

Bryce Maxell



MSL Learn Webinar Series

Using the Montana Field Guide and Species Snapshot Websites

May 7, 2024

Today's Hosts

Bryce Maxell



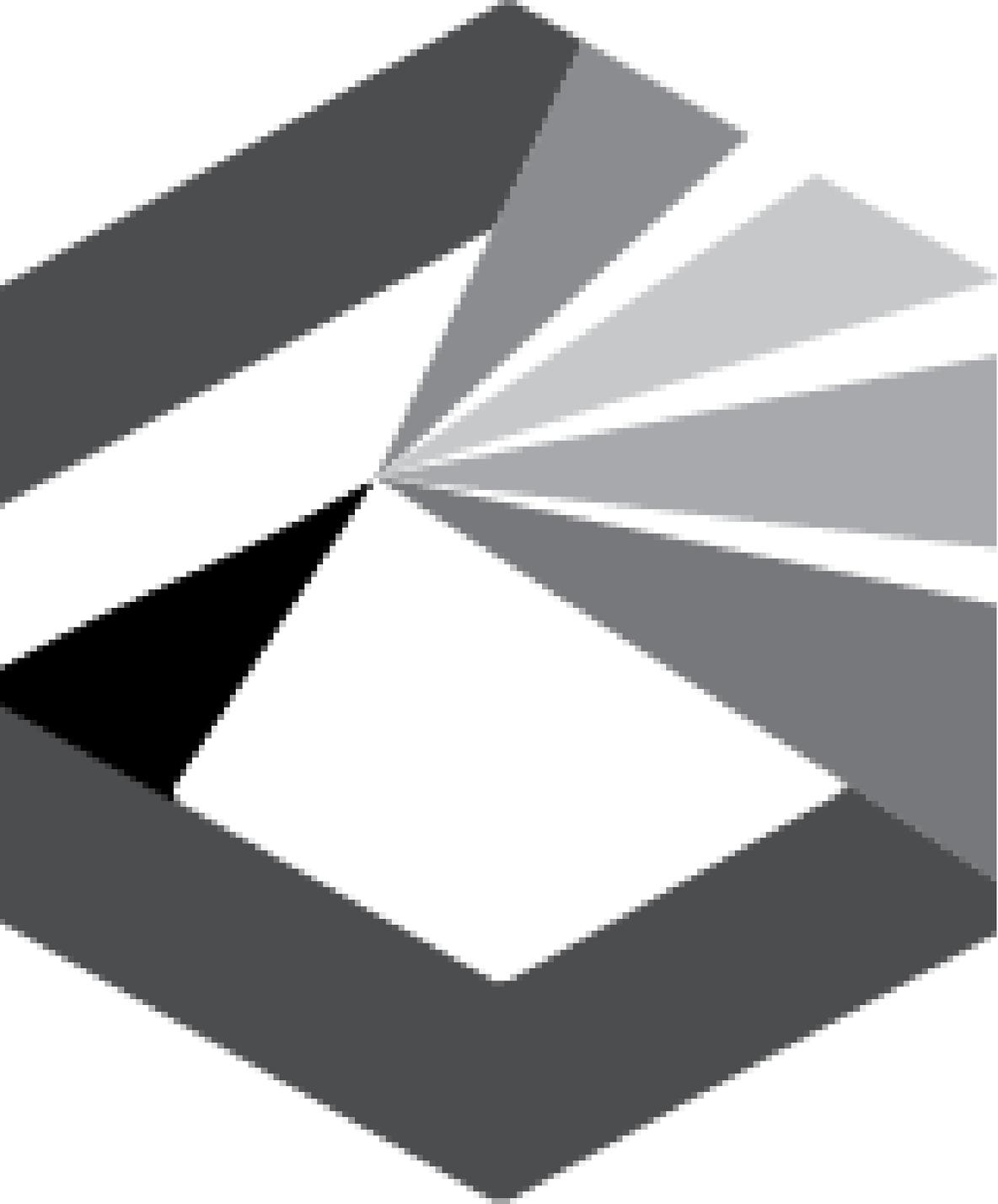
Montana Natural Heritage Program
Program Coordinator

Colet Bartow



MSL Continuing
Education
Coordinator

(Colet rhymes with Olay)



