yellow-flag Iris, and Salt Cedar (Tamarisk)*<br>If you counted: > 9 species points = 2<br>4-9 species points = 1<br># of species ____ < 4 species points = (0 points) | 0 |

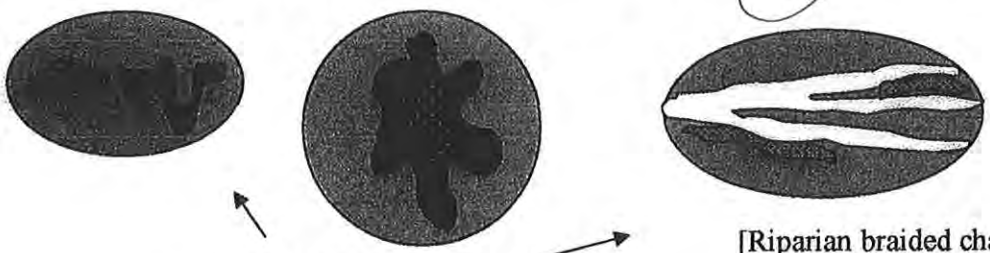
W32

H 1.5. Interspersion of habitats *(see p. 67)*

Decided from the diagrams below whether interspersion between types of vegetation (described in H 1.1), or vegetation types and un-vegetated areas (can include open water or mudflats) is high, medium, low, or none.



None = 0 points  Low = 1 point  Moderate = 2 points



High = 3 points  [Riparian braided channel]

NOTE: If you have four or more vegetation types or three vegetation types and open water the rating is always "high".

2

H 1.6. Special Habitat Features: *(see p. 68)*

*Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.*

____Loose rocks larger than 4" **or** large, downed, woody debris (>4in. diameter) within the area of surface ponding or in stream.

____Cattails or bulrushes are present within the wetland.

____✓Standing snags (diameter at the bottom > 4 inches) in the wetland or within 30 m (100 ft) of the edge.

____Emergent or shrub vegetation in areas that are permanently inundated/ponded. *The presence of "yellow flag" Iris is a good indicator of vegetation in areas permanently ponded.*

____Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) OR signs of recent beaver activity

____ Invasive species cover less than 20% in each stratum of vegetation

*Maximum score possible = 6*

1

**TOTAL** Potential to provide habitat
*Add the scores in the column above*

3

**Comments**

W32

| **H 2.0 Does the wetland have the opportunity to provide habitat for many species?** | |
|---|---|
| H 2.1 Buffers ***(see p. 71)***<br>*Choose the description that best represents condition of buffer of wetland. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."*<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No developed areas within undisturbed part of buffer. **(relatively undisturbed also means no-grazing)** **Points = 5**<br>— 330 ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. **Points = 4**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **Points = 4**<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . **Points = 3**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. **Points = 3**<br>**If buffer does not meet any of the criteria above**<br>— No paved areas (except paved trails) or buildings within 80ft (25 m) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— No paved areas or buildings within 170ft (50m) of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— Heavy grazing in buffer. **Points = 1**<br>✓ Vegetated buffers are <6.6ft wide (2m) for more than 95% of the circumference (e.g . tilled fields, paving, basalt bedrock extend to edge of wetland). **Points = 0**<br>— Buffer does not meet any of the criteria above. **Points = 1** | 0 |
| H 2.2 Wet Corridors ***(see p. 72)***<br>H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor at least ¼ mile long with surface water or flowing water throughout most of the year (> 9 months/yr)? (*dams, heavily used gravel roads, paved roads, fields tilled to edge of stream, or pasture to edge of stream are considered breaks in the corridor*).<br>YES = 4 points (go to H 2.3) NO = go to H 2.2.2<br>H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken, vegetated corridor, at least ¼ mile long with water flowing seasonally, **OR** a lake-fringe wetland without a "wet" corridor, **OR** a riverine wetland without a surface channel connecting to the stream?<br>YES = 2 points (go to H 2.3) NO go to H 2.2.3<br>H 2.2.3 Is the wetland within a 1/2 mile of any permanent stream, seasonal stream, or lake (*do not include man-made ditches*)?<br>YES = 1 point NO = 0 points | 4 |

W32

H 2.3 Near or adjacent to other priority habitats listed by WDFW *(see p. 74)*
Which of the following priority habitats are within 330ft (100m) of the wetland?
*(see text for a more detailed description of these priority habitats)*

__/__**Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
____**Aspen Stands:** Pure or mixed stands of aspen greater than 2 acres.
____**Cliffs:** Greater than 25 ft high and occurring below 5000 ft.
____**Old-growth forests:** (east of Cascade crest): In general, stands will be >150 years of age, with 10 trees/acrethat are > 21 in dbh, and 1 - 3 snags/acre > 12-14 in diameter.
____**Mature forests:** Stands with average diameters exceeding 21 in dbh; crown cover may be less that 100%; decay, 80 - 160 years old east of the Cascade crest.
____**Prairies and Steppe:** Relatively undisturbed areas (as indicated by dominance of native plants) where grasses and/or forbs form the natural climax plant community.
____**Shrub-steppe:** Tracts of land consisting of plant communities with one or more layers of perennial grasses and a conspicuous but discontinuous layer of shrubs.
____**Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft, composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
____**Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages
____**Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.
____**Urban Natural Open Space**: A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other *priority habitats*, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.
____**Aspen Stands:** Pure or mixed stands of aspen greater than 0.8 ha (2 acres).

If wetland has **2 or more** Priority Habitats = **4 points**
If wetland has **1** Priority Habitat = **2 points**
No Priority habitats = 0 points

2

**Comments**

W 32

| | |
|---|---|
| H 2.4 Landscape *(choose the **one** description of the landscape around the wetland that best fits)* ***(see p. 76)***<br>— The wetland is in an area where annual rainfall is less than 12 inches, and its water regime is not influenced by irrigation practices, dams, or water control structures. *(Generally, this means outside boundaries of reclamation areas, irrigation district, or reservoirs)* points = 5<br>— There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing in the connection or an open water connection along a lake shore without heavy boat traffic are OK, but connections should NOT be bisected by paved roads, fill, fields, heavy boat traffic or other development). points = 5<br>X There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed? points = 2<br>— There is at least 1 wetland within ½ mile. points = 1<br>— Does not meet any of the four criteria above points = 0 | 2 |
| **H 2.** TOTAL Score - opportunity for providing habitat *Add the scores in the column above* | 8 |
| **H 3.0 Does the wetland have indicators that its ability to provide habitat is reduced?** | |
| H 3.1 Indicator of reduced habitat functions ***(see p. 75)***<br>Do the areas of open water in the wetland have a resident population of carp (see text for indicators of the presence of carp)? *(NOTE: This question does not apply to reservoirs with water levels controlled by dams, such as the reservoirs on the Columbia and Snake Rivers)*<br>YES = **- 5 points** NO = 0 points | *Points will be subtracted*<br>0 |
| **Total Score for Habitat Functions** – *add the points for H 1, H 2, and H 3 and record the result on p. 1*<br>7 + 8 + 0 | 15 |

**Comments**

W32

# 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.***

| **Wetland Type**<br>*Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.* | Category |
|---|---|
| **SC 1.0 Vernal pools** ***(see p. 79)***<br>Is the wetland **less than 4000 ft²**, and does it meet at least **two** of the following criteria?<br>— Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input<br>— Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *NOTE: If you find perennial, "obligate", wetland plants the wetland is probably NOT a vernal pool*<br>— The soil in the wetland are shallow (<1ft deep (30 cm)) and is underlain by an impermeable layer such as basalt or clay.<br>— Surface water is present for less than 120 days during the "wet" season.<br>YES = Go to SC 1.1 NO - *not a vernal pool*<br>SC 1.1 Is the vernal pool relatively undisturbed in February and March?<br>YES = Go to SC 1.2 NO - *categorize based on functions* | |
| SC 1.2 Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 miles (other wetlands, rivers, lakes etc.)?<br>YES = Category II NO = Category III | **Cat. II**<br>**Cat. III** |
| **SC 2.0 Alkali wetlands** ***(see p. 81)***<br>Does the wetland meets **one** of the following two criteria?<br>— The wetland has a conductivity > 3.0 mS/cm.<br>— The wetland has a conductivity between 2.0 - 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 2 for list of plants found in alkali systems).<br>— 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.<br>**OR** does the wetland meets two of the following three sub-criteria?<br>— Salt encrustations around more than 80% of the edge of the wetland<br>— More than ¾ of the plant cover consists of species listed on Table 2<br>— 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.<br>YES = Category I NO - *categorize based on functions* | **Cat. I** |

N32

**SC 3.0 Natural Heritage Wetlands** *(see p. 81)*

Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.

SC 3.1 Is the wetland being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)* S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ___

YES____ – contact WNHP/DNR (see p. 79) and go to SC 3.2 NO ___

SC 3.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? **Cat. I**

YES = Category I NO ____

**SC 4.0 Bogs** *(see p. 82)*

Does the wetland (or part of the wetland) meet both the criteria for soils and vegetation in bogs. *Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.*

SC 4.1. Does the wetland have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)?

Yes - go to SC 4.3 No - go to SC 4.2

SC 4.2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond??

Yes - go to SC 4.3 No - Is not a bog for rating

SC 4.3. Does the wetland have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?

Yes – Category I bog No - go to Q. 4.4 **Cat. I**

*NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.*

SC 4.4. Is the wetland forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover)?* **Cat. I**

Yes – Category I bog No - *categorize based on functions*

W32

| | |
|---|---|
| **SC 5.0 Forested Wetlands** ***(see p. 85)***<br>Does the wetland have an area of forest (*you should have identified a forested class, if present, in question H 1.1*) rooted within its boundary that meet **at least one** of the following three criteria?<br>— The wetland is within the "100 year" floodplain of a river or stream<br>— aspen (*Populus tremuloides*) are a dominant or co-dominant of the "woody" vegetation. (*Dominants means it represents at least 50% of the cover of woody species, co-dominant means it represents at least 20% of the total cover of woody species*)<br>— There is at least ¼ acre of trees (even in wetlands smaller than 2.5 acres) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW *(see p. 83)*<br>YES = go to SC 5.1 NO - *categorize based on functions* | |
| 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<br>Slow growing trees are: western red cedar (*Thuja plicata*), Alaska yellow cedar (*Chamaecyparis nootkatensis*), pine spp. mostly "white" pine (*Pinus monticola*), western hemlock (*Tsuga heterophylla*), Englemann spruce (*Picea engelmannii*).<br>YES = Category I NO = go to SC 5.2 | **Cat. I** |
| SC 5.2 Does the wetland have aspen (*Populus tremuloides*) as a dominant or co-dominant species in the category of woody species?<br>YES = Category I NO = go to SC 5.3 | **Cat. I** |
| SC 5.3 Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are fast growing species.<br>Fast growing species are:<br>Alders – red (*Alnus rubra*), thin-leaf (*A. tenuifolia*)<br>Cottonwoods – narrow-leaf (*Populus angustifolia*), black (*P. balsamifera*)<br>Willows- peach-leaf (*Salix amygdaloides*), Sitka (*S. sitchensis*), Pacific (*S. lasiandra*), Aspen - (*Populus tremuloides*), Water Birch (*Betula occidentalis*)<br>YES = Category II NO = go to SC 5.5 | **Cat. II** |
| SC 5.5 Is the forested component of the wetland within the "100 year floodplain" of a river or stream?<br>YES = Category II NO - *categorize based on functions* | **Cat. II** |
| **Category of wetland based on Special Characteristics**<br>*Choose the "highest" rating if wetland falls into several categories.*<br>If you answered NO for all types enter "Not Applicable" on p.1 | N/A |

Wetland name or number W33

# WETLAND RATING FORM – EASTERN WASHINGTON

Version 2 - Updated June 2006 to increase accuracy and reproducibility among users
Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Thorncreek Road + Moss Date of site visit: 2004-2005

Rated by S. Gilmore Trained by Ecology? Yes ✓ No ___ Date of training 2007

SEC: ___ TWNSHP: ___ RNGE: ___ Is S/T/R in Appendix D? Yes ___ No ✓

**Map of wetland unit: Figure** 3of4 **Estimated size** <0.5 Ac

## SUMMARY OF RATING

### Category based on FUNCTIONS provided by wetland

**I**___ **II**___ **III**✓ **IV**___

| |
|---|
| Category I = Score >=70 |
| Category II = Score 51-69 |
| Category III = Score 30-50 |
| Category IV = Score < 30 |

| | |
|---|---|
| Score for "Water Quality" Functions | 16 |
| Score for Hydrologic Functions | 8 |
| Score for Habitat Functions | 8 |
| **TOTAL score for functions** | |

### Category based on SPECIAL CHARACTERISTICS of wetland

**I**___ **II**___ **III**___ **Does not Apply**✓

### Final Category (choose the "highest" category from above)

III

**Summary of basic information about the wetland unit**

| Wetland Type | | Wetland Class | |
|---|---|---|---|
| Vernal Pool | | Depressional | ✓ |
| Alkali | | Riverine | |
| Natural Heritage Wetland | | Lake-fringe | |
| Bog | | Slope | |
| Forest | | | |
| None of the above | ✓ | Check if unit has multiple HGM classes present | ✓ |

Wetland name or number 33

## Does the wetland being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

| Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating | YES | NO |
|---|---|---|
| SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?*<br>For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database. | | ✓ |
| SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?*<br>For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form). | | ✓ |
| SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?* | | ✓ |
| SP4. *Does the wetland unit have a local significance in addition to its functions*?<br>For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance. | | ✓ |

## To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 20 for more detailed instructions on classifying wetlands.

Wetland name or number 33

## Classification of Vegetated Wetlands for Eastern Washington

**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 1-7 apply, and go to Question 8.**

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

___The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

___At least 30% of the open water area is deeper than 3 m (10 ft)?

(NO) – go to Step 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**?

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 <3ft diameter and less than a foot deep).*

NO - go to Step 3 (YES) – The wetland class is **Slope**

**3.** Is the entire wetland unit in a valley or stream channel where it gets inundated by overbank flooding from that stream or river? In general, the flooding should occur at least once every ten years to answer "yes." *The wetland can contain depressions that are filled with water when the river is not flooding.*

(NO) - go to Step 4 **YES** – The wetland class is **Riverine**

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

NO – go to Step 5 (YES) – The wetland class is **Depressional** ponds @ constriction Below Road

**5.** Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. 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 1-7 APPLY TO DIFFERENT AREAS IN THE 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 your wetland. 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 class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

Wetland name or number 33

| HGM Classes Within One Delineated Wetland Boundary | Class to Use for Rating |
|---|---|
| Slope + Riverine | Riverine |
| Slope + Depressional | Depressional ✓ |
| Slope + Lake-fringe | Lake-fringe |
| Depressional + Riverine (riverine is within boundary of depression) | Depressional |
| Depressional + Lake-fringe | Depressional |

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

Wetland name or number 33

| | Depressional Wetlands<br>WATER QUALITY FUNCTIONS - Indicators that the wetland functions to improve water quality | Points (only 1 score per box) |
|---|---|---|
| D | **D 1.0 Does the wetland unit have the <u>potential</u> to improve water quality?** | *(see p. 38)* |
| D | D 1.1 Characteristics of surface water flows out of the wetland unit:<br>Wetland has no surface water outlet - points = 5<br>Wetland has an intermittently flowing outlet points = (3)<br>Wetland has a highly constricted permanently flowing outlet points = 3<br>Wetland has a permanently flowing surface outlet points = 1 | 3 |
| D | D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic *(use NRCS definitions of soil types)*<br>YES points = 3<br>NO points = (0) | 0 |
| D | D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)<br>Wetland has persistent, ungrazed, vegetation for > 2/3 of area points = (5)<br>Wetland has persistent, ungrazed, vegetation from 1/3 to 2/3 of area points = 3<br>Wetland has persistent, ungrazed vegetation from 1/10 to < 1/3 of area points = 1<br>Wetland has persistent, ungrazed vegetation <1/10 of area points = 0<br>Map of Cowardin vegetation classes | Figure ___<br>5 |
| D | D 1.4 Characteristics of seasonal ponding or inundation.<br>*This is the area of ponding that fluctuates every year. Do not count the area that is permanently ponded.*<br>Area seasonally ponded is > ½ total area of wetland points = 3<br>Area seasonally ponded is ¼ - ½ total area of wetland points = 1<br>Area seasonally ponded is < ¼ total area of wetland points = (0)<br>NOTE: *See text for indicators of seasonal and permanent inundation/flooding.*<br>Map of Hydroperiods | Figure ___<br>0 |
| D | **Total for D 1** *Add the points in the boxes above* | 8 |
| D | **D 2. Does the wetland unit have the <u>opportunity</u> to improve water quality?**<br>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.*<br>✓ Grazing in the wetland or within 150 ft<br>✓ Untreated stormwater discharges to wetland<br>✓ Tilled fields or orchards within 150 ft of wetland<br>✓ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging<br>— Residential, urban areas, golf courses are within 150 ft of wetland<br>— Wetland is fed by groundwater high in phosphorus or nitrogen<br>— Other_____<br>**YES** multiplier is (2) **NO** multiplier is **1** | multiplier<br>2 |
| D | **<u>TOTAL</u> - Water Quality Functions** Multiply the score from D1 by the multiplier in D2<br>***Record score on p. 1 of field form*** | 16 |

Wetland name or number 33

| | Depressional Wetlands<br>HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream erosion | Points (only 1 score per box) |
|---|---|---|
| D | **D 3.0 Does the wetland unit have the potential to reduce flooding and stream erosion?** | *(see p. 39)* |
| D | D 3.1 Characteristics of surface water flows out of the wetland unit:<br>Wetland has no surface water outlet — points = 8<br>Wetland has an intermittently flowing outlet — points = (4)<br>Wetland has a highly constricted permanently flowing outlet — points = 4<br>Wetland has a permanently flowing surface outlet — points = 0 | 4 |
| D | D 3.2 Depth of storage during wet periods:<br>*Estimate the height of ponding above the surface of the wetland (see text for description of measuring height). In wetlands with permanent ponding, the surface is the lowest elevation of "permanent" water)*<br>Marks of ponding are at least 3 ft above the surface — points = 8<br>The wetland is a "headwater" wetland" *(see p. 39)* — points = 6<br>Marks are 2 ft to < 3 ft from surface — points = 6<br>Marks are 1 ft to < 2 ft from surface — points = 4<br>Marks are 6 in to < 1 ft from surface — points = 2<br>No marks above 6 in. or wetland has only saturated soils — points = (0) | 0 |
| D | **Total for D 3** *Add the points in the boxes above* | 4 |
| D | **D 4.0 Does the wetland unit have the opportunity to reduce flooding and erosion?** *(see p. 42)*<br>*Answer NO if the major source of water is groundwater, irrigation return flow, or water levels in the wetland are controlled by a reservoir.*<br>Answer YES if the wetland is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. *Note which of the following conditions apply.*<br>— Wetland is in a headwater of a river or stream that has flooding problems<br>— ✓ Wetland drains to a river or stream that has flooding problems<br>— Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems<br>— Other _____<br>**YES** multiplier is (2) **NO** multiplier is **1** | multiplier 2 |
| D | **TOTAL - Hydrologic Functions** Multiply the score from D3 by the multiplier in D4<br>***Record score on p. 1 of field form*** | 8 |

**Comments**

Wetland name or number 33

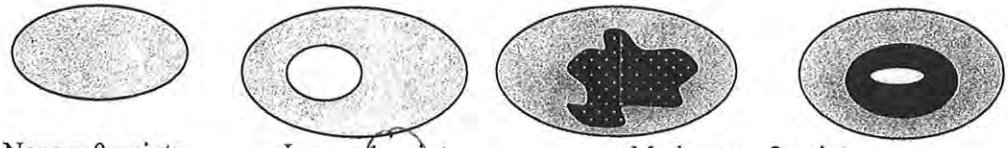
| *These questions apply to wetlands of all HGM classes.* HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat | Points (only 1 score per box) |
|---|---|
| **H 1. Does the wetland unit have the potential to provide habitat for many species?** | |
| H 1.1 Categories of vegetation structure *(see p.62)*<br>*Check the vegetation classes (as defined by Cowardin) and heights of emergents present. Size threshold for each class or height category is ¼ acre or more than 10% of the area if unit is < 2.5 acres.*<br>___Aquatic bed<br>___Emergent plants 0-12 in. (0 – 30 cm) high are the highest layer and have > 30% cover<br>__/__Emergent plants >12 – 40 in.(>30 – 100cm) high are the highest layer with >30% cover<br>__/__Emergent plants > 40 in.(> 100cm) high are the highest layer with >30% cover<br>___Scrub/shrub (areas where shrubs have >30% cover)<br>___Forested (areas where trees have >30% cover)<br>*Add the number of vegetation types that qualify. If you have:*<br>4-6 types points = 3<br>3 types points = 2<br>2 types points = (1)<br>1 type points = 0<br>Map of Cowardin vegetation classes and areas with different heights of emergents | Figure ___<br>1 |
| H 1.2. Is one of the vegetation types "aquatic bed?" *(see p .64)*<br>YES = 1 point NO = (0) points | 0 |
| H 1.3. Surface Water *(see p.65)*<br>H 1.3.1 Does the unit have areas of "open" water (without herbaceous or shrub plants) over at least ¼ acre or 10% of its area during the spring (March – early June) OR in early fall (August – end of September)? *Note: answer YES for Lake-fringe wetlands*<br>YES = 3 points & **go to H 1.4** (NO) = go to H 1.3.2<br>H 1.3.2 Does the unit have an intermittent or permanent stream within its boundaries, or along one side, over at least ¼ acre or 10% of its area, AND that has an unvegetated bottom (*answer yes only if H 1.3.1 is NO*)?<br>YES = (3) points NO = 0 points<br>Map showing areas of open water | Figure ___<br>3 |
| H 1.4. Richness of Plant Species *(see p. 66)*<br>Count the number of plant species in the wetland that cover at least 10 ft$^2$. (*different patches of the same species can be combined to meet the size threshold)*<br>*You do not have to name the species.*<br>*Do not include Eurasean Milfoil, reed canarygrass, purple loosestrife, Russian Olive, Phragmites ,Canadian Thistle, Yellow-flag Iris, and Salt Cedar (Tamarisk)*<br>If you counted: > 9 species points = 2<br>4-9 species points = 1<br># of species ____ ≤ 4 species points = 0 points<br>*List species below if you wish* | 0 |

Wetland name or number 33

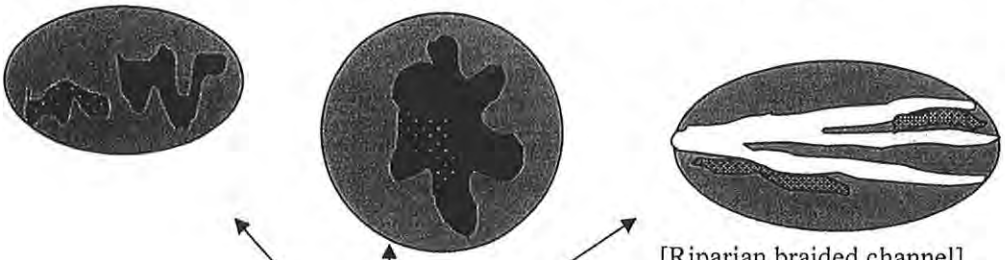
H 1.5. Interspersion of habitats *(see p. 67)*

Decided from the diagrams below whether interspersion between categories of vegetation (described in H 1.1), or categories and un-vegetated areas (can include open water or mudflats) is high, medium, low, or none.

Figure ___



None = 0 points Low = 1 point Moderate = 2 points



[Riparian braided channel]

High = 3 points

NOTE: If you have four or more vegetation categories or three vegetation categories and open water the rating is always "high". Use maps from H1.1 and H1.3

1

H 1.6. Special Habitat Features: *(see p. 68)*

*Check the habitat features that are present in the wetland unit. The number of checks is the number of points you put into the next column.*

____Loose rocks larger than 4" **or** large, downed, woody debris (>4in. diameter) within the area of surface ponding or in stream.

____Cattails or bulrushes are present within the unit.

____Standing snags (diameter at the bottom > 4 inches) in the wetland unit or within 30 m (100ft) of the edge.

____Emergent or shrub vegetation in areas that are permanently inundated/ponded. *The presence of "yellow flag" Iris is a good indicator of vegetation in areas permanently ponded.*

____Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) OR signs of recent beaver activity

____ Invasive species cover less than 20% in each stratum of vegetation *(canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)*

*Maximum score possible = 6*

0

**TOTAL** Potential to provide habitat
*Add the scores in the column above*

5

**Comments**

Wetland name or number 33

**H 2.0 Does the wetland have the opportunity to provide habitat for many species?**

H 2.1 Buffers *(see p. 71)*

*Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed." Relatively undisturbed also means no grazing, no landscaping, no daily human use, and no structures or paving within undisturbed part of buffer.*

— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference **Points = 5**

— 330 ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. **Points = 4**

— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **Points = 4**

— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . **Points = 3**

— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. **Points = 3**

**If buffer does not meet any of the criteria above**

— No paved areas (except paved trails) or buildings within 80ft (25 m) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**

— No paved areas or buildings within 170ft (50m) of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**

— Heavy grazing in buffer. **Points = 1**

✓ Vegetated buffers are <6.6ft wide (2m) for more than 95% of the circumference (e.g . tilled fields, paving, basalt bedrock extend to edge of wetland). **Points = 0**

— Buffer does not meet any of the criteria above. **Points = 1**

Aerial photo showing buffers

Figure ___

0

H 2.2 Wet Corridors *(see p. 72)*

H 2.2.1 Is the wetland unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor at least ¼ mile long with surface water or flowing water throughout most of the year (> 9 months/yr)? (*dams, heavily used gravel roads, paved roads, fields tilled to edge of stream, or pasture to edge of stream are considered breaks in the corridor*).

YES = 4 points (go to H 2.3) (NO) = go to H 2.2.2

H 2.2.2 Is the unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor, at least ¼ mile long with water flowing seasonally, **OR** a lake-fringe wetland without a "wet" corridor, **OR** a riverine wetland without a surface channel connecting to the stream?

YES = 2 points (go to H 2.3) NO go to H 2.2.3

1

H 2.2.3 Is the wetland within a 1/2 mile of any permanent stream, seasonal stream, or lake (*do not include man-made ditches*)?

YES = (1 point) NO = 0 points

Wetland name or number 33

H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm )***

Which of the following priority habitats are within 330ft (100m) of the wetland unit? *NOTE: the connections to the habitats can be disturbed.*

____**Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).

____**Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).

____ **Eastside Steppe:** Non-forested vegetation type dominated by broadleaf herbaceous flora (*(full description of herbaceous species found here are in WDFW PHS report p. 153*).

____**Old-growth/Mature forests (east of Cascade crest):** (*full descriptions in WDFW PHS report p. 157*). Old-growth: Stands are > 150 yrs in age; may be variable in tree species composition and structural characteristics due to the influence of fire, climate, and soils. Mature: Stands 80 – 160 yrs old. Decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.

____**Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).

____ **Juniper Savannah**: All juniper woodlands (*SE part of state only; check map*)

____ **Shrub-steppe**: A nonforested vegetation type consisting of one or more layers of perennial bunchgrasses and a conspicuous but discontinuous layer of shrubs (see Eastside Steppe for sites with little or no shrub cover).

____**Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

____Inland Dunes This placeholder is for a new priority habitat that will capture areas known as Inland Dunes. A definition will be developed later in Fall 2008. *(check WDFW web site)*

____**Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

____**Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

____**Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.

____**Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

____**Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 30 cm (12 in) in eastern Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.

If wetland has **2 or more** Priority Habitats = **4 points**
If wetland has **1** Priority Habitat = **2 points**
No Priority habitats = **0 points** 0

*Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)*

Wetland name or number 33

| | |
|---|---|
| H 2.4 Landscape *(choose the **one** description of the landscape around the wetland that best fits)* ***(see p. 76)*** <br><br>— The wetland unit is in an area where annual rainfall is less than 12 inches, and its water regime is not influenced by irrigation practices, dams, or water control structures. (*Generally, this means outside boundaries of reclamation areas, irrigation district, or reservoirs* ) **points = 5** <br>— There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing in the connection or an open water connection along a lake shore without heavy boat traffic are OK, but connections should NOT be bisected by paved roads, fill, fields, heavy boat traffic or other development) **points = 5** <br>✓ There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed? **points = 2** <br>— There is at least 1 wetland within ½ mile. **points = 1** <br>— Does not meet any of the four criteria above **points = 0** | 2 |
| **H 2.** TOTAL Score - opportunity for providing habitat *Add the scores in the column above* | 3 |
| **H 3.0 Does the wetland unit have indicators that its ability to provide habitat is reduced?** | |
| H 3.1 Indicator of reduced habitat functions ***(see p. 75)*** <br>Do the areas of open water in the wetland unit have a resident population of carp (see text for indicators of the presence of carp)? *(NOTE: This question does not apply to reservoirs with water levels controlled by dams, such as the reservoirs on the Columbia and Snake Rivers)* <br><br>YES = **- 5 points** NO = 0 points | *Points will be subtracted* <br><br>0 |
| **Total Score for Habitat Functions** – *add the points for H 1, H 2, and H 3 and record the result on p. 1* <br>5 + 3 + 0 | 8 |

**Comments**

Wetland name or number 33

# CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

***Please determine if the wetland unit 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 units should also be characterized based on their functions.***

| **Wetland Type**<br>*Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.* | Category |
|---|---|
| **SC 1.0 Vernal pools** *(see p. 79)*<br>Is the wetland unit **less than 4000 ft²**, and does it meet at least **two** of the following criteria?<br>— Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input<br>— Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *NOTE: If you find perennial, "obligate", wetland plants the wetland is probably NOT a vernal pool*<br>— The soil in the wetland are shallow (<1ft deep (30 cm)) and is underlain by an impermeable layer such as basalt or clay.<br>— Surface water is present for less than 120 days during the "wet" season.<br>YES = Go to SC 1.1 (NO) *not a vernal pool*<br>SC 1.1 Is the vernal pool relatively undisturbed in February and March?<br>YES = Go to SC 1.2 (NO) *not a vernal pool with special characteristics* | |
| SC 1.2 Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 miles (other wetlands, rivers, lakes etc.)?<br>YES = Category II (NO) = Category III | **Cat. II**<br>**Cat. III** |
| **SC 2.0 Alkali wetlands** *(see p. 81)*<br>Does the wetland unit meets **one** of the following two criteria?<br>— The wetland has a conductivity > 3.0 mS/cm.<br>— The wetland has a conductivity between 2.0 - 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 2 for list of plants found in alkali systems).<br>— 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.<br>**OR** does the wetland unit meets two of the following three sub-criteria?<br>— Salt encrustations around more than 80% of the edge of the wetland<br>— More than ¾ of the plant cover consists of species listed on Table 2<br>— 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.<br>YES = Category I (NO) *not an alkali wetland* | **Cat. I** |

**SC 3.0 Natural Heritage Wetlands** *(see p. 81)*

Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.

SC 3.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)*

S/T/R information from Appendix D ___ or accessed from WNHP/DNR database ___

YES____ – contact WNHP/DNR (see p. 79) and go to SC 3.2 NO___

SC 3.2 Has DNR identified the wetland unit as a high quality undisturbed wetland or as or as a site with state threatened, endangered, or sensitive plant species? **Cat. I**

YES = Category I NO *–not a natural heritage wetland*

**SC 4.0 Bogs** *(see p. 82)*

Does the wetland unit **(or any part of the wetland unit)** meet both the criteria for soils and vegetation in bogs. *Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.*

SC 4.1. Does the wetland unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)?

Yes - go to SC 4.3 No - go to SC 4.2

SC 4.2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond??

Yes - go to SC 4.3 No - *Is not a bog for rating*

SC 4.3. Does the wetland unit have more than 70% cover of mosses at ground level in any area within its boundaries, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? **Cat. I**

Yes – Category I bog No - go to Q. 4.4

*NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.*

SC 4.4. Is the unit, or any part of it, forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover)?* **Cat. I**

Yes – Category I bog NO

Wetland name or number 33

| | |
|---|---|
| **SC 5.0 Forested Wetlands** *(see p. 85)*<br>Does the wetland unit have an area of forest (*you should have identified a forested class, if present, in question H 1.1*) rooted within its boundary that meet **at least one** of the following three criteria?<br>— The wetland is within the "100 year" floodplain of a river or stream<br>— aspen (*Populus tremuloides*) are a dominant or co-dominant of the "woody" vegetation. (*Dominants means it represents at least 50% of the cover of woody species, co-dominant means it represents at least 20% of the total cover of woody species*)<br>— There is at least ¼ acre of trees (even in wetlands smaller than 2.5 acres) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW *(see p. 83)*<br>YES = go to SC 5.1 NO *–not a forested wetland with special characteristics* | |
| SC 5.1 Does the wetland unit have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees<br>Slow growing trees are: western red cedar (*Thuja plicata*), Alaska yellow cedar (*Chamaecyparis nootkatensis*), pine spp. mostly "white" pine (*Pinus monticola*), western hemlock (*Tsuga heterophylla*), Englemann spruce (*Picea engelmannii*).<br>YES = Category I NO = go to SC 5.2 | **Cat. I** |
| SC 5.2 Does the unit have areas where aspen (*Populus tremuloides*) are a dominant or co-dominant species?<br>YES = Category I NO = go to SC 5.3 | **Cat. I** |
| SC 5.3 Does the wetland unit have areas with a forest canopy where more than 50% of the tree species (by cover) are fast growing species.<br>Fast growing species are:<br>Alders – red (*Alnus rubra*), thin-leaf (*A. tenuifolia*)<br>Cottonwoods – narrow-leaf (*Populus angustifolia*), black (*P. balsamifera*)<br>Willows- peach-leaf (*Salix amygdaloides*), Sitka (*S. sitchensis*), Pacific (*S. lasiandra*), Aspen - *(Populus tremuloides*), Water Birch (*Betula occidentalis*)<br>YES = Category II NO = go to SC 5.5 | **Cat. II** |
| SC 5.5 Is the forested component of the wetland within the "100 year floodplain" of a river or stream?<br>YES = Category II | **Cat. II** |
| **Category of wetland based on Special Characteristics**<br>*Choose the "highest" rating if wetland falls into several categories.*<br>If you answered NO for all types enter "Not Applicable" on p. 1 | N/A |

Wetland name or number W34

# WETLAND RATING FORM – EASTERN WASHINGTON

Version 2 - Updated June 2006 to increase accuracy and reproducibility among users
Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Thorncreek Road + Moscow Date of site visit: 2004-2005

Rated by S. Gilmore Trained by Ecology? Yes ✓ No ___ Date of training 2007

SEC: ___ TWNSHP: ___ RNGE: ___ Is S/T/R in Appendix D? Yes ___ No ✓

**Map of wetland unit: Figure** 3 of 4 **Estimated size** _____

## SUMMARY OF RATING

### Category based on FUNCTIONS provided by wetland

**I**___ **II**___ **III** ✓ **IV**___

| |
|---|
| Category I = Score >=70 |
| Category II = Score 51-69 |
| Category III = Score 30-50 |
| Category IV = Score < 30 |

| | |
|---|---|
| Score for "Water Quality" Functions | 18 |
| Score for Hydrologic Functions | 12 |
| Score for Habitat Functions | 10 |
| **TOTAL score for functions** | 40 |

### Category based on SPECIAL CHARACTERISTICS of wetland

**I**___ **II**___ **III**___ **Does not Apply** ✓

### Final Category (choose the "highest" category from above)

III

**Summary of basic information about the wetland unit**

| Wetland Type | | Wetland Class | |
|---|---|---|---|
| Vernal Pool | | Depressional | ✓ |
| Alkali | | Riverine | |
| Natural Heritage Wetland | | Lake-fringe | |
| Bog | | Slope | |
| Forest | | | |
| None of the above | ✓ | Check if unit has multiple HGM classes present | ✓ |

Wetland name or number 34

## Does the wetland being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

| Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating | YES | NO |
|---|---|---|
| SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?*<br>For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database. | | ✓ |
| SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?*<br>For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form). | | ✓ |
| SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?* | | ✓ |
| SP4. *Does the wetland unit have a local significance in addition to its functions*?<br>For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance. | | ✓ |

**To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.**

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 20 for more detailed instructions on classifying wetlands.

