

**From:** [Guinotte, John](#)  
**To:** [Turner, Ed](#)  
**Subject:** Fwd: Wolverine Data  
**Date:** Monday, January 9, 2017 8:12:05 AM  
**Attachments:** [image002.png](#)  
[image001.png](#)  
[Wolverine GIS Data.zip](#)

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Hi Ed, Sorry for the delay. I've been down w the flu since Thurs of last week. Attached is the Montana observation from NH. Have a look at the attributes. You will see that some are of questionable quality. I'll send the other files now.

Best, John

----- Forwarded message -----

From: **Bush, Jodi** <[jodi\\_bush@fws.gov](mailto:jodi_bush@fws.gov)>  
Date: Wed, Jul 6, 2016 at 3:36 PM  
Subject: Fwd: Wolverine Data  
To: John Guinotte <[john\\_guinotte@fws.gov](mailto:john_guinotte@fws.gov)>

Here you go John. JB

Jodi L. Bush  
Office Supervisor  
Montana State Ecological Services Office  
585 Shepard Way, Suite 1  
Helena, MT 59601  
(406) 449-5225, ext.205

----- Forwarded message -----

From: **Miller, Martin** <[martinm@mt.gov](mailto:martinm@mt.gov)>  
Date: Wed, Jul 6, 2016 at 3:35 PM  
Subject: RE: Wolverine Data  
To: "[jodi\\_bush@fws.gov](mailto:jodi_bush@fws.gov)" <[jodi\\_bush@fws.gov](mailto:jodi_bush@fws.gov)>  
Cc: "Maxell, Bryce" <[BMaxell@mt.gov](mailto:BMaxell@mt.gov)>

Jodi,

The attached zip file contains a personal geodatabase with layers for wolverine occurrences, observations, and a range map. Also included are metadata and a file with agency contacts that may provide additional information.

In order to help us improve our services to you, we invite you to take a simple survey. The survey is intended to gather some basic information on the value and quality of the information and services you recently received from the Montana Natural Heritage Program. The survey is short and should not take more than a few minutes to complete. All information will be kept confidential and will be used internally to improve the delivery of services and to help document the value of our services. Use this link to go to the survey: <http://www.surveymonkey.com/s/RYN8Y8L>.

Let me know if you have any questions.

Thanks,

Martin Miller

Data Assistant

Montana Natural Heritage Program (<http://mtnhp.org>)

P.O. Box 201800, 1515 East Sixth Ave., Helena, MT 59620-1800

(406) 444-3290

(406) 444-0266 (fax)

[martinm@mt.gov](mailto:martinm@mt.gov)

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**From:** Maxell, Bryce

**Sent:** Wednesday, July 06, 2016 3:02 PM

**To:** Miller, Martin <[martinm@mt.gov](mailto:martinm@mt.gov)>

**Subject:** FW: Wolverine Data

Hi Martin,

Could you please put together shapefiles of the following for Wolverine:

Observations

Species Occurrences

Range Map

If it can all be zipped small enough to attach to an email, please just go ahead and email it to Jodi and cc me. Otherwise, please email the ftp site address.

Let me know if you have any questions.

-Bryce

Bryce A. Maxell

Program Coordinator

Montana Natural Heritage Program <http://mtnhp.org>

P.O. Box 201800, 1515 East Sixth Ave., Helena, MT 59620-1800

(406) 444-3989 (office) | (406) 461-1279 (cell) | (406) 444-0266 (fax)

[bmaxell@mt.gov](mailto:bmaxell@mt.gov)

**From:** Bush, Jodi [[mailto:jodi\\_bush@fws.gov](mailto:jodi_bush@fws.gov)]

**Sent:** Wednesday, July 06, 2016 2:59 PM

**To:** Maxell, Bryce <[BMaxell@mt.gov](mailto:BMaxell@mt.gov)>

**Subject:** Re: Wolverine Data

yes Bryce. You are welcome.

Can I get the information as shapefile? Appreciate it. JB

Jodi L. Bush

Office Supervisor

Montana State Ecological Services Office

585 Shepard Way, Suite 1

Helena, MT 59601

(406) 449-5225, ext.205

On Wed, Jul 6, 2016 at 2:42 PM, Maxell, Bryce <[BMaxell@mt.gov](mailto:BMaxell@mt.gov)> wrote:

Hi Jodi,

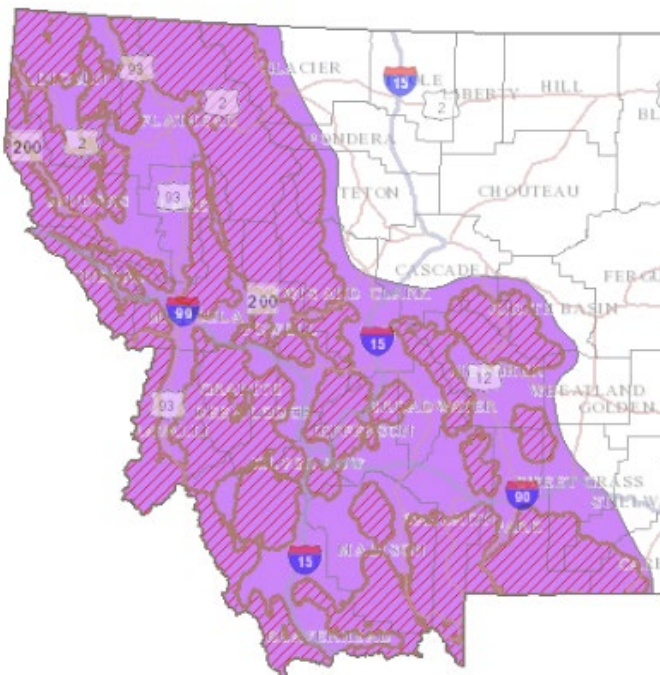
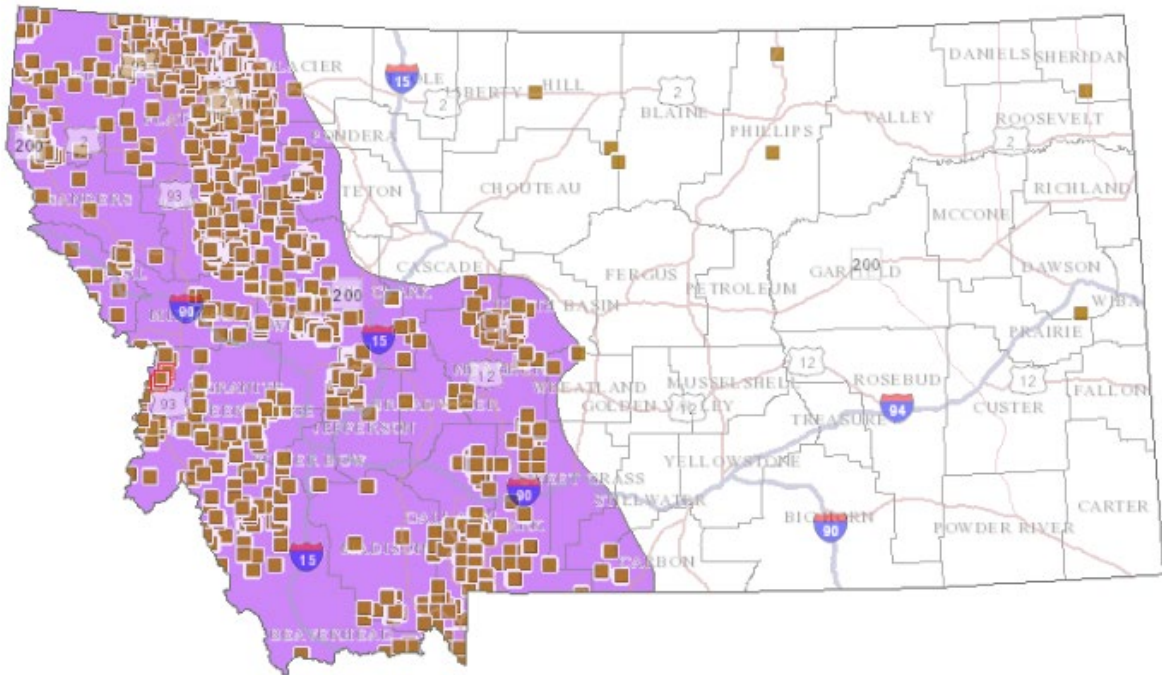
Attached is what we have for Wolverine records in Montana (associated map of observations in upper map below). The cross-hatched areas in the bottom map are our species occurrences that go out in environmental reviews.

