MONTANA STATE LIBRARY

NATURAL HERITAGE PROGRAM **mtnhp.mt.gov**

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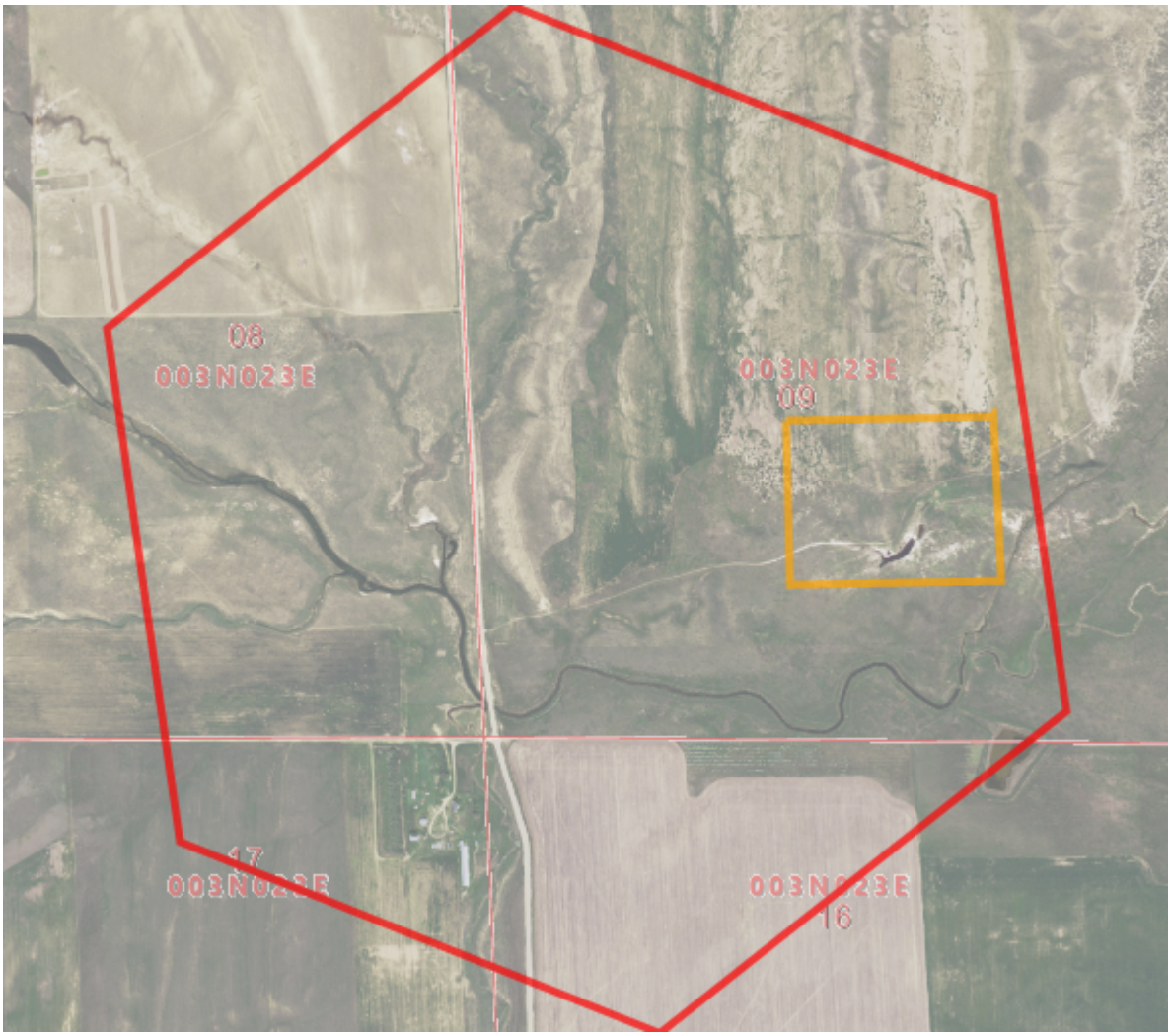
Latitude	Longitude
46.01243	-108.86805
46.03011	-108.89216

Summarized by:

Quantica Big Sky Campus Well

(Custom Area of Interest)



Suggested Citation

Montana Natural Heritage Program. Environmental Summary Report.

for Latitude 46.01243 to 46.03011 and Longitude -108.86805 to -108.89216. Retrieved on 9/23/2026.

The Montana Natural Heritage Program is part of the Montana State Library's Natural Resource Information System. Since 1985, it has served as a neutral and non-regulatory provider of easily accessible information on Montana's species and biological communities to inform all stakeholders in environmental review, permitting, and planning processes. The program is part of the NatureServe network that is composed of over 60 member programs across North America that work to provide current and comprehensive distribution and status information on species and biological communities.

MONTANA STATE LIBRARY NATURAL HERITAGE PROGRAM

NATURESERVE

Environmental Summary

Table of Contents

- Species Report
- Structured Surveys
- Land Cover
- Wetland and Riparian
- Land Management
- Biological Reports
- Invasive and Pest Species
- Introduction to Montana Natural Heritage Program
- Data Use Terms and Conditions
- Suggested Contacts for Natural Resource Agencies
- Introduction to Native Species
- Introduction to Land Cover
- Introduction to Wetland and Riparian
- Introduction to Land Management
- Introduction to Invasive and Pest Species
- Additional Information Resources

Introduction to Environmental Summary Report

Environmental Summary Reports from the Montana Natural Heritage Program (MTNHP) provide information on species and biological communities to inform all stakeholders in environmental review, permitting, and planning processes. For information on environmental permits in Montana, please see permitting overviews by the Montana Department of Environmental Quality, the Montana Department of Natural Resources and Conservation, the Index of Environmental Permits for Montana and our Suggested Contacts for Natural Resource Management Agencies. The report for your area of interest consists of introductory and related materials in this PDF and an Excel workbook with worksheets summarizing information managed in the MTNHP databases for: (1) species occurrences; (2) other observed species without species occurrences; (3) other species potentially present based on their range, presence of associated habitats, or predictive distribution model output if available; (4) structured surveys that follow a protocol capable of detecting one or more species; (5) land cover mapped as ecological systems; (6) wetland and riparian mapping; (7) land management categories; and (8) biological reports associated with plant and animal observations. If your area of interest corresponds to a statewide polygon layer (e.g., watersheds, counties, or public land survey sections) information summaries in your report will exactly match those boundaries. However, if your report is for a custom area, users should be aware that summaries do not correspond to the exact boundaries of the polygon they have specified, but instead are a summary across a layer of hexagons intersected by the polygon they specified as shown on the report cover. Summarizing by these hexagons which are one square mile in area and approximately one kilometer in length on each side allows for consistent and rapid delivery of summaries based on a uniform grid that has been used for planning efforts across North America.

In presenting this information, MTNHP is working towards assisting the user with rapidly assessing the known or potential species and biological communities, land management categories, and biological reports associated with the report area. Users are reminded that this information is likely incomplete and may be inaccurate as surveys to document species are lacking in many areas of the state, species' range polygons often include regions of unsuitable habitat, methods of predicting the presence of species or communities are constantly improving, and information is constantly being added and updated in our databases. **Field verification by professional biologists of the absence or presence of species and biological communities in a report area will always be an important obligation of users of our data. Users are encouraged to only use this environmental summary report as a starting point for more in depth analyses and are encouraged to contact state, federal, and tribal resource management agencies for additional data or management guidelines relevant to your efforts. Please see the Appendix for introductory materials to each section of the report, additional information resources, and a list of relevant agency contacts.**

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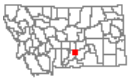
Legend

Model Icons	Habitat Icons	Range Icons	Num Obs
N Suitable (native range)	C Common	Y Native / Year-round	Count of obs with 'good precision' (<=1000m)
O Optimal Suitability	O Occasional	S Summer	+ indicates additional 'poor precision' obs (1001m-10,000m)
M Moderate Suitability		W Winter	
L Low Suitability		M Migratory	
I Suitable (introduced range)		N Non-native	
		H Historical	



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Native Species

Summarized by: **Quantica Big Sky Campus Well** *(Custom Area of Interest)*
Filtered by:
Native Species reports are filtered for Species with MT Status = Species of Concern, Special Status, Important Animal Habitat, Species of Potential Concern

Species Occurrences

	Spec Regs	# SO	# Obs	Predicted Model	Range
M - Black-tailed Prairie Dog *(Cynomys ludovicianus)* SOC		2	3		Y

View in MONTANA FIELD GUIDE™ **View Predicted Models** **View Range Maps**
Species of Concern - Native Species Global: **G4** State: **S3** BLM: **SENSITIVE** FWP SWAP: **SGCN**
Delineation Criteria Areas with recent evidence of activity (i.e. burrow entrances) visible on recent National Agricultural Imagery Program (NAIP) aerial color photographic imagery that are within a distance of 200 meters of definitive observations buffered by the locational uncertainty of less than or equal to 1,000 meters. (Last Updated: Jul 03, 2019)
Predicted Models: M 100% Moderate (inductive), L 0% Low (inductive)

	Spec Regs	# SO	# Obs	Predicted Model	Range
B - Loggerhead Shrike *(Lanius ludovicianus)* SOC		3	2		S M

View in MONTANA FIELD GUIDE™ **View Predicted Models** **View Range Maps**
Species of Concern - Native Species Global: **G4** State: **S3B** USFWS: **MBTA** BLM: **SENSITIVE** FWP SWAP: **SGCN** PIF: **2**
Delineation Criteria Confirmed breeding area based on the presence of a nest, chicks, or territorial adults during the breeding season. Point observation location is buffered by a minimum distance of 300 meters in order to encompass the maximum breeding territory size reported for the species in Alberta and Idaho and otherwise is buffered by the locational uncertainty associated with the observation up to a maximum distance of 5,000 meters. (Last Updated: Jul 23, 2026)
Predicted Models: M 100% Moderate (inductive), L 0% Low (inductive)

	Spec Regs	# SO	# Obs	Predicted Model	Range
B - Sage Thrasher *(Oreoscoptes montanus)* SOC		1			S M

View in MONTANA FIELD GUIDE™ **View Predicted Models** **View Range Maps**
Species of Concern - Native Species Global: **G4** State: **S3B** USFWS: **MBTA** BLM: **SENSITIVE** FWP SWAP: **SGCN** PIF: **3**
Delineation Criteria Confirmed breeding area based on the presence of a nest, chicks, or territorial adults during the breeding season. Point observation location is buffered by a minimum distance of 75 meters in order to encompass the maximum breeding territory size reported for the species and otherwise is buffered by the locational uncertainty associated with the observation up to a maximum distance of 5,000 meters. (Last Updated: Jul 23, 2026)
Predicted Models: M 100% Moderate (inductive), L 0% Low (inductive)

B - Greater Sage-Grouse *(Centrocercus urophasianus)* SOC

SG 1 Y

View in MONTANA FIELD GUIDE™ **View Predicted Models** **View Range Maps**

USFS: **Sensitive - Known in Forests (BD)**

Species of Concern - Native Species Global: **G3** State: **S2** **Species of Conservation Concern in Forests (CG)** BLM: **SENSITIVE** FWP SWAP: **SGCN** PIF: **1**

Delineation Criteria Confirmed breeding area based on the presence of a nest, chicks, juveniles, or adults on a lek. Point observations are mapped in the center of a one-square mile hexagon to protect the exact locations of leks. The outer edges of this hexagon are then buffered by a distance of 6,400 meters in order to encompass a body of research indicating that females typically nest within this distance of a lek and that lek numbers are negatively impacted by fossil fuel drilling activities within this distance of a lek. If the locational uncertainty associated with the observation is greater than 5,000 meters, the observation is not valid for creation of a species occurrence. All of the one-square mile hexagons intersecting this buffered area are presented as the Species Occurrence record. (Last Updated: Jul 25, 2026)