Today's Agenda

Montana Natural Heritage Program

Montana Field Guide

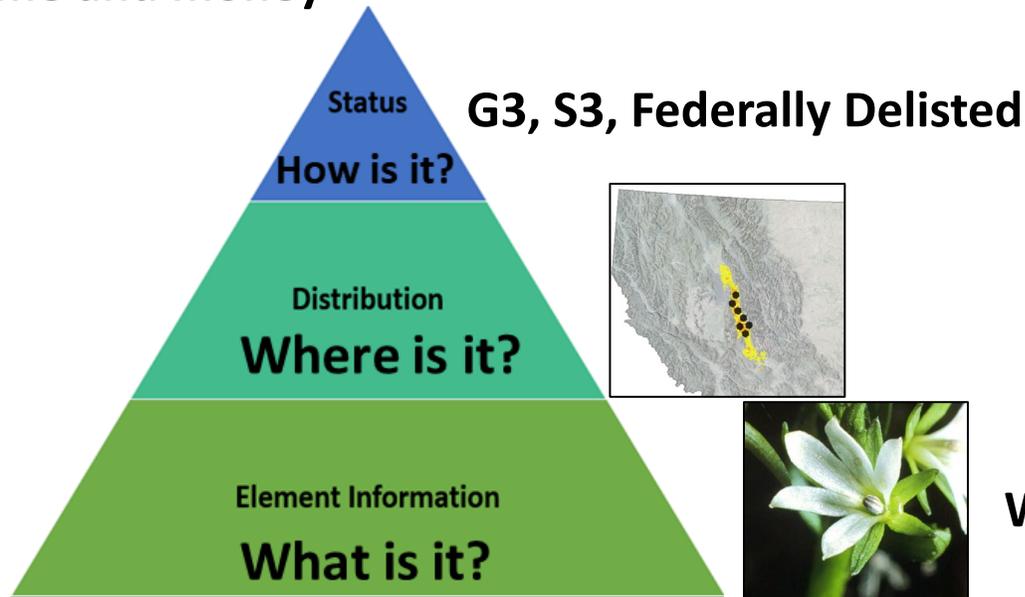
Species Snapshot

Accessing Information on Montana's Species & Habitats: Montana Field Guide and Species Snapshot websites



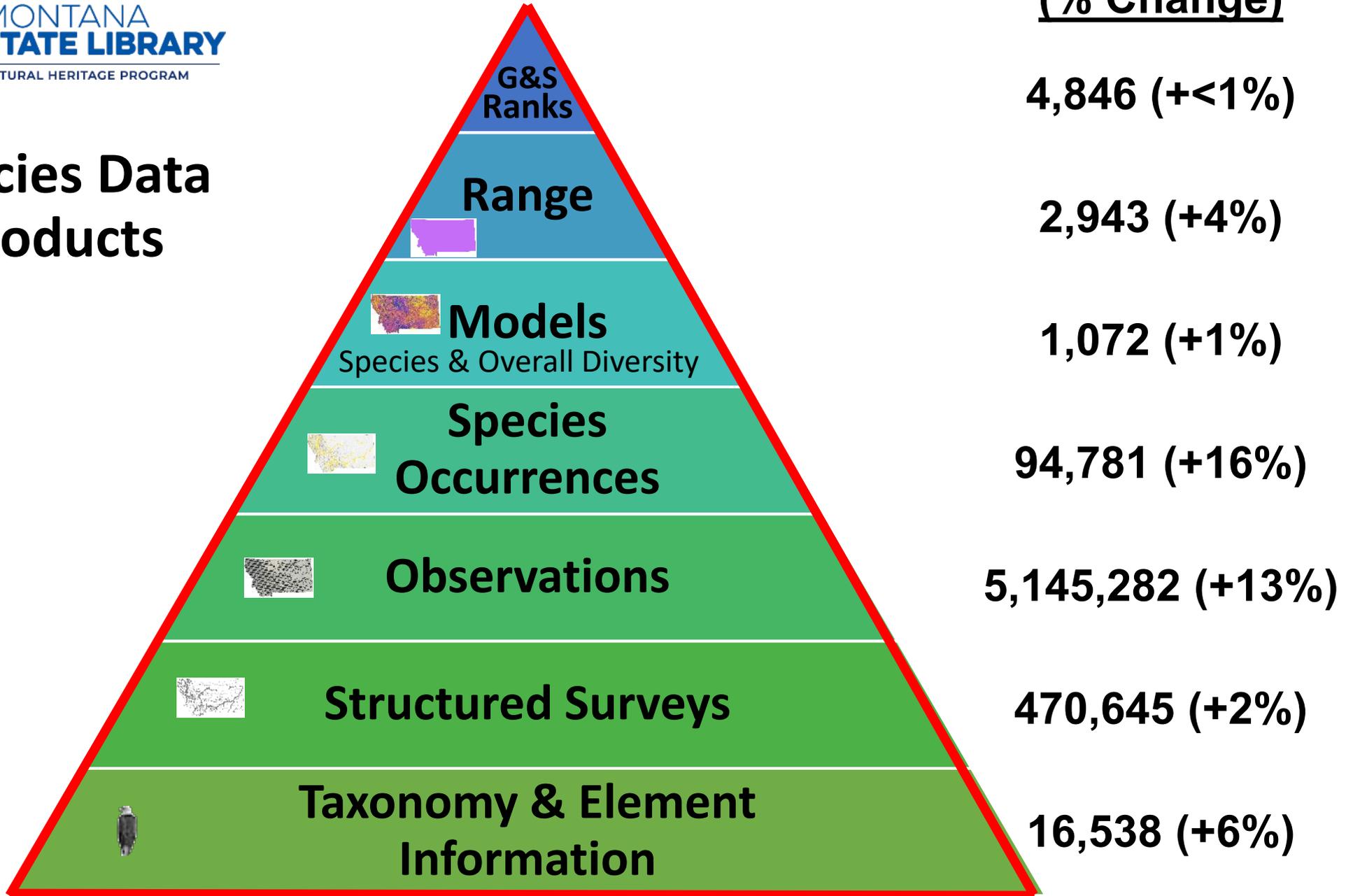
Why have a Natural Heritage Program?

