

## **Delineations for Large or Linear Projects January 2017**

### A. Study Area and Route Planning

1. Consider involving an Oregon Department of State Lands (DSL) resource coordinator in preliminary discussions or requesting a joint pre-delineation/pre-application meeting (see B below).
2. Establish a study area to include all potential impact areas associated with the project, both permanent and temporary (e.g., access roads, staging areas, trenching for cables, etc.).
3. Be aware of issues that may influence route or site selection when planning the corridor and impact sites:
  - a) If forested or shrub wetlands will be impacted, due to a requirement to keep woody vegetation under control (e.g., under or over cable lines), those impacts may not be considered temporary and may require compensatory wetland mitigation (CWM).
  - b) Try to avoid wetlands of conservation concern, unusual wetland types or relatively highly functioning (per assessment) wetlands. This is pertinent to the alternatives analysis as well as ability to compensate through CWM.

### B. Pre-Delineation Meeting Discussion Items

1. Review the areas and types of impacts (including permanent vs. temporary), the anticipated study corridor width, the likelihood of alternative routes being proposed after field work is begun and/or after the initial delineation is submitted and proposed delineation methods for wetlands and other waters.
2. Consider assuming that all streams and all ditches are subject to state jurisdiction in order to save time obtaining the information needed by both DSL and the Corps to make jurisdictional determinations. This option is often less costly, especially if impacts are temporary and/or boring under streams is planned.
3. Before completing the maps and the report, consider providing examples of a delineation index and detail map and proposed table of waters for review by DSL before all the work is done.

### C. General Delineation Guidance

1. Delineation reports must meet all requirements in the administrative rules (141-090). There are no exceptions for large projects. Keep in mind the following:
  - a) Streams should be mapped at their boundaries; the Ordinary High Water Line (OHWL) on both banks (meaning 2 lines). See the allowance in #7, below.
  - b) All mapped hydric soil units should be investigated and sampled.
  - c) All changes to previously delineated and/or permitted sites within the study area corridor need to be explained.

- d) Linear projects may take several years to fruition. However, because wetlands and other waters can be affected over time by both natural changes and human activities, data should be current - less than five years old at the time of the Department's concurrence. Older data will need to be updated. Discuss timelines and appropriate updates with the appropriate DSL wetland ecologist.
2. Existing mapping—for example NWI, LWI, National Hydrography Dataset (NHD), and Soil Surveys—should be used for reconnaissance and for supplemental maps in the report, but should not be included on the delineation maps.
3. Provide data plots and photo-documentation of questionable areas. For example, if NWI mapping shows a wetland or an aerial photo shows wet ground signatures and wetlands are not present, provide sample plot data to verify upland conditions. Do the same for areas mapped as hydric soils. If NHD or other waterway mapping shows a waterway, provide detailed photo-documentation or a completed Streamflow Duration Assessment Methods (SDAM) data form to verify a waterway is not present.
4. Projects covering an entire county or more may have large areas without data plots where there are large expanses of upland. All areas must be checked using offsite methods and ground truthed as needed. For any questionable areas, document findings (See C3).
5. Artificially created or irrigation induced wetlands may need additional sampling to determine if created partially from naturally-occurring wetland. However, even features created in upland may be jurisdictional if greater than one acre in size. As a time-saving alternative, these features may be considered jurisdictional.
6. Consider GPS mapping precision and how to obtain optimal GPS data when planning field work. For problematic areas (canopy cover, steep terrain), collect and post-process GPS raw data separately from data taken in areas with good coverage. If this practice is not always possible, take detailed field notes that could assist with any necessary boundary modifications. For areas or features where post-processed data does not meet the 1-meter mapping standard and impacts are planned, options are:
  - a) Use additional information such as LiDAR topography or georectified aerial photos to modify the GPS boundaries. Determine the estimated precision of the modified mapping based on the estimated precision of the information source(s) used. Make sure horizontal datum of data sources match. Provide supporting documentation describing the steps and information used to modify the boundary.
  - b) Consider hiring a Professional Land Surveyor (PLS) for features that will be impacted during the project.
  - c) Use the highest reported amount of error in the data set for the mapping precision statement of those areas or features.
7. Streams less than 6 feet wide may be mapped as a single line with a map label stating the maximum width at OHW identified within the study area boundary.

8. For most small streams, it is usually faster to map the top of bank at bankfull stage (high water) instead of looking for OHWL—i.e., using top of bank as a surrogate for OHWL—as long as OHWL is below top of bank. If done, note in report and/or in table that top of bank was used to estimate OHW.
9. If you think that the streamflow duration for a waterway is less than intermittent, then document onsite conditions with a SDAM data form.
10. To identify potential waterway locations not identified by the NHD, utilize tools such as aerials, LiDAR, and soil surveys.
11. For intermittent streams, provide information about whether the stream provides spawning, rearing or food-producing areas for food and game fish. Consider whether the stream reaches other downstream waters and whether there are fish bearing waters downstream.
12. Creating separate compilation tables for wetlands and for other types of waters (see attached templates, Tables 1 and 2) facilitates the review. Considerations:
  - a) Water features and data plots should have identifier codes that are spatially sequential and logical, for example W1-P1, W1-P2; W2-P1, W2-P2, etc. The coding can also help identify different types of features, for example W1, S1, D1, etc. for wetlands, streams & ditches, respectively. Keep identifier codes as short as possible. Long codes create the potential for data entry errors, can be difficult to distinguish, and are difficult to track, which extends the review time.
  - b) Cross-reference each water feature to a map number and location (e.g., project milepost on a linear route; latitude and longitude or TRS and tax lot, for a non-linear study area). Providing mileposts (in tenths of miles) on linear routes is a good option for referencing location on both hard copy maps and GIS layers (if provided, see #16). Locator information should appear in the first and second columns after the water feature identifier.
  - c) Arrange all table entries, data forms, photos and maps using the same spatially sequential and logical naming conventions created above.
  - d) Include names for waterways if available.
  - e) Document if waterway is designated Essential Salmonid Habitat (ESH).
  - f) Provide additional information that is needed to determine jurisdiction, such as:
    - i. Where SDAM was used to determine streamflow.
    - ii. For intermittent streams, indicate whether they reach other downstream waters and whether there are fish bearing waters downstream.
    - iii. Include a column to indicate locations where access permission was not obtained and mapping was based on offsite methods (see section D below).
13. Do not provide text in the report describing each waters of this state. Put whatever is necessary in the table. The only exception should be a discussion of how a difficult wetland type or situation was handled.
14. Annotating data forms with the wetland code and map number (written in the upper margin) facilitates the review.