Predicted Models: M 100% Moderate (inductive)

B - Burrowing Owl *(Athene cunicularia)* SOC

1 S M

View in MONTANA FIELD GUIDE™ **View Predicted Models** **View Range Maps**

Species of Concern - Native Species Global: **G4** State: **S3B** USFWS: **MBTA; BCC17** BLM: **SENSITIVE** FWP SWAP: **SGCN** PIF: **1**

Delineation Criteria Confirmed breeding area based on the presence of a nest, chicks, or territorial adults during the breeding season. Direct observation of a bird or birds at/on a prairie dog town is indirect but sufficient evidence of breeding (b). Point observation location is buffered by a minimum distance of 2,700 meters in order to encompass the maximum foraging distance reported for breeding adults and otherwise is buffered by the locational uncertainty associated with the observation up to a maximum distance of 5,000 meters. (Last Updated: Jul 23, 2026)

Predicted Models: M 1% Moderate (inductive), L 99% Low (inductive)

B - Brewer's Sparrow *(Spizella breweri)* SOC

1 S M

View in MONTANA FIELD GUIDE™ **View Predicted Models** **View Range Maps**

Species of Concern - Native Species Global: **G5** State: **S3B** USFWS: **MBTA** BLM: **SENSITIVE** FWP SWAP: **SGCN** PIF: **2**

Delineation Criteria Confirmed breeding area based on the presence of a nest, chicks, or territorial adults during the breeding season. Point observation location is buffered by a minimum distance of 100 meters in order to encompass the maximum territory size reported for the species and otherwise is buffered by the locational uncertainty associated with the observation up to a maximum distance of 5,000 meters. (Last Updated: Jul 22, 2026)

Predicted Models: L 100% Low (inductive)

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Legend

Model Icons	Habitat Icons	Range Icons	Num Obs
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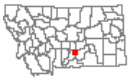
O Optimal Suitability	O Occasional	S Summer	+ indicates additional 'poor precision' obs (1001m-10,000m)
M Moderate Suitability		W Winter	
L Low Suitability		M Migratory	
I Suitable (introduced range)		N Non-native	
		H Historical	



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Native Species

Summarized by: **Quantica Big Sky Campus Well** *(Custom Area of Interest)*
Filtered by:
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Other Observed Species

No Species were found for the filters selected

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Legend

Model Icons	Habitat Icons	Range Icons	Num Obs
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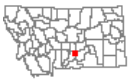
O Optimal Suitability	O Occasional	S Summer	+ indicates additional 'poor precision' obs (1001m-10,000m)
M Moderate Suitability		W Winter	
L Low Suitability		M Migratory	
I Suitable (introduced range)		N Non-native	
		H Historical	



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Native Species

Summarized by: **Quantica Big Sky Campus Well** *(Custom Area of Interest)*
Filtered by:
Native Species reports are filtered for Species with MT Status = Species of Concern, Special Status, Important Animal Habitat, Species of Potential Concern

Other Potential Species

	Spec Regs	Predicted Model	Range
M - North American Porcupine *(Erethizon dorsatum)* SOPC			Y
B - Golden Eagle *(Aquila chrysaetos)* SOC			Y
B - Short-eared Owl *(Asio flammeus)* SOPC			Y
A - Great Plains Toad *(Anaxyrus cognatus)* SOC			Y
M - Merriam's Shrew *(Sorex merriami)* SOC			Y
B - Dickcissel *(Spiza americana)* SOPC			S M
B - Long-billed Curlew *(Numenius americanus)* SOC			S M
M - Little Brown Myotis *(Myotis lucifugus)* SOC			Y
M - Preble's Shrew *(Sorex preblei)* SOC			Y
M - Silver-haired Bat *(Lasionycteris noctivagans)* SOC			Y
R - Greater Short-horned Lizard *(Phrynosoma hernandesi)* SOC			Y
R - North American Snapping Turtle *(Chelydra serpentina)* SOC			Y

M - North American Porcupine *(Erethizon dorsatum)* SOPC
View in MONTANA FIELD GUIDE™ | View Predicted Models | View Range Maps
Species of Potential Concern - Native Species Global: **G5** State: **S3S4** FWP SWAP: **SGCN**
Predicted Models: M 100% Moderate (inductive), L 0% Low (inductive)

B - Golden Eagle *(Aquila chrysaetos)* SOC
View in MONTANA FIELD GUIDE™ | View Predicted Models | View Range Maps
Species of Concern - Native Species Global: **G5** State: **S3** USFWS: **BGEPA; MBTA** BLM: **SENSITIVE** FWP SWAP: **SGCN**
Predicted Models: M 100% Moderate (inductive), L 0% Low (inductive)

B - Short-eared Owl *(Asio flammeus)* SOPC
View in MONTANA FIELD GUIDE™ | View Predicted Models | View Range Maps
Species of Potential Concern - Native Species Global: **G5** State: **S4** USFWS: **MBTA; BCC11; BCC17** FWP SWAP: **SGIN** PIF: **3**
Predicted Models: M 100% Moderate (inductive), L 0% Low (inductive)

A - Great Plains Toad *(Anaxyrus cognatus)* SOC
View in MONTANA FIELD GUIDE™ | View Predicted Models | View Range Maps
Species of Concern - Native Species Global: **G5** State: **S3** BLM: **SENSITIVE** FWP SWAP: **SGCN**
Predicted Models: M 100% Moderate (inductive), L 0% Low (inductive)

M - Merriam's Shrew *(Sorex merriami)* SOC
View in MONTANA FIELD GUIDE™ | View Predicted Models | View Range Maps
Species of Concern - Native Species Global: **G4** State: **S3** FWP SWAP: **SGCN**
Predicted Models: M 100% Moderate (inductive)

B - Dickcissel *(Spiza americana)* SOPC
View in MONTANA FIELD GUIDE™ | View Predicted Models | View Range Maps
Species of Potential Concern - Native Species Global: **G5** State: **S4B** USFWS: **MBTA**
Predicted Models: M 100% Moderate (inductive)

B - Long-billed Curlew *(Numenius americanus)* SOC
View in MONTANA FIELD GUIDE™ | View Predicted Models | View Range Maps
Species of Concern - Native Species Global: **G4** State: **S3B** USFWS: **MBTA; BCC11** BLM: **SENSITIVE** FWP SWAP: **SGCN** PIF: **2**
Predicted Models: M 100% Moderate (inductive)

M - Little Brown Myotis *(Myotis lucifugus)* SOC
View in MONTANA FIELD GUIDE™ | View Predicted Models | View Range Maps
Species of Concern - Native Species Global: **G3G4** State: **S2S3** USFS: **Sensitive - Known in Forests (BD, BRT, KOOT)** FWP SWAP: **SGCN**
Predicted Models: M 1% Moderate (inductive), L 99% Low (inductive)

M - Preble's Shrew *(Sorex preblei)* SOC
View in MONTANA FIELD GUIDE™ | View Predicted Models | View Range Maps
Species of Concern - Native Species Global: **G4** State: **S3** FWP SWAP: **SGCN**
Predicted Models: M 1% Moderate (inductive), L 99% Low (inductive)

M - Silver-haired Bat *(Lasionycteris noctivagans)* SOC
View in MONTANA FIELD GUIDE™ | View Predicted Models | View Range Maps
Species of Concern - Native Species Global: **G4** State: **S3** FWP SWAP: **SGCN**
Predicted Models: M 1% Moderate (inductive), L 99% Low (inductive)

R - Greater Short-horned Lizard *(Phrynosoma hernandesi)* SOC
View in MONTANA FIELD GUIDE™ | View Predicted Models | View Range Maps
Species of Concern - Native Species Global: **G4** State: **S3** BLM: **SENSITIVE** FWP SWAP: **SGCN**
Predicted Models: M 1% Moderate (inductive), L 99% Low (inductive)

R - North American Snapping Turtle *(Chelydra serpentina)* SOC
View in MONTANA FIELD GUIDE™ | View Predicted Models | View Range Maps
Species of Concern - Native/Non-native Species - (depends on location or taxa) Global: **G4G5** State: **S3** BLM: **SENSITIVE** FWP SWAP: **SGCN**
Predicted Models: M 1% Moderate (inductive), L 99% Low (inductive)

A - Northern Leopard Frog *(Lithobates pipiens)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G5** State: **S3S4** USFS: **Sensitive - Suspected in Forests (KOOT, LOLO)** BLM: **SENSITIVE** FWP SWAP: **SGCN**
Predicted Models: M 1% Moderate (inductive), L 99% Low (inductive)

I - Bombus occidentalis *(Western Bumble Bee)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G3** State: **S2** USFS: **Sensitive - Known in Forests (BD, BRT, KOOT)** BLM: **SENSITIVE** FWP SWAP: **SGCN**
Predicted Models: M 1% Moderate (inductive), L 99% Low (inductive)

I - Bombus suckleyi *(Suckley's Cuckoo Bumble Bee)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G2G3** State: **S1** USFWS: **P** FWP SWAP: **SGCN**
Predicted Models: M 1% Moderate (inductive), L 99% Low (inductive)

M - Eastern Red Bat *(Lasiurus borealis)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G3G4** State: **S3B** BLM: **SENSITIVE** FWP SWAP: **SGCN**
Predicted Models: M 1% Moderate (inductive), L 99% Low (inductive)

M - Northern Hoary Bat *(Lasiurus cinereus)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G3G4** State: **S3B** BLM: **SENSITIVE** FWP SWAP: **SGCN**
Predicted Models: M 1% Moderate (inductive), L 99% Low (inductive)

B - American Bittern *(Botaurus lentiginosus)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G5** State: **S3B** USFWS: **MBTA** BLM: **SENSITIVE** FWP SWAP: **SGCN** PIF: **3**
Predicted Models: M 1% Moderate (inductive), L 99% Low (inductive)

B - Black-crowned Night Heron *(Nycticorax nycticorax)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G5** State: **S3B** USFWS: **MBTA** FWP SWAP: **SGCN** PIF: **3**
Predicted Models: M 1% Moderate (inductive), L 99% Low (inductive)

B - Ferruginous Hawk *(Buteo regalis)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G4** State: **S3B** USFWS: **MBTA; BCC17** BLM: **SENSITIVE** FWP SWAP: **SGCN** PIF: **2**
Predicted Models: M 1% Moderate (inductive), L 99% Low (inductive)

I - Danaus plexippus *(Monarch)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G4** State: **S2S3** USFWS: **P** USFS: **Sensitive - Migratory in Forests (BD, BRT, KOOT)** FWP SWAP: **SGCN**
Predicted Models: M 1% Moderate (inductive), L 99% Low (inductive)

B - Yellow-billed Cuckoo *(Coccyzus americanus)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G5** State: **S2B** USFWS: **PS: LT; MBTA** BLM: **THREATENED** FWP SWAP: **SGCN** PIF: **2**
Predicted Models: M 1% Moderate (inductive), L 1% Low (inductive)

V - Potentilla plattensis *(Platte Cinquefoil)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G4** State: **S3** Plant Threat Score: **No Known Threats** CCVI: **Highly Vulnerable**
Predicted Models: M 1% Moderate (inductive)

B - White-faced Ibis *(Plegadis chihi)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G5** State: **S3B** USFWS: **MBTA** BLM: **SENSITIVE** FWP SWAP: **SGCN** PIF: **2**
Predicted Models: M 1% Moderate (inductive)

M - Fringed Myotis *(Myotis thysanodes)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G4** State: **S3** BLM: **SENSITIVE** FWP SWAP: **SGCN**
Predicted Models: L 100% Low (inductive)

M - Long-eared Myotis *(Myotis evotis)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G5** State: **S3** FWP SWAP: **SGCN**
Predicted Models: L 100% Low (inductive)

M - Long-legged Myotis *(Myotis volans)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G4G5** State: **S3** FWP SWAP: **SGCN**
Predicted Models: L 100% Low (inductive)

