

MONTANA NATURAL HERITAGE PROGRAM



WETLAND AND RIPARIAN MAPPING IN MONTANA



Northern Pintail – Photo by Nathan DeBoer

WETLANDS AND RIPARIAN AREAS PROVIDE IMPORTANT FUNCTIONS

Wetlands and riparian areas provide critical biological and economic benefits:

- fish & wildlife habitat
- flood attenuation
- groundwater recharge
- sediment retention
- water quality improvement
- maintain stream flows
- shoreline stabilization
- recreation

WETLAND AND RIPARIAN MAPPING

Wetland and riparian mapping provides information on the type, size, and location of wetland and riparian resources. Digital wetland and riparian mapping is a necessary first step towards effectively and efficiently identifying and protecting Montana's aquatic resources.

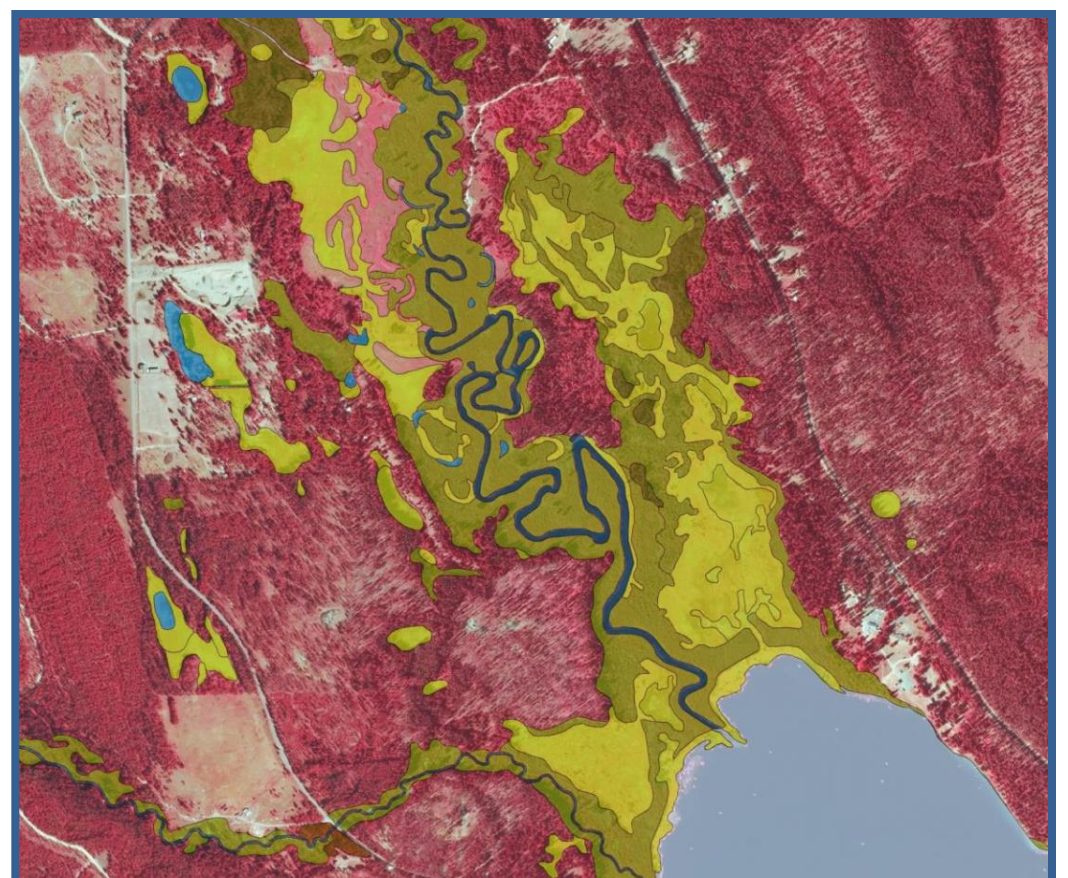
WETLAND AND RIPARIAN MAPPING CENTER

The Wetland and Riparian Mapping Center (WRMC) of the Montana Natural Heritage Program (MTNHP) is creating digital wetland and riparian maps with the support of multiple project partners. Our goal is to create a statewide digital wetland and riparian layer as a resource for management, planning, conservation, and restoration efforts. The WRMC completes mapping according to the national wetland mapping standard. Mapped wetlands are classified using the Cowardin classification system of the National Wetlands Inventory (NWI). Riparian mapping follows the U.S. Fish and Wildlife Service's System for Mapping Riparian Areas. Mapping is ultimately incorporated into the NWI.

Mapping is completed through photointerpretation of 1-meter resolution color infrared aerial imagery. Ancillary data layers such as topographic maps, digital elevation models, soils data, and other aerial imagery sources are also used to improve mapping accuracy.

LIMITATIONS OF WETLAND AND RIPARIAN MAPPING

Federal, State, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands differently than the NWI. Mapped wetlands do not represent precise wetland boundaries, and digital wetland data cannot substitute for an on-site determination of jurisdictional wetlands.



Example of color infrared aerial imagery and completed wetland and riparian mapping.

How to access wetland and riparian mapping.



ACCESSING WETLAND AND RIPARIAN MAPPING

WETLAND AND RIPARIAN MAPPING CENTER WEBPAGE

Overview

Wetlands and riparian areas are one of the 14 themes in the [Montana Spatial Data Infrastructure \(MSDI\)](#), and our goal is to create a statewide digital wetland and riparian layer as a resource for management, planning, and restoration efforts.

