Statewide Wetlands Inventory

The SWI web map provides state-recognized wetlands, waters and certain soils mapping in one location. It includes multiple sources of aquatic resource mapping because DSL regulates wetlands and waters.

If you have GIS desktop capabilities and wish to download the original datasets and configure them to display as in the SWI, or to connect to the SWI layers as web services on your system, find directions at the "How to Configure" link on the SWI webpage. Map datasets displayed on the SWI are updated annually from the original sources and published on December 1.

Disclaimer

Information shown on this map is for planning purposes, represents the conditions that exist at the map date, and is subject to change. The location and extent of wetlands and other waters is approximate. ***There may be unmapped wetlands and other waters present that are subject to regulation***. A current Oregon Department of State Lands-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.

The Statewide Wetlands Inventory (SWI) represents the best data available at the time the data was published and is updated as new data becomes available. In all cases, actual field conditions determine the presence, absence and boundaries of wetlands and waters (such as creeks and ponds). An onsite investigation by a wetland professional can verify actual field conditions.

This product is for informational purposes, and may not be suitable for legal, engineering, or surveying purposes. This information or data is provided with the understanding that conclusions drawn from such information are the responsibility of the user.

Some SWI data layers are created and maintained by organizations and entities outside of the Department of State Lands. Brief descriptions and limitations are provided. Refer to the original source documentation to better understand the data sources, results, methodologies and limitations of each dataset presented. DSL makes no claims, representations or warranties as to the accuracy or completeness of these external data layers.

Layer Descriptions and Limitations

It is always good to know the limitations and accuracy of each mapping source. These descriptions are provided for general information. See the original mapping source documentation for full map dataset details.

US Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI)

"The National Wetlands Inventory (NWI) was established by the US Fish and Wildlife Service (FWS) in 1974 to conduct a nationwide inventory of U.S. wetlands to provide its biologists and others with information on the distribution of wetlands to aid in wetland conservation efforts." https://www.fws.gov/wetlands/nwi/Overview.html

NWI mapping was originally based on high-altitude aerial photography used to identify visible wetlands and other waters. The scope of this national effort limited the amount of field verification possible. Most of the

Oregon mapping dates to the mid-1980s. The coastal zone was updated in the late 2000's when the NWI was digitized. NWI mapping is available for the entire state.
There are limitations with the Oregon NWI, including:

- There are unmapped wetlands and waters, including many smaller, seasonal and forested wetlands that may not have been detected from the aerials.
- By policy, the NWI excludes certain types of "farmed wetlands" as may be defined by the Food Security Act. Although many farmed areas in Oregon meet wetland criteria, many of these important wetlands are unmapped.
- The development scale of 1:24,000 and other factors cited above make the wetland and water boundary locations approximate. Conducting on-the-ground wetland delineations is the only way to verify wetland boundary locations.

For more information go to the NWI home page: https://www.fws.gov/wetlands/nwi/index.html

Local Wetlands Inventories (LWI) – Coming soon!
The older LWIs were developed and approved in paper format only. After a 2001 rule change LWI products included digital datasets. These needed to be reorganized into a standard structure and format. With a grant from the Environmental Protection Agency (EPA), DSL is having datasets created for paper maps and having all the datasets standardized. These will be added to the SWI web map and available for download when complete. In the meantime, a layer is provided showing the approximate LWI study areas. If the location of interest is in an LWI study area, view and download PDF versions of the LWI maps and reports, and the available GIS datasets here: https://www.oregon.gov/dsl/WW/Pages/Inventories.aspx

In addition to mapping wetlands and waters within a specific study area, LWIs include a report describing the study methods, study area, detailed information about each wetland identified and a functional assessment of each wetland greater than 0.5 acre in size. The functional assessment scores each wetland's capacity to provide or perform functions such as improve water quality, water storage and delay, and fish and wildlife habitats. These findings are used to determine if a wetland is a "locally significant wetland" (LSW). These significant wetlands may gain additional local protections.
The more accurate LWI wetlands and waters mapping replaces the NWI mapping within the study area of the LWI. LWI mapping is for planning purposes. DSL approved wetland delineation mapping is required for state removal-fill and federal Clean Water Act permits.
Characteristics of LWI mapping include:

