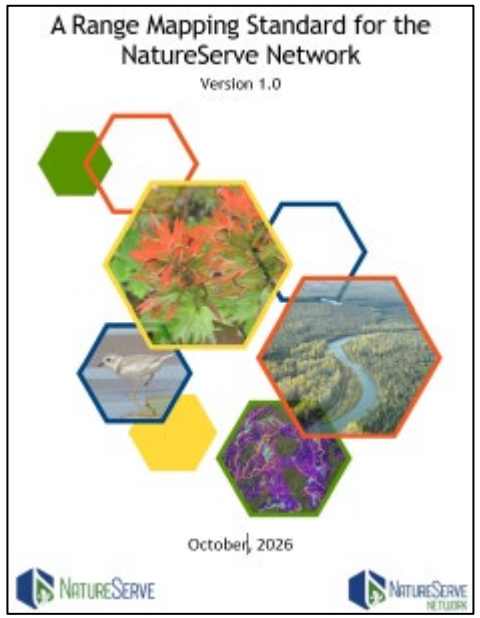
Improving Information Holdings and Agency Processes

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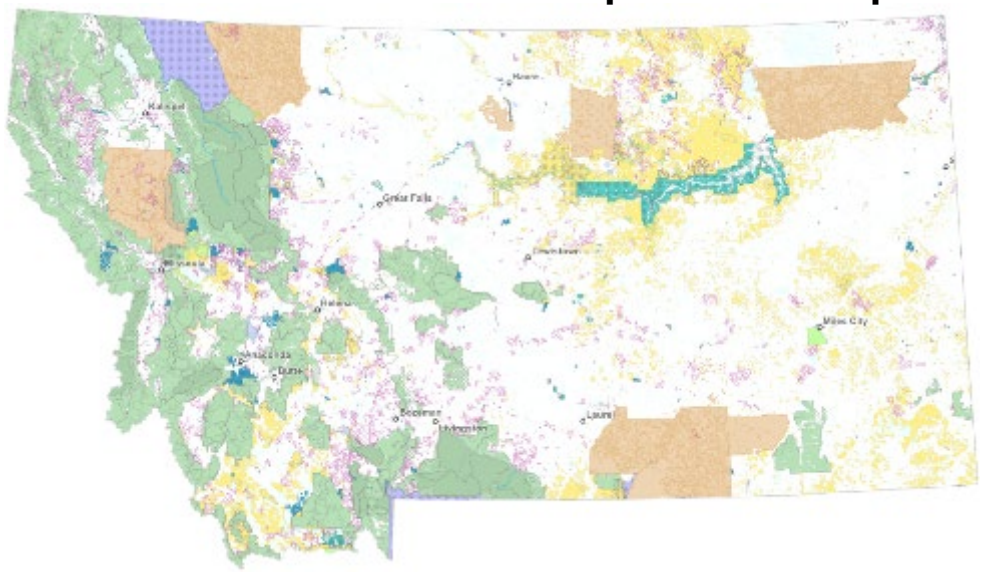
Range Map Standard

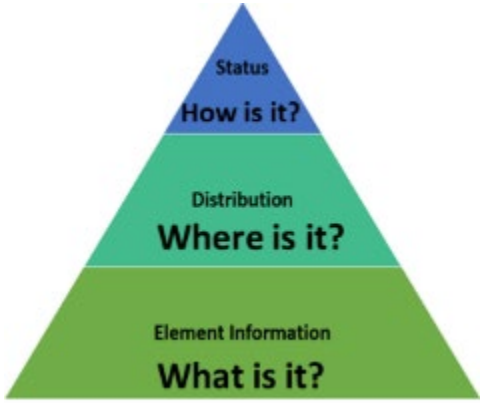


Rock Glaciers & Ecological Sites



Future of Land Ownership/Stewardship





How is our Information Being Used?

