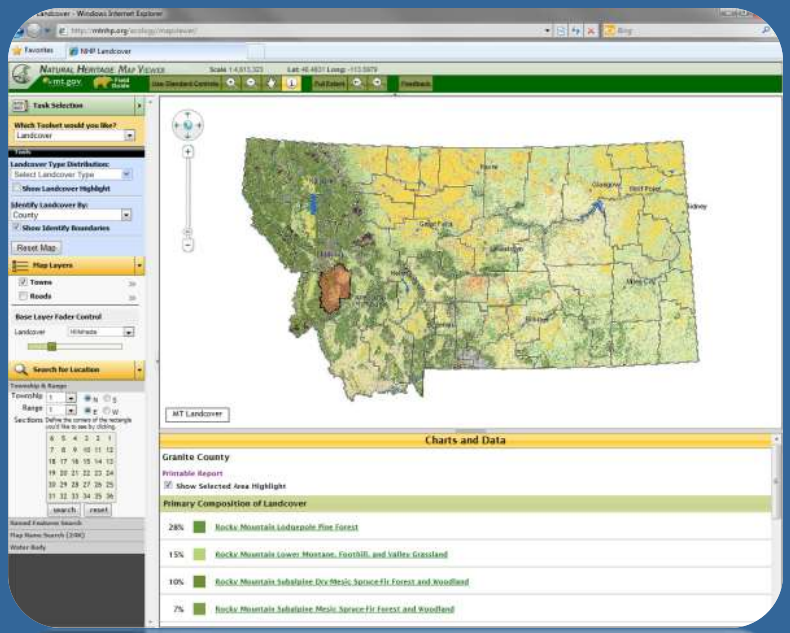
Introduction to the New Natural Heritage MapViewer



Tuesday February 22, 2011
1:00m to 2:00pm

Dial-in Number: 1-219-509-8222

Access Code: 8707152

Presented By:

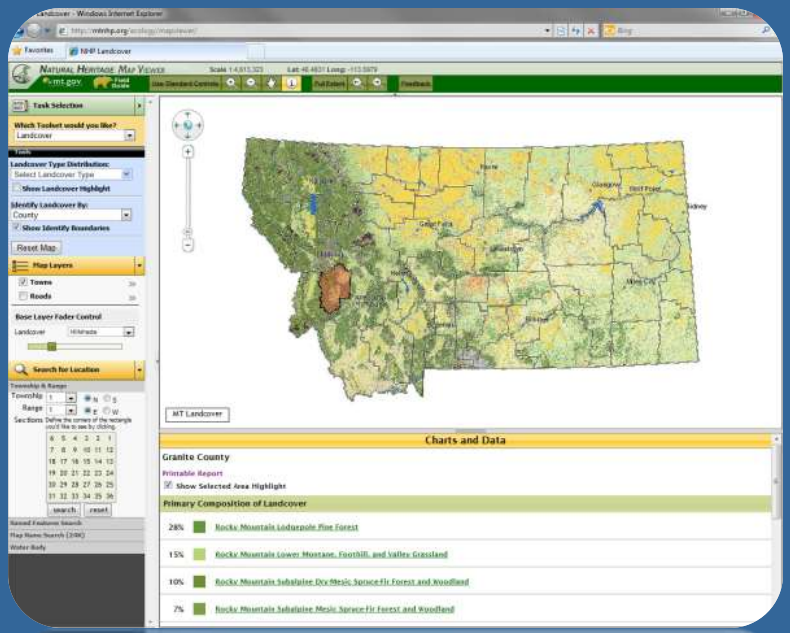
Allan Cox

Systems & Services Manager

MONTANA Natural Heritage Program

Webinar Topics

- Overview of Land Cover Tool Set
- Overview of Land Management Tool Set
- Live Demo of MapViewer



MONTANA
Natural Heritage Program

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MONTANA Natural Heritage Program

MONTANA NATURAL HERITAGE PROGRAM

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Announcements

NEW! Natural Heritage Program Webinars!

What's New

- 2010-2014 Strategic Plan
- 10 Years of SWG Grants
- Natural Heritage MapViewer
- Wetland Reference Network
- Land Stewardship Maps
- New Easement Web Map
- MT Wetlands Data
- User Services Survey

Recent Publications

- *Reference Wetland Network for Assessment & Monitoring...*
- *The Checklist of Montana Dragonflies & Damselflies*
- *Aquatic Invertebrate Species of Concern...*
- More Publications...

Related Resources

- MTNHP Webinars
- Montana GIS Portal
- NatureServe Explorer
- NRCS PLANTS Database
- Avian Science Center

Montana Natural Heritage Program

- **Natural Heritage MapViewer** NEW
- **Natural Heritage Tracker**
- **Animal Species of Concern Report**
- **Plant Species of Concern Report**
- **Animal Information**
- **Plant Information**
- **Ecology Information**
- **Wetlands Information**
- **Land Management Mapping**
- **Submit Observations**
- **Request Information**

The Natural Heritage Program provides information on Montana's species and habitats, emphasizing those of conservation concern. The Program is **operated** by the **University of Montana** in partnership with the **Montana State Library.**

A Montana Species of Concern

Marsh Felwort *Lomatogonium rotatum*

Image from the **Montana Field Guide**

Our Partners

- **Montana State Library**
- **University of Montana**
- **Natural Resource Information System**
- **NatureServe**

We're part of a **network** of over 80 Natural Heritage Programs that share data through **NatureServe.** Find species and ecological data for North America at **NatureServe Explorer.**

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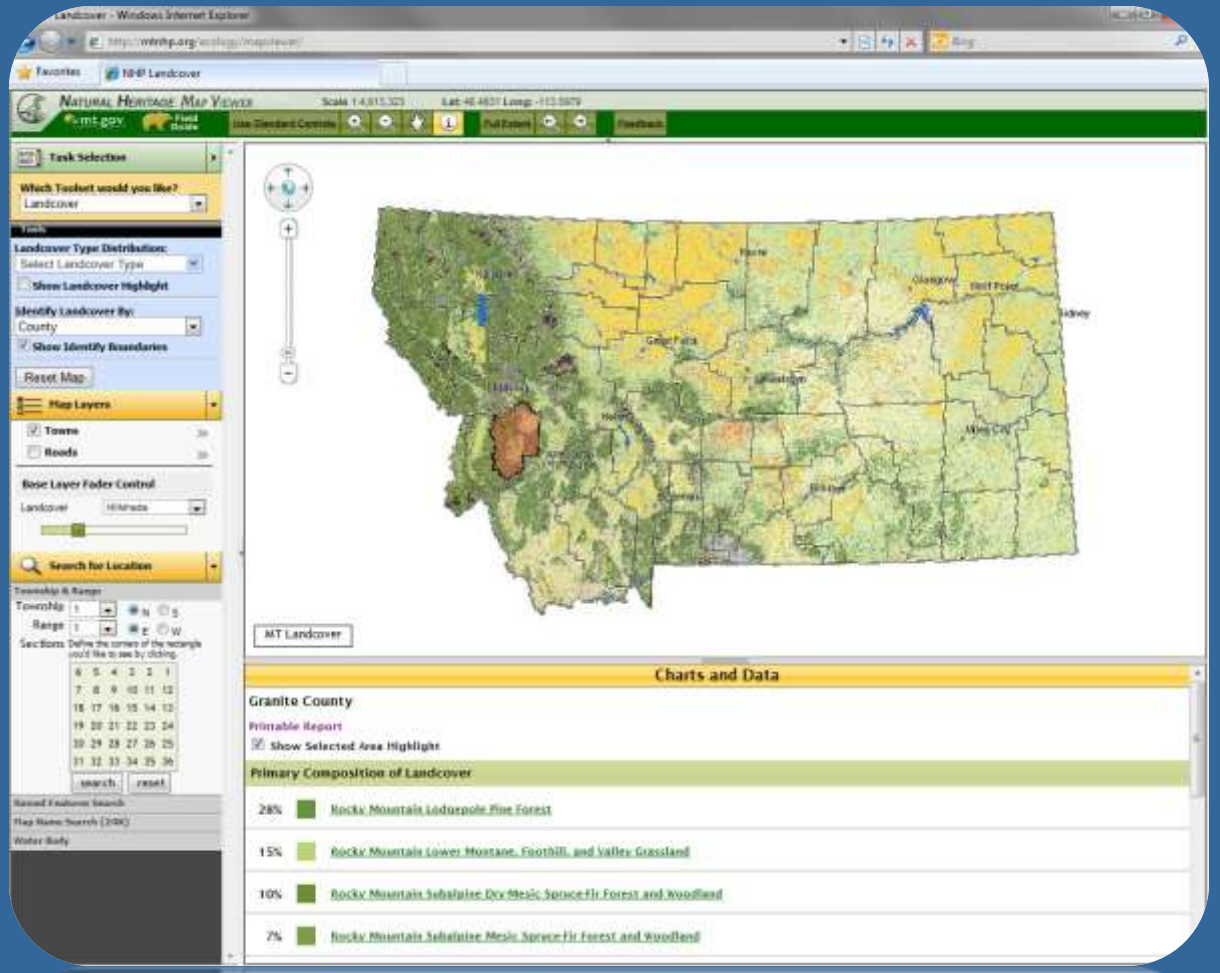
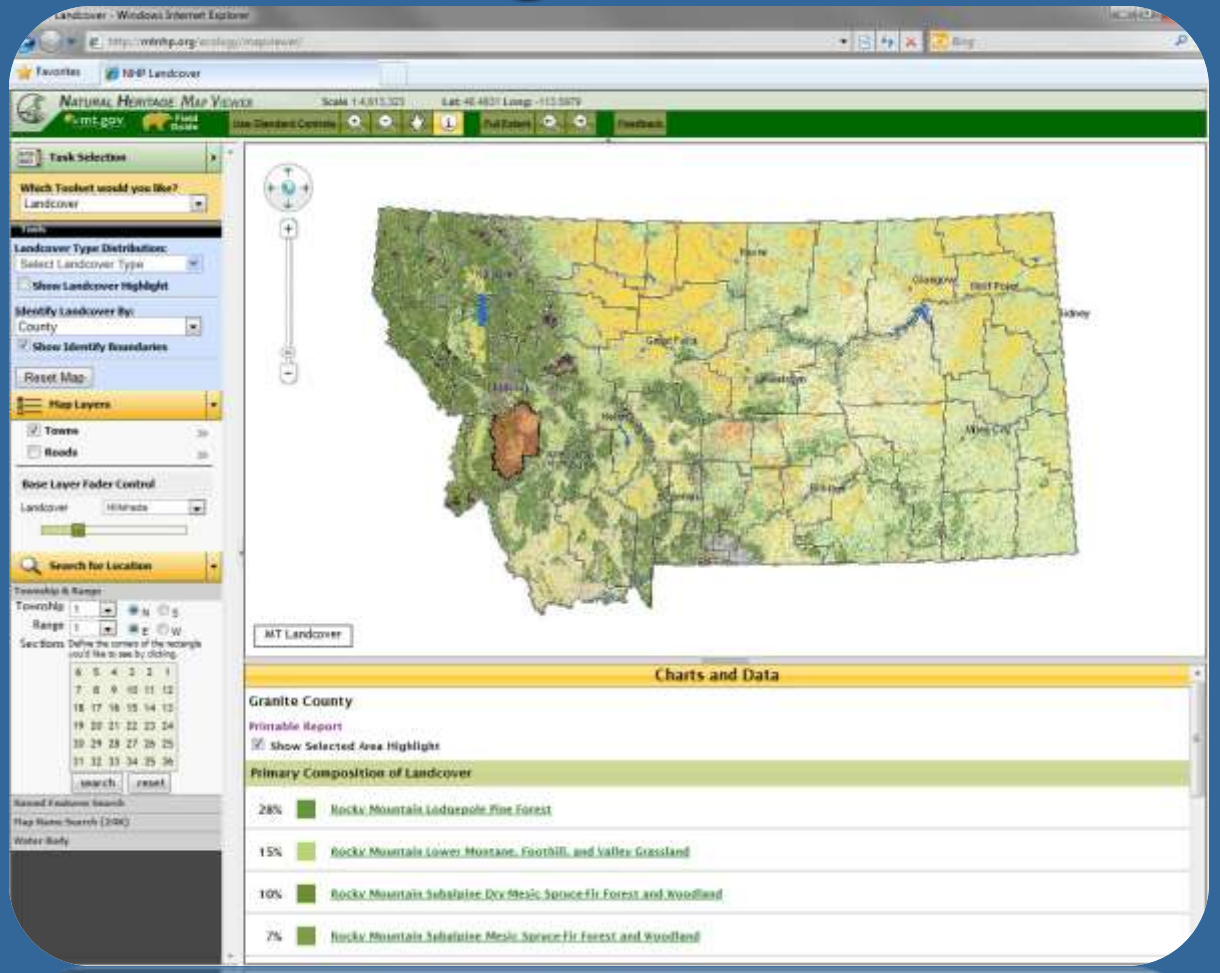
Natural Heritage MapViewer