Wetland name or number 34

## Classification of Vegetated Wetlands for Eastern Washington

**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 1-7 apply, and go to Question 8.**

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

___The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

___At least 30% of the open water area is deeper than 3 m (10 ft)?

NO – go to Step 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**?

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 <3ft diameter and less than a foot deep).*

NO - go to Step 3 **YES** – The wetland class is **Slope**

**3.** Is the entire wetland unit in a valley or stream channel where it gets inundated by overbank flooding from that stream or river? In general, the flooding should occur at least once every ten years to answer "yes." *The wetland can contain depressions that are filled with water when the river is not flooding.*

NO - go to Step 4 **YES** – The wetland class is **Riverine**

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

NO – go to Step 5 **YES** – The wetland class is **Depressional** ponded area by Hwy

**5.** Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. 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 1-7 APPLY TO DIFFERENT AREAS IN THE 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 your wetland. 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 class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

Wetland name or number 34

| HGM Classes Within One Delineated Wetland Boundary | Class to Use for Rating |
|---|---|
| Slope + Riverine | Riverine |
| Slope + Depressional | Depressional |
| Slope + Lake-fringe | Lake-fringe |
| Depressional + Riverine (riverine is within boundary of depression) | Depressional |
| Depressional + Lake-fringe | Depressional |

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

Wetland name or number 34

| | Depressional Wetlands<br>WATER QUALITY FUNCTIONS - Indicators that the wetland functions to improve water quality | Points (only 1 score per box) |
|---|---|---|
| D | **D 1.0 Does the wetland unit have the potential to improve water quality?** | *(see p. 38)* |
| D | D 1.1 Characteristics of surface water flows out of the wetland unit:<br>Wetland has no surface water outlet - points = 5<br>Wetland has an intermittently flowing outlet points = (3)<br>Wetland has a highly constricted permanently flowing outlet points = 3<br>Wetland has a permanently flowing surface outlet points = 1 | 3 |
| D | D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic *(use NRCS definitions of soil types)*<br>YES points = 3<br>NO points = (0) | 0 |
| D | D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)<br>Wetland has persistent, ungrazed, vegetation for > 2/3 of area points = 5<br>Wetland has persistent, ungrazed, vegetation from 1/3 to 2/3 of area points = 3<br>Wetland has persistent, ungrazed vegetation from 1/10 to < 1/3 of area points = 1<br>Wetland has persistent, ungrazed vegetation <1/10 of area points = 0<br>Map of Cowardin vegetation classes | Figure ___<br>5 |
| D | D 1.4 Characteristics of seasonal ponding or inundation.<br>*This is the area of ponding that fluctuates every year. Do not count the area that is permanently ponded.*<br>Area seasonally ponded is > ½ total area of wetland points = 3<br>Area seasonally ponded is ¼ - ½ total area of wetland points = (1)<br>Area seasonally ponded is < ¼ total area of wetland points = 0<br>NOTE: *See text for indicators of seasonal and permanent inundation/flooding.*<br>Map of Hydroperiods | Figure ___<br>1 |
| D | **Total for D 1** *Add the points in the boxes above* | 9 |
| D | **D 2. Does the wetland unit have the opportunity to improve water quality?**<br>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.*<br>— Grazing in the wetland or within 150 ft<br>✓ Untreated stormwater discharges to wetland<br>✓ Tilled fields or orchards within 150 ft of wetland<br>✓ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging<br>— Residential, urban areas, golf courses are within 150 ft of wetland<br>— Wetland is fed by groundwater high in phosphorus or nitrogen<br>— Other_____<br>**YES** multiplier is (2) **NO** multiplier is **1** | multiplier<br>2 |
| D | **TOTAL - Water Quality Functions** Multiply the score from D1 by the multiplier in D2<br>***Record score on p. 1 of field form*** | 18 |

Wetland name or number 34

| D | Depressional Wetlands<br>HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream erosion | Points (only 1 score per box) |
|---|---|---|
| D | **D 3.0 Does the wetland unit have the <u>potential</u> to reduce flooding and stream erosion?** | *(see p. 39)* |
| D | D 3.1 Characteristics of surface water flows out of the wetland unit:<br>Wetland has no surface water outlet — points = 8<br>Wetland has an intermittently flowing outlet — points = (4)<br>Wetland has a highly constricted permanently flowing outlet — points = 4<br>Wetland has a permanently flowing surface outlet — points = 0 | 4 |
| D | D 3.2 Depth of storage during wet periods:<br>*Estimate the height of ponding above the surface of the wetland (see text for description of measuring height). In wetlands with permanent ponding, the surface is the lowest elevation of "permanent" water)*<br>Marks of ponding are at least 3 ft above the surface — points = 8<br>The wetland is a "headwater" wetland" *(see p. 39)* — points = 6<br>Marks are 2 ft to < 3 ft from surface — points = 6<br>Marks are 1 ft to < 2 ft from surface — points = 4<br>Marks are 6 in to < 1 ft from surface — points = (2)<br>No marks above 6 in. or wetland has only saturated soils — points = 0 | 2 |
| D | **Total for D 3** *Add the points in the boxes above* | 6 |
| D | **D 4.0 Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion?** *(see p. 42)*<br>*Answer NO if the major source of water is groundwater, irrigation return flow, or water levels in the wetland are controlled by a reservoir.*<br>Answer YES if the wetland is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. *Note which of the following conditions apply.*<br>— Wetland is in a headwater of a river or stream that has flooding problems<br>— ✓ Wetland drains to a river or stream that has flooding problems<br>— Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems<br>— Other _____<br>**YES** multiplier is (2) **NO** multiplier is **1** | multiplier 2 |
| D | **TOTAL - Hydrologic Functions** Multiply the score from D3 by the multiplier in D4<br>***Record score on p. 1 of field form*** | 12 |

**Comments**

Wetland name or number 34

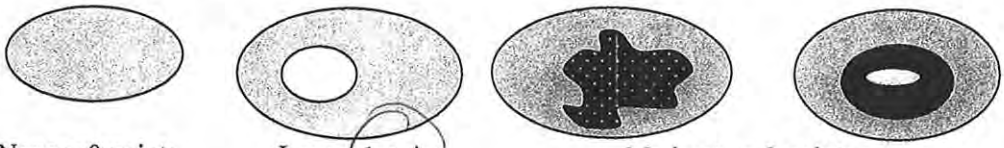
| *These questions apply to wetlands of all HGM classes.* HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat | Points (only 1 score per box) |
|---|---|
| **H 1. Does the wetland unit have the <u>potential</u> to provide habitat for many species?** | |
| H 1.1 <u>Categories of vegetation structure</u> ***(see p.62)*** | **Figure ___** |
| *Check the vegetation classes (as defined by Cowardin) and heights of emergents present. Size threshold for each class or height category is ¼ acre or more than 10% of the area if unit is < 2.5 acres.* | |
| ___Aquatic bed | |
| ___Emergent plants 0-12 in. (0 – 30 cm) high are the highest layer and have > 30% cover | |
| ___/Emergent plants >12 – 40 in.(>30 – 100cm) high are the highest layer with >30% cover | |
| ___Emergent plants > 40 in.(> 100cm) high are the highest layer with >30% cover | |
| ___Scrub/shrub (areas where shrubs have >30% cover) | |
| ___Forested (areas where trees have >30% cover) Reed Canarygrass | |
| *Add the number of vegetation types that qualify. If you have:* | |
| 4-6 types points = 3 | |
| 3 types points = 2 | |
| 2 types points = 1 | |
| 1 type points = 0 | 0 |
| Map of Cowardin vegetation classes and areas with different heights of emergents | |
| H 1.2. Is one of the vegetation types "aquatic bed?" ***(see p .64)*** | |
| YES = 1 point NO = 0 points | 0 |
| H 1.3. <u>Surface Water</u> ***(see p.65)*** | **Figure ___** |
| H 1.3.1 Does the unit have areas of "open" water (without herbaceous or shrub plants) over at least ¼ acre or 10% of its area during the spring (March – early June) OR in early fall (August – end of September)? *Note: answer YES for Lake-fringe wetlands* | |
| YES = 3 points & **go to H 1.4** NO = go to H 1.3.2 | |
| H 1.3.2 Does the unit have an intermittent or permanent stream within its boundaries, or along one side, over at least ¼ acre or 10% of its area, AND that has an unvegetated bottom (*answer yes only if H 1.3.1 is NO*)? | |
| YES = 3 points NO = 0 points | 3 |
| Map showing areas of open water | |
| H 1.4. <u>Richness of Plant Species</u> ***(see p. 66)*** | |
| Count the number of plant species in the wetland that cover at least 10 ft$^2$. (*different patches of the same species can be combined to meet the size threshold)* | |
| *You do not have to name the species.* | |
| *Do not include Eurasean Milfoil, reed canarygrass, purple loosestrife, Russian Olive, Phragmites ,Canadian Thistle, Yellow-flag Iris, and Salt Cedar (Tamarisk)* | |
| If you counted: > 9 species points = 2 | |
| 4-9 species points = 1 | |
| # of species ___ < 4 species points = 0 points | |
| *List species below if you wish* | 0 |

Wetland name or number 34

H 1.5. Interspersion of habitats *(see p. 67)*

Figure ___

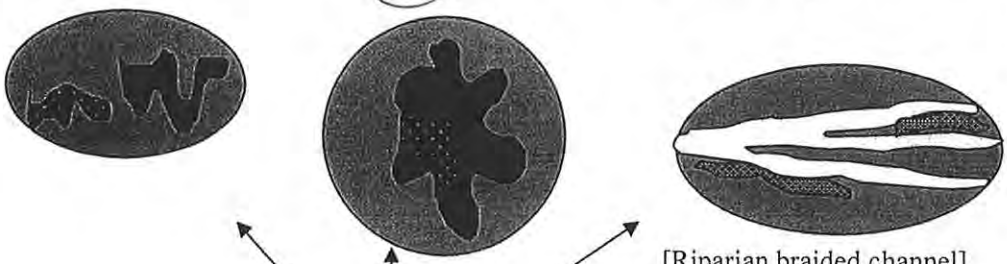
Decided from the diagrams below whether interspersion between categories of vegetation (described in H 1.1), or categories and un-vegetated areas (can include open water or mudflats) is high, medium, low, or none.



None = 0 points

Low = 1 point

Moderate = 2 points



[Riparian braided channel]

High = 3 points

NOTE: If you have four or more vegetation categories or three vegetation categories and open water the rating is always "high". Use maps from H1.1 and H1.3

1

H 1.6. Special Habitat Features: *(see p. 68)*

*Check the habitat features that are present in the wetland unit. The number of checks is the number of points you put into the next column.*

____Loose rocks larger than 4" **or** large, downed, woody debris (>4in. diameter) within the area of surface ponding or in stream.

__✓__Cattails or bulrushes are present within the unit. some on pond edge

____Standing snags (diameter at the bottom > 4 inches) in the wetland unit or within 30 m (100ft) of the edge.

____Emergent or shrub vegetation in areas that are permanently inundated/ponded. *The presence of "yellow flag" Iris is a good indicator of vegetation in areas permanently ponded.*

____Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) OR signs of recent beaver activity

____ Invasive species cover less than 20% in each stratum of vegetation *(canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)*

*Maximum score possible = 6*

1

**TOTAL** Potential to provide habitat
*Add the scores in the column above*

5

**Comments**

Wetland name or number 34

**H 2.0 Does the wetland have the opportunity to provide habitat for many species?**

H 2.1 Buffers *(see p. 71)*

*Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed." Relatively undisturbed also means no grazing, no landscaping, no daily human use, and no structures or paving within undisturbed part of buffer.*

— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference **Points = 5**

— 330 ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. **Points = 4**

— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **Points = 4**

— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . **Points = 3**

— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. **Points = 3**

**If buffer does not meet any of the criteria above**

— No paved areas (except paved trails) or buildings within 80ft (25 m) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**

— No paved areas or buildings within 170ft (50m) of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**

— Heavy grazing in buffer. **Points = 1**

— Vegetated buffers are <6.6ft wide (2m) for more than 95% of the circumference (e.g . tilled fields, paving, basalt bedrock extend to edge of wetland). **Points = 0**

— Buffer does not meet any of the criteria above. **Points = 1**

Some buffer around ponded area

Aerial photo showing buffers

Figure ___ 1

H 2.2 Wet Corridors *(see p. 72)*

H 2.2.1 Is the wetland unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor at least ¼ mile long with surface water or flowing water throughout most of the year (> 9 months/yr)? (*dams, heavily used gravel roads, paved roads, fields tilled to edge of stream, or pasture to edge of stream are considered breaks in the corridor*).

YES = 4 points (go to H 2.3) NO = go to H 2.2.2

H 2.2.2 Is the unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor, at least ¼ mile long with water flowing seasonally, **OR** a lake-fringe wetland without a "wet" corridor, **OR** a riverine wetland without a surface channel connecting to the stream?

YES = 2 points (go to H 2.3) NO go to H 2.2.3

2

H 2.2.3 Is the wetland within a 1/2 mile of any permanent stream, seasonal stream, or lake (*do not include man-made ditches*)?

YES = 1 point NO = 0 points

Wetland name or number 34

| | |
|---|---|
| H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm )***<br>Which of the following priority habitats are within 330ft (100m) of the wetland unit? *NOTE: the connections to the habitats can be disturbed.*<br>____**Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).<br>____**Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).<br>____ **Eastside Steppe:** Non-forested vegetation type dominated by broadleaf herbaceous flora ((*full description of herbaceous species found here are in WDFW PHS report p. 153*).<br>____**Old-growth/Mature forests (east of Cascade crest):** (*full descriptions in WDFW PHS report p. 157*). Old-growth: Stands are > 150 yrs in age; may be variable in tree species composition and structural characteristics due to the influence of fire, climate, and soils. Mature: Stands 80 – 160 yrs old. Decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.<br>____**Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).<br>____ **Juniper Savannah**: All juniper woodlands (*SE part of state only; check map*)<br>____ **Shrub-steppe**: A nonforested vegetation type consisting of one or more layers of perennial bunchgrasses and a conspicuous but discontinuous layer of shrubs (see Eastside Steppe for sites with little or no shrub cover).<br>____**Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.<br>____Inland Dunes This placeholder is for a new priority habitat that will capture areas known as Inland Dunes. A definition will be developed later in Fall 2008. *(check WDFW web site)*<br>____**Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.<br>____**Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.<br>____**Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.<br>____**Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.<br>____**Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 30 cm (12 in) in eastern Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.<br>If wetland has **2 or more** Priority Habitats = **4 points**<br>If wetland has **1** Priority Habitat = **2 points**<br>No Priority habitats = **0 points**<br>*Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)* | 0 |

Wetland name or number 34

| | |
|---|---|
| H 2.4 Landscape *(choose the **one** description of the landscape around the wetland that best fits)* ***(see p. 76)*** <br><br>— The wetland unit is in an area where annual rainfall is less than 12 inches, and its water regime is not influenced by irrigation practices, dams, or water control structures. (*Generally, this means outside boundaries of reclamation areas, irrigation district, or reservoirs* ) **points = 5** <br>— There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing in the connection or an open water connection along a lake shore without heavy boat traffic are OK, but connections should NOT be bisected by paved roads, fill, fields, heavy boat traffic or other development) **points = 5** <br>✓ There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed? **points = 2** <br>— There is at least 1 wetland within ½ mile. **points = 1** <br>— Does not meet any of the four criteria above **points = 0** | 2 |
| **H 2.** TOTAL Score - opportunity for providing habitat *Add the scores in the column above* | 5 |
| **H 3.0 Does the wetland unit have indicators that its ability to provide habitat is reduced?** | |
| H 3.1 Indicator of reduced habitat functions ***(see p. 75)*** <br>Do the areas of open water in the wetland unit have a resident population of carp (see text for indicators of the presence of carp)? *(NOTE: This question does not apply to reservoirs with water levels controlled by dams, such as the reservoirs on the Columbia and Snake Rivers)* <br><br>YES = **- 5 points** NO = 0 points | *Points will be subtracted* <br><br>0 |
| **Total Score for Habitat Functions** – *add the points for H 1, H 2, and H 3 and record the result on p. 1* <br>5 + 5 + 0 | 10 |

**Comments**

Wetland name or number 34

# CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

***Please determine if the wetland unit 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 units should also be characterized based on their functions.***

| **Wetland Type**<br>*Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.* | Category |
|---|---|
| **SC 1.0 Vernal pools** *(see p. 79)*<br>Is the wetland unit **less than 4000 ft²**, and does it meet at least **two** of the following criteria?<br>— Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input<br>— Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *NOTE: If you find perennial, "obligate", wetland plants the wetland is probably NOT a vernal pool*<br>— The soil in the wetland are shallow (<1ft deep (30 cm)) and is underlain by an impermeable layer such as basalt or clay.<br>— Surface water is present for less than 120 days during the "wet" season.<br>YES = Go to SC 1.1 (NO) *not a vernal pool*<br>SC 1.1 Is the vernal pool relatively undisturbed in February and March?<br>YES = Go to SC 1.2 (NO) *not a vernal pool with special characteristics* | |
| SC 1.2 Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 miles (other wetlands, rivers, lakes etc.)?<br>YES = Category II (NO) = Category III | **Cat. II**<br>**Cat. III** |
| **SC 2.0 Alkali wetlands** *(see p. 81)*<br>Does the wetland unit meets **one** of the following two criteria?<br>— The wetland has a conductivity > 3.0 mS/cm.<br>— The wetland has a conductivity between 2.0 - 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 2 for list of plants found in alkali systems).<br>— 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.<br>**OR** does the wetland unit meets two of the following three sub-criteria?<br>— Salt encrustations around more than 80% of the edge of the wetland<br>— More than ¾ of the plant cover consists of species listed on Table 2<br>— 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.<br>YES = Category I (NO) *not an alkali wetland* | **Cat. I** |

Wetland name or number 34

**SC 3.0 Natural Heritage Wetlands** *(see p. 81)*

Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.

SC 3.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)*

S/T/R information from Appendix D ___ or accessed from WNHP/DNR database ___

YES____ – contact WNHP/DNR (see p. 79) and go to SC 3.2 NO

SC 3.2 Has DNR identified the wetland unit as a high quality undisturbed wetland or as or as a site with state threatened, endangered, or sensitive plant species? **Cat. I**

YES = Category I NO *–not a natural heritage wetland*

**SC 4.0 Bogs** *(see p. 82)*

Does the wetland unit **(or any part of the wetland unit)** meet both the criteria for soils and vegetation in bogs. *Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.*

SC 4.1. Does the wetland unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)?

Yes - go to SC 4.3 No - go to SC 4.2

SC 4.2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond??

Yes - go to SC 4.3 No - *Is not a bog for rating*

SC 4.3. Does the wetland unit have more than 70% cover of mosses at ground level in any area within its boundaries, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? **Cat. I**

Yes – Category I bog No - go to Q. 4.4

*NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.*

SC 4.4. Is the unit, or any part of it, forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover)?* **Cat. I**

Yes – Category I bog NO

Wetland name or number 34

| | |
|---|---|
| **SC 5.0 Forested Wetlands** *(see p. 85)*<br>Does the wetland unit have an area of forest (*you should have identified a forested class, if present, in question H 1.1*) rooted within its boundary that meet **at least one** of the following three criteria?<br>— The wetland is within the "100 year" floodplain of a river or stream<br>— aspen (*Populus tremuloides*) are a dominant or co-dominant of the "woody" vegetation. (*Dominants means it represents at least 50% of the cover of woody species, co-dominant means it represents at least 20% of the total cover of woody species*)<br>— There is at least ¼ acre of trees (even in wetlands smaller than 2.5 acres) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW *(see p. 83)*<br>YES = go to SC 5.1 NO *–not a forested wetland with special characteristics* | |
| SC 5.1 Does the wetland unit have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees<br>Slow growing trees are: western red cedar (*Thuja plicata*), Alaska yellow cedar (*Chamaecyparis nootkatensis*), pine spp. mostly "white" pine (*Pinus monticola*), western hemlock (*Tsuga heterophylla*), Englemann spruce (*Picea engelmannii*).<br>YES = Category I NO = go to SC 5.2 | **Cat. I** |
| SC 5.2 Does the unit have areas where aspen (*Populus tremuloides*) are a dominant or co-dominant species?<br>YES = Category I NO = go to SC 5.3 | **Cat. I** |
| SC 5.3 Does the wetland unit have areas with a forest canopy where more than 50% of the tree species (by cover) are fast growing species.<br>Fast growing species are:<br>Alders – red (*Alnus rubra*), thin-leaf (*A. tenuifolia*)<br>Cottonwoods – narrow-leaf (*Populus angustifolia*), black (*P. balsamifera*)<br>Willows- peach-leaf (*Salix amygdaloides*), Sitka (*S. sitchensis*), Pacific (*S. lasiandra*), Aspen - *(Populus tremuloides*), Water Birch (*Betula occidentalis*)<br>YES = Category II NO = go to SC 5.5 | **Cat. II** |
| SC 5.5 Is the forested component of the wetland within the "100 year floodplain" of a river or stream?<br>YES = Category II | **Cat. II** |
| **Category of wetland based on Special Characteristics**<br>*Choose the "highest" rating if wetland falls into several categories.*<br>If you answered NO for all types enter "Not Applicable" on p.1 | N/A |

# WETLAND RATING FORM – EASTERN WASHINGTON

**Wetland Name:** Wetland 35 **Date:** 5/3/2006

Name of wetland (if known): Thorn Creek Rd to Moscow

Location: SEC: ___ TWNSHP: __ RNGE: ___ (attach map with outline of wetland to rating form) (MAP in Report)

Person(s) Rating Wetland: S. Gilmore Affiliation: RPU Date of site visit: 2004+2005

## SUMMARY OF RATING

updated MAP 3 of 4

**Category based on FUNCTIONS provided by wetland**

**I___ II___ III_✓ IV___**

| |
|---|
| Category I = Score >70 |
| Category II = Score 51-69 |
| Category III = Score 30-50 |
| Category IV = Score < 30 |

| | |
|---|---|
| Score for "Water Quality" Functions | 14 |
| Score for Hydrologic Functions | 12 |
| Score for Habitat Functions | 14 |
| **TOTAL score for functions** | 40 |

**Category based on SPECIAL CHARACTERISTICS of wetland**

**I___ II___ III___ Does not Apply_✓**

**Final Category (choose the "highest" category from above)** III

**Check the appropriate type and class of wetland being rated.**

| Wetland Type | | Wetland Class | |
|---|---|---|---|
| Vernal Pool | | Depressional | |
| Alkali | | Riverine | |
| Natural Heritage Wetland | | Lake-fringe | |
| Bog | | Slope | ✓ |
| Forest | | | |
| None of the above | ✓ | | |

**Does the wetland being rated meet any of the criteria below?** W35

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

| Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating | YES | NO |
|---|---|---|
| **A1.** *Has the wetland been documented as a habitat for any Federally listed Threatened or Endangered plant or animal species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database. | | / |
| **A2.** *Has the wetland been documented as habitat for any State listed Threatened or Endangered plant or animal species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. | | / |
| **A3.** Does the wetland contain individuals of **Priority species** listed by the WDFW for the state? | | / |
| **A4.** Does the wetland have a **local significance** in addition to its functions. For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance. | | / |

**To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.**

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 20 for more detailed instructions on classifying wetlands.

## Classification of Vegetated Wetlands for Eastern Washington

**Wetland Name:** W35 **Date:** 5/3/2006

1. Does the wetland **meet both** of the following criteria?
   ___The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) where at least 20 acres (8 ha) are permanently inundated (ponded or flooded);
   ___At least 30% of the open water area is deeper than 3 m (10 ft)?

   NO – go to Step 2 **YES** – The wetland class is **Lake-fringe (lacustrine fringe)**

2. Does the wetland **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**?
   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 <3ft diameter and less than a foot deep).*

   NO - go to Step 3 **YES** – The wetland class is **Slope**

3. Is the wetland in a valley or stream channel where it gets inundated by overbank flooding from that stream or river? In general, the flooding should occur at least once every ten years to answer "yes." *The wetland can contain depressions that are filled with water when the river is not flooding.*

   NO - go to Step 4 **YES** – The wetland class is **Riverine**

4. Is the wetland in a topographic depression, outside areas that are inundated by overbank flooding, in which water ponds, or is saturated to the surface, at some time of the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

   NO – go to Step 5 **YES** – The wetland class is **Depressional**

5. Your wetland seems to be difficult to classify. 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. Sometimes we find characteristics of several different hydrogeomorphic classes within one wetland boundary. If you have a wetland with several HGM classes present within its boundaries use the following table to identify the appropriate class to use for the rating system. 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 being rated.

| HGM Classes Within One Delineated Wetland Boundary | Class to Use in Rating if area of this class > 10% total |
|---|---|
| Slope + Riverine | Riverine |
| Slope + Depressional | Depressional |
| Slope + Lake-fringe | Lake-fringe |
| Depressional + Riverine (riverine is within boundary of depression) | Depressional |
| Depressional + Lake-fringe | Depressional |

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

| S | Slope Wetlands | Points |
|---|---|---|
| | WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality | |
| S | **S 1.0 Does the wetland have the potential to improve water quality? *(see p.56)*** | |
| S | S 1.1 Characteristics of average slope of wetland:<br>Slope is1% or less *(a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance)* points = 3<br>Slope is between 1% and 2% points = 2<br>Slope is more than 2% but less than 5% points = (1)<br>Slope is 5% or greater points = 0 | 1 |
| S | S 1.2 The soil 2 inches below the surface is clay, organic, or smells anoxic (hydrogen sulfide or rotten eggs).<br>YES = 3 points NO = 0 points | 0 |
| S | S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants:<br>*Choose the points appropriate for the description that best fit conditions in the wetland. Dense vegetation means you have trouble seeing the soil surface.*<br>Dense, ungrazed, herbaceous vegetation > 90% of the wetland area points = (6)<br>Dense, ungrazed, herbaceous vegetation > 1/2 of area points = 3<br>Dense, woody, vegetation > ½ of area points = 2<br>Dense, ungrazed, herbaceous vegetation > 1/4 of area points = 1<br>Does not meet any of the criteria above for herbaceous vegetation points = 0 | 6 |
| S | **Total for S 1** *Add the points in the boxes above* | 7 |
| S | **S 2.0 Does the wetland have the opportunity to improve water quality? *(see p.58)***<br>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants.*<br>— Grazing in the wetland or within 150ft<br>— Wetland is a groundwater seep within the Reclamation Area<br>✓ Untreated stormwater flows through the wetland<br>✓ Tilled fields or orchards within 150 feet of wetland<br>— Residential, urban areas, or golf courses are within 150 ft upslope of wetland<br>— Other_____<br>**YES** multiplier is (2) **NO** multiplier is **1** | multiplier<br>2 |
| S | **TOTAL - Water Quality Functions** Multiply the score from S1 by the multiplier in S2<br>***Record score on p. 1 of field form*** | 14 |

NW 35

| S | Slope Wetlands | Points |
|---|---|---|
| | HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation | |
| S | **S 3.0 Does the wetland have the <u>potential</u> to reduce flooding and stream erosion?** ***(see p.59)*** | |
| S | S 3.1 Characteristics of vegetation that reduce the velocity of surface flows during storms. *Choose the points appropriate for the description that best fit conditions in the wetland.*<br>Dense, uncut, **rigid** vegetation covers > 90% of the area of the wetland. (stems of plants should be thick enough (usually > 1/8in), or dense enough, to remain erect during surface flows) points = 6<br>Dense, uncut, **rigid** vegetation > 1/2 – 90% area of wetland points = 3<br>Dense, uncut, **rigid** vegetation > 1/4 – 1/2 area points = 1<br>More than 1/4 of area is grazed, mowed, tilled or vegetation is not rigid points = 0 | 6 |
| S | S 3.2 Characteristics of slope wetland that holds back small amounts of flood flows:<br>The slope wetland has small surface depressions that can retain water over at least 10% of its area. YES points = 2<br>NO points = 0 | 0 |
| S | **Total for S3** *Add the points in the boxes above* | 6 |
| S | **S 4. 0 Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** ***(see p.61)***<br>*Answer NO if the major source of water is irrigation return flow (e.g. a seep that is on the downstream side of a dam or at the base of an irrigated field.*<br>Answer YES if the wetland is in a landscape position where the reduction in water velocity it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. *Note which of the following conditions apply.*<br>✓ Wetland has surface runoff that can cause flooding problems downgradient<br>— Other_____<br>**YES** multiplier is **2** **NO** multiplier is **1** | multiplier<br>2 |
| S | **TOTAL - Hydrologic Functions** Multiply the score from S3 by the multiplier in S4<br>***Record score on p. 1 of field form*** | 12 |

**Comments**

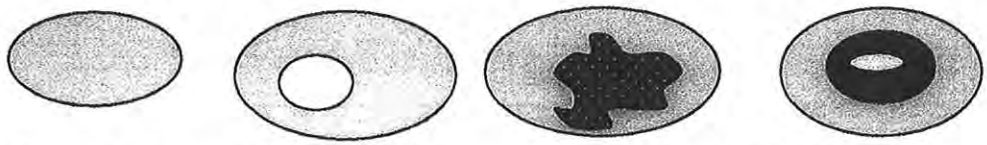
W35

| *These questions apply to wetlands of all HGM classes.* | Points |
|---|---|
| HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat | |
| **H 1. Does the wetland have the <u>potential</u> to provide habitat for many species?** | |
| H 1.1 <u>Vegetation structure</u> ***(see p.62)***<br>*Check the types of vegetation present if the type covers more than 10% of the area of the wetland or ¼ acre.*<br>____Aquatic bed<br>____Emergent plants 0-12 inches high (0 – 30 cm)<br>__/__Emergent plants >12 – 40 inches high (>30 – 100cm)<br>____Emergent plants > 40 inches high (> 100 cm)<br>____Scrub/shrub (areas where shrubs have >30% cover)<br>____Forested (areas where trees have >30% cover)<br>*Add the number of vegetation types that qualify. If you have:*<br>4-6 types *record* points = 3<br>3 types points = 2<br>2 types points = 1<br>1 type points = 0 | 0 |
| H 1.2. Is one of the vegetation types "aquatic bed?" ***(see p .64)***<br>YES = 1 point NO = 0 points | 0 |
| H 1.3. <u>Surface Water</u> ***(see p.65)***<br>H 1.3.1 Does the wetland have areas of "open" water (without emergent or shrub plants) over at least ¼ acre or 10% of its area during the spring (March – early June) OR in early fall (August – end of September)? *Note: answer YES for Lake-fringe wetlands*<br>YES = 3 points **& go to H 1.4** NO = go to H 1.3.2<br>H 1.3.2 Does the wetland have an intermittent or permanent stream within its boundaries, or along one side, that has an unvegetated bottom (*answer yes only if H 1.3.1 is NO*)?<br>YES = 3 points NO = 0 points | 3 |
| H 1.4. <u>Richness of Plant Species</u> ***(see p. 66)***<br>Count the number of plant species in the wetland that cover at least 10 $ft^2$. (*different patches of the same species can be combined to meet the size threshold)*<br>*You do not have to name the species.*<br>*Do not include Eurasean Milfoil, reed canarygrass, purple loosestrife, Russian Olive, Phragmites ,Canadian Thistle, Yellow-flag Iris, and Salt Cedar (Tamarisk)*<br>If you counted: > 9 species points = 2<br>4-9 species points = 1<br># of species ____ < 4 species points = 0 points | 0 |

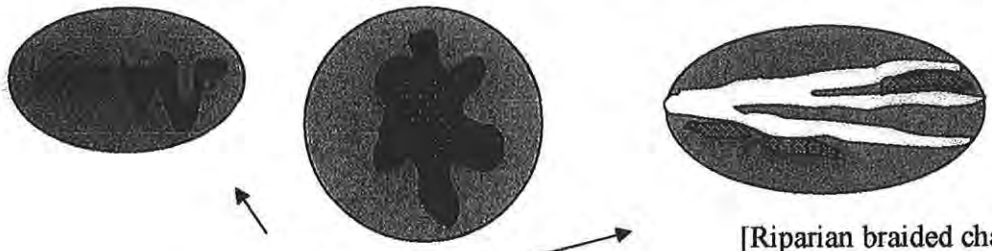
W35

H 1.5. Interspersion of habitats *(see p. 67)*

Decided from the diagrams below whether interspersion between types of vegetation (described in H 1.1), or vegetation types and un-vegetated areas (can include open water or mudflats) is high, medium, low, or none.



None = 0 points  Low = 1 point  Moderate = 2 points



[Riparian braided channel]

High = 3 points

NOTE: If you have four or more vegetation types or three vegetation types and open water the rating is always "high".

1

H 1.6. Special Habitat Features: *(see p. 68)*

*Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.*

____Loose rocks larger than 4" **or** large, downed, woody debris (>4in. diameter) within the area of surface ponding or in stream.