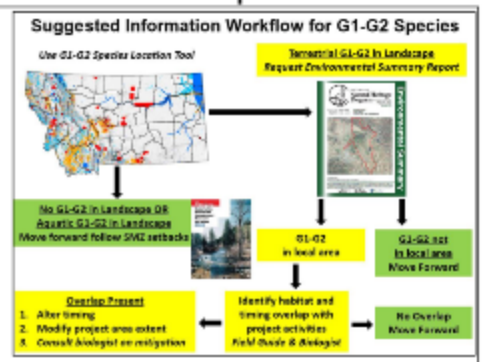
Improving User Workflows

Accessing and Using Information on Forest Species and Habitats

G1-G2 Species Location Tool
Supporting SFI Certified Timber Sourcing

https://arcg.is/0Wv1ui

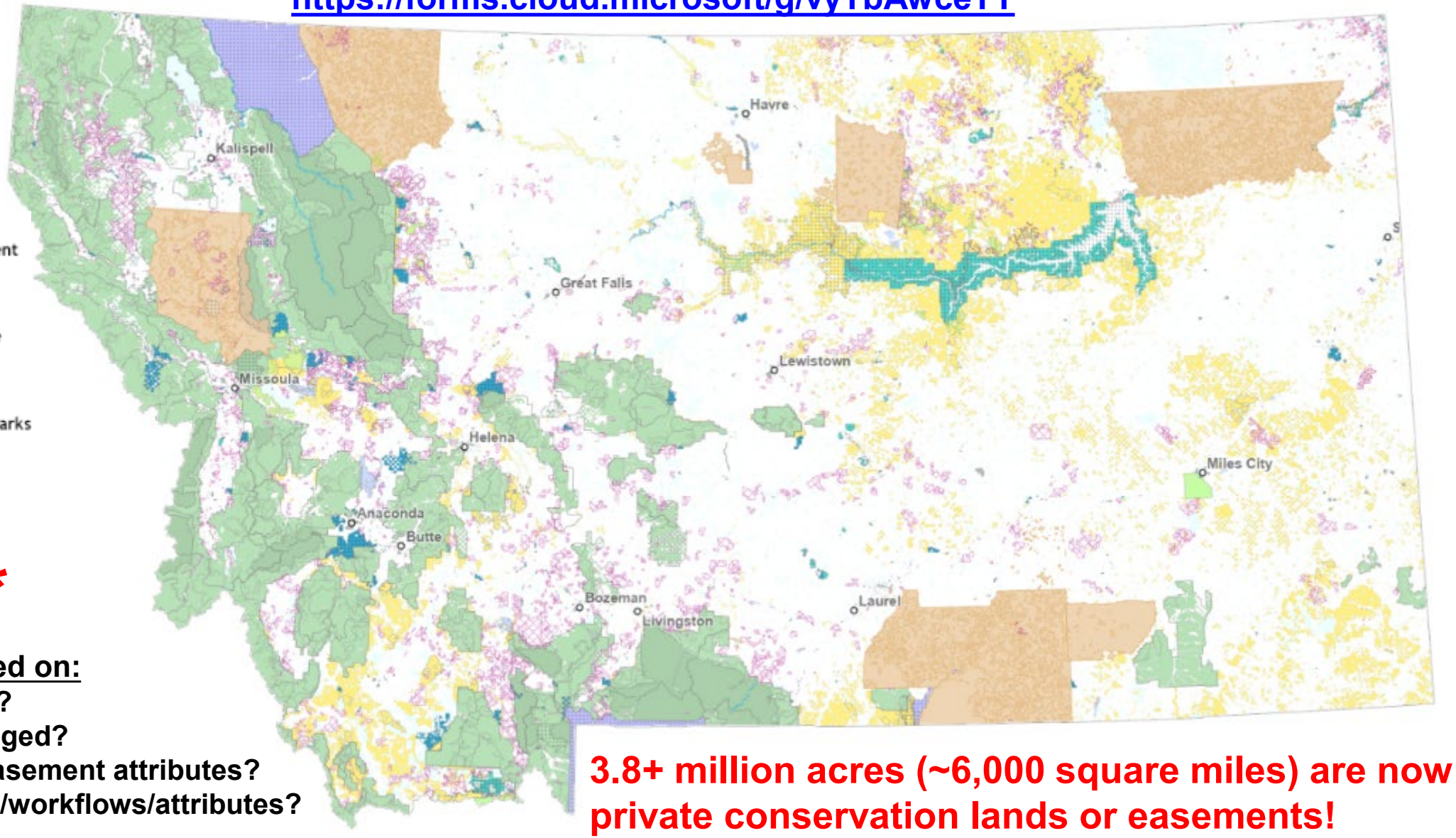
The Montana Natural Heritage Program developed this tool to support timber sourcing which meets Sustainable Forestry Initiative (SFI) certification requirements in not impacting species with global conservation status ranks of G1 (critically imperiled) or G2 (imperiled) as assigned by NatureServe. This mapping application displays both the documented presence of G1-G2 species as well as areas they are possibly present. Species are split into one of four habitat association groups: (1) **FOREST** which occur in forest habitat; (2) **SMZ** which occur in aquatic or riparian habitat within forest habitat; (3) **ACCESS** which have the potential to be encountered while accessing forest habitats; (4) **UNLIKELY** which occur in non-forest habitat and are unlikely to be encountered even on the way to forest habitat. The application includes an introductory video on how to use it.



Cause for Stewardship Celebration!

However, do we need to discuss partner needs for land ownership/stewardship moving forward?