- Wetland boundaries are mapped onsite where access permission is granted. Where access is not permitted, resource boundaries are estimated using offsite methods. Offsite methods yield less reliable results; there may be wetlands and waters that are unmapped and boundary accuracy is decreased.
- Recent LWIs have a boundary accuracy of approximately 5 meters (16.4 feet). Prior to 2009 the goal accuracy was +/- 25 feet.
- Wetlands that are estimated to be smaller than 0.5 acre are represented as "probable wetlands" (PW). LWIs that were developed prior to 2001 rules were not required to map wetlands or waters smaller than 0.5 acres. These LWIs generally have approval dates prior to 2002.
- Most LWI field work includes some level of ground-verification of stream locations.
- LWIs include multiple types of mapping. See the LWI Data Description on the LWI webpage (above).
- The SWI will be updated with new LWIs as they are approved. The maps, reports and datasets will be available on the LWI webpage about the same time.

USDA NRCS Soils

The US Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) develops soil surveys that include maps of soils and related reports. Extensive field work is done to complete the mapping and document findings. The maps consist of outlined areas called *map units*. These are areas with generally similar soils, or a similar mix of soil types that can be consistently identified across the landscape. When more than one named soil occurs in a map unit, each soil is called a component of the map unit. Each component makes up a certain percentage of the map unit. Two subsets of the soils dataset are helpful in predicting the presence of wetlands and are included in the SWI.

Predominantly hydric soil map units

Some soils naturally retain water longer than others, especially when they occur on certain parts of the landscape, such as depressions. These soils often exhibit characteristics (e.g. routinely flooded) that meet the definition of, and they are designated as "hydric soils." (NRCS Hydric Soils List Criteria https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/use/hydric/?cid=nrcs142p2_053959) Because of these characteristics hydric soils are often found on the landscape where wetlands occur.

The SWI shows soil map units that are comprised of predominantly (greater than 50%) hydric soil components. This means that a user can expect more than half of that soil map unit to include soil components that have been designated as hydric. These map units indicate places across the landscape with a higher likelihood for wetland occurrence. Displaying predominantly hydric soil map units in the SWI is especially helpful in recognizing potential wetland areas in places where only the NWI wetland mapping is available.

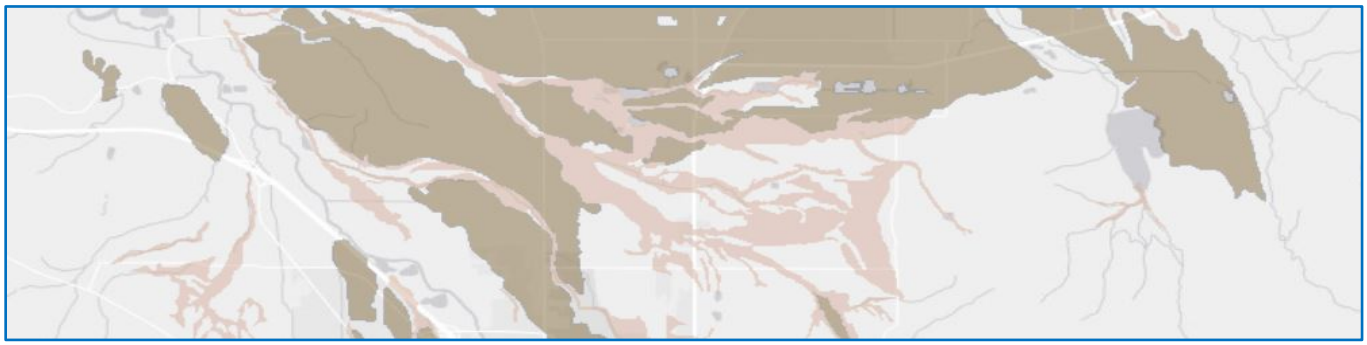
Agate-Winlo soil, Jackson County

Agate-Winlo soil occurs in Jackson County near Medford and is highly associated with a type of wetland of conservation concern called vernal pools. This soil is not a predominantly hydric map unit so does not appear in that layer.