- Common set of information available to everyone
- Inform species and habitat management decisions
- Inform environmental review, permitting, and planning processes
- Inform disaster response
- Make informed decisions quickly
- Avoid litigation
- Maintain local authority over species management
- Save time and money



Water Howellia (*Howellia aquatilis*)

Species Data Products

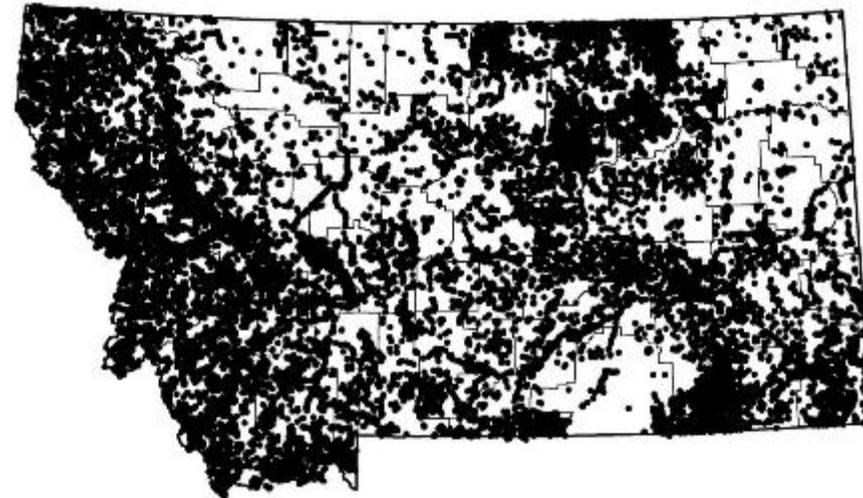


Distribution of 16,281 Species

