

APPENDIX K

WSDOT Functional Assessment Table

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The Washington State Department of Transportation's *Wetland Functions Characterization Tool for Linear Projects* is a useful approach for the rapid assessment of wetland functions based on best professional judgment. The method's blank field form is presented here for the reader's reference. For Tables 3-2, 3-3, 3-4, 3-5, and 3-6 of the main text, in the column labeled "Indicators Present," the numbers correspond to the numbered statements given for each function on the blank field form.

Wetland Functions Field Data Form – WSDOT's BPJ Characterization *

Project: _____

Date: _____

Wetland Name: _____

Biologist: _____

A. Flood Flow Alteration

(Storage and Desynchronization)

1. Wetland occurs in the upper portion of its watershed.
2. Wetland is in a relatively flat area and is capable of retaining higher volumes of water during storm events, than under normal rainfall conditions.
3. Wetland is a closed (depressional) system.
4. If flowthrough, wetland has constricted outlet with signs of fluctuating water levels, algal mats, and/or lodged debris.
5. Wetland has dense woody vegetation.
6. Wetland receives floodwater from an adjacent water course.
7. Floodwaters come as sheet flow rather than channel flow.

Likely or not likely to provide.
(State your rationale.)

B. Sediment Removal

1. Sources of excess sediment (from tillage or construction) are present upgradient of the wetland.
2. Slow-moving water and/or a deepwater habitat are present in the wetland.
3. Dense herbaceous vegetation is present.
4. Interspersion of vegetation and water is high in wetland.
5. Ponding of water occurs in the wetland.
6. Sediment deposits are present in wetland.

Likely or not likely to provide.
(State your rationale.)

* Adapted from the Highway Methodology Workbook Supplement for Wetland Functions and Values (COE, 1995).

C. Nutrient and Toxicant Removal

1. Sources of excess nutrients (fertilizers) and toxicants (pesticides and heavy metals) are present upgradient of the wetland.
2. Wetland is inundated or has indicators that flooding is a seasonal event during the growing season.
3. Wetland provides long duration for water detention.
4. Wetland has at least 30% areal cover of live dense herbaceous vegetation.
5. Fine-grained mineral or organic soils are present in the wetland.

Likely or not likely to provide.
(State your rationale.)

D. Erosion Control and Shoreline Stabilization

If associated with water course or shoreline.

1. Wetland has dense, energy absorbing vegetation bordering the water course and no evidence of erosion.
2. A herbaceous layer is part of this dense vegetation.
3. Trees and shrubs able to withstand erosive flood events are also part of this dense vegetation.

Likely or not likely to provide.
(State your rationale.)

E. Production of Organic Matter and its Export

1. Wetland has at least 30% areal cover of dense herbaceous vegetation.
2. Woody plants in wetland are mostly deciduous.
3. High degree of plant community structure, vegetation density, and species richness present.
4. Interspersion of vegetation and water is high in wetland.
5. Wetland is inundated or has indicators that flooding is a seasonal event during the growing season.
6. Wetland has outlet from which organic matter is flushed.

Likely or not likely to provide.
(State your rationale.)

* Adapted from the Highway Methodology Workbook Supplement for Wetland Functions and Values (COE, 1995).

F. General Habitat Suitability

1. Wetland is not fragmented by development.
2. Upland surrounding wetland is undeveloped.
3. Wetland has connectivity with other habitat types.
4. Diversity of plant species is high.
5. Wetland has more than one Cowardin Class, i.e., (PFO, PSS, PEM, PAB, POW, etc.)
6. Has high degree of Cowardin Class interspersions.
7. Evidence of wildlife use, e.g., tracks, scat, gnawed stumps, etc., is present

Likely or not likely to provide.
(State your rationale.)

G. Habitat for Aquatic Invertebrates

1. Wetland must have permanent or evidence of seasonal inundation for this function to be provided.
2. Various water depths present in wetland
3. Aquatic bed vegetation present.
4. Emergent vegetation present within ponded area.
5. Cover (i.e., woody debris, rocks, and leaf litter) present within in the standing water area.
6. A stream or another wetland within 2 km (1.2 mi) of wetland.

Likely or not likely to provide.
(State your rationale.)