__(__Cattails or bulrushes are present within the wetland. SOME IN N. BRANCH

____Standing snags (diameter at the bottom > 4 inches) in the wetland or within 30 m (100 ft) of the edge.

____Emergent or shrub vegetation in areas that are permanently inundated/ponded. *The presence of "yellow flag" Iris is a good indicator of vegetation in areas permanently ponded.*

____Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) OR signs of recent beaver activity

____Invasive species cover less than 20% in each stratum of vegetation

*Maximum score possible = 6*

1

**TOTAL** Potential to provide habitat
*Add the scores in the column above*

5

**Comments**

W35

| **H 2.0 Does the wetland have the opportunity to provide habitat for many species?** | |
|---|---|
| H 2.1 Buffers ***(see p. 71)***<br>*Choose the description that best represents condition of buffer of wetland. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."*<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No developed areas within undisturbed part of buffer. **(relatively undisturbed also means no-grazing)** **Points = 5**<br>— 330 ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. **Points = 4**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **Points = 4**<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . **Points = 3**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. **Points = 3**<br>**If buffer does not meet any of the criteria above**<br>— No paved areas (except paved trails) or buildings within 80ft (25 m) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— No paved areas or buildings within 170ft (50m) of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— Heavy grazing in buffer. **Points = 1**<br>— Vegetated buffers are <6.6ft wide (2m) for more than 95% of the circumference (e.g . tilled fields, paving, basalt bedrock extend to edge of wetland). **Points = 0**<br>— Buffer does not meet any of the criteria above. **Points = 1** | 1 |
| H 2.2 Wet Corridors ***(see p. 72)***<br>H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor at least ¼ mile long with surface water or flowing water throughout most of the year (> 9 months/yr)? (*dams, heavily used gravel roads, paved roads, fields tilled to edge of stream, or pasture to edge of stream are considered breaks in the corridor*).<br>YES = 4 points (go to H 2.3) NO = go to H 2.2.2<br>H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken, vegetated corridor, at least ¼ mile long with water flowing seasonally, **OR** a lake-fringe wetland without a "wet" corridor, **OR** a riverine wetland without a surface channel connecting to the stream?<br>YES = 2 points (go to H 2.3) NO go to H 2.2.3<br>H 2.2.3 Is the wetland within a 1/2 mile of any permanent stream, seasonal stream, or lake (*do not include man-made ditches*)?<br>YES = 1 point NO = 0 points | 4 |

W35

H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see p. 74)***
Which of the following priority habitats are within 330ft (100m) of the wetland?
*(see text for a more detailed description of these priority habitats)*

___/ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
____ **Aspen Stands:** Pure or mixed stands of aspen greater than 2 acres.
____ **Cliffs:** Greater than 25 ft high and occurring below 5000 ft.
____ **Old-growth forests:** (east of Cascade crest): In general, stands will be >150 years of age, with 10 trees/acrethat are > 21 in dbh, and 1 - 3 snags/acre > 12-14 in diameter.
____ **Mature forests:** Stands with average diameters exceeding 21 in dbh; crown cover may be less that 100%; decay, 80 - 160 years old east of the Cascade crest.
____ **Prairies and Steppe:** Relatively undisturbed areas (as indicated by dominance of native plants) where grasses and/or forbs form the natural climax plant community.
____ **Shrub-steppe:** Tracts of land consisting of plant communities with one or more layers of perennial grasses and a conspicuous but discontinuous layer of shrubs.
____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft, composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages
____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.
____ **Urban Natural Open Space**: A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other *priority habitats*, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.
____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.8 ha (2 acres).

If wetland has **2 or more** Priority Habitats = **4 points**
If wetland has **1** Priority Habitat = **2 points**
No Priority habitats = 0 points

2

**Comments**

W35

| | |
|---|---|
| H 2.4 Landscape *(choose the **one** description of the landscape around the wetland that best fits)* ***(see p. 76)***<br>— The wetland is in an area where annual rainfall is less than 12 inches, and its water regime is not influenced by irrigation practices, dams, or water control structures. *(Generally, this means outside boundaries of reclamation areas, irrigation district, or reservoirs)* points = 5<br>— There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing in the connection or an open water connection along a lake shore without heavy boat traffic are OK, but connections should NOT be bisected by paved roads, fill, fields, heavy boat traffic or other development). points = 5<br>— There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed? points = (2)<br>— There is at least 1 wetland within ½ mile. points = 1<br>— Does not meet any of the four criteria above points = 0 | 2 |
| **H 2.** TOTAL Score - opportunity for providing habitat *Add the scores in the column above* | 9 |
| **H 3.0 Does the wetland have indicators that its ability to provide habitat is reduced?** | |
| H 3.1 Indicator of reduced habitat functions ***(see p. 75)***<br>Do the areas of open water in the wetland have a resident population of carp (see text for indicators of the presence of carp)? *(NOTE: This question does not apply to reservoirs with water levels controlled by dams, such as the reservoirs on the Columbia and Snake Rivers)*<br>YES = **- 5 points** NO = 0 points | *Points will be subtracted*<br>0 |
| **Total Score for Habitat Functions** – *add the points for H 1, H 2, and H 3 and record the result on p. 1*<br>5 + 9 | 14 |

**Comments**

## CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

W35

***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.***

| **Wetland Type**<br>*Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.* | Category |
|---|---|
| **SC 1.0 Vernal pools** ***(see p. 79)***<br>Is the wetland **less than 4000 ft²**, and does it meet at least **two** of the following criteria?<br>— Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input<br>— Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *NOTE: If you find perennial, "obligate", wetland plants the wetland is probably NOT a vernal pool*<br>— The soil in the wetland are shallow (<1ft deep (30 cm)) and is underlain by an impermeable layer such as basalt or clay.<br>— Surface water is present for less than 120 days during the "wet" season.<br>YES = Go to SC 1.1 NO - *not a vernal pool*<br>SC 1.1 Is the vernal pool relatively undisturbed in February and March?<br>YES = Go to SC 1.2 NO - *categorize based on functions* | |
| SC 1.2 Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 miles (other wetlands, rivers, lakes etc.)?<br>YES = Category II NO = Category III | **Cat. II**<br>**Cat. III** |
| **SC 2.0 Alkali wetlands** ***(see p. 81)***<br>Does the wetland meets **one** of the following two criteria?<br>— The wetland has a conductivity > 3.0 mS/cm.<br>— The wetland has a conductivity between 2.0 - 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 2 for list of plants found in alkali systems).<br>— 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.<br>**OR** does the wetland meets two of the following three sub-criteria?<br>— Salt encrustations around more than 80% of the edge of the wetland<br>— More than ¾ of the plant cover consists of species listed on Table 2<br>— 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.<br>YES = Category I NO - *categorize based on functions* | **Cat. I** |

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**SC 3.0 Natural Heritage Wetlands** ***(see p. 81)***

Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.

SC 3.1 Is the wetland being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)* S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ___

YES____ – contact WNHP/DNR (see p. 79) and go to SC 3.2 NO___

SC 3.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? **Cat. I**

YES = Category I NO ____

**SC 4.0 Bogs** ***(see p. 82)***

Does the wetland (or part of the wetland) meet both the criteria for soils and vegetation in bogs. *Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.*

SC 4.1. Does the wetland have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)?

Yes - go to SC 4.3 No - go to SC 4.2

SC 4.2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond??

Yes - go to SC 4.3 No - Is not a bog for rating

SC 4.3. Does the wetland have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?

Yes – Category I bog No - go to Q. 4.4 **Cat. I**

*NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.*

SC 4.4. Is the wetland forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover)?* **Cat. I**

Yes – Category I bog No - *categorize based on functions*

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| | |
|---|---|
| **SC 5.0 Forested Wetlands** ***(see p. 85)***<br>Does the wetland have an area of forest (*you should have identified a forested class, if present, in question H 1.1*) rooted within its boundary that meet **at least one** of the following three criteria?<br>— The wetland is within the "100 year" floodplain of a river or stream<br>— aspen (*Populus tremuloides*) are a dominant or co-dominant of the "woody" vegetation. (*Dominants means it represents at least 50% of the cover of woody species, co-dominant means it represents at least 20% of the total cover of woody species*)<br>— There is at least ¼ acre of trees (even in wetlands smaller than 2.5 acres) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW *(see p. 83)*<br>YES = go to SC 5.1 NO - *categorize based on functions* | |
| 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<br>Slow growing trees are: western red cedar (*Thuja plicata*), Alaska yellow cedar (*Chamaecyparis nootkatensis*), pine spp. mostly "white" pine (*Pinus monticola*), western hemlock (*Tsuga heterophylla*), Englemann spruce (*Picea engelmannii*).<br>YES = Category I NO = go to SC 5.2 | **Cat. I** |
| SC 5.2 Does the wetland have aspen (*Populus tremuloides*) as a dominant or co-dominant species in the category of woody species?<br>YES = Category I NO = go to SC 5.3 | **Cat. I** |
| SC 5.3 Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are fast growing species.<br>Fast growing species are:<br>Alders – red (*Alnus rubra*), thin-leaf (*A. tenuifolia*)<br>Cottonwoods – narrow-leaf (*Populus angustifolia*), black (*P. balsamifera*)<br>Willows- peach-leaf (*Salix amygdaloides*), Sitka (*S. sitchensis*), Pacific (*S. lasiandra*), Aspen - (*Populus tremuloides*), Water Birch (*Betula occidentalis*)<br>YES = Category II NO = go to SC 5.5 | **Cat. II** |
| SC 5.5 Is the forested component of the wetland within the "100 year floodplain" of a river or stream?<br>YES = Category II NO - *categorize based on functions* | **Cat. II** |
| **Category of wetland based on Special Characteristics**<br>*Choose the "highest" rating if wetland falls into several categories.*<br>If you answered NO for all types enter "Not Applicable" on p.1 | N/A |

Wetland name or number W38

# WETLAND RATING FORM – EASTERN WASHINGTON

Version 2 - Updated June 2006 to increase accuracy and reproducibility among users
Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Thorncreek Road + Moxe Date of site visit: 2004-2005

Rated by S. Gilmore Trained by Ecology? Yes ✓ No ___ Date of training 2007

SEC: ___ TWNSHP: ____ RNGE: ____ Is S/T/R in Appendix D? Yes___ No ✓

**Map of wetland unit: Figure** 4 of 4 **Estimated size** < 0.1 acres

## SUMMARY OF RATING

### Category based on FUNCTIONS provided by wetland

**I___ II___ III ✓ IV___**

| |
|---|
| Category I = Score >=70 |
| Category II = Score 51-69 |
| Category III = Score 30-50 |
| Category IV = Score < 30 |

| | |
|---|---|
| Score for "Water Quality" Functions | 16 |
| Score for Hydrologic Functions | 12 |
| Score for Habitat Functions | 9 |
| **TOTAL score for functions** | 37 |

### Category based on SPECIAL CHARACTERISTICS of wetland

**I___ II___ III___ Does not Apply ✓**

**Final Category (choose the "highest" category from above)** III

**Summary of basic information about the wetland unit**

| Wetland Type | | Wetland Class | |
|---|---|---|---|
| Vernal Pool | | Depressional | |
| Alkali | | Riverine | |
| Natural Heritage Wetland | | Lake-fringe | |
| Bog | | Slope | ✓ |
| Forest | | | |
| None of the above | ✓ | Check if unit has multiple HGM classes present | |

Wetland name or number 38

## Does the wetland being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

| Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating | YES | NO |
|---|---|---|
| SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered* ***animal or plant*** *species (T/E species)?*<br>For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database. | | ✓ |
| SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered* ***animal*** *species?*<br>For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form). | | ✓ |
| SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?* | | ✓ |
| SP4. *Does the wetland unit have a local significance in addition to its functions*?<br>For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance. | | ✓ |

## To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 20 for more detailed instructions on classifying wetlands.

Wetland name or number 38

## Classification of Vegetated Wetlands for Eastern Washington

**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 1-7 apply, and go to Question 8.**

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

___The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

___At least 30% of the open water area is deeper than 3 m (10 ft)?

(NO) – go to Step 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**?

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 <3ft diameter and less than a foot deep).*

NO - go to Step 3 (**YES**) – The wetland class is **Slope**

**3**. Is the entire wetland unit in a valley or stream channel where it gets inundated by overbank flooding from that stream or river? In general, the flooding should occur at least once every ten years to answer "yes." *The wetland can contain depressions that are filled with water when the river is not flooding.*

(NO) - go to Step 4 **YES** – The wetland class is **Riverine**

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

(NO) – go to Step 5 **YES** – The wetland class is **Depressional**

**5**. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. 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 1-7 APPLY TO DIFFERENT AREAS IN THE 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 your wetland. 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 class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

Wetland name or number 38

| HGM Classes Within One Delineated Wetland Boundary | Class to Use for Rating |
|---|---|
| Slope + Riverine | Riverine |
| Slope + Depressional | Depressional |
| Slope + Lake-fringe | Lake-fringe |
| Depressional + Riverine (riverine is within boundary of depression) | Depressional |
| Depressional + Lake-fringe | Depressional |

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

Wetland name or number 38

| S | Slope Wetlands<br>WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality | Points (only 1 score per box) |
|---|---|---|
| S | **S 1.0 Does the wetland have the potential to improve water quality?** | *(see p.56)* |
| S | S 1.1 Characteristics of average slope of wetland:<br>Slope is1% or less *(a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance)* points = 3<br>Slope is between 1% and 2% points = (2)<br>Slope is more than 2% but less than 5% points = 1<br>Slope is 5% or greater points = 0 | 2 |
| S | S 1.2 The soil 2 inches below the surface is clay or organic *(use NRCS definitions of soil types)*<br>YES = 3 points NO = (0) points | 0 |
| S | S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants:<br>*Choose the points appropriate for the description that best fits the vegetation in the wetland.* ***Dense*** *vegetation means you have trouble seeing the soil surface (>75% cover), and* ***uncut*** *means not grazed or mowed and plants are higher than 6 inches.*<br>Dense, ungrazed, herbaceous vegetation > 90% of the wetland unit points = (6)<br>Dense, ungrazed, herbaceous vegetation > 1/2 of unit points = 3<br>Dense, woody, vegetation > ½ of unit points = 2<br>Dense, ungrazed, herbaceous vegetation > 1/4 of unit points = 1<br>Does not meet any of the criteria above for herbaceous vegetation points = 0<br>Aerial photo or map with vegetation polygons | Figure ___<br>6 |
| S | **Total for S 1** *Add the points in the boxes above* | 8 |
| S | **S 2.0 Does the wetland have the opportunity to improve water quality?**<br>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.*<br>— Grazing in the wetland or within 150ft<br>— Wetland is a groundwater seep within the Reclamation Area<br>✓ Untreated stormwater flows through the wetland<br>✓ Tilled fields or orchards within 150 feet of wetland<br>— Residential, urban areas, or golf courses are within 150 ft upslope of wetland<br>— Other_____<br>**YES** multiplier is 2 **NO** multiplier is **1** | *(see p.58)*<br>multiplier<br>2 |
| S | **TOTAL - Water Quality Functions** Multiply the score from S1 by the multiplier in S2<br>***Record score on p. 1 of field form*** | 16 |

Wetland name or number 38

| S | Slope Wetlands<br>HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation | Points (only 1 score per box) |
|---|---|---|
| S | **S 3.0 Does the wetland unit have the <u>potential</u> to reduce flooding and stream erosion?** | *(see p.59)* |
| S | S 3.1 Characteristics of vegetation that reduce the velocity of surface flows during storms.<br>*Choose the points appropriate for the description that best fit conditions in the wetland. See question S 1.3 for definition of dense and uncut.* ***Rigid*** *means that the stems of plants should be thick enough (usually > 1/8in), or dense enough, to remain erect during surface flows.*<br><br>Dense, uncut, **rigid** vegetation covers > 90% of the area of the unit points = 6<br>Dense, uncut, **rigid** vegetation > 1/2 – 90% area of unit points = 3<br>Dense, uncut, **rigid** vegetation > 1/4 – 1/2 of unit points = 1<br>More than 1/4 of area is grazed, mowed, tilled or vegetation is not rigid points = 0 | 6 |
| S | S 3.2 Characteristics of slope wetland that holds back small amounts of flood flows:<br>The slope wetland has small surface depressions that can retain water over at least 10% of its area. YES points = 2<br>NO points = 0 | 0 |
| S | **Total for S3** *Add the points in the boxes above* | 6 |
| S | **S 4. 0 Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion?**<br>***(see p.61)***<br>*Answer NO if the major source of water is irrigation return flow (e.g. a seep that is on the downstream side of a dam or at the base of an irrigated field.*<br>Answer YES if the wetland is in a landscape position where the reduction in water velocity it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. *Note which of the following conditions apply.*<br>— Wetland has surface runoff that can cause flooding problems downgradient<br>— Other_____<br>**YES** multiplier is 2 **NO** multiplier is **1** | multiplier<br>2 |
| S | **TOTAL - Hydrologic Functions** Multiply the score from S3 by the multiplier in S4<br>***Record score on p. 1 of field form*** | 12 |

**Comments**

Wetland name or number 38

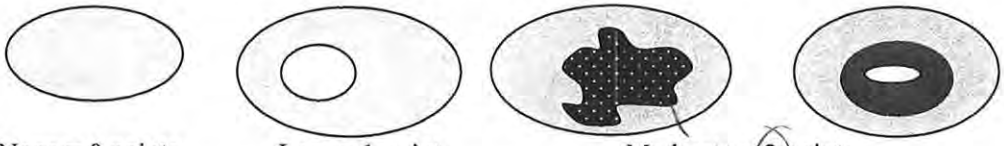
| ***These questions apply to wetlands of all HGM classes.*** HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat | **Points** (only 1 score per box) |
|---|---|
| **H 1. Does the wetland unit have the potential to provide habitat for many species?** | |
| H 1.1 Categories of vegetation structure ***(see p.62)*** | **Figure ___** |
| *Check the vegetation classes (as defined by Cowardin) and heights of emergents present. Size threshold for each class or height category is ¼ acre or more than 10% of the area if unit is < 2.5 acres.* | |
| ____Aquatic bed | |
| ____Emergent plants 0-12 in. (0 – 30 cm) high are the highest layer and have > 30% cover | |
| ___/Emergent plants >12 – 40 in.(>30 – 100cm) high are the highest layer with >30% cover | |
| ___/Emergent plants > 40 in.(> 100cm) high are the highest layer with >30% cover | |
| ____Scrub/shrub (areas where shrubs have >30% cover) | |
| ____Forested (areas where trees have >30% cover) | |
| *Add the number of vegetation types that qualify. If you have:* | |
| 4-6 types points = 3<br>3 types points = 2<br>2 types points = 1<br>1 type points = 0 | 1 |
| Map of Cowardin vegetation classes and areas with different heights of emergents | |
| H 1.2. Is one of the vegetation types "aquatic bed?" ***(see p .64)***<br>YES = 1 point NO = 0 points | 0 |
| H 1.3. Surface Water ***(see p.65)*** | **Figure ___** |
| H 1.3.1 Does the unit have areas of "open" water (without herbaceous or shrub plants) over at least ¼ acre or 10% of its area during the spring (March – early June) OR in early fall (August – end of September)? *Note: answer YES for Lake-fringe wetlands*<br>YES = 3 points **& go to H 1.4** NO = go to H 1.3.2 | |
| H 1.3.2 Does the unit have an intermittent or permanent stream within its boundaries, or along one side, over at least ¼ acre or 10% of its area, AND that has an unvegetated bottom (*answer yes only if H 1.3.1 is NO*)?<br>YES = 3 points MAN MADE pond NO = 0 points | 3 |
| Map showing areas of open water | |
| H 1.4. Richness of Plant Species ***(see p. 66)***<br>Count the number of plant species in the wetland that cover at least 10 ft$^2$. (*different patches of the same species can be combined to meet the size threshold)*<br>*You do not have to name the species.*<br>*Do not include Eurasean Milfoil, reed canarygrass, purple loosestrife, Russian Olive, Phragmites ,Canadian Thistle, Yellow-flag Iris, and Salt Cedar (Tamarisk)*<br>If you counted: > 9 species points = 2<br>4-9 species points = 1<br># of species ____ < 4 species points = 0 points<br>*List species below if you wish*<br>reed + cattails | 0 |

Wetland name or number 38

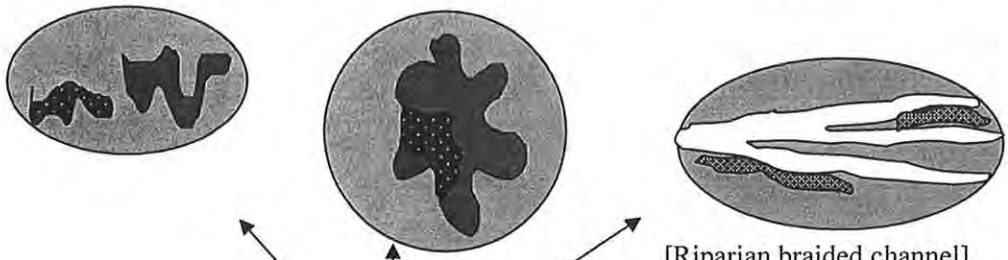
H 1.5. Interspersion of habitats *(see p. 67)*

Figure ___

Decided from the diagrams below whether interspersion between categories of vegetation (described in H 1.1), or categories and un-vegetated areas (can include open water or mudflats) is high, medium, low, or none.



None = 0 points Low = 1 point Moderate = 2 points



[Riparian braided channel]

High = 3 points

NOTE: If you have four or more vegetation categories or three vegetation categories and open water the rating is always "high". Use maps from H1.1 and H1.3

2

H 1.6. Special Habitat Features: *(see p. 68)*

*Check the habitat features that are present in the wetland unit. The number of checks is the number of points you put into the next column.*

____Loose rocks larger than 4" **or** large, downed, woody debris (>4in. diameter) within the area of surface ponding or in stream.

__✓__Cattails or bulrushes are present within the unit.

____Standing snags (diameter at the bottom > 4 inches) in the wetland unit or within 30 m (100ft) of the edge.

____Emergent or shrub vegetation in areas that are permanently inundated/ponded. *The presence of "yellow flag" Iris is a good indicator of vegetation in areas permanently ponded.*

____Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) OR signs of recent beaver activity

____ Invasive species cover less than 20% in each stratum of vegetation *(canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)*

1

*Maximum score possible = 6*

**TOTAL** Potential to provide habitat
*Add the scores in the column above*

3

**Comments**

Wetland name or number 38

| **H 2.0 Does the wetland have the opportunity to provide habitat for many species?** | |
|---|---|
| H 2.1 Buffers ***(see p. 71)***<br>*Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed." Relatively undisturbed also means no grazing, no landscaping, no daily human use, and no structures or paving within undisturbed part of buffer.*<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference **Points = 5**<br>— 330 ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. **Points = 4**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **Points = 4**<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . **Points = 3**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. **Points = 3**<br>**If buffer does not meet any of the criteria above**<br>— No paved areas (except paved trails) or buildings within 80ft (25 m) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— No paved areas or buildings within 170ft (50m) of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— Heavy grazing in buffer. **Points = 1**<br>✓ Vegetated buffers are <6.6ft wide (2m) for more than 95% of the circumference (e.g . tilled fields, paving, basalt bedrock extend to edge of wetland). **Points = 0**<br>— Buffer does not meet any of the criteria above. **Points = 1**<br>Aerial photo showing buffers | **Figure ___**<br>0 |
| H 2.2 Wet Corridors ***(see p. 72)***<br>H 2.2.1 Is the wetland unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor at least ¼ mile long with surface water or flowing water throughout most of the year (> 9 months/yr)? (*dams, heavily used gravel roads, paved roads, fields tilled to edge of stream, or pasture to edge of stream are considered breaks in the corridor*).<br>YES = 4 points (go to H 2.3) NO = go to H 2.2.2<br>H 2.2.2 Is the unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor, at least ¼ mile long with water flowing seasonally, **OR** a lake-fringe wetland without a "wet" corridor, **OR** a riverine wetland without a surface channel connecting to the stream?<br>YES = 2 points (go to H 2.3) NO go to H 2.2.3<br>H 2.2.3 Is the wetland within a 1/2 mile of any permanent stream, seasonal stream, or lake (*do not include man-made ditches*)?<br>YES = 1 point NO = 0 points | 1 |

Wetland name or number 38

| | |
|---|---|
| H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm )***<br>Which of the following priority habitats are within 330ft (100m) of the wetland unit? *NOTE: the connections to the habitats can be disturbed.*<br>____**Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).<br>____**Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).<br>____ **Eastside Steppe:** Non-forested vegetation type dominated by broadleaf herbaceous flora ((*full description of herbaceous species found here are in WDFW PHS report p. 153*).<br>____**Old-growth/Mature forests (east of Cascade crest):** (*full descriptions in WDFW PHS report p. 157*). Old-growth: Stands are > 150 yrs in age; may be variable in tree species composition and structural characteristics due to the influence of fire, climate, and soils. Mature: Stands 80 – 160 yrs old. Decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.<br>____**Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).<br>____ **Juniper Savannah**: All juniper woodlands (*SE part of state only; check map*)<br>____ **Shrub-steppe**: A nonforested vegetation type consisting of one or more layers of perennial bunchgrasses and a conspicuous but discontinuous layer of shrubs (see Eastside Steppe for sites with little or no shrub cover).<br>____**Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.<br>____Inland Dunes This placeholder is for a new priority habitat that will capture areas known as Inland Dunes. A definition will be developed later in Fall 2008. *(check WDFW web site)*<br>____**Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.<br>____**Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.<br>____**Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.<br>____**Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.<br>____**Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 30 cm (12 in) in eastern Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.<br>If wetland has **2 or more** Priority Habitats = **4 points**<br>If wetland has **1** Priority Habitat = **2 points**<br>No Priority habitats = **0 points**<br>*Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)* | 0 |

Wetland name or number 38

| | |
|---|---|
| H 2.4 Landscape *(choose the **one** description of the landscape around the wetland that best fits)* ***(see p. 76)*** <br><br>— The wetland unit is in an area where annual rainfall is less than 12 inches, and its water regime is not influenced by irrigation practices, dams, or water control structures. (*Generally, this means outside boundaries of reclamation areas, irrigation district, or reservoirs* ) **points = 5** <br>— There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing in the connection or an open water connection along a lake shore without heavy boat traffic are OK, but connections should NOT be bisected by paved roads, fill, fields, heavy boat traffic or other development) **points = 5** <br>— There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed? **points = 2** <br>✓ There is at least 1 wetland within ½ mile. **points = 1** <br>— Does not meet any of the four criteria above **points = 0** | 1 |
| **H 2.** TOTAL Score - opportunity for providing habitat *Add the scores in the column above* | 2 |
| **H 3.0 Does the wetland unit have indicators that its ability to provide habitat is reduced?** | |
| H 3.1 Indicator of reduced habitat functions ***(see p. 75)*** <br>Do the areas of open water in the wetland unit have a resident population of carp (see text for indicators of the presence of carp)? *(NOTE: This question does not apply to reservoirs with water levels controlled by dams, such as the reservoirs on the Columbia and Snake Rivers)* <br><br>YES = **- 5 points** NO = 0 points | *Points will be subtracted* |
| **Total Score for Habitat Functions** – *add the points for H 1, H 2, and H 3 and record the result on p. 1* <br>7 + 2 + 0 | 9 |

**Comments**

Wetland name or number 38

# CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

***Please determine if the wetland unit 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 units should also be characterized based on their functions.***

| **Wetland Type**<br>*Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.* | Category |
|---|---|
| **SC 1.0 Vernal pools** *(see p. 79)*<br>Is the wetland unit **less than 4000 ft²**, and does it meet at least **two** of the following criteria?<br>— Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input<br>— Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *NOTE: If you find perennial, "obligate", wetland plants the wetland is probably NOT a vernal pool*<br>— The soil in the wetland are shallow (<1ft deep (30 cm)) and is underlain by an impermeable layer such as basalt or clay.<br>— Surface water is present for less than 120 days during the "wet" season.<br>YES = Go to SC 1.1 (NO) *not a vernal pool*<br>SC 1.1 Is the vernal pool relatively undisturbed in February and March?<br>YES = Go to SC 1.2 (NO) *not a vernal pool with special characteristics* | |
| SC 1.2 Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 miles (other wetlands, rivers, lakes etc.)?<br>YES = Category II (NO) = Category III | **Cat. II**<br>**Cat. III** |
| **SC 2.0 Alkali wetlands** *(see p. 81)*<br>Does the wetland unit meets **one** of the following two criteria?<br>— The wetland has a conductivity > 3.0 mS/cm.<br>— The wetland has a conductivity between 2.0 - 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 2 for list of plants found in alkali systems).<br>— 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.<br>**OR** does the wetland unit meets two of the following three sub-criteria?<br>— Salt encrustations around more than 80% of the edge of the wetland<br>— More than ¾ of the plant cover consists of species listed on Table 2<br>— 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.<br>YES = Category I (NO) *not an alkali wetland* | **Cat. I** |

Wetland name or number 38

**SC 3.0 Natural Heritage Wetlands** *(see p. 81)*

Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.

SC 3.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)*

S/T/R information from Appendix D ___ or accessed from WNHP/DNR database ___

YES____ – contact WNHP/DNR (see p. 79) and go to SC 3.2 (NO)___

SC 3.2 Has DNR identified the wetland unit as a high quality undisturbed wetland or as or as a site with state threatened, endangered, or sensitive plant species? **Cat. I**

YES = Category I (NO) *–not a natural heritage wetland*

**SC 4.0 Bogs** *(see p. 82)*

Does the wetland unit **(or any part of the wetland unit)** meet both the criteria for soils and vegetation in bogs. *Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.*

SC 4.1. Does the wetland unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)?

Yes - go to SC 4.3 (No) - go to SC 4.2

SC 4.2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond??

Yes - go to SC 4.3 (No) - *Is not a bog for rating*

SC 4.3. Does the wetland unit have more than 70% cover of mosses at ground level in any area within its boundaries, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? **Cat. I**

Yes – Category I bog No - go to Q. 4.4

*NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.*

SC 4.4. Is the unit, or any part of it, forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover)?* **Cat. I**

Yes – Category I bog (NO)

Wetland name or number 39

| | |
|---|---|
| **SC 5.0 Forested Wetlands** *(see p. 85)*<br>Does the wetland unit have an area of forest (*you should have identified a forested class, if present, in question H 1.1*) rooted within its boundary that meet **at least one** of the following three criteria?<br>— The wetland is within the "100 year" floodplain of a river or stream<br>— aspen (*Populus tremuloides*) are a dominant or co-dominant of the "woody" vegetation. (*Dominants means it represents at least 50% of the cover of woody species, co-dominant means it represents at least 20% of the total cover of woody species*)<br>— There is at least ¼ acre of trees (even in wetlands smaller than 2.5 acres) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW *(see p. 83)*<br>YES = go to SC 5.1 NO – *not a forested wetland with special characteristics* | |
| SC 5.1 Does the wetland unit have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees<br>Slow growing trees are: western red cedar (*Thuja plicata*), Alaska yellow cedar (*Chamaecyparis nootkatensis*), pine spp. mostly "white" pine (*Pinus monticola*), western hemlock (*Tsuga heterophylla*), Englemann spruce (*Picea engelmannii*).<br>YES = Category I NO = go to SC 5.2 | **Cat. I** |
| SC 5.2 Does the unit have areas where aspen (*Populus tremuloides*) are a dominant or co-dominant species?<br>YES = Category I NO = go to SC 5.3 | **Cat. I** |
| SC 5.3 Does the wetland unit have areas with a forest canopy where more than 50% of the tree species (by cover) are fast growing species.<br>Fast growing species are:<br>Alders – red (*Alnus rubra*), thin-leaf (*A. tenuifolia*)<br>Cottonwoods – narrow-leaf (*Populus angustifolia*), black (*P. balsamifera*)<br>Willows- peach-leaf (*Salix amygdaloides*), Sitka (*S. sitchensis*), Pacific (*S. lasiandra*), Aspen - (*Populus tremuloides*), Water Birch (*Betula occidentalis*)<br>YES = Category II NO = go to SC 5.5 | **Cat. II** |
| SC 5.5 Is the forested component of the wetland within the "100 year floodplain" of a river or stream?<br>YES = Category II | **Cat. II** |
| **Category of wetland based on Special Characteristics**<br>*Choose the "highest" rating if wetland falls into several categories.*<br>If you answered NO for all types enter "Not Applicable" on p.1 | N/A |

# WETLAND RATING FORM – EASTERN WASHINGTON

**Wetland Name:** Wetland 39 **Date:** 5/3/2006 updated 4/3/2012

Name of wetland (if known): Thorn Creek Rd to Moscow

Location: SEC: ___ TWNSHP: __ RNGE: ___ (attach map with outline of wetland to rating form) (MAP in Report)

Person(s) Rating Wetland: S. Gilmore Affiliation: LPU Date of site visit: 2004+2005

## SUMMARY OF RATING

updated map 4 of 4

**Category based on FUNCTIONS provided by wetland**

**I___ II___ III__ IV✓**

| |
|---|
| Category I = Score >70 |
| Category II = Score 51-69 |
| Category III = Score 30-50 |
| Category IV = Score <30 |

| | |
|---|---|
| Score for "Water Quality" Functions | 10 |
| Score for Hydrologic Functions | 10 |
| Score for Habitat Functions | 8 |
| **TOTAL score for functions** | 28 |

**Category based on SPECIAL CHARACTERISTICS of wetland**

**I___ II___ III___ Does not Apply✓**

**Final Category (choose the "highest" category from above)** IV

**Check the appropriate type and class of wetland being rated.**

| Wetland Type | | Wetland Class | |
|---|---|---|---|
| Vernal Pool | | Depressional | |
| Alkali | | Riverine | |
| Natural Heritage Wetland | | Lake-fringe | |
| Bog | | Slope | ✓ |
| Forest | | | |
| None of the above | ✓ | | |

W 39

## Does the wetland being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

| Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating | YES | NO |
|---|---|---|
| **A1.** *Has the wetland been documented as a habitat for any Federally listed Threatened or Endangered plant or animal species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database. | | ✓ |
| **A2.** *Has the wetland been documented as habitat for any State listed Threatened or Endangered plant or animal species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. | | ✓ |
| **A3.** Does the wetland contain individuals of **Priority species** listed by the WDFW for the state? | | ✓ |
| **A4.** Does the wetland have a **local significance** in addition to its functions. For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance. | | ✓ |

## To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 20 for more detailed instructions on classifying wetlands.

## Classification of Vegetated Wetlands for Eastern Washington

**Wetland Name:** W39 **Date:** 5/3/2006 updated 4/3/2012

1. Does the wetland **meet both** of the following criteria?
   ___The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) where at least 20 acres (8 ha) are permanently inundated (ponded or flooded);
   ___At least 30% of the open water area is deeper than 3 m (10 ft)?