Land Cover Tools



Natural Heritage MapViewer

Demo: Georgetown Lake Area



Natural Heritage MapViewer

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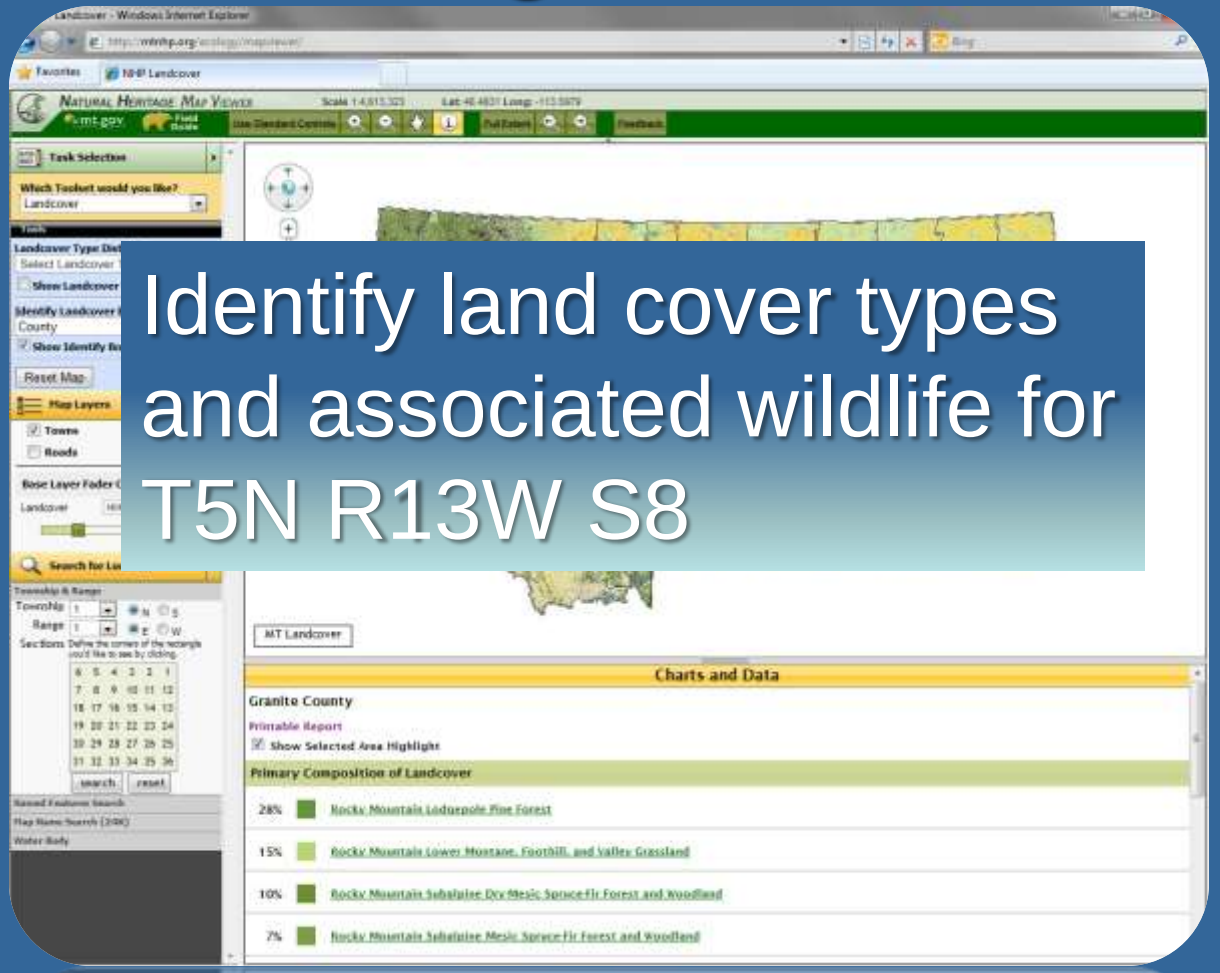
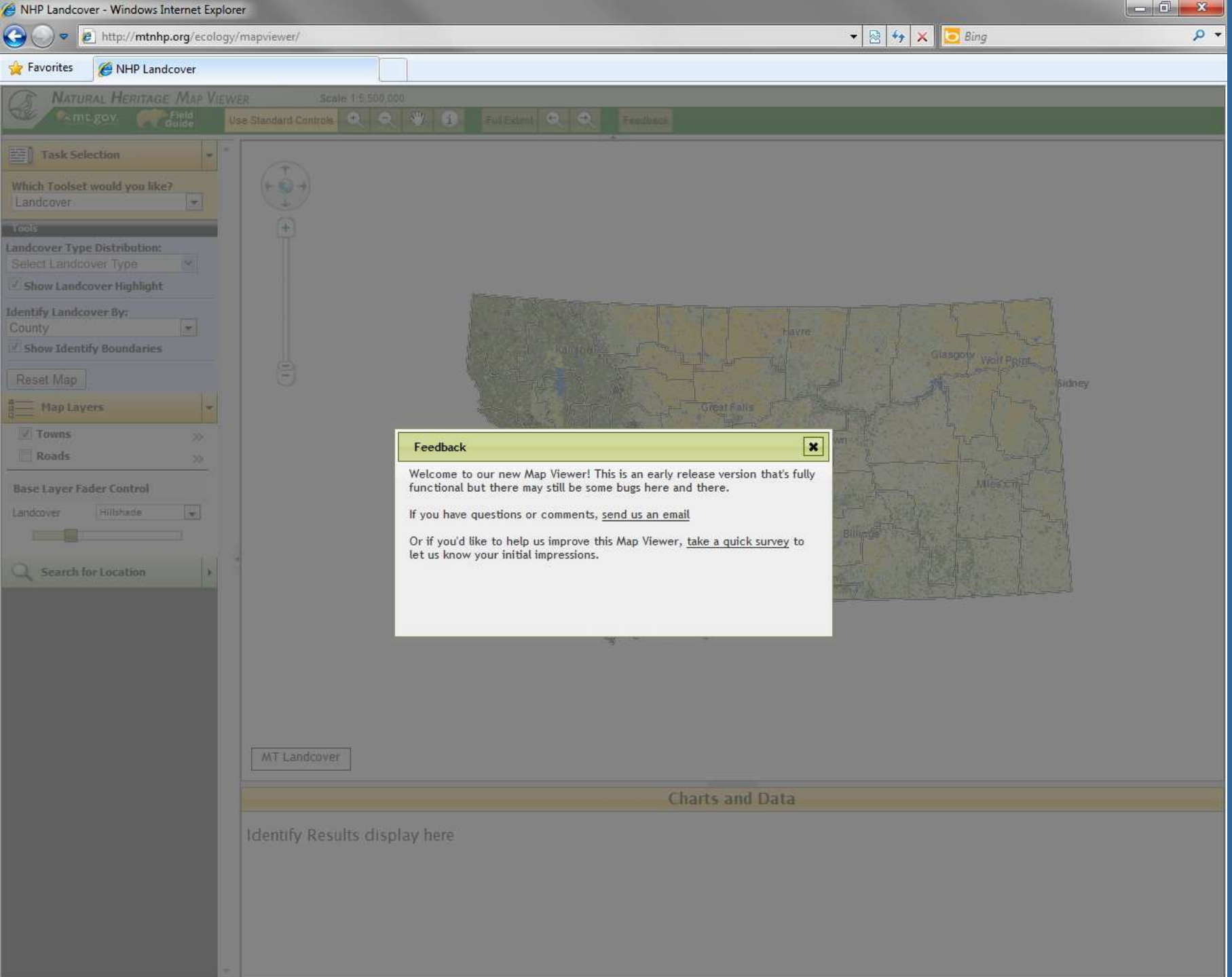


Identify land cover types and associated wildlife for T5N R13W S8


NHP Landcover - Windows Internet Explorer
http://mtnhp.org/ecology/mapviewer/
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NHP Landcover
Natural Heritage Map Viewer
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mt.gov
Field Guide
Use Standard Controls
Full Extent
Feedback
Task Selection
Which Toolset would you like?
Landcover
Tools
Landcover Type Distribution:
Select Landcover Type
Show Landcover Highlight
Identify Landcover By:
County
Show Identify Boundaries
Reset Map
Map Layers
Towns
Roads
Base Layer Fader Control
Landcover
Hillshade
Search for Location
Havre
Glasgow
Wolf Point
Sidney
Great Falls
Miles City
Billings
Feedback
Welcome to our new Map Viewer! This is an early release version that's fully functional but there may still be some bugs here and there.
If you have questions or comments, send us an email
Or if you'd like to help us improve this Map Viewer, take a quick survey to let us know your initial impressions.
MT Landcover
Charts and Data
Identify Results display here

NHP Landcover - Windows Internet Explorer

http://mtnhp.org/ecology/mapviewer/

Favorites | NHP Landcover

Natural Heritage Map Viewer

Scale 1:5,500,000

mt.gov | Field Guide | Use Standard Controls | Full Extent | Feedback

Task Selection

Which Toolset would you like?