As with the other map layers in the SWI, there may be areas of predominately hydric soil map units and Agate-Winlo soil that do not contain wetlands, and wetlands will occur in soil map units with less than 50% hydric components. The presence of predominantly hydric soil map units or Agate-Winlo soil helps planners, landowners, and others recognize where further site assessment is needed.

The dataset used for the SWI is a combined SSURGO/STATSGO dataset created by NRCS for the State of Oregon Department of Administrative Services Geographic Enterprise Office (DAS GEO). DSL will download the dataset annually and symbolize the data to display the two described subsets for viewing on December 1. See directions to connect to or download and configure datasets in your GIS environment at the top of this document or on the main SWI webpage.

More information on the NRCS soil survey: https://websoilsurvey.nrcs.usda.gov/app/HomePage.htm



USGS National Hydrography Dataset (NHD)

"The US Geological Survey's NHD represents the nation's drainage networks and related features, including rivers, streams, canals, lakes, ponds, glaciers, coastlines, dams and stream gages. The NHD High Resolution, at 1:24,000 scale or better, is the most up-to-date and detailed hydrography dataset for the nation."

The NHD is developed through complex modeling using multiple types of information, including some local level input. The mapped resource boundaries may differ from their actual location on the ground. Onsite investigations may be needed to confirm wetlands and waters boundaries.

The NHD has many more features than are displayed in the SWI because many of these features are structures within or beside waters and overly complicated the SWI mapping. The subset of the NHD represented in the SWI includes only those items listed below. Items may occur in different groups because the waters are mapped slightly differently. Structures like flumes were included because they may contain potential waters of this state.

- NHDPoint – Spring/Seep
- NHDFlowline (line) – Canal/Ditch, Coastline, Stream/River
- NHDWaterbody – Estuary, Lake/Pond, Playa, Reservoir, Swamp/Marsh
- NHDArea – Area of complex channels, Bay/Inlet, Canal/Ditch, Flume, Foreshore, Inundation area, Lock chamber, Rapids, Sea/ocean, Spillway, Stream/river, Submerged stream, Wash, Water intake/outflow

For general information about the NHD see https://nhd.usgs.gov/ The user's guide provides definitions and examples of all the datasets and features https://nhd.usgs.gov/userguide.html

Important mapping that is not incorporated into the SWI

Essential Salmonid Habitat (ESH) and State Scenic Waterways (SSW)

The mapping of ESH and SSW has not been added to the SWI. However, being aware of their locations can be helpful for project planning. Within ESH and SSW any removal and fill activities require a DSL permit. Activities customarily associated with agriculture in ESH have a 50 cubic yards permit threshold. Projects in SSW may require additional coordination through the Oregon Parks and Recreation Department. Maps are available on the DSL website:

Essential Salmonid Habitat (ESH)
https://maps.dsl.state.or.us/esh2017/

State Scenic Waterways (SSW)
https://www.oregon.gov/dsl/WW/Pages/SSW.aspx

SWI mapping that *may* be added to the web map in the future:

Compensatory mitigation (CM) sites – all removal and fill in CM sites requires a DSL permit and double mitigation. DSL has received an EPA grant to create a polygon dataset of all DSL CM sites statewide. This will be added to the SWI once complete.

DSL-Approved Wetland Delineation Mapping – This is the most accurate wetland mapping and supersedes other mapping types within a study area, but it is not available in GIS format. DSL intends to seek funds to digitize wetland delineation locations for the SWI.

More information:

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https://www.oregon.gov/dsl/WW/Pages/SWI.aspx

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