   (NO) go to Step 2 **YES** – The wetland class is **Lake-fringe (lacustrine fringe)**

2. Does the wetland **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**?
   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 <3ft diameter and less than a foot deep).*

   NO - go to Step 3 (YES) – The wetland class is **Slope**

3. Is the wetland in a valley or stream channel where it gets inundated by overbank flooding from that stream or river? In general, the flooding should occur at least once every ten years to answer "yes." *The wetland can contain depressions that are filled with water when the river is not flooding.*

   (NO) - go to Step 4 **YES** – The wetland class is **Riverine**

4. Is the wetland in a topographic depression, outside areas that are inundated by overbank flooding, in which water ponds, or is saturated to the surface, at some time of the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

   (NO) – go to Step 5 **YES** – The wetland class is **Depressional**

5. Your wetland seems to be difficult to classify. 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. Sometimes we find characteristics of several different hydrogeomorphic classes within one wetland boundary. If you have a wetland with several HGM classes present within its boundaries use the following table to identify the appropriate class to use for the rating system. 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 being rated.

| HGM Classes Within One Delineated Wetland Boundary | Class to Use in Rating if area of this class > 10% total |
|---|---|
| Slope + Riverine | Riverine |
| Slope + Depressional | Depressional |
| Slope + Lake-fringe | Lake-fringe |
| Depressional + Riverine (riverine is within boundary of depression) | Depressional |
| Depressional + Lake-fringe | Depressional |

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

W39

| S | Slope Wetlands | Points |
|---|---|---|
| | WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality | |
| S | **S 1.0 Does the wetland have the potential to improve water quality? *(see p.56)*** | |
| S | S 1.1 Characteristics of average slope of wetland:<br>Slope is1% or less *(a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance)* points = 3<br>Slope is between 1% and 2% points = (2)<br>Slope is more than 2% but less than 5% points = 1<br>Slope is 5% or greater points = 0 | 2 |
| S | S 1.2 The soil 2 inches below the surface is clay, organic, or smells anoxic (hydrogen sulfide or rotten eggs).<br>YES = 3 points NO = (0) points | 0 |
| S | S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants:<br>*Choose the points appropriate for the description that best fit conditions in the wetland. Dense vegetation means you have trouble seeing the soil surface.*<br>Dense, ungrazed, herbaceous vegetation > 90% of the wetland area points = 6<br>Dense, ungrazed, herbaceous vegetation > 1/2 of area points = (3)<br>Dense, woody, vegetation > ½ of area points = 2<br>Dense, ungrazed, herbaceous vegetation > 1/4 of area points = 1<br>Does not meet any of the criteria above for herbaceous vegetation points = 0 | some cropland<br>3 |
| S | **Total for S 1** *Add the points in the boxes above* | 5 |
| S | **S 2.0 Does the wetland have the opportunity to improve water quality? *(see p.58)***<br>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants.*<br>— Grazing in the wetland or within 150ft<br>— Wetland is a groundwater seep within the Reclamation Area<br>— Untreated stormwater flows through the wetland<br>— Tilled fields or orchards within 150 feet of wetland<br>— Residential, urban areas, or golf courses are within 150 ft upslope of wetland<br>— Other_____<br>**YES** multiplier is (2) **NO** multiplier is **1** | multiplier<br>2 |
| S | **TOTAL - Water Quality Functions** Multiply the score from S1 by the multiplier in S2<br>***Record score on p. 1 of field form*** | 10 |

W39

| S | Slope Wetlands | Points |
|---|---|---|
| | HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation | |
| S | **S 3.0 Does the wetland have the <u>potential</u> to reduce flooding and stream erosion?** ***(see p.59)*** | |
| S | S 3.1 Characteristics of vegetation that reduce the velocity of surface flows during storms. *Choose the points appropriate for the description that best fit conditions in the wetland.*<br>Dense, uncut, **rigid** vegetation covers > 90% of the area of the wetland. (stems of plants should be thick enough (usually > 1/8in), or dense enough, to remain erect during surface flows) points = 6<br>Dense, uncut, **rigid** vegetation > 1/2 – 90% area of wetland points = (3)<br>Dense, uncut, **rigid** vegetation > 1/4 – 1/2 area points = 1<br>More than 1/4 of area is grazed, mowed, tilled or vegetation is not rigid points = 0 | 3 |
| S | S 3.2 Characteristics of slope wetland that holds back small amounts of flood flows:<br>The slope wetland has small surface depressions that can retain water over at least 10% of its area. YES points = (2)<br>NO points = 0 | 2 |
| S | **Total for S3** *Add the points in the boxes above* | 5 |
| S | **S 4. 0 Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** ***(see p.61)***<br>*Answer NO if the major source of water is irrigation return flow (e.g. a seep that is on the downstream side of a dam or at the base of an irrigated field.*<br>Answer YES if the wetland is in a landscape position where the reduction in water velocity it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. *Note which of the following conditions apply.*<br>✓ Wetland has surface runoff that can cause flooding problems downgradient<br>— Other_____<br>**YES** multiplier is (2) **NO** multiplier is **1** | multiplier<br>2 |
| S | **TOTAL - Hydrologic Functions** Multiply the score from S3 by the multiplier in S4<br>***Record score on p. 1 of field form*** | 10 |

**Comments**

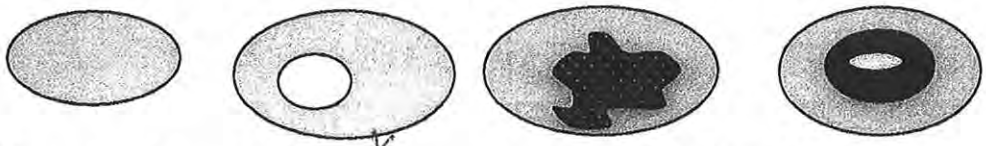
W39

| *These questions apply to wetlands of all HGM classes.* | Points |
|---|---|
| HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat | |
| **H 1. Does the wetland have the <u>potential</u> to provide habitat for many species?** | |
| H 1.1 <u>Vegetation structure</u> ***(see p.62)***<br>*Check the types of vegetation present if the type covers more than 10% of the area of the wetland or ¼ acre.*<br>____Aquatic bed<br>____Emergent plants 0-12 inches high (0 – 30 cm)<br>__/__Emergent plants >12 – 40 inches high (>30 – 100cm)<br>____Emergent plants > 40 inches high (> 100 cm)<br>____Scrub/shrub (areas where shrubs have >30% cover)<br>____Forested (areas where trees have >30% cover)<br>*Add the number of vegetation types that qualify. If you have:*<br>4-6 types *record* points = 3<br>3 types points = 2<br>2 types points = 1<br>1 type points = 0 | 0 |
| H 1.2. Is one of the vegetation types "aquatic bed?" ***(see p .64)***<br>YES = 1 point NO = 0 points | 0 |
| H 1.3. <u>Surface Water</u> ***(see p.65)***<br>H 1.3.1 Does the wetland have areas of "open" water (without emergent or shrub plants) over at least ¼ acre or 10% of its area during the spring (March – early June) OR in early fall (August – end of September)? *Note: answer YES for Lake-fringe wetlands*<br>YES = 3 points & **go to H 1.4** NO = go to H 1.3.2<br>H 1.3.2 Does the wetland have an intermittent or permanent stream within its boundaries, or along one side, that has an unvegetated bottom (*answer yes only if H 1.3.1 is NO*)?<br>YES = 3 points NO = 0 points | 3 |
| H 1.4. <u>Richness of Plant Species</u> ***(see p. 66)***<br>Count the number of plant species in the wetland that cover at least 10 ft$^2$. (*different patches of the same species can be combined to meet the size threshold)*<br>*You do not have to name the species.*<br>*Do not include Eurasean Milfoil, reed canarygrass, purple loosestrife, Russian Olive, Phragmites ,Canadian Thistle, Yellow-flag Iris, and Salt Cedar (Tamarisk)*<br>If you counted: > 9 species points = 2<br>4-9 species points = 1<br># of species ____ < 4 species points = 0 points | 0 |

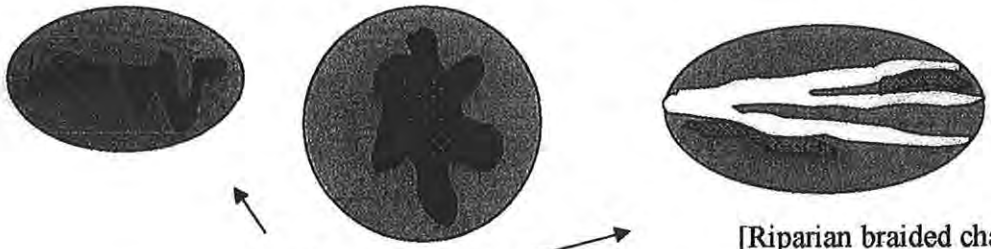
W39

H 1.5. Interspersion of habitats *(see p. 67)*

Decided from the diagrams below whether interspersion between types of vegetation (described in H 1.1), or vegetation types and un-vegetated areas (can include open water or mudflats) is high, medium, low, or none.



None = 0 points  Low = 1 point  Moderate = 2 points



High = 3 points  [Riparian braided channel]

NOTE: If you have four or more vegetation types or three vegetation types and open water the rating is always "high".

1

H 1.6. Special Habitat Features: *(see p. 68)*

*Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.*

____Loose rocks larger than 4" **or** large, downed, woody debris (>4in. diameter) within the area of surface ponding or in stream.

____Cattails or bulrushes are present within the wetland.

____Standing snags (diameter at the bottom > 4 inches) in the wetland or within 30 m (100 ft) of the edge.

____Emergent or shrub vegetation in areas that are permanently inundated/ponded. *The presence of "yellow flag" Iris is a good indicator of vegetation in areas permanently ponded.*

____Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) OR signs of recent beaver activity

____ Invasive species cover less than 20% in each stratum of vegetation

*Maximum score possible = 6*

0

**TOTAL** Potential to provide habitat
*Add the scores in the column above*

4

**Comments**

W 39

**H 2.0 Does the wetland have the opportunity to provide habitat for many species?**

H 2.1 Buffers *(see p. 71)*

*Choose the description that best represents condition of buffer of wetland. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."*

— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No developed areas within undisturbed part of buffer. **(relatively undisturbed also means no-grazing)** **Points = 5**

— 330 ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. **Points = 4**

— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **Points = 4**

— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . **Points = 3**

— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. **Points = 3**

**If buffer does not meet any of the criteria above**

— No paved areas (except paved trails) or buildings within 80ft (25 m) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**

— No paved areas or buildings within 170ft (50m) of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**

— Heavy grazing in buffer. **Points = 1**

— Vegetated buffers are <6.6ft wide (2m) for more than 95% of the circumference (e.g . tilled fields, paving, basalt bedrock extend to edge of wetland). **Points = 0**

✓ — Buffer does not meet any of the criteria above. **Points = 1**

cropped uplands reed canarygrass on down-stream edge

1

H 2.2 Wet Corridors *(see p. 72)*

H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor at least ¼ mile long with surface water or flowing water throughout most of the year (> 9 months/yr)? (*dams, heavily used gravel roads, paved roads, fields tilled to edge of stream, or pasture to edge of stream are considered breaks in the corridor*).

YES = 4 points (go to H 2.3) NO = go to H 2.2.2

H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken, vegetated corridor, at least ¼ mile long with water flowing seasonally, **OR** a lake-fringe wetland without a "wet" corridor, **OR** a riverine wetland without a surface channel connecting to the stream?

YES = 2 points (go to H 2.3) NO go to H 2.2.3

1

H 2.2.3 Is the wetland within a 1/2 mile of any permanent stream, seasonal stream, or lake (*do not include man-made ditches*)?

YES = 1 point NO = 0 points

W 39

| | |
|---|---|
| H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see p. 74)***<br>Which of the following priority habitats are within 330ft (100m) of the wetland?<br>*(see text for a more detailed description of these priority habitats)*<br>____**Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.<br>____**Aspen Stands:** Pure or mixed stands of aspen greater than 2 acres.<br>____**Cliffs:** Greater than 25 ft high and occurring below 5000 ft.<br>____**Old-growth forests:** (east of Cascade crest): In general, stands will be >150 years of age, with 10 trees/acrethat are > 21 in dbh, and 1 - 3 snags/acre > 12-14 in diameter.<br>____**Mature forests:** Stands with average diameters exceeding 21 in dbh; crown cover may be less that 100%; decay, 80 - 160 years old east of the Cascade crest.<br>____**Prairies and Steppe:** Relatively undisturbed areas (as indicated by dominance of native plants) where grasses and/or forbs form the natural climax plant community.<br>____**Shrub-steppe:** Tracts of land consisting of plant communities with one or more layers of perennial grasses and a conspicuous but discontinuous layer of shrubs.<br>____**Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft, composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.<br>____**Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages<br>____**Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.<br>____**Urban Natural Open Space**: A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other *priority habitats*, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.<br>____**Aspen Stands:** Pure or mixed stands of aspen greater than 0.8 ha (2 acres).<br><br>If wetland has **2 or more** Priority Habitats = **4 points**<br>If wetland has **1** Priority Habitat = **2 points**<br>No Priority habitats = 0 points | 0 |

**Comments**

W39

| | |
|---|---|
| H 2.4 Landscape *(choose the **one** description of the landscape around the wetland that best fits)* ***(see p. 76)***<br>— The wetland is in an area where annual rainfall is less than 12 inches, and its water regime is not influenced by irrigation practices, dams, or water control structures. *(Generally, this means outside boundaries of reclamation areas, irrigation district, or reservoirs)* points = 5<br>— There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing in the connection or an open water connection along a lake shore without heavy boat traffic are OK, but connections should NOT be bisected by paved roads, fill, fields, heavy boat traffic or other development). points = 5<br>— There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed? points = 2<br>— There is at least 1 wetland within ½ mile. points = 1<br>— Does not meet any of the four criteria above points = 0 | 2 |
| **H 2.** TOTAL Score - opportunity for providing habitat *Add the scores in the column above* | 4 |
| **H 3.0 Does the wetland have indicators that its ability to provide habitat is reduced?** | |
| H 3.1 Indicator of reduced habitat functions ***(see p. 75)***<br>Do the areas of open water in the wetland have a resident population of carp (see text for indicators of the presence of carp)? *(NOTE: This question does not apply to reservoirs with water levels controlled by dams, such as the reservoirs on the Columbia and Snake Rivers)*<br>YES = **- 5 points** NO = 0 points | *Points will be subtracted*<br>0 |
| **Total Score for Habitat Functions** – *add the points for H 1, H 2, and H 3 and record the result on p. 1*<br>4 + 4 + 0 | 8 |

**Comments**

## CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS W39

***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.***

| **Wetland Type**<br>*Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.* | Category |
|---|---|
| **SC 1.0 Vernal pools** ***(see p. 79)***<br>Is the wetland **less than 4000 ft²**, and does it meet at least **two** of the following criteria?<br>— Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input<br>— Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *NOTE: If you find perennial, "obligate", wetland plants the wetland is probably NOT a vernal pool*<br>— The soil in the wetland are shallow (<1ft deep (30 cm)) and is underlain by an impermeable layer such as basalt or clay.<br>— Surface water is present for less than 120 days during the "wet" season.<br>YES = Go to SC 1.1 NO - *not a vernal pool*<br>SC 1.1 Is the vernal pool relatively undisturbed in February and March?<br>YES = Go to SC 1.2 NO - *categorize based on functions* | |
| SC 1.2 Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 miles (other wetlands, rivers, lakes etc.)?<br>YES = Category II NO = Category III | **Cat. II**<br>**Cat. III** |
| **SC 2.0 Alkali wetlands** ***(see p. 81)***<br>Does the wetland meets **one** of the following two criteria?<br>— The wetland has a conductivity > 3.0 mS/cm.<br>— The wetland has a conductivity between 2.0 - 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 2 for list of plants found in alkali systems).<br>— 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.<br>**OR** does the wetland meets two of the following three sub-criteria?<br>— Salt encrustations around more than 80% of the edge of the wetland<br>— More than ¾ of the plant cover consists of species listed on Table 2<br>— 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.<br>YES = Category I NO - *categorize based on functions* | **Cat. I** |

W39

**SC 3.0 Natural Heritage Wetlands** ***(see p. 81)***

Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.

SC 3.1 Is the wetland being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)* S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ___

YES____ – contact WNHP/DNR (see p. 79) and go to SC 3.2 NO ___

SC 3.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? **Cat. I**

YES = Category I NO ____

**SC 4.0 Bogs** ***(see p. 82)***

Does the wetland (or part of the wetland) meet both the criteria for soils and vegetation in bogs. *Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.*

SC 4.1. Does the wetland have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)?

Yes - go to SC 4.3 No - go to SC 4.2

SC 4.2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond??

Yes - go to SC 4.3 No - Is not a bog for rating

SC 4.3. Does the wetland have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?

Yes – Category I bog No - go to Q. 4.4 **Cat. I**

*NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.*

SC 4.4. Is the wetland forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover)?* **Cat. I**

Yes – Category I bog No - *categorize based on functions*

| | |
|---|---|
| **SC 5.0 Forested Wetlands** ***(see p. 85)***<br>Does the wetland have an area of forest (*you should have identified a forested class, if present, in question H 1.1*) rooted within its boundary that meet **at least one** of the following three criteria?<br>— The wetland is within the "100 year" floodplain of a river or stream<br>— aspen (*Populus tremuloides*) are a dominant or co-dominant of the "woody" vegetation. (*Dominants means it represents at least 50% of the cover of woody species, co-dominant means it represents at least 20% of the total cover of woody species*)<br>— There is at least ¼ acre of trees (even in wetlands smaller than 2.5 acres) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW *(see p. 83)*<br>YES = go to SC 5.1 NO - *categorize based on functions* | |
| 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<br>Slow growing trees are: western red cedar (*Thuja plicata*), Alaska yellow cedar (*Chamaecyparis nootkatensis*), pine spp. mostly "white" pine (*Pinus monticola*), western hemlock (*Tsuga heterophylla*), Englemann spruce (*Picea engelmannii*).<br>YES = Category I NO = go to SC 5.2 | **Cat. I** |
| SC 5.2 Does the wetland have aspen (*Populus tremuloides*) as a dominant or co-dominant species in the category of woody species?<br>YES = Category I NO = go to SC 5.3 | **Cat. I** |
| SC 5.3 Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are fast growing species.<br>Fast growing species are:<br>Alders – red (*Alnus rubra*), thin-leaf (*A. tenuifolia*)<br>Cottonwoods – narrow-leaf (*Populus angustifolia*), black (*P. balsamifera*)<br>Willows- peach-leaf (*Salix amygdaloides*), Sitka (*S. sitchensis*), Pacific (*S. lasiandra*), Aspen - (*Populus tremuloides*), Water Birch (*Betula occidentalis*)<br>YES = Category II NO = go to SC 5.5 | **Cat. II** |
| SC 5.5 Is the forested component of the wetland within the "100 year floodplain" of a river or stream?<br>YES = Category II NO - *categorize based on functions* | **Cat. II** |
| **Category of wetland based on Special Characteristics**<br>*Choose the "highest" rating if wetland falls into several categories.*<br>If you answered NO for all types enter "Not Applicable" on p.1 | N/A |

Wetland name or number W40

# WETLAND RATING FORM – EASTERN WASHINGTON

Version 2 - Updated June 2006 to increase accuracy and reproducibility among users
Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Thorncreek Road + Moss Date of site visit: 2004-2005

Rated by S. Gilmore Trained by Ecology? Yes ✓ No ___ Date of training 2007

SEC: ___ TWNSHP: ___ RNGE: ___ Is S/T/R in Appendix D? Yes ___ No ✓

**Map of wetland unit: Figure** 4&4 **Estimated size** < .5 Ac

## SUMMARY OF RATING

### Category based on FUNCTIONS provided by wetland

**I**___ **II**___ **III**✓ **IV**___

| |
|---|
| Category I = Score >=70 |
| Category II = Score 51-69 |
| Category III = Score 30-50 |
| Category IV = Score < 30 |

| | |
|---|---|
| Score for "Water Quality" Functions | 14 |
| Score for Hydrologic Functions | 12 |
| Score for Habitat Functions | 7 |
| **TOTAL score for functions** | 33 |

### Category based on SPECIAL CHARACTERISTICS of wetland

**I**___ **II**___ **III**___ **Does not Apply**✓

### Final Category (choose the "highest" category from above)

III

**Summary of basic information about the wetland unit**

| Wetland Type | | Wetland Class | |
|---|---|---|---|
| Vernal Pool | | Depressional | |
| Alkali | | Riverine | |
| Natural Heritage Wetland | | Lake-fringe | |
| Bog | | Slope | ✓ |
| Forest | | | |
| None of the above | ✓ | Check if unit has multiple HGM classes present | |

Wetland name or number 40

## Does the wetland being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

| Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating | YES | NO |
|---|---|---|
| SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?*<br>For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database. | | ✓ |
| SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?*<br>For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form). | | ✓ |
| SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?* | | ✓ |
| SP4. *Does the wetland unit have a local significance in addition to its functions*?<br>For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance. | | ✓ |

## To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 20 for more detailed instructions on classifying wetlands.

Wetland name or number 46

## Classification of Vegetated Wetlands for Eastern Washington

**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 1-7 apply, and go to Question 8.**

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

___The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

___At least 30% of the open water area is deeper than 3 m (10 ft)?

NO – go to Step 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**?

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 <3ft diameter and less than a foot deep).*

NO - go to Step 3 **YES** – The wetland class is **Slope**

**3.** Is the entire wetland unit in a valley or stream channel where it gets inundated by overbank flooding from that stream or river? In general, the flooding should occur at least once every ten years to answer "yes." *The wetland can contain depressions that are filled with water when the river is not flooding.*

NO - go to Step 4 **YES** – The wetland class is **Riverine**

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

NO – go to Step 5 **YES** – The wetland class is **Depressional**

**5.** Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. 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 1-7 APPLY TO DIFFERENT AREAS IN THE 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 your wetland. 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 class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

Wetland name or number H O

| HGM Classes Within One Delineated Wetland Boundary | Class to Use for Rating |
|---|---|
| Slope + Riverine | Riverine |
| Slope + Depressional | Depressional |
| Slope + Lake-fringe | Lake-fringe |
| Depressional + Riverine (riverine is within boundary of depression) | Depressional |
| Depressional + Lake-fringe | Depressional |

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

Wetland name or number 40

| S | **Slope Wetlands**<br>WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality | **Points** (only 1 score per box) |
|---|---|---|
| S | **S 1.0 Does the wetland have the potential to improve water quality?** | *(see p.56)* |
| S | S 1.1 Characteristics of average slope of wetland:<br>Slope is1% or less *(a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance)* points = 3<br>Slope is between 1% and 2% points = 2<br>Slope is more than 2% but less than 5% points = (1)<br>Slope is 5% or greater points = 0 | 1 |
| S | S 1.2 The soil 2 inches below the surface is clay or organic *(use NRCS definitions of soil types)*<br>YES = 3 points NO = 0 points | 0 |
| S | S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants:<br>*Choose the points appropriate for the description that best fits the vegetation in the wetland. **Dense** vegetation means you have trouble seeing the soil surface (>75% cover), and **uncut** means not grazed or mowed and plants are higher than 6 inches.*<br>Dense, ungrazed, herbaceous vegetation > 90% of the wetland unit points = (6)<br>Dense, ungrazed, herbaceous vegetation > 1/2 of unit points = 3<br>Dense, woody, vegetation > ½ of unit points = 2<br>Dense, ungrazed, herbaceous vegetation > 1/4 of unit points = 1<br>Does not meet any of the criteria above for herbaceous vegetation points = 0<br>Aerial photo or map with vegetation polygons | Figure ___<br>6 |
| S | **Total for S 1** *Add the points in the boxes above* | 7 |
| S | **S 2.0 Does the wetland have the opportunity to improve water quality?**<br>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.*<br>— Grazing in the wetland or within 150ft<br>— Wetland is a groundwater seep within the Reclamation Area<br>— ✓ Untreated stormwater flows through the wetland<br>— ✓ Tilled fields or orchards within 150 feet of wetland<br>— Residential, urban areas, or golf courses are within 150 ft upslope of wetland<br>— Other ___<br>**YES** multiplier is (2) **NO** multiplier is **1** | *(see p.58)*<br>multiplier<br>2 |
| S | **TOTAL - Water Quality Functions** Multiply the score from S1 by the multiplier in S2<br>***Record score on p. 1 of field form*** | 14 |

Wetland name or number 40

| S | **Slope Wetlands**<br>HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation | **Points** (only 1 score per box) |
|---|---|---|
| S | **S 3.0 Does the wetland unit have the <u>potential</u> to reduce flooding and stream erosion?** | *(see p.59)* |
| S | S 3.1 Characteristics of vegetation that reduce the velocity of surface flows during storms.<br>*Choose the points appropriate for the description that best fit conditions in the wetland. See question S 1.3 for definition of dense and uncut.* ***Rigid*** *means that the stems of plants should be thick enough (usually > 1/8in), or dense enough, to remain erect during surface flows.*<br><br>Dense, uncut, **rigid** vegetation covers > 90% of the area of the unit points = (6)<br>Dense, uncut, **rigid** vegetation > 1/2 – 90% area of unit points = 3<br>Dense, uncut, **rigid** vegetation > 1/4 – 1/2 of unit points = 1<br>More than 1/4 of area is grazed, mowed, tilled or vegetation is not rigid points = 0 | 6 |
| S | S 3.2 Characteristics of slope wetland that holds back small amounts of flood flows:<br>The slope wetland has small surface depressions that can retain water over at least 10% of its area. YES points = 2<br>NO points = (0) | 0 |
| S | **Total for S3** *Add the points in the boxes above* | 6 |
| S | **S 4. 0 Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion?**<br>***(see p.61)***<br>*Answer NO if the major source of water is irrigation return flow (e.g. a seep that is on the downstream side of a dam or at the base of an irrigated field.*<br>Answer YES if the wetland is in a landscape position where the reduction in water velocity it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. *Note which of the following conditions apply.*<br>— ✓ Wetland has surface runoff that can cause flooding problems downgradient<br>— Other_____<br>**YES** multiplier is (2) **NO** multiplier is **1** | multiplier<br>2 |
| S | **TOTAL - Hydrologic Functions** Multiply the score from S3 by the multiplier in S4<br>***Record score on p. 1 of field form*** | 12 |

**Comments**

Wetland name or number 40

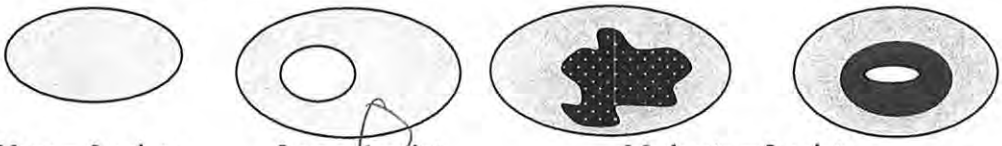
| ***These questions apply to wetlands of all HGM classes.*** HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat | **Points** (only 1 score per box) |
|---|---|
| **H 1. Does the wetland unit have the potential to provide habitat for many species?** | |
| H 1.1 Categories of vegetation structure ***(see p.62)*** | **Figure ___** |
| *Check the vegetation classes (as defined by Cowardin) and heights of emergents present. Size threshold for each class or height category is ¼ acre or more than 10% of the area if unit is < 2.5 acres.*<br>____Aquatic bed<br>____Emergent plants 0-12 in. (0 – 30 cm) high are the highest layer and have > 30% cover<br>__/__Emergent plants >12 – 40 in.(>30 – 100cm) high are the highest layer with >30% cover<br>____Emergent plants > 40 in.(> 100cm) high are the highest layer with >30% cover<br>____Scrub/shrub (areas where shrubs have >30% cover)<br>____Forested (areas where trees have >30% cover)<br>*Add the number of vegetation types that qualify. If you have:*<br>4-6 types points = 3<br>3 types points = 2<br>2 types points = 1<br>1 type points = 0<br>Map of Cowardin vegetation classes and areas with different heights of emergents | 0 |
| H 1.2. Is one of the vegetation types "aquatic bed?" ***(see p .64)***<br>YES = 1 point NO = 0 points | 0 |
| H 1.3. Surface Water ***(see p.65)***<br>H 1.3.1 Does the unit have areas of "open" water (without herbaceous or shrub plants) over at least ¼ acre or 10% of its area during the spring (March – early June) OR in early fall (August – end of September)? *Note: answer YES for Lake-fringe wetlands*<br>YES = 3 points **& go to H 1.4** NO = go to H 1.3.2<br>H 1.3.2 Does the unit have an intermittent or permanent stream within its boundaries, or along one side, over at least ¼ acre or 10% of its area, AND that has an unvegetated bottom (*answer yes only if H 1.3.1 is NO*)?<br>YES = 3 points NO = 0 points<br>Map showing areas of open water | **Figure ___**<br>3 |
| H 1.4. Richness of Plant Species ***(see p. 66)***<br>Count the number of plant species in the wetland that cover at least 10 ft$^2$. (*different patches of the same species can be combined to meet the size threshold)*<br>*You do not have to name the species.*<br>*Do not include Eurasean Milfoil, reed canarygrass, purple loosestrife, Russian Olive, Phragmites ,Canadian Thistle, Yellow-flag Iris, and Salt Cedar (Tamarisk)*<br>If you counted: > 9 species points = 2<br>4-9 species points = 1<br># of species ____ < 4 species points = 0 points<br>*List species below if you wish*<br>reed + mayweed | 0 |

Wetland name or number 40

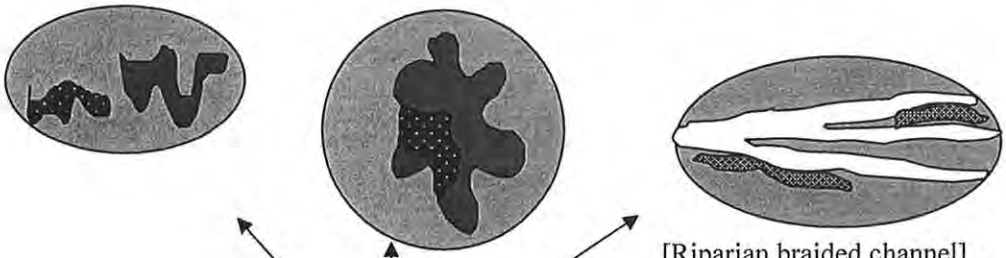
H 1.5. Interspersion of habitats *(see p. 67)*

Figure ___

Decided from the diagrams below whether interspersion between categories of vegetation (described in H 1.1), or categories and un-vegetated areas (can include open water or mudflats) is high, medium, low, or none.



None = 0 points Low = 1 point Moderate = 2 points



[Riparian braided channel]

High = 3 points

NOTE: If you have four or more vegetation categories or three vegetation categories and open water the rating is always "high". Use maps from H1.1 and H1.3

1

H 1.6. Special Habitat Features: *(see p. 68)*

*Check the habitat features that are present in the wetland unit. The number of checks is the number of points you put into the next column.*

____Loose rocks larger than 4" **or** large, downed, woody debris (>4in. diameter) within the area of surface ponding or in stream.

____Cattails or bulrushes are present within the unit.

____Standing snags (diameter at the bottom > 4 inches) in the wetland unit or within 30 m (100ft) of the edge.

____Emergent or shrub vegetation in areas that are permanently inundated/ponded. *The presence of "yellow flag" Iris is a good indicator of vegetation in areas permanently ponded.*

____Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) OR signs of recent beaver activity

____ Invasive species cover less than 20% in each stratum of vegetation *(canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)*

0

*Maximum score possible = 6*

**TOTAL** Potential to provide habitat
*Add the scores in the column above*

4

**Comments**

Wetland name or number 40

| **H 2.0 Does the wetland have the opportunity to provide habitat for many species?** | |
|---|---|
| H 2.1 Buffers *(see p. 71)*<br>*Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed." Relatively undisturbed also means no grazing, no landscaping, no daily human use, and no structures or paving within undisturbed part of buffer.*<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference **Points = 5**<br>— 330 ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. **Points = 4**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **Points = 4**<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . **Points = 3**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. **Points = 3**<br>**If buffer does not meet any of the criteria above**<br>— No paved areas (except paved trails) or buildings within 80ft (25 m) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— No paved areas or buildings within 170ft (50m) of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— Heavy grazing in buffer. **Points = 1**<br>— Vegetated buffers are <6.6ft wide (2m) for more than 95% of the circumference (e.g . tilled fields, paving, basalt bedrock extend to edge of wetland). **Points = 0**<br>— Buffer does not meet any of the criteria above. **Points = 1**<br>Aerial photo showing buffers | Figure ___<br>0 |
| H 2.2 Wet Corridors *(see p. 72)*<br>H 2.2.1 Is the wetland unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor at least ¼ mile long with surface water or flowing water throughout most of the year (> 9 months/yr)? (*dams, heavily used gravel roads, paved roads, fields tilled to edge of stream, or pasture to edge of stream are considered breaks in the corridor*).<br>YES = 4 points (go to H 2.3) NO = go to H 2.2.2<br>H 2.2.2 Is the unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor, at least ¼ mile long with water flowing seasonally, **OR** a lake-fringe wetland without a "wet" corridor, **OR** a riverine wetland without a surface channel connecting to the stream?<br>YES = 2 points (go to H 2.3) NO go to H 2.2.3<br>H 2.2.3 Is the wetland within a 1/2 mile of any permanent stream, seasonal stream, or lake (*do not include man-made ditches*)?<br>YES = 1 point NO = 0 points | 1 |

Wetland name or number 40

| | |
|---|---|
| H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm )***<br>Which of the following priority habitats are within 330ft (100m) of the wetland unit? *NOTE: the connections to the habitats can be disturbed.*<br>____**Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).<br>____**Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).<br>____ **Eastside Steppe:** Non-forested vegetation type dominated by broadleaf herbaceous flora ((*full description of herbaceous species found here are in WDFW PHS report p. 153*).<br>____**Old-growth/Mature forests (east of Cascade crest):** (*full descriptions in WDFW PHS report p. 157*). Old-growth: Stands are > 150 yrs in age; may be variable in tree species composition and structural characteristics due to the influence of fire, climate, and soils. Mature: Stands 80 – 160 yrs old. Decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.<br>____**Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).<br>____ **Juniper Savannah**: All juniper woodlands (*SE part of state only; check map*)<br>____ **Shrub-steppe**: A nonforested vegetation type consisting of one or more layers of perennial bunchgrasses and a conspicuous but discontinuous layer of shrubs (see Eastside Steppe for sites with little or no shrub cover).<br>____**Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.<br>____Inland Dunes This placeholder is for a new priority habitat that will capture areas known as Inland Dunes. A definition will be developed later in Fall 2008. *(check WDFW web site)*<br>____**Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.<br>____**Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.<br>____**Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.<br>____**Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.<br>____**Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 30 cm (12 in) in eastern Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.<br>If wetland has **2 or more** Priority Habitats = **4 points**<br>If wetland has **1** Priority Habitat = **2 points**<br>No Priority habitats = **0 points**<br>*Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)* | 0 |

Wetland name or number 40

| | |
|---|---|
| H 2.4 Landscape *(choose the **one** description of the landscape around the wetland that best fits)* ***(see p. 76)***<br><br>— The wetland unit is in an area where annual rainfall is less than 12 inches, and its water regime is not influenced by irrigation practices, dams, or water control structures. (*Generally, this means outside boundaries of reclamation areas, irrigation district, or reservoirs* ) **points = 5**<br>— There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing in the connection or an open water connection along a lake shore without heavy boat traffic are OK, but connections should NOT be bisected by paved roads, fill, fields, heavy boat traffic or other development) **points = 5**<br>✓ There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed? **points = 2**<br>— There is at least 1 wetland within ½ mile. **points = 1**<br>— Does not meet any of the four criteria above **points = 0** | 2 |
| **H 2.** TOTAL Score - opportunity for providing habitat<br>*Add the scores in the column above* | 3 |
| **H 3.0 Does the wetland unit have indicators that its ability to provide habitat is reduced?** | |
| H 3.1 Indicator of reduced habitat functions ***(see p. 75)***<br>Do the areas of open water in the wetland unit have a resident population of carp (see text for indicators of the presence of carp)? *(NOTE: This question does not apply to reservoirs with water levels controlled by dams, such as the reservoirs on the Columbia and Snake Rivers)*<br><br>YES = **- 5 points** NO = 0 points | *Points will be subtracted*<br><br>0 |
| **Total Score for Habitat Functions** – *add the points for H 1, H 2, and H 3 and record the result on p. 1*<br>4+3+0 | 7 |

**Comments**

Wetland name or number 40

# CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

***Please determine if the wetland unit 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 units should also be characterized based on their functions.***

| **Wetland Type**<br>*Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.* | Category |
|---|---|
| **SC 1.0 Vernal pools** *(see p. 79)*<br>Is the wetland unit **less than 4000 ft²**, and does it meet at least **two** of the following criteria?<br>— Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input<br>— Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *NOTE: If you find perennial, "obligate", wetland plants the wetland is probably NOT a vernal pool*<br>— The soil in the wetland are shallow (<1ft deep (30 cm)) and is underlain by an impermeable layer such as basalt or clay.<br>— Surface water is present for less than 120 days during the "wet" season.<br>YES = Go to SC 1.1 (NO) – *not a vernal pool*<br>SC 1.1 Is the vernal pool relatively undisturbed in February and March?<br>YES = Go to SC 1.2 (NO) – *not a vernal pool with special characteristics* | |
| SC 1.2 Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 miles (other wetlands, rivers, lakes etc.)?<br>YES = Category II (NO) = Category III | **Cat. II**<br>**Cat. III** |
| **SC 2.0 Alkali wetlands** *(see p. 81)*<br>Does the wetland unit meets **one** of the following two criteria?<br>— The wetland has a conductivity > 3.0 mS/cm.<br>— The wetland has a conductivity between 2.0 - 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 2 for list of plants found in alkali systems).<br>— 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.<br>**OR** does the wetland unit meets two of the following three sub-criteria?<br>— Salt encrustations around more than 80% of the edge of the wetland<br>— More than ¾ of the plant cover consists of species listed on Table 2<br>— 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.<br>YES = Category I (NO) – *not an alkali wetland* | **Cat. I** |

**SC 3.0 Natural Heritage Wetlands** *(see p. 81)*

Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.