Landcover

Tools

Landcover Type Distribution:

Select Landcover Type

☑ **Show Landcover Highlight**

Identify Landcover By:

County

☑ **Show Identify Boundaries**

Reset Map

Map Layers

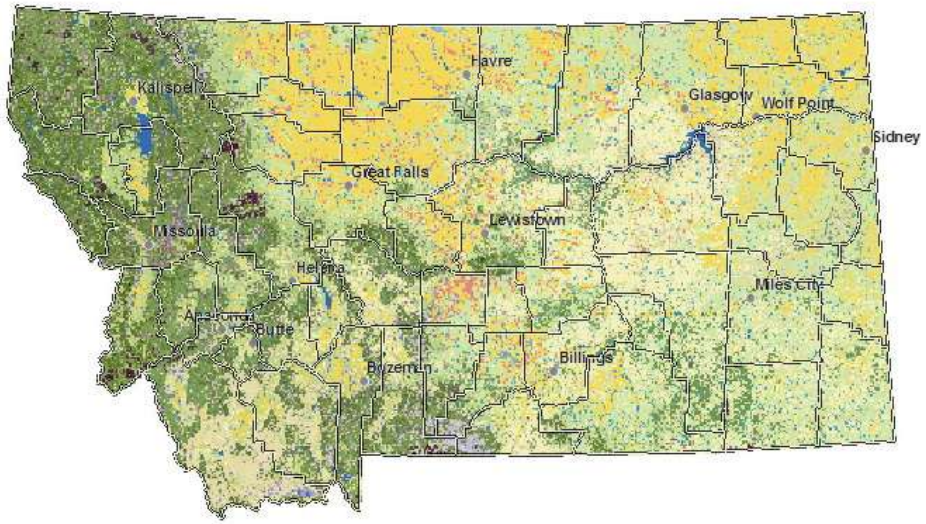
☑ **Towns**

☐ **Roads**

Base Layer Fader Control

Landcover — Hillshade

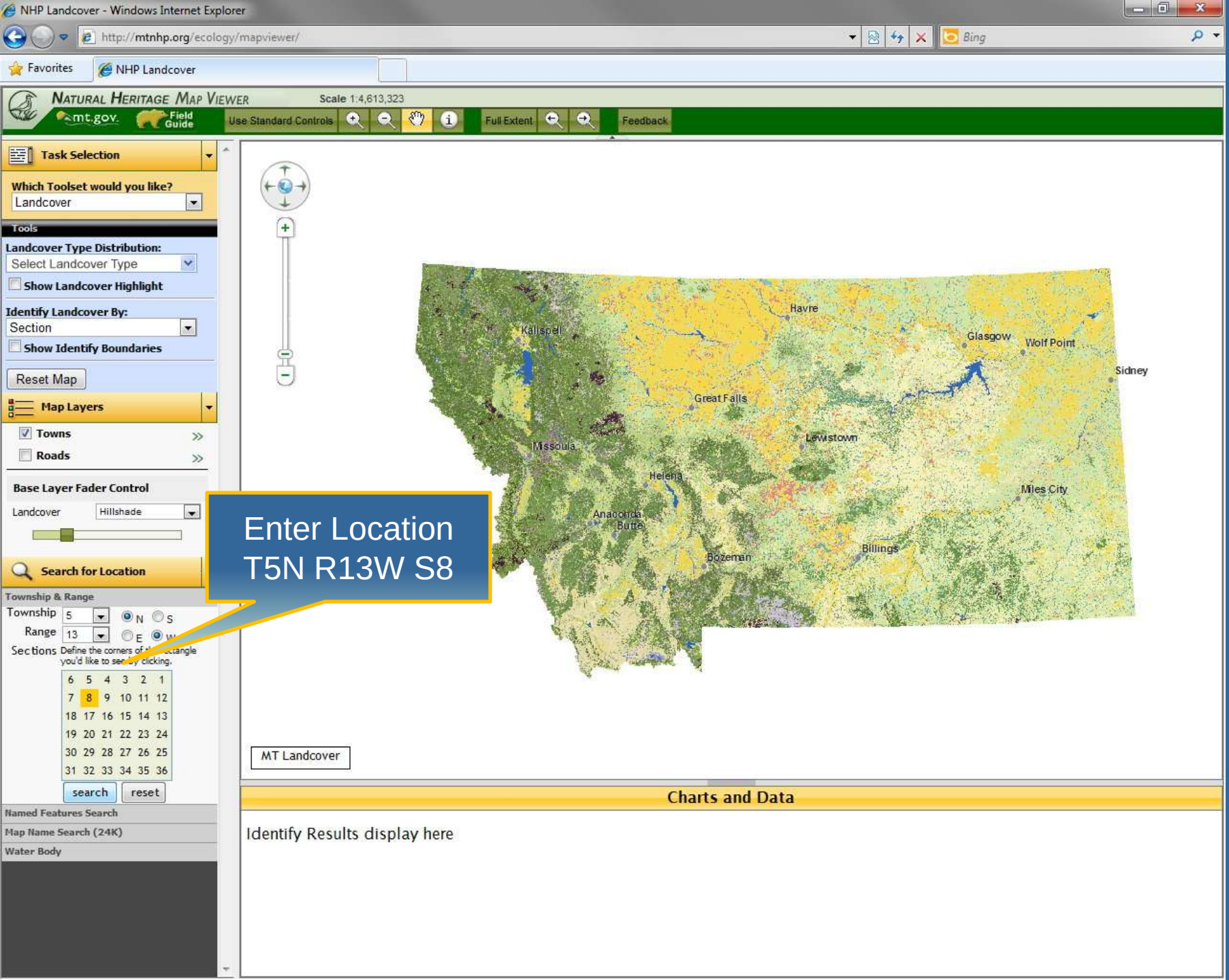
Search for Location



MT Landcover

Charts and Data

Identify Results display here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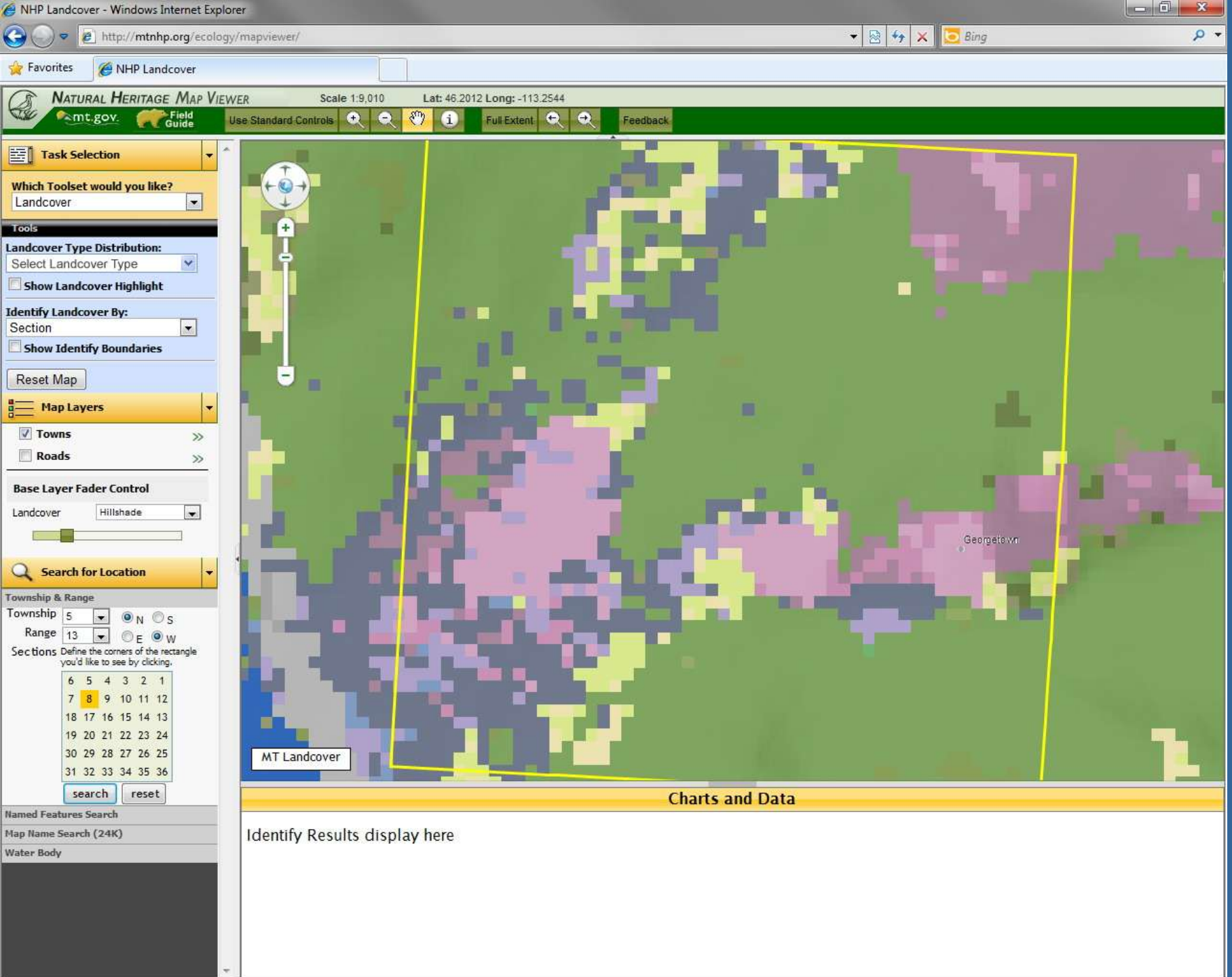
mt.gov
Field Guide
Use Standard Controls
Full Extent
Feedback
Task Selection
Which Toolset would you like?
Landcover
Tools
Landcover Type Distribution:
Select Landcover Type
Show Landcover Highlight
Identify Landcover By:
Section
Show Identify Boundaries
Reset Map
Map Layers
Towns
Roads
Base Layer Fader Control
Landcover
Hillshade
Search for Location
Township & Range
Township 5
Range 13
N
S
E
W
Sections Define the corners of the rectangle you'd like to search by clicking.
6 5 4 3 2 1
7 8 9 10 11 12
18 17 16 15 14 13
19 20 21 22 23 24
30 29 28 27 26 25
31 32 33 34 35 36
search
reset
Named Features Search
Map Name Search (24K)
Water Body
Havre
Kalispell
Glasgow
Wolf Point
Sidney
Great Falls
Lewistown
Missoula
Helena
Miles City
Anaconda
Butte
Bozeman
Billings
MT Landcover
Enter Location
T5N R13W S8
Charts and Data
Identify Results display here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Natural Heritage Map Viewer
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mt.gov
Field Guide
Use Standard Controls
Full Extent
Feedback
Task Selection
Which Toolset would you like?
Landcover
Tools
Landcover Type Distribution:
Select Landcover Type
Show Landcover Highlight
Identify Landcover By:
Section
Show Identify Boundaries
Reset Map
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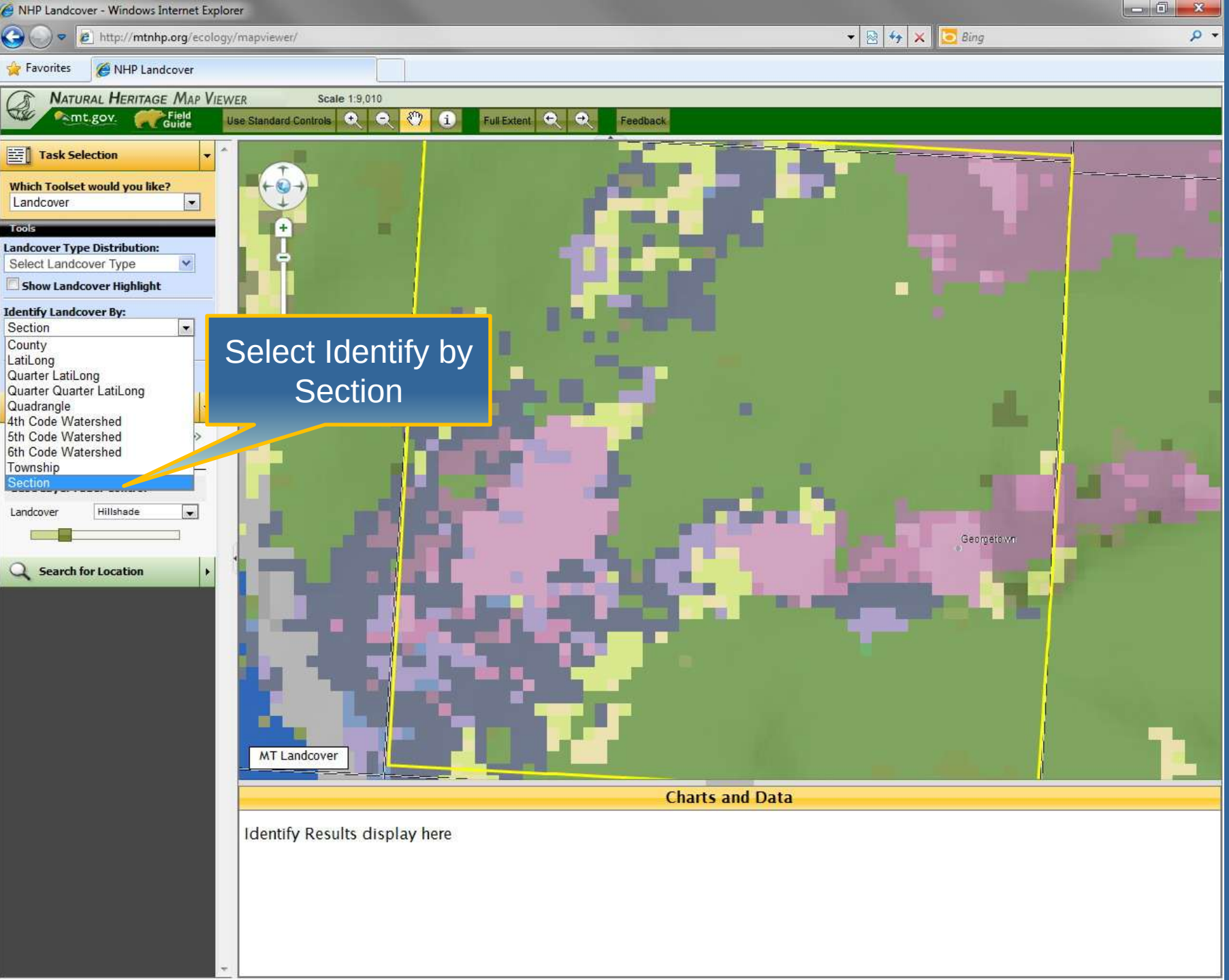
Towns
Roads
Base Layer Fader Control
Landcover
Hillshade
Search for Location
Township & Range
Township 5 N S
Range 13 E W
Sections Define the corners of the rectangle you'd like to see by clicking.
6 5 4 3 2 1
7 8 9 10 11 12
18 17 16 15 14 13
19 20 21 22 23 24
30 29 28 27 26 25
31 32 33 34 35 36
search
reset
Named Features Search
Map Name Search (24K)
Water Body
Georgetown
MT Landcover
Charts and Data
Identify Results display here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5th Code Watershed
6th Code Watershed
Township
Section
Landcover
Hillshade
Search for Location
Select Identify by Section
Georgetown
MT Landcover
Charts and Data
Identify Results display here

