



Aquatic Resource Management

Delineation GIS Data Description

The purpose of this document is to provide a description and set of instructions for creating a Geographic Information System (GIS) dataset for delineations submitted to the Department of State Lands (DSL). This document outlines the names of the GIS feature classes and their attributes required for a submitted dataset. When submitting a wetland delineation report, please use DSL's Delineation GIS template ([here](#)) or follow the structure outlined in this document.

The layers attributes below are provided in the Delineation GIS Template. If the Delineation GIS template is not used, then dataset must include all the following required attributes with fields fully populated.

- 1) Format** – The DSL Delineation GIS data description below was adapted by DSL as a file geodatabase using a proprietary data structure developed by Esri.

- 2) Layers and Attributes**

Note: Attributes shaded light gray indicate those that are populated by the GIS software. All other attributes need to be populated by those preparing the delineation GIS data.

I. Aquatic Resource of Special Concern (ARSC_POLY): Mandatory if present

Attribute	Type	Width	Description
OBJECTID			Database unique ID
SHAPE	Polygon		Database Feature Type
ARSC_TYPE	Text	50	Aquatic Resources of Special Concern type
WETLAND_ID	Text	10	Associated wetland polygon unique identifier
SHAPE_AREA	Double		Database calculation of the area of the polygon in square feet
SHAPE_LENGTH	Double		Database calculation of the perimeter of the polygon

II. Contour Lines (CONTOUR): Optional (Mandatory for HMT and OHW if present)

Attribute	Type	Width	Description
OBJECTID			Database unique ID
SHAPE	Line		Database Feature Type
CONTOUR	Double		Elevation value in feet
VERTICAL_DATUM	Text	50	NAVD88, NGVD29
SOURCE	Text	100	Ground based survey, Lidar, GPS, etc.
SHAPE_LENGTH	Double		Database calculation of the length of the line

III. Cowardin System and Class Code (COWARDIN_POLY): Mandatory

Attribute	Type	Width	Description
OBJECTID			Database unique ID
SHAPE	Polygon		Database Feature Type
COWARDIN_CODE	Text	50	Cowardin system and class code, include subsystem as needed
WETLAND_ID	Text	10	Associated wetland polygon unique identifier
SHAPE_AREA	Double		Database calculation of the area of the polygon in square feet
SHAPE_LENGTH	Double		Database calculation of the perimeter of the polygon

IV. HGM Class Code (HGM_POLY): Mandatory

Attribute	Type	Width	Description
OBJECTID			Database unique ID
SHAPE	Polygon		Database Feature Type
HGM_CODE	Text	50	HGM code
WETLAND_ID	Text	10	Associated wetland polygon unique identifier
SHAPE_AREA	Double		Database calculation of the area of the polygon in square feet
SHAPE_LENGTH	Double		Database calculation of the perimeter of the polygon

V. Highest Measured Tide (HMT_LINE): Mandatory when present

Attribute	Type	Width	Description
OBJECTID			Database unique ID
SHAPE	Line		Database Feature Type
NAME	Text	50	Estuary or waterway name
HMT_ELEVATION	Double	10	HMT elevation, using NAVD88 datum
SHAPE_LENGTH	Double		Database calculation of the length of the line

VI. Photo Point (PHOTOPT): Mandatory

Attribute	Type	Width	Description
OBJECTID			Database unique ID
SHAPE	Point		Database Feature Type
PHOTOPT_ID	Text	15	Alphanumeric ID must correspond with labels for ground-level photographs shown on maps and photographs in report
DIRECTION	Text	30	Cardinal (N, S, E, W) or intermediate (NE, SE, SW, NW) direction of view for photograph
PHOTO_DESC	Text	100	Notes about why photo taken and what is being shown

VII. Project Mile Post (MILEPOST): (Mandatory for large linear projects or others as needed)

Attribute	Type	Width	Description
OBJECTID			Database unique ID
SHAPE	Point		Database Feature Type
MILEPOST_ID	Text	15	Project Mile Points are numbered to tenths of a mile and prefix by "MP."