SC 3.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)*

S/T/R information from Appendix D ___ or accessed from WNHP/DNR database ___

YES____ – contact WNHP/DNR (see p. 79) and go to SC 3.2 (NO)

SC 3.2 Has DNR identified the wetland unit as a high quality undisturbed wetland or as or as a site with state threatened, endangered, or sensitive plant species? **Cat. I**

YES = Category I (NO) *–not a natural heritage wetland*

**SC 4.0 Bogs** *(see p. 82)*

Does the wetland unit **(or any part of the wetland unit)** meet both the criteria for soils and vegetation in bogs. *Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.*

SC 4.1. Does the wetland unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)?

Yes - go to SC 4.3 No - go to SC 4.2

SC 4.2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond??

Yes - go to SC 4.3 (No) - *Is not a bog for rating*

SC 4.3. Does the wetland unit have more than 70% cover of mosses at ground level in any area within its boundaries, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? **Cat. I**

Yes – Category I bog No - go to Q. 4.4

*NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.*

SC 4.4. Is the unit, or any part of it, forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover)?* **Cat. I**

Yes – Category I bog (NO)

Wetland name or number 4,0

| | |
|---|---|
| **SC 5.0 Forested Wetlands** *(see p. 85)*<br>Does the wetland unit have an area of forest (*you should have identified a forested class, if present, in question H 1.1*) rooted within its boundary that meet **at least one** of the following three criteria?<br>— The wetland is within the "100 year" floodplain of a river or stream<br>— aspen (*Populus tremuloides*) are a dominant or co-dominant of the "woody" vegetation. (*Dominants means it represents at least 50% of the cover of woody species, co-dominant means it represents at least 20% of the total cover of woody species*)<br>— There is at least ¼ acre of trees (even in wetlands smaller than 2.5 acres) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW *(see p. 83)*<br>YES = go to SC 5.1 NO *–not a forested wetland with special characteristics* | |
| SC 5.1 Does the wetland unit have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees<br>Slow growing trees are: western red cedar (*Thuja plicata*), Alaska yellow cedar (*Chamaecyparis nootkatensis*), pine spp. mostly "white" pine (*Pinus monticola*), western hemlock (*Tsuga heterophylla*), Englemann spruce (*Picea engelmannii*).<br>YES = Category I NO = go to SC 5.2 | **Cat. I** |
| SC 5.2 Does the unit have areas where aspen (*Populus tremuloides*) are a dominant or co-dominant species?<br>YES = Category I NO = go to SC 5.3 | **Cat. I** |
| SC 5.3 Does the wetland unit have areas with a forest canopy where more than 50% of the tree species (by cover) are fast growing species.<br>Fast growing species are:<br>Alders – red (*Alnus rubra*), thin-leaf (*A. tenuifolia*)<br>Cottonwoods – narrow-leaf (*Populus angustifolia*), black (*P. balsamifera*)<br>Willows- peach-leaf (*Salix amygdaloides*), Sitka (*S. sitchensis*), Pacific (*S. lasiandra*), Aspen - (*Populus tremuloides*), Water Birch (*Betula occidentalis*)<br>YES = Category II NO = go to SC 5.5 | **Cat. II** |
| SC 5.5 Is the forested component of the wetland within the "100 year floodplain" of a river or stream?<br>YES = Category II | **Cat. II** |
| **Category of wetland based on Special Characteristics**<br>*Choose the "highest" rating if wetland falls into several categories.*<br>If you answered NO for all types enter "Not Applicable" on p.1 | N/A |

Wetland name or number W41

# WETLAND RATING FORM – EASTERN WASHINGTON

Version 2 - Updated June 2006 to increase accuracy and reproducibility among users
Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Thorncreek Road + Moss Date of site visit: 2004-2005

Rated by S. Gilmore Trained by Ecology? Yes ✓ No ___ Date of training 2007

SEC: ___ TWNSHP: ___ RNGE: ___ Is S/T/R in Appendix D? Yes ___ No ✓

**Map of wetland unit: Figure 1 of 4 Estimated size < .2 Ac**

## SUMMARY OF RATING

### Category based on FUNCTIONS provided by wetland

**I___ II___ III___ IV ✓**

| |
|---|
| Category I = Score >=70 |
| Category II = Score 51-69 |
| Category III = Score 30-50 |
| Category IV = Score < 30 |

| | |
|---|---|
| Score for "Water Quality" Functions | 8 |
| Score for Hydrologic Functions | 6 |
| Score for Habitat Functions | 4 |
| **TOTAL score for functions** | 18 |

### Category based on SPECIAL CHARACTERISTICS of wetland

**I___ II___ III___ Does not Apply ✓**

**Final Category (choose the "highest" category from above)** IV

**Summary of basic information about the wetland unit**

| Wetland Type | | Wetland Class | |
|---|---|---|---|
| Vernal Pool | | Depressional | |
| Alkali | | Riverine | |
| Natural Heritage Wetland | | Lake-fringe | |
| Bog | | Slope | ✓ |
| Forest | | | |
| None of the above | ✓ | Check if unit has multiple HGM classes present | |

Wetland name or number 41

## Does the wetland being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

| Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating | YES | NO |
|---|---|---|
| SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?*<br>For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database. | | ✓ |
| SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?*<br>For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form). | | ✓ |
| SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?* | | ✓ |
| SP4. *Does the wetland unit have a local significance in addition to its functions*?<br>For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance. | | ✓ |

## To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 20 for more detailed instructions on classifying wetlands.

Wetland name or number 41

## Classification of Vegetated Wetlands for Eastern Washington

**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 1-7 apply, and go to Question 8.**

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

___The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

___At least 30% of the open water area is deeper than 3 m (10 ft)?

NO – go to Step 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**?

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 <3ft diameter and less than a foot deep).*

NO - go to Step 3 (YES) – The wetland class is **Slope**

**3.** Is the entire wetland unit in a valley or stream channel where it gets inundated by overbank flooding from that stream or river? In general, the flooding should occur at least once every ten years to answer "yes." *The wetland can contain depressions that are filled with water when the river is not flooding.*

(NO) - go to Step 4 **YES** – The wetland class is **Riverine**

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

(NO) – go to Step 5 **YES** – The wetland class is **Depressional**

**5.** Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. 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 1-7 APPLY TO DIFFERENT AREAS IN THE 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 your wetland. 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 class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

Wetland name or number 41

| HGM Classes Within One Delineated Wetland Boundary | Class to Use for Rating |
|---|---|
| Slope + Riverine | Riverine |
| Slope + Depressional | Depressional |
| Slope + Lake-fringe | Lake-fringe |
| Depressional + Riverine (riverine is within boundary of depression) | Depressional |
| Depressional + Lake-fringe | Depressional |

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

Wetland name or number 41

| S | Slope Wetlands<br>WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality | Points (only 1 score per box) |
|---|---|---|
| S | **S 1.0 Does the wetland have the potential to improve water quality?** | *(see p.56)* |
| S | S 1.1 Characteristics of average slope of wetland:<br>Slope is1% or less *(a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance)* points = 3<br>Slope is between 1% and 2% points = 2<br>Slope is more than 2% but less than 5% points = (1)<br>Slope is 5% or greater points = 0 | 1 |
| S | S 1.2 The soil 2 inches below the surface is clay or organic *(use NRCS definitions of soil types)*<br>YES = 3 points NO = (0) points | 0 |
| S | S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants:<br>*Choose the points appropriate for the description that best fits the vegetation in the wetland. **Dense** vegetation means you have trouble seeing the soil surface (>75% cover), and **uncut** means not grazed or mowed and plants are higher than 6 inches.*<br>Dense, ungrazed, herbaceous vegetation > 90% of the wetland unit points = 6<br>Dense, ungrazed, herbaceous vegetation > 1/2 of unit points = (3)<br>Dense, woody, vegetation > ½ of unit points = 2<br>Dense, ungrazed, herbaceous vegetation > 1/4 of unit points = 1<br>Does not meet any of the criteria above for herbaceous vegetation points = 0<br>Aerial photo or map with vegetation polygons | Figure ___<br>some areas farmed<br>3 |
| S | **Total for S 1** *Add the points in the boxes above* | 4 |
| S | **S 2.0 Does the wetland have the opportunity to improve water quality?**<br>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.*<br>— Grazing in the wetland or within 150ft<br>— Wetland is a groundwater seep within the Reclamation Area<br>— Untreated stormwater flows through the wetland<br>— Tilled fields or orchards within 150 feet of wetland<br>— Residential, urban areas, or golf courses are within 150 ft upslope of wetland<br>— Other ___<br>**YES** multiplier is (2) **NO** multiplier is **1** | *(see p.58)*<br>multiplier<br>2 |
| S | **TOTAL - Water Quality Functions** Multiply the score from S1 by the multiplier in S2<br>***Record score on p. 1 of field form*** | 8 |

Wetland name or number 41

| S | Slope Wetlands<br>HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation | Points (only 1 score per box) |
|---|---|---|
| S | **S 3.0 Does the wetland unit have the <u>potential</u> to reduce flooding and stream erosion?** | *(see p.59)* |
| S | S 3.1 Characteristics of vegetation that reduce the velocity of surface flows during storms.<br>*Choose the points appropriate for the description that best fit conditions in the wetland. See question S 1.3 for definition of dense and uncut.* ***Rigid*** *means that the stems of plants should be thick enough (usually > 1/8in), or dense enough, to remain erect during surface flows.*<br><br>Dense, uncut, **rigid** vegetation covers > 90% of the area of the unit points = 6<br>Dense, uncut, **rigid** vegetation > 1/2 – 90% area of unit points = (3)<br>Dense, uncut, **rigid** vegetation > 1/4 – 1/2 of unit points = 1<br>More than 1/4 of area is grazed, mowed, tilled or vegetation is not rigid points = 0 | 3 |
| S | S 3.2 Characteristics of slope wetland that holds back small amounts of flood flows:<br>The slope wetland has small surface depressions that can retain water over at least 10% of its area. YES points = 2<br>NO points = (0) | 0 |
| S | **Total for S3** *Add the points in the boxes above* | 3 |
| S | **S 4. 0 Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion?**<br>***(see p.61)***<br>*Answer NO if the major source of water is irrigation return flow (e.g. a seep that is on the downstream side of a dam or at the base of an irrigated field.*<br>Answer YES if the wetland is in a landscape position where the reduction in water velocity it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. *Note which of the following conditions apply.*<br>— Wetland has surface runoff that can cause flooding problems downgradient<br>— Other_____<br>**YES** multiplier is 2 **NO** multiplier is **1** | multiplier<br>2 |
| S | **TOTAL - Hydrologic Functions** Multiply the score from S3 by the multiplier in S4<br>***Record score on p. 1 of field form*** | 6 |

**Comments**

Wetland name or number 41

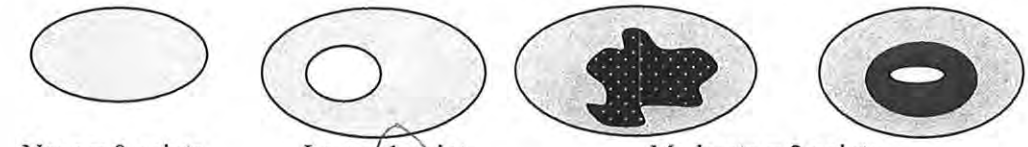
| ***These questions apply to wetlands of all HGM classes.*** HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat | **Points** (only 1 score per box) |
|---|---|
| **H 1. Does the wetland unit have the potential to provide habitat for many species?** | |
| H 1.1 Categories of vegetation structure ***(see p.62)*** | **Figure ___** |
| *Check the vegetation classes (as defined by Cowardin) and heights of emergents present. Size threshold for each class or height category is ¼ acre or more than 10% of the area if unit is < 2.5 acres.* | |
| ____Aquatic bed | |
| ____Emergent plants 0-12 in. (0 – 30 cm) high are the highest layer and have > 30% cover | |
| ___✓Emergent plants >12 – 40 in.(>30 – 100cm) high are the highest layer with >30% cover | |
| ____Emergent plants > 40 in.(> 100cm) high are the highest layer with >30% cover | |
| ____Scrub/shrub (areas where shrubs have >30% cover) | |
| ____Forested (areas where trees have >30% cover) | |
| *Add the number of vegetation types that qualify. If you have:* | |
| 4-6 types points = 3<br>3 types points = 2<br>2 types points = 1<br>1 type points = 0 | 0 |
| Map of Cowardin vegetation classes and areas with different heights of emergents | |
| H 1.2. Is one of the vegetation types "aquatic bed?" ***(see p .64)***<br>YES = 1 point NO = 0 points | 0 |
| H 1.3. Surface Water ***(see p.65)*** | **Figure ___** |
| H 1.3.1 Does the unit have areas of "open" water (without herbaceous or shrub plants) over at least ¼ acre or 10% of its area during the spring (March – early June) OR in early fall (August – end of September)? *Note: answer YES for Lake-fringe wetlands*<br>YES = 3 points **& go to H 1.4** NO = go to H 1.3.2 | |
| H 1.3.2 Does the unit have an intermittent or permanent stream within its boundaries, or along one side, over at least ¼ acre or 10% of its area, AND that has an unvegetated bottom (*answer yes only if H 1.3.1 is NO*)?<br>YES = 3 points NO = 0 points isolated-<br>Map showing areas of open water | 0 |
| H 1.4. Richness of Plant Species ***(see p. 66)***<br>Count the number of plant species in the wetland that cover at least 10 ft$^2$. (*different patches of the same species can be combined to meet the size threshold)*<br>*You do not have to name the species.*<br>*Do not include Eurasean Milfoil, reed canarygrass, purple loosestrife, Russian Olive, Phragmites ,Canadian Thistle, Yellow-flag Iris, and Salt Cedar (Tamarisk)*<br>If you counted: > 9 species points = 2<br>4-9 species points = 1<br># of species ____ < 4 species points = 0 points<br>*List species below if you wish*<br>pond prickly lettuce | 0 |

Wetland name or number 41

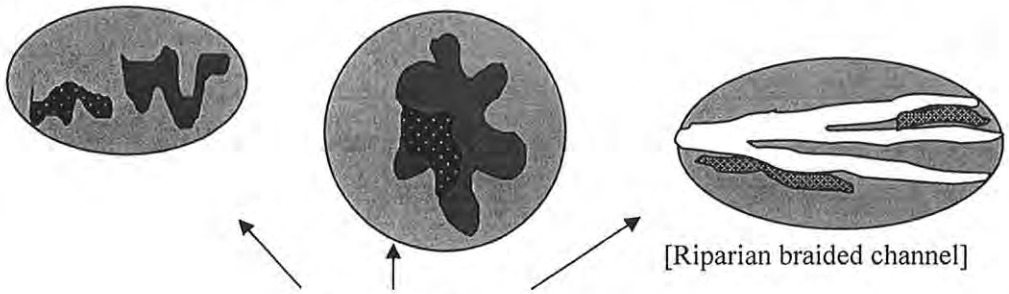
H 1.5. Interspersion of habitats *(see p. 67)*

Figure ___

Decided from the diagrams below whether interspersion between categories of vegetation (described in H 1.1), or categories and un-vegetated areas (can include open water or mudflats) is high, medium, low, or none.



None = 0 points Low = 1 point Moderate = 2 points



[Riparian braided channel]

High = 3 points

NOTE: If you have four or more vegetation categories or three vegetation categories and open water the rating is always "high". Use maps from H1.1 and H1.3

1

H 1.6. Special Habitat Features: *(see p. 68)*

*Check the habitat features that are present in the wetland unit. The number of checks is the number of points you put into the next column.*

____Loose rocks larger than 4" **or** large, downed, woody debris (>4in. diameter) within the area of surface ponding or in stream.

____Cattails or bulrushes are present within the unit.

____Standing snags (diameter at the bottom > 4 inches) in the wetland unit or within 30 m (100ft) of the edge.

____Emergent or shrub vegetation in areas that are permanently inundated/ponded. *The presence of "yellow flag" Iris is a good indicator of vegetation in areas permanently ponded.*

____Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) OR signs of recent beaver activity

____ Invasive species cover less than 20% in each stratum of vegetation *(canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)*

*Maximum score possible = 6*

0

**TOTAL** Potential to provide habitat
*Add the scores in the column above*

1

**Comments**

Wetland name or number 41

| **H 2.0 Does the wetland have the opportunity to provide habitat for many species?** | |
|---|---|
| H 2.1 Buffers *(see p. 71)*<br>*Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed." Relatively undisturbed also means no grazing, no landscaping, no daily human use, and no structures or paving within undisturbed part of buffer.*<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference **Points = 5**<br>— 330 ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. **Points = 4**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **Points = 4**<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . **Points = 3**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. **Points = 3**<br>**If buffer does not meet any of the criteria above**<br>— No paved areas (except paved trails) or buildings within 80ft (25 m) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— No paved areas or buildings within 170ft (50m) of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— Heavy grazing in buffer. **Points = 1**<br>— Vegetated buffers are <6.6ft wide (2m) for more than 95% of the circumference (e.g . tilled fields, paving, basalt bedrock extend to edge of wetland). **Points = 0**<br>— Buffer does not meet any of the criteria above. **Points = 1**<br>Aerial photo showing buffers | Figure ___<br>0 |
| H 2.2 Wet Corridors *(see p. 72)*<br>H 2.2.1 Is the wetland unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor at least ¼ mile long with surface water or flowing water throughout most of the year (> 9 months/yr)? (*dams, heavily used gravel roads, paved roads, fields tilled to edge of stream, or pasture to edge of stream are considered breaks in the corridor*).<br>YES = 4 points (go to H 2.3) NO = go to H 2.2.2<br>H 2.2.2 Is the unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor, at least ¼ mile long with water flowing seasonally, **OR** a lake-fringe wetland without a "wet" corridor, **OR** a riverine wetland without a surface channel connecting to the stream?<br>YES = 2 points (go to H 2.3) NO go to H 2.2.3<br>H 2.2.3 Is the wetland within a 1/2 mile of any permanent stream, seasonal stream, or lake (*do not include man-made ditches*)?<br>YES = 1 point NO = 0 points | 1 |

Wetland name or number 41

| | |
|---|---|
| H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm )***<br>Which of the following priority habitats are within 330ft (100m) of the wetland unit? *NOTE: the connections to the habitats can be disturbed.*<br>____**Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).<br>____**Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).<br>____ **Eastside Steppe:** Non-forested vegetation type dominated by broadleaf herbaceous flora ((*full description of herbaceous species found here are in WDFW PHS report p. 153*).<br>____**Old-growth/Mature forests (east of Cascade crest):** (*full descriptions in WDFW PHS report p. 157*). Old-growth: Stands are > 150 yrs in age; may be variable in tree species composition and structural characteristics due to the influence of fire, climate, and soils. Mature: Stands 80 – 160 yrs old. Decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.<br>____**Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).<br>____ **Juniper Savannah**: All juniper woodlands (*SE part of state only; check map*)<br>____ **Shrub-steppe**: A nonforested vegetation type consisting of one or more layers of perennial bunchgrasses and a conspicuous but discontinuous layer of shrubs (see Eastside Steppe for sites with little or no shrub cover).<br>____**Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.<br>____Inland Dunes This placeholder is for a new priority habitat that will capture areas known as Inland Dunes. A definition will be developed later in Fall 2008. *(check WDFW web site)*<br>____**Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.<br>____**Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.<br>____**Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.<br>____**Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.<br>____**Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 30 cm (12 in) in eastern Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.<br>If wetland has **2 or more** Priority Habitats = **4 points**<br>If wetland has **1** Priority Habitat = **2 points**<br>No Priority habitats = **0 points**<br>*lote: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)* | 0 |

Wetland name or number 41

| | |
|---|---|
| H 2.4 Landscape *(choose the **one** description of the landscape around the wetland that best fits)* ***(see p. 76)***<br><br>— The wetland unit is in an area where annual rainfall is less than 12 inches, and its water regime is not influenced by irrigation practices, dams, or water control structures. (*Generally, this means outside boundaries of reclamation areas, irrigation district, or reservoirs* ) **points = 5**<br>— There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing in the connection or an open water connection along a lake shore without heavy boat traffic are OK, but connections should NOT be bisected by paved roads, fill, fields, heavy boat traffic or other development) **points = 5**<br>✓ — There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed? **points = (2)**<br>— There is at least 1 wetland within ½ mile. **points = 1**<br>— Does not meet any of the four criteria above **points = 0** | 2 |
| **H 2.** TOTAL Score - opportunity for providing habitat<br>*Add the scores in the column above* | 3 |
| **H 3.0 Does the wetland unit have indicators that its ability to provide habitat is reduced?** | |
| H 3.1 Indicator of reduced habitat functions ***(see p. 75)***<br>Do the areas of open water in the wetland unit have a resident population of carp (see text for indicators of the presence of carp)? *(NOTE: This question does not apply to reservoirs with water levels controlled by dams, such as the reservoirs on the Columbia and Snake Rivers)*<br><br>YES = **- 5 points** NO = 0 points | *Points will be subtracted*<br><br>0 |
| **Total Score for Habitat Functions** – *add the points for H 1, H 2, and H 3 and record the result on p. 1*<br>1 + 3 + 0 | 4 |

**Comments**

Wetland name or number 41

# CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

***Please determine if the wetland unit 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 units should also be characterized based on their functions.***

| **Wetland Type**<br>*Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.* | Category |
|---|---|
| **SC 1.0 Vernal pools** *(see p. 79)*<br>Is the wetland unit **less than 4000 ft²**, and does it meet at least **two** of the following criteria?<br>— Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input<br>— Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *NOTE: If you find perennial, "obligate", wetland plants the wetland is probably NOT a vernal pool*<br>— The soil in the wetland are shallow (<1ft deep (30 cm)) and is underlain by an impermeable layer such as basalt or clay.<br>— Surface water is present for less than 120 days during the "wet" season.<br>YES = Go to SC 1.1 (NO) *not a vernal pool*<br>SC 1.1 Is the vernal pool relatively undisturbed in February and March?<br>YES = Go to SC 1.2 (NO) *not a vernal pool with special characteristics* | |
| SC 1.2 Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 miles (other wetlands, rivers, lakes etc.)?<br>YES = Category II (NO) = Category III | **Cat. II**<br>**Cat. III** |
| **SC 2.0 Alkali wetlands** *(see p. 81)*<br>Does the wetland unit meets **one** of the following two criteria?<br>— The wetland has a conductivity > 3.0 mS/cm.<br>— The wetland has a conductivity between 2.0 - 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 2 for list of plants found in alkali systems).<br>— 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.<br>**OR** does the wetland unit meets two of the following three sub-criteria?<br>— Salt encrustations around more than 80% of the edge of the wetland<br>— More than ¾ of the plant cover consists of species listed on Table 2<br>— 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.<br>YES = Category I (NO) *not an alkali wetland* | **Cat. I** |

Wetland name or number 41

**SC 3.0 Natural Heritage Wetlands** *(see p. 81)*

Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.

SC 3.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)*

S/T/R information from Appendix D ___ or accessed from WNHP/DNR database ___

YES____ – contact WNHP/DNR (see p. 79) and go to SC 3.2 (NO)

SC 3.2 Has DNR identified the wetland unit as a high quality undisturbed wetland or as or as a site with state threatened, endangered, or sensitive plant species? **Cat. I**

YES = Category I (NO) *–not a natural heritage wetland*

**SC 4.0 Bogs** *(see p. 82)*

Does the wetland unit **(or any part of the wetland unit)** meet both the criteria for soils and vegetation in bogs. *Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.*

SC 4.1. Does the wetland unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)?

Yes - go to SC 4.3 No - go to SC 4.2

SC 4.2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond??

Yes - go to SC 4.3 (No) - *Is not a bog for rating*

SC 4.3. Does the wetland unit have more than 70% cover of mosses at ground level in any area within its boundaries, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? **Cat. I**

Yes – Category I bog No - go to Q. 4.4

*NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.*

SC 4.4. Is the unit, or any part of it, forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover)?* **Cat. I**

Yes – Category I bog (NO)

Wetland name or number 41

| | |
|---|---|
| **SC 5.0 Forested Wetlands** *(see p. 85)*<br>Does the wetland unit have an area of forest (*you should have identified a forested class, if present, in question H 1.1*) rooted within its boundary that meet **at least one** of the following three criteria?<br>— The wetland is within the "100 year" floodplain of a river or stream<br>— aspen (*Populus tremuloides*) are a dominant or co-dominant of the "woody" vegetation. (*Dominants means it represents at least 50% of the cover of woody species, co-dominant means it represents at least 20% of the total cover of woody species*)<br>— There is at least ¼ acre of trees (even in wetlands smaller than 2.5 acres) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW *(see p. 83)*<br>YES = go to SC 5.1 NO – *not a forested wetland with special characteristics* | |
| SC 5.1 Does the wetland unit have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees<br>Slow growing trees are: western red cedar (*Thuja plicata*), Alaska yellow cedar (*Chamaecyparis nootkatensis*), pine spp. mostly "white" pine (*Pinus monticola*), western hemlock (*Tsuga heterophylla*), Englemann spruce (*Picea engelmannii*).<br>YES = Category I NO = go to SC 5.2 | **Cat. I** |
| SC 5.2 Does the unit have areas where aspen (*Populus tremuloides*) are a dominant or co-dominant species?<br>YES = Category I NO = go to SC 5.3 | **Cat. I** |
| SC 5.3 Does the wetland unit have areas with a forest canopy where more than 50% of the tree species (by cover) are fast growing species.<br>Fast growing species are:<br>Alders – red (*Alnus rubra*), thin-leaf (*A. tenuifolia*)<br>Cottonwoods – narrow-leaf (*Populus angustifolia*), black (*P. balsamifera*)<br>Willows- peach-leaf (*Salix amygdaloides*), Sitka (*S. sitchensis*), Pacific (*S. lasiandra*), Aspen - (*Populus tremuloides*), Water Birch (*Betula occidentalis*)<br>YES = Category II NO = go to SC 5.5 | **Cat. II** |
| SC 5.5 Is the forested component of the wetland within the "100 year floodplain" of a river or stream?<br>YES = Category II | **Cat. II** |
| **Category of wetland based on Special Characteristics**<br>*Choose the "highest" rating if wetland falls into several categories.*<br>If you answered NO for all types enter "Not Applicable" on p.1 | N/A |

Wetland name or number W42

# WETLAND RATING FORM – EASTERN WASHINGTON

Version 2 - Updated June 2006 to increase accuracy and reproducibility among users
Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Thorncreek Road + Moss Date of site visit: 2004-2005

Rated by S. Gilmore Trained by Ecology? Yes ✓ No ___ Date of training 2007

SEC: ___ TWNSHP: ___ RNGE: ___ Is S/T/R in Appendix D? Yes ___ No ✓

**Map of wetland unit: Figure** 3-4 **Estimated size** ~ 0.5 Ac

## SUMMARY OF RATING

### Category based on FUNCTIONS provided by wetland

**I**___ **II**___ **III**✓ **IV**___

| |
|---|
| Category I = Score >=70 |
| Category II = Score 51-69 |
| Category III = Score 30-50 |
| Category IV = Score < 30 |

| | |
|---|---|
| Score for "Water Quality" Functions | 18 |
| Score for Hydrologic Functions | 20 |
| Score for Habitat Functions | 9 |
| **TOTAL score for functions** | 47 |

### Category based on SPECIAL CHARACTERISTICS of wetland

**I**___ **II**___ **III**___ **Does not Apply**✓

**Final Category (choose the "highest" category from above)** III

**Summary of basic information about the wetland unit**

| Wetland Type | | Wetland Class | |
|---|---|---|---|
| Vernal Pool | | Depressional | ✓ |
| Alkali | | Riverine | |
| Natural Heritage Wetland | | Lake-fringe | |
| Bog | | Slope | |
| Forest | | | |
| None of the above | ✓ | Check if unit has multiple HGM classes present | |

Wetland name or number 42

## Does the wetland being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

| Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating | YES | NO |
|---|---|---|
| SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?*<br>For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database. | | ✓ |
| SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?*<br>For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form). | | ✓ |
| SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?* | | ✓ |
| SP4. *Does the wetland unit have a local significance in addition to its functions*?<br>For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance. | | ✓ |

## To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 20 for more detailed instructions on classifying wetlands.

Wetland name or number 42

## Classification of Vegetated Wetlands for Eastern Washington

**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 1-7 apply, and go to Question 8.**

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

___The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

___At least 30% of the open water area is deeper than 3 m (10 ft)?

(NO) – go to Step 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**?

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 <3ft diameter and less than a foot deep).*

(NO) - go to Step 3 **YES** – The wetland class is **Slope**

**3.** Is the entire wetland unit in a valley or stream channel where it gets inundated by overbank flooding from that stream or river? In general, the flooding should occur at least once every ten years to answer "yes." *The wetland can contain depressions that are filled with water when the river is not flooding.*

(NO) - go to Step 4 **YES** – The wetland class is **Riverine**

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

NO – go to Step 5 (YES) – The wetland class is **Depressional**

**5.** Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. 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 1-7 APPLY TO DIFFERENT AREAS IN THE 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 your wetland. 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 class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

Wetland name or number 42

| HGM Classes Within One Delineated Wetland Boundary | Class to Use for Rating |
|---|---|
| Slope + Riverine | Riverine |
| Slope + Depressional | Depressional |
| Slope + Lake-fringe | Lake-fringe |
| Depressional + Riverine (riverine is within boundary of depression) | Depressional |
| Depressional + Lake-fringe | Depressional |

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

Wetland name or number 42

| | **Depressional Wetlands** WATER QUALITY FUNCTIONS - Indicators that the wetland functions to improve water quality | **Points** (only 1 score per box) |
|---|---|---|
| D | **D 1.0 Does the wetland unit have the potential to improve water quality?** | *(see p. 38)* |
| D | D 1.1 Characteristics of surface water flows out of the wetland unit:<br>Wetland has no surface water outlet - points = (5)<br>Wetland has an intermittently flowing outlet points = 3<br>Wetland has a highly constricted permanently flowing outlet points = 3<br>Wetland has a permanently flowing surface outlet points = 1 | 5 |
| D | D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic *(use NRCS definitions of soil types)*<br>YES points = 3<br>NO points = (0) | 0 |
| D | D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)<br>Wetland has persistent, ungrazed, vegetation for > 2/3 of area points = 5<br>Wetland has persistent, ungrazed, vegetation from 1/3 to 2/3 of area points = (3)<br>Wetland has persistent, ungrazed vegetation from 1/10 to < 1/3 of area points = 1<br>Wetland has persistent, ungrazed vegetation <1/10 of area points = 0<br>Map of Cowardin vegetation classes | Figure ___<br>3 |
| D | D 1.4 Characteristics of seasonal ponding or inundation.<br>*This is the area of ponding that fluctuates every year. Do not count the area that is permanently ponded.*<br>Area seasonally ponded is > ½ total area of wetland points = 3<br>Area seasonally ponded is ¼ - ½ total area of wetland points = (1)<br>Area seasonally ponded is < ¼ total area of wetland points = 0<br>NOTE: *See text for indicators of seasonal and permanent inundation/flooding.*<br>Map of Hydroperiods | Figure ___<br>1 |
| D | **Total for D 1** *Add the points in the boxes above* | 9 |
| D | **D 2. Does the wetland unit have the opportunity to improve water quality?**<br>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.*<br>— Grazing in the wetland or within 150 ft<br>— Untreated stormwater discharges to wetland<br>— Tilled fields or orchards within 150 ft of wetland<br>— A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging<br>✓ Residential, urban areas, golf courses are within 150 ft of wetland<br>— Wetland is fed by groundwater high in phosphorus or nitrogen<br>— Other_____<br>**YES** multiplier is (2) **NO** multiplier is **1** | multiplier<br>2 |
| D | **TOTAL - Water Quality Functions** Multiply the score from D1 by the multiplier in D2<br>***Record score on p. 1 of field form*** | 18 |

Wetland name or number 42

| D | Depressional Wetlands<br>HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream erosion | Points (only 1 score per box) |
|---|---|---|
| D | **D 3.0 Does the wetland unit have the potential to reduce flooding and stream erosion?** | *(see p. 39)* |
| D | D 3.1 Characteristics of surface water flows out of the wetland unit:<br>Wetland has no surface water outlet — points = (8)<br>Wetland has an intermittently flowing outlet — points = 4<br>Wetland has a highly constricted permanently flowing outlet — points = 4<br>Wetland has a permanently flowing surface outlet — points = 0 | 8 |
| D | D 3.2 Depth of storage during wet periods:<br>*Estimate the height of ponding above the surface of the wetland (see text for description of measuring height). In wetlands with permanent ponding, the surface is the lowest elevation of "permanent" water)*<br>Marks of ponding are at least 3 ft above the surface — points = 8<br>The wetland is a "headwater" wetland" *(see p. 39)* — points = 6<br>Marks are 2 ft to < 3 ft from surface — points = 6<br>Marks are 1 ft to < 2 ft from surface — points = 4<br>Marks are 6 in to < 1 ft from surface — points = (2)<br>No marks above 6 in. or wetland has only saturated soils — points = 0 | 2 |
| D | **Total for D 3** *Add the points in the boxes above* | 10 |
| D | **D 4.0 Does the wetland unit have the opportunity to reduce flooding and erosion?**<br>*Answer NO if the major source of water is groundwater, irrigation return flow, or water levels in the wetland are controlled by a reservoir.*<br>Answer YES if the wetland is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. *Note which of the following conditions apply.*<br>— Wetland is in a headwater of a river or stream that has flooding problems<br>— Wetland drains to a river or stream that has flooding problems<br>— ✓ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems<br>— Other_____<br>**YES** multiplier is (2) **NO** multiplier is **1** | *(see p. 42)*<br>multiplier 2 |
| D | **TOTAL - Hydrologic Functions** Multiply the score from D3 by the multiplier in D4<br>***Record score on p. 1 of field form*** | 20 |

**Comments**

Wetland name or number 42

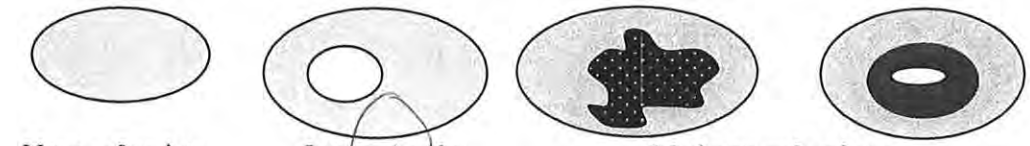
| ***These questions apply to wetlands of all HGM classes.*** HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat | **Points** (only 1 score per box) |
|---|---|
| **H 1. Does the wetland unit have the potential to provide habitat for many species?** | |
| H 1.1 Categories of vegetation structure ***(see p.62)*** | **Figure ___** |
| *Check the vegetation classes (as defined by Cowardin) and heights of emergents present. Size threshold for each class or height category is ¼ acre or more than 10% of the area if unit is < 2.5 acres.* | |
| ____Aquatic bed | |
| ____Emergent plants 0-12 in. (0 – 30 cm) high are the highest layer and have > 30% cover | |
| ___/Emergent plants >12 – 40 in.(>30 – 100cm) high are the highest layer with >30% cover | |
| ____Emergent plants > 40 in.(> 100cm) high are the highest layer with >30% cover | |
| ____Scrub/shrub (areas where shrubs have >30% cover) | |
| ___/Forested (areas where trees have >30% cover) | |
| *Add the number of vegetation types that qualify. If you have:* | |
| 4-6 types points = 3<br>3 types points = 2<br>2 types points = (1)<br>1 type points = 0 | 1 |
| Map of Cowardin vegetation classes and areas with different heights of emergents | |
| H 1.2. Is one of the vegetation types "aquatic bed?" ***(see p .64)***<br>YES = 1 point NO = 0 points | 0 |
| H 1.3. Surface Water ***(see p.65)*** | **Figure ___** |
| H 1.3.1 Does the unit have areas of "open" water (without herbaceous or shrub plants) over at least ¼ acre or 10% of its area during the spring (March – early June) OR in early fall (August – end of September)? *Note: answer YES for Lake-fringe wetlands*<br>YES = 3 points & **go to H 1.4** NO = go to H 1.3.2 MAN made ponds | |
| H 1.3.2 Does the unit have an intermittent or permanent stream within its boundaries, or along one side, over at least ¼ acre or 10% of its area, AND that has an unvegetated bottom (*answer yes only if H 1.3.1 is NO*)?<br>YES = 3 points NO = 0 points | 3 |
| Map showing areas of open water | |
| H 1.4. Richness of Plant Species ***(see p. 66)*** | |
| Count the number of plant species in the wetland that cover at least 10 ft$^2$. (*different patches of the same species can be combined to meet the size threshold)*<br>*You do not have to name the species.*<br>*Do not include Eurasean Milfoil, reed canarygrass, purple loosestrife, Russian Olive, Phragmites ,Canadian Thistle, Yellow-flag Iris, and Salt Cedar (Tamarisk)* | |
| If you counted: > 9 species points = 2<br>4-9 species points = 1<br># of species ____ < 4 species points = 0 points<br>*List species below if you wish* | |
| Reed banks - some mature willows between ponds | 0 |

Wetland name or number 42

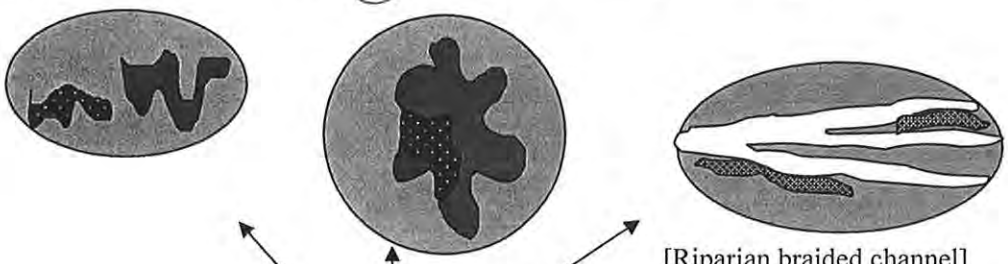
H 1.5. Interspersion of habitats *(see p. 67)*

Decided from the diagrams below whether interspersion between categories of vegetation (described in H 1.1), or categories and un-vegetated areas (can include open water or mudflats) is high, medium, low, or none.