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Natural Heritage Map Viewer

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Task Selection

Which Toolset would you like?
Landcover

Tools

Landcover Type Distribution:
Select Landcover Type

☐ Show Landcover Highlight

Identify Landcover By:
Section

☑ Show Identify Boundaries

Reset Map

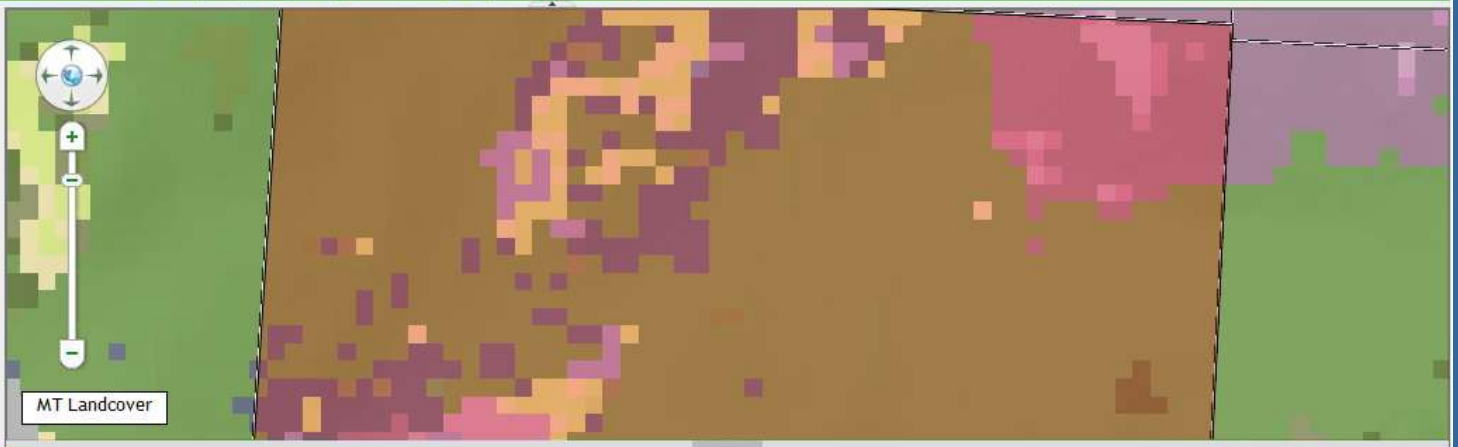
Map Layers

☑ Towns »
☐ Roads »

Base Layer Fader Control

Landcover — Hillshade

Search for Location



Charts and Data

Section 005N013W008

Printable Report

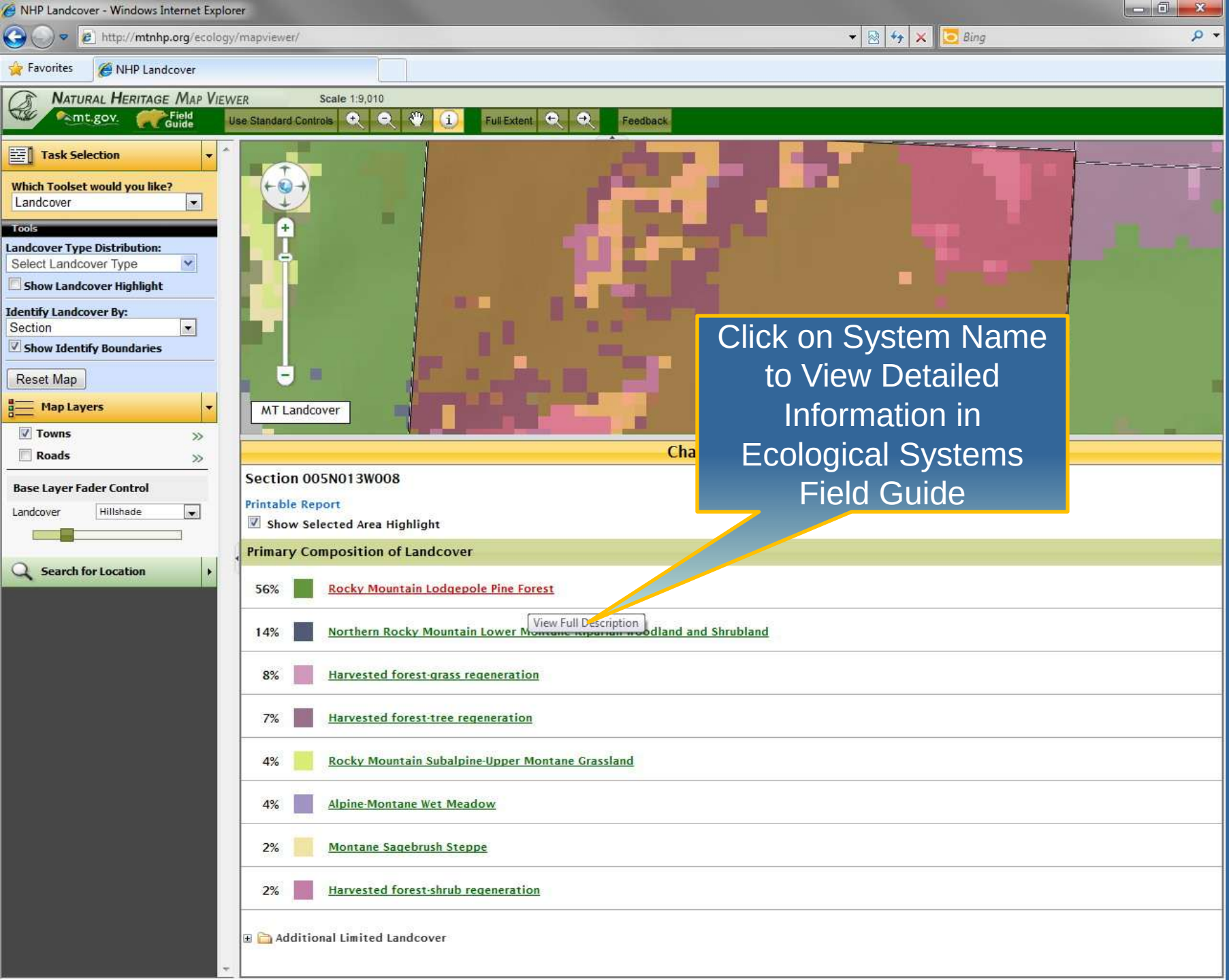
☑ Show Selected Area Highlight

Primary Composition of Landcover

56%		Rocky Mountain Lodgepole Pine Forest
14%		Northern Rocky Mountain Lower Montane Riparian Woodland and Shrubland
8%		Harvested forest-grass regeneration
7%		Harvested forest-tree regeneration
4%		Rocky Mountain Subalpine-Upper Montane Grassland
4%		Alpine-Montane Wet Meadow
2%		Montane Sagebrush Steppe
2%		Harvested forest-shrub regeneration

View Full Description

⊞ Additional Limited Landcover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Landcover
Hillshade
Search for Location
MT Landcover
Click on System Name to View Detailed Information in Ecological Systems Field Guide
Section 005N013W008
Printable Report
Show Selected Area Highlight
Primary Composition of Landcover
56% Rocky Mountain Lodgepole Pine Forest
View Full Description
14% Northern Rocky Mountain Lower
and Shrubland
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4% Alpine-Montane Wet Meadow
2% Montane Sagebrush Steppe
2% Harvested forest-shrub regeneration
Additional Limited Landcover

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Rocky Mountain Lodgepole Pine Forest

Provisional State Rank: S3

NatureServe Ecological Systems

General Description

This forested system is widespread in upper montane to subalpine zones of the Montana Rocky Mountains, and

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Diagnostic Characteristics

forest and woodland, acidic, shallow ustic soils, organic A horizon greater than 10 cm, *Pinus contorta*

Similar Systems

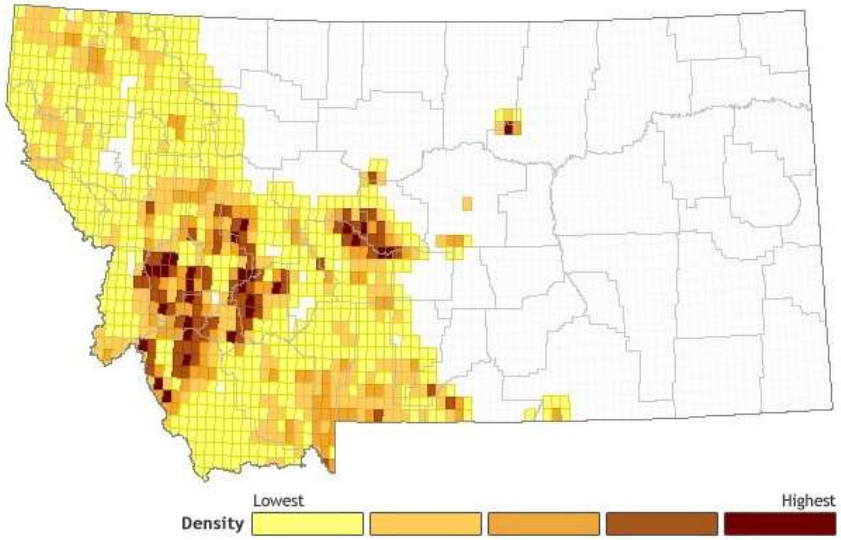
- Rocky Mountain Poor Site Lodgepole Pine Forest

Range

This system occurs throughout the Montana Rocky Mountains and the island ranges from valley bottoms west of the Continental Divide to upper subalpine forests.