https://forms.cloud.microsoft/g/vyTbAwceTY



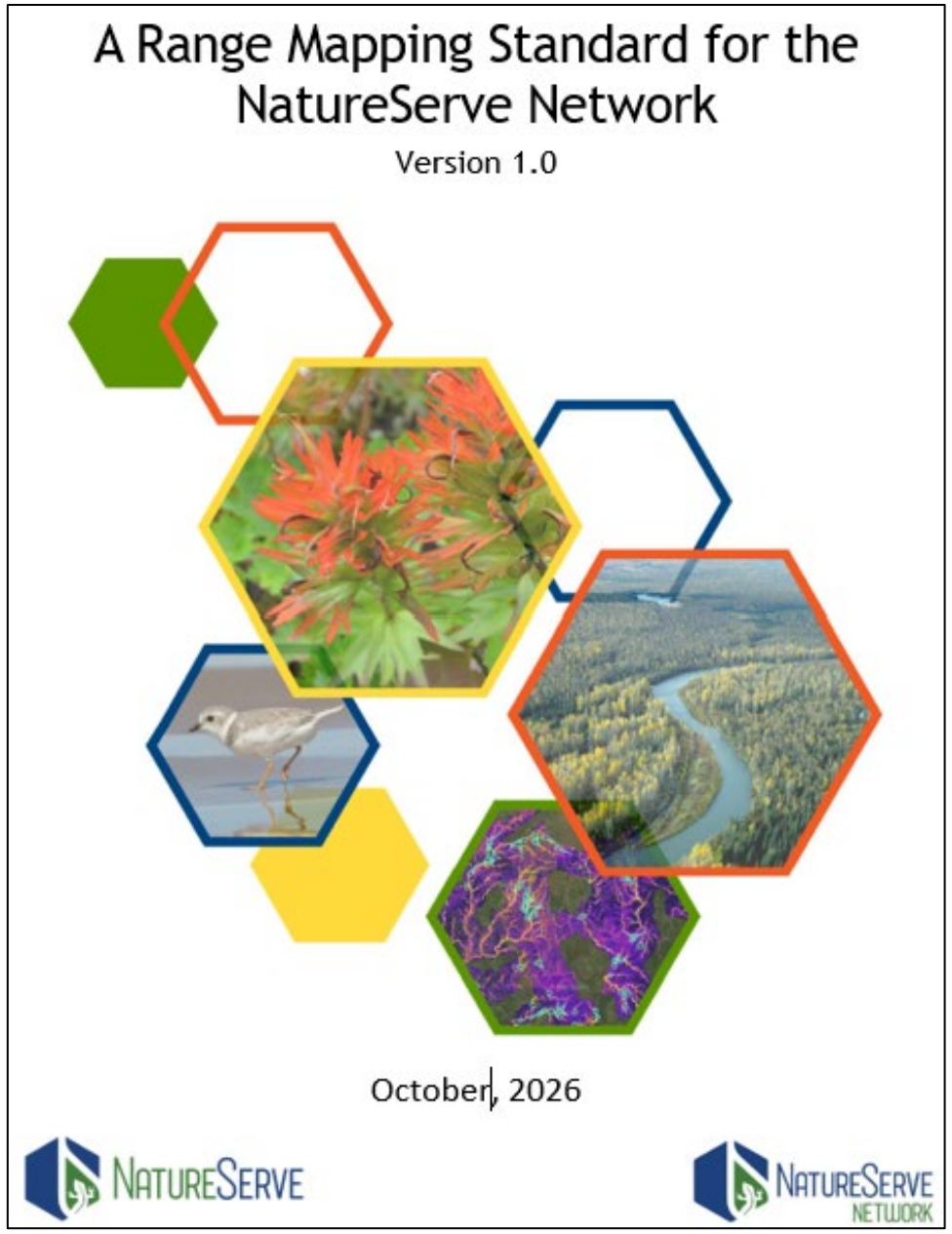
Discussion Needed on:

(1) data workflows?
(2) attributes managed?
(3) conservation easement attributes?
(4) tribal lands info/workflows/attributes?
(5) Other?

3.8+ million acres (~6,000 square miles) are now private conservation lands or easements!

Plus 237,000 acres were transferred to fed, state, local government since 2016!

