

# Wetland and Stream Assessment Report Review Tips

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*This document provides tips for reviewing Wetland and Stream Assessment Reports (WSARs). Additional information and supporting documents and links are found on the WSDOT Wetlands & other waters webpage at: <https://wsdot.wa.gov/engineering-standards/environmental-guidance/wetlands-other-waters>*

## General notes

- Focus your review on technical content and avoid editorial comments. What matters is technical information is correct and consistent.
- Have material ready to support your review including the WSDOT Wetlands and other waters webpage, regional supplement delineation manual, rating manual, Natural Resources Conservation Service Field Indicators of Hydric Soils, Munsell, local Critical Areas Ordinance (CAO)/Municipal Code (Munsell is the only resource you can't access from the WSDOT wetland page and would need a hard copy instead).
- Consider making yourself a "review ArcMap" file, or similar mapping tool, with all the layers that are helpful to have for reference for WSAR review. Helpful layers include county and city boundaries, Section/Township/Range, Water Resource Inventory Area, soils, National Wetlands Inventory, topo, aerial photo, rivers and streams, Major Land Resource Area (MLRA), WSDOT Environmental Mitigation Sites.
- Check that the report has all the same sections established in the WSAR template and applicable sections for the documented waters (e.g. stream sections deleted if streams are not present, High Tide Line (HTL) sections added if tidal waters are present, including in the methods section).
- Watch out for cut and paste errors or remnants from other reports that may have been inadvertently copied or neglected to be deleted.
- Check for consistency throughout the report for technical elements including wetland acreages, wetland Category, Hydrogeomorphic classification (HGM), Cowardin classification, and buffer widths. Check the combined wetland summary table, individual wetland summary tables, and any report text referencing these items. Check that HGM noted in the rating and Cowardin classes in H 1.1. match the report narrative and wetland summary tables. Does the vegetation section on the wetland data sheets seem to match answers provided in the rating on H 1.1. and H 1.4?
- Make sure wetland and stream buffers are correct by reviewing the applicable city or county CAO/Municipal Code. Note, many local codes refer to streams as Fish and Wildlife Habitat Conservation Areas (FWHCAs).
- Check that all cited references listed in the reference section.
- Check that abbreviations are spelled out the first time and listed in the abbreviations section.

- For plant names, check that scientific names are used in addition to common names at least the first time the plant is mentioned.

### Wetland data sheets

- **Overall:** Is the entire top of the data sheet filled out? Every field needs to be filled out.
- **Overall:** Comments in the remarks box are good and often means the biologist cares, is engaged, isn't just absentmindedly checking boxes, and likely has an understanding of technical issues and methods if they take time to explain something.
- **Overall:** There should be a pair of wetland and upland data points very close to the wetland boundary to document the decision to place the line where they did. There should be a data sheet for each Cowardin class for each wetland, unless the Cowardin class falls outside of the study area.
- **Top of data sheet:** The "Are climatic/hydrologic conditions typical for this time of year" answer should match the Climate, Precipitation, and Growing Season section of the WSAR as well as the WSAR appendix that documents precipitation and determines if conditions encountered during the field work were considered "normal, wetter, or drier than normal".
- **Vegetation:** Did they fill out the plot sizes for all strata? Do they know their plants? Did they use scientific names? A veg strata has to have  $\geq 5\%$  cover to count as its own layer, otherwise it is lumped with another strata. Did they use the Woody Vine strata appropriately?
- **Vegetation:** Did they do the correct procedures to determine if dominance test or prevalence index is met? To meet dominance test it has to be greater than 50%. So 50% does not meet the dominance test, but 51% would meet dominance test.
- **Vegetation:** Does their plant community documentation match the Cowardin classes documented in the report (combined wetland summary table and individual wetland summary tables) and does it match the rating question H 1.1. (how many Cowardin classes) and H 1.4. (there should be a separate data sheet for each Cowardin class in the wetland). If moderate or high is assigned to H 1.4. then they will likely need two or more data sheets for that wetland to document that diversity.
- **Soils:** Review the soils indicators. Most common for WSDOT projects in Western Washington A11/F3 and F6. A12, F1, and F7 are also encountered but are less common. S5 is common in soils with a true sand texture.
- **Soils:** Did they indicate the contrast between matrix color and concentrations? Usually, WSDOT documents this in the remarks per each line. This is required to determine if an indicator is met. The biologist needs to look this up to make the determination if an indicator is met, so they should document it so the reviewer can see it.
- **Soils:** Soil indicators are made to describe the wetland boundary. If a data point is documenting an interior Cowardin class in the wetland (a wetter area of the wetland), an indicator may not be present but hydric soils may still be present. If this is the case they can check the "other" box for hydric soils indicators and use the remarks to explain.

- **Hydrology:** Did they fill out the “Field Observations” section. This should correlate with weather or not they checked indicators A1 - A3. Observations below 12 inches do not meet A1 - A3 unless it is the dry-season and then A2 may be replaced with C2.
- **Hydrology:** If they check water-stained leaves indicator, it is a primary or secondary indicator depending on which MLRA the project occurs.
- **Hydrology:** Look at the time of the year the field work was done. Do the hydrology indicators make sense based on time of year and landscape position. If it is the dry season often Geomorphic Position (D2) and FAC-Neutral Test (D5) can be combined to get the hydrology indicators needed to show hydrology is present in the dry season.

### Wetland Ratings

- Did they rate it correctly, add all the points correctly, and fill out all the info on the first page?
- Do they have the HGM’s documented correctly – are there multiple?
- Did they include all required figures, and do they make sense to answer the questions they relate to? Did they fill out the figure numbers on page 2?
- Did they answer D1.1. and D 4.1. the same for depressional wetlands?
- Did they fill out the Special Characteristics section, even if all the answers are “no”?
- Does the wetland category, HGM, and Cowardin noted on the rating form match what is in the report body (any text references, combined wetland summary table, and individual wetland summary tables)?

### Functions

Wetland Functions Characterization Tool for Linear Projects (a.k.a. Best Professional Judgement Tool - BPJ) should be done for wetlands that will be impacted. If for some reason they know certain wetlands won’t be impacted they don’t need to do BPJ for those wetlands where no impacts will occur. Review our [BPJ tool \(PDF 96KB\)](#).

Functions evaluations are not necessary for fish passage projects and should not be discussed in fish passage reports.

### Plan sheets

Carefully review the plan sheets to make sure they document existing conditions and do not provide extraneous information.

Review the plan sheets to confirm they include all wetlands, labeled wetland sample points, Ordinary High Water Mark, and HTL features, and their buffers (ditches are shown on the permit application drawings and do not need to be on plan sheets in the WSAR).

Verify any information regarding these features, such as tables and labels, are consistent with the information provided in the body of the report/data sheets/ratings, such as wetland acreages, Cowardin, Category, buffer widths etc.

The area of potential effect should be identified on the plans. Make sure that unnecessary information, making the plans “too busy” and adding confusion is removed. The main features to show are the existing roadway, state route number, project milepost begin and end, and existing wetlands, streams, and tidal waters, and their buffers.