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): _____ Date of site visit: _____

Rated by_____ Trained by Ecology? Yes__No___ Date of training_____

SEC: ___ TWNSHP: ____ RNGE: ____ Is S/T/R in Appendix D? Yes___ No___

Map of wetland unit: Figure ____ 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	
Score for Hydrologic Functions	
Score for Habitat Functions	
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)

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	

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.		

<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

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.

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.

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 <u>potential</u> to improve water quality?**	***(see p. 38)***
D	D 1.1 Characteristics of surface water flows out of the wetland unit: Wetland has no surface water outlet - points = 5 Wetland has an intermittently flowing outlet points = 3 Wetland has a highly constricted permanently flowing outlet points = 3 Wetland has a permanently flowing surface outlet points = 1	
D	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic *(use NRCS definitions of soil types)* YES points = 3 NO points = 0	
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class) Wetland has persistent, ungrazed, vegetation for > 2/3 of area points = 5 Wetland has persistent, ungrazed, vegetation from 1/3 to 2/3 of area points = 3 Wetland has persistent, ungrazed vegetation from 1/10 to < 1/3 of area points = 1 Wetland has persistent, ungrazed vegetation <1/10 of area points = 0 Map of Cowardin vegetation classes	**Figure** ___
D	D 1.4 Characteristics of seasonal ponding or inundation. *This is the area of ponding that fluctuates every year. Do not count the area that is permanently ponded.* Area seasonally ponded is > ½ total area of wetland points = 3 Area seasonally ponded is ¼ - ½ total area of wetland points = 1 Area seasonally ponded is < ¼ total area of wetland points = 0 NOTE: *See text for indicators of seasonal and permanent inundation/flooding.* Map of Hydroperiods	**Figure** ___
D	**Total for D 1** *Add the points in the boxes above*	
D	**D 2. Does the wetland unit have the <u>opportunity</u> to improve water quality?** 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.* — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging — Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen — Other_____ **YES** multiplier is **2** **NO** multiplier is **1**	multiplier _____
D	**<u>TOTAL</u> - Water Quality Functions** Multiply the score from D1 by the multiplier in D2 ***Record score on p. 1 of field form***	

D	**Depressional Wetlands** 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: Wetland has no surface water outlet points = 8 Wetland has an intermittently flowing outlet points = 4 Wetland has a highly constricted permanently flowing outlet points = 4 Wetland has a permanently flowing surface outlet points = 0	
D	D 3.2 Depth of storage during wet periods: *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)* Marks of ponding are at least 3 ft above the surface points = 8 The wetland is a "headwater" wetland" *(see p. 39)* points = 6 Marks are 2 ft to < 3 ft from surface points = 6 Marks are 1 ft to < 2 ft from surface points = 4 Marks are 6 in to < 1 ft from surface points = 2 No marks above 6 in. or wetland has only saturated soils points = 0	
D	**Total for D 3** *Add the points in the boxes above*	
D	**D 4.0 Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion?** *Answer NO if the major source of water is groundwater, irrigation return flow, or water levels in the wetland are controlled by a reservoir.* 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.* — Wetland is in a headwater of a river or stream that has flooding problems — Wetland drains to a river or stream that has flooding problems — Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems — Other_____ **YES** multiplier is **2** **NO** multiplier is **1**	***(see p. 42)*** multiplier _____
D	**TOTAL - Hydrologic Functions** Multiply the score from D3 by the multiplier in D4 ***Record score on p. 1 of field form***	

