

## WSDOT WETLAND DELINEATION STANDARD OPERATING PROCEDURES

WSDOT Updated 3/16/2009

Wetland biologists doing work for WSDOT should direct all technical questions related to wetland delineations to the WSDOT Wetland Project Manager (Project Manager), the regional or [headquarters'](#) wetland biologist designated contact for the project. Project engineers can provide answers to project related questions, such as project descriptions and construction techniques.

**Qualified wetland biologists must complete the following for each project, unless instructed otherwise by the WSDOT Wetland Project Manager:**

- *Delineation Assignment* — Verify study area with Project Manager based on the scope of work. Identify which highway, which side(s) of the road, the starting and ending point(s), and the distance from the center line to search for and delineate wetlands. Identify what report(s) will be the end product ([Inventory Report](#), [Wetland and Stream Assessment Report](#), Wetland Discipline Report, etc.) and do only the work *required* for that product.
- *Access* — If applicable, have the Project Manager obtain written permission to enter private property, and carry permission in the field.
  - *Background information* — Plan fieldwork so that all necessary background information can be obtained ahead of time, if possible. Before going into the field, become familiar with the area through relevant background information such as project plans, aerial photos, [National Wetland Inventory](#) (NWI) maps, [Soil Surveys](#), [County Hydric Soils Lists](#), topographic maps, precipitation data, local critical area ordinances, Department of Natural Resources natural heritage data, GIS data, previous fieldwork notes, etc. If possible, take along a folder with all background information into the field.
  - *Cultural Resources* — Follow the [WSDOT Guidance on Cultural Resources](#) (pdf 8 kb). This requires contacting WSDOT cultural resources staff or checking the WSDOT GIS Environmental Workbench to see if there are any known cultural resources within the project area or potential wetland sites, and working with cultural resources staff if there are historic sites present.
- *Field Methods*— WSDOT requires field visits for all wetland delineations; office delineations using only GIS and NWI maps are not acceptable. **WSDOT requires the use of** the regional supplements to the 1987 Corps of Engineers Wetlands Delineation Manual by staff and consultants on all delineations for WSDOT projects where field work was conducted after July 27, 2008. Choose either the U.S. Army Corps of Engineers' [Arid West Regional Supplement](#) (2008a) or the [Western Mountains, Valleys, and Coast Interim Regional Supplement](#) depending on where the project is located. You are welcome to insert WSDOT's condensed electronic data forms into your reports: [Arid West Supplement data forms](#) or [Western Mountains, Valleys, and Coast Supplement data forms](#). If a local Critical Area Ordinance also requires delineations using the [Washington State Wetlands Identification and Delineation Manual](#) (Ecology 1997), WSDOT staff and consultants

are required to submit two sets of data forms: one set of regional supplement forms and one set of [Washington State Wetland Delineation Data Forms](#) (185 kb).

- *Data points (soil pits)* The three-factor approach requires evidence of wetland vegetation, soils, and hydrology to meet the criteria for a wetland. Dig a soil pit for each data point with a minimum depth of 16 inches. Describe the soil throughout the entire zone of the soil profile. Record hydrology and vegetation data for each data point according to the manual as well.

When doing a routine delineation of small wetlands, document a minimum of one wetland and one upland data point, in which soil, hydrology, and vegetation are described on a [data form](#). Additionally, at least one extra wetland data point must be documented on a data sheet for each different wetland type present (emergent, scrub-shrub, forested, etc.). For difficult and/or large sites in which the three factors (including digging soil pits) may be investigated at many locations, talk to the Project Manager to see roughly how many additional data points would be appropriate to document for the site.

- *Flagging* — Clearly identify all documented data points and wetland boundary points with alphanumerically marked flagging. Unless the Project Manager directs otherwise, label and refer to datapoints and wetlands consistently according to [WSDOT Sensitive Areas Naming Convention](#) (pdf 13 kb), which includes an alphanumeric identifier for each wetland and sequentially numbered wetland delineation flagging. Use wetland flagging that is a solid pink, orange, blue, or white color, unless directed otherwise. Attach flagging to fixed objects such as survey stakes, woody vegetation, or pin flags that are within easy sight distance of each other. Indicate the location of each flag and their letters/numbers on an aerial photograph, plan sheet, or sketch map for reference by WSDOT survey crews. Inform the Project Manager when you are finished delineating and provide them with the map of your documented data points as soon as possible to minimize delay to the survey crew.
- *Wetland Rating* — Perform wetland rating(s) and functions assessments for each wetland, usually during the same field visit as the delineation. Rate wetlands using the Department of Ecology's [Washington State Wetland Rating System of Western Washington](#) or [Washington State Wetland Rating System for Eastern Washington](#). Also check the applicable county and/or city critical areas ordinance(s) to determine whether a local wetland rating system must also be applied in addition to the state system.
- *Functions Assessment* — Check with your Project Manager to see which functions assessment tool is to be used. The WSDOT [Wetland Functions Characterization Tool for Linear Projects](#), also known as the Wetland Functions Best Professional Judgment (BPJ) Tool, is routinely applied to assess functions of wetlands occurring within highway rights-of-way and project areas. When using this method, use the [Summary of Functions and Values Form](#) or something similar to summarize results in reports. Alternatively, the information gathered to rate the wetland using the Washington State Wetland Rating Systems may be appropriate to help characterize

the functions of the wetland in reports. [Washington State Wetland Function Assessment Method](#), also known as WFAM, is only used when specifically required by regulatory agencies.

- *Field notes* — Take detailed field notes. Record enough data to discuss the following points in a written report:
  - Date, weather conditions, location of the wetland (GPS point, or marked on aerial photos/ hand-drawn map), etc.
  - Field observations of the hydrology (sources, depth to saturation and or standing water in soil pit, areas of inundation, hydrologic connection(s) to other wetlands or downstream aquatic resources, etc.)
  - Approximate total size of the wetland
  - Justification that was used to determine whether a given wetland is a separate wetland or part of a larger system because it is divided by a road, etc. When determining whether to lump or split wetland areas, use the criteria in the Department of Ecology's [Washington State Wetland Rating System of Western Washington](#) or [Washington State Wetland Rating System for Eastern Washington](#).
  - Description of vegetation, soils, and hydrology indicators
  - Approximate percentage of area covered by each wetland community type (forested, scrub-shrub, emergent, etc.) as described in [Washington State Wetland Rating System of Western Washington](#) or [Washington State Wetland Rating System for Eastern Washington](#)
  - Characteristics of the uplands surrounding the wetland (land use, vegetated or not, etc.)
  - Wildlife usage observations
  - Any fill or other human disturbance
- *Photo documentation* — Take at least one picture for each delineated wetland and each data plot for documentation and for potential inclusion in reports. Include a picture of each delineated wetland in reports, unless otherwise directed.