Ecological System Distribution

Approximately 12,817 square kilometers are classified as Rocky Mountain Lodgepole Pine Forest in the 2009 Montana Land Cover layers. *Grid on map is based on USGS 7.5 minute quadrangle map boundaries.*



Montana Counties of Occurrence

Big Horn, Blaine, Broadwater, Carbon, Cascade, Chouteau, Deer Lodge, Fergus, Flathead, Gallatin, Glacier, Golden Valley, Granite, Jefferson, Judith Basin, Lake, Lewis and Clark, Lincoln, Meagher, Mineral, Missoula, Park, Phillips, Pondera, Powell, Ravalli, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Wheatland

Spatial Pattern

Matrix

Environment

This system generally occurs on dry to intermediate sites with a wide seasonal range of temperatures and

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Species Associated with this Ecological System

Details on how we associated these species with this Ecological System

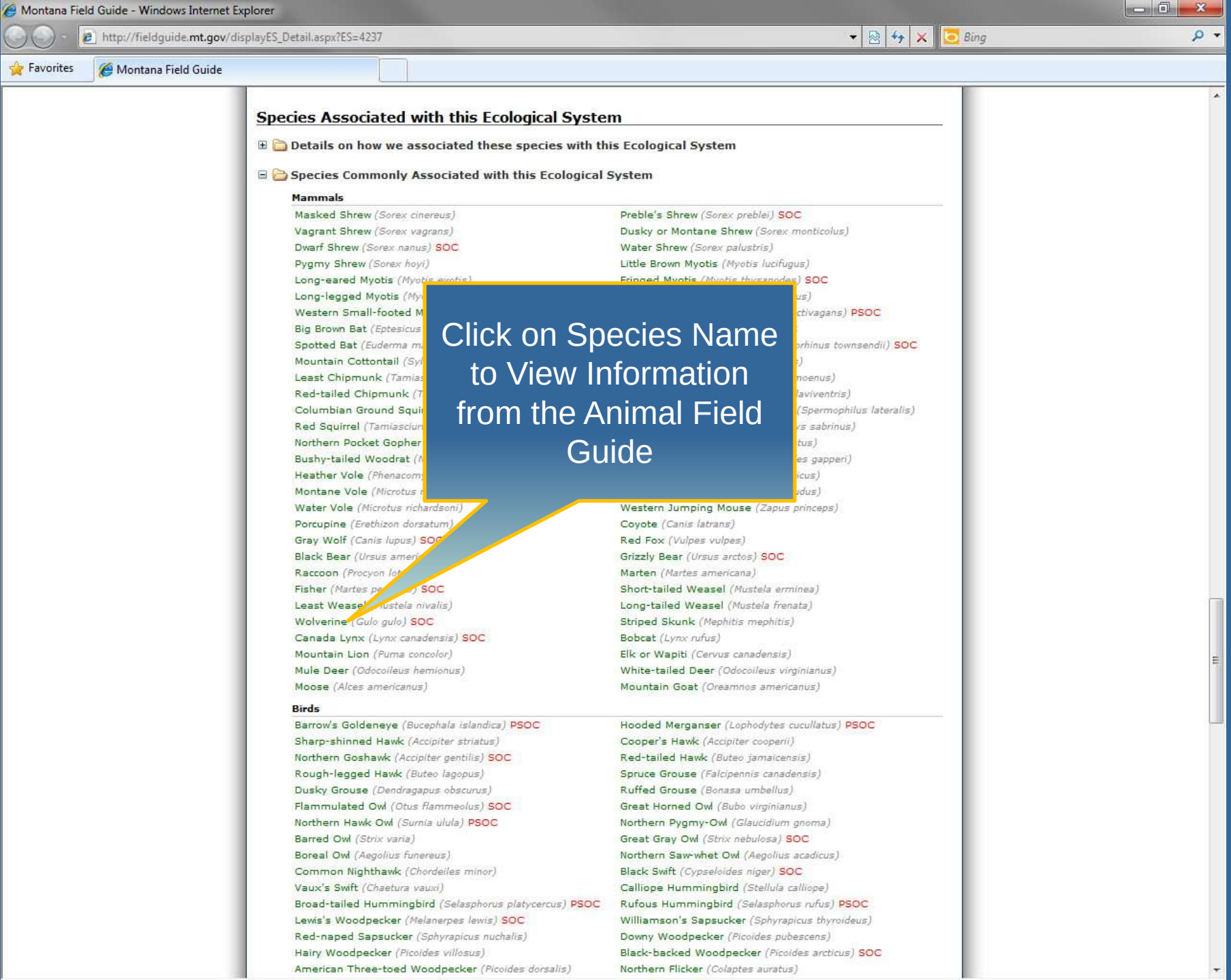
Species Commonly Associated with this Ecological System

Mammals

- Masked Shrew *(Sorex cinereus)*
- Vagrant Shrew *(Sorex vagrans)*
- Dwarf Shrew *(Sorex nanus)* SOC
- Pygmy Shrew *(Sorex hoyi)*
- Long-eared Myotis *(Myotis evotis)*
- Long-legged Myotis *(Myotis volans)*
- Western Small-footed Myotis *(Myotis ciliolabrum)*
- Big Brown Bat *(Eptesicus fuscus)*
- Spotted Bat *(Euderma maculatum)* SOC
- Mountain Cottontail *(Sylvilagus nuttallii)*
- Least Chipmunk *(Tamias minimus)*
- Red-tailed Chipmunk *(Tamias ruficaudus)*
- Columbian Ground Squirrel *(Spermophilus columbianus)*
- Red Squirrel *(Tamiasciurus hudsonicus)*
- Northern Pocket Gopher *(Thomomys talpoides)*
- Bushy-tailed Woodrat *(Neotoma cinerea)*
- Heather Vole *(Phenacomys intermedius)*
- Montane Vole *(Microtus montanus)*
- Water Vole *(Microtus richardsoni)*
- Porcupine *(Erethizon dorsatum)*
- Gray Wolf *(Canis lupus)* SOC
- Black Bear *(Ursus americanus)*
- Raccoon *(Procyon lotor)*
- Fisher *(Martes pennanti)* SOC
- Least Weasel *(Mustela nivalis)*
- Wolverine *(Gulo gulo)* SOC
- Canada Lynx *(Lynx canadensis)* SOC
- Mountain Lion *(Puma concolor)*
- Mule Deer *(Odocoileus hemionus)*
- Moose *(Alces americanus)*
- Preble's Shrew *(Sorex preblei)* SOC
- Dusky or Montane Shrew *(Sorex monticolus)*
- Water Shrew *(Sorex palustris)*
- Little Brown Myotis *(Myotis lucifugus)*
- Fringed Myotis *(Myotis thysanodes)* SOC
- California Myotis *(Myotis californicus)*
- Silver-haired Bat *(Lasionycteris noctivagans)* PSOC
- Hoary Bat *(Lasiurus cinereus)* SOC
- Townsend's Big-eared Bat *(Corynorhinus townsendii)* SOC
- Snowshoe Hare *(Lepus americanus)*
- Yellow-pine Chipmunk *(Tamias amoenus)*
- Yellow-bellied Marmot *(Marmota flaviventris)*
- Golden-mantled Ground Squirrel *(Spermophilus lateralis)*
- Northern Flying Squirrel *(Glaucomys sabrinus)*
- Deer Mouse *(Peromyscus maniculatus)*
- Southern Red-backed Vole *(Myodes gapperi)*
- Meadow Vole *(Microtus pennsylvanicus)*
- Long-tailed Vole *(Microtus longicaudus)*
- Western Jumping Mouse *(Zapus princeps)*
- Coyote *(Canis latrans)*
- Red Fox *(Vulpes vulpes)*
- Grizzly Bear *(Ursus arctos)* SOC
- Marten *(Martes americana)*
- Short-tailed Weasel *(Mustela erminea)*
- Long-tailed Weasel *(Mustela frenata)*
- Striped Skunk *(Mephitis mephitis)*
- Bobcat *(Lynx rufus)*
- Elk or Wapiti *(Cervus canadensis)*
- White-tailed Deer *(Odocoileus virginianus)*
- Mountain Goat *(Oreamnos americanus)*

Birds

- Barrow's Goldeneye *(Bucephala islandica)* PSOC
- Sharp-shinned Hawk *(Accipiter striatus)*
- Northern Goshawk *(Accipiter gentilis)* SOC
- Rough-legged Hawk *(Buteo lagopus)*
- Dusky Grouse *(Dendragapus obscurus)*
- Flammulated Owl *(Otus flammeolus)* SOC
- Northern Hawk Owl *(Surnia ulula)* PSOC
- Barred Owl *(Strix varia)*
- Boreal Owl *(Aegolius funereus)*
- Common Nighthawk *(Chordeiles minor)*
- Vaux's Swift *(Chaetura vauxi)*
- Broad-tailed Hummingbird *(Selasphorus platycercus)* PSOC
- Lewis's Woodpecker *(Melanerpes lewis)* SOC
- Red-naped Sapsucker *(Sphyrapicus nuchalis)*
- Hairy Woodpecker *(Picoides villosus)*
- American Three-toed Woodpecker *(Picoides dorsalis)*
- Hooded Merganser *(Lophodytes cucullatus)* PSOC
- Cooper's Hawk *(Accipiter cooperii)*
- Red-tailed Hawk *(Buteo jamaicensis)*
- Spruce Grouse *(Falcipennis canadensis)*
- Ruffed Grouse *(Bonasa umbellus)*
- Great Horned Owl *(Bubo virginianus)*
- Northern Pygmy-Owl *(Glaucidium gnoma)*
- Great Gray Owl *(Strix nebulosa)* SOC
- Northern Saw-whet Owl *(Aegolius acadicus)*
- Black Swift *(Cypseloides niger)* SOC
- Calliope Hummingbird *(Stellula calliope)*
- Rufous Hummingbird *(Selasphorus rufus)* PSOC
- Williamson's Sapsucker *(Sphyrapicus thyroideus)*
- Downy Woodpecker *(Picoides pubescens)*
- Black-backed Woodpecker *(Picoides arcticus)* SOC
- Northern Flicker *(Colaptes auratus)*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Northern Pygmy-Owl (Glaucidium gnoma)
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Northern Saw-whet Owl (Aegolius acadicus)
Black Swift (Cypseloides niger) SOC
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Rufous Hummingbird (Selasphorus rufus) PSOC
Williamson's Sapsucker (Sphyrapicus thyroideus)
Downy Woodpecker (Picoides pubescens)
Black-backed Woodpecker (Picoides arcticus) SOC
Northern Flicker (Colaptes auratus)
Click on Species Name to View Information from the Animal Field Guide