H. Habitat for Amphibians

1. Wetland contains areas of seasonal and/or permanent standing water in most years. (Must be present for this function to be provided)
2. Thin-stemmed emergent and/or floating aquatic vegetation present within areas of seasonal and/or perennial standing water.
3. Wetland buffer < 40% developed, i.e., by pavement and/or buildings.

Likely or not likely to provide.
(State your rationale.)

* Adapted from the Highway Methodology Workbook Supplement for Wetland Functions and Values (COE, 1995).

4. Woody debris present within wetland.
5. Lands within 1 km (0.6 mi) of wetland are greater than or equal to 40% undeveloped (e.g., green belts, forest, grassland, agricultural).
6. Other wetlands and/or an intermittent or perennial stream within 1 km (0.6 mi) of wetland.

I. Habitat for Wetland-Associated Mammals

1. Permanent water present within the wetland. (Must be present for this function to be provided.)
2. Presence of emergent vegetation in areas of permanent water.
3. Areas containing dense shrubs and/or trees are present within wetland or its buffer.
4. Interspersion between different strata of vegetation.
5. Interspersion between permanent open water (without vegetation) and permanent water with vegetation.
6. Presence of banks suitable for denning.
7. Evidence of wildlife use, e.g., dens, tracks, scat, gnawed stumps, etc., is present.

J. Habitat for Wetland-Associated Birds

1. Wetland has 30 to 50% shallow open water and/or aquatic bed classes present within the wetland.
2. Emergent vegetation class present within the wetland.
3. Forested and scrub-shrub classes present within the wetland or its buffer.
4. Snags present in wetland or its buffer.
5. Sand bars and/or mud flats present within the wetland.

Likely or not likely to provide.
(State your rationale.)

Likely or not likely to provide.
(State your rationale.)

Likely or not likely to provide.
(State your rationale.)

* Adapted from the Highway Methodology Workbook Supplement for Wetland Functions and Values (COE, 1995).

6. Wetland contains invertebrates, amphibians, and/or fish.
7. Buffer contains relatively undisturbed grassland shrub and/or forest habitats.
8. Lands within 1 km (0.6 mi) of the wetland are greater than or equal to 40% undeveloped (e.g., green belts, forest, grassland, agricultural).

K. General Fish Habitat

(Must be associated with a fish-bearing water.)

1. Wetland has a perennial or intermittent surface-water connection to a fish-bearing water body
2. Wetland has sufficient size and depth of open water so as not to freeze completely during winter.
3. Observation of fish.
4. Herbaceous and/or woody vegetation is present in wetland and/or buffer to provide cover, shade, and/or detrital matter.
5. Spawning areas are present (aquatic vegetation and/or gravel beds).

L. Native Plant Richness

1. Dominant and codominant plants are native.
2. Wetland contains two or more Cowardin Classes.
3. Wetland has three or more strata of vegetation.
4. Wetland has mature trees.

M. Educational or Scientific Value

1. Site has documented scientific or educational use.
2. Wetland is in public ownership.
3. Parking at site is suitable for a school bus.

Likely or not likely to provide.
(State your rationale.)

Likely or not likely to provide.
(State your rationale.)

Likely or not likely to provide.
(State your rationale.)

Likely or not likely to provide.
(State your rationale.)

* Adapted from the Highway Methodology Workbook Supplement for Wetland Functions and Values (COE, 1995).

N. Uniqueness and Heritage

1. Wetland contains documented occurrence of a state- or federally listed threatened or endangered species.
2. Wetland contains documented critical habitat, high quality ecosystems, or priority species respectively designated by the U.S. Fish and Wildlife Service, the WDNR's Natural Heritage Program, or WDFW's Priority Habitats and Species Program.
3. Wetland is part of a National Natural Landmark designated by the National Park Service or a Natural Heritage Site designated by WDNR.
4. Wetland has biological, geological, or other features that are determined rare by the local jurisdiction.
5. Wetland has been determined significant by the local jurisdiction because it provides functions scarce for the area.
6. Wetland is part of ...
 - an estuary,
 - a bog,
 - a mature forest.

Likely or not likely to provide.
(State your rationale.)

* Adapted from the Highway Methodology Workbook Supplement for Wetland Functions and Values (COE, 1995).