M - Prairie Shrew *(Sorex haydeni)* SOPC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Potential Concern - Native Species Global: **G5** State: **S3S4** FWP SWAP: **SGCN**
Predicted Models: L 100% Low (inductive)

B - Great Blue Heron *(Ardea herodias)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G5** State: **S3** USFWS: **MBTA** FWP SWAP: **SGCN**
Predicted Models: L 100% Low (inductive)

B - Sharp-tailed Grouse *(Tympanuchus phasianellus)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G5** State: **S3S4** FWP SWAP: **SGCN** PIF: **2**
Predicted Models: L 100% Low (inductive)

R - Western Hog-nosed Snake *(Heterodon nasicus)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G5** State: **S3** BLM: **SENSITIVE** FWP SWAP: **SGCN**
Predicted Models: L 100% Low (inductive)

R - Western Milksnake *(Lampropeltis gentilis)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G5** State: **S3** BLM: **SENSITIVE** FWP SWAP: **SGCN**
Predicted Models: L 100% Low (inductive)

I - Bombus pensylvanicus *(American Bumble Bee)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G3G4** State: **S3** FWP SWAP: **SGCN**
Predicted Models: L 100% Low (inductive)

V - Atriplex canescens *(Four-wing Saltbush)* SOPC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Potential Concern - Native Species Global: **G5** State: **S4** Plant Threat Score: **Unknown**
Predicted Models: L 100% Low (inductive)

V - Elodea bifoliata *(Long-sheath Waterweed)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G4G5** State: **S2?** Plant Threat Score: **No Known Threats**
Predicted Models: L 100% Low (inductive)

M - Spotted Bat *(Euderma maculatum)* SOPC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Potential Concern - Native Species Global: **G4** State: **SU** BLM: **SENSITIVE** FWP SWAP: **SGIN**
Predicted Models: L 100% Low (inductive)

B - American White Pelican *(Pelecanus erythrorhynchos)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G4** State: **S3B** USFWS: **MBTA** FWP SWAP: **SGCN** PIF: **3**
Predicted Models: L 100% Low (inductive)

B - Baird's Sparrow *(Centronyx bairdii)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G4** State: **S3B** USFWS: **MBTA; BCC11; BCC17** BLM: **SENSITIVE** FWP SWAP: **SGCN** PIF: **1**
Predicted Models: L 100% Low (inductive)

B - Black-necked Stilt *(Himantopus mexicanus)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G5** State: **S3B** USFWS: **MBTA** FWP SWAP: **SGCN** PIF: **3**
Predicted Models: L 100% Low (inductive)

B - Bobolink *(Dolichonyx oryzivorus)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G5** State: **S3B** USFWS: **MBTA; BCC10; BCC11; BCC17** FWP SWAP: **SGCN** PIF: **3**
Predicted Models: L 100% Low (inductive)

B - Cassin's Kingbird *(Tyrannus vociferans)* SOPC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Potential Concern - Native Species Global: **G5** State: **S4B** USFWS: **MBTA**
Predicted Models: L 100% Low (inductive)

B - Chestnut-collared Longspur *(Calcarius ornatus)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G5** State: **S2B** USFWS: **MBTA; BCC11; BCC17** BLM: **SENSITIVE** FWP SWAP: **SGCN** PIF: **2**
Predicted Models: L 100% Low (inductive)

B - Common Poorwill *(Phalaenoptilus nuttallii)* SOPC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Potential Concern - Native Species Global: **G5** State: **S4B** USFWS: **MBTA** FWP SWAP: **SGIN** PIF: **3**
Predicted Models: L 100% Low (inductive)

B - Sprague's Pipit *(Anthus spragueii)* SOC

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps
Species of Concern - Native Species Global: **G3G4** State: **S3B** USFWS: **MBTA; BCC11; BCC17** BLM: **SENSITIVE** FWP SWAP: **SGCN** PIF: **1**
Predicted Models: L 100% Low (inductive)

B - Thick-billed Longspur *(Rhynchophanes mccownii)* **SOC**

View in MONTANA FIELD GUIDE™ **View Predicted Models** **View Range Maps**

Species of Concern - Native Species Global: **G4** State: **S3B** USFWS: **MBTA; BCC10; BCC11; BCC17** BLM: **SENSITIVE** FWP SWAP: **SGCN** PIF: **2**

Predicted Models: L 100% Low (inductive)

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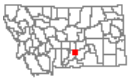

Latitude	Longitude
46.01243	-108.86805
46.03011	-108.89216

Structured Surveys

Summarized by: **Quantica Big Sky Campus Well** *(Custom Area of Interest)*

The Montana Natural Heritage Program (MTNHP) records information on the locations where more than 80 different types of well-defined repeatable survey protocols capable of detecting an animal species or suite of animal species have been conducted by state, federal, tribal, university, or private consulting biologists. Examples of structured survey protocols tracked by MTNHP include: visual encounter and dip net surveys for pond breeding amphibians, point counts for birds, call playback surveys for selected bird species, visual surveys of migrating raptors, kick net stream reach surveys for macroinvertebrates, visual encounter cover object surveys for terrestrial mollusks, bat acoustic or mist net surveys, pitfall and/or snap trap surveys for small terrestrial mammals, track or camera trap surveys for large mammals, and trap surveys for turtles. Whenever possible, photographs of survey locations are stored in MTNHP databases.

MTNHP does not typically manage information on structured surveys for plants; surveys for invasive species may be a future exception.

Within the report area you have requested, structured surveys are summarized by the number of each type of structured survey protocol that has been conducted, the number of species detections/observations resulting from these surveys, and the most recent year a survey has been conducted.

E-Eastern Heath Snail *(Eastern Heath Snail Survey)* **Survey Count**: 1 **Obs Count**: **Recent Survey**: 2012

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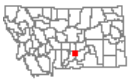

Latitude	Longitude
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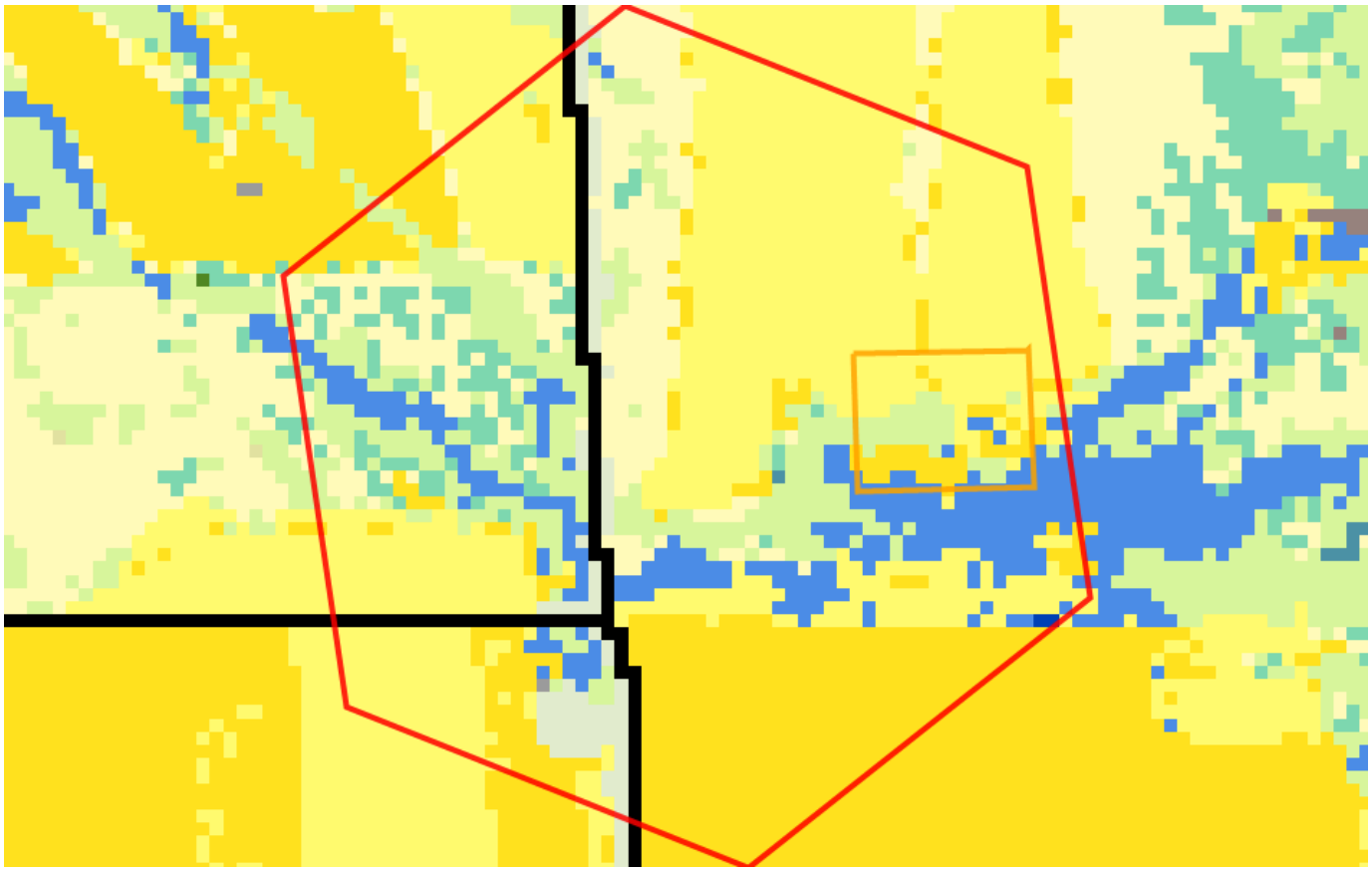
Land Cover

Summarized by: **Quantica Big Sky Campus Well** *(Custom Area of Interest)*



38% (*246 Acres*)

Human Land Use
Agriculture
Pasture/Hay, Dryland

These agriculture lands typically have perennial herbaceous cover (e.g. regularly-shaped plantings) used for livestock grazing or the production of hay. There are obvious signs of management such as haying that distinguish it from natural grasslands.

20% (*125 Acres*)

Human Land Use
Agriculture
Cultivated Crops, Dryland

These agriculture lands are used for the production of crops without irrigation, such as wheat, barley, pulses, and oilseeds, typically on an annual cycle. Agricultural plant cover is variable depending on season and type of farming.

12% (*75 Acres*)

Grassland
Lowland - Prairie Grassland
Great Plains Dry Mixedgrass Prairie **HGCN**

This National Vegetation Classification Group of Dry Mixedgrass Prairie is the dominant grassland group across the prairie region in Montana. It is characterized by sparse to dense cover of various short to mid-statured, perennial grasses. Some sites within this group support a short or dwarf-shrub component with a layer of grasses. Dominant species include the following cool season grasses; Needle-and-Thread (*Stipa comata*), Western Wheatgrass (*Elymus smithii*), Bluebunch Wheatgrass (*Elymus spicatus*), Thickspike Wheatgrass (*Elymus lanceolatus*) and Prairie Junegrass (*Koeleria macrantha*) Blue Grama (*Bouteloua gracilis*) and Little Bluestem (*Schizachyrium scoparium*) are common warm-season grass at some sites. Upland sedges, such as *Carex inops* ssp. heliophila and *Carex filifolia*, are important components of some sites. Short and dwarf-shrubs are common components of some mixedgrass prairie communities and as a result, the Dry Mixedgrass Prairies transition readily into shrub-steppe communities of G302 and G310 as well as some Badlands and Sparsely-Vegetated communities. More mesic grassland sites are part of the much less common G141 - Great Plains Mesic Mixedgrass Prairie while sandy sites are part of G889 - Great Plains Sand Prairie. This group is separated from G141 - Great Plains Mixedgrass Prairie Group based on soil moisture and species composition. Stronger constancy and dominance of the short and mid grasses, distinguish this type from the related mesic mixedgrass types. Strong grazing pressures on mesic mixedgrass prairies, which increases the shortgrass component, can blur the distinction between the two types.