15. Delineation maps:

- a. Provide separate index maps of the entire route or site – generally on a USGS quad base map or aerial - showing locations of each delineation map along the route.
- b. Delineation maps of the entire route must be provided – on recent aerials:
  - i. Contact the DSL wetland ecologist to discuss appropriate scale.
  - ii. Recommend providing all maps at one scale of 1 inch = 100 feet or at a scale where the wetland and water boundaries, plots, photo points, labels, and SDAM locations, are easily discernable.
  - iii. However, for projects that cover considerable distance, the scale can be reduced (e.g. scale of 1 inch = 400 feet) in areas with no identified waters of the state. The scale should be at a range that allows location of the study area within the landscape and on properties.
- c. Submitting project GIS layers is strongly recommended. The review process takes considerably longer without GIS. All GIS datasets should be in the Oregon coordinate Reference System Standard – Oregon Lambert Projection. Contact DSL for details.

16. Other maps and figures:

- a. Consider combining maps where feasible to reduce the total number of maps, such as combining the tax lot maps (Figure 2) with the LWI/NWI maps (Figure 3) and the recent aerial maps (Figure 5) with the delineation maps.
  - i. Contact the DSL wetland ecologist to discuss appropriate options.

D. Areas without Access Permission

1. Handle these areas in one of two ways:

- a) Do not delineate. Indicate on delineation maps the tax lots that were not delineated by using a hatch or other distinguishing pattern and describe in legend. These areas will not receive concurrence.
- b) Delineate using offsite methods, if a preliminary jurisdictional determination (PJD) is needed for proceeding with permitting processes. On the delineation maps, shade with a hatch or other distinguishing pattern all parcels where offsite methods were used. Include a column in the table (see section C12 above) to indicate water features that were mapped without access.
  - i. DSL will address no-access areas as a PJD in the concurrence until access is granted and on-site delineation is submitted for review.
  - ii. When access is granted, these areas must be delineated per usual:
    - o Submit new information as a delineation report with a new cover form and review fee, if applicable (see section F below).

- New information should clearly distinguish the previous PJD or undelineated areas from any previously-approved areas (for example with a fill pattern and legend description).

#### E. Non-Continuous Projects (such as wind turbines; towers)

1. If project areas are non-continuous, provide map showing entire route or network, with location of each study area. Provide lat-long & TRS for each study area and label the study areas sequentially. Follow other guidelines in section C.
2. Be sure to include in the study area all potential impact areas, including temporary (e.g., access roads, staging areas, stockpile areas, underground cable operations areas, etc.).

#### F. Reporting Post-submittal Additions or Route Changes

1. If DSL's review is completed, send a new delineation report with new cover form and fee. Make sure the maps show clearly the relationship of the changes or additions to the original mapping.
2. If DSL's review is in progress, contact DSL reviewer for instructions. Depending on status of review and extent of changes, we may be able to accept revisions. The reviewer will determine the type of replacement documents required.
3. *For Oregon Energy Facility Siting Council (EFSC) projects only:* addenda may be submitted for an in-progress review up to the date of concurrence. All addenda should include a new report and cover form for the new area. All map changes and additions should show clearly the relationship to the original mapping. Title the new report "Addendum to...", and inform DSL when each addendum is submitted.

Examples for Large Linear Wetland Delineation Tables

Table 1. Wetlands

Unique Identifier Code	Map #	Milepost (Linear); Lat/Long or TRS & tax lot (non-linear)	Area (acre)	Cowardin HGM	Sample Plots	Photo Points	Additional information for JD*	Access Yes / No

Table 2. Waters (Streams, Ponds, Ditches, and Reservoirs)

Unique Identifier Code	Map #	Milepost (Linear); Lat/Long or TRS & tax lot (non-linear)	Feature Name (if available)	ESH Yes/No	OHW width or Area (acre)	Photo Points	Additional information for JD*	Access Yes / No

\* OAR 141-085-0510(46) and OAR 141-085-0515. (e.g. fish presence, downstream and upstream connection to fish bearing stream, ordinary high water line, streamflow duration (SDAM))

Number and Total Wetland Acreage: \_\_\_\_\_ (DSL) \_\_\_\_\_ (USACE)

Number and Total Water Acreage: \_\_\_\_\_ (DSL) \_\_\_\_\_ (USACE)

Number and Total Potential Non-Jurisdictional Wetland Acreage: \_\_\_\_\_ (DSL) \_\_\_\_\_ (USACE)

Number and Total Potential Non-Jurisdictional Waters Acreage: \_\_\_\_\_ (DSL) \_\_\_\_\_ (USACE)