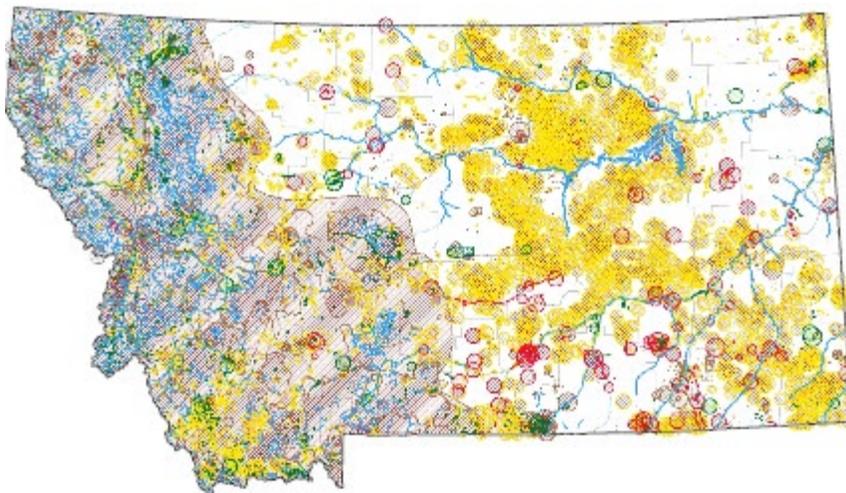
~5.2 Million Observations



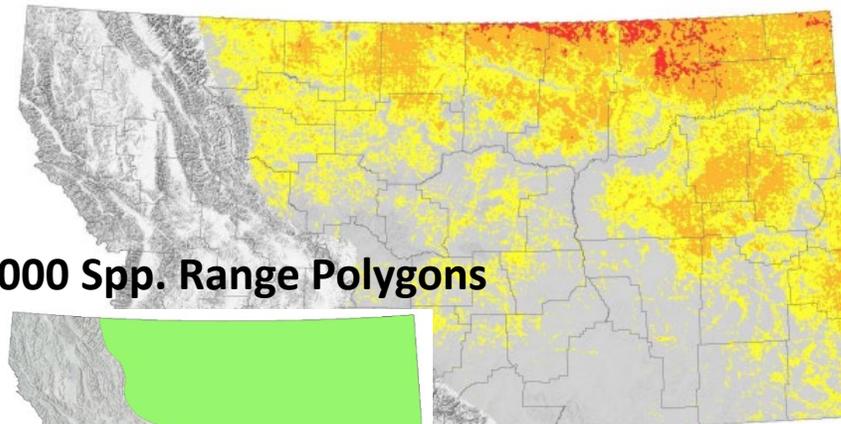
~471,000 Surveys



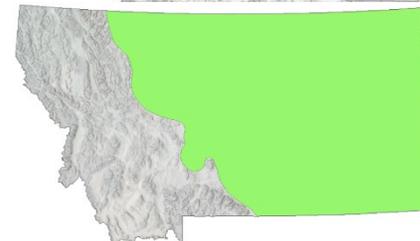
~95,000 Species of Concern Occurrences



~1,100 Species Modeled



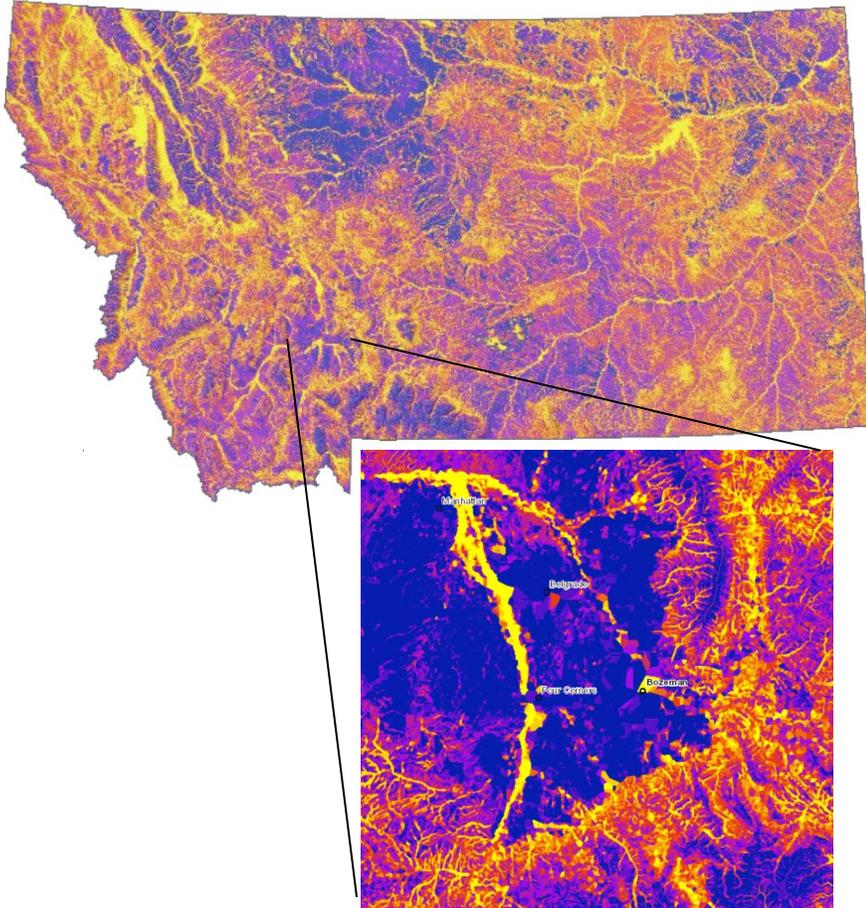
~3,000 Spp. Range Polygons



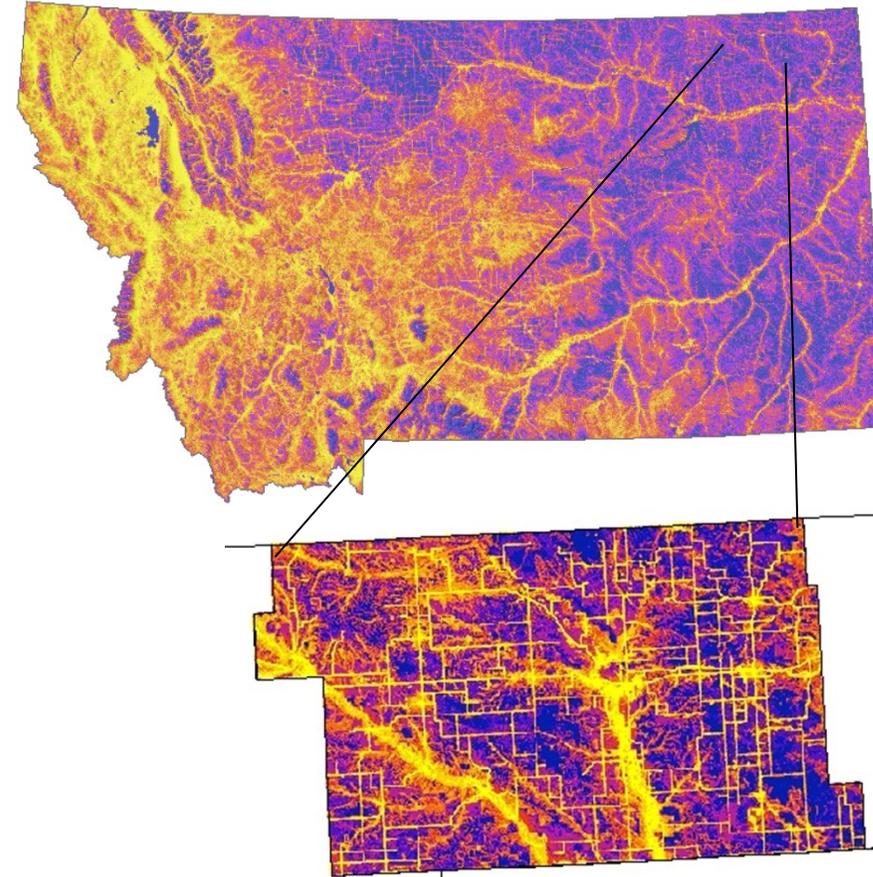
Optimal Suitability
Moderate Suitability
Low Suitability
Unsuitable

Predicted Biodiversity Models

- Montana Land Use Planning Act