This group includes the majority of the Great Plains Mixedgrass Prairie Ecological System excluding the more mesic communities.

12% (*75 Acres*)

Shrubland
Sagebrush Shrubland

Basin and Wyoming Big (Threetip) Sagebrush Shrubland HOC HGCN

This National Vegetation Classification Group is a xeric shrubland group that is widespread and sometimes a landscape dominant east of the Continental Divide. It is primarily dominated by Wyoming Big Sagebrush communities, though it also includes more localized communities dominated by Basin Big Sagebrush in southwest Montana and by small patches of Threetip Sagebrush or Antelope Bitterbrush. Shrub cover is sparse to dense and consists of shrubs typically 1-3ft. tall, though heights may be up to twice that in the case of Basin Big Sagebrush. Other shrub species are occasionally present. Perennial, herbaceous species typically contribute greater than 25% vegetative cover and often consists of both rhizomatous and bunch-forming graminoids, with a diversity of perennial forbs. These habitats typically occur in broad basins between mountain ranges, and on plains and in the foothills. Typical elevations are from 3,000-5,000ft for Wyoming Big Sagebrush communities though the group extends to elevations of approx 7,000ft for communities dominated by Antelope Bitterbrush, Basin Big Sagebrush and Threetip Sagebrush. The group occurs as an extensive matrix on level to gently rolling plains, on toeslopes and in valley bottoms, as well as in small and large patches in dissected landscapes such as breaks and badlands. It can occur on all aspects. Soils are shallow, fine to coarse textured, well drained and mostly non-saline.

Some communities in this group provide important wildlife habitat for species such as Sage Grouse and Pronghorn as well as many other animal and plant species.

This group encompasses the Big Sagebrush Steppe and the Big Sagebrush Shrubland Ecological Systems.

9% (*58 Acres*)

Wetland and Riparian
Riparian and Wetland Forest

Great Plains Floodplain Forest HOC HGCN

This National Vegetation Classification Group occurs along rivers and larger streams across the Great Plains region in Montana. It is most prevalent along the major prairie rivers in the eastern third of the state. Riparian forest and woodland communities in this groups are typically dominated or co-dominated by Eastern Cottonwood (*Populus deltoides*), Green Ash (*Fraxinus pennsylvanica*), Boxelder (*Acer negundo*), American Elm (*Ulmus americana*), and/or Peachleaf Willow (*Salix amygdaloides*). Communities dominated or co-dominated by Eastern Cottonwood are most common while those dominated or co-dominated by American Elm (*Ulmus americana*) are the least abundant. The tree canopy can be open to closed and is generally >25% and can range from about 30-50ft in height. The shrub and herbaceous strata can range from nearly absent to dense. Periodic flooding is important in establishing and maintaining stands of this group. Flooding regime (frequency, severity, duration) is also important in shaping the understory composition and structure. Scouring and deposition during flooding create areas of new bare mineral soil necessary for Eastern Cottonwood regeneration.

This group is similar to the Great Plains Floodplain and the Great Plains Riparian Ecological Systems.

3% (*22 Acres*)

Wetland and Riparian
Alkaline - Saline Wetlands

Greasewood Shrubland HGCN

This National Vegetation Classification Group is a minor type that occurs in the valleys of southwest Montana, in the Bighorn Basin in Carbon County and on the Great Plains of central and eastern MT. These communities usually consist of open to moderately dense shrubs dominated by Black Greasewood (*Sarcobatus vermiculatus*) with a sparse graminoid understory. It is found on nearly level, older alluvial terraces on broad or narrow floodplains and alluvial fans in valley bottoms. It may also occur on broad expanses along lake shores and playas. Sites typically have saline or alkaline soils and a shallow water table. They flood intermittently, but the surface is dry for most of the growing season. The water table remains high enough to maintain vegetation, despite salt accumulations. In many cases, fine textured soils result in a perched water table.

As originally defined, this group is limited to arid regions of the Intermountain West, including southwest Montana and the Bighorn Basin with greasewood communities in the Great Plains Region included in G566 (Great Plains Sparsely-Vegetated Badlands) or G984 (Great Plains Saline Wet Meadow & Marsh). However, greasewood communities are mapped by NatureServe and in the Montana Landcover Layer as continuing onto the Great Plains. As such, the concept adopted here does not specifically limit these communities to the Intermountain West.

This group encompasses the portion of the Greasewood Flat Ecological System that occurs in the Intermountain Basins of southwest MT and in the Bighorn Basin in south-central MT.

3% (*19 Acres*)

Human Land Use
Developed

Developed - Vegetation

Vegetation (primarily grasses) planted in developed settings for recreation, erosion control, or aesthetic purposes. Impervious surfaces account for less than 20% of total cover. This category often includes highway and railway rights of way and graveled rural roads.

3% (*19 Acres*)

Human Land Use
Transportation

Other Road

County, city and or rural roads generally open to motor vehicles.

Additional Limited Land Cover

<1% (*0 Acres*) Open Water Classified in 2025 Land Cover

<1% (*0 Acres*) Developed - Low and Medium Intensity

<1% (*0 Acres*) Great Plains Saline Marsh and Wet Meadow HGCN

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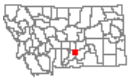

Latitude	Longitude
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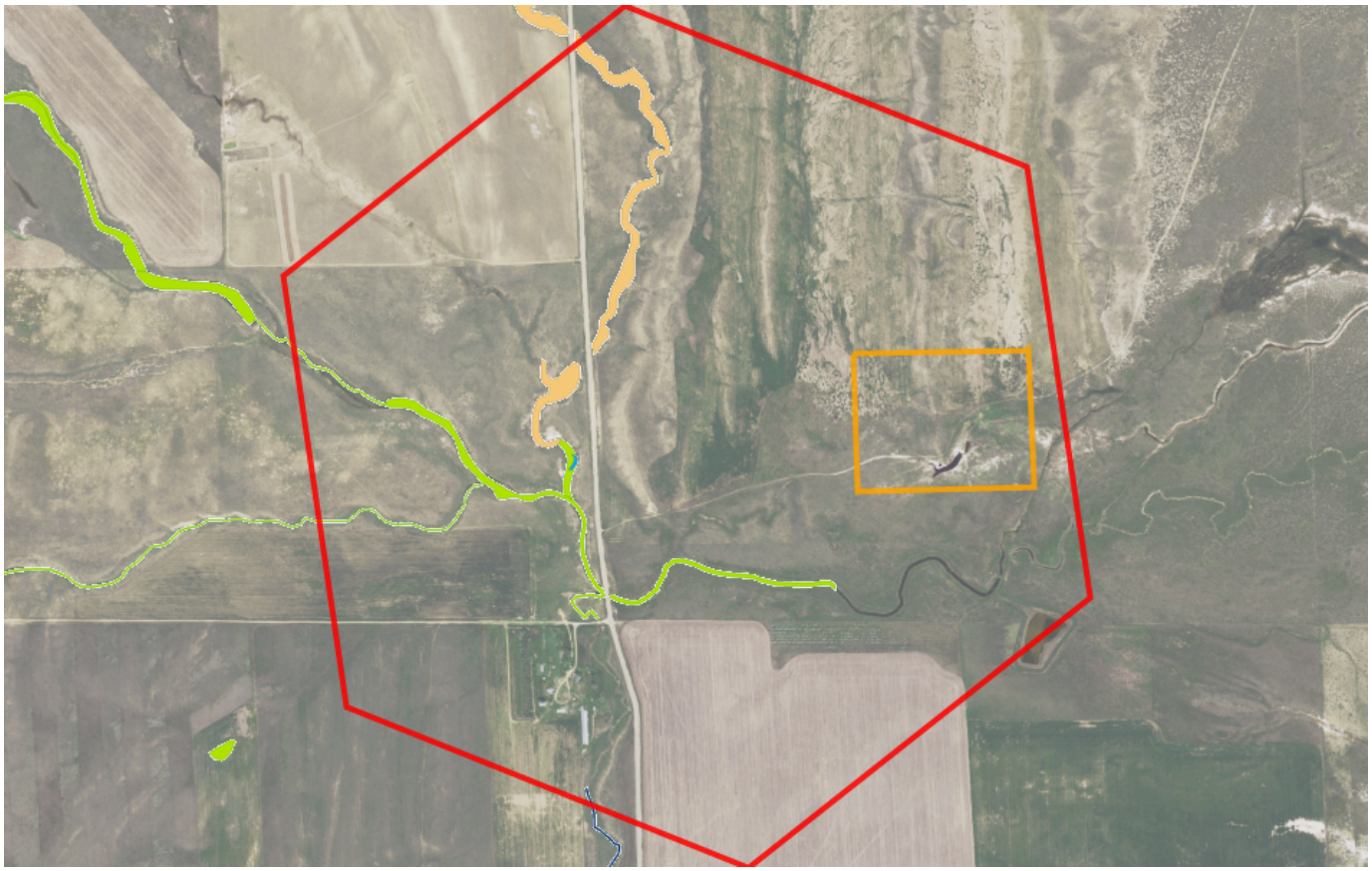
Wetland and Riparian

Summarized by: **Quantica Big Sky Campus Well** *(Custom Area of Interest)*



Wetland and Riparian Mapping

P - Palustrine

AB - Aquatic Bed

F - Semipermanently Flooded <1 Acres

(no modifier) **<1 Acres** **PABF**

P - Palustrine, AB - Aquatic Bed
Wetlands with vegetation growing on or below the water surface for most of the growing season.

EM - Emergent

1 - Persistent

A - Temporarily Flooded 1 Acres

(no modifier) **1 Acres** **PEM1A**

C - Seasonally Flooded 4 Acres

(no modifier) **4 Acres** **PEM1C**

P - Palustrine, EM - Emergent
Wetlands with erect, rooted herbaceous vegetation present during most of the growing season.

R - Riverine (Rivers)

4 - Intermittent

SB - Stream Bed

A - Temporarily Flooded <1 Acres

(no modifier) **<1 Acres** **R4SBA**

R - Riverine (Rivers), 4 - Intermittent, SB - Stream Bed
Active channel that contains periodic water flow.

Rp - Riparian

1 - Lotic

EM - Emergent

(no modifier) **6 Acres** **Rp1EM**

Rp - Riparian, 1 - Lotic, EM - Emergent
Riparian areas that have erect, rooted herbaceous vegetation during most of the growing season.