VIII. Sample Plot Point (SAMPLE_PLOT): Mandatory

Attribute	Type	Width	Description
OBJECTID			Database unique ID
SHAPE	Point		Database Feature Type
ID	Text	50	Sample plot with unique identification labels that correspond to the field data form.

IX. Stream Centerline (STREAM_CL): Optional (Use only where OHW lines not mapped)

Attribute	Type	Width	Description
OBJECTID			Database unique ID
SHAPE	Line		Database Feature Type
NAME	Text	50	If not named in NHD, provide local name if available.
MAX_WIDTH	Double		Additional attribute, maximum ordinary high water width, recorded for reaches 6 feet wide or less mapped only as a centerline.
SHAPE_LENGTH	Double		Database calculation of the length of the line

X. Stream OHW line (STREAM_OHWL) (Can be one or both sides depending on study area boundary): Mandatory

Attribute	Type	Width	Description
OBJECTID			Database unique ID
SHAPE	Line		Database Feature Type
NAME	Text	50	If not named in National Hydrography Dataset (NHD), provide local name if available.
BANK_SIDE	Text	5	Left (L) or right (R) looking downstream
SHAPE_LENGTH	Double		Database calculation of the length of the line

XI. Structure Polygons (STRUCT_POLY): Mandatory unless visible on aerial base map.

Attribute	Type	Width	Description
OBJECTID			Database unique ID
SHAPE	Polygon		Database Feature Type
DESCRIPTION	Text	100	Brief description of the existing structures such as culverts, bridges, tidegates, and roads, where practicable
SHAPE_AREA	Double		Database calculation of the area of the polygon in square feet
SHAPE_LENGTH	Double		Database calculation of the perimeter of the polygon

XII. Structure Points (STRUCT_PT): (Mandatory unless visible on aerial base map)

Attribute	Type	Width	Description
OBJECTID			Database unique ID
SHAPE	Point		Database Feature Type
DESCRIPTION	Text	100	Brief description of the existing structures such as culverts and tidedgates, where practicable.

XIII. Structure Lines (STRUCT_LINE): (Mandatory unless visible on aerial base map)

Attribute	Type	Width	Description
OBJECTID			Database unique ID
SHAPE	Line		Database Feature Type
DESCRIPTION	Text	100	Brief description of the existing structures such as culverts, bridges, tidedgates, fencelines, powerlines, and roads, where practicable
SHAPE_LENGTH	Double		Database calculation of the length of the line

XIV. Study Area Polygon (STUDY_AREA): Mandatory

Attribute	Type	Width	Description
OBJECTID			Database unique ID
SHAPE	Polygon		Database Feature Type
SA_NAME	Text	50	Study Area Name
WD_NUMBER	Text	15	Filled in by DSL upon approval
SHAPE_AREA	Double		Database calculation of the area of the polygon in square feet
SHAPE_LENGTH	Double		Database calculation of the perimeter of the polygon

XV. Tax Lot Polygons (TAX_LOT): Mandatory

Attribute	Type	Width	Description
OBJECTID			Database unique ID
SHAPE	Polygon		Database Feature Type
MAP_NUMBER	Text	20	Must use Tax Map number as stored in the County's Assessor's database.
TAXLOT	Text	5	Tax lot number padded with leading zeros (00100, 00200, etc., or, for polygons without tax lot numbers, the allowable values are, ROADS, RAILS, WATER or NONTL)
MAPTAXLOT	Text	25	Map and tax lot number as stored in the assessor's database
ACCESS	Text	3	Property access granted (Yes/No)
COMMENT	Text	100	Any additional comment regarding access.
SHAPE_AREA	Double		Database calculation of the area of the polygon in square feet
SHAPE_LENGTH	Double		Database calculation of the perimeter of the polygon

XVI. Water Polygons (WATER_POLY): Mandatory

Attribute	Type	Width	Description
OBJECTID			Database unique ID
SHAPE	Polygon		Database Feature Type
NAME	Text	50	Name of water body from NHD. If not named in NHD provide local name
SHAPE_AREA	Double		Database calculation of the area of the polygon in square feet
SHAPE_LENGTH	Double		Database calculation of the perimeter of the polygon