Let me know if you want any of this as a shapefile or geodatabase or if you want to chat anything out via phone.

Thank you very much for the \$5,000 addition to the IPAC agreement. That helps us keep

our data up-to-date and comprehensive!

-Bryce



Bryce A. Maxell

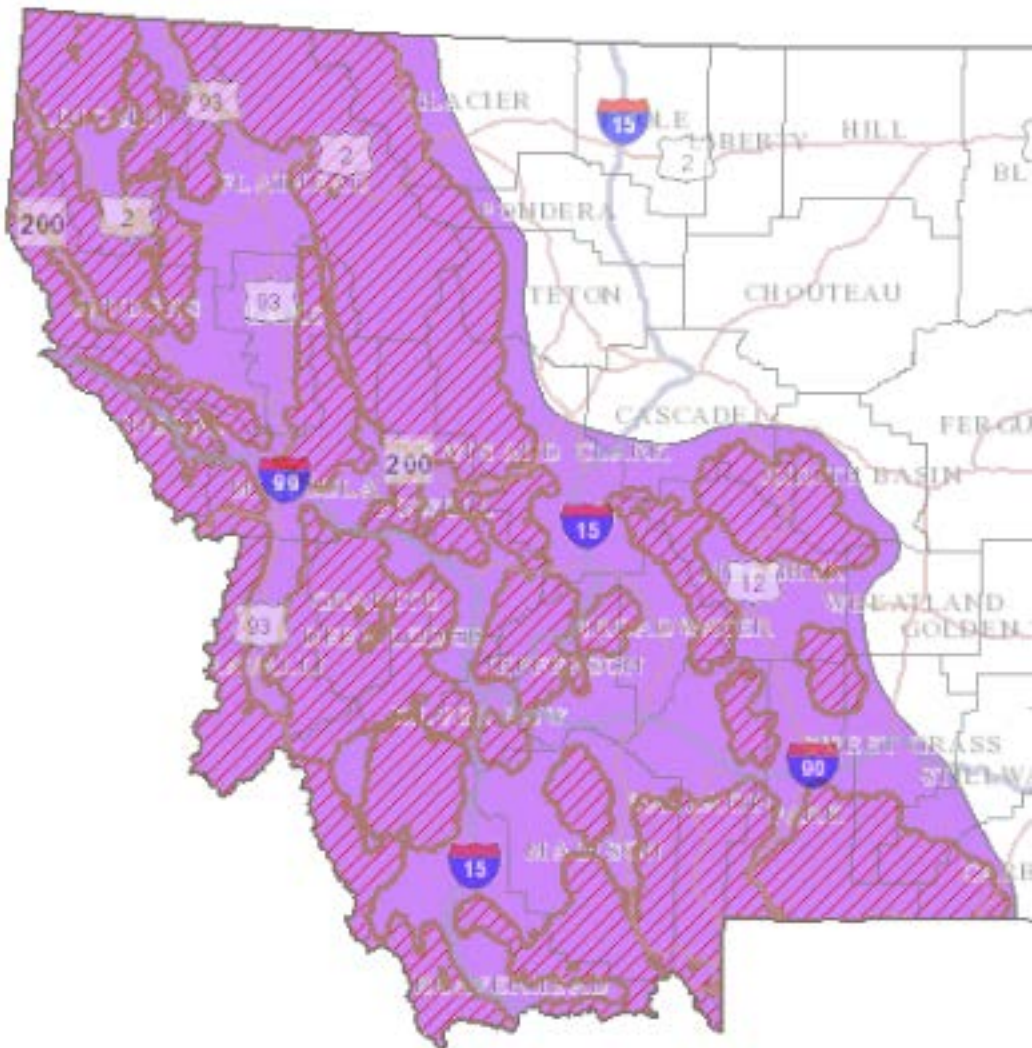
Program Coordinator

Montana Natural Heritage Program <http://mtnhp.org>

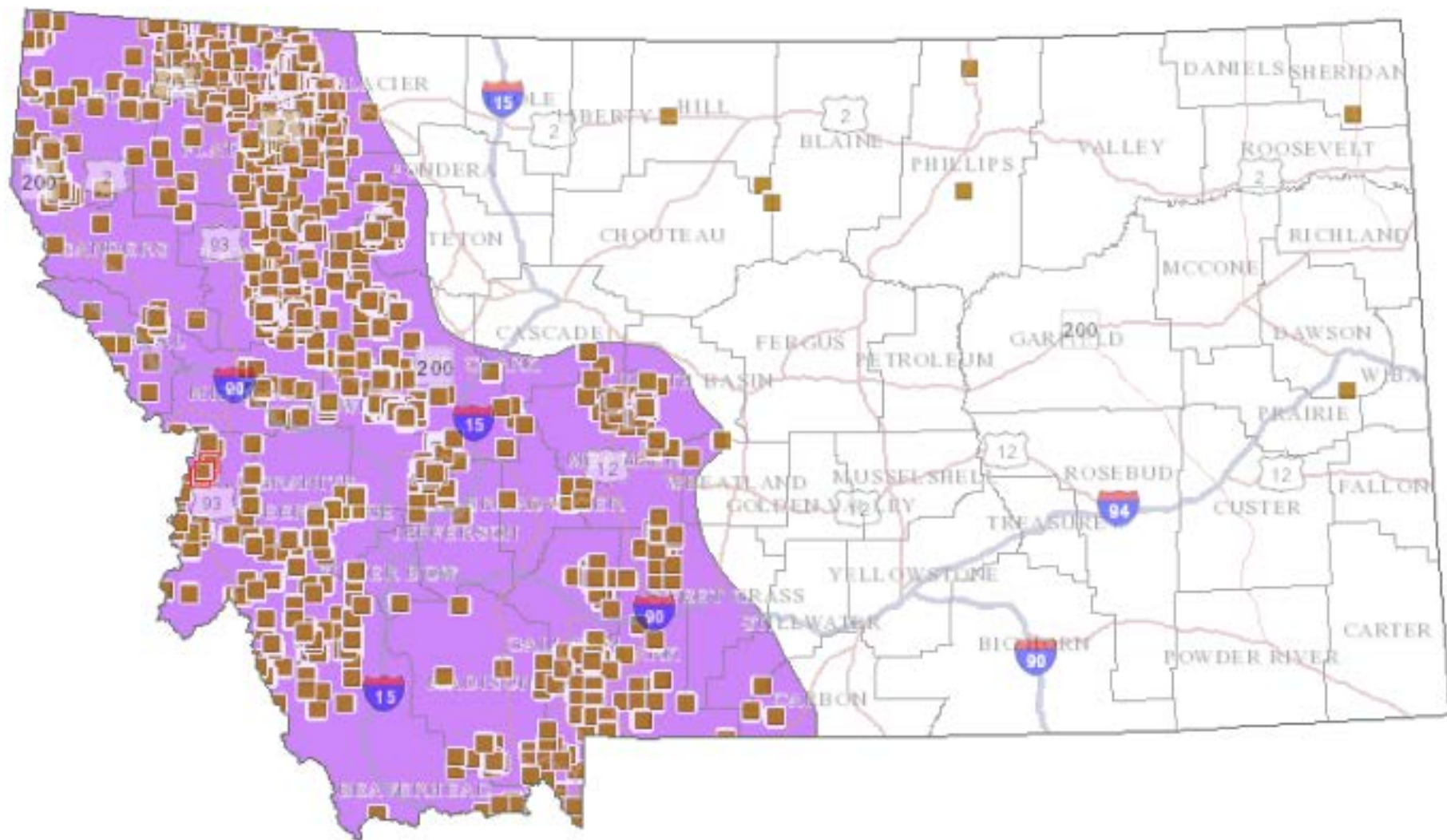
P.O. Box 201800, 1515 East Sixth Ave., Helena, MT 59620-1800

(406) 444-3989 (office) | (406) 461-1279 (cell) | (406) 444-0266 (fax)

[bmaxell@mt.gov](mailto:bmaxell@mt.gov)







## Suggested Contacts for State and Federal Natural Resource 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 planning processes and management decisions. In addition to the information you receive from us, we encourage you to contact state and federal resource management agencies in the area where your project is located. They may have additional data or management 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 Conservation (IPAC) website <http://ecos.fws.gov/ipac/> 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:

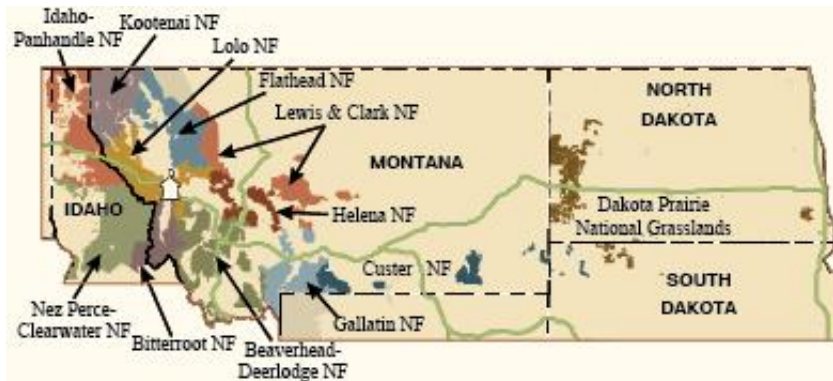
Montana Fish, Wildlife & Parks		
Regional Contacts 	<a href="#">Region 1</a> (Kalispell) (406) 752-5501 <a href="#">Region 2</a> (Missoula) (406) 542-5500 <a href="#">Region 3</a> (Bozeman) (406) 994-4042 <a href="#">Region 4</a> (Great Falls) (406) 454-5840 <a href="#">Region 5</a> (Billings) (406) 247-2940 <a href="#">Region 6</a> (Glasgow) (406) 228-3700 <a href="#">Region 7</a> (Miles City) (406) 234-0900	<b>Fish and Wildlife Recommendations for Subdivision Development:</b> Renee Lemon <a href="mailto:RLemon@mt.gov">RLemon@mt.gov</a> (406) 444-3738 and see:  <a href="http://fwp.mt.gov/fishAndWildlife/livingWithWildlife/buildingWithWildlife/subdivisionRecommendations/">http://fwp.mt.gov/fishAndWildlife/livingWithWildlife/buildingWithWildlife/subdivisionRecommendations/</a>