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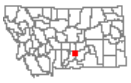

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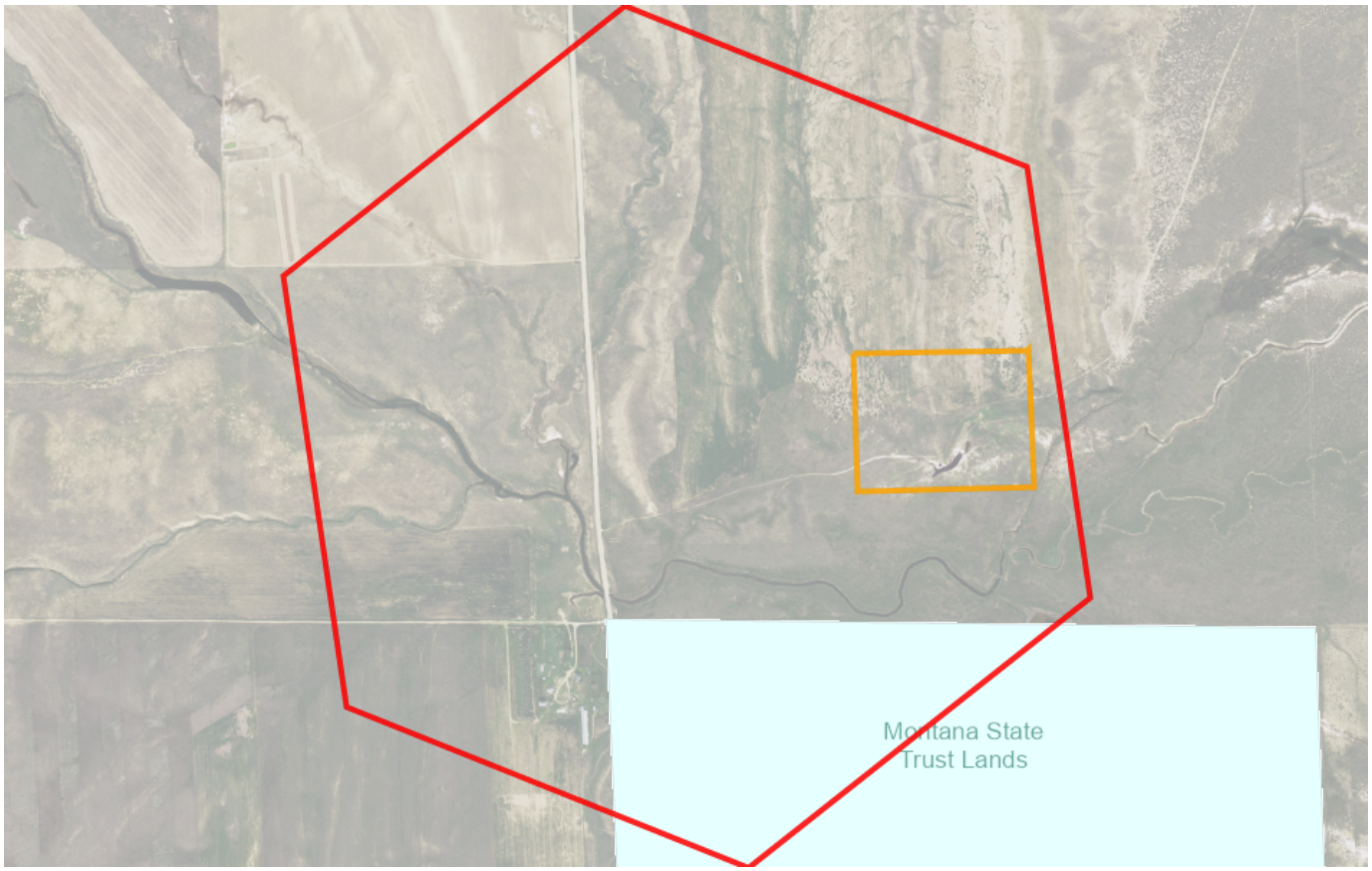
Land Management

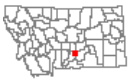
Summarized by: **Quantica Big Sky Campus Well** *(Custom Area of Interest)*



Land Management Summary

	Ownership	Easements	Other Boundaries (possible overlap)
Public Lands	**89 Acres (14%)**		
State	89 Acres (14%)		
Montana State Trust Lands	89 Acres (14%)		
Montana State Trust Lands	89 Acres (14%)		
Private Lands, Tribal Lands, or Unknown Ownership	**550 Acres (86%)**		
	550 Acres (86%)		

A program of the **Montana State Library's Natural Resource Information System**



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Biological Reports

Summarized by: **Quantica Big Sky Campus Well** *(Custom Area of Interest)*

Within the report area you have requested, citations for all reports and publications associated with plant or animal observations in Montana Natural Heritage Program (MTNHP) databases are listed and, where possible, links to the documents are included.

The MTNHP plans to include reports associated with terrestrial and aquatic communities in the future as allowed for by staff resources. If you know of reports or publications associated with species or biological communities within the report area that are not shown in this report, please let us know: mtnhp@mt.gov

No Biological Reports were found in the selected area

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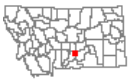
Legend

Model Icons	Habitat Icons	Range Icons	Num Obs
N Suitable (native range)	C Common	N Non-native	Count of obs with 'good precision' (<=1000m)
O Optimal Suitability	O Occasional		+ indicates additional 'poor precision' obs (1001m-10,000m)
M Moderate Suitability			
L Low Suitability			
I Suitable (introduced range)			



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Invasive and Pest Species

Summarized by: **Quantica Big Sky Campus Well** *(Custom Area of Interest)*

	# Obs	Predicted Model	Range

Aquatic Invasive Species

V - Nymphaea odorata *(American Water-lily)* **AIS**

View in MONTANA FIELD GUIDE™ **View Predicted Models** **View Range Maps**
Aquatic Invasive Species - Non-native Species Global: **G5** State: **SNA**
Predicted Models: I 100% Suitable (introduced range) (deductive)

V - Nymphoides peltata *(Yellow Floating Heart)* **AIS**

View in MONTANA FIELD GUIDE™ **View Predicted Models** **View Range Maps**
Aquatic Invasive Species - Non-native Species Global: **G5** State: **SNA**
Predicted Models: I 100% Suitable (introduced range) (deductive)

Noxious Weeds: Priority 1A

V - Isatis tinctoria *(Dyer's Woad)* **N1A**

View in MONTANA FIELD GUIDE™ **View Predicted Models** **View Range Maps**
Noxious Weed: Priority 1A - Non-native Species Global: **GNR** State: **SNA**
Predicted Models: L 100% Low (inductive)

Noxious Weeds: Priority 2A

V - Ventenata dubia *(Ventenata)* **N2A**

View in MONTANA FIELD GUIDE™ **View Predicted Models** **View Range Maps**
Noxious Weed: Priority 2A - Non-native Species Global: **GNR** State: **SNA**
Predicted Models: L 100% Low (inductive)

Noxious Weeds: Priority 2B

V - Centaurea stoebe *(Spotted Knapweed)* **N2B**

View in MONTANA FIELD GUIDE™ **View Predicted Models** **View Range Maps**
Noxious Weed: Priority 2B - Non-native Species Global: **GNR** State: **SNA**
Predicted Models: M 100% Moderate (inductive), L 0% Low (inductive)

V - Convolvulus arvensis *(Field Bindweed)* **N2B**

View in MONTANA FIELD GUIDE™ **View Predicted Models** **View Range Maps**
Noxious Weed: Priority 2B - Non-native Species Global: **GNR** State: **SNA**
Predicted Models: M 100% Moderate (inductive), L 0% Low (inductive)

V - Lepidium draba *(Whitetop)* **N2B**

View in MONTANA FIELD GUIDE™ **View Predicted Models** **View Range Maps**
Noxious Weed: Priority 2B - Non-native Species Global: **GNR** State: **SNA**
Predicted Models: M 100% Moderate (inductive), L 0% Low (inductive)

V - Acroptilon repens *(Russian Knapweed)* **N2B**

View in MONTANA FIELD GUIDE™ **View Predicted Models** **View Range Maps**
Noxious Weed: Priority 2B - Non-native Species Global: **GNR** State: **SNA**
Predicted Models: L 100% Low (inductive)

V - Centaurea diffusa *(Diffuse Knapweed)* **N2B**

View in MONTANA FIELD GUIDE™ **View Predicted Models** **View Range Maps**
Noxious Weed: Priority 2B - Non-native Species Global: **GNR** State: **SNA**
Predicted Models: L 100% Low (inductive)

V - Cirsium arvense *(Canada Thistle)* **N2B**

View in MONTANA FIELD GUIDE™ **View Predicted Models** **View Range Maps**
Noxious Weed: Priority 2B - Non-native Species Global: **G5** State: **SNA**
Predicted Models: L 100% Low (inductive)

V - Cynoglossum officinale *(Common Hound's-tongue)* **N2B**

View in MONTANA FIELD GUIDE™ **View Predicted Models** **View Range Maps**
Noxious Weed: Priority 2B - Non-native Species Global: **GNR** State: **SNA**
Predicted Models: L 100% Low (inductive)

V - Euphorbia virgata *(Leafy Spurge)* **N2B**

View in MONTANA FIELD GUIDE™ **View Predicted Models** **View Range Maps**
Noxious Weed: Priority 2B - Non-native Species Global: **GNR** State: **SNA**
Predicted Models: L 100% Low (inductive)

V - Linaria dalmatica *(Dalmatian Toadflax)* **N2B**

View in MONTANA FIELD GUIDE™ **View Predicted Models** **View Range Maps**
Noxious Weed: Priority 2B - Non-native Species Global: **G5** State: **SNA**
Predicted Models: L 100% Low (inductive)

V - Tamarix ramosissima *(Salt Cedar)* N2B

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps

Noxious Weed: Priority 2B - Non-native Species Global: **GNR** State: **SNA**

Predicted Models: L 100% Low (inductive)

Regulated Weeds: Priority 3

V - Bromus tectorum *(Cheatgrass)* R3

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps

Regulated Weed: Priority 3 - Non-native Species Global: **GNR** State: **SNA**

Predicted Models: L 100% Low (inductive)

V - Elaeagnus angustifolia *(Russian Olive)* R3 1

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps

Regulated Weed: Priority 3 - Non-native Species Global: **GNR** State: **SNA**

Predicted Models: L 100% Low (inductive)

Yellowstone County Noxious Weeds

V - Chorispora tenella *(Common Blue-mustard)* Not Assessed

View in MONTANA FIELD GUIDE™

Non-native Species Global: **GNR** State: **SNA**

V - Conium maculatum *(Poison Hemlock)* Not Assessed

View in MONTANA FIELD GUIDE™

Non-native Species Global: **G5** State: **SNA**

V - Dipsacus fullonum *(Common Teasel)* Not Assessed

View in MONTANA FIELD GUIDE™

Non-native Species Global: **GNR** State: **SNA**

V - Onopordum acanthium *(Scotch Thistle)* Not Assessed

View in MONTANA FIELD GUIDE™

Non-native Species Global: **GNR** State: **SNA**

V - Tribulus terrestris *(Puncture-vine)* Not Assessed

View in MONTANA FIELD GUIDE™

Non-native Species Global: **GNR** State: **SNA**

V - Verbascum thapsus *(Common Mullein)* Not Assessed

View in MONTANA FIELD GUIDE™

Non-native Species Global: **GNR** State: **SNA**

Biocontrol Species

I - Mecinus janthiniformis *(Dalmatian Toadflax Stem-boring Weevil)* BIOCNTRL

View in MONTANA FIELD GUIDE™ View Predicted Models View Range Maps

Biocontrol Species - Non-native Species Global: **GNR** State: **SNA**

Predicted Models: L 100% Low (inductive)

Introduction to Montana Natural Heritage Program

PO Box 201800 • 1201 11th Avenue • Helena, MT 59620-1800 • fax 406.444.0266 • phone 406.444.3989 • mtnhp.mt.gov

Introduction

The Montana Natural Heritage Program (MTNHP) is Montana's source for reliable and objective information on Montana's native species and habitats, emphasizing those of conservation concern. MTNHP was created by the Montana legislature in 1983 as part of the Natural Resource Information System (NRIS) at the Montana State Library (MSL). MTNHP is "a program of information acquisition, storage, and retrieval for data relating to the flora, fauna, and biological community types of Montana" (MCA 90-15-102). MTNHP's activities are guided by statute as well as through ongoing interaction with, and feedback from, principal data source agencies such as Montana Fish, Wildlife, and Parks, the Montana Department of Environmental Quality, the Montana Department of Natural Resources and Conservation, the Montana University System, the US Forest Service, and the US Bureau of Land Management. Since the first staff was hired in 1985, the Program has logged a long record of success, and developed into a highly respected, service-oriented program. MTNHP is widely recognized as one of the most advanced and effective of over 60 natural heritage programs that are distributed across North America.

Vision

Our vision is that public agencies, the private sector, the education sector, and the general public will trust and rely upon MTNHP as the source for information and expertise on Montana's species and habitats, especially those of conservation concern. We strive to provide easy access to our information to allow users to save time and money, speed environmental reviews, and make informed decisions.