Wolverine - Montana Field Guide - Windows Internet Explorer
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Wolverine - Montana Field Guide

Wolverine - *Gulo gulo*

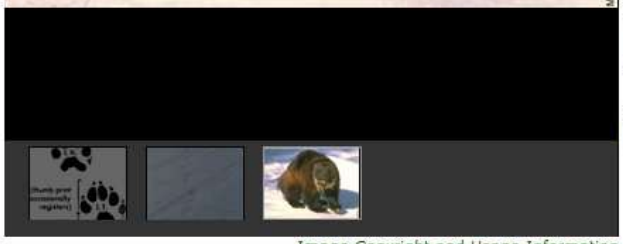

Image Copyright and Usage Information

Species of Concern

Global Rank: G4
State Rank: S3

Agency Status
USFWS: none
USFS: SENSITIVE
BLM: SENSITIVE
FWP Conservation Tier: 2

Tracker Montana Observations
NatureServe Species Report
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Recording of a wolverine in a research trap by Brenna Forester

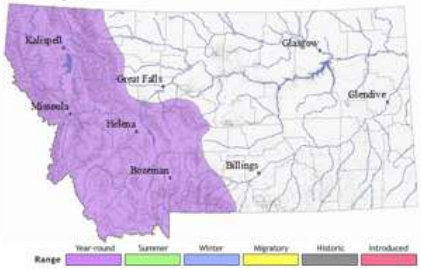
yellowish markings are often present on the throat and chest. The tail is bushy. The feet are relatively large (6.5 to 11.3 centimeters total length) with robust claws. Wolverines weigh between 7 and 32 kilograms and range from 0.9 to 1.1 meters in length. Females average about 30% less than males in linear measurements and 50% less in mass (Ingles 1965, Hall 1981, Nowak 1991).

Diagnostic Characteristics

Wolverines are most similar to fishers (*Martes pennanti*) but are nearly twice as large. Fishers also lack the light colored lateral markings of the Wolverine and the tail is less bushy. Badgers have shorter legs and are much lighter colored with a distinctive black and white pattern on the face.

General Distribution

Montana Range



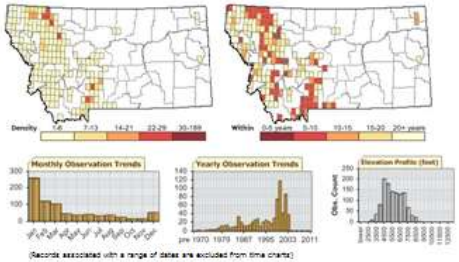
Western Hemisphere Range

Summary of Observations Submitted for Montana

Number of Observations: 1204

(Click on the following maps and charts to see full sized version) Map Help and Descriptions

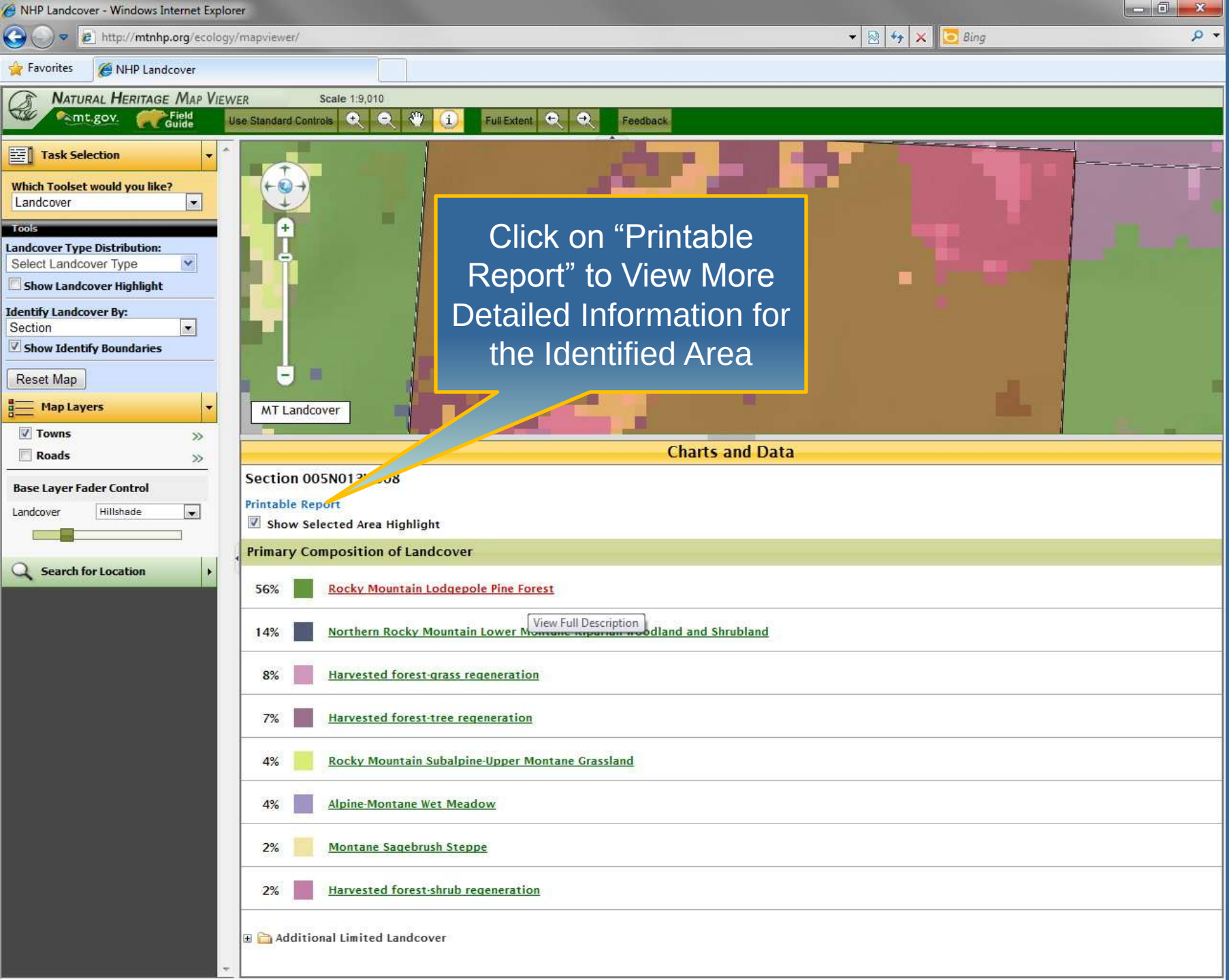
Relative Density **Recency**



(Records associated with a range of dates are excluded from time charts)

Migration

Wolverines in northwestern Montana and Alaska tended to occupy higher elevations in summer and lower elevations in winter (Hornocker and Hash 1981, Whitman et al. 1986). Seasonal ranges were all within a large home range; dispersal movements of more than 300 kilometers are known (Magoun 1985, Gardner et al. 1986).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Section
Show Identify Boundaries
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MT Landcover
Click on “Printable Report” to View More Detailed Information for the Identified Area
Charts and Data
Section 005N013
Printable Report
Show Selected Area Highlight
Primary Composition of Landcover
56% Rocky Mountain Lodgepole Pine Forest
View Full Description
14% Northern Rocky Mountain Lower
land and Shrubland
8% Harvested forest-grass regeneration
7% Harvested forest-tree regeneration
4% Rocky Mountain Subalpine-Upper Montane Grassland
4% Alpine-Montane Wet Meadow
2% Montane Sagebrush Steppe
2% Harvested forest-shrub regeneration
Additional Limited Landcover

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Montana Ecological Systems - Landcover Report

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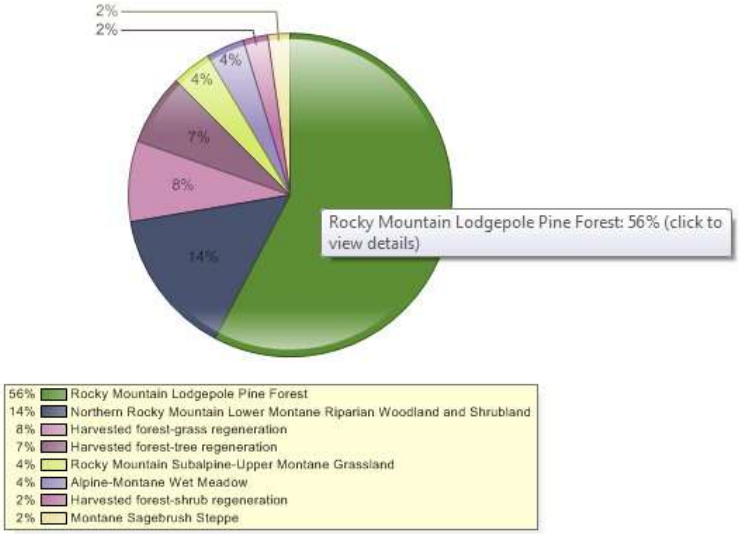

Primary Composition of Landcover

56%

Forest and Woodland Systems

Conifer-dominated forest and woodland (xeric-mesic)

Rocky Mountain Lodgepole Pine Forest

This forested system is widespread in upper montane to subalpine zones of the Montana Rocky Mountains, and east into island ranges of north-central Montana and the Bighorn and Beartooth ranges of south-central Montana. These are montane to subalpine forests where the dominance of lodgepole pine (*Pinus contorta*) is related to fire history and topoedaphic conditions. In Montana, elevation ranges from 975 to 2,743 meters (3,200-9000 feet). These forests occur on flats to slopes of all degrees and aspect, as well as valley bottoms. Fire is frequent, and stand-replacing fires are common. Following stand-replacing fires, lodgepole pinewill rapidly colonize and develop into dense, even-aged stands. Most forests in this ecological system occur as early- to mid-successional forests persisting for 50-200 years on warmer, lower elevation forests, and 150-400 years in subalpine forests. They generally occur on dry to intermediate sites with a wide seasonal range of temperatures and long precipitation-free periods in summer. Snowfall is heavy and supplies the major source of soil water used for growth in early summer. Vigorous stands occur where the precipitation exceeds 533 millimeters (21 inches). These lodgepole forests are typically associated with rock types weathering to acidic substrates, such as granite and rhyolite. In west-central Montana ranges such the Big Belts and the Rocky Mountain Front, these forests are found on limestone substrates. These systems are especially well developed on the broad ridges and high valleys near and east of the Continental Divide. Succession proceeds at different rates, moving relatively quickly on low-elevation, mesic sites and particularly slowly in high-elevation forests such as those along the Continental Divide in Montana.