- Prioritize weed survey & control
- State Wildlife Action Plan
- Forest Plan Revisions
- BLM Resource Management Plans
- Tribal Management Plans



Native Vertebrate Biodiversity (N = 462)



**Cumulative Risk of Invasion
by State-listed Noxious Weeds**

Habitat Data Products

Land Cover

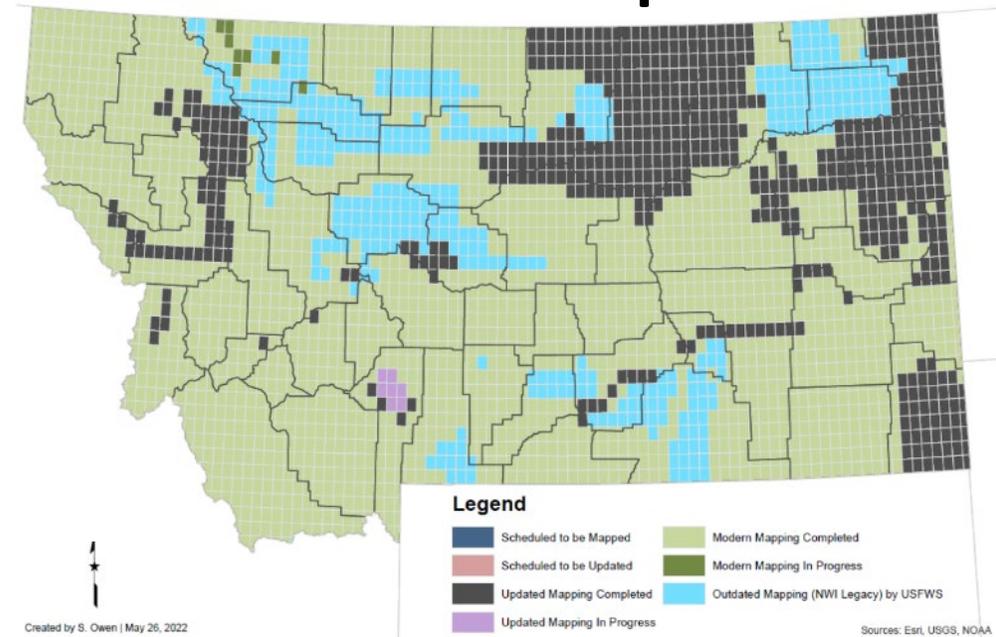


- * Moving toward NVC for July of 2024
- * Spatial Data Infrastructure Homepage
https://msl.mt.gov/geoinfo/msdi/land_use_land_cover/