Core Values

- We endeavor to be a single statewide source of accurate and up-to-date information on Montana's plants, animals, and aquatic and terrestrial biological communities.
- We actively listen to our data users and work responsively to meet their information and training needs.
- We strive to provide neutral, trusted, timely, and equitable service to all of our information users.
- We make every effort to be transparent to our data users in setting work priorities and providing data products.

Confidentiality

All information requests made to the Montana Natural Heritage Program are considered library records and are protected from disclosure by the Montana Library Records Confidentiality Act (MCA 22-1-11).

Information Managed

Information managed at the Montana Natural Heritage Program is botanical, zoological, and ecological information that describes the distribution (e.g., observations, structured surveys, range polygons, predicted habitat suitability models), conservation status (e.g., global and state conservation status ranks, including threats), and other supporting information (e.g., accounts and references) on the biology and ecology of species and biological communities.

Data Use Terms and Conditions

- Montana Natural Heritage Program (MTNHP) products and services are based on biological data and the objective interpretation of those data by professional scientists. MTNHP does not advocate any particular philosophy of natural resource protection, management, development, or public policy.
- MTNHP has no natural resource management or regulatory authority. Products, statements, and services from MTNHP are intended to inform parties as to the state of scientific knowledge about certain natural resources, and to further develop that knowledge. The information is not intended as natural resource management guidelines or prescriptions or a determination of environmental impacts. MTNHP recommends consultation with appropriate state, federal, and tribal resource management agencies and authorities in the area where your project is located.
- Information on the status and spatial distribution of biological resources produced by MTNHP are intended to inform parties of the state-wide status, known occurrence, or the likelihood of the presence of those resources. **These products are not intended to substitute for field-collected data, nor are they intended to be the sole basis for natural resource management decisions.**
- MTNHP does not portray its data as exhaustive or comprehensive inventories of rare species or biological communities. **Field verification of the absence or presence of sensitive species and biological communities will always be an important obligation of users of our data.**
- MTNHP responds equally to all requests for products and services, regardless of the purpose or identity of the requester.
- Because MTNHP constantly updates and revises its databases with new data and information, products will become outdated over time. Interested parties are encouraged to obtain the most current information possible from MTNHP, rather than using older products. We add, review, update, and delete records on a daily basis. Consequently, we strongly advise that you update your MTNHP data sets at a minimum of every four months for most applications of our information.
- MTNHP data require a certain degree of biological expertise for proper analysis, interpretation, and application. Our staff is available to advise you on questions regarding the interpretation or appropriate use of the data that we provide. See Contact Information for MTNHP Staff
- The information provided to you by MTNHP may include sensitive data that if publicly released might jeopardize the welfare of threatened, endangered, or sensitive species or biological communities. This information is intended for distribution or use only within your department, agency, or business. Subcontractors may have access to the data during the course of any given project, but should not be given a copy for their use on subsequent, unrelated work.
- MTNHP data are made freely available. Duplication of hard-copy or digital MTNHP products with the intent to sell is prohibited without written consent by MTNHP. Should you be asked by individuals outside your organization for the type of data that we provide, please refer them to MTNHP.
- MTNHP and appropriate staff members should be appropriately acknowledged as an information source in any third-party product involving MTNHP data, reports, papers, publications, or in maps that incorporate MTNHP graphic elements.
- Sources of our data include museum specimens, published and unpublished scientific literature, field surveys by state and federal agencies and private contractors, and reports from knowledgeable individuals. MTNHP actively solicits and encourages additions, corrections and updates, new observations or collections, and comments on any of the data we provide.
- MTNHP staff and contractors do not enter or cross privately-owned lands without express permission from the landowner. However, the program cannot guarantee that information provided to us by others was obtained under adherence to this policy.

Suggested Contacts for Natural Resource Management Agencies

As required by Montana statute (MCA 90-15), the Montana Natural Heritage Program works with state, federal, tribal, nongovernmental organizations, and private partners to ensure that the latest animal and plant distribution and status information is incorporated into our databases so that it can be used to inform a variety of permitting and planning processes and management decisions. We encourage you to contact state, federal, and tribal resource management agencies in the area where your project is located and review the permitting overviews by the Montana Department of Environmental Quality, the Montana Department of Natural Resources and Conservation and the Index of Environmental Permits for Montana for guidelines relevant to your efforts. In particular, we encourage you to contact the Montana Department of Fish, Wildlife, and Parks for the latest data and management information regarding hunted and high-profile management species and to use the U.S. Fish and Wildlife Service's Information Planning and Consultation (IPAC) website regarding U.S. Endangered Species Act listed Threatened, Endangered, or Candidate species.

For your convenience, we have compiled a list of relevant agency contacts and links below:

Montana Fish, Wildlife, and Parks

Fish Species	Zachary Shattuck zshattuck@mt.gov (406) 444-1231
Aquatic Invasive Species	Tom Woolf thomas.woolf@mt.gov (406) 444-1230
American Bison Black-footed Ferret Black-tailed Prairie Dog Bald Eagle Golden Eagle Common Loon Least Tern Piping Plover Whooping Crane	Kristina Smucker ksmucker@mt.gov (406) 444-5209
Grizzly Bear Greater Sage Grouse Trumpeter Swan Big Game Upland Game Birds Furbearers	Brian Wakeling brian.wakeling@mt.gov (406) 444-3940
Managed Terrestrial Game Data	Adam Messer – MFWP GIS Coordinator amesser@mt.gov (406) 444-0095
Fisheries Data and Nongame Animal Data	Adam Messer – MFWP GIS Coordinator amesser@mt.gov (406) 444-0095
Wildlife and Fisheries Scientific Collector's Permits	https://fwp.mt.gov/buyandapply/commercialwildlifeandscientificpermits/scientific Kristina Smucker for Wildlife ksmucker@mt.gov (406) 444-5209 Fisheries Division for Fisheries fwpfishadmin@mt.gov
Fish and Wildlife Recommendations for Subdivision Development	Stevie Burton stevie.burton@mt.gov (406) 594-7354 See https://fwp.mt.gov/conservation/living-with-wildlife/subdivision-recommendations
Regional Contacts 	Region 1 (Kalispell) (406) 752-5501 fwprg12@mt.gov Region 2 (Missoula) (406) 542-5500 fwprg22@mt.gov Region 3 (Bozeman) (406) 577-7900 fwprg3@mt.gov Region 4 (Great Falls) (406) 454-5840 fwprg42@mt.gov Region 5 (Billings) (406) 247-2940 fwprg52@mt.gov Region 6 (Glasgow) (406) 228-3700 fwprg62@mt.gov Region 7 (Miles City) (406) 234-0900 fwprg72@mt.gov

Montana Conservation Districts
Clickable map for contact information across Montana: https://macdnet.org/conservation-district-map/
Montana Association of Conservation Districts Resources Directory: https://macdnet.org/resources

Montana Department of Agriculture
General Contact Information: https://agr.mt.gov/About/Office-Locations/Office-Locations-and-Field-Offices
Noxious Weeds: https://agr.mt.gov/Noxious-Weeds

Montana Department of Environmental Quality
Permitting and Operator Assistance for all Environmental Permits: https://deq.mt.gov/Permitting
Opencut Mining Web Mapping Application for review of opencut mining applications
https://gis.mtdeq.us/portal/apps/webappviewer/index.html?id=7b60084bc4c444a19c9a7a0867e7635a

Montana Department of Natural Resources and Conservation
Montana Sage Grouse Habitat Conservation Program: https://sagegrouse.mt.gov/ (406) 444-6340

Permits and Services: https://dnrc.mt.gov/Permits-Services

Stream Permitting (310, 404, Section 10, SPA 124, floodplain, 318, Navigable Water, and other stream permits)
https://dnrc.mt.gov/licenses-and-permits/stream-permitting/

Montana Floodplains Program https://dnrc.mt.gov/Water-Resources/Floodplains/

Wildfire Resources: https://dnrc.mt.gov/Forestry/Wildfire

Regional Office Contacts: https://dnrc.mt.gov/TrustLand/About/Regional-Offices

Bureau of Land Management

Montana Field Office Contacts:

Billings	(406) 896-5013	Lewistown	(406) 538-1900
Butte	(406) 533-7600	Malta	(406) 654-5100
Dillon	(406) 683-8000	Miles City	(406) 233-2800
Glasgow	(406) 228-3750	Missoula	(406) 329-3914
Havre	(406) 262-2820		

Federal Emergency Management Agency
Region 8 Contacts https://www.fema.gov/about/contact
Montana Disaster and Emergency Services Contacts https://des.mt.gov/DES/Contact-us

Natural Resources Conservation Service
Montana Home Page https://www.nrcs.usda.gov/state-offices/montana
State Office and Employee Directories
https://www.nrcs.usda.gov/contact/state-office-contacts/montana-employee-directory-state-office

United States Environmental Protection Agency
Environmental information, notices, permitting, and contacts https://www.epa.gov/mt
Gateway to state resource locators https://www.envcap.org/srl/index.php

United States Army Corps of Engineers
Montana Regulatory Office for federal permits related to construction in water and wetlands
https://www.nwo.usace.army.mil/Missions/Regulatory-Program/Montana/
Direct Link to Regulatory Request System: https://rrs.usace.army.mil/rrs/home
Email for questions: Montana.Reg@usace.army.mil
Phone for questions: (406) 441-1375

United States Fish and Wildlife Service
Information Planning and Conservation (IPAC) website: https://ipac.ecosphere.fws.gov
Montana Ecological Services Field Office: https://www.fws.gov/office/montana-ecological-services (406) 449-5225
Migratory Bird Joint Ventures: https://www.fws.gov/partner/migratory-bird-joint-ventures

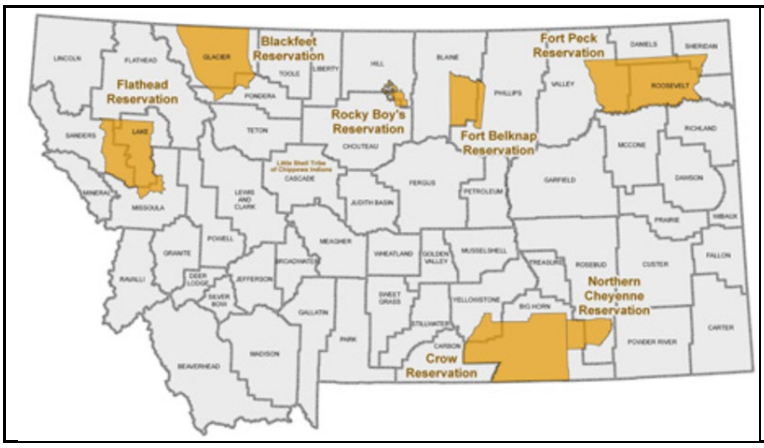
United States Forest Service

Regional Office – Missoula, Montana Contacts

Assistant Regional TES PM	Diane Probasco	diane.probasco@usda.gov	(307) 709-2292
Regional Botanist	Amanda Hendrix	amanda.hendrix@usda.gov	(406) 329-3041
Invasive Species Program Manager	Michelle Cox	michelle.cox2@usda.gov	(406) 329-3669
Regional Hydrologist	Andy Efta	james.efta@usda.gov	(406) 329-3447

Contacts for Northern Region Forests and Districts
https://www.fs.usda.gov/r01 (Select a State and Forest. Forest contact and link to Districts is at the bottom left of each page.)