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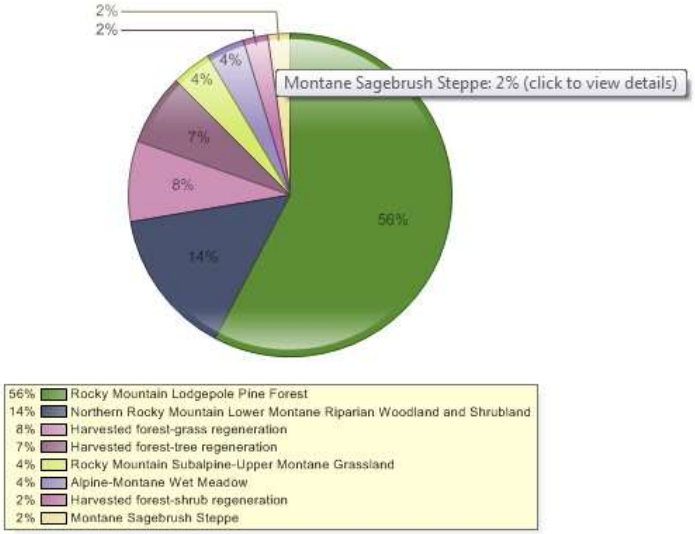

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4%

Alpine-Montane Wet Meadow

These moderate-to-high-elevation systems are found throughout the Rocky Mountains, dominated by herbaceous species found on wetter sites with very low-velocity surface and subsurface flows. Occurrences range in elevation from montane to alpine at 1,000 to 3,353 meters (3,280-11,000 feet). This system typically occurs in cold, moist basins, seeps and alluvial terraces of headwater streams or as a narrow strip adjacent to alpine lakes (Hansen et al., 1996). Wet meadows are typically found on flat areas or gentle slopes, but may also occur on sub-irrigated sites with slopes up to 10 percent. In alpine regions, sites are typically small depressions located below late-melting snow patches or on snowbeds. The growing season may only last for one to two months. Soils of this system may be mineral or organic. In either case, soils show typical hydric soil characteristics, including high organic content and/or low chroma and redoximorphic features. This system often occurs as a mosaic of several plant associations, often dominated by graminoids such as tufted hairgrass (*Deschampsia caespitosa*), and a diversity of montane or alpine sedges such as small-head sedge (*Carex illota*), small-winged sedge (*Carex microptera*), black alpine sedge (*Carex nigricans*), Holm's Rocky Mountain sedge (*Carex scopulorum*) shortstalk sedge (*Carex podocarpa*) and Payson's sedge (*Carex paysonis*). Drummond's rush (*Juncus drummondii*), Merten's rush (*Juncus mertensianus*), and high elevation bluegrasses (*Poa arctica* and *Poa alpina*) are often present. Forbs such as arrow-leaf groundsel (*Senecio triangularis*), slender-sepal marsh marigold (*Caltha leptosepala*), and spreading globeflower (*Trollius laxus*) often form high cover in higher elevation meadows. Wet meadows are associated with snowmelt and are usually not subjected to high disturbance events such as flooding.

Recently Disturbed or Modified

2%

Harvested Forest

Harvested forest-shrub regeneration

Land cover has been modified by logging. New growth is primarily shrubs.

Shrubland, Steppe and Savanna Systems

2%

Sagebrush Steppe

Montane Sagebrush Steppe

This system dominates the montane and subalpine landscape of southwestern Montana from valley bottoms to subalpine ridges and is found as far north as Glacier National Park. It can also be seen in the island mountain ranges of the north-central and south-central portions of the state. It primarily occurs on deep-soiled to stony flats, ridges, nearly flat ridgetops, and mountain slopes. In general, this system occurs in areas of gentle topography, fine soils, subsurface moisture or mesic conditions, within zones of higher precipitation and areas of snow accumulation. It occurs on all slopes and aspects, variable substrates and all soil types. The shrub component of this system is generally dominated by mountain big sagebrush (*Artemisia tridentata ssp. vaseyana*). Other co-dominant shrubs include silver sagebrush (*Artemisia cana ssp. viscidula*), subalpine big sagebrush (*Artemisia tridentata ssp. spiciformis*), three tip sagebrush (*Artemisia tripartita* ssp. *tripartita*) and antelope bitterbrush (*Purshia tridentata*). Little sagebrush (*Artemisia arbuscula ssp. arbuscula*) shrublands are only found in southwestern Montana on sites with a perched water table. Wyoming big sagebrush (*Artemisia tridentata ssp. wyomingensis*) sites may be included within this system if occurrences are at montane elevations, and are associated with montane graminoids such as Idaho fescue (*Festuca idahoensis*), spike fescue (*Leucopoa kingii*), or poverty oatgrass (*Danthonia intermedia*). In ares where sage has been eliminated by human activities like burning, disking or poisoning, other shrubs may be dominant, especially rubber rabbitbrush (*Ericameria nauseosa*), and green rabbitbrush (*Chrysothamnus viscidiflorus*). Because of the mesic site conditions, most occurrences support a diverse herbaceous undergrowth of grasses and forbs. Shrub canopy cover is extremely variable, ranging from 10 percent to as high as 40 or 50 percent.