Comments

Wetland name or number _____

	Riverine Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland functions to improve water quality	**Points** (only 1 score per box)
R	**R 1.0 Does the wetland unit have the <u>potential</u> to improve water quality?**	***(see p. 45)***
R	R 1.1 Area of surface depressions within the riverine unit that can trap sediments during a flooding event: Depressions cover >1/3 area of wetland points = 6 Depressions cover > 1/10 area of wetland points = 3 If depressions > 1/10th of area of unit draw polygons on aerial photo or map Depressions present but cover < 1/10 area of wetland points = 1 No depressions present points = 0	**Figure** ___
R	R 1.2 Characteristics (cover) of the vegetation in the unit *(area of polygons with >90% cover at person height. This is **not** Cowardin vegetation classes)*: Forest or shrub > 2/3 the area of the wetland points = 10 Forest or shrub 1/3 – 2/3 area of the wetland points = 5 Ungrazed, herbaceous plants > 2/3 area of wetland points = 5 Ungrazed herbaceous plants 1/3 – 2/3 area of wetland points = 2 Forest, shrub, and ungrazed herbaceous < 1/3 area of wetland points = 0 Aerial photo or map showing polygons of different vegetation cover	**Figure** ___
R	**Total for R1** *Add the points in the boxes above*	
R	**R 2.0 Does the wetland have the <u>opportunity</u> to improve water quality?** 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.* — Grazing in the wetland or within 150ft — Wetland intercepts groundwater within the Reclamation Area — Untreated stormwater flows into wetland — Tilled fields or orchards within 150 feet of wetland — Water flows into wetland from a stream or culvert that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging — Residential or urban areas are within 150 ft of wetland — The river or stream that floods the wetland has a contributing basin where human activities have raised the levels of sediment, toxic compounds or nutrients in the river water above water quality standards — Other_____ **YES** multiplier is **2** **NO** multiplier is **1**	***(see p.46)*** multiplier _____
R	**<u>TOTAL</u> - Water Quality Functions** Multiply the score from R1 by the multiplier in R2 ***Record score on p. 1 of field form***	

R	**Riverine Wetlands** HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation	**Points** (only 1 score per box)
R	**R 3.0 Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	***(see p. 47)***
R	R 3.1 Amount overbank storage the wetland provides: *Estimate the average width of the wetland perpendicular to the direction of the flow of water and the width of the stream or river channel (distance between banks).* *Calculate the ratio: width of wetland/ width of stream.* If the ratio is 2 or more — points = 10 If the ratio is between 1 and < 2 — points = 8 If the ratio is ½ to < 1 — points = 4 If the ratio is ¼ to < ½ — points = 2 If the ratio is < ¼ — points = 1 Aerial photo or map showing average widths	**Figure ___**
R	R 3.2 Characteristics of vegetation that slow down water velocities during floods: *Treat large woody debris as "forest or shrub" (area of polygons with >90% cover at person height. This is **not** Cowardin vegetation classes)*: Forest or shrub for more than 2/3 the area of the wetland. — points = 6 Forest or shrub for >1/3 area OR herbaceous plants > 2/3 area — points = 4 Forest or shrub for > 1/10 area OR herbaceous plants > 1/3 area — points = 2 Vegetation does not meet above criteria — points = 0 Aerial photo or map showing polygons of different vegetation types	**Figure ___**
R	**Total for R3** *Add the points in the boxes above*	
R	**R 4.0 Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** *Answer NO if the major source of water is irrigation return flow or water levels are controlled by a reservoir.* 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.* — There are human structures and activities downstream (roads, buildings, bridges, farms) that can be damaged by flooding. — There are natural resources downstream (e.g. salmon redds) than can be damaged by flooding — Other_____ **YES** multiplier is **2** **NO** multiplier is **1**	***(see p. 50)*** multiplier _____
R	**TOTAL - Hydrologic Functions** Multiply the score from R3 by the multiplier in R4 ***Record score on p. 1 of field form***	

Comments

L	**Lake-fringe Wetlands** WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality	**Points** (only 1 score per box)
L	**L 1.0 Does the wetland have the <u>potential</u> to improve water quality?**	***(see p.52)***
L	L 1.1 Average width of vegetation along the lakeshore: Vegetation is more than 33ft (10m) wide points = 6 Vegetation is between 16 ft (5m) and 33ft wide points = 3 Vegetation is 6ft (2m) wide to < 16 ft wide points = 1 Map of Cowardin classes with widths marked	**Figure** ___
L	L 1.2 Characteristics of the vegetation in the wetland *choose the appropriate description that results in the highest points, and do not include any open water in your estimate of coverage. The herbaceous plants can be either the dominant form or as an understory in a shrub or forest community. These are not Cowardin classes. Area of Cover is total cover in the unit, but it can be in patches. NOTE: Herbaceous does not include aquatic bed.* Herbaceous plants cover >90% of the vegetated area points = 6 Herbaceous plants cover >2/3 of the vegetated area points = 4 Herbaceous plants cover >1/3 of the vegetated area points = 3 Other vegetation that is not aquatic bed in > 2/3 vegetated area points = 3 Other vegetation that is not aquatic bed in > 1/3 vegetated area points = 1 Aquatic bed cover > 2/3 of the vegetated area points = 0 Map with polygons of different vegetation types	**Figure** ___
L	**Total for L1** *Add the points in the boxes above*	
L	**L 2.0 Does the wetland have the <u>opportunity</u> to improve water quality?** Answer YES if you know or believe there are pollutants in the lake water, or surface water flowing through the wetland to the lake is polluted. *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.* — Wetland is along the shores of a lake or reservoir that does not meet water quality standards — Grazing in the wetland or within 150ft — Untreated stormwater flows into the wetland — Tilled fields or orchards within 150 feet of wetland — Residential or urban areas are within 150 ft of wetland — Powerboats with gasoline or diesel engines use the lake — Parks with grassy areas that are maintained, ballfields, golf courses (all within 150 ft. of shore of lake) — Other_____ **YES** multiplier is **2** **NO** multiplier is **1**	***(see p. 53)*** multiplier _____
L	**<u>TOTAL</u> - Water Quality Functions** Multiply the score from L1 by the multiplier in L2 ***Record score on p. 1 of field form***	