Tribal Nations – General Websites



Assiniboine & Gros Ventre Tribes – Fort Belknap Reservation
Assiniboine & Sioux Tribes – Fort Peck Reservation
Blackfeet Tribe - Blackfeet Reservation
Chippewa Cree Tribe - Rocky Boy's Reservation
Crow Tribe – Crow Reservation
Little Shell Chippewa Tribe
Northern Cheyenne Tribe – Northern Cheyenne Reservation
Salish & Kootenai Tribes - Flathead Reservation

Indigenous Knowledge Resources

Tribal Nations – Specific Contacts
Confederated Salish & Kootenai Tribes (Flathead Reservation)-Division of Wildlife, Recreation, & Conservation

Whisper Camel-Means – Division Manager	Whisper.Means@cskt.org	(406) 675-2700
Kari Kingery – Wildlife Program Manager	Kari.Kingery@cskt.org	(406) 675-2700

Natural Heritage Programs and Conservation Data Centers in Surrounding States and Provinces
Alberta Conservation Information Management System
British Columbia Conservation Data Centre
Idaho Natural Heritage Program
North Dakota Natural Heritage Program
Saskatchewan Conservation Data Centre
South Dakota Natural Heritage Program
Wyoming Natural Diversity Database

Invasive Species Management Contacts and Information

General

Montana Invasive Species Council (MISC)
Central and Eastern Montana Invasive Species Team (CEMIST)
Montana State University Integrated Pest Management Extension

Aquatic Invasive Species

Montana Fish, Wildlife, and Parks Aquatic Invasive Species staff
Montana Department of Natural Resources and Conservation's Aquatic Invasive Species Grant Program
Western Montana Conservation Commission

Noxious Weeds

Montana Weed Control Association Contacts Webpage
Montana Biological Weed Control Coordination Project
Montana Department of Agriculture - Noxious Weeds
Montana Weed Control Association
Montana Fish, Wildlife, and Parks - Noxious Weeds
Integrated Noxious Weed Management after Wildfires
Fire Management and Invasive Plants

Introduction to Native Species

Within the report area you have requested, separate summaries are provided for: (1) Species Occurrences (SO) for plant and animal Species of Concern, Special Status Species (SSS), Important Animal Habitat (IAH) and some Potential Plant Species of Concern; (2) other observed non-Species of Concern filtered or requested as "Additional Species" or Species of Concern without suitable documentation to create Species Occurrence polygons; and (3) other non-documented Species of Concern or additionally filtered or requested that are potentially present based on their range, predicted suitable habitat model output, or presence of associated habitats. Each of these summaries provides the following information when present for a species: (1) the number of Species Occurrences and associated delineation criteria for construction of these polygons that have long been used for considerations of documented Species of Concern in environmental reviews; (2) the number of observations of each species; (3) the geographic range polygons for each species that the report area overlaps; (4) predicted habitat suitability classes that are present if a predicted suitable habitat model has been created; (5) the percent of the report area that is mapped as commonly associated or occasionally associated habitat as listed for each species in the Montana Field Guide; and (6) a variety of conservation status ranks and links to species accounts in the Montana Field Guide. Details on each of these information categories are included under relevant section headers below or are defined on our Species Status Codes page. In presenting this information, the Montana Natural Heritage Program (MTNHP) is working towards assisting the user with rapidly determining what species have been documented and what species are potentially present in the report area. We remind users that this information is likely incomplete as surveys to document native and introduced species are lacking in many areas of the state, the MTNHP's staff and resources are restricted by budgets, and information is constantly being added and updated in our databases. **Thus, field verification by professional biologists of the absence or presence of species and biological communities will always be an important obligation of users of our data.**

If you are aware of observation datasets that the MTNHP is missing, please report them to the Program Botanist apipp@mt.gov or Senior Zoologist dbachen@mt.gov If you have animal or plant observations that you would like to contribute, you can also submit them via Excel spreadsheets, geodatabases, iNaturalist, or a Survey123 form. Various methods of data submission are reviewed in this playlist of videos: https://www.youtube.com/playlist?list=PLRaydtZpHu2qOHPoSPq9cnM9uXGmEXACx

Observations

An observation is a visual, audio, specimen, genetic, or other documentation of a particular species at a location with an assigned spatial precision on a given date. Most observations are submitted in digital format from standardized databases associated with research or monitoring efforts and spreadsheets of incidental observations submitted by professional biologists and amateur naturalists. At a minimum, accepted observation records must contain a credible species identification (i.e. appropriate geographic range, date, and habitat and, if species are difficult to identify, a photograph and/or notes on key identifying features), a date or date range, observer name, locational information (ideally with latitude and longitude in decimal degrees), notes on numbers observed, and species behavior or habitat use (e.g., is the observation likely associated with reproduction). Bird records are also required to have information associated with date-appropriate breeding or overwintering status of the species observed. MTNHP reviews observation records to ensure that they are mapped correctly, occur within date ranges when the species is known to be present or detectable, occur within the known seasonal geographic range of the species, and occur in appropriate habitats. MTNHP also assigns each record a locational uncertainty value in meters to indicate the spatial precision associated with the record's mapped coordinates. Only records with locational uncertainty values of 5,000 meters or less are included in environmental summary reports and number summaries are only provided for records with locational uncertainty values of 1,000 meters or less.

Species Occurrences

The MTNHP evaluates plant and animal observation records for Species of Concern, Potential Species of Concern, and Special Status Species to determine whether they are worthy of inclusion in the Species Occurrence (SO) (also known as an "element occurrence" or EO) layer for use in environmental reviews; observations not worthy of inclusion in this layer include long distance dispersal events, migrants observed away from key migratory stopover habitats, and winter observations. An SO is a polygon depicting what is known about a species occupancy from direct observation with a defined level of locational uncertainty and any inference that can be made about adjacent habitat use from the latest peer-reviewed science. If an observation can be associated with a map feature that can be tracked (e.g., a wetland boundary) then this polygon feature is used to represent the SO. Areas that can be inferred as probable occupied habitat based on direct observation of a species location and what is known about the foraging area or home range size of the species may be incorporated into the SO. Species Occurrences generally belong to one of the following categories:

Botanical Species

A documented location of a specimen collection or observed plant, lichen, or fungi population. In some instances, adjacent, spatially separated clusters are considered subpopulations and are grouped as one occurrence (e.g., the subpopulations occur in ecologically similar habitats, and their spatial proximity likely allows them to interbreed). Tabular information for multiple observations at the same SO location is generally linked to a single polygon.

Animal Species

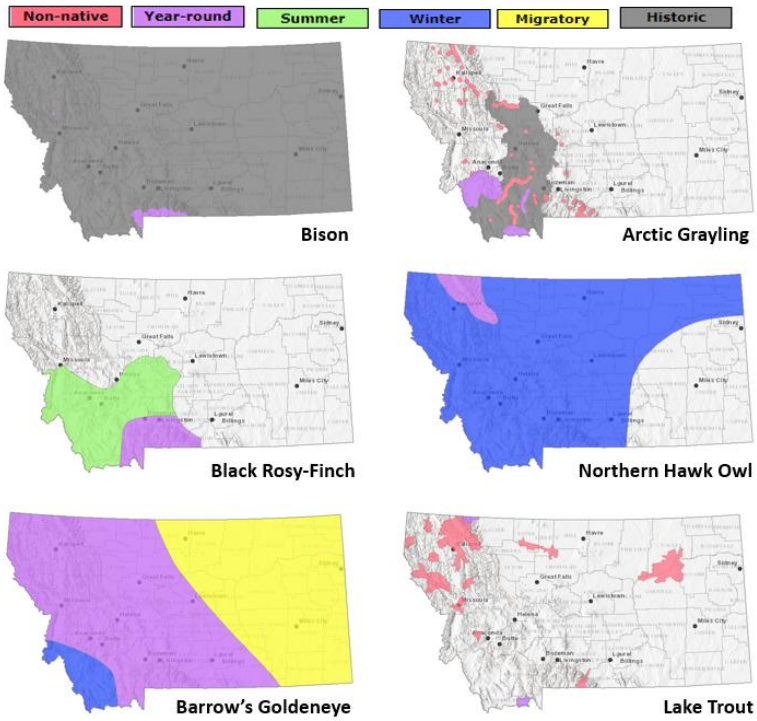
The location of a verified observation or specimen record typically known or assumed to represent a breeding population or a portion of a breeding population. Animal SO's are generally: (1) buffers of terrestrial point observations based on documented species' home range sizes; (2) buffers of stream segments to encompass occupied streams and immediate adjacent riparian habitats; (3) polygonal features encompassing known or likely breeding populations (e.g., a wetland for some amphibians or a forested portion of a mountain range for some wide-ranging carnivores); or (4) combinations of the above. Tabular information for multiple observations at the same SO location is generally linked to a single polygon. Species Occurrence polygons may encompass some unsuitable habitat in some instances in order to avoid heavy data processing associated with clipping out habitats that are readily assessed as unsuitable by the data user (e.g., a point buffer of a terrestrial species may overlap into a portion of a lake that is obviously inappropriate habitat for the species).

Other

Significant biological features not included in the above categories, such as Important Animal Habitats like bird rookeries and bat roosts, and peatlands or other wetland and riparian communities that support diverse plant and animal communities.

Geographic Range Polygons

Range polygons have been created for native vascular plants and vertebrate animal species with sufficient data and are being created for other taxa as staff time is available. Range polygons are refined over time with assistance of additional survey and observation data and predicted habitat suitability models. Range polygons are classified as native year-round, summer, winter, migratory, historical, and non-native year-round (see examples to the left). Range polygons for native species and non-native aquatic species typically bound the extent of known or likely occupied habitats for non-migratory and relatively sedentary species and the regular extent of known or likely occupied habitats for migratory and long-distance dispersing species; polygons may include unsuitable intervening habitats. Unless predicted invasion risk models indicate unsuitable habitat for large portions of Montana, range polygons for non-native vascular plant species are typically mapped as statewide to reflect their possible invasion across Montana; please see relative density maps for reported distributions of these species. For most species, a single polygon can represent the year-round or seasonal range, but breeding ranges of some colonial nesting water birds and some non-native species are represented more patchily when supported by data. Some ranges are mapped more broadly than actual distributions to be visible on statewide maps (e.g., streams with fish are buffered for visibility)



Predicted Suitable Habitat Models

Predicted habitat suitability models have been created for plant and animal Species of Concern and are undergoing development for non-Species of Concern. For species for which models have been completed, the environmental summary report includes simple rule-based associations with streams for aquatic species and seasonal habitats for game species as well as mathematically complex Maximum Entropy models (Phillips et al. 2006, Ecological Modeling 190:231-259) constructed from a variety of statewide biotic and abiotic layers and presence only data for individual species for most terrestrial species. For the Maximum Entropy models, we reclassified 90 x 90-meter continuous model output into suitability classes (unsuitable, low, moderate, and optimal) then aggregated that into the one square mile hexagons used in the environmental summary report; this is the finest spatial scale we suggest using this information in management decisions and survey planning. Full model write ups for individual species that discuss model goals, inputs, outputs, and evaluation in much greater detail are posted on the MTNHP's Predicted Suitable Habitat Models webpage. Evaluations of predictive accuracy and specific limitations are included with the metadata for models of individual species. **Model outputs should not be used in place of on-the-ground surveys for species. Instead model outputs should be used in conjunction with habitat evaluations to determine the need for on-the-ground surveys for species.** We suggest that the percentage of predicted optimal and moderate suitable habitat within the report area be used in conjunction with geographic range polygons and the percentage of commonly associated habitats to generate lists of potential species that may occupy broader landscapes for the purposes of landscape-level planning.

Other Habitat Information for Species

1. The excel spreadsheet accompanying this report contains a field labeled "Habitat" in all the species related worksheets that contains brief text describing the predominant habitat or habitats each species is dependent on. This field can be useful for quickly determining whether a species needs considerations in environmental permitting and planning. For example, if the report area includes a large area of forest and grassland habitat and the project is only affecting a small portion of the grassland habitat without any disturbance to the forest habitat, the Habitat field can be useful for removing the forest dependent species from further consideration.
2. Species accounts in the Montana Field Guide each contain a section on Ecological Communities Associated with this Species that lists and links to accounts for associated natural habitats.
3. Accounts for natural habitats in the Ecological Communities portion of the Montana Field Guide each contain a section on Species Associated with this Community that lists and links to accounts for associated species. This is divided between: (1) Species of Concern Associated with this Community; (2) Diagnostic, Dominant, or Codominant Plant Species for this Community; and (3) Other Native Species Commonly Associated with this Community.