<b>American Bison, Black-footed Ferret, Black-tailed Prairie Dog, Bald Eagle, Golden Eagle, Common Loon, Least Tern, Piping Plover, Whooping Crane:</b> Lauri Hanauska-Brown <a href="mailto:LHanauska-Brown@mt.gov">LHanauska-Brown@mt.gov</a> (406) 444-5209		
<b>Grizzly Bear, Greater Sage Grouse, Trumpeter Swan, Big Game, Upland Game Birds, or Furbearers:</b> John Vore <a href="mailto:jvore@mt.gov">jvore@mt.gov</a> (406) 444-3940		
<b>Managed Terrestrial Game and Nongame Animal Data:</b> Adam Messer <a href="mailto:amesser@mt.gov">amesser@mt.gov</a> (406) 444-0095		
<b>Fish Species:</b> Zachary Shattuck <a href="mailto:zshattuck@mt.gov">zshattuck@mt.gov</a> (406) 444-1231 or Lee Nelson <a href="mailto:leenelson@mt.gov">leenelson@mt.gov</a> (406) 444-2447		
<b>Fisheries Data:</b> Jane Horton <a href="mailto:jhorton@mt.gov">jhorton@mt.gov</a> (406) 444-3759		
<b>Wildlife and Fisheries Scientific Collector's Permits:</b> <a href="http://fwp.mt.gov/doingBusiness/licenses/scientificWildlife/default.html">http://fwp.mt.gov/doingBusiness/licenses/scientificWildlife/default.html</a> Merissa Hayes for Wildlife <a href="mailto:merhayes@mt.gov">merhayes@mt.gov</a> (406) 444-7320 or Beth Giddings for Fisheries <a href="mailto:begiddings@mt.gov">begiddings@mt.gov</a> (406) 444-7319		

Montana Department of Environmental Quality
<b>Permitting and Compliance Division:</b> <a href="http://svc.mt.gov/deq/staffdirectory#pca">http://svc.mt.gov/deq/staffdirectory#pca</a> (406) 444-4323
<b>Wetlands:</b> Lynda Saul <a href="mailto:lsaul@mt.gov">lsaul@mt.gov</a> (406) 444-6836