- Story Map
- Downloads and Web Service
- Ecological Site Reviewer
- Land Cover Validation Tool Kit



Wetland & Riparian



- * 3.2 million + acres mapped
- * 87% of state is mapped
- * 385 quads at ~\$3,000/quad
- * Funding ready for ~15 quads



Environmental Summary Report

Standard report for all NEPA, MEPA, and permitting processes

Video on How to Interpret and Use Environmental Summary Reports

<https://youtu.be/fbzUCGxrPDO?feature=shared>

Table of Contents

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 - Suggested Contacts for Natural Resource Agencies
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 - Introduction to Land Cover
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 - Introduction to Land Management
 - Introduction to Invasive and Pest Species
 - Additional Information Resources



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NATURAL HERITAGE PROGRAM mtnhp.org
1201 11th Ave • P.O. Box 201800 • Helena, MT 59620-1800 • fax 406-444-0266 • phone 406-444-3989



Latitude	Longitude
45.69648	-112.68851
45.82951	-112.86051

Summarized by:
Charcoal Creek-Big Hole River
(100200041104 - 6th Code Watershed)



Suggested Citation
Montana Natural Heritage Program. Environmental Summary Report.
for Latitude 45.69648 to 45.82951 and Longitude -112.68851 to -112.86051. Retrieved on 4/1/2024.

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.



Environmental Summary

Field Guide Use

Montana Field Guides

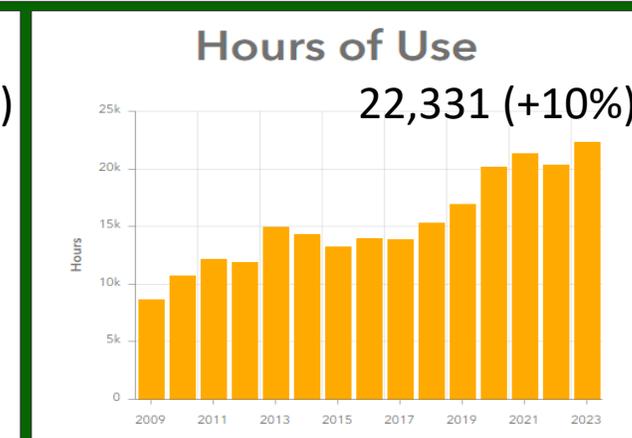
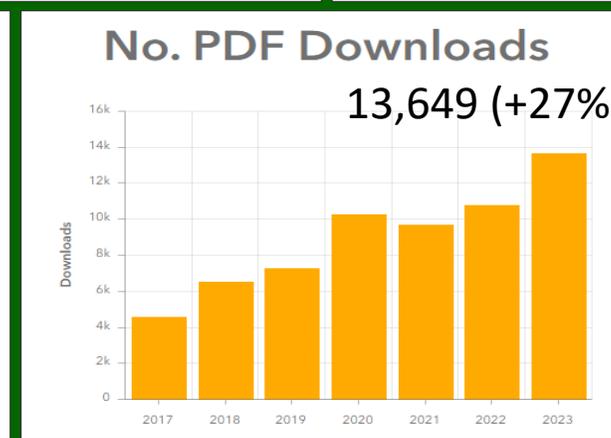
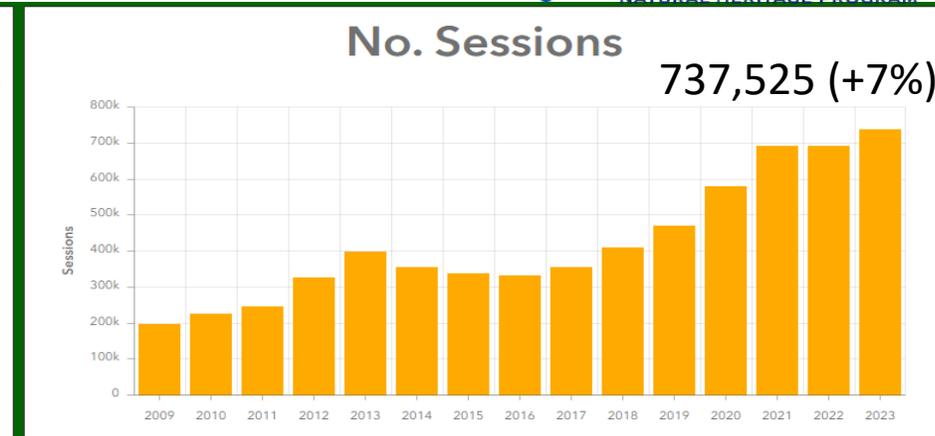
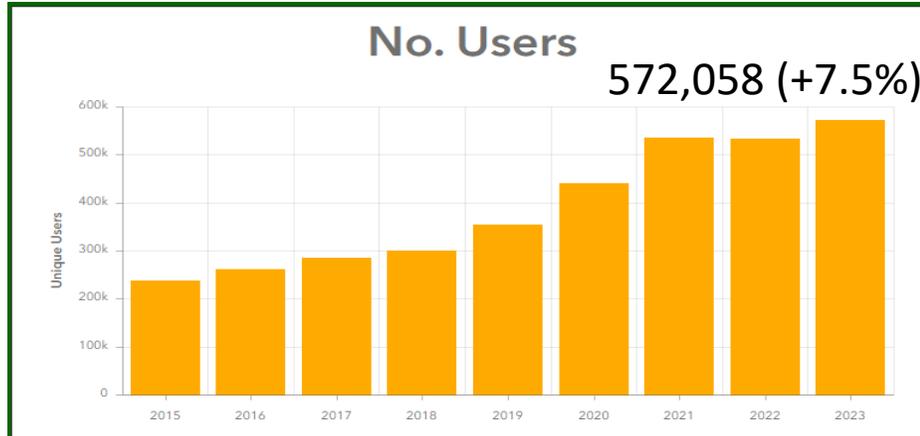
Animals