L	**Lake-fringe Wetlands** HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce shoreline erosion	**Points** (only 1 score per box)
L	**L 3.0 Does the wetland have the <u>potential</u> to reduce shoreline erosion?**	***(see p.54)***
L	L 3.1 Average width and characteristics of vegetation along the lakeshore (**do not** include aquatic bed): *(choose the highest scoring description that matches conditions in the wetland)* > ¾ of the vegetation is shrubs or trees at least 33 ft (10m) wide points = 6 > ¾ of the vegetation is shrubs or trees at least 6 ft. (2 m) wide points = 4 > ¼ of the vegetation is shrubs or trees at least 33 ft (10m) wide points = 4 Vegetation is at least 6 ft (2m) wide points = 2 Vegetation is less than 6 ft (2m) wide points = 0 Aerial photo or map with Cowardin vegetation classes	**Figure** ___
L	**L 4.0 Does the wetland have the <u>opportunity</u> to reduce erosion?** Are there features along the shore that will be impacted if the shoreline erodes? *Note which of the following conditions apply.* — There are human structures and activities along the shore behind the wetland (buildings, fields) that can be damaged by erosion. — There are undisturbed natural resources along the shore (e.g. mature forests, other classes of wetland) behind the wetland than can be damaged by shoreline erosion — Other_____ **YES** multiplier is **2** **NO** multiplier is **1**	***(see p. 55)*** Multiplier _____
L	**TOTAL - Hydrologic Functions** Multiply the score from L3 by the multiplier in L4 ***Record score on p. 1 of field form***	

Comments

S	**Slope Wetlands** 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: Slope is1% or less *(a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance*) points = 3 Slope is between 1% and 2% points = 2 Slope is more than 2% but less than 5% points = 1 Slope is 5% or greater points = 0	
S	S 1.2 The soil 2 inches below the surface is clay or organic *(use NRCS definitions of soil types)* YES = 3 points NO = 0 points	
S	S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants: *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.* Dense, ungrazed, herbaceous vegetation > 90% of the wetland unit points = 6 Dense, ungrazed, herbaceous vegetation > 1/2 of unit points = 3 Dense, woody, vegetation > ½ of unit points = 2 Dense, ungrazed, herbaceous vegetation > 1/4 of unit points = 1 Does not meet any of the criteria above for herbaceous vegetation points = 0 Aerial photo or map with vegetation polygons	**Figure ___**
S	**Total for S 1** *Add the points in the boxes above*	
S	**S 2.0 Does the wetland have the <u>opportunity</u> to improve water quality?** 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.* — Grazing in the wetland or within 150ft — Wetland is a groundwater seep within the Reclamation Area — Untreated stormwater flows through the wetland — Tilled fields or orchards within 150 feet of wetland — Residential, urban areas, or golf courses are within 150 ft upslope of wetland — Other_____ **YES** multiplier is **2** **NO** multiplier is **1**	***(see p.58)*** multiplier _____
S	**<u>TOTAL</u> - Water Quality Functions** Multiply the score from S1 by the multiplier in S2 ***Record score on p. 1 of field form***	