XVII. Wetland Polygons (WETLANDS): Mandatory

Attribute	Type	Width	Description
OBJECTID			Database unique ID
SHAPE	Polygon		Database Feature Type
WETLAND_ID	Text	10	Unique identifier.
DSL_ACCURACY	Text	1	Does entire boundary meet DSL mapping accuracy standard (Y or N)
DSL_FILE_NO	Text	100	For polygons sourced from previous DSL files, provide file number(s) in format[.] Leave blank if not sources from previous file.
SHAPE_AREA	Double		Database calculation of the area of the polygon in square feet
SHAPE_LENGTH	Double		Database calculation of the perimeter of the polygon

3) Additional Considerations

- (a) All georeferenced data sets must be projected using the Oregon Geographic Information Council-endorsed state standard: Oregon Lambert conformal conic (Datum: NAD 83; Units: International feet: 3.28084; Spheroid: GRS1980). For additional information see: <https://www.oregon.gov/geo/pages/projections.aspx>
- (b) Metadata must be completed for each layer and conform to the current Oregon Geographic Information Council Metadata Standard. and must include the following disclaimer: "This mapping documents the investigation, best professional judgment and conclusions of the investigator. It is correct and complete to the best of the investigator's knowledge. It should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and used at your own risk until it has been reviewed and approved in writing by the Oregon Department of State Lands in accordance with OAR 141-090-0005 through 141-090-0055. A current approved wetland delineation is required for state removal-fill permits. You are advised to contact the Department of State Lands and the U.S. Army Corps of Engineers with any regulatory questions."
- (c) Computer-aided design (CAD) file versions supported in ArcGIS and ArcGIS Pro include Autodesk AutoCAD (DWG and DXF) and Bentley MicroStation (DGN)

Appendix: Additional Resources

- DSL's Local Wetlands Inventory (LWI) Digital Data Standards (OAR 141-086-0225)
secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=351
- DSL's Wetland Delineation Report Standards and Requirements for Figures and Maps (OAR 141-090-0035)
<https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=355>
- Adamus, P.R. 2001. Guidebook for Hydrogeomorphic (HGM)–based Assessment of Oregon Wetland and Riparian Sites: Statewide Classification and Profiles. Oregon Division of State Lands, Salem, OR.
- Adamus, P.R. and D. Field. 2001. Guidebook for Hydrogeomorphic (HGM)–based Assessment of Oregon Wetland and Riparian Sites. I. Willamette Valley Ecoregion, Riverine Impounding and Slope/Flats Subclasses. Volume IA: Assessment Methods. Oregon Division [Department] of State Lands, Salem, OR.
www.oregon.gov/dsl/WW/Pages/Resources.aspx#assessment
- Adamus, P.R. 2006. Hydrogeomorphic (HGM) Assessment Guidebook for Tidal Wetlands of the Oregon Coast, Part 1: Rapid Assessment Method, Adamus Resource Assessment, Inc., Corvallis, OR 97330;
adamus7@comcast.net www.oregon.gov/dsl/WW/Pages/Resources.aspx#assessment
- Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Jamestown, ND: Northern Prairie Wildlife Research Center Online.
www.npwrc.usgs.gov/resource/wetlands/classwet/index.htm (Version 04DEC1998).
- Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States, [FGDC-STD-004-2013](#), Second Edition, Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.
- Oregon Geographic Information Council. 2010. Oregon Wetland Mapping Standard. Version 2.1.1—revised April 2010 based on comments from ODSL, ORNHIC, The Wetlands Conservancy, and the March 2010 GIS Standards Forum.
[https://www.oregon.gov/geo/standards/Wetland%20Mapping%20Standard,%20v2.1.1%20\(pdf\).pdf](https://www.oregon.gov/geo/standards/Wetland%20Mapping%20Standard,%20v2.1.1%20(pdf).pdf)