

Strategic Framework for Information Services
July 2020 through June 2025



Purpose

Information Services staff at the Montana Natural Heritage Program support informed decision making for the stewardship of Montana's plants, animals, and biological communities by making information on these natural resources readily available to state, federal, tribal, nongovernmental organizations, and private stakeholders. To do this, we support the Botany, Ecology, and Zoology Programs in centralization of data and development of innovative information products. We also strive to create and maintain web applications that make this information easily accessible to all stakeholders.

What we Value

- Analyzing and interpreting data using science-based methods to develop innovative information products.
- Comprehensive, current, accurate, and scientifically credible information on Montana's species and biological communities.
- Efficient processes and procedures that save staff time and program funding while improving data quality and consistency.
- Making information readily available to stakeholders at a scale appropriate to their information needs through our websites and mediated requests.
- Providing neutral, trusted, timely, and equitable service to all our information users.

Our Roles

- We design, create, and deploy relational databases that facilitate storage and retrieval of information on Montana's species and biological communities.
- We centralize information gathered by our partners and the Botany, Ecology, and Zoology programs on the distribution and status of Montana's species and biological communities.
- We provide database, scripting, and coding support to the Botany, Ecology, and Zoology programs to create value-added information products such as conservation status ranks, species of concern occurrences, predicted habitat suitability models, and national wetland and riparian and land cover mapping products.
- We develop automated procedures and processes that ensure data quality and consistency while reducing staff time required to review data and create information products and reports.
- With feedback from our partners, we create, maintain, and enhance web applications that provide information on the distribution, conservation status, biology, and ecology of Montana's species and biological communities.
- We fill mediated requests for geospatial information for environmental review, permitting, and planning processes in a timely and impartial manner.

Strategic Result 1

What we will do:

Centralize information on Montana's plants, animals, and biological communities and ensure it is complete, up-to-date, and of high quality.

How we will do it:

- Develop innovative web-based and other data submission tools using the latest technologies that facilitate the centralization of species and biological community information by staff and partners.
- Provide database support to facilitate Montana Spatial Data Infrastructure development for statewide wetland and riparian and land cover mapping efforts.
- Add species and related biology and ecology information to the program's databases and websites, prioritizing those of greatest conservation need in the case of native species or representing the greatest threat to native species and communities in the case of non-native species.
- Provide database and data analysis support for conservation status rank criteria to facilitate up-to-date and accurate conservation status ranks for plant and animal species and biological communities.
- Obtain survey and detection/observation information from existing data sources for plant and animal species, with emphasis on those of conservation concern, and integrate it into the program's databases.
- Develop automated processes and procedures that identify observations and surveys that need hand review by botany or zoology staff to ensure high data quality.
- Support the Botany, Ecology, and Zoology programs in filling in information gaps for species and biological community accounts on the Montana Field Guide.
- Update the reference database with literature on Montana species and biological communities and display references on species and ecological system accounts in the Montana Field Guide with input from the Botany, Zoology, and Ecology programs.
- Add and attribute photos of species and biological communities gathered by staff, partners, and the public and, where possible, make them readily accessible on websites.

Why we will do it:

Users are able to make informed and timely decisions because they have ready access to comprehensive, current, and accurate information on the distribution, status, and biology/ecology of species and biological communities from a single trusted source.

Strategic Result 2

What we will do:

Create innovative value-added information products for Botany, Ecology, and Zoology information.

How we will do it:

- Support Botany, Zoology, and Ecology programs in the creation of value-added products such as conservation status ranks, climate change vulnerability indices, and species-habitat associations.
- Create and maintain Species of Concern occurrences for use in environmental review and permitting processes in coordination with the Botany and Zoology programs.
- Use survey and observation information for native plants and animals to create models reflecting the predicted landscape suitability for individual species with input from Botany and Zoology program staff.
- Use survey and observation information in Montana or elsewhere for non-native plants and animals to create models reflecting the predicted landscape risk of invasion by individual species.
- Use collective predicted landscape suitability models for numerous species to create predicted maps for overall biodiversity, taxonomic groups, or suites of species that are of a similar conservation status.
- Use survey, observation, predicted habitat suitability information to create range polygons to identify the potential distribution of individual species.
- Ensure that website users can summarize species, biological community, and other program information by commonly used administrative boundaries or custom areas of interest.

Why we will do it:

Users are able to make more informed and timely decisions with innovative species and habitat information products that summarize the known and potential distribution and status of species and habitats in geographic areas of interest.

Strategic Result 3

What we will do:

Make our information readily available to our data users and ensure that they are aware of, and trained in, the use of our information products.

How we will do it:

- Develop innovative website and other information tools using the latest technologies that provide ready access to the full suite of information sources the program manages.
- Collaborate with partners on trainings that help users understand our data, how to access what they need, and what the appropriate uses of the information are.
- Monitor how staff expertise, data, and web applications are used by partners in order to evaluate and improve services.
- Partner with the larger Montana State Digital Library to leverage staff expertise and web tools to support users.
- Develop and post self-service user guides and training webinars appropriate to various levels of data access that can be viewed on our website.
- Where possible, expand outreach to our network of partners (e.g., conservation districts, county government, local citizen groups, and citizen scientists).
- Regularly engage partners and users through partner's meetings and trainings to solicit advice, identify opportunities, and better understand user challenges, needs, and priorities.
- Employ staff that maintain currency in their disciplines and exhibit professionalism and responsiveness in their service to users.
- Engage in partner funded project work that enhances our data holdings and staff expertise, with emphasis on species and biological communities of conservation concern.
- Empower staff to identify and develop innovative solutions and services.

Why we will do it:

Users are able to save time and money and make more informed decisions by readily accessing information through innovative and easy-to-use web applications they are proactively trained on and through direct access to the expertise of staff.