Range Map Standard for NatureServe Network



Great Plains Toad



Montana Range



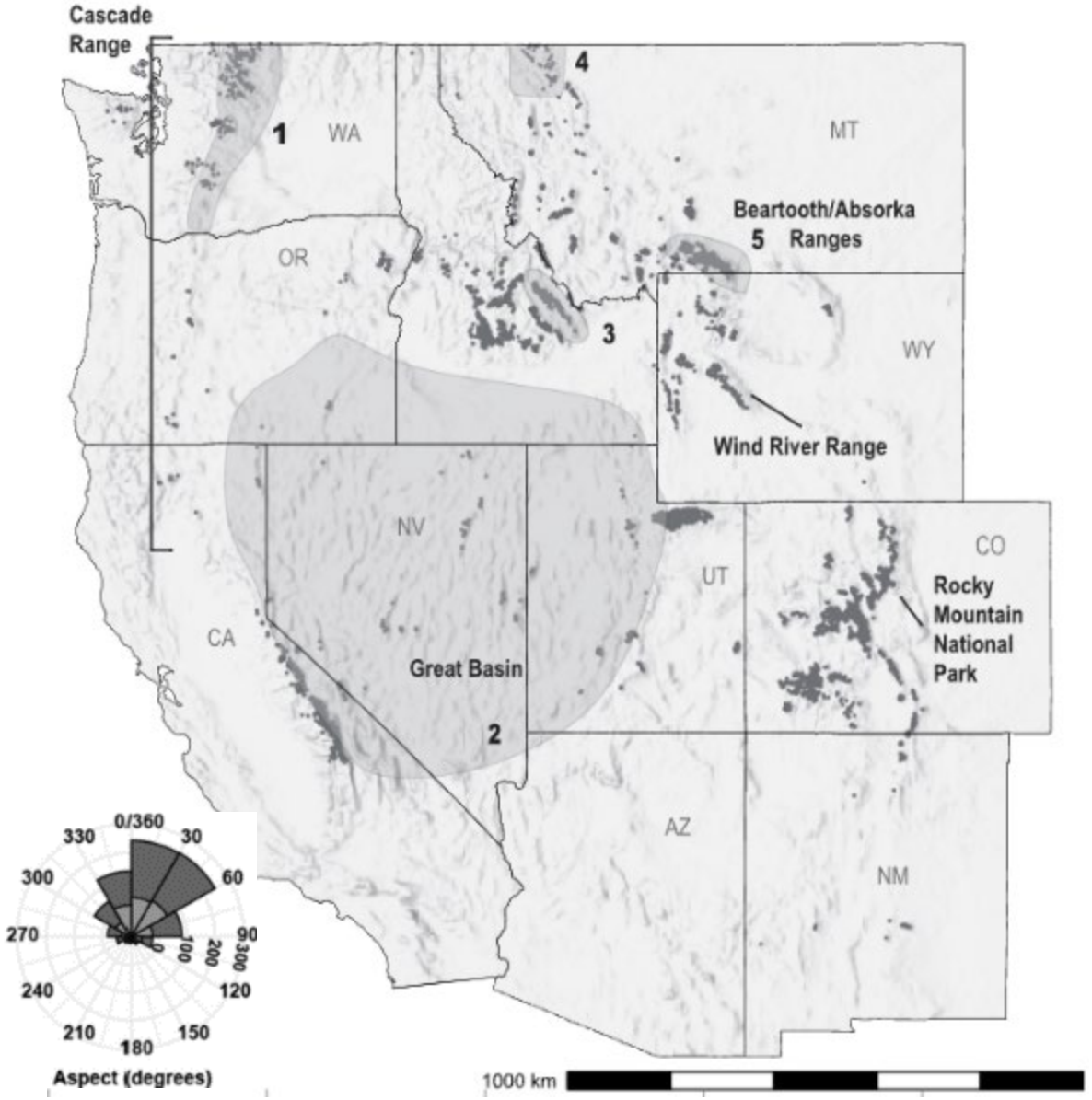
Global Range

Summary

- **Extension of existing standards**
- **Range map = full collection of pre-defined spatial map units in which the target species or ecosystem is know or suspected to occur, presently or historically, representing the full geographic extent of the species or ecosystem without consideration of specific environmental conditions or habitat requirements**
- **Underlying map units can vary across jurisdictions (e.g., counties, townships, watersheds, ecoregions, buffers of streams, squares, or hexagons)**
- **Minimum required attributes for each map unit include:**
  - **occupation type (regular, irregular, vagrant)**
  - **annual tenure (year-round, partial year)**
  - **life history activities (e.g., breeding, wintering)**
  - **historical tenure (extant or historic)**
  - **nativity (native or non-native)**
  - **taxonomic identifiers**
  - **standard metadata**
- **Recommend CC-BY-NC licensing**
- **A NatureServe Network management framework, library, and upscaling schema**

Rock Glaciers and Other Ecological Sites





Rock Glacier Basics

- Ice dating back to Pleistocene
- Covered in rocks and debris and persisting where it would not if exposed to the surface. Northern aspects.
- Past and current existence detected with flow in aerial imagery time series
- Can be important to maintaining stream flows and cold temperatures, thus supporting cold water dependent species
- At risk of melting out by end of century

Ecological Sites in Enviro Summaries?

- Rock Glaciers
- Fens
- Wetlands of Special Significance
- Native Champion Trees
- Mapped NVC Alliances or Associations of Conservation Concern
- Others…please let us know?

Trcka et al. 2025 Arctic, Antarctic, and Alpine Research 57(1):2546699.
https://doi.org/10.1080/15230430.2025.2546699