**Figure ___**



None = 0 points Low = 1 point Moderate = 2 points



[Riparian braided channel]

High = 3 points

NOTE: If you have four or more vegetation categories or three vegetation categories and open water the rating is always "high". Use maps from H1.1 and H1.3

1

H 1.6. Special Habitat Features: *(see p. 68)*

*Check the habitat features that are present in the wetland unit. The number of checks is the number of points you put into the next column.*

____Loose rocks larger than 4" **or** large, downed, woody debris (>4in. diameter) within the area of surface ponding or in stream.

____Cattails or bulrushes are present within the unit.

__1__Standing snags (diameter at the bottom > 4 inches) in the wetland unit or within 30 m (100ft) of the edge.

____Emergent or shrub vegetation in areas that are permanently inundated/ponded. *The presence of "yellow flag" Iris is a good indicator of vegetation in areas permanently ponded.*

____Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) OR signs of recent beaver activity

____ Invasive species cover less than 20% in each stratum of vegetation *(canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)*

*Maximum score possible = 6*

1

**TOTAL** Potential to provide habitat
*Add the scores in the column above*

6

**Comments**

Wetland name or number 42

| **H 2.0 Does the wetland have the opportunity to provide habitat for many species?** | |
|---|---|
| H 2.1 Buffers ***(see p. 71)***<br>*Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed." Relatively undisturbed also means no grazing, no landscaping, no daily human use, and no structures or paving within undisturbed part of buffer.*<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference **Points = 5**<br>— 330 ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. **Points = 4**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **Points = 4**<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . **Points = 3**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. **Points = 3**<br>**If buffer does not meet any of the criteria above**<br>— No paved areas (except paved trails) or buildings within 80ft (25 m) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— No paved areas or buildings within 170ft (50m) of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— Heavy grazing in buffer. **Points = 1**<br>— Vegetated buffers are <6.6ft wide (2m) for more than 95% of the circumference (e.g . tilled fields, paving, basalt bedrock extend to edge of wetland). **Points = 0**<br>— Buffer does not meet any of the criteria above. **Points = 1**<br>Aerial photo showing buffers | **Figure ___**<br>0 |
| H 2.2 Wet Corridors ***(see p. 72)***<br>H 2.2.1 Is the wetland unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor at least ¼ mile long with surface water or flowing water throughout most of the year (> 9 months/yr)? (*dams, heavily used gravel roads, paved roads, fields tilled to edge of stream, or pasture to edge of stream are considered breaks in the corridor*).<br>YES = 4 points (go to H 2.3) NO = go to H 2.2.2<br>H 2.2.2 Is the unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor, at least ¼ mile long with water flowing seasonally, **OR** a lake-fringe wetland without a "wet" corridor, **OR** a riverine wetland without a surface channel connecting to the stream?<br>YES = 2 points (go to H 2.3) NO go to H 2.2.3<br>H 2.2.3 Is the wetland within a 1/2 mile of any permanent stream, seasonal stream, or lake (*do not include man-made ditches*)?<br>YES = 1 point NO = 0 points | 1 |

Wetland name or number 42

| | |
|---|---|
| H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm )***<br>Which of the following priority habitats are within 330ft (100m) of the wetland unit? *NOTE: the connections to the habitats can be disturbed.*<br>____**Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).<br>____**Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).<br>____ **Eastside Steppe:** Non-forested vegetation type dominated by broadleaf herbaceous flora ((*full description of herbaceous species found here are in WDFW PHS report p. 153*).<br>____**Old-growth/Mature forests (east of Cascade crest):** (*full descriptions in WDFW PHS report p. 157*). Old-growth: Stands are > 150 yrs in age; may be variable in tree species composition and structural characteristics due to the influence of fire, climate, and soils. Mature: Stands 80 – 160 yrs old. Decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.<br>____**Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).<br>____ **Juniper Savannah**: All juniper woodlands (*SE part of state only; check map*)<br>____ **Shrub-steppe**: A nonforested vegetation type consisting of one or more layers of perennial bunchgrasses and a conspicuous but discontinuous layer of shrubs (see Eastside Steppe for sites with little or no shrub cover).<br>____**Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.<br>____Inland Dunes This placeholder is for a new priority habitat that will capture areas known as Inland Dunes. A definition will be developed later in Fall 2008. *(check WDFW web site)*<br>____**Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.<br>____**Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.<br>____**Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.<br>____**Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.<br>____**Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 30 cm (12 in) in eastern Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.<br>If wetland has **2 or more** Priority Habitats = **4 points**<br>If wetland has **1** Priority Habitat = **2 points**<br>No Priority habitats = **0 points**<br>*Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)* | 0 |

Wetland name or number 42

| | |
|---|---|
| H 2.4 Landscape *(choose the **one** description of the landscape around the wetland that best fits)* ***(see p. 76)*** <br><br>— The wetland unit is in an area where annual rainfall is less than 12 inches, and its water regime is not influenced by irrigation practices, dams, or water control structures. (*Generally, this means outside boundaries of reclamation areas, irrigation district, or reservoirs* ) **points = 5** <br>— There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing in the connection or an open water connection along a lake shore without heavy boat traffic are OK, but connections should NOT be bisected by paved roads, fill, fields, heavy boat traffic or other development) **points = 5** <br>✓ There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed? **points = (2)** <br>— There is at least 1 wetland within ½ mile. **points = 1** <br>— Does not meet any of the four criteria above **points = 0** | 2 |
| **H 2.** TOTAL Score - opportunity for providing habitat *Add the scores in the column above* | |
| **H 3.0 Does the wetland unit have indicators that its ability to provide habitat is reduced?** | |
| H 3.1 Indicator of reduced habitat functions ***(see p. 75)*** <br>Do the areas of open water in the wetland unit have a resident population of carp (see text for indicators of the presence of carp)? *(NOTE: This question does not apply to reservoirs with water levels controlled by dams, such as the reservoirs on the Columbia and Snake Rivers)* <br><br>YES = **- 5 points** NO = 0 points | *Points will be subtracted* <br><br>0 |
| **Total Score for Habitat Functions** – *add the points for H 1, H 2, and H 3 and record the result on p. 1* <br>6 + 3 + 0 | 9 |

**Comments**

Wetland name or number 4-2

## CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

***Please determine if the wetland unit 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 units should also be characterized based on their functions.***

| **Wetland Type**<br>*Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.* | Category |
|---|---|
| **SC 1.0 Vernal pools** *(see p. 79)*<br>Is the wetland unit **less than 4000 ft²**, and does it meet at least **two** of the following criteria?<br>— Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input<br>— Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *NOTE: If you find perennial, "obligate", wetland plants the wetland is probably NOT a vernal pool*<br>— The soil in the wetland are shallow (<1ft deep (30 cm)) and is underlain by an impermeable layer such as basalt or clay.<br>— Surface water is present for less than 120 days during the "wet" season.<br>YES = Go to SC 1.1 (NO) *not a vernal pool*<br>SC 1.1 Is the vernal pool relatively undisturbed in February and March?<br>YES = Go to SC 1.2 (NO) *not a vernal pool with special characteristics* | |
| SC 1.2 Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 miles (other wetlands, rivers, lakes etc.)?<br>YES = Category II (NO) = Category III | **Cat. II**<br>**Cat. III** |
| **SC 2.0 Alkali wetlands** *(see p. 81)*<br>Does the wetland unit meets **one** of the following two criteria?<br>— The wetland has a conductivity > 3.0 mS/cm.<br>— The wetland has a conductivity between 2.0 - 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 2 for list of plants found in alkali systems).<br>— 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.<br>**OR** does the wetland unit meets two of the following three sub-criteria?<br>— Salt encrustations around more than 80% of the edge of the wetland<br>— More than ¾ of the plant cover consists of species listed on Table 2<br>— 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.<br>YES = Category I (NO) *not an alkali wetland* | **Cat. I** |

**SC 3.0 Natural Heritage Wetlands** *(see p. 81)*

Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.

SC 3.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)*

S/T/R information from Appendix D ___ or accessed from WNHP/DNR database ___

YES____ – contact WNHP/DNR (see p. 79) and go to SC 3.2 (NO)

SC 3.2 Has DNR identified the wetland unit as a high quality undisturbed wetland or as or as a site with state threatened, endangered, or sensitive plant species? **Cat. I**

YES = Category I (NO) *–not a natural heritage wetland*

**SC 4.0 Bogs** *(see p. 82)*

Does the wetland unit **(or any part of the wetland unit)** meet both the criteria for soils and vegetation in bogs. *Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.*

SC 4.1. Does the wetland unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)?

Yes - go to SC 4.3 No - go to SC 4.2

SC 4.2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond??

Yes - go to SC 4.3 (No) - *Is not a bog for rating*

SC 4.3. Does the wetland unit have more than 70% cover of mosses at ground level in any area within its boundaries, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? **Cat. I**

Yes – Category I bog No - go to Q. 4.4

*NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.*

SC 4.4. Is the unit, or any part of it, forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover)?* **Cat. I**

Yes – Category I bog (NO)

Wetland name or number 42

| | |
|---|---|
| **SC 5.0 Forested Wetlands** *(see p. 85)*<br>Does the wetland unit have an area of forest (*you should have identified a forested class, if present, in question H 1.1*) rooted within its boundary that meet **at least one** of the following three criteria?<br>— The wetland is within the "100 year" floodplain of a river or stream<br>— aspen (*Populus tremuloides*) are a dominant or co-dominant of the "woody" vegetation. (*Dominants means it represents at least 50% of the cover of woody species, co-dominant means it represents at least 20% of the total cover of woody species*)<br>— There is at least ¼ acre of trees (even in wetlands smaller than 2.5 acres) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW *(see p. 83)*<br>YES = go to SC 5.1 (NO) *–not a forested wetland with special characteristics* | |
| SC 5.1 Does the wetland unit have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees<br>Slow growing trees are: western red cedar (*Thuja plicata*), Alaska yellow cedar (*Chamaecyparis nootkatensis*), pine spp. mostly "white" pine (*Pinus monticola*), western hemlock (*Tsuga heterophylla*), Englemann spruce (*Picea engelmannii*).<br>YES = Category I NO = go to SC 5.2 | **Cat. I** |
| SC 5.2 Does the unit have areas where aspen (*Populus tremuloides*) are a dominant or co-dominant species?<br>YES = Category I NO = go to SC 5.3 | **Cat. I** |
| SC 5.3 Does the wetland unit have areas with a forest canopy where more than 50% of the tree species (by cover) are fast growing species.<br>Fast growing species are:<br>Alders – red (*Alnus rubra*), thin-leaf (*A. tenuifolia*)<br>Cottonwoods – narrow-leaf (*Populus angustifolia*), black (*P. balsamifera*)<br>Willows- peach-leaf (*Salix amygdaloides*), Sitka (*S. sitchensis*), Pacific (*S. lasiandra*), Aspen - (*Populus tremuloides*), Water Birch (*Betula occidentalis*)<br>YES = Category II NO = go to SC 5.5 | **Cat. II** |
| SC 5.5 Is the forested component of the wetland within the "100 year floodplain" of a river or stream?<br>YES = Category II | **Cat. II** |
| **Category of wetland based on Special Characteristics**<br>*Choose the "highest" rating if wetland falls into several categories.*<br>If you answered NO for all types enter "Not Applicable" on p.1 | N/A |

Wetland name or number W43

# WETLAND RATING FORM – EASTERN WASHINGTON

Version 2 - Updated June 2006 to increase accuracy and reproducibility among users
Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Thorncreek Road + Moss Date of site visit: 2004-2005

Rated by S. Gilmore Trained by Ecology? Yes ✓ No ___ Date of training 2007

SEC: ___ TWNSHP: ___ RNGE: ___ Is S/T/R in Appendix D? Yes ___ No ✓

**Map of wetland unit: Figure** 2 of 4 **Estimated size** ~1.0 Ac

## SUMMARY OF RATING

### Category based on FUNCTIONS provided by wetland

**I**___ **II**___ **III** ✓ **IV**___

| |
|---|
| Category I = Score >=70 |
| Category II = Score 51-69 |
| Category III = Score 30-50 |
| Category IV = Score < 30 |

| | |
|---|---|
| Score for "Water Quality" Functions | 18 |
| Score for Hydrologic Functions | 20 |
| Score for Habitat Functions | 5 |
| **TOTAL score for functions** | 43 |

### Category based on SPECIAL CHARACTERISTICS of wetland

**I**___ **II**___ **III**___ **Does not Apply** ✓

**Final Category (choose the "highest" category from above)** III

**Summary of basic information about the wetland unit**

| Wetland Type | | Wetland Class | |
|---|---|---|---|
| Vernal Pool | | Depressional | ✓ |
| Alkali | | Riverine | |
| Natural Heritage Wetland | | Lake-fringe | |
| Bog | | Slope | |
| Forest | | | |
| None of the above | ✓ | Check if unit has multiple HGM classes present | |

Wetland name or number 43

## Does the wetland being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

| Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating | YES | NO |
|---|---|---|
| SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?*<br>For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database. | | ✓ |
| SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?*<br>For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form). | | ✓ |
| SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?* | | ✓ |
| SP4. *Does the wetland unit have a local significance in addition to its functions*?<br>For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance. | | ✓ |

## To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 20 for more detailed instructions on classifying wetlands.

Wetland name or number 43

## Classification of Vegetated Wetlands for Eastern Washington

**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 1-7 apply, and go to Question 8.**

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

___The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

___At least 30% of the open water area is deeper than 3 m (10 ft)?

NO – go to Step 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**?

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 <3ft diameter and less than a foot deep).*

NO - go to Step 3 **YES** – The wetland class is **Slope**

**3.** Is the entire wetland unit in a valley or stream channel where it gets inundated by overbank flooding from that stream or river? In general, the flooding should occur at least once every ten years to answer "yes." *The wetland can contain depressions that are filled with water when the river is not flooding.*

NO - go to Step 4 **YES** – The wetland class is **Riverine**

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

NO – go to Step 5 **YES** – The wetland class is **Depressional**

**5.** Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. 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 1-7 APPLY TO DIFFERENT AREAS IN THE 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 your wetland. 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 class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

Wetland name or number 43

| HGM Classes Within One Delineated Wetland Boundary | Class to Use for Rating |
|---|---|
| Slope + Riverine | Riverine |
| Slope + Depressional | Depressional |
| Slope + Lake-fringe | Lake-fringe |
| Depressional + Riverine (riverine is within boundary of depression) | Depressional |
| Depressional + Lake-fringe | Depressional |

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

Wetland name or number 43

| D | **Depressional Wetlands** WATER QUALITY FUNCTIONS - Indicators that the wetland functions to improve water quality | **Points** (only 1 score per box) |
|---|---|---|
| D | **D 1.0 Does the wetland unit have the potential to improve water quality?** | *(see p. 38)* |
| D | D 1.1 Characteristics of surface water flows out of the wetland unit:<br>Wetland has no surface water outlet - points = (5)<br>Wetland has an intermittently flowing outlet points = 3<br>Wetland has a highly constricted permanently flowing outlet points = 3<br>Wetland has a permanently flowing surface outlet points = 1 | 5 |
| D | D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic *(use NRCS definitions of soil types)*<br>YES points = 3<br>NO points = (0)<br>ASSuming the ponds are lined or sealed Lagoons | 0 |
| D | D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)<br>Wetland has persistent, ungrazed, vegetation for > 2/3 of area points = 5<br>Wetland has persistent, ungrazed, vegetation from 1/3 to 2/3 of area points = 3<br>Wetland has persistent, ungrazed vegetation from 1/10 to < 1/3 of area points = (1)<br>Wetland has persistent, ungrazed vegetation <1/10 of area points = 0<br>Map of Cowardin vegetation classes | Figure ___<br>1 |
| D | D 1.4 Characteristics of seasonal ponding or inundation.<br>*This is the area of ponding that fluctuates every year. Do not count the area that is permanently ponded.*<br>Area seasonally ponded is > ½ total area of wetland points = (3)<br>Area seasonally ponded is ¼ - ½ total area of wetland points = 1<br>Area seasonally ponded is < ¼ total area of wetland points = 0<br>NOTE: *See text for indicators of seasonal and permanent inundation/flooding.*<br>Map of Hydroperiods | Figure ___<br>3 |
| D | **Total for D 1** *Add the points in the boxes above* | 9 |
| D | **D 2. Does the wetland unit have the opportunity to improve water quality?**<br>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.*<br>— Grazing in the wetland or within 150 ft<br>— Untreated stormwater discharges to wetland<br>✓ Tilled fields or orchards within 150 ft of wetland<br>— A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging<br>— Residential, urban areas, golf courses are within 150 ft of wetland<br>— Wetland is fed by groundwater high in phosphorus or nitrogen<br>— Other_____<br>**YES** multiplier is **2** **NO** multiplier is **1** | multiplier<br>2 |
| D | **TOTAL - Water Quality Functions** Multiply the score from D1 by the multiplier in D2<br>***Record score on p. 1 of field form*** | 18 |

Wetland name or number 43

| D | Depressional Wetlands<br>HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream erosion | Points (only 1 score per box) |
|---|---|---|
| D | **D 3.0 Does the wetland unit have the potential to reduce flooding and stream erosion?** | *(see p. 39)* |
| D | D 3.1 Characteristics of surface water flows out of the wetland unit:<br>Wetland has no surface water outlet — points = 8<br>Wetland has an intermittently flowing outlet — points = 4<br>Wetland has a highly constricted permanently flowing outlet — points = 4<br>Wetland has a permanently flowing surface outlet — points = 0 | 8 |
| D | D 3.2 Depth of storage during wet periods:<br>*Estimate the height of ponding above the surface of the wetland (see text for description of measuring height). In wetlands with permanent ponding, the surface is the lowest elevation of "permanent" water)*<br>Marks of ponding are at least 3 ft above the surface — points = 8<br>The wetland is a "headwater" wetland" *(see p. 39)* — points = 6<br>Marks are 2 ft to < 3 ft from surface — points = 6<br>Marks are 1 ft to < 2 ft from surface — points = 4<br>Marks are 6 in to < 1 ft from surface — points = 2<br>No marks above 6 in. or wetland has only saturated soils — points = 0 | 2 |
| D | **Total for D 3** *Add the points in the boxes above* | 10 |
| D | **D 4.0 Does the wetland unit have the opportunity to reduce flooding and erosion?**<br>*Answer NO if the major source of water is groundwater, irrigation return flow, or water levels in the wetland are controlled by a reservoir.*<br>Answer YES if the wetland is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. *Note which of the following conditions apply.*<br>— Wetland is in a headwater of a river or stream that has flooding problems<br>— Wetland drains to a river or stream that has flooding problems<br>✓ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems<br>— Other_____<br>**YES** multiplier is 2 **NO** multiplier is **1** | *(see p. 42)*<br>multiplier<br>2 |
| D | **TOTAL - Hydrologic Functions** Multiply the score from D3 by the multiplier in D4<br>***Record score on p. 1 of field form*** | 20 |

**Comments**

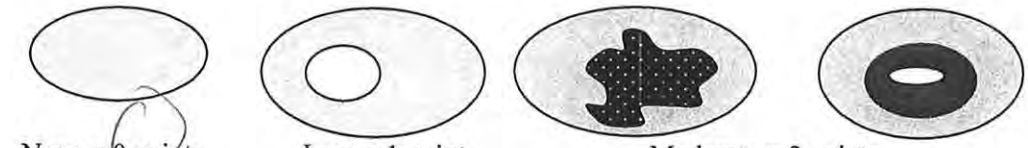
Wetland name or number 43

| ***These questions apply to wetlands of all HGM classes.*** HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat | **Points** (only 1 score per box) |
|---|---|
| **H 1. Does the wetland unit have the potential to provide habitat for many species?** | |
| H 1.1 Categories of vegetation structure ***(see p.62)*** | **Figure ___** |
| *Check the vegetation classes (as defined by Cowardin) and heights of emergents present. Size threshold for each class or height category is ¼ acre or more than 10% of the area if unit is < 2.5 acres.* | |
| ___Aquatic bed | |
| ___Emergent plants 0-12 in. (0 – 30 cm) high are the highest layer and have > 30% cover | |
| ___/Emergent plants >12 – 40 in.(>30 – 100cm) high are the highest layer with >30% cover (Reed on edge) | |
| ___Emergent plants > 40 in.(> 100cm) high are the highest layer with >30% cover | |
| ___Scrub/shrub (areas where shrubs have >30% cover) | |
| ___Forested (areas where trees have >30% cover) | |
| *Add the number of vegetation types that qualify. If you have:* | |
| 4-6 types points = 3<br>3 types points = 2<br>2 types points = 1<br>1 type points = 0 | 0 |
| Map of Cowardin vegetation classes and areas with different heights of emergents | |
| H 1.2. Is one of the vegetation types "aquatic bed?" ***(see p .64)*** | |
| YES = 1 point NO = 0 points | 0 |
| H 1.3. Surface Water ***(see p.65)*** | **Figure ___** |
| H 1.3.1 Does the unit have areas of "open" water (without herbaceous or shrub plants) over at least ¼ acre or 10% of its area during the spring (March – early June) OR in early fall (August – end of September)? *Note: answer YES for Lake-fringe wetlands* | |
| YES = 3 points **& go to H 1.4** NO = go to H 1.3.2 | |
| H 1.3.2 Does the unit have an intermittent or permanent stream within its boundaries, or along one side, over at least ¼ acre or 10% of its area, AND that has an unvegetated bottom (*answer yes only if H 1.3.1 is NO*)? | 3 |
| YES = 3 points NO = 0 points | |
| Map showing areas of open water | |
| H 1.4. Richness of Plant Species ***(see p. 66)*** | |
| Count the number of plant species in the wetland that cover at least 10 ft$^2$. (*different patches of the same species can be combined to meet the size threshold)* | |
| *You do not have to name the species.* | |
| *Do not include Eurasean Milfoil, reed canarygrass, purple loosestrife, Russian Olive, Phragmites ,Canadian Thistle, Yellow-flag Iris, and Salt Cedar (Tamarisk)* | |
| If you counted: > 9 species points = 2<br>4-9 species points = 1<br># of species ____ < 4 species points = 0 points | |
| *List species below if you wish* | 0 |

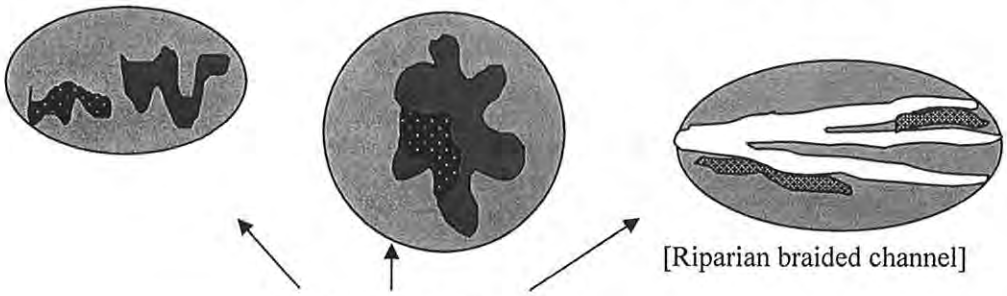
Wetland name or number 43

H 1.5. Interspersion of habitats *(see p. 67)*
Decided from the diagrams below whether interspersion between categories of vegetation (described in H 1.1), or categories and un-vegetated areas (can include open water or mudflats) is high, medium, low, or none.

Figure ___



None = 0 points Low = 1 point Moderate = 2 points



[Riparian braided channel]

High = 3 points

NOTE: If you have four or more vegetation categories or three vegetation categories and open water the rating is always "high". Use maps from H1.1 and H1.3

6

H 1.6. Special Habitat Features: *(see p. 68)*
*Check the habitat features that are present in the wetland unit. The number of checks is the number of points you put into the next column.*

____Loose rocks larger than 4" **or** large, downed, woody debris (>4in. diameter) within the area of surface ponding or in stream.

____Cattails or bulrushes are present within the unit.

____Standing snags (diameter at the bottom > 4 inches) in the wetland unit or within 30 m (100ft) of the edge.

____Emergent or shrub vegetation in areas that are permanently inundated/ponded. *The presence of "yellow flag" Iris is a good indicator of vegetation in areas permanently ponded.*

____Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) OR signs of recent beaver activity

____ Invasive species cover less than 20% in each stratum of vegetation *(canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)*

*Maximum score possible = 6*

0

**TOTAL** Potential to provide habitat
*Add the scores in the column above*

3

**Comments**

Wetland name or number 43

**H 2.0 Does the wetland have the opportunity to provide habitat for many species?**

H 2.1 Buffers *(see p. 71)*

*Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed." Relatively undisturbed also means no grazing, no landscaping, no daily human use, and no structures or paving within undisturbed part of buffer.*

— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference **Points = 5**

— 330 ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. **Points = 4**

— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **Points = 4**

— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . **Points = 3**

— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. **Points = 3**

**If buffer does not meet any of the criteria above**

— No paved areas (except paved trails) or buildings within 80ft (25 m) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**

— No paved areas or buildings within 170ft (50m) of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**

— Heavy grazing in buffer. **Points = 1**

— Vegetated buffers are <6.6ft wide (2m) for more than 95% of the circumference (e.g . tilled fields, paving, basalt bedrock extend to edge of wetland). **Points = 0**

— Buffer does not meet any of the criteria above. **Points = 1**

Aerial photo showing buffers

Figure ___

0

H 2.2 Wet Corridors *(see p. 72)*

H 2.2.1 Is the wetland unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor at least ¼ mile long with surface water or flowing water throughout most of the year (> 9 months/yr)? (*dams, heavily used gravel roads, paved roads, fields tilled to edge of stream, or pasture to edge of stream are considered breaks in the corridor*).

YES = 4 points (go to H 2.3) NO = go to H 2.2.2

H 2.2.2 Is the unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor, at least ¼ mile long with water flowing seasonally, **OR** a lake-fringe wetland without a "wet" corridor, **OR** a riverine wetland without a surface channel connecting to the stream?

YES = 2 points (go to H 2.3) NO go to H 2.2.3

H 2.2.3 Is the wetland within a 1/2 mile of any permanent stream, seasonal stream, or lake (*do not include man-made ditches*)?

YES = 1 point NO = 0 points

1

Wetland name or number 43

| | |
|---|---|
| H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm )***<br>Which of the following priority habitats are within 330ft (100m) of the wetland unit? *NOTE: the connections to the habitats can be disturbed.*<br>____**Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).<br>____**Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).<br>____ **Eastside Steppe:** Non-forested vegetation type dominated by broadleaf herbaceous flora ((*full description of herbaceous species found here are in WDFW PHS report p. 153*).<br>____**Old-growth/Mature forests (east of Cascade crest):** (*full descriptions in WDFW PHS report p. 157*). Old-growth: Stands are > 150 yrs in age; may be variable in tree species composition and structural characteristics due to the influence of fire, climate, and soils. Mature: Stands 80 – 160 yrs old. Decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.<br>____**Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).<br>____ **Juniper Savannah**: All juniper woodlands (*SE part of state only; check map*)<br>____ **Shrub-steppe**: A nonforested vegetation type consisting of one or more layers of perennial bunchgrasses and a conspicuous but discontinuous layer of shrubs (see Eastside Steppe for sites with little or no shrub cover).<br>____**Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.<br>____Inland Dunes This placeholder is for a new priority habitat that will capture areas known as Inland Dunes. A definition will be developed later in Fall 2008. *(check WDFW web site)*<br>____**Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.<br>____**Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.<br>____**Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.<br>____**Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.<br>____**Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 30 cm (12 in) in eastern Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.<br>If wetland has **2 or more** Priority Habitats = **4 points**<br>If wetland has **1** Priority Habitat = **2 points**<br>No Priority habitats = **0 points**<br>*Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)* | 0 |

Wetland name or number 43

| | |
|---|---|
| H 2.4 Landscape *(choose the **one** description of the landscape around the wetland that best fits)* ***(see p. 76)*** <br><br> — The wetland unit is in an area where annual rainfall is less than 12 inches, and its water regime is not influenced by irrigation practices, dams, or water control structures. (*Generally, this means outside boundaries of reclamation areas, irrigation district, or reservoirs* ) **points = 5** <br> — There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing in the connection or an open water connection along a lake shore without heavy boat traffic are OK, but connections should NOT be bisected by paved roads, fill, fields, heavy boat traffic or other development) **points = 5** <br> — There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed? **points = 2** <br> ✓ There is at least 1 wetland within ½ mile. **points = 1** <br> — Does not meet any of the four criteria above **points = 0** | 1 |
| **H 2.** TOTAL Score - opportunity for providing habitat *Add the scores in the column above* | 2 |
| **H 3.0 Does the wetland unit have indicators that its ability to provide habitat is reduced?** | |
| H 3.1 Indicator of reduced habitat functions ***(see p. 75)*** <br> Do the areas of open water in the wetland unit have a resident population of carp (see text for indicators of the presence of carp)? *(NOTE: This question does not apply to reservoirs with water levels controlled by dams, such as the reservoirs on the Columbia and Snake Rivers)* <br><br> YES = **- 5 points** NO = 0 points | *Points will be subtracted* <br> 0 |
| **Total Score for Habitat Functions** – *add the points for H 1, H 2, and H 3 and record the result on p. 1* <br> 3 + 2 + 0 | 5 |

**Comments**

Wetland name or number 43

# CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

***Please determine if the wetland unit 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 units should also be characterized based on their functions.***

| **Wetland Type**<br>*Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.* | Category |
|---|---|
| **SC 1.0 Vernal pools** *(see p. 79)*<br>Is the wetland unit **less than 4000 ft²**, and does it meet at least **two** of the following criteria?<br>— Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input<br>— Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *NOTE: If you find perennial, "obligate", wetland plants the wetland is probably NOT a vernal pool*<br>— The soil in the wetland are shallow (<1ft deep (30 cm)) and is underlain by an impermeable layer such as basalt or clay.<br>— Surface water is present for less than 120 days during the "wet" season.<br>YES = Go to SC 1.1 (NO) *not a vernal pool*<br>SC 1.1 Is the vernal pool relatively undisturbed in February and March?<br>YES = Go to SC 1.2 (NO) *not a vernal pool with special characteristics* | |
| SC 1.2 Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 miles (other wetlands, rivers, lakes etc.)?<br>YES = Category II (NO) = Category III | **Cat. II**<br>**Cat. III** |
| **SC 2.0 Alkali wetlands** *(see p. 81)*<br>Does the wetland unit meets **one** of the following two criteria?<br>— The wetland has a conductivity > 3.0 mS/cm.<br>— The wetland has a conductivity between 2.0 - 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 2 for list of plants found in alkali systems).<br>— 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.<br>**OR** does the wetland unit meets two of the following three sub-criteria?<br>— Salt encrustations around more than 80% of the edge of the wetland<br>— More than ¾ of the plant cover consists of species listed on Table 2<br>— 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.<br>YES = Category I (NO) *not an alkali wetland* | **Cat. I** |

**SC 3.0 Natural Heritage Wetlands** *(see p. 81)*

Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.