Multicellular organisms that develop from the fertilization of an egg by a sperm. Heterotrophic - obtain food by ingestion.



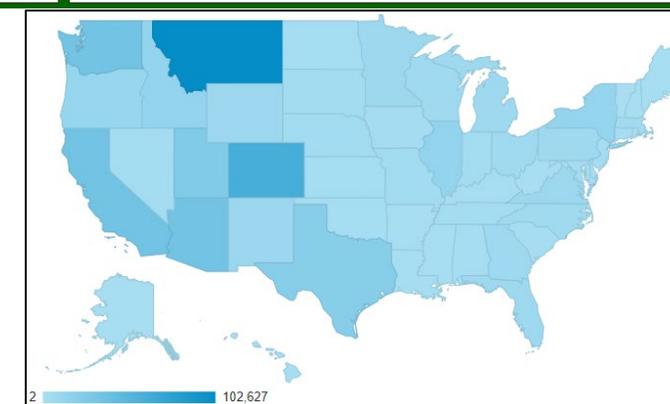

MONTANA STATE LIBRARY

NATURAL HERITAGE PROGRAM



1. United States	495,141 (86.13%)
2. Canada	36,420 (6.34%)
3. India	5,965 (1.04%)
4. United Kingdom	5,082 (0.88%)
5. Philippines	3,486 (0.61%)
6. Nigeria	2,043 (0.36%)
7. Australia	1,872 (0.33%)
8. Germany	1,508 (0.26%)
9. France	1,390 (0.24%)
10. Mexico	1,178 (0.20%)

1. Montana	102,627 (19.71%)
2. Colorado	61,448 (11.80%)
3. California	35,036 (6.73%)
4. Arizona	34,519 (6.63%)
5. Washington	34,212 (6.57%)
6. Utah	25,583 (4.91%)
7. Texas	20,950 (4.02%)
8. Illinois	14,198 (2.73%)
9. Idaho	13,398 (2.57%)
10. New York	12,811 (2.46%)



Website Demonstrations

Montana Field Guide

Animals
Multicellular organisms that develop from the fertilization of an egg by a sperm. Heterotrophic - obtain food by ingestion.

Plants
Multicellular organisms that are autotrophic or make complex carbohydrates from basic constituents. Most use photosynthesis.

Fungi Lichens, Mushrooms, Molds, Yeasts, Chytrids
Multi- or single-celled organisms that have chitin in their cell walls, reproduce by spores, do not photosynthesize, and acquire food primarily by secreting digestive enzymes into their environment. Some fungi, called Lichens, develop symbiotic relationships with green algae and/or cyanobacteria.

Ecological Systems
Ecological systems represent recurring groups of biological communities that are found in similar physical environments and are influenced by similar dynamic ecological processes, such as fire or flooding. Human Land Use classes are also shown here because they're included in the Montana Land Cover layer.

Invasive and Pest Species
Species not native to a specific location, which has a tendency to spread to a degree believed to cause damage to the environment, human economy, or human health.

Welcome to our Montana Field Guides. These guides and this website are a collaborative effort between the Montana Natural Heritage Program and Montana Fish, Wildlife and Parks. These guides provide information on the identification, distribution, status, and ecology of Montana's animals, plants, lichens, and biological communities. You can find individual species or habitats by hierarchical drill downs or simple searches. New features include the ability to view galleries of photos to assist with species identification and the ability to download custom field guides as PDF files.