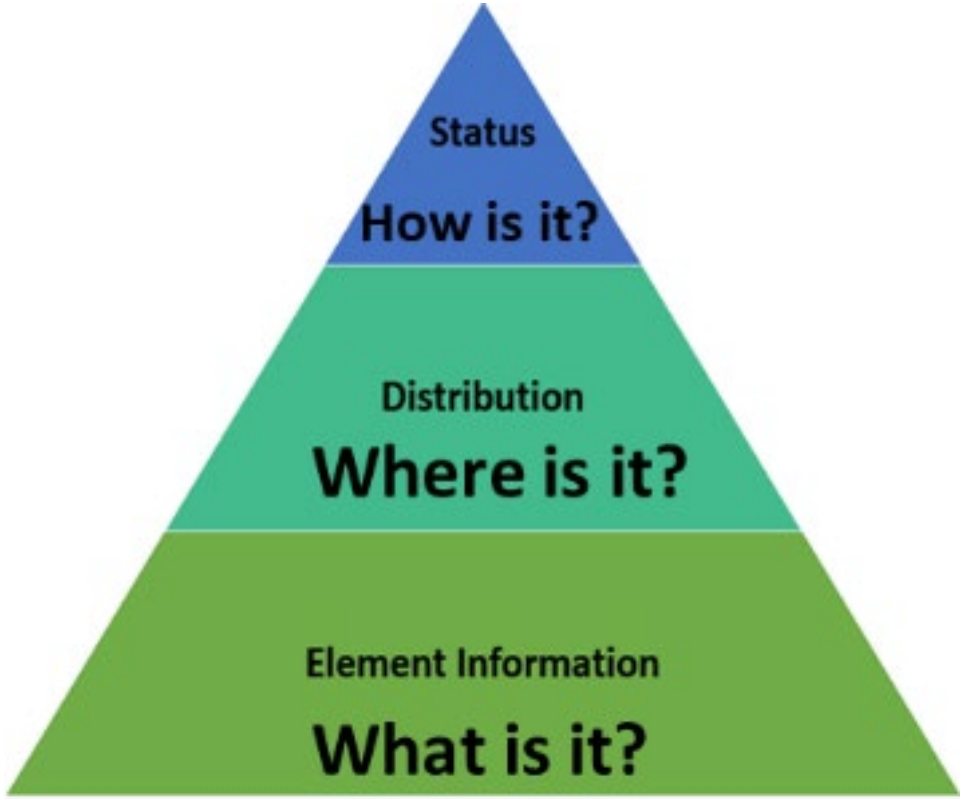
Why have a Natural Heritage Program?

- Common set of information available to everyone for
  - environmental review, permitting, and planning
  - species and habitat management decisions
  - disaster and invasive species response efforts
- Make informed decisions quickly
- Expedite processes to save time and money
- Provide certainty (avoid litigation and harm to species)
- Maintain local authority…prevent ESA listings
- Conserve Montana's native species and habitats

How is our Information Being Used?

- 37 state and 30 federal laws
- 10 executive orders
- 70 plus processes for agencies

*See full list at https://mtnhp.mt.gov/about/information-uses/



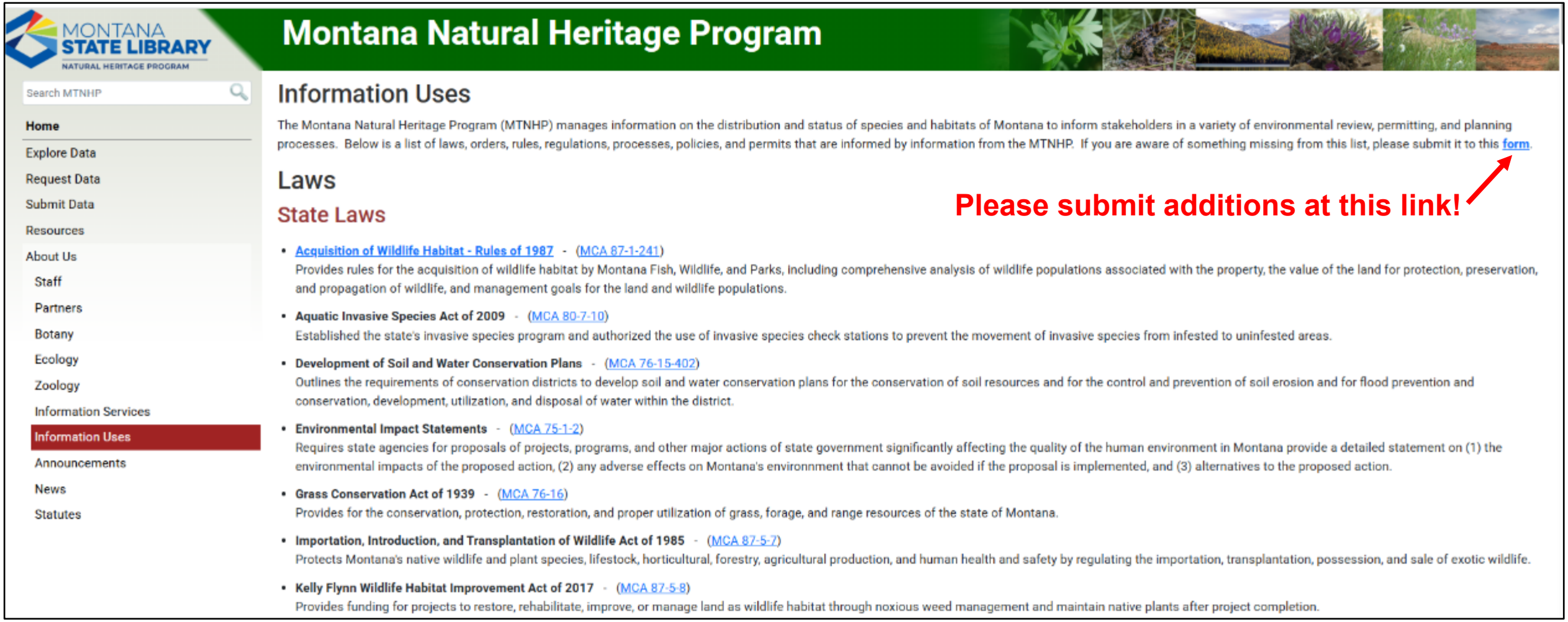
How is our Information Being Used?