SC 3.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)*

S/T/R information from Appendix D ___ or accessed from WNHP/DNR database ___

YES____ – contact WNHP/DNR (see p. 79) and go to SC 3.2 (NO)___

SC 3.2 Has DNR identified the wetland unit as a high quality undisturbed wetland or as or as a site with state threatened, endangered, or sensitive plant species? **Cat. I**

YES = Category I (NO) *–not a natural heritage wetland*

**SC 4.0 Bogs** *(see p. 82)*

Does the wetland unit **(or any part of the wetland unit)** meet both the criteria for soils and vegetation in bogs. *Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.*

SC 4.1. Does the wetland unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)?

Yes - go to SC 4.3 No - go to SC 4.2

SC 4.2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond??

Yes - go to SC 4.3 (No) - *Is not a bog for rating*

SC 4.3. Does the wetland unit have more than 70% cover of mosses at ground level in any area within its boundaries, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? **Cat. I**

Yes – Category I bog No - go to Q. 4.4

*NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.*

SC 4.4. Is the unit, or any part of it, forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover)?* **Cat. I**

Yes – Category I bog (NO)

Wetland name or number 43

| | |
|---|---|
| **SC 5.0 Forested Wetlands** *(see p. 85)*<br>Does the wetland unit have an area of forest (*you should have identified a forested class, if present, in question H 1.1*) rooted within its boundary that meet **at least one** of the following three criteria?<br>— The wetland is within the "100 year" floodplain of a river or stream<br>— aspen (*Populus tremuloides*) are a dominant or co-dominant of the "woody" vegetation. (*Dominants means it represents at least 50% of the cover of woody species, co-dominant means it represents at least 20% of the total cover of woody species*)<br>— There is at least ¼ acre of trees (even in wetlands smaller than 2.5 acres) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW *(see p. 83)*<br>YES = go to SC 5.1 (NO) *–not a forested wetland with special characteristics* | |
| SC 5.1 Does the wetland unit have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees<br>Slow growing trees are: western red cedar (*Thuja plicata*), Alaska yellow cedar (*Chamaecyparis nootkatensis*), pine spp. mostly "white" pine (*Pinus monticola*), western hemlock (*Tsuga heterophylla*), Englemann spruce (*Picea engelmannii*).<br>YES = Category I NO = go to SC 5.2 | **Cat. I** |
| SC 5.2 Does the unit have areas where aspen (*Populus tremuloides*) are a dominant or co-dominant species?<br>YES = Category I NO = go to SC 5.3 | **Cat. I** |
| SC 5.3 Does the wetland unit have areas with a forest canopy where more than 50% of the tree species (by cover) are fast growing species.<br>Fast growing species are:<br>Alders – red (*Alnus rubra*), thin-leaf (*A. tenuifolia*)<br>Cottonwoods – narrow-leaf (*Populus angustifolia*), black (*P. balsamifera*)<br>Willows- peach-leaf (*Salix amygdaloides*), Sitka (*S. sitchensis*), Pacific (*S. lasiandra*), Aspen - *(Populus tremuloides*), Water Birch (*Betula occidentalis*)<br>YES = Category II NO = go to SC 5.5 | **Cat. II** |
| SC 5.5 Is the forested component of the wetland within the "100 year floodplain" of a river or stream?<br>YES = Category II | **Cat. II** |
| **Category of wetland based on Special Characteristics**<br>*Choose the "highest" rating if wetland falls into several categories.*<br>If you answered NO for all types enter "Not Applicable" on p.1 | N/A |

Wetland name or number W44

# WETLAND RATING FORM – EASTERN WASHINGTON

Version 2 - Updated June 2006 to increase accuracy and reproducibility among users
Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Thorncrew Road + Moses Date of site visit: 2004-2005

Rated by S. Gilmore Trained by Ecology? Yes ✓ No ___ Date of training 2007

SEC: ___ TWNSHP: ____ RNGE: ____ Is S/T/R in Appendix D? Yes___ No ✓

**Map of wetland unit: Figure 3of4 Estimated size ~1AC**

## SUMMARY OF RATING

### Category based on FUNCTIONS provided by wetland

**I___ II___ III ✓ IV___**

| |
|---|
| Category I = Score >=70 |
| Category II = Score 51-69 |
| Category III = Score 30-50 |
| Category IV = Score < 30 |

| | |
|---|---|
| Score for "Water Quality" Functions | 18 |
| Score for Hydrologic Functions | 12 |
| Score for Habitat Functions | 5 |
| **TOTAL score for functions** | 35 |

### Category based on SPECIAL CHARACTERISTICS of wetland

**I___ II___ III___ Does not Apply ✓**

**Final Category (choose the "highest" category from above)** III

**Summary of basic information about the wetland unit**

| Wetland Type | | Wetland Class | |
|---|---|---|---|
| Vernal Pool | | Depressional | ✓ |
| Alkali | | Riverine | |
| Natural Heritage Wetland | | Lake-fringe | |
| Bog | | Slope | |
| Forest | | | |
| None of the above | ✓ | Check if unit has multiple HGM classes present | ✓ |

Wetland name or number 44

## Does the wetland being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

| Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating | YES | NO |
|---|---|---|
| SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered* ***animal or plant*** *species (T/E species)?*<br>For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database. | | ✓ |
| SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered* ***animal*** *species?*<br>For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form). | | ✓ |
| SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?* | | ✓ |
| SP4. *Does the wetland unit have a local significance in addition to its functions*?<br>For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance. | | ✓ |

**To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.**

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 20 for more detailed instructions on classifying wetlands.

Wetland name or number 44

## Classification of Vegetated Wetlands for Eastern Washington

**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 1-7 apply, and go to Question 8.**

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

___The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

___At least 30% of the open water area is deeper than 3 m (10 ft)?

NO – go to Step 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**?

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 <3ft diameter and less than a foot deep).*

NO - go to Step 3 YES – The wetland class is **Slope**

**3.** Is the entire wetland unit in a valley or stream channel where it gets inundated by overbank flooding from that stream or river? In general, the flooding should occur at least once every ten years to answer "yes." *The wetland can contain depressions that are filled with water when the river is not flooding.*

NO - go to Step 4 **YES** – The wetland class is **Riverine**

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

NO – go to Step 5 YES – The wetland class is **Depressional**

**5.** Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. 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 1-7 APPLY TO DIFFERENT AREAS IN THE 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 your wetland. 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 class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

Wetland name or number 44

| HGM Classes Within One Delineated Wetland Boundary | Class to Use for Rating |
|---|---|
| Slope + Riverine | Riverine |
| Slope + Depressional | Depressional |
| Slope + Lake-fringe | Lake-fringe |
| Depressional + Riverine (riverine is within boundary of depression) | Depressional |
| Depressional + Lake-fringe | Depressional |

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

Wetland name or number 44

| | Depressional Wetlands<br>WATER QUALITY FUNCTIONS - Indicators that the wetland functions to improve water quality | Points (only 1 score per box) |
|---|---|---|
| D | **D 1.0 Does the wetland unit have the <u>potential</u> to improve water quality?** | *(see p. 38)* |
| D | D 1.1 Characteristics of surface water flows out of the wetland unit:<br>Wetland has no surface water outlet - points = 5<br>Wetland has an intermittently flowing outlet points = (3)<br>Wetland has a highly constricted permanently flowing outlet points = 3<br>Wetland has a permanently flowing surface outlet points = 1 | may overflow during flooding<br>3 |
| D | D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic *(use NRCS definitions of soil types)*<br>YES points = 3<br>NO points = (0) | 0 |
| D | D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)<br>Wetland has persistent, ungrazed, vegetation for > 2/3 of area points = (5)<br>Wetland has persistent, ungrazed, vegetation from 1/3 to 2/3 of area points = 3<br>Wetland has persistent, ungrazed vegetation from 1/10 to < 1/3 of area points = 1<br>Wetland has persistent, ungrazed vegetation <1/10 of area points = 0<br>Map of Cowardin vegetation classes | Figure ___<br>5 |
| D | D 1.4 Characteristics of seasonal ponding or inundation.<br>*This is the area of ponding that fluctuates every year. Do not count the area that is permanently ponded.*<br>Area seasonally ponded is > ½ total area of wetland points = 3<br>Area seasonally ponded is ¼ - ½ total area of wetland points = (1)<br>Area seasonally ponded is < ¼ total area of wetland points = 0<br>NOTE: *See text for indicators of seasonal and permanent inundation/flooding.*<br>Map of Hydroperiods | Figure ___<br>1 |
| D | **Total for D 1** *Add the points in the boxes above* | 9 |
| D | **D 2. Does the wetland unit have the <u>opportunity</u> to improve water quality?**<br>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.*<br>— Grazing in the wetland or within 150 ft<br>✓ Untreated stormwater discharges to wetland<br>✓ Tilled fields or orchards within 150 ft of wetland<br>✓ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging<br>— Residential, urban areas, golf courses are within 150 ft of wetland<br>— Wetland is fed by groundwater high in phosphorus or nitrogen<br>— Other_____<br>**YES** multiplier is 2 **NO** multiplier is **1** | multiplier<br>2 |
| D | **<u>TOTAL</u> - Water Quality Functions** Multiply the score from D1 by the multiplier in D2<br>***Record score on p. 1 of field form*** | 18 |

Wetland name or number 44

| D | Depressional Wetlands<br>HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream erosion | Points (only 1 score per box) |
|---|---|---|
| D | **D 3.0 Does the wetland unit have the <u>potential</u> to reduce flooding and stream erosion?** | *(see p. 39)* |
| D | D 3.1 Characteristics of surface water flows out of the wetland unit:<br>Wetland has no surface water outlet — points = 8<br>Wetland has an intermittently flowing outlet — points = (4)<br>Wetland has a highly constricted permanently flowing outlet — points = 4<br>Wetland has a permanently flowing surface outlet — points = 0 | 4 |
| D | D 3.2 Depth of storage during wet periods:<br>*Estimate the height of ponding above the surface of the wetland (see text for description of measuring height). In wetlands with permanent ponding, the surface is the lowest elevation of "permanent" water)*<br>Marks of ponding are at least 3 ft above the surface — points = 8<br>The wetland is a "headwater" wetland" *(see p. 39)* — points = 6<br>Marks are 2 ft to < 3 ft from surface — points = 6<br>Marks are 1 ft to < 2 ft from surface — points = 4<br>Marks are 6 in to < 1 ft from surface — points = (2)<br>No marks above 6 in. or wetland has only saturated soils — points = 0 | 2 |
| D | **Total for D 3** *Add the points in the boxes above* | 6 |
| D | **D 4.0 Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion?**<br>*Answer NO if the major source of water is groundwater, irrigation return flow, or water levels in the wetland are controlled by a reservoir.*<br>Answer YES if the wetland is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. *Note which of the following conditions apply.*<br>— Wetland is in a headwater of a river or stream that has flooding problems<br>— Wetland drains to a river or stream that has flooding problems<br>✓ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems<br>— Other_____<br>**YES** multiplier is (2) **NO** multiplier is **1** | *(see p. 42)*<br>multiplier<br>2 |
| D | **TOTAL - Hydrologic Functions** Multiply the score from D3 by the multiplier in D4<br>***Record score on p. 1 of field form*** | 12 |

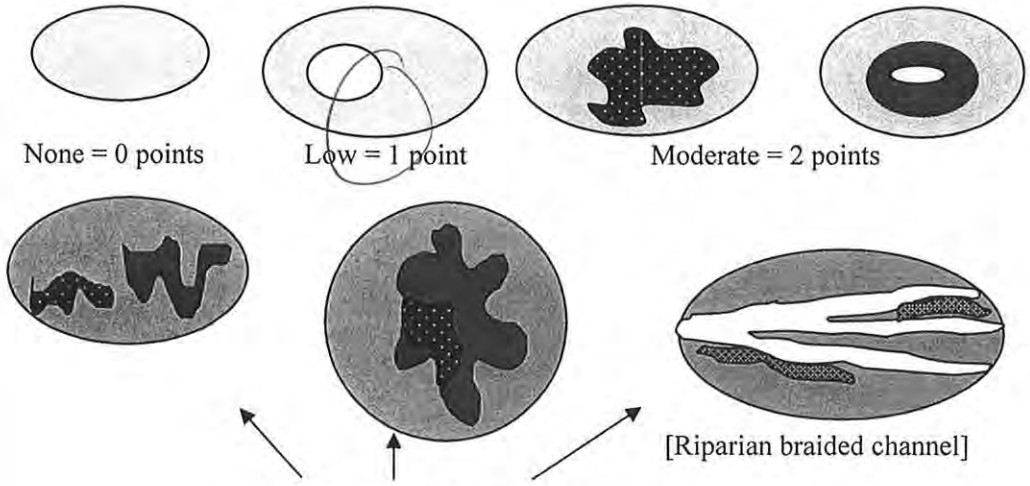
**Comments**

Wetland name or number 44

H 1.5. Interspersion of habitats *(see p. 67)*

Decided from the diagrams below whether interspersion between categories of vegetation (described in H 1.1), or categories and un-vegetated areas (can include open water or mudflats) is high, medium, low, or none.

**Figure ___**




NOTE: If you have four or more vegetation categories or three vegetation categories and open water the rating is always "high". Use maps from H1.1 and H1.3

1

H 1.6. Special Habitat Features: *(see p. 68)*

*Check the habitat features that are present in the wetland unit. The number of checks is the number of points you put into the next column.*

____Loose rocks larger than 4" **or** large, downed, woody debris (>4in. diameter) within the area of surface ponding or in stream.

____Cattails or bulrushes are present within the unit.

____Standing snags (diameter at the bottom > 4 inches) in the wetland unit or within 30 m (100ft) of the edge.

____Emergent or shrub vegetation in areas that are permanently inundated/ponded. *The presence of "yellow flag" Iris is a good indicator of vegetation in areas permanently ponded.*

____Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) OR signs of recent beaver activity

____ Invasive species cover less than 20% in each stratum of vegetation *(canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)*

*Maximum score possible = 6*

0

**TOTAL** Potential to provide habitat
*Add the scores in the column above*

1

**Comments**

Wetland name or number 44

**H 2.0 Does the wetland have the opportunity to provide habitat for many species?**

H 2.1 Buffers *(see p. 71)*

*Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed." Relatively undisturbed also means no grazing, no landscaping, no daily human use, and no structures or paving within undisturbed part of buffer.*

— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference **Points = 5**

— 330 ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. **Points = 4**

— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **Points = 4**

— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . **Points = 3**

— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. **Points = 3**

**If buffer does not meet any of the criteria above**

— No paved areas (except paved trails) or buildings within 80ft (25 m) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**

— No paved areas or buildings within 170ft (50m) of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**

— Heavy grazing in buffer. **Points = 1**

— Vegetated buffers are <6.6ft wide (2m) for more than 95% of the circumference (e.g . tilled fields, paving, basalt bedrock extend to edge of wetland). **Points = 0**

— Buffer does not meet any of the criteria above. **Points = 1**

Figure ___ 1

Aerial photo showing buffers (in report) Some reed canarygrass around ponded area

H 2.2 Wet Corridors *(see p. 72)*

H 2.2.1 Is the wetland unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor at least ¼ mile long with surface water or flowing water throughout most of the year (> 9 months/yr)? (*dams, heavily used gravel roads, paved roads, fields tilled to edge of stream, or pasture to edge of stream are considered breaks in the corridor*).

YES = 4 points (go to H 2.3) NO = go to H 2.2.2

H 2.2.2 Is the unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor, at least ¼ mile long with water flowing seasonally, **OR** a lake-fringe wetland without a "wet" corridor, **OR** a riverine wetland without a surface channel connecting to the stream?

YES = 2 points (go to H 2.3) NO go to H 2.2.3

1

H 2.2.3 Is the wetland within a 1/2 mile of any permanent stream, seasonal stream, or lake (*do not include man-made ditches*)?

YES = 1 point NO = 0 points

Wetland name or number 44

| | |
|---|---|
| H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm )***<br>Which of the following priority habitats are within 330ft (100m) of the wetland unit? *NOTE: the connections to the habitats can be disturbed.*<br>____**Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).<br>____**Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).<br>____ **Eastside Steppe:** Non-forested vegetation type dominated by broadleaf herbaceous flora ((*full description of herbaceous species found here are in WDFW PHS report p. 153*).<br>____**Old-growth/Mature forests (east of Cascade crest):** (*full descriptions in WDFW PHS report p. 157*). Old-growth: Stands are > 150 yrs in age; may be variable in tree species composition and structural characteristics due to the influence of fire, climate, and soils. Mature: Stands 80 – 160 yrs old. Decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.<br>____**Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).<br>____ **Juniper Savannah**: All juniper woodlands (*SE part of state only; check map*)<br>____ **Shrub-steppe**: A nonforested vegetation type consisting of one or more layers of perennial bunchgrasses and a conspicuous but discontinuous layer of shrubs (see Eastside Steppe for sites with little or no shrub cover).<br>____**Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.<br>____Inland Dunes This placeholder is for a new priority habitat that will capture areas known as Inland Dunes. A definition will be developed later in Fall 2008. *(check WDFW web site)*<br>____**Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.<br>____**Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.<br>____**Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.<br>____**Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.<br>____**Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 30 cm (12 in) in eastern Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.<br>If wetland has **2 or more** Priority Habitats = **4 points**<br>If wetland has **1** Priority Habitat = **2 points**<br>No Priority habitats = **0 points**<br>*Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)* | 0 |

Wetland name or number 44

| | |
|---|---|
| H 2.4 Landscape *(choose the **one** description of the landscape around the wetland that best fits)* ***(see p. 76)*** | |
| — The wetland unit is in an area where annual rainfall is less than 12 inches, and its water regime is not influenced by irrigation practices, dams, or water control structures. (*Generally, this means outside boundaries of reclamation areas, irrigation district, or reservoirs* ) **points = 5** | |
| — There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing in the connection or an open water connection along a lake shore without heavy boat traffic are OK, but connections should NOT be bisected by paved roads, fill, fields, heavy boat traffic or other development) **points = 5** | |
| ✓ — There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed? **points = 2** | |
| — There is at least 1 wetland within ½ mile. **points = 1** | |
| — Does not meet any of the four criteria above **points = 0** | 2 |
| **H 2.** TOTAL Score - opportunity for providing habitat *Add the scores in the column above* | 4 |
| **H 3.0 Does the wetland unit have indicators that its ability to provide habitat is reduced?** | |
| H 3.1 Indicator of reduced habitat functions ***(see p. 75)*** Do the areas of open water in the wetland unit have a resident population of carp (see text for indicators of the presence of carp)? *(NOTE: This question does not apply to reservoirs with water levels controlled by dams, such as the reservoirs on the Columbia and Snake Rivers)* YES = **- 5 points** NO = 0 points | *Points will be subtracted* 5 |
| **Total Score for Habitat Functions** – *add the points for H 1, H 2, and H 3 and record the result on p. 1* 1 + 4 + 0 | 5 |

**Comments**

Wetland name or number 44

# CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

***Please determine if the wetland unit 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 units should also be characterized based on their functions.***

| **Wetland Type**<br>*Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.* | Category |
|---|---|
| **SC 1.0 Vernal pools** ***(see p. 79)***<br>Is the wetland unit **less than 4000 ft²**, and does it meet at least **two** of the following criteria?<br>— Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input<br>— Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *NOTE: If you find perennial, "obligate", wetland plants the wetland is probably NOT a vernal pool*<br>— The soil in the wetland are shallow (<1ft deep (30 cm)) and is underlain by an impermeable layer such as basalt or clay.<br>— Surface water is present for less than 120 days during the "wet" season.<br>YES = Go to SC 1.1 (NO) *not a vernal pool*<br>SC 1.1 Is the vernal pool relatively undisturbed in February and March?<br>YES = Go to SC 1.2 (NO) *not a vernal pool with special characteristics* | |
| SC 1.2 Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 miles (other wetlands, rivers, lakes etc.)?<br>YES = Category II (NO) = Category III | **Cat. II**<br>**Cat. III** |
| **SC 2.0 Alkali wetlands** ***(see p. 81)***<br>Does the wetland unit meets **one** of the following two criteria?<br>— The wetland has a conductivity > 3.0 mS/cm.<br>— The wetland has a conductivity between 2.0 - 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 2 for list of plants found in alkali systems).<br>— 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.<br>**OR** does the wetland unit meets two of the following three sub-criteria?<br>— Salt encrustations around more than 80% of the edge of the wetland<br>— More than ¾ of the plant cover consists of species listed on Table 2<br>— 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.<br>YES = Category I (NO) *not an alkali wetland* | **Cat. I** |

**SC 3.0 Natural Heritage Wetlands** *(see p. 81)*

Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.

SC 3.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)*

S/T/R information from Appendix D ___ or accessed from WNHP/DNR database ___

YES____ – contact WNHP/DNR (see p. 79) and go to SC 3.2 NO

SC 3.2 Has DNR identified the wetland unit as a high quality undisturbed wetland or as or as a site with state threatened, endangered, or sensitive plant species? **Cat. I**

YES = Category I NO *–not a natural heritage wetland*

**SC 4.0 Bogs** *(see p. 82)*

Does the wetland unit **(or any part of the wetland unit)** meet both the criteria for soils and vegetation in bogs. *Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.*

SC 4.1. Does the wetland unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)?

Yes - go to SC 4.3 No - go to SC 4.2

SC 4.2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond??

Yes - go to SC 4.3 No - *Is not a bog for rating*

SC 4.3. Does the wetland unit have more than 70% cover of mosses at ground level in any area within its boundaries, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? **Cat. I**

Yes – Category I bog No - go to Q. 4.4

*NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.*

SC 4.4. Is the unit, or any part of it, forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover)?* **Cat. I**

Yes – Category I bog NO

Wetland name or number 44

| | |
|---|---|
| **SC 5.0 Forested Wetlands** *(see p. 85)*<br>Does the wetland unit have an area of forest (*you should have identified a forested class, if present, in question H 1.1*) rooted within its boundary that meet **at least one** of the following three criteria?<br>— The wetland is within the "100 year" floodplain of a river or stream<br>— aspen (*Populus tremuloides*) are a dominant or co-dominant of the "woody" vegetation. (*Dominants means it represents at least 50% of the cover of woody species, co-dominant means it represents at least 20% of the total cover of woody species*)<br>— There is at least ¼ acre of trees (even in wetlands smaller than 2.5 acres) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW *(see p. 83)*<br>YES = go to SC 5.1 NO *–not a forested wetland with special characteristics* | |
| SC 5.1 Does the wetland unit have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees<br>Slow growing trees are: western red cedar (*Thuja plicata*), Alaska yellow cedar (*Chamaecyparis nootkatensis*), pine spp. mostly "white" pine (*Pinus monticola*), western hemlock (*Tsuga heterophylla*), Englemann spruce (*Picea engelmannii*).<br>YES = Category I NO = go to SC 5.2 | **Cat. I** |
| SC 5.2 Does the unit have areas where aspen (*Populus tremuloides*) are a dominant or co-dominant species?<br>YES = Category I NO = go to SC 5.3 | **Cat. I** |
| SC 5.3 Does the wetland unit have areas with a forest canopy where more than 50% of the tree species (by cover) are fast growing species.<br>Fast growing species are:<br>Alders – red (*Alnus rubra*), thin-leaf (*A. tenuifolia*)<br>Cottonwoods – narrow-leaf (*Populus angustifolia*), black (*P. balsamifera*)<br>Willows- peach-leaf (*Salix amygdaloides*), Sitka (*S. sitchensis*), Pacific (*S. lasiandra*), Aspen - (*Populus tremuloides*), Water Birch (*Betula occidentalis*)<br>YES = Category II NO = go to SC 5.5 | **Cat. II** |
| SC 5.5 Is the forested component of the wetland within the "100 year floodplain" of a river or stream?<br>YES = Category II | **Cat. II** |
| **Category of wetland based on Special Characteristics**<br>*Choose the "highest" rating if wetland falls into several categories.*<br>If you answered NO for all types enter "Not Applicable" on p.1 | N/A |

Wetland name or number W45

# WETLAND RATING FORM – EASTERN WASHINGTON

Version 2 - Updated June 2006 to increase accuracy and reproducibility among users
Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Thorncreek Road + Moore Date of site visit: 2004-2005

Rated by S. Gilmore Trained by Ecology? Yes ✓ No ___ Date of training 2007

SEC: ___ TWNSHP: ____ RNGE: ____ Is S/T/R in Appendix D? Yes___ No ✓

**Map of wetland unit: Figure** 3 of 4 **Estimated size** < .10 Acres

## SUMMARY OF RATING

### Category based on FUNCTIONS provided by wetland

**I___ II___ III___ IV** ✓

| |
|---|
| Category I = Score >=70 |
| Category II = Score 51-69 |
| Category III = Score 30-50 |
| Category IV = Score < 30 |

| | |
|---|---|
| Score for "Water Quality" Functions | 4 |
| Score for Hydrologic Functions | 2 |
| Score for Habitat Functions | 2 |
| **TOTAL score for functions** | 8 |

### Category based on SPECIAL CHARACTERISTICS of wetland

**I___ II___ III___ Does not Apply** ✓

### Final Category (choose the "highest" category from above)

**IV**

**Summary of basic information about the wetland unit**

| Wetland Type | | Wetland Class | |
|---|---|---|---|
| Vernal Pool | | Depressional | |
| Alkali | | Riverine | |
| Natural Heritage Wetland | | Lake-fringe | |
| Bog | | Slope | ✓ |
| Forest | | | |
| None of the above | ✓ | Check if unit has multiple HGM classes present | |

Wetland name or number 45

## Does the wetland being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

| Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating | YES | NO |
|---|---|---|
| SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?*<br>For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database. | | ✓ |
| SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?*<br>For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form). | | ✓ |
| SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?* | | ✓ |
| SP4. *Does the wetland unit have a local significance in addition to its functions*?<br>For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance. | | ✓ |

## To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 20 for more detailed instructions on classifying wetlands.

Wetland name or number 45

## Classification of Vegetated Wetlands for Eastern Washington

**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 1-7 apply, and go to Question 8.**

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

___The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

___At least 30% of the open water area is deeper than 3 m (10 ft)?

NO – go to Step 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**?

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 <3ft diameter and less than a foot deep).*

NO - go to Step 3 **YES** – The wetland class is **Slope**

Soils well drained below - isolated

**3.** Is the entire wetland unit in a valley or stream channel where it gets inundated by overbank flooding from that stream or river? In general, the flooding should occur at least once every ten years to answer "yes." *The wetland can contain depressions that are filled with water when the river is not flooding.*

NO – go to Step 4 **YES** – The wetland class is **Riverine**

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

NO – go to Step 5 **YES** – The wetland class is **Depressional**

**5.** Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. 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 1-7 APPLY TO DIFFERENT AREAS IN THE 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 your wetland. 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 class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

Wetland name or number 45

| HGM Classes Within One Delineated Wetland Boundary | Class to Use for Rating |
|---|---|
| Slope + Riverine | Riverine |
| Slope + Depressional | Depressional |
| Slope + Lake-fringe | Lake-fringe |
| Depressional + Riverine (riverine is within boundary of depression) | Depressional |
| Depressional + Lake-fringe | Depressional |

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

Wetland name or number 45

| S | Slope Wetlands<br>WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality | Points (only 1 score per box) |
|---|---|---|
| S | **S 1.0 Does the wetland have the potential to improve water quality?** | *(see p.56)* |
| S | S 1.1 Characteristics of average slope of wetland:<br>Slope is1% or less *(a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance)* points = 3<br>Slope is between 1% and 2% points = 2<br>Slope is more than 2% but less than 5% points = (1)<br>Slope is 5% or greater points = 0 | 1 |
| S | S 1.2 The soil 2 inches below the surface is clay or organic *(use NRCS definitions of soil types)*<br>YES = 3 points NO = 0 points | 0 |
| S | S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants:<br>*Choose the points appropriate for the description that best fits the vegetation in the wetland. **Dense** vegetation means you have trouble seeing the soil surface (>75% cover), and **uncut** means not grazed or mowed and plants are higher than 6 inches.*<br>Dense, ungrazed, herbaceous vegetation > 90% of the wetland unit points = 6<br>Dense, ungrazed, herbaceous vegetation > 1/2 of unit points = 3<br>Dense, woody, vegetation > ½ of unit points = 2<br>Dense, ungrazed, herbaceous vegetation > 1/4 of unit points = (1)<br>Does not meet any of the criteria above for herbaceous vegetation points = 0<br>Aerial photo or map with vegetation polygons | Figure ___<br>Mostly Farmed<br>1 |
| S | **Total for S 1** *Add the points in the boxes above* | 2 |
| S | **S 2.0 Does the wetland have the opportunity to improve water quality?**<br>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.*<br>— Grazing in the wetland or within 150ft<br>— Wetland is a groundwater seep within the Reclamation Area<br>✓ Untreated stormwater flows through the wetland<br>✓ Tilled fields or orchards within 150 feet of wetland<br>— Residential, urban areas, or golf courses are within 150 ft upslope of wetland<br>— Other _____<br>**YES** multiplier is (2) **NO** multiplier is **1** | *(see p.58)*<br>multiplier<br>2 |
| S | **TOTAL - Water Quality Functions** Multiply the score from S1 by the multiplier in S2<br>***Record score on p. 1 of field form*** | 4 |

Wetland name or number 45

| S | Slope Wetlands<br>HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation | Points (only 1 score per box) |
|---|---|---|
| S | **S 3.0 Does the wetland unit have the potential to reduce flooding and stream erosion?** | *(see p.59)* |
| S | S 3.1 Characteristics of vegetation that reduce the velocity of surface flows during storms.<br>*Choose the points appropriate for the description that best fit conditions in the wetland. See question S 1.3 for definition of dense and uncut.* ***Rigid*** *means that the stems of plants should be thick enough (usually > 1/8in), or dense enough, to remain erect during surface flows.*<br><br>Dense, uncut, **rigid** vegetation covers > 90% of the area of the unit points = 6<br>Dense, uncut, **rigid** vegetation > 1/2 – 90% area of unit points = 3<br>Dense, uncut, **rigid** vegetation > 1/4 – 1/2 of unit points = (1)<br>More than 1/4 of area is grazed, mowed, tilled or vegetation is not rigid points = 0 | 1 |
| S | S 3.2 Characteristics of slope wetland that holds back small amounts of flood flows:<br>The slope wetland has small surface depressions that can retain water over at least 10% of its area. YES points = 2<br>NO points = (0) | 6 |
| S | **Total for S3** *Add the points in the boxes above* | 1 |
| S | **S 4. 0 Does the wetland unit have the opportunity to reduce flooding and erosion?**<br>***(see p.61)***<br>*Answer NO if the major source of water is irrigation return flow (e.g. a seep that is on the downstream side of a dam or at the base of an irrigated field.*<br>Answer YES if the wetland is in a landscape position where the reduction in water velocity it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. *Note which of the following conditions apply.*<br>— Wetland has surface runoff that can cause flooding problems downgradient<br>— Other_____<br>**YES** multiplier is (2) **NO** multiplier is **1** | multiplier<br>2 |
| S | **TOTAL - Hydrologic Functions** Multiply the score from S3 by the multiplier in S4<br>***Record score on p. 1 of field form*** | 2 |

**Comments**

Wetland name or number 45

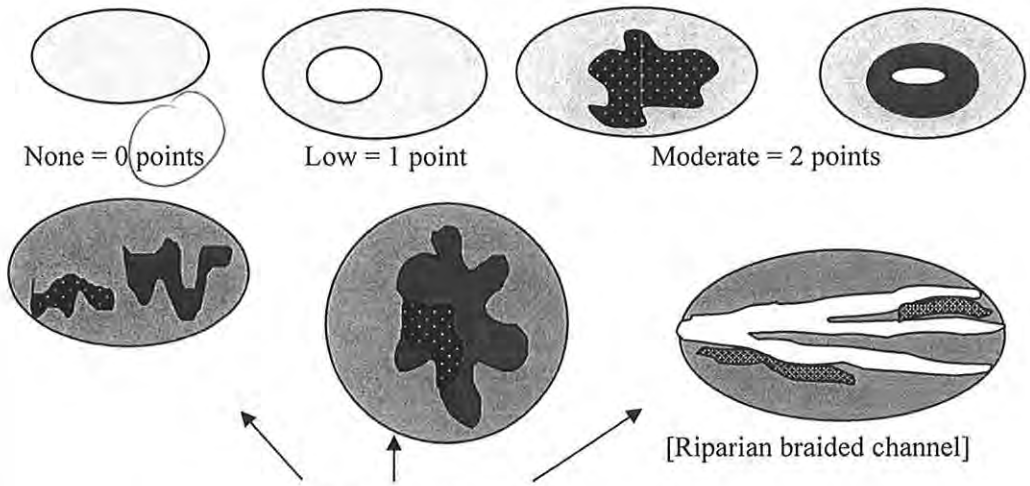
| ***These questions apply to wetlands of all HGM classes.*** HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat | **Points** (only 1 score per box) |
|---|---|
| **H 1. Does the wetland unit have the potential to provide habitat for many species?** | |
| H 1.1 Categories of vegetation structure ***(see p.62)*** | **Figure ___** |
| *Check the vegetation classes (as defined by Cowardin) and heights of emergents present. Size threshold for each class or height category is ¼ acre or more than 10% of the area if unit is < 2.5 acres.*<br>____Aquatic bed<br>____Emergent plants 0-12 in. (0 – 30 cm) high are the highest layer and have > 30% cover<br>____Emergent plants >12 – 40 in.(>30 – 100cm) high are the highest layer with >30% cover<br>____Emergent plants > 40 in.(> 100cm) high are the highest layer with >30% cover<br>____Scrub/shrub (areas where shrubs have >30% cover)<br>____Forested (areas where trees have >30% cover)<br>*Add the number of vegetation types that qualify. If you have:*<br>4-6 types points = 3<br>3 types points = 2<br>2 types points = 1<br>1 type points = (0)<br>Map of Cowardin vegetation classes and areas with different heights of emergents | 0 |
| H 1.2. Is one of the vegetation types "aquatic bed?" ***(see p .64)***<br>YES = 1 point NO = 0 points | 0 |
| H 1.3. Surface Water ***(see p.65)***<br>H 1.3.1 Does the unit have areas of "open" water (without herbaceous or shrub plants) over at least ¼ acre or 10% of its area during the spring (March – early June) OR in early fall (August – end of September)? *Note: answer YES for Lake-fringe wetlands*<br>YES = 3 points **& go to H 1.4** (NO) = go to H 1.3.2<br>H 1.3.2 Does the unit have an intermittent or permanent stream within its boundaries, or along one side, over at least ¼ acre or 10% of its area, AND that has an unvegetated bottom (*answer yes only if H 1.3.1 is NO*)?<br>YES = 3 points (NO) = 0 points<br>Map showing areas of open water | **Figure ___**<br>0 |
| H 1.4. Richness of Plant Species ***(see p. 66)***<br>Count the number of plant species in the wetland that cover at least 10 ft$^2$. (*different patches of the same species can be combined to meet the size threshold)*<br>*You do not have to name the species.*<br>*Do not include Eurasean Milfoil, reed canarygrass, purple loosestrife, Russian Olive, Phragmites ,Canadian Thistle, Yellow-flag Iris, and Salt Cedar (Tamarisk)*<br>If you counted: > 9 species points = 2<br>4-9 species points = 1<br># of species ____ < 4 species points = (0 points)<br>*List species below if you wish* | 0 |

Wetland name or number 45

H 1.5. Interspersion of habitats *(see p. 67)*

Figure ___

Decided from the diagrams below whether interspersion between categories of vegetation (described in H 1.1), or categories and un-vegetated areas (can include open water or mudflats) is high, medium, low, or none.