With support from the Montana Wetland Council and our other partners, the Center maps wetlands and riparian areas to FGDC and USFWS National Wetlands Inventory (NWI) standards.

Additionally, wetland mapping can be enhanced by incorporating descriptors to characterize hydrogeomorphic features to identify potential wetland function. These descriptors are added to each wetland polygon to describe the landscape position, landform, water flow path, and waterbody type (LLWW).

Digital wetland mapping is necessary to effectively assess Montana's wetlands by identifying the type, size, and location of wetland resources.

Partners Map



Wetland and Riparian Mapping Center

Wetland and Riparian Mapping Status

- Natural Heritage Map Viewer - Wetland and Riparian Mapping
- View & Download Wetlands Data
- National Wetlands Inventory Guide

Other Information

- View Ecology Information
- View Aquatic Information
- Land Stewardship Mapping
- View Plant Information
- View Animal Information
- Submit Observations
- Request Information



View an example of Montana wetland and riparian mapping.

View in the MTNHP Map Viewer

View & Download Mapping

- Wetland & Riparian Mapping Fact Sheet
- National Spatial Data Infrastructure (NSDI) Wetlands Layer
- Montana Wetland Information Clearinghouse
- USFWS National Wetlands Inventory (NWI)
- USFWS NWI Riparian Mapping
- Confederated Salish & Kootenai Tribes Wetlands Conservation Program
- Montana Geographic Information
- US EPA Wetlands Info

Other useful links:

Wetland and Riparian Mapping Center

mtnhp.org/nwi/

Guide to Wetland and Riparian Classification in Montana

mtnhp.org/nwi/Wetland_Riparian_Classification.pdf

National Wetlands Inventory

<http://www.fws.gov/wetlands/>

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MTNHP MAP VIEWER

Summarize mapping by an area of interest.

Turn mapping layers on and off.

View different base layers.

Search for specific location.

Download Wetland and Riparian Mapping:

<ftp://ftp.geoinfo.msl.mt.gov/Data/Spatial/MSDI/Wetlands>

Or view as a

Wetland and Riparian Map Service:

https://gisservicemt.gov/arcgis/rest/services/MSDI_Framework/WetlandsRiparianSPC/MapServer

The screenshot shows the MTNHP Map Viewer interface. On the left, there are navigation and layer controls. The main map area displays a satellite view with a red outline of the 6th Code Watershed. A legend on the right explains the mapping types. Below the map, a summary report for the 6th Code Watershed (Goose Creek-Gallatin River) is shown, including a bar chart of acreage by mapping type.

Mapping Type	Acres
PUB	11
PAB	50
PBM	874
PSS	238
R2UB	324
R2US	177
R3UB	5
R3US	48
Rp1SS	234
Rp1FO	1,570
Rp1EM	7

View mapping summary and printable report.

GEOGRAPHIC INFORMATION CLEARINGHOUSE

What are you looking for? Search GIS Data List...

Home / Geographic Information Clearinghouse / Data / Montana Spatial Data Infrastructure (MSDI) / Wetlands

Wetlands

The Wetlands Framework consists of spatial data representing the extent, type, and approximate location of wetlands, riparian areas, and deepwater habitats in Montana.

Data and Documentation

Wetlands Data Download

The Wetlands theme dataset, with associated metadata, are provided in geodatabase version 9.3. Data are downloaded at a statewide scale. New data are added as individual wetland mapping project areas are completed. This data does not cover the entire state of Montana. For areas within Montana that do not have modern MTNHP mapping, please use the National Wetlands Inventory's NWI Legacy (outdated mapping) and NWI Scalable (incomplete mapping) datasets. For more information regarding the different datasets, please refer to the help file.

Wetland and Riparian Framework Web Service

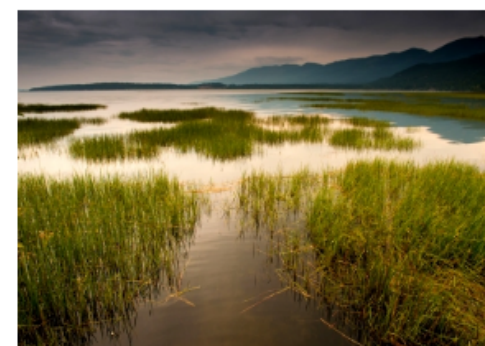
This web map service provides access to the MSDI Wetlands and Riparian Framework dataset. Included in this service are provisional and final wetland and riparian polygons, the wetland and riparian mapping program status map, and the National Wetlands Inventory's (NWI) Legacy (outdated mapping) and Scalable (incomplete mapping) datasets. For more information regarding the different datasets, please refer to the help file.

Applications

Wetlands Data using the Montana Natural Heritage Program's Map Viewer

About

The Wetlands Framework is a detailed digital map of wetlands and riparian areas in Montana. Users include federal, state, and local government agencies, including conservation districts and watershed groups; hunters, birdwatchers, and anglers; consultants, planners, and stakeholders involved in land development; restoration and mitigation practitioners, including federal, tribal, state, local, and non-governmental organizations, and land trusts and other organizations.



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- Funding and Support

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- MSDI Work Plans
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