Please Help Document How MTNHP Information is Used?

https://mtnhp.mt.gov/about/information-uses

MONTANA STATE LIBRARY
NATURAL HERITAGE PROGRAM

State, Federal, & Local Laws, Executive Orders, Rules & Regulations, Processes & Policies, Permits, and Industry Certifications & Standards



MONTANA STATE LIBRARY
NATURAL HERITAGE PROGRAM

Montana Natural Heritage Program

Search MTNHP

- Home
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- Request Data
- Submit Data
- Resources
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  - Staff
  - Partners
  - Botany
  - Ecology
  - Zoology
  - Information Services
  - Information Uses
  - Announcements
  - News
  - Statutes

Information Uses

The Montana Natural Heritage Program (MTNHP) manages information on the distribution and status of species and habitats of Montana to inform stakeholders in a variety of environmental review, permitting, and planning processes. Below is a list of laws, orders, rules, regulations, processes, policies, and permits that are informed by information from the MTNHP. If you are aware of something missing from this list, please submit it to this form.

Laws

State Laws

Please submit additions at this link!

- Acquisition of Wildlife Habitat - Rules of 1987 - (MCA 87-1-241)
  Provides rules for the acquisition of wildlife habitat by Montana Fish, Wildlife, and Parks, including comprehensive analysis of wildlife populations associated with the property, the value of the land for protection, preservation, and propagation of wildlife, and management goals for the land and wildlife populations.
- **Aquatic Invasive Species Act of 2009** - (MCA 80-7-10)
  Established the state's invasive species program and authorized the use of invasive species check stations to prevent the movement of invasive species from infested to uninfested areas.
- **Development of Soil and Water Conservation Plans** - (MCA 76-15-402)
  Outlines the requirements of conservation districts to develop soil and water conservation plans for the conservation of soil resources and for the control and prevention of soil erosion and for flood prevention and conservation, development, utilization, and disposal of water within the district.
- **Environmental Impact Statements** - (MCA 75-1-2)
  Requires state agencies for proposals of projects, programs, and other major actions of state government significantly affecting the quality of the human environment in Montana provide a detailed statement on (1) the environmental impacts of the proposed action, (2) any adverse effects on Montana's environnment that cannot be avoided if the proposal is implemented, and (3) alternatives to the proposed action.
- **Grass Conservation Act of 1939** - (MCA 76-16)
  Provides for the conservation, protection, restoration, and proper utilization of grass, forage, and range resources of the state of Montana.
- **Importation, Introduction, and Transplantation of Wildlife Act of 1985** - (MCA 87-5-7)
  Protects Montana's native wildlife and plant species, lifestock, horticultural, forestry, agricultural production, and human health and safety by regulating the importation, transplantation, possession, and sale of exotic wildlife.
- **Kelly Flynn Wildlife Habitat Improvement Act of 2017** - (MCA 87-5-8)
  Provides funding for projects to restore, rehabilitate, improve, or manage land as wildlife habitat through noxious weed management and maintain native plants after project completion.

For the Timber Industry, We Facilitate Sustainable Forestry Initiative Certification and Help Them Navigate Environmental Reviews

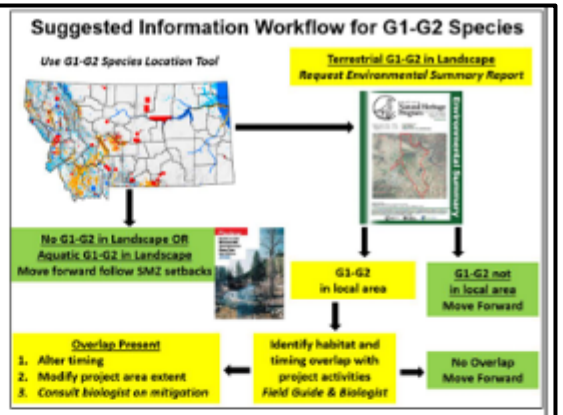
Spatial Tool for Mills for Sourcing & Brochure for Mills and Landowners https://tinyurl.com/9w5u7wvc

G1-G2 Species Location Tool Supporting SFI Certified Timber Sourcing

https://arcg.is/0Wv1ui

The Montana Natural Heritage Program developed this tool to support timber sourcing which meets Sustainable Forestry Initiative (SFI) certification requirements in not impacting species with global conservation status ranks of G1 (critically imperiled) or G2 (imperiled) as assigned by NatureServe. This mapping application displays both the documented presence of G1-G2 species as well as areas they are possibly present. Species are split into one of four habitat association groups: (1) **FOREST** which occur in forest habitat; (2) **SMZ** which occur in aquatic or riparian habitat within forest habitat; (3) **ACCESS** which have the potential to be encountered while accessing forest habitats; (4) **UNLIKELY** which occur in non-forest habitat and are unlikely to be encountered even on the way to forest habitat. The application includes an introductory video on how to use it.