U.S. Fish and Wildlife Service
<b>Information Planning and Conservation (IPAC) website:</b> <a href="http://ecos.fws.gov/ipac/">http://ecos.fws.gov/ipac/</a>
<b>Montana Ecological Services Field Office:</b> <a href="http://www.fws.gov/montanafieldoffice/">http://www.fws.gov/montanafieldoffice/</a> (406) 449-5225

Bureau of Land Management

<b>BLM Montana Field Office Contacts</b> Billings: (406) 896-5013 Butte: (406) 533-7600 Dillon: (406) 683-8000 Glasgow: (406) 228-3750 Havre: (406) 262-2820 Lewistown: (406) 538-1900 Malta: (406) 654-5100 Miles City: (406) 233-2800 Missoula: (406) 329-3914

United States Forest Service

<b>USFS Regional Office – Missoula, Montana Contacts</b> Wildlife Program Leader: Tammy Fletcher <a href="mailto:tammyfletcher@fs.fed.us">tammyfletcher@fs.fed.us</a> (406) 329-3588 Wildlife Ecologist: Cara Staab <a href="mailto:cstaab@fs.fed.us">cstaab@fs.fed.us</a> (406) 329-3677 Fish Program Leader: Scott Spaulding <a href="mailto:scottspaulding@fs.fed.us">scottspaulding@fs.fed.us</a> (406) 329-3287 Fish Ecologist: Cameron Thomas <a href="mailto:cathomas@fs.fed.us">cathomas@fs.fed.us</a> (406) 329-3087 TES Program: Kristi Swisher <a href="mailto:kswisher@fs.fed.us">kswisher@fs.fed.us</a> (406) 329-3558 Interagency Grizzly Bear Coordinator: Scott Jackson <a href="mailto:sjackson03@fs.fed.us">sjackson03@fs.fed.us</a> (406) 329-3664 Regional Botanist: Steve Shelly <a href="mailto:sshelly@fs.fed.us">sshelly@fs.fed.us</a> (406) 329-3041



# Metadata for Montana Animal Observations

- [Identification Information](#)
- [Data Quality Information](#)
- [Spatial Data Organization Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
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## Identification Information:

### Citation:

Originator: Montana Natural Heritage Program

Publication date: 05/08/2014

Title: Montana Animal Observations

Publication place: Helena, MT

Publisher: Montana Natural Heritage Program

Online linkage: <http://nris.mt.gov/reqapp/userMain.asp>

Online linkage: <http://mtnhp.org/>

Online linkage: <http://mtnhp.org/mapviewer/>

Online linkage: <http://fieldguide.mt.gov/>

### Abstract:

The Montana Natural Heritage Program (MTNHP) maintains point observation data for plant and animal species in Montana. These databases include information on the location, status, characteristics, and dates of observation. All data are reviewed by Montana Natural Heritage biologists. The observation data form the basis for Species Occurrences of Species of Concern.

### Purpose:

Observation data are collected and maintained by MTNHP using a standardized methodology to provide accurate and current biodiversity and conservation information to public and private agencies and individuals. Uses of the data can include: natural resource management, conservation planning, environmental review, biological and ecological research, land acquisition, and economic development.

### Time period of content:

Beginning date: 01/01/1805

Ending date: 05/08/2014

Currentness reference: Data are continuously updated.

### Status:

Progress: In work

Maintenance and update frequency: Continually

### Access constraints:

The information provided to you by MTNHP 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 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.

### Use constraints:

Species observation and Species Occurrence data obtained from the Montana Natural Heritage Program are

intended for use only by the individual or organization who requested it. Because MTNHP constantly updates and revises its databases with new data and information, products may become less accurate over time. Interested parties are encouraged to obtain the most current information possible from MTNHP, rather than using older products. We add, delete, and change records on a daily basis; consequently, we strongly advise that you update your MTNHP data sets every three (3) months for most applications of our information. Additionally, MTNHP data do not represent comprehensive inventories of all species in all locations. 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. In order to document MTNHP's intent regarding how digital data should be used and to educate users regarding the extent and limitations of the data, MTNHP requires a signed acknowledgement that specifies appropriate and inappropriate uses of the data. A copy of this acknowledgement can be made available upon request.

**Point of contact:**

Karen Coleman  
Biological Data Systems Coordinator  
Montana Natural Heritage Program  
1515 East 6th Ave.  
Helena, MT 59620

Telephone: 406-444-3321  
E-Mail: [kvwcoleman@mt.gov](mailto:kvwcoleman@mt.gov)

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## Data Quality Information:

**Attribute accuracy report:**

The database is dependent on the research and observations of many scientists and individuals. In most cases this information is not the result of comprehensive site-specific field surveys, and is not confirmed by Heritage staff. Many areas have never been thoroughly surveyed, and new observations are still being discovered. Database information should never be regarded as final statements or substituted for on-site surveys required for environmental assessments.

**Logical consistency report:**

Plotted latitudes/longitudes are checked against standard digital themes such as counties, watershed, and USGS quadrangle and topographic maps. Species locations are also checked against known ranges for that species.

**Completeness report:**

**General:**

All data are provided as is. The Montana Natural Heritage Program makes no warranty as to the currency, completeness, or accuracy of any specific data. Since the data in the Montana Natural Heritage Program databases are continually being updated, it is advisable to refresh data received on a quarterly basis for ongoing use. The data provided are for planning, assessment, and informational purposes. The data should not be considered a definitive statement on the presence, absence, or condition of biological elements at any given location. The lack of data for any geographic area cannot be construed to mean that no significant features are present. Observation information is derived from site visits; published or unpublished literature, museum specimens, and personal communications. Not all information is known or made available to the Natural Heritage Program. Many areas have not been adequately explored and new locations of species are continuously being discovered. Heritage information provides the best warning that an area may be rich in rare elements, but cannot be used to assess the opposite. Therefore, biological experts for certain species or land areas should be contacted to reconfirm species location and status.

**Taxonomic Completeness:**

Data are tracked for all vertebrate and invertebrate species and all vascular plants, bryophytes, and lichens found in Montana when data are available.

**Geographic Completeness:**

In general, data are state-wide. However, there are some areas of the state where data are sparse. There are several large parcels of tribal lands scattered across the state, and data are often not available from these areas. Also, some areas have high concentrations of private lands where access to land for data collection is restricted.

Horizontal Positional Accuracy Report:

Observation locations are typically gathered via GPS unit or plotted against standard digital themes such as DRG topographical maps or digital photographs. Locational Uncertainty is estimated where the precise location is unknown or to represent the spatial extent of of the observation.

Lineage:

Process step:

Location information is stored and maintained as coordinate pairs. This data set is very dynamic with continual updates and additions. Shapefiles or feature classes are recreated using an event theme each time the data are requested.