Introduction to Land Cover

Land Use/Land Cover is one of 15 Montana Spatial Data Infrastructure framework layers considered vital for making statewide maps of Montana and understanding its geography. The layer records all Montana natural vegetation, land cover and land use, classified from satellite and aerial imagery, mapped at a scale of 1:100,000, and interpreted with supporting ground-level data. The baseline map is adapted from the Northwest ReGAP (NWGAP) project land cover classification, which used 30m resolution multi-spectral Landsat imagery acquired between 1999 and 2001. Vegetation classes were drawn from the Ecological System Classification developed by NatureServe (Comer et al. 2003). The land cover classes were developed by Anderson et al. (1976). The NWGAP effort encompasses 12 map zones. Montana overlaps seven of these zones. The two NWGAP teams responsible for the initial land cover mapping effort in Montana were Sanborn and NWGAP at the University of Idaho. Both Sanborn and NWGAP employed a similar modeling approach in which Classification and Regression Tree (CART) models were applied to Landsat ETM+ scenes. The Spatial Analysis Lab within the Montana Natural Heritage Program was responsible for developing a seamless Montana land cover map with a consistent statewide legend from these two separate products. Additionally, the Montana land cover layer incorporates several other land cover and land use products (e.g., MSDI Structures and Transportation themes and the Montana Department of Revenue Final Land Unit classification) and reclassifications based on plot-level data and the latest NAIP imagery to improve accuracy and enhance the usability of the theme. Updates are done as partner support and funding allow, or when other MSDI datasets can be incorporated. Recent updates include fire perimeters and agricultural land use (annually), energy developments such as wind, oil and gas installations (2014), roads, structures and other impervious surfaces (various years): and local updates/improvements to specific ecological systems (e.g., central Montana grassland and sagebrush ecosystems). Current and previous versions of the Land Use/Land Cover layer with full metadata are available for download from the Montana State Library's GIS Data List More information on the land cover layer is available at: https://msl.mt.gov/geoinfo/msdi/land_use_land_cover/

Within the report area you have requested, land cover is summarized by acres of Level 1, Level 2, and Level 3 Ecological Systems.

Literature Cited

Anderson, J.R. E.E. Hardy, J.T. Roach, and R.E. Witmer. 1976. A land use and land cover classification system for use with remote sensor data. U.S. Geological Survey Professional Paper 964.

Comer, P., D. Faber-Langendoen, R. Evans, S. Gawler, C. Josse, G. Kittel, S. Menard, M. Pyne, M. Reid, K. Schulz, K. Snow, and J. Teague. 2003. Ecological systems of the United States: A working classification of U.S. terrestrial systems. NatureServe, Arlington, VA.

Introduction to Wetland and Riparian

Within the report area you have requested, wetland and riparian mapping is summarized by acres of each classification present. Summaries are only provided for modern MTNHP wetland and riparian mapping and not for outdated (NWI Legacy) or incomplete (NWI Scalable) mapping efforts; described here. MTNHP has made all three of these datasets and associated metadata available for separate download on the Montana Wetland and Riparian Framework web page.

Wetland and Riparian mapping is one of 15 Montana Spatial Data Infrastructure framework layers considered vital for making statewide maps of Montana and understanding its geography. The wetland and riparian framework layer consists of spatial data representing the extent, type, and approximate location of wetlands, riparian areas, and deep water habitats in Montana.

Wetland and riparian mapping is completed through photointerpretation of 1-m resolution color infrared aerial imagery acquired from 2005 or later. A coding convention using letters and numbers is assigned to each mapped wetland. These letters and numbers describe the broad landscape context of the wetland, its vegetation type, its water regime, and the kind of alterations that may have occurred. Ancillary data layers such as topographic maps, digital elevation models, soils data, and other aerial imagery sources are also used to improve mapping accuracy. Wetland mapping follows the federal Wetland Mapping Standard and classifies wetlands according to the Cowardin classification system of the National Wetlands Inventory (NWI) (Cowardin et al. 1979, FGDC Wetlands Subcommittee 2013). Federal, State, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands differently than the NWI. Similar coding, based on U.S. Fish and Wildlife Service conventions, is applied to riparian areas (U.S. Fish and Wildlife Service 2009). These are mapped areas where vegetation composition and growth is influenced by nearby water bodies, but where soils, plant communities, and hydrology do not display true wetland characteristics. **These data are intended for use at a scale of 1:12,000 or smaller. Mapped wetland and riparian areas do not represent precise boundaries and digital wetland data cannot substitute for an on-site determination of jurisdictional wetlands.**

See detailed overviews, with examples, of both wetland and riparian classification systems and associated codes as a storymap and companion guide

Literature Cited

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Fish and Wildlife Service, FWS/OBS-79/31. Washington, D.C. 103pp.

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, D.C.

U.S. Fish and Wildlife Services. 2009. A system for mapping riparian areas in the western United States. Division of Habitat and Resource Conservation, Branch of Resource and Mapping Support, Arlington, Virginia.

Introduction to Land Management

Within the report area you have requested, land management information is summarized by acres of federal, state, and local government lands, tribal reservation boundaries, private conservation lands, and federal, state, local, and private conservation easements. Acreage for "Owned", "Tribal", or "Easement" categories represents non-overlapping areas that may be totaled. However, "Other Boundaries" represents managed areas such as National Forest boundaries containing private inholdings and other mixed ownership which may cause boundaries to overlap (e.g. a wilderness area within a forest). Therefore, acreages may not total in a straight-forward manner.

Because information on land stewardship is critical to effective land management, the Montana Natural Heritage Program (MTNHP) began compiling ownership and management data in 1997. The goal of the Montana Land Management Database is to manage a single, statewide digital data set that incorporates information from both public and private entities. The database assembles information on public lands, private conservation lands, and conservation easements held by state and federal agencies and land trusts and is updated on a regular basis. Since 2011, the Information Management group in the Montana State Library's Digital Library Division has led the Montana Land Management Database in partnership with the MTNHP.

Public and private conservation land polygons are attributed with the name of the entity that owns it. The data are derived from the statewide Montana Cadastral Parcel layer Conservation easement data shows land parcels on which a public agency or qualified land trust has placed a conservation easement in cooperation with the landowner. The dataset contains no information about ownership or status of the mineral estate. For questions about the dataset or to report errors, please contact the Montana Natural Heritage Program at (406) 444-5363 or mtnhp@mt.gov. You can download various components of the Land Management Database and view associated metadata at the Montana State Library's GIS Data List at the following links:

Public Lands
Conservation Easements
Private Conservation Lands
Managed Areas

Map features in the Montana Land Management Database or summaries provided in this report are not intended as a legal depiction of public or private surface land ownership boundaries and should not be used in place of a survey conducted by a licensed land surveyor. Similarly, map features do not imply public access to any lands. The Montana Natural Heritage Program makes no representations or warranties whatsoever with respect to the accuracy or completeness of this data and assumes no responsibility for the suitability of the data for a particular purpose. The Montana Natural Heritage Program will not be liable for any damages incurred as a result of errors displayed here. Consumers of this information should review or consult the primary data and information sources to ascertain the viability of the information for their purposes.

Introduction to Invasive and Pest Species

Within the report area you have requested, separate summaries are provided for: Aquatic Invasive Species, Noxious Weeds, Agricultural Pests, Forest Pests, and Biocontrol species that have been documented or potentially occur there based on the predicted suitability of habitat. Definitions for each of these invasive and pest species categories can be found on our Species Status Codes page.

Each of these summaries provides the following information when present for a species: (1) the number of observations of each species; (2) the geographic range polygons for each species, if developed, that the report area overlaps; (3) predicted relative habitat suitability classes that are present if a predicted suitable habitat model has been created; (4) the percent of the report area that is mapped as commonly associated or occasionally associated habitat as listed for each species in the Montana Field Guide; and (5) links to species accounts in the Montana Field Guide. Details on each of these information categories are included under relevant section headers under the Introduction to Native Species above or are defined on our Species Status Codes page. In presenting this information, the Montana Natural Heritage Program (MTNHP) is working towards assisting the user with rapidly determining what invasive and pest species have been documented and what species are potentially present in the report area. We remind users that this information is likely incomplete as surveys to document introduced species are lacking in many areas of the state, information on introduced species has only been tracked relatively recently, the MTNHP's staff and resources are limited, and information is constantly being added and updated in our databases. **Thus, field verification by professional biologists of the absence or presence of species will always be an important obligation of users of our data.**

If you are aware of observation or survey datasets for invasive or pest species that the MTNHP is missing, please report them to the Program Coordinator bmaxell@mt.gov Program Botanist apipp@mt.gov or Senior Zoologist dbachen@mt.gov If you have animal or plant observations that you would like to contribute, you can also submit them via Excel spreadsheets, geodatabases, iNaturalist, or a Survey123 form. Various methods of data submission are reviewed in this playlist of videos:
https://www.youtube.com/playlist?list=PLRaydtZpHu2qOHPoSPq9cnM9uXGmEXACx

Additional Information Resources

- Effects of Recreation on Rocky Mountain Wildlife
- FEMA Flood Insurance Study Data
- Fire Effects Information System (species reviews, fire regimes, fire studies)
- Gilly – tool for simplifying stream, wetland, and floodplain permitting applications
- Identification Resources for Montana Species and Citizen Science
- Indigenous Knowledge Resources
- Integrating Wildlife Habitat Connectivity into Local Government Planning
- Laws, Treaties, Regulations, and Agreements on Animals and Plants
- Managing the Ecological Impacts of Extreme Heat in the Northwest
- Migratory Bird Joint Ventures and Associated Resources
  - Intermountain West Joint Venture
  - Northern Great Plains Joint Venture
  - Prairie Pothole Joint Venture
- MTNHP Staff Contact Information
- MTNHP Species of Concern Report - Animals and Plants
- MTNHP Species Status Codes - Explanation
- MTNHP Predicted Suitable Habitat Models (for select Animals and Plants)
- MTNHP Request Information page
- Montana Cadastral
- Montana Climate Office
- Montana Code Annotated
- Montana Field Guide
- Montana Fisheries Information System
- Montana Fish, Wildlife, and Parks Subdivision Recommendations
- Montana Forestry Best Management Practices
- Montana GIS Data Layers
- Montana GIS Data Bundler
- Montana Guide to Streamside Management Zone Law and Rules
- Montana Ground Water Information Center
- Montana Index of Environmental Permits, 21st Edition (2018)
- Montana Environmental Policy Act (MEPA)
- Montana Environmental Policy Act Analysis Resource List
- Montana Sage Grouse Project Submittal Site
- Montana Native Plant Conservation Strategy
- Montana Spatial Data Infrastructure Layers
- Montana State Historic Preservation Office Review and Compliance
- Montana Statewide Fisheries Management Plan 2023-2026
- Montana Stream Permitting: a guide for conservation district supervisors and others
- Montana Water Information System
- Montana Web Map Services
- Montana's 2025 State Wildlife Action Plan
- Montana's Statewide Comprehensive Outdoor Recreation Plan (SCORP)
- National Environmental Policy Act
- Penalties for Misuse of Fish and Wildlife Location Data (MCA 87-6-222)
- Rangeland Analysis Platform
- U.S. Fish and Wildlife Service Information for Planning and Consultation (Section 7 Consultation)
- Uses of Information from the Montana Natural Heritage Program
- Vegetation Futures Tool
- Web Soil Survey Tool
- Wildfire Risk to Communities
- Xerces Society for Invertebrate Conservation Resources