0

NOTE: If you have four or more vegetation categories or three vegetation categories and open water the rating is always "high". Use maps from H1.1 and H1.3

H 1.6. Special Habitat Features: *(see p. 68)*

*Check the habitat features that are present in the wetland unit. The number of checks is the number of points you put into the next column.*

____Loose rocks larger than 4" **or** large, downed, woody debris (>4in. diameter) within the area of surface ponding or in stream.

____Cattails or bulrushes are present within the unit.

____Standing snags (diameter at the bottom > 4 inches) in the wetland unit or within 30 m (100ft) of the edge.

____Emergent or shrub vegetation in areas that are permanently inundated/ponded. *The presence of "yellow flag" Iris is a good indicator of vegetation in areas permanently ponded.*

____Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) OR signs of recent beaver activity

____ Invasive species cover less than 20% in each stratum of vegetation *(canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)*

0

*Maximum score possible = 6*

**TOTAL** Potential to provide habitat
*Add the scores in the column above*

0

**Comments**

Wetland name or number 45

| **H 2.0 Does the wetland have the opportunity to provide habitat for many species?** | |
|---|---|
| H 2.1 Buffers ***(see p. 71)***<br>*Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed." Relatively undisturbed also means no grazing, no landscaping, no daily human use, and no structures or paving within undisturbed part of buffer.*<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference **Points = 5**<br>— 330 ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. **Points = 4**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **Points = 4**<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . **Points = 3**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. **Points = 3**<br>**If buffer does not meet any of the criteria above**<br>— No paved areas (except paved trails) or buildings within 80ft (25 m) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— No paved areas or buildings within 170ft (50m) of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— Heavy grazing in buffer. **Points = 1**<br>✓ Vegetated buffers are <6.6ft wide (2m) for more than 95% of the circumference (e.g . tilled fields, paving, basalt bedrock extend to edge of wetland). **Points = 0**<br>— Buffer does not meet any of the criteria above. **Points = 1**<br>Aerial photo showing buffers | Figure ___<br>0 |
| H 2.2 Wet Corridors ***(see p. 72)***<br>H 2.2.1 Is the wetland unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor at least ¼ mile long with surface water or flowing water throughout most of the year (> 9 months/yr)? (*dams, heavily used gravel roads, paved roads, fields tilled to edge of stream, or pasture to edge of stream are considered breaks in the corridor*).<br>YES = 4 points (go to H 2.3) NO = go to H 2.2.2<br>H 2.2.2 Is the unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor, at least ¼ mile long with water flowing seasonally, **OR** a lake-fringe wetland without a "wet" corridor, **OR** a riverine wetland without a surface channel connecting to the stream?<br>YES = 2 points (go to H 2.3) NO go to H 2.2.3<br>H 2.2.3 Is the wetland within a 1/2 mile of any permanent stream, seasonal stream, or lake (*do not include man-made ditches*)?<br>YES = 1 point NO = 0 points | 1 |

Wetland name or number 45

| | |
|---|---|
| H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm )***<br>Which of the following priority habitats are within 330ft (100m) of the wetland unit? *NOTE: the connections to the habitats can be disturbed.*<br>____**Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).<br>____**Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).<br>____ **Eastside Steppe:** Non-forested vegetation type dominated by broadleaf herbaceous flora ((*full description of herbaceous species found here are in WDFW PHS report p. 153*).<br>____**Old-growth/Mature forests (east of Cascade crest):** (*full descriptions in WDFW PHS report p. 157*). Old-growth: Stands are > 150 yrs in age; may be variable in tree species composition and structural characteristics due to the influence of fire, climate, and soils. Mature: Stands 80 – 160 yrs old. Decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.<br>____**Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).<br>____ **Juniper Savannah**: All juniper woodlands (*SE part of state only; check map*)<br>____ **Shrub-steppe**: A nonforested vegetation type consisting of one or more layers of perennial bunchgrasses and a conspicuous but discontinuous layer of shrubs (see Eastside Steppe for sites with little or no shrub cover).<br>____**Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.<br>____Inland Dunes This placeholder is for a new priority habitat that will capture areas known as Inland Dunes. A definition will be developed later in Fall 2008. *(check WDFW web site)*<br>____**Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.<br>____**Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.<br>____**Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.<br>____**Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.<br>____**Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 30 cm (12 in) in eastern Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.<br>If wetland has **2 or more** Priority Habitats = **4 points**<br>If wetland has **1** Priority Habitat = **2 points**<br>No Priority habitats = **0 points**<br>*Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)* | 0 |

Wetland name or number 45

| | |
|---|---|
| H 2.4 Landscape *(choose the **one** description of the landscape around the wetland that best fits)* ***(see p. 76)*** | |
| — The wetland unit is in an area where annual rainfall is less than 12 inches, and its water regime is not influenced by irrigation practices, dams, or water control structures. (*Generally, this means outside boundaries of reclamation areas, irrigation district, or reservoirs* ) **points = 5** | |
| — There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing in the connection or an open water connection along a lake shore without heavy boat traffic are OK, but connections should NOT be bisected by paved roads, fill, fields, heavy boat traffic or other development) **points = 5** | |
| — There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed? **points = 2** | |
| — There is at least 1 wetland within ½ mile. **points = 1** | |
| — Does not meet any of the four criteria above **points = 0** | 1 |
| **H 2.** TOTAL Score - opportunity for providing habitat *Add the scores in the column above* | 2 |
| **H 3.0 Does the wetland unit have indicators that its ability to provide habitat is reduced?** | |
| H 3.1 Indicator of reduced habitat functions ***(see p. 75)*** Do the areas of open water in the wetland unit have a resident population of carp (see text for indicators of the presence of carp)? *(NOTE: This question does not apply to reservoirs with water levels controlled by dams, such as the reservoirs on the Columbia and Snake Rivers)* YES = **- 5 points** NO = 0 points | *Points will be subtracted* 0 |
| **Total Score for Habitat Functions** – *add the points for H 1, H 2, and H 3 and record the result on p. 1* 0 + 2 + 0 | 2 |

**Comments**

Wetland name or number 45

# CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

***Please determine if the wetland unit 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 units should also be characterized based on their functions.***

| **Wetland Type**<br>*Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.* | Category |
|---|---|
| **SC 1.0 Vernal pools** *(see p. 79)*<br>Is the wetland unit **less than 4000 ft²**, and does it meet at least **two** of the following criteria?<br>— Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input<br>— Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *NOTE: If you find perennial, "obligate", wetland plants the wetland is probably NOT a vernal pool*<br>— The soil in the wetland are shallow (<1ft deep (30 cm)) and is underlain by an impermeable layer such as basalt or clay.<br>— Surface water is present for less than 120 days during the "wet" season.<br>YES = Go to SC 1.1 (NO) *not a vernal pool*<br>SC 1.1 Is the vernal pool relatively undisturbed in February and March?<br>YES = Go to SC 1.2 (NO) *not a vernal pool with special characteristics* | |
| SC 1.2 Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 miles (other wetlands, rivers, lakes etc.)?<br>YES = Category II (NO) = Category III | **Cat. II**<br>**Cat. III** |
| **SC 2.0 Alkali wetlands** *(see p. 81)*<br>Does the wetland unit meets **one** of the following two criteria?<br>— The wetland has a conductivity > 3.0 mS/cm.<br>— The wetland has a conductivity between 2.0 - 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 2 for list of plants found in alkali systems).<br>— 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.<br>**OR** does the wetland unit meets two of the following three sub-criteria?<br>— Salt encrustations around more than 80% of the edge of the wetland<br>— More than ¾ of the plant cover consists of species listed on Table 2<br>— 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.<br>YES = Category I (NO) *not an alkali wetland* | **Cat. I** |

Wetland name or number 45

**SC 3.0 Natural Heritage Wetlands** *(see p. 81)*

Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.

SC 3.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)*

S/T/R information from Appendix D ___ or accessed from WNHP/DNR database ___

YES____ – contact WNHP/DNR (see p. 79) and go to SC 3.2 (NO)___

SC 3.2 Has DNR identified the wetland unit as a high quality undisturbed wetland or as or as a site with state threatened, endangered, or sensitive plant species? **Cat. I**

YES = Category I (NO) –*not a natural heritage wetland*

**SC 4.0 Bogs** *(see p. 82)*

Does the wetland unit **(or any part of the wetland unit)** meet both the criteria for soils and vegetation in bogs. *Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.*

SC 4.1. Does the wetland unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)?

Yes - go to SC 4.3 No - go to SC 4.2

SC 4.2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond??

Yes - go to SC 4.3 (No)- *Is not a bog for rating*

SC 4.3. Does the wetland unit have more than 70% cover of mosses at ground level in any area within its boundaries, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? **Cat. I**

Yes – Category I bog No - go to Q. 4.4

*NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.*

SC 4.4. Is the unit, or any part of it, forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover)?* **Cat. I**

Yes – Category I bog (NO)

Wetland name or number 45

| | |
|---|---|
| **SC 5.0 Forested Wetlands** *(see p. 85)*<br>Does the wetland unit have an area of forest (*you should have identified a forested class, if present, in question H 1.1*) rooted within its boundary that meet **at least one** of the following three criteria?<br>— The wetland is within the "100 year" floodplain of a river or stream<br>— aspen (*Populus tremuloides*) are a dominant or co-dominant of the "woody" vegetation. (*Dominants means it represents at least 50% of the cover of woody species, co-dominant means it represents at least 20% of the total cover of woody species*)<br>— There is at least ¼ acre of trees (even in wetlands smaller than 2.5 acres) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW *(see p. 83)*<br>YES = go to SC 5.1 NO *–not a forested wetland with special characteristics* | |
| SC 5.1 Does the wetland unit have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees<br>Slow growing trees are: western red cedar (*Thuja plicata*), Alaska yellow cedar (*Chamaecyparis nootkatensis*), pine spp. mostly "white" pine (*Pinus monticola*), western hemlock (*Tsuga heterophylla*), Englemann spruce (*Picea engelmannii*).<br>YES = Category I NO = go to SC 5.2 | **Cat. I** |
| SC 5.2 Does the unit have areas where aspen (*Populus tremuloides*) are a dominant or co-dominant species?<br>YES = Category I NO = go to SC 5.3 | **Cat. I** |
| SC 5.3 Does the wetland unit have areas with a forest canopy where more than 50% of the tree species (by cover) are fast growing species.<br>Fast growing species are:<br>Alders – red (*Alnus rubra*), thin-leaf (*A. tenuifolia*)<br>Cottonwoods – narrow-leaf (*Populus angustifolia*), black (*P. balsamifera*)<br>Willows- peach-leaf (*Salix amygdaloides*), Sitka (*S. sitchensis*), Pacific (*S. lasiandra*), Aspen - (*Populus tremuloides*), Water Birch (*Betula occidentalis*)<br>YES = Category II NO = go to SC 5.5 | **Cat. II** |
| SC 5.5 Is the forested component of the wetland within the "100 year floodplain" of a river or stream?<br>YES = Category II | **Cat. II** |
| **Category of wetland based on Special Characteristics**<br>*Choose the "highest" rating if wetland falls into several categories.*<br>If you answered NO for all types enter "Not Applicable" on p.1 | N/A |

Wetland name or number W46

# WETLAND RATING FORM – EASTERN WASHINGTON

Version 2 - Updated June 2006 to increase accuracy and reproducibility among users
Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Thornerock Road + Moses Date of site visit: 2004-2005

Rated by S. Gilmore Trained by Ecology? Yes ✓ No ___ Date of training 2007

SEC: ___ TWNSHP: ____ RNGE: ____ Is S/T/R in Appendix D? Yes___ No ✓

**Map of wetland unit: Figure** 3 of 4 **Estimated size** < .10 AC

## SUMMARY OF RATING

### Category based on FUNCTIONS provided by wetland

**I___ II___ III___ IV** ✓

| Category I = Score >=70<br>Category II = Score 51-69<br>Category III = Score 30-50<br>Category IV = Score < 30 | Score for "Water Quality" Functions | 4 |
|---|---|---|
| | Score for Hydrologic Functions | 2 |
| | Score for Habitat Functions | 2 |
| | **TOTAL score for functions** | 8 |

### Category based on SPECIAL CHARACTERISTICS of wetland

**I___ II___ III___ Does not Apply** ✓

**Final Category (choose the "highest" category from above)** IV

**Summary of basic information about the wetland unit**

| Wetland Type | | Wetland Class | |
|---|---|---|---|
| Vernal Pool | | Depressional | |
| Alkali | | Riverine | |
| Natural Heritage Wetland | | Lake-fringe | |
| Bog | | Slope | ✓ |
| Forest | | | |
| None of the above | ✓ | Check if unit has multiple HGM classes present | |

Wetland name or number 46

## Does the wetland being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

| Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating | YES | NO |
|---|---|---|
| SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?*<br>For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database. | | ✓ |
| SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?*<br>For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form). | | ✓ |
| SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?* | | ✓ |
| SP4. *Does the wetland unit have a local significance in addition to its functions*?<br>For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance. | | ✓ |

## To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 20 for more detailed instructions on classifying wetlands.

Wetland name or number 46

## Classification of Vegetated Wetlands for Eastern Washington

**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 1-7 apply, and go to Question 8.**

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

___The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

___At least 30% of the open water area is deeper than 3 m (10 ft)?

(NO) – go to Step 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**?

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 <3ft diameter and less than a foot deep).*

NO - go to Step 3 **YES** – The wetland class is **Slope**

Isolated - Farmed around - well drained soils below

**3**. Is the entire wetland unit in a valley or stream channel where it gets inundated by overbank flooding from that stream or river? In general, the flooding should occur at least once every ten years to answer "yes." *The wetland can contain depressions that are filled with water when the river is not flooding.*

(NO) - go to Step 4 **YES** – The wetland class is **Riverine**

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

(NO) – go to Step 5 **YES** – The wetland class is **Depressional**

**5.** Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. 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 1-7 APPLY TO DIFFERENT AREAS IN THE 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 your wetland. 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 class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

Wetland name or number 4/6

| HGM Classes Within One Delineated Wetland Boundary | Class to Use for Rating |
|---|---|
| Slope + Riverine | Riverine |
| Slope + Depressional | Depressional |
| Slope + Lake-fringe | Lake-fringe |
| Depressional + Riverine (riverine is within boundary of depression) | Depressional |
| Depressional + Lake-fringe | Depressional |

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

Wetland name or number 46

| S | Slope Wetlands<br>WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality | Points (only 1 score per box) |
|---|---|---|
| S | **S 1.0 Does the wetland have the <u>potential</u> to improve water quality?** | *(see p.56)* |
| S | S 1.1 Characteristics of average slope of wetland:<br>Slope is1% or less *(a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance)* points = 3<br>Slope is between 1% and 2% points = 2<br>Slope is more than 2% but less than 5% points = (1)<br>Slope is 5% or greater points = 0 | 1 |
| S | S 1.2 The soil 2 inches below the surface is clay or organic *(use NRCS definitions of soil types)*<br>YES = 3 points NO = (0) points | 0 |
| S | S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants:<br>*Choose the points appropriate for the description that best fits the vegetation in the wetland. **Dense** vegetation means you have trouble seeing the soil surface (>75% cover), and **uncut** means not grazed or mowed and plants are higher than 6 inches.*<br>Dense, ungrazed, herbaceous vegetation > 90% of the wetland unit points = 6<br>Dense, ungrazed, herbaceous vegetation > 1/2 of unit points = 3<br>Dense, woody, vegetation > ½ of unit points = 2<br>Dense, ungrazed, herbaceous vegetation > 1/4 of unit points = (1)<br>Does not meet any of the criteria above for herbaceous vegetation points = 0<br>Aerial photo or map with vegetation polygons | Figure ___<br>Mostly Farmed<br>1 |
| S | **Total for S 1** *Add the points in the boxes above* | 2 |
| S | **S 2.0 Does the wetland have the <u>opportunity</u> to improve water quality?**<br>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.*<br>— Grazing in the wetland or within 150ft<br>— Wetland is a groundwater seep within the Reclamation Area<br>✓ Untreated stormwater flows through the wetland<br>✓ Tilled fields or orchards within 150 feet of wetland<br>— Residential, urban areas, or golf courses are within 150 ft upslope of wetland<br>— Other _____<br>**YES** multiplier is (2) **NO** multiplier is **1** | *(see p.58)*<br>multiplier<br>2 |
| S | **<u>TOTAL</u> - Water Quality Functions** Multiply the score from S1 by the multiplier in S2<br>***Record score on p. 1 of field form*** | 4 |

Wetland name or number 46

| S | Slope Wetlands<br>HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation | Points<br>(only 1 score per box) |
|---|---|---|
| S | **S 3.0 Does the wetland unit have the potential to reduce flooding and stream erosion?** | *(see p.59)* |
| S | S 3.1 Characteristics of vegetation that reduce the velocity of surface flows during storms.<br>*Choose the points appropriate for the description that best fit conditions in the wetland. See question S 1.3 for definition of dense and uncut.* ***Rigid*** *means that the stems of plants should be thick enough (usually > 1/8in), or dense enough, to remain erect during surface flows.*<br><br>Dense, uncut, **rigid** vegetation covers > 90% of the area of the unit points = 6<br>Dense, uncut, **rigid** vegetation > 1/2 – 90% area of unit points = 3<br>Dense, uncut, **rigid** vegetation > 1/4 – 1/2 of unit points = 1<br>More than 1/4 of area is grazed, mowed, tilled or vegetation is not rigid points = 0 | 1 |
| S | S 3.2 Characteristics of slope wetland that holds back small amounts of flood flows:<br>The slope wetland has small surface depressions that can retain water over at least 10% of its area. YES points = 2<br>NO points = 0 | 0 |
| S | **Total for S3** *Add the points in the boxes above* | 1 |
| S | **S 4. 0 Does the wetland unit have the opportunity to reduce flooding and erosion?**<br>***(see p.61)***<br>*Answer NO if the major source of water is irrigation return flow (e.g. a seep that is on the downstream side of a dam or at the base of an irrigated field.*<br>Answer YES if the wetland is in a landscape position where the reduction in water velocity it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. *Note which of the following conditions apply.*<br>✓ Wetland has surface runoff that can cause flooding problems downgradient<br>— Other_____<br>**YES** multiplier is 2 **NO** multiplier is **1** | multiplier<br>2 |
| S | **TOTAL - Hydrologic Functions** Multiply the score from S3 by the multiplier in S4<br>***Record score on p. 1 of field form*** | 2 |

**Comments**

Wetland name or number 46

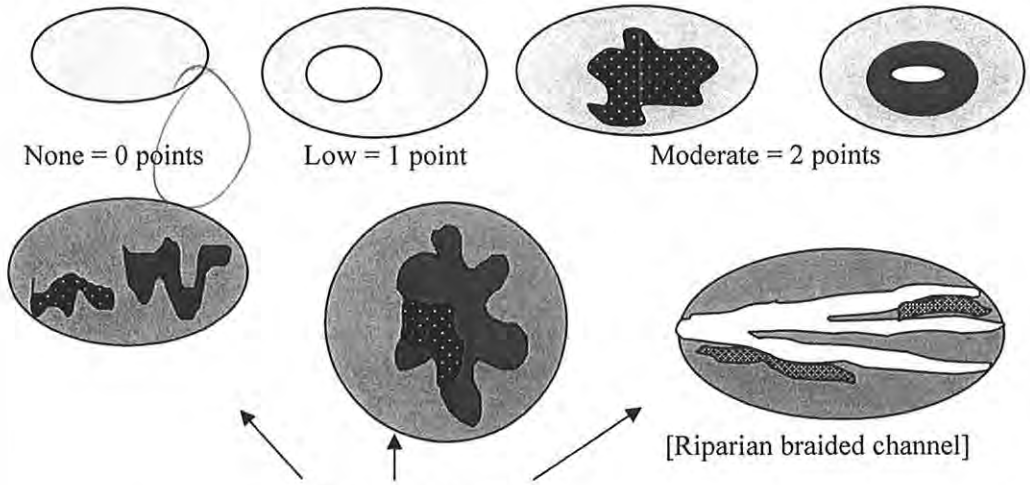
| ***These questions apply to wetlands of all HGM classes.*** HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat | **Points** (only 1 score per box) |
|---|---|
| **H 1. Does the wetland unit have the potential to provide habitat for many species?** | |
| H 1.1 Categories of vegetation structure ***(see p.62)*** | **Figure ___** |
| *Check the vegetation classes (as defined by Cowardin) and heights of emergents present. Size threshold for each class or height category is ¼ acre or more than 10% of the area if unit is < 2.5 acres.* | |
| ____Aquatic bed | |
| ____Emergent plants 0-12 in. (0 – 30 cm) high are the highest layer and have > 30% cover | |
| ___/Emergent plants >12 – 40 in.(>30 – 100cm) high are the highest layer with >30% cover | |
| ____Emergent plants > 40 in.(> 100cm) high are the highest layer with >30% cover | |
| ____Scrub/shrub (areas where shrubs have >30% cover) | |
| ____Forested (areas where trees have >30% cover) | |
| *Add the number of vegetation types that qualify. If you have:* | |
| 4-6 types points = 3<br>3 types points = 2<br>2 types points = 1<br>1 type points = 0 | 0 |
| Map of Cowardin vegetation classes and areas with different heights of emergents | |
| H 1.2. Is one of the vegetation types "aquatic bed?" ***(see p .64)***<br>YES = 1 point NO = 0 points | 0 |
| H 1.3. Surface Water ***(see p.65)*** | **Figure ___** |
| H 1.3.1 Does the unit have areas of "open" water (without herbaceous or shrub plants) over at least ¼ acre or 10% of its area during the spring (March – early June) OR in early fall (August – end of September)? *Note: answer YES for Lake-fringe wetlands*<br>YES = 3 points **& go to H 1.4** NO = go to H 1.3.2 | |
| H 1.3.2 Does the unit have an intermittent or permanent stream within its boundaries, or along one side, over at least ¼ acre or 10% of its area, AND that has an unvegetated bottom (*answer yes only if H 1.3.1 is NO*)?<br>YES = 3 points NO = 0 points | 0 |
| Map showing areas of open water | |
| H 1.4. Richness of Plant Species ***(see p. 66)***<br>Count the number of plant species in the wetland that cover at least 10 ft$^2$. (*different patches of the same species can be combined to meet the size threshold)*<br>*You do not have to name the species.*<br>*Do not include Eurasean Milfoil, reed canarygrass, purple loosestrife, Russian Olive, Phragmites ,Canadian Thistle, Yellow-flag Iris, and Salt Cedar (Tamarisk)*<br>If you counted: > 9 species points = 2<br>4-9 species points = 1<br># of species ____ < 4 species points = 0 points<br>*List species below if you wish* | 0 |

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H 1.5. Interspersion of habitats *(see p. 67)*

Figure ___

Decided from the diagrams below whether interspersion between categories of vegetation (described in H 1.1), or categories and un-vegetated areas (can include open water or mudflats) is high, medium, low, or none.



None = 0 points

Low = 1 point

Moderate = 2 points

[Riparian braided channel]

High = 3 points

NOTE: If you have four or more vegetation categories or three vegetation categories and open water the rating is always "high". Use maps from H1.1 and H1.3

0

H 1.6. Special Habitat Features: *(see p. 68)*

*Check the habitat features that are present in the wetland unit. The number of checks is the number of points you put into the next column.*

____Loose rocks larger than 4" **or** large, downed, woody debris (>4in. diameter) within the area of surface ponding or in stream.

____Cattails or bulrushes are present within the unit.

____Standing snags (diameter at the bottom > 4 inches) in the wetland unit or within 30 m (100ft) of the edge.

____Emergent or shrub vegetation in areas that are permanently inundated/ponded. *The presence of "yellow flag" Iris is a good indicator of vegetation in areas permanently ponded.*

____Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) OR signs of recent beaver activity

____ Invasive species cover less than 20% in each stratum of vegetation *(canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)*

*Maximum score possible = 6*

0

**TOTAL** Potential to provide habitat
*Add the scores in the column above*

0

**Comments**

Wetland name or number 46

| **H 2.0 Does the wetland have the opportunity to provide habitat for many species?** | |
|---|---|
| H 2.1 Buffers *(see p. 71)*<br>*Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed." Relatively undisturbed also means no grazing, no landscaping, no daily human use, and no structures or paving within undisturbed part of buffer.*<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference **Points = 5**<br>— 330 ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. **Points = 4**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **Points = 4**<br>— 330ft (100 m) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . **Points = 3**<br>— 170ft (50 m) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. **Points = 3**<br>**If buffer does not meet any of the criteria above**<br>— No paved areas (except paved trails) or buildings within 80ft (25 m) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— No paved areas or buildings within 170ft (50m) of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**<br>— Heavy grazing in buffer. **Points = 1**<br>— Vegetated buffers are <6.6ft wide (2m) for more than 95% of the circumference (e.g . tilled fields, paving, basalt bedrock extend to edge of wetland). **Points = 0**<br>— Buffer does not meet any of the criteria above. **Points = 1**<br>Aerial photo showing buffers | Figure ___<br>0 |
| H 2.2 Wet Corridors *(see p. 72)*<br>H 2.2.1 Is the wetland unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor at least ¼ mile long with surface water or flowing water throughout most of the year (> 9 months/yr)? (*dams, heavily used gravel roads, paved roads, fields tilled to edge of stream, or pasture to edge of stream are considered breaks in the corridor*).<br>YES = 4 points (go to H 2.3) NO = go to H 2.2.2<br>H 2.2.2 Is the unit part of a relatively undisturbed and unbroken, > 30 ft wide, vegetated corridor, at least ¼ mile long with water flowing seasonally, **OR** a lake-fringe wetland without a "wet" corridor, **OR** a riverine wetland without a surface channel connecting to the stream?<br>YES = 2 points (go to H 2.3) NO go to H 2.2.3<br>H 2.2.3 Is the wetland within a 1/2 mile of any permanent stream, seasonal stream, or lake (*do not include man-made ditches*)?<br>YES = 1 point NO = 0 points | 1 |

Wetland name or number 46

| | |
|---|---|
| H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm )***<br>Which of the following priority habitats are within 330ft (100m) of the wetland unit? *NOTE: the connections to the habitats can be disturbed.*<br>____**Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).<br>____**Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).<br>____ **Eastside Steppe:** Non-forested vegetation type dominated by broadleaf herbaceous flora ((*full description of herbaceous species found here are in WDFW PHS report p. 153*).<br>____**Old-growth/Mature forests (east of Cascade crest):** (*full descriptions in WDFW PHS report p. 157*). Old-growth: Stands are > 150 yrs in age; may be variable in tree species composition and structural characteristics due to the influence of fire, climate, and soils. Mature: Stands 80 – 160 yrs old. Decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.<br>____**Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).<br>____ **Juniper Savannah**: All juniper woodlands (*SE part of state only; check map*)<br>____ **Shrub-steppe**: A nonforested vegetation type consisting of one or more layers of perennial bunchgrasses and a conspicuous but discontinuous layer of shrubs (see Eastside Steppe for sites with little or no shrub cover).<br>____**Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.<br>____Inland Dunes This placeholder is for a new priority habitat that will capture areas known as Inland Dunes. A definition will be developed later in Fall 2008. *(check WDFW web site)*<br>____**Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.<br>____**Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.<br>____**Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.<br>____**Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.<br>____**Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 30 cm (12 in) in eastern Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.<br>If wetland has **2 or more** Priority Habitats = **4 points**<br>If wetland has **1** Priority Habitat = **2 points**<br>No Priority habitats = **0 points**<br>*lote: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)* | 0 |

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| | |
|---|---|
| H 2.4 Landscape *(choose the **one** description of the landscape around the wetland that best fits)* ***(see p. 76)*** | |
| — The wetland unit is in an area where annual rainfall is less than 12 inches, and its water regime is not influenced by irrigation practices, dams, or water control structures. (*Generally, this means outside boundaries of reclamation areas, irrigation district, or reservoirs* ) **points = 5** | |
| — There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing in the connection or an open water connection along a lake shore without heavy boat traffic are OK, but connections should NOT be bisected by paved roads, fill, fields, heavy boat traffic or other development) **points = 5** | |
| — There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed? **points = 2** | |
| — There is at least 1 wetland within ½ mile. **points = (1)** | |
| — Does not meet any of the four criteria above **points = 0** | 1 |
| **H 2.** TOTAL Score - opportunity for providing habitat *Add the scores in the column above* | 2 |
| **H 3.0 Does the wetland unit have indicators that its ability to provide habitat is reduced?** | |
| H 3.1 Indicator of reduced habitat functions ***(see p. 75)*** Do the areas of open water in the wetland unit have a resident population of carp (see text for indicators of the presence of carp)? *(NOTE: This question does not apply to reservoirs with water levels controlled by dams, such as the reservoirs on the Columbia and Snake Rivers)* YES = **- 5 points** NO = 0 points | *Points will be subtracted* 0 |
| **Total Score for Habitat Functions** – *add the points for H 1, H 2, and H 3 and record the result on p. 1* 0 + 2 + 0 | 2 |

**Comments**

Wetland name or number 46

# CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

***Please determine if the wetland unit 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 units should also be characterized based on their functions.***

| **Wetland Type**<br>*Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.* | Category |
|---|---|
| **SC 1.0 Vernal pools** *(see p. 79)*<br>Is the wetland unit **less than 4000 ft²**, and does it meet at least **two** of the following criteria?<br>— Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input<br>— Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *NOTE: If you find perennial, "obligate", wetland plants the wetland is probably NOT a vernal pool*<br>— The soil in the wetland are shallow (<1ft deep (30 cm)) and is underlain by an impermeable layer such as basalt or clay.<br>— Surface water is present for less than 120 days during the "wet" season.<br>YES = Go to SC 1.1 (NO) *not a vernal pool*<br>SC 1.1 Is the vernal pool relatively undisturbed in February and March?<br>YES = Go to SC 1.2 (NO) *not a vernal pool with special characteristics* | |
| SC 1.2 Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 miles (other wetlands, rivers, lakes etc.)?<br>YES = Category II (NO) = Category III | **Cat. II**<br>**Cat. III** |
| **SC 2.0 Alkali wetlands** *(see p. 81)*<br>Does the wetland unit meets **one** of the following two criteria?<br>— The wetland has a conductivity > 3.0 mS/cm.<br>— The wetland has a conductivity between 2.0 - 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 2 for list of plants found in alkali systems).<br>— 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.<br>**OR** does the wetland unit meets two of the following three sub-criteria?<br>— Salt encrustations around more than 80% of the edge of the wetland<br>— More than ¾ of the plant cover consists of species listed on Table 2<br>— 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.<br>YES = Category I (NO) *not an alkali wetland* | **Cat. I** |

**SC 3.0 Natural Heritage Wetlands** *(see p. 81)*

Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.

SC 3.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)*

S/T/R information from Appendix D ___ or accessed from WNHP/DNR database ___

YES____ – contact WNHP/DNR (see p. 79) and go to SC 3.2 (NO)

SC 3.2 Has DNR identified the wetland unit as a high quality undisturbed wetland or as or as a site with state threatened, endangered, or sensitive plant species? **Cat. I**

YES = Category I (NO) *–not a natural heritage wetland*

**SC 4.0 Bogs** *(see p. 82)*

Does the wetland unit **(or any part of the wetland unit)** meet both the criteria for soils and vegetation in bogs. *Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.*

SC 4.1. Does the wetland unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)?

Yes - go to SC 4.3 No - go to SC 4.2

SC 4.2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond??

Yes - go to SC 4.3 (No) - *Is not a bog for rating*

SC 4.3. Does the wetland unit have more than 70% cover of mosses at ground level in any area within its boundaries, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? **Cat. I**

Yes – Category I bog No - go to Q. 4.4

*NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.*

SC 4.4. Is the unit, or any part of it, forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover)?* **Cat. I**

Yes – Category I bog (NO)

| | |
|---|---|
| **SC 5.0 Forested Wetlands** *(see p. 85)*<br>Does the wetland unit have an area of forest (*you should have identified a forested class, if present, in question H 1.1*) rooted within its boundary that meet **at least one** of the following three criteria?<br>— The wetland is within the "100 year" floodplain of a river or stream<br>— aspen (*Populus tremuloides*) are a dominant or co-dominant of the "woody" vegetation. (*Dominants means it represents at least 50% of the cover of woody species, co-dominant means it represents at least 20% of the total cover of woody species*)<br>— There is at least ¼ acre of trees (even in wetlands smaller than 2.5 acres) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW *(see p. 83)*<br>YES = go to SC 5.1 NO –*not a forested wetland with special characteristics* | |
| SC 5.1 Does the wetland unit have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees<br>Slow growing trees are: western red cedar (*Thuja plicata*), Alaska yellow cedar (*Chamaecyparis nootkatensis*), pine spp. mostly "white" pine (*Pinus monticola*), western hemlock (*Tsuga heterophylla*), Englemann spruce (*Picea engelmannii*).<br>YES = Category I NO = go to SC 5.2 | **Cat. I** |
| SC 5.2 Does the unit have areas where aspen (*Populus tremuloides*) are a dominant or co-dominant species?<br>YES = Category I NO = go to SC 5.3 | **Cat. I** |
| SC 5.3 Does the wetland unit have areas with a forest canopy where more than 50% of the tree species (by cover) are fast growing species.<br>Fast growing species are:<br>Alders – red (*Alnus rubra*), thin-leaf (*A. tenuifolia*)<br>Cottonwoods – narrow-leaf (*Populus angustifolia*), black (*P. balsamifera*)<br>Willows- peach-leaf (*Salix amygdaloides*), Sitka (*S. sitchensis*), Pacific (*S. lasiandra*), Aspen - *(Populus tremuloides*), Water Birch (*Betula occidentalis*)<br>YES = Category II NO = go to SC 5.5 | **Cat. II** |
| SC 5.5 Is the forested component of the wetland within the "100 year floodplain" of a river or stream?<br>YES = Category II | **Cat. II** |
| **Category of wetland based on Special Characteristics**<br>*Choose the "highest" rating if wetland falls into several categories.*<br>If you answered NO for all types enter "Not Applicable" on p.1 | N/A |