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Spatial Data Organization Information:

Point and vector object information:

SDTS object type: Entity point  
SDTS object count: 1366380

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Entity and Attribute Information:

Attribute label: Obs\_ID  
Attribute definition: Unique identifier for each Observation record.  
Attribute domain:  
Sequential unique whole numbers that are automatically generated.

Attribute label: ELCODE  
Attribute definition:  
Unique code for each species, roughly taxonomically sortable.

Attribute label: Species\_Group  
Attribute definition: Broad taxonomic group of the species.

Attribute label: S\_Com\_Name  
Attribute definition: Common name for the species.

Attribute label: S\_Sci\_Name  
Attribute definition: Scientific name for the species.

Attribute label: Family\_Sci\_Name

Attribute definition: Scientific name for the family of the species.

Attribute label: Order\_Sci\_Name

Attribute definition: Scientific name for the order of the species.

Attribute label: Class\_Sci\_Name

Attribute definition: Scientific name for the class of the species.

Attribute label: G\_Rank

Attribute definition: Global rank.

Attribute domain: See <http://fieldguide.mt.gov/statusCodes.aspx#msrc>

Attribute label: S\_Rank

Attribute definition: State rank.

Attribute domain: See <http://fieldguide.mt.gov/statusCodes.aspx#msrc>

Attribute label: S\_Rank\_Reasons

Attribute definition:  
Reasons that the S\_RANK was assigned, including key ranking variables and other considerations used

Attribute label: MT\_Status

Attribute definition: Montana Species of Concern or other status.

Attribute Value	Definition of Attribute Value
SOC	Species of Concern
PSOC	Potential Species of Concern
Review	Status Under Review
SSS	Special Status Species
IAH	Important Animal Habitat
Noxious	Noxious Weeds
Regulated	Regulated Plants

Attribute domain:  
See <http://fieldguide.mt.gov/statusCodes.aspx#soc> for more information.

Attribute label: USFS

Attribute definition: Status of species as designated by the U.S. Forest Service.

Attribute Value	Definition of Attribute Value
Endangered	Listed as Endangered (LE) under the U.S. Endangered Species Act
Threatened	Listed as Threatened (LT) under the U.S. Endangered Species Act
Sensitive	Listed as a Sensitive Species by USFS Northern Region (R1)

Attribute domain:  
See <http://fieldguide.mt.gov/statusCodes.aspx#usfs> for more information.

Attribute label: BLM

Attribute definition:  
Status of species as designated by the U.S. Bureau of Land Management.

Attribute Value	Definition of Attribute Value
Sensitive	Denotes species listed as sensitive on BLM lands
Special Status	Denotes species that are listed as Endangered or Threatened under the Endangered Species Act

Attribute domain:  
See <http://fieldguide.mt.gov/statusCodes.aspx#blm> for more information.

Attribute label: USESA

Attribute definition:  
Status of species as designated by the U.S. Fish and Wildlife Service under the Endangered Species Act and other legislation.

Attribute Value	Definition of Attribute Value
LE	Listed endangered
LT	Listed threatened
C	Candidate
DM	Recovered, delisted, and being monitored
NL	Not listed
XE	Experimental - Essential population
XN	Experimental - Nonessential population
CH	Critical Habitat
PS:value	Partial status: status in only a portion of the species range
BGEPA	Protected by the Bald and Golden Eagle Protection Act
MBTA	Protected by the Migratory Bird Treaty Act



BCC	Birds of Conservation Concern
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**Attribute domain:**

See <http://fieldguide.mt.gov/statusCodes.aspx#usfws> for more information.

**Attribute label:** USESA\_Com

**Attribute definition:** Comments regarding the USESA status of the species.

**Attribute label:** PIF\_Montana

**Attribute definition:** Partners in Flight scores for Montana.

**Attribute domain:**

See <http://fieldguide.mt.gov/statusCodes.aspx#pif> for more information.

**Attribute label:** CFWCS\_Tier\_ID

**Attribute definition:**

Montana Fish, Wildlife, and Parks Comprehensive Fish and Wildlife Conservation Strategy Tier ID.

**Attribute domain:**

See <http://fieldguide.mt.gov/statusCodes.aspx#cfwcs> for more information.

**Attribute label:** Latitude

**Attribute definition:** Latitude in decimal degrees.

**Attribute label:** Longitude

**Attribute definition:** Longitude in decimal degrees.

**Attribute label:** SPX

**Attribute definition:** Montana State Plane (meters) X coordinate.

**Attribute label:** SPY

**Attribute definition:** Montana State Plane (meters) Y coordinate.

**Attribute label:** Loc\_Uncert\_M

**Attribute definition:** Locational uncertainty distance in meters.

**Attribute label:** Location

**Attribute definition:** Text field for description of location.

**Attribute label:** County

**Attribute definition:** County where observation is located.

**Attribute label:** Observer

**Attribute definition:** Person who made the observation.

Attribute label: Obs\_Date\_Start

Attribute definition: Earliest possible date of the observation.

Attribute label: Obs\_Date\_End

Attribute definition: Latest possible date of the observation.

Attribute label: Obs\_Date\_Text

Attribute definition: Text field for clarification or description of dates.

Attribute label: Type\_Description

Attribute definition:  
Birds only. Describes type of observation, i.e. breeding, overwintering, etc.

Attribute label: Species\_Obs\_Data

Attribute definition: Text field for species-related observation comments.

Attribute label: Habitat\_Obs\_Data

Attribute definition: Text field for habitat-related observation comments.

Attribute label: Total\_Number

Attribute definition: Total number of individuals observed.

Attribute label: Unknown\_Sex

Attribute definition: Number of individuals of unknown sex observed.

Attribute label: Males

Attribute definition: Number of males observed.

Attribute label: Females

Attribute definition: Number of females observed.

Attribute label: Pairs

Attribute definition: Number of pairs observed.

Attribute label: Juveniles

Attribute definition: Number of juveniles observed.

Attribute label: Immature

Attribute definition: Number of immature individuals observed.

Attribute label: Eggs

Attribute definition: Number of eggs observed.

Attribute label: Nest

Attribute definition: Number of nests observed.

Attribute label: Pending

Attribute definition: Flag for "Pending Final Review".

Attribute Value	Definition of Attribute Value
0	Not pending. Data have been reviewed by an MTNHP Zoologist for appropriateness of timing, distribution, and general habitat of the observation.
-1 or 1	Pending Final Review. Data have NOT been reviewed by an MTNHP Zoologist for appropriateness of timing, distribution, and general habitat of the observation. Please use caution when using these records.

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**Distribution Information:**

Distributor:

Martin Miller  
Data Assistant  
Montana Natural Heritage Program  
Helena, MT

Telephone: 406-444-3290  
E-Mail: martinm@mt.gov

Resource description: offline data

Distribution liability:

The Observation database is a statewide inventory of known locations and conditions of plant and animal species. Users must recognize that parts of the state remain uninventoried or under-inventoried. Thus, "the absence of evidence is not evidence of absence", nor does the documented presence of one species imply that other species were surveyed for but not found.

The 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. They are not intended at natural resource management guidelines or prescriptions.