Suggested Information Workflow for G1-G2 Species



To Request a Free Environmental Summary Report or Geodatabase

https://mtnhp.mt.gov/requests/

1. Set up a User Profile
2. Login and file a New Request
3. Request an Environmental Summary Report or geodatabase for a specific location

Tips for Using an Environmental Summary Report



Introductory Materials and How-to-Use Videos

1. Read introductions at back to better understand the report and how to use it
2. Watch this how-to-use video https://youtu.be/fbzUCGxrPD0

Coarse Filter

3. Use Land Cover with Montana Field Guide to investigate habitat types present

Fine Filter

4. Use Species Report to identify documented Species of Concern and those likely to occur because of predicted habitat suitability
5. Use Wetland/Riparian & Land Cover to identify special/rare habitats (e.g., wetland, riparian)

Identify Potential Impacts

6. Look at summary of habitat for area of interest and use predicted habitat suitability model output and Montana Field Guide accounts for individual species to identify species that are likely to overlap with planned activities
7. Use on-the-ground visits by internal or contract biologists to look for special habitats (e.g., snags, wetlands, rock outcrops, springs/seeps)

Work With Agencies to Mitigate Impacts

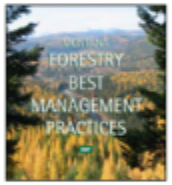
8. Use contacts provided to get feedback from agency biologists on habitats and Species of Concern that require surveys or mitigation actions (e.g., Sec 7 consultation)
9. For questions on Environmental Summary Report, contact: Bryce Maxell bmaxell@mt.gov (406) 444-3989

How to Contribute Data

Submit photos or sound recordings of species that you know and don't know how to identify to iNaturalist https://www.inaturalist.org/ Experts using iNaturalist all over the world will confirm your identification or help you determine what you saw and the Montana Natural Heritage Program will incorporate this data. This is a great way of documenting species that are rarely seen, but are more common than generally recognized. Want to contribute data in other ways such as a spreadsheet or Survey123 smart phone application? Contact Bryce Maxell at bmaxell@mt.gov or (406) 444-3989

Publications of Potential Interest

Montana Forestry Best Management Practices Handbook: https://dnrc.mt.gov/_docs/forestry/BMP.pdf
Montana Forestry BMP Illustrated Guidelines: https://dnrc.mt.gov/_docs/forestry/FinalBMP_VersionForWeb10_1_15.pdf
Guide to Streamside Management Zone Law and Rules https://dnrc.mt.gov/_docs/forestry/SMZFullcopy.pdf
Hazard Reduction Fact Sheet https://dnrc.mt.gov/Forestry/Forest-Management/logging-slash-reduction
Riparian Forest Wildlife Guidelines: https://www.pyramidlumber.com/landlogres/Riparian%20Forest%20Wildlife.pdf
Snags, Bark Beetles, and Cavity Nesting Birds: https://abcbirds.org/wp-content/uploads/2015/05/Cavity-nester-booklet.pdf
Land Manager's Guide to Cavity-nesting Birdshttp://abcbirds.org/wp-content/uploads/2015/05/PonderosaPinebirdguide.pdf
Cavity-Nesting Birds in Ponderosa Pine Forests: http://abcbirds.org/wp-content/uploads/2015/05/ppine_landowner.pdf
Montana Forest Landowner Bird Habitat Management: https://tinyurl.com/43k4pb94
Bat Biology and Habitat Management Guide: https://tinyurl.com/4dnwzvfx
Biodiversity Guide for Montana Forest and Woodlot Owners: https://tinyurl.com/yknjg86





Other Information Sources at the Montana Natural Heritage Program https://mtnhp.mt.gov/

Montana Field Guide: https://fieldguide.mt.gov
Species Snapshot: https://mtnhp.org/SpeciesSnapshot/
Map Viewer: https://mtnhp.org/mapviewer
Habitat Suitability Models: https://mtnhp.mt.gov/resources/Models/
Weed Dashboard: https://mtnhp.mt.gov/webapps/dashboards
Email for assistance: mtnhp@mt.gov

Since 1985, the Montana Natural Heritage Program (MTNHP) has been Montana's source for reliable and objective information on Montana's native species and habitats, emphasizing those of conservation concern. The Montana legislature housed the program in the neutral and non-regulatory Montana State Library as "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). The program works with a variety of partners in striving to be a comprehensive, up-to-date, and accurate source of natural resource information to save time and money, speed environmental reviews, and inform decision making. These include NatureServe, the parent body of Natural Heritage Programs across North America which centralizes taxonomy and assigns global conservation status ranks and the Spatial Analysis Lab and the Ecological Mapping, Monitoring, and Analysis Group at the University of Montana who respectively develop the Montana land cover and wetland and riparian mapping layers.

