NTERMOUNTAIN WEST

WET 101

WHAT IS THE WETLAND EVALUATION TOOL (WET)?

The Wetland Evaluation Tool (WET) is a Google Earth Engine-supported app that enables users to track changes in surface water over space and time. Combined with local knowledge, the tool can help land managers create a landscape-scale picture of important areas to target for land and water conservation.

SPATIAL MODELS

SURFACE WATER

Common uses: Measuring the change in flooded footprint following land management actions or comparing surface water abundance between years of interest.



Surface water layers depict the monthly extent of flooding within wetland, riparian, and agricultural systems. Historical data can be viewed as averaged monthly conditions within four 10-year periods spanning the mid-1980s to the present. Monthly data is provided for 2022 onward.



SPATIAL MODELS (CONT.)

HYDROPERIOD

Common uses:

Measuring changes in wetland types across months and/or years to inform habitat management for wetland-dependent wildlife species.



Hydroperiod layers depict wetlands classified by hydroperiods, which are defined as: temporary (flooded <2 months), seasonal (flooded >2 and <9 months), or semi-permanent (flooded >9 months). Data provides ecological context to wetland function and agricultural irrigation practices supporting wildlife habitat. Hydroperiod layers are provided as monthly averages over approximately four 10-year periods from the mid-1980s to the present.

Note: Hydroperiods can be split when flooding is separated by drying within the same year, for example, in human-modified systems such as flood-irrigated hay meadows or on wildlife refuges. This can result in false hydroperiods where a site is classified as a seasonal wetland based on the total flooded months but ecologically functions as a temporary wetland split over multiple periods. INTERMOUNTAIN WEST JOINT VENTURE

SPATIAL MODELS (CONT.)

RESILIENCE

Common uses:

As a screening tool for prioritizing protections of climate-resilient wetlands or as a restoration tool that allows users to focus on areas of wetland drying.





Wetland resilience layers depict long-term surface water trends (1984-2021) in temporary, seasonal, and semi-permanent wetlands. Trends are displayed monthly within the averaged surface water extent for recent timeframes (2015-2021) to best reflect current conditions. Wetland drying is shown in red (darker shades represent shorter or less frequent periods of inundation). Areas that have become wet more frequently or for longer periods are shown in blue (darker shades represent consistently wetter conditions). White areas represent stable conditions. All trends are relative to local patterns, for example, a site that is rarely inundated but has experienced abnormal flooding events in recent years will be depicted as trending wetter despite relatively dry conditions otherwise.

Note: Interpretation of wetland resilience trends can be complex as patterns are frequently influenced by multiple factors (hydrology, climate, irrigation practices, water delivery, and water use laws). Local knowledge of these factors is necessary to inform causation.