Species range maps, habitat models, occurrence polygons, and other predictions of the spatial distribution of biological resources produced by MTNHP are objective extrapolations of credible data. They are intended to inform parties of the known occurrence or the likelihood of the presence of those resources, guide future surveys for those resources, and to test hypotheses regarding habitat quality and abundance. They are not intended to substitute for field-collected data, nor are they intended to be the sole basis for natural resource management decisions. We do not portray our databases as exhaustive or comprehensive inventories of rare species or of significant natural features. Field verification of the absence or presence of sensitive species will always be an important obligation of users of our data.

MTNHP assumes no liability for the use or misuse of this data.

#### [Standard order process:](#)

[Fees:](#) None

#### [Ordering instructions:](#)

Please make a request at <http://nris.mt.gov/reqapp/userMain.asp> or contact the Montana Natural Heritage Program.

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## **Metadata Reference Information:**

[Metadata date:](#) 05/08/2014

[Metadata contact:](#)

Karen Coleman  
Biological Data Systems Coordinator  
Montana Natural Heritage Program  
1515 East 6th Ave.  
Helena, MT 59620

[Telephone:](#) 406-444-3321

[E-Mail:](#) [kvwcoleman@mt.gov](mailto:kvwcoleman@mt.gov)

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# Metadata for Species Occurrence Data for Animal Species of Concern in Montana

- [Identification Information](#)
- [Data Quality Information](#)
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## Identification Information:

### Citation:

Originator: Montana Natural Heritage Program

Publication date: 05/08/2014

Title:

Species Occurrence Data for Animal Species of Concern in Montana

Publication place: Helena, MT

Publisher: Montana Natural Heritage Program

Online linkage: <http://nris.mt.gov/reqapp/userMain.asp>

Online linkage: <http://mtnhp.org/>

Online linkage: <http://mtnhp.org/mapviewer/>

Online linkage: <http://fieldguide.mt.gov/>

### Abstract:

The Species Occurrence (SO) records include information on the location, status, characteristics, numbers, condition, and distribution of Animal Species of Concern using established Natural Heritage Methodology developed by NatureServe and The Natural Heritage Network. A Species Occurrence (SO) is an area of land and/or water in which a species is, or was, present. An SO should have practical conservation value for the species as evidenced by potential continued (or historical) presence and/or regular recurrence at a given location. SO records are most commonly created for current or historically known occurrences of native species of conservation interest. They may also be created, in some cases, for extirpated occurrences. Animal Species Occurrences are based on Observations from the Montana Natural Heritage program's Point Observation Database (POD). Observations are reviewed for evidence of sustained presence (for example, breeding evidence) and SOs are created from those that meet established criteria for species. In many cases, an SO will represent several Observations, or visits, to a given location.

### Purpose:

The Species Occurrence (SO) data are collected and maintained by the Montana Natural Heritage Program using a standardized methodology to provide accurate and current biodiversity and conservation information to public and private agencies and individuals. The primary emphasis is on species that are rare or otherwise imperiled (Species of Concern). Uses of the data can include: natural resource management, conservation planning, environmental review, biological and ecological research, land acquisition, and economic development.

### Time period of content:

Calendar date: 05/08/2014

Currentness reference: publication date

### Status:

Progress: In work



**Maintenance and update frequency:** Continually

**Access constraints:**

Heritage information is only for the intended use of the individual or organization who requested it. This database and accompanying files may not be distributed in any way without the written consent of the Montana Natural Heritage Program. Use of the data are subject to the terms of a license developed between the Montana Natural Heritage Program and the information requester. The Heritage Data are licensed only to the agency or individual who subscribed to it. Providing Heritage's digital database data to a non-subscribing individual or agency is prohibited. A sample data use agreement may be viewed here:  
[http://mtnhp.org/requests/110805\\_data\\_use\\_agree.pdf](http://mtnhp.org/requests/110805_data_use_agree.pdf)

**Use constraints:**

Use of the Species Occurrence Data for Animal Species of Concern in Montana are governed by a signed data use agreement. A sample data use agreement may be viewed here:  
[http://mtnhp.org/requests/110805\\_data\\_use\\_agree.pdf](http://mtnhp.org/requests/110805_data_use_agree.pdf)

**Point of contact:**

Karen Coleman  
Biological Data Systems Coordinator  
Montana Natural Heritage Program  
PO Box 201800  
1515 East 6th Ave  
Helena, MT 59620-1800

**Telephone:** 406-444-3321

**E-Mail:** [kvwcoleman@mt.gov](mailto:kvwcoleman@mt.gov)

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## Data Quality Information:

**Attribute accuracy report:**

The database is dependent on the research and observations of many scientists and individuals. In most cases this information is not the result of comprehensive site-specific field surveys, and is not confirmed by Heritage staff. Many areas have never been thoroughly surveyed, and new observations are still being discovered. Database information should never be regarded as final statements or substituted for on-site surveys required for environmental assessments.

**Logical consistency report:**

Plotted locations are checked against standard digital themes such as counties, watershed, and lat/long quadrangles, and Township, Range, and Section.

**Completeness report:**

**General:**

All data are provided as is. The Montana Natural Heritage Program makes no warranty as to the currency, completeness, or accuracy of any specific data. Since the data in the Montana Natural Heritage Program databases are continually being updated, it is advisable to refresh data received at least once a year after its receipt. The data provided are for planning, assessment, and informational purposes. The data should not be considered a definitive statement on the presence, absence, or condition of biological elements at any given location. The lack of data for any geographic area cannot be construed to mean that no significant features are present. Species Occurrence information is derived from site visits, published or unpublished literature, museum specimens, and personal communications. Not all information is known or made available to the Natural Heritage Program. Many areas have not been adequately explored and new locations of species are continuously being discovered. Heritage information provides the best warning that an area may be rich in rare elements, but cannot be used to assess the opposite. Therefore, biological experts for certain species or land areas should be contacted to reconfirm species location and status.

**Taxonomic Completeness:**

SO data are tracked for all imperiled (G1/T1 - G2/T2) species and all federally Threatened and Endangered

Species found within Montana when data are available. Additional "Species of Concern" for Montana are also tracked. Vertebrates, Invertebrates, and Fish are tracked when applicable.

Geographic Completeness: In general, data are state-wide. However, there are some areas of the state where data are sparse. There are several large parcels of tribal lands scattered across the state, and data are often not available from these areas. Also, some areas have high concentrations of private lands where access to land for data collection is restricted

Horizontal Positional Accuracy Report:

SO locations are typically gathered via GPS unit or plotted against standard digital themes such as DRG topographical maps or digital photographs. Locational Uncertainty is estimated where the precise location is unknown or to represent the spatial extent of of the observation.

Lineage:

Process step:

For most animal species, SO's are based on information found in the POD and BirdPOD Point Observation Databases. This data is reviewed annually and SO's are recreated to incorporate new and updated data.