Select a Field Guide to start browsing or use the Search.

Take us with you!
Look for this PDF icon as you search and browse. Click it to build a custom PDF with species shown on that page or for all the species within that taxonomic level. To create your own list of species, use the PDF Creator tool at the bottom of the [Advanced Search](#) page.

Here's some links if you want to download a whole group.

- Mammals
- Birds
- Reptiles
- Amphibians
- Fish
- Invertebrates
- Butterflies / Moths
- Dragonflies / Damselflies
- Ferns and allies
- Conifers
- Flowering Plants (Dicots)
- Flowering Plants (Monocots)
- Bryophytes
- Lichens
- Ecological Systems
- Noxious Weeds

How to use the Animal / Plant / Fungi guide
How to use the Ecological System guide
Link to us - Want to put the field guide on your site?
Advanced Search page

Species Snapshot

Montana Natural Heritage - Species Snapshot

Statewide All Species All Status Submit Reset

All Montana Species

	Species of Concern	Potential SOC	MT Special Status	Other Status	Invasive and Pest	Total
Mammals	30	12		74		116
Birds	65	18	2	371		456
Reptiles	8	1		11		20
Amphibians	5			9	1	15
Fish	23	5		64	10	102
Invertebrates	95	57	59	7303	108	7622
ALL ANIMALS	226	93	61	7832	119	8331
Vascular Plants	369	63	1	2432	52	2917
Bryophytes	50	18	2	607		677
Lichens	32	8	27	987		1054
Algae				3		3
ALL PLANTS	451	89	32	5681	56	6309

[Collapse All](#) | [Expand All Species Groups](#) | [Expand All Species Groups and Species Info](#)

- Mammals 116 Species
- Birds 456 Species
- Reptiles 20 Species
- Amphibians 15 Species
- Fish 102 Species
- Invertebrates 7622 Species
- Vascular Plants 2917 Species
- Bryophytes 677 Species
- Lichens 1054 Species
- Algae 3 Species
- Bacteria 61 Species
- Fungi 1658 Species
- Other 1246 Species

Links from Live Presentation

- Montana Natural Heritage Program
 - <https://mtnhp.org/>
- Montana Field Guide
 - <https://fieldguide.mt.gov/>
- Species Snapshot
 - <https://mtnhp.org/SpeciesSnapshot/?Vector=&Species=&Rank>
- How to Interpret and Use Environmental Summary Reports
 - <https://youtu.be/fbzUCGxrPD0?feature=shared>
- Habitat Data Products
 - <https://storymaps.arcgis.com/stories/77e6bf223649419c95c596cbc2da9529>
- Spatial Data Infrastructure Homepage
 - https://msl.mt.gov/geoinfo/msdi/land_use_land_cover/

Questions?



MSL YouTube Channel

- Look for the MSL Learn Webinar Series Playlist
- Access new recordings
- Subscribe!

Montana State Library
@montanastatelibrary 157 subscribers 131 videos
The Montana State Library helps all organizations, communities, and Mont... >
msl.mt.gov

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MSL Meetings

State Library Commission Meeting	2023 Public Library Standards Task Force Meeting	MT Land Information Advisory Council	Network Advisory Council Meeting:
October 11, 2023, at 9:30 a.m. Ace Stillwater Civic Center, Columbus, MT and Zoom	August 22, 2023 at 9:00 a.m. Zoom	June 23, 2023	February 1, 2023, 9:30 am
55 videos	2 videos	14 videos	25 videos
MSL Commission Meetings Public · Playlist Updated 5 days ago View full playlist	2023 Public Library Standards Task Force Public · Playlist View full playlist	Montana Geospatial Information Advisory Council Public · Playlist View full playlist	Network Advisory Council (NAC) Public · Playlist View full playlist

Learn with MSL

MSL Learn Webinar Series	Tiny Tech Trainings	Montana Shared Catalog	2023-24 MLN Virtual Programming Series	Webside Chats
Hosted by Pam Hestley	Tiny Tech Training			
20 videos	10 videos	4 videos	2 videos	
MSL Learn Webinar Series Public · Playlist Updated 7 days ago View full playlist	Tiny Tech Trainings Public · Playlist View full playlist	Montana Shared Catalog Public · Playlist View full playlist	2023-24 MLN Virtual Programming Series Public · Playlist Updated 4 days ago View full playlist	Webside Chats Public · Playlist Updated 3 days ago View full playlist

MSL Evaluation Survey



Up Next – Check the ASPeN Calendar



May 14 - Montana Historic Newspaper Collections



May 15 – Connecting with Local Government Officials: How Libraries Add Value



May 17 – Webside Chat



June 11 – Automated Catalog Clean-Up!

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