MONTANA STATE LIBRARY NATURAL HERITAGE PROGRAM
NATURESERVE
Spatial Analysis Lab MONTANA

Where we started:

- 155 G1G2 species in MT

After Investing How Our Information Should Be Used:

- 57 are in commercial forests
  - 16 only while accessing forest
  - 25 are aquatic or streamside
  - 16 occur terrestrially in forests
- 12 are known from 1-4 sites
- 4 have broader distributions
  - Long-styled Thistle
  - Keeled Mountain Snail
  - Carinate Mountain Snail
  - Lyrate Mountain Snail
- Most impacts mitigated with timing restrictions
- Conservation is more likely to be successful if information is easy to use!

Help Us Improve Environmental Summary Reports

Suggested Contacts – Pages 23-25 Updates or Additional Contacts?

Additional Information Resources – Page 34 Anything else we should link to?

https://mtnhp.mt.gov/requests

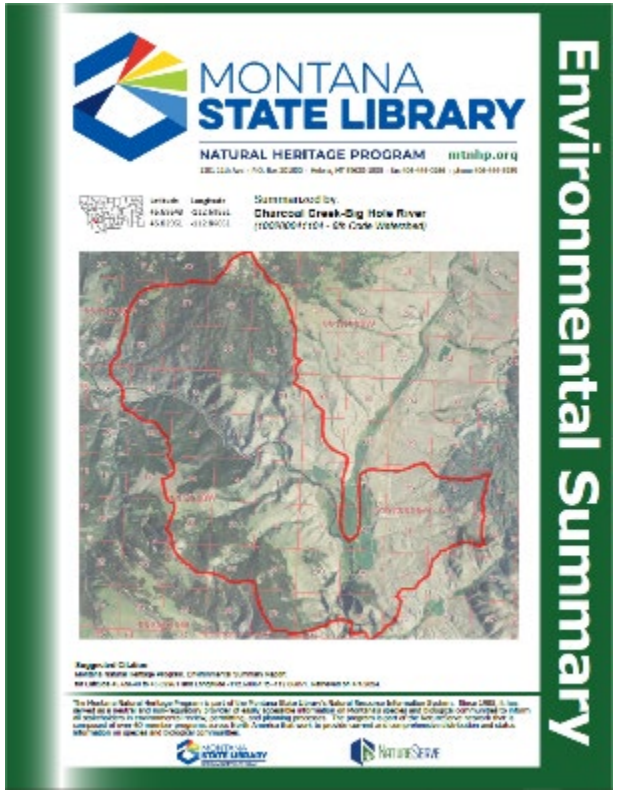
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Request Data

For environmental reviews, permits, or planning

Submit Request

Data Use Terms and Conditions



Montana Natural Heritage Program

Data Requests

Consultants, private organizations, and the general public may request Environmental Summary Reports, geodatabases of species information, and other data products for environmental review, permitting, and planning processes. Natural resource managers in government agencies can self-serve this information from our Map Viewer web application by creating an account and receiving elevated permissions.

All requests are free of charge. Before submitting a request, note that we make a variety of information on species and habitats readily available in our web applications and other online resources.

Questions about submitting a request? Email us: mtnhp@mt.gov

Request Submission

To submit a request, you will need a State of Montana account:

- Click the **Submit Request** button below.
- Choose **Citizen Login**, unless you work for a State Agency in Montana.
- **Log in** to your account (or create an account).
- If prompted, choose "**I am not representing a business**" at the start of the request form.
- Fill out the **Data Request form** as directed.

Need an account with the State of Montana/Okta? Use these instructions to create an Okta account or see the FAQs.

Submit Request

View Examples of Data and Information Requests

Environmental Summary Reports are the most common type of information we provide. These reports include a PDF (example) with summaries of species and habitat information (including a list of Species of Concern), a spreadsheet with those data in tabular form, Species of Concern Occurrence reports for select species if present, and custom Field Guide snapshots for the species highlighted in the report.

- How to Interpret and Use MTNHP Environmental Summary Reports

Our examples page lists other types of requests and the data or information we can supply to fulfill them.

Data Use Terms and Conditions and Data Use Acknowledgments

Help Us Ensure that Everyone in Your Agency Has Access to, and Training for, MTNHP Resources that Will Make Their Jobs Easier

At Upper Right of
mtnhp.mt.gov
Take An In-Depth Video Tour!

- Guide to Publicly Available Resources
- Invasive Species Manager Guide
- Biologist / Resource Manager Guide

- Show your coworkers our
  - Guides to Using MTNHP Information
  - Videos on using iNaturalist
  - Videos on Map Viewer tasks & interpreting Environmental Summary Reports
- Send us contact lists, emails, and positions that should have agency-level access and we will do the outreach
- Let us know if you:
  - need a training session for your group
  - need a specific training video made
  - think we can help improve your workflows / processes
  - have need for new information resources
  - have contacts or info for Environmental Summary Reports

Bryce Maxell
(406) 444-3989
bmaxell@mt.gov

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