Process date: Ongoing

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Spatial Data Organization Information:

Point and vector object information:

SDTS object type: G-polygon

SDTS object count: 37566

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Spatial Reference Information:

Horizontal coordinate system definition:

Grid coordinate system name: State Plane Coordinate System  
SPCS zone identifier: 2500  
Lambert conformal conic:

Standard parallel: 45.000000  
Standard parallel: 49.000000  
Longitude of central meridian: -109.500000  
Latitude of projection origin: 44.250000  
False easting: 600000.000000  
False northing: 0.000000

Planar distance units: meters  
Geodetic model:

Horizontal datum name: North American Datum of 1983  
Ellipsoid name: Geodetic Reference System 80  
Semi-major axis: 6378137.000000  
Denominator of flattening ratio: 298.257222

Altitude system definition:

Altitude encoding method:

Explicit elevation coordinate included with horizontal coordinates

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## Entity and Attribute Information:

Entity type label:

Animal SO's

Entity type definition: Animal Species Occurrence Polygons

Attribute label: OBJECTID

Attribute definition: Internal feature number.

Attribute domain:

Sequential unique whole numbers that are automatically generated.

Attribute label: SHAPE

Attribute definition: Feature geometry.

Attribute domain: Coordinates defining the features.

Attribute label: SO\_ID

Attribute definition: Unique identifier for each animal species occurrence

Attribute label: POLYID

Attribute definition:

SO\_ID + 10000000 in order to create a unique identifier field when combined with Plant SO's.

Attribute label: SO\_NUM

Attribute definition:

Number that identifies the particular occurrence within the species

Attribute label: ELCODE

Attribute definition:

Unique code for each species, roughly taxonomically sortable.

Attribute label: Species\_Group

Attribute definition: Broad taxonomic group of the species.

Attribute label: S\_Sci\_Name

Attribute definition: Scientific name for the species.

Attribute label: S\_Com\_Name

Attribute definition: Common name for the species.

Attribute label: Family\_Sci\_Name

**Attribute definition:** Taxonomic family which the species belongs to

**Attribute label:** Order\_Sci\_Name

**Attribute definition:** Taxonomic order which the species belongs to

**Attribute label:** Class\_Sci\_Name

**Attribute definition:** Taxonomic class which the species belongs to

**Attribute label:** Short\_Habitat

**Attribute definition:**  
Brief description of the main habitat in which the species is found.

**Attribute label:** G\_Rank

**Attribute definition:** Global rank  
**Attribute domain:** See entity and attribute overview.

**Attribute label:** S\_Rank

**Attribute definition:** Subnational rank  
**Attribute domain:** See entity and attribute overview.

**Attribute label:** S\_Rank\_Reasons

**Attribute definition:**  
Reasons that the S\_RANK was assigned, including key ranking variables and other considerations used

**Attribute label:** MT\_Status

**Attribute definition:** Montana Species of Concern or other status.

Attribute Value	Definition of Attribute Value
SOC	Species of Concern: Species of Concern are native taxa that are at-risk due to declining population trends, threats to their habitats, restricted distribution, and/or other factors. Designation as a Montana Species of Concern or Potential Species of Concern is based on the Montana Status Rank, and is not a statutory or regulatory classification. Rather, these designations provide information that helps resource managers make proactive decisions regarding species conservation and data collection priorities.

Attribute Value	Definition of Attribute Value
PSOC	Potential Species of Concern: Potential Species of Concern are native taxa for which current, often limited, information suggests potential vulnerability. Also included are animal species which additional data are needed before an accurate status assessment can be made.

Attribute Value	Definition of Attribute Value
SSS	Special Status Species: Special Status Species are species that have some legal protections in place, but are otherwise not recognized as federally listed under the Endangered Species Act and are not Montana Species of Concern. Bald Eagles are a Special Status Species because, although they are no longer protected under the Endangered Species Act and are also no longer a Montana Species of Concern, they are still protected under the Bald and Golden Eagle Protection Act of 1940 (16 U.S.C. 668-668c).

Attribute Value	Definition of Attribute Value
IAH	Important Animal Habitat: Habitats that are especially important for sustaining populations of individual species or multiple species during particular time periods or throughout the year are designated Important Animal Habitat. These areas include: (1) bat roosting areas such as maternity roosts, hibernacula, and bachelor roosts; (2) bird rookeries where species congregate in large numbers to breed, incubate eggs, and raise young due to protections from predators or availability of critical resources; and (3) stopover areas for migratory birds that provide critical food resources that sustain migration. Important animal habitats that have been mapped are included with other information that is provided for environmental reviews.

Attribute label: USFS

Attribute definition:  
The status of species on U.S. Forest Service lands. These taxa are listed as such by the Regional Forester (Northern Region).

Attribute Value	Definition of Attribute Value
Endangered	Listed as Endangered (LE) by the USFWS.

Attribute Value	Definition of Attribute Value
Threatened	Listed as Threatened (LT) by the USFWS.

Attribute Value	Definition of Attribute Value
Sensitive	Any species for which the Regional Forester has determined there is a concern for population viability within the state, as evidenced by a significant current or predicted downward trend in populations or habitat.

Attribute Value	Definition of Attribute Value
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Species of Concern	USFS Species-of-Concern (FSH 1909.12, 43.22b) are species for which the Responsible Official determines management actions may be necessary to prevent listing under the Endangered Species Act (ESA).
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Attribute Value	Definition of Attribute Value
Species of Interest	USFS Species-of-Interest (FSH 1909.12, 43.22c) are species for which the Responsible Official determines that management actions may be necessary or desirable to achieve ecological or other multiple-use objectives.

Attribute label: BLM

Attribute definition:  
The status of species on U.S. Bureau of Land Management lands.

Attribute Value	Definition of Attribute Value
Sensitive	Species that normally occur on Bureau administered lands for which BLM has the capability to significantly affect the conservation status of the species through management.

Attribute Value	Definition of Attribute Value
Special Status	The State Director may designate additional categories of special status species as appropriate and applicable to his or her state's needs.

Attribute label: USESA

Attribute definition:  
Value that indicates the current status of the taxon as designated or proposed by the U.S. Fish and Wildlife Service (USFWS) or the U.S. National Marine Fisheries Service, and as reported in the U.S. Federal Register in accordance with the U.S. Endangered Species Act of 1973, as amended. Statuses include candidates for listing as reported by either of these agencies in the U.S. Federal Register. A taxon may have more than one status, due either to recent proposed changes, or differences across its range.

Attribute Value	Definition of Attribute Value
LE	Listed endangered

Attribute Value	Definition of Attribute Value
PE	Proposed endangered

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Attribute Value	Definition of Attribute Value
LT	Listed threatened

Attribute Value	Definition of Attribute Value
PT	Proposed threatened

Attribute Value	Definition of Attribute Value
E(S/A) or T(S/A)	Any species listed endangered or threatened because of similarity of appearance.