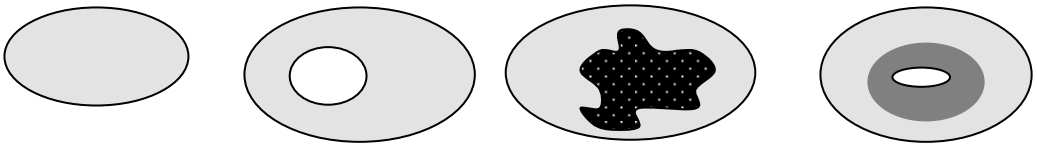
S	**Slope Wetlands** HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation	**Points** (only 1 score per box)
S	**S 3.0 Does the wetland unit have the <u>potential</u> to reduce flooding and stream erosion?**	***(see p.59)***
S	S 3.1 Characteristics of vegetation that reduce the velocity of surface flows during storms. *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.* Dense, uncut, **rigid** vegetation covers > 90% of the area of the unit points = 6 Dense, uncut, **rigid** vegetation > 1/2 – 90% area of unit points = 3 Dense, uncut, **rigid** vegetation > 1/4 – 1/2 of unit points = 1 More than 1/4 of area is grazed, mowed, tilled or vegetation is not rigid points = 0	
S	S 3.2 Characteristics of slope wetland that holds back small amounts of flood flows: The slope wetland has small surface depressions that can retain water over at least 10% of its area. YES points = 2 NO points = 0	
S	**Total for S3** *Add the points in the boxes above*	
S	**S 4. 0 Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion?** ***(see p.61)*** *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.* 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.* — Wetland has surface runoff that can cause flooding problems downgradient — Other_____ **YES** multiplier is **2** **NO** multiplier is **1**	multiplier _____
S	**TOTAL - Hydrologic Functions** Multiply the score from S3 by the multiplier in S4 ***Record score on p. 1 of field form***	

Comments

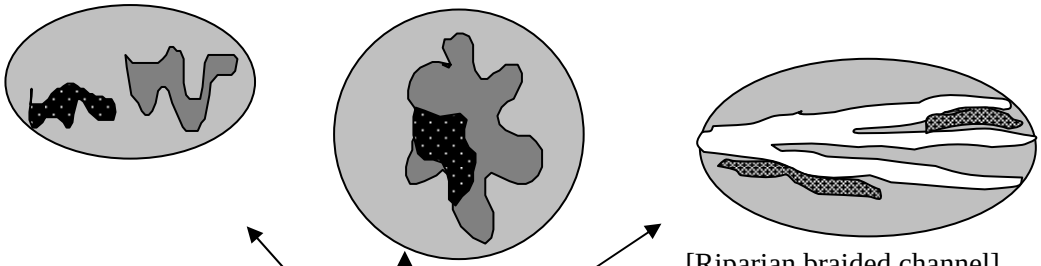
These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat	**Points** (only 1 score per box)
H 1. Does the wetland unit have the <u>potential</u> to provide habitat for many species?	
H 1.1 <u>Categories of vegetation structure</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) *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 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	
H 1.3. <u>Surface Water</u> ***(see p.65)*** 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 Map showing areas of open water	**Figure ___**
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*	

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

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

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

Comments

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

Figure ___

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

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

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**

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)

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**	
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)*** 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*
Total Score for Habitat Functions *– add the points for H 1, H 2, and H 3 and record the result on p. 1*	

Comments

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 *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)*** Is the wetland unit **less than 4000 ft^2**, and does it meet at least **two** of the following criteria? — Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input — Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *NOTE: If you find perennial, "obligate", wetland plants the wetland is probably NOT a vernal pool* — The soil in the wetland are shallow (<1ft deep (30 cm)) and is underlain by an impermeable layer such as basalt or clay. — Surface water is present for less than 120 days during the "wet" season. YES = Go to SC 1.1 NO - *not a vernal pool* SC 1.1 Is the vernal pool relatively undisturbed in February and March? 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.)? YES = Category II NO = Category III	**Cat. II** **Cat. III**
SC 2.0 Alkali wetlands ***(see p. 81)*** Does the wetland unit meets **one** of the following two criteria? — The wetland has a conductivity > 3.0 mS/cm. — 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). — 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. **OR** does the wetland unit meets two of the following three sub-criteria? — Salt encrustations around more than 80% of the edge of the wetland — More than ¾ of the plant cover consists of species listed on Table 2 — A pH above 9.0. All alkali wetlands have a high pH, but please note that some freshwater wetlands may also have a high pH. Thus, pH alone is not a good indicator of alkali wetlands. YES = 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? YES = Category I NO –*not a natural heritage wetland*	**Cat. I**
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)? 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)?* Yes – Category I bog NO	**Cat. I** **Cat. I**

SC 5.0 Forested Wetlands *(see p. 85)* 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? — 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 –*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 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 unit have areas where aspen (*Populus tremuloides*) are a dominant or co-dominant species? 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. 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	**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	