Attribute Value	Definition of Attribute Value
C	Candidate

Attribute Value	Definition of Attribute Value
PDL	Proposed for delisting

Attribute Value	Definition of Attribute Value
DM	Recovered, delisted, and being monitored

Attribute Value	Definition of Attribute Value
NL	Not listed

Attribute Value	Definition of Attribute Value
XE	Essential experimental population

Attribute Value	Definition of Attribute Value
XN	Nonessential experimental population

Attribute Value	Definition of Attribute Value
PS	Partial Status

Attribute label: USESA\_Com

Attribute definition: Any comments necessary to explain the designated status of the taxon under the U.S. Endangered Species Act (USESA) (entered in the associated USESA field).

Attribute label: PIF\_Montana

Attribute definition: Partners In Flight conservation status score for Montana

Attribute label: CFWCS\_Tier\_ID

Attribute definition: Tier status from MTFWP's Comprehensive Fish and Wildlife Conservation Strategy

Attribute label: Survey\_Site\_Name

Attribute definition: Name of survey site - brief location description

Attribute label: First\_Obs\_Date

Attribute definition: Date that the SO was first reported at the site

Attribute label: Last\_Obs\_date

Attribute definition: Date that the SO was last observed to be extant at the site

Attribute label: Last\_Survey\_Date

Attribute definition: Most recent survey date, whether the species was observed or not

Attribute label: SO\_Data

Attribute definition: Additional information known about the occurrence, if applicable

Attribute label: Acres

Attribute definition: Area of the occurrence in acres, calculated by the GIS

Attribute label: SO\_Delineation\_Criteria

Attribute definition: Description of EO delineation methods

Attribute label: FG\_Link

**Attribute definition:** URL for the MTNHP field guide page for the species

**Entity and attribute overview:**

G\_RANK and S\_RANK:

Montana employs a standardized ranking system to denote global (G) and state (S) status (NatureServe 2003). Species are assigned numeric ranks ranging from 1 (critically imperiled) to 5 (demonstrably secure), reflecting the relative degree to which they are "at-risk". Rank definitions are given below. A number of factors are considered in assigning ranks - the number, size and distribution of known "occurrences" or populations, population trends (if known), habitat sensitivity, life history traits and threats.

For example, Clustered lady's slipper (*Cypripedium fasciculatum*) is ranked G4 S2. Globally the species is uncommon but not vulnerable, while in Montana it is at risk because of limited and potentially declining numbers, extent and/or habitat.

G1 S1

At high risk because of extremely limited and potentially declining numbers, extent and/or habitat, making it highly vulnerable to global extinction or extirpation in the state.

G2 S2

At risk because of very limited and potentially declining numbers, extent and/or habitat, making it vulnerable to global extinction or extirpation in the state.

G3 S3

Potentially at risk because of limited and potentially declining numbers, extent and/or habitat, even though it may be abundant in some areas.

G4 S4

Uncommon but not rare (although it may be rare in parts of its range), and usually widespread. Apparently not vulnerable in most of its range, but possibly cause for long-term concern.

G5 S5

Common, widespread, and abundant (although it may be rare in parts of its range). Not vulnerable in most of its range.

GX SX

Presumed Extinct or Extirpated - Species is believed to be extinct throughout its range or extirpated in Montana. Not located despite intensive searches of historical sites and other appropriate habitat, and small likelihood that it will ever be rediscovered.

GH SH

Possibly Extinct or Extirpated - Species is known only from historical records, but may nevertheless still be extant; additional surveys are needed.

GNR SNR

Not yet ranked.

GU SU

Unrankable - Species currently unrankable due to lack of information or due to substantially conflicting information about status or trends.

GNA SNA

A conservation status rank is not applicable for one of the following reasons:

The taxa is of Hybrid Origin; is Exotic or Introduced; is Accidental or is Not Confidently Present in the state. (see other codes below)

**Other Codes and Modifiers:**

HYB

Hybrid-Entity not ranked because it represents an interspecific hybrid and not a species.

T

Infraspecific Taxon (trinomial) - The status of infraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species' global rank.

?

Inexact Numeric Rank - Denotes inexact numeric rank.

Q

Questionable taxonomy that may reduce conservation priority-Distinctiveness of this entity as a taxon at the current level is questionable; resolution of this uncertainty may result in change from a species to a subspecies or hybrid, or inclusion of this taxon in another taxon, with the resulting taxon having a lower-priority

(numerically higher) conservation status rank.

C

Captive or Cultivated Only - Species at present is extant only in captivity or cultivation, or as a reintroduced population not yet established.

A

Accidental - Species is accidental or casual in Montana, in other words, infrequent and outside usual range. Includes species (usually birds or butterflies) recorded once or only a few times at a location. A few of these species may have bred on the one or two occasions they were recorded.

SYN

Synonym - Species reported as occurring in Montana, but the Montana Natural Heritage Program does not recognize the taxon; therefore the species is not assigned a rank.

B

Breeding - Rank refers to the breeding population of the species in Montana.

N

Nonbreeding - Rank refers to the non-breeding population of the species in Montana.

M

Migratory - Species occurs in Montana on during migration.

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## Distribution Information:

### Distributor:

Martin Miller  
Data Assistant  
Montana Natural Heritage Program  
PO Box 201800  
1515 East 6th Avenue  
Helena, MT 59620-1800

Telephone: 406-444-3290

E-Mail: [martinm@mt.gov](mailto:martinm@mt.gov)

Resource description: Offline Data

### Distribution liability:

The Element Occurrence database is a statewide inventory of KNOWN locations and conditions of sensitive species. Users need to recognize that parts of the state have not yet been inventoried. Thus an "absence of evidence is not evidence of absence." Nor does the presence of one element imply that other elements were surveyed for but not found.

The 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. They are not intended as natural resource management guidelines or prescriptions.

Species range maps, habitat models, occurrence polygons, and other predictions of the spatial distribution of biological resources produced by MTNHP are objective extrapolations of credible data. They are intended to inform parties of the known occurrence or the likelihood of the presence of those resources, guide future surveys for those resources, and to test hypotheses regarding habitat quality and abundance. They are not intended to substitute for field-collected data, nor are they intended to be the sole bases for natural resource management decisions. We do not portray our databases as exhaustive or comprehensive inventories of rare species or of significant natural features. Field verification of the absence or presence of sensitive species will



always be an important obligation of users of our data.

The Montana Natural Heritage Program assumes no liability for the use or mis-use of this data

Standard order process:

Digital form:

Fees: None for standard requests.

Ordering instructions: Please contact the Montana Natural Heritage Program.

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## Metadata Reference Information:

Metadata date: 05/08/2014

Metadata contact:

Karen Coleman  
Biological Data Systems Coordinator  
Montana Natural Heritage Program  
PO Box 201800  
1515 East 6th Avenue  
Helena, MT 59620-1800

Telephone: 406-444-3321

E-Mail: [kvwcoleman@mt.gov](mailto:kvwcoleman@mt.gov)

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Attachment 20170109 081205\_EM\_Fwd\_ Wolverine Data.xml (28899 Bytes) cannot be converted to PDF format.

Attachment 20170109 081205\_EM\_Fwd\_ Wolverine Data.mdb (6721536 Bytes) cannot be converted to PDF format.