- Additional Limited Landcover

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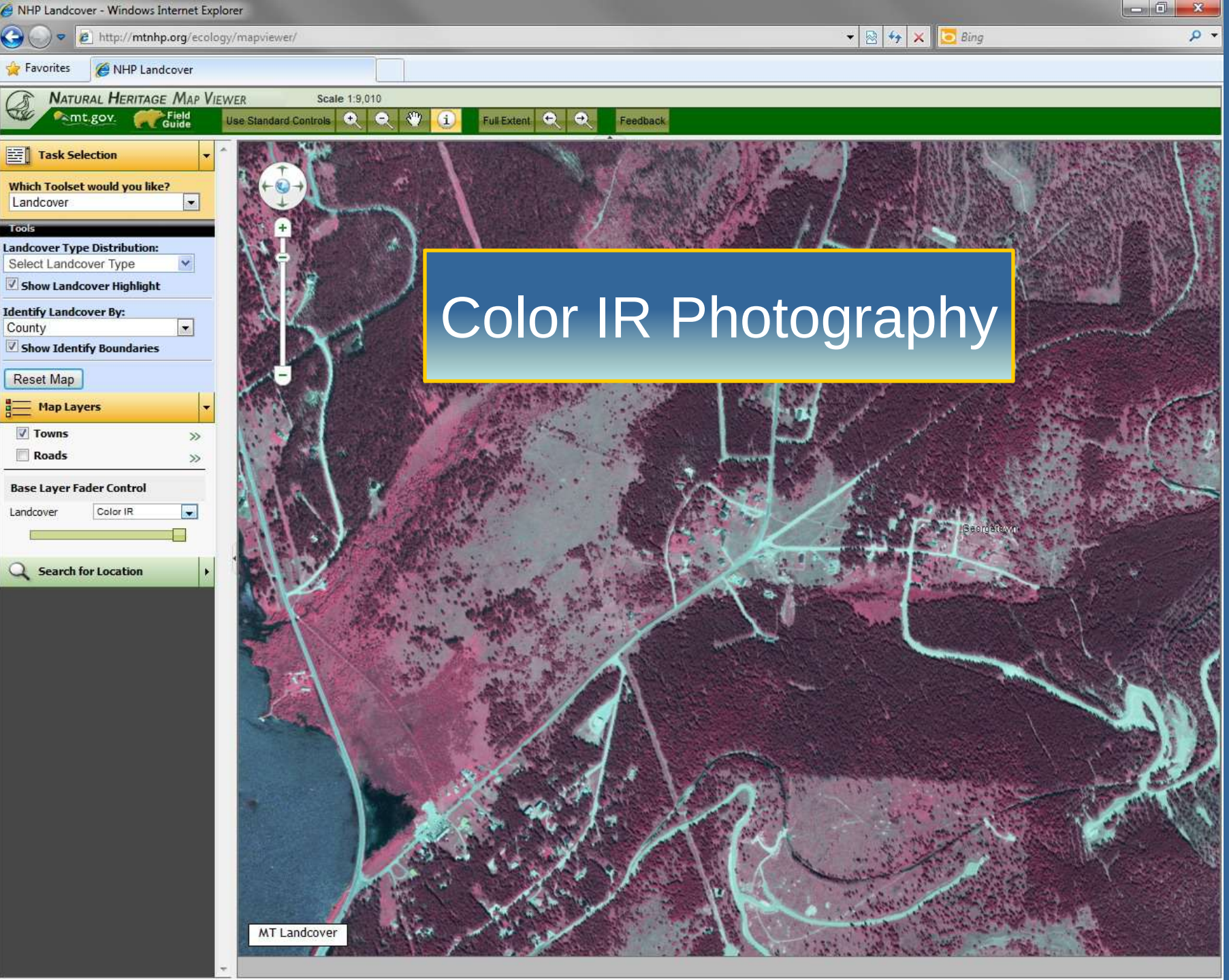
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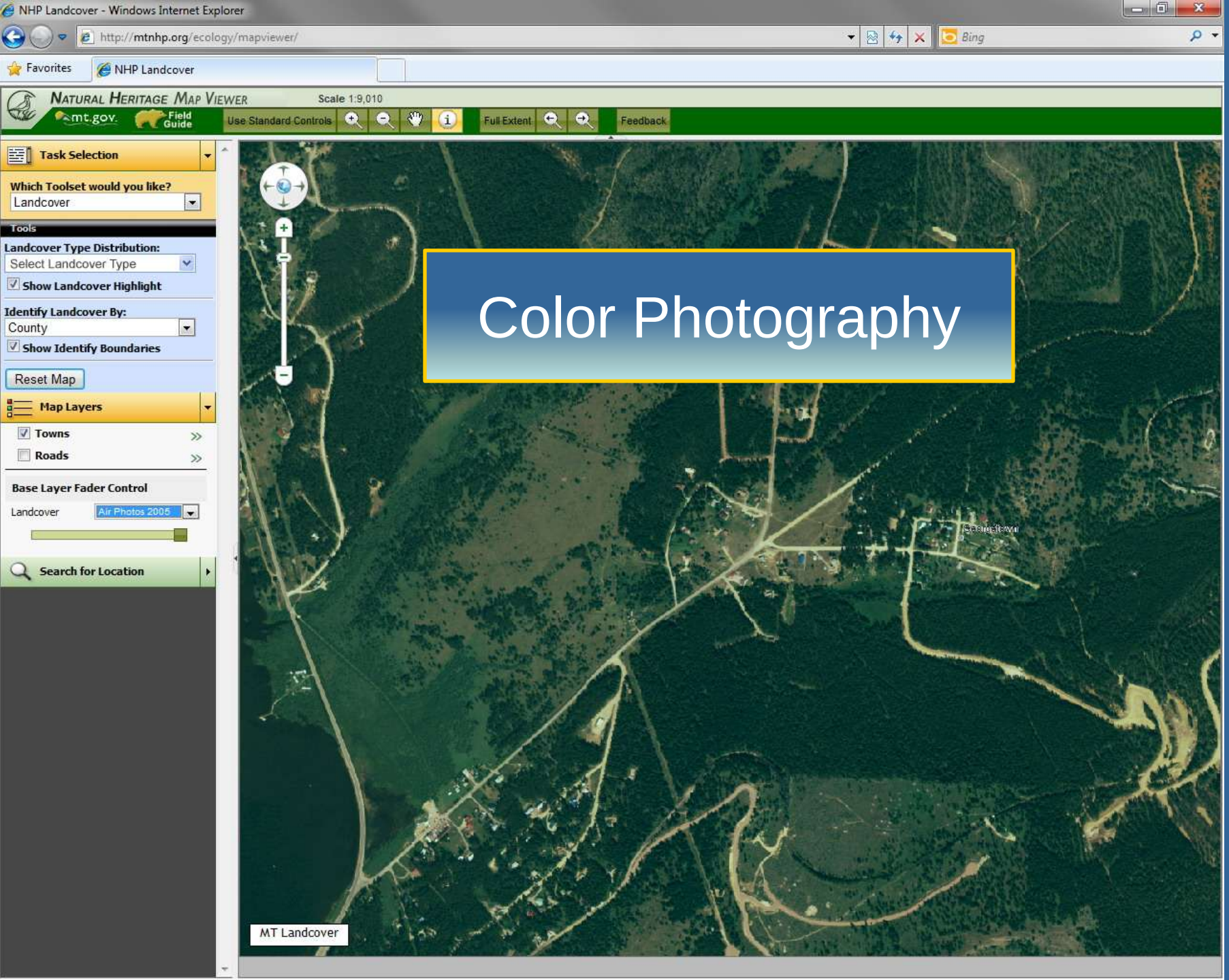
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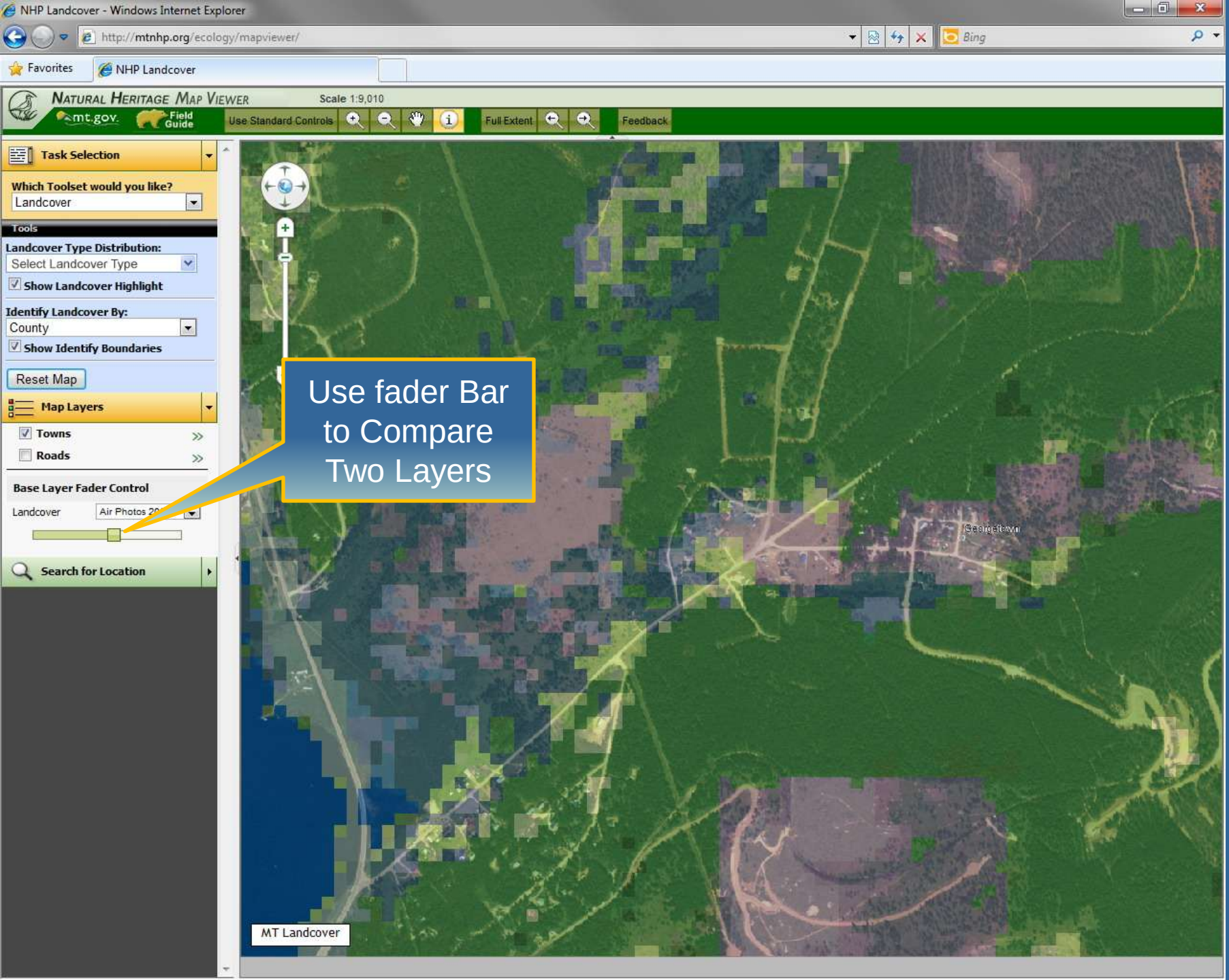
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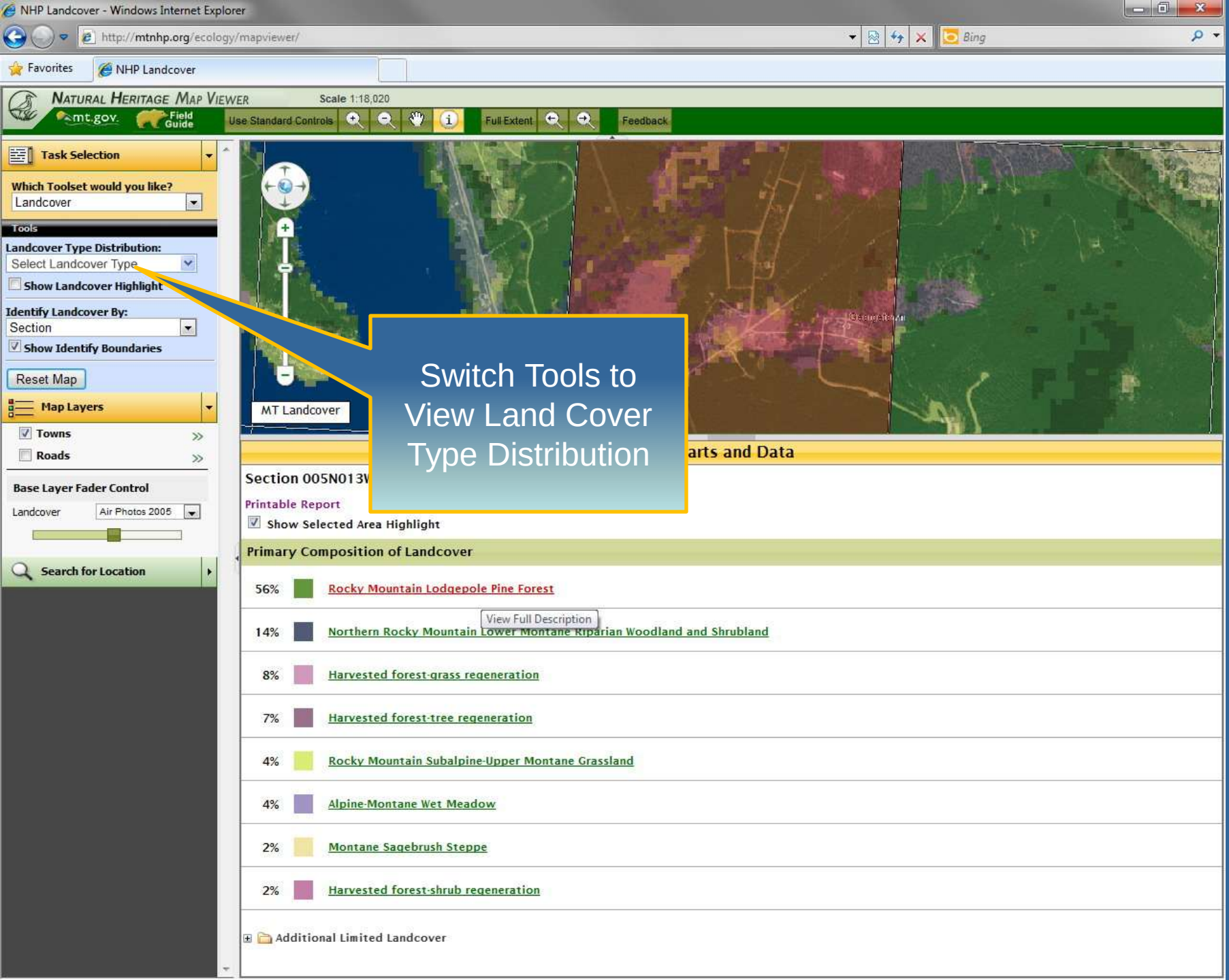
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Show Selected Area Highlight
Primary Composition of Landcover
56% Rocky Mountain Lodgepole Pine Forest
View Full Description
14% Northern Rocky Mountain Lower Montane Riparian Woodland and Shrubland
8% Harvested forest-grass regeneration
7% Harvested forest-tree regeneration
4% Rocky Mountain Subalpine-Upper Montane Grassland
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2% Montane Sagebrush Steppe
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Task Selection

Which Toolset would you like?

Landcover

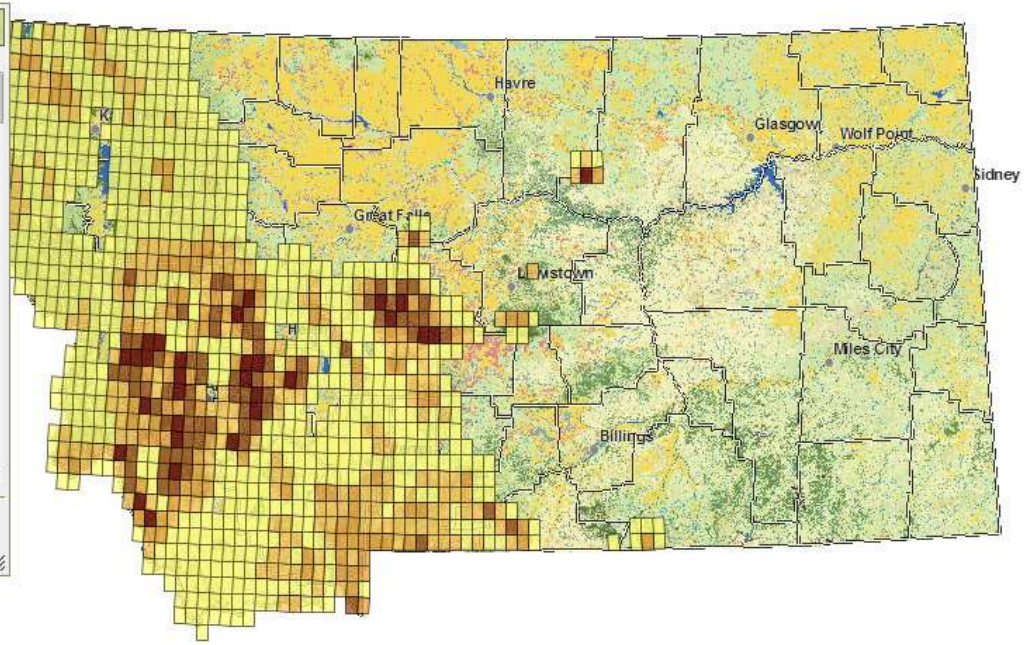
Tools

Landcover Type Distribution:

Select Landcover to Highlight

- Forest and Woodland Systems
  - *Conifer-dominated forest and woodland (mesic-wet)*
    - Rocky Mountain Mesic Montane Mixed Conifer Forest
    - Rocky Mountain Subalpine Mesic Spruce-Fir Forest and Woodland
  - *Conifer-dominated forest and woodland (xeric-mesic)*
    - Great Plains Ponderosa Pine Woodland and Savanna
    - Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest
    - Rocky Mountain Foothill Limber Pine - Juniper Woodland
    - Rocky Mountain Foothill Woodland-Steppe Transition
    - **Rocky Mountain Lodgepole Pine Forest**
    - Rocky Mountain Montane Douglas-fir Forest and Woodland
    - Rocky Mountain Ponderosa Pine Woodland and Savanna
    - Rocky Mountain Poor Site Lodgepole Pine Forest
    - Rocky Mountain Subalpine Dry-Mesic Spruce-Fir Forest and Woodland

Clear Selection



Rocky Mountain Lodgepole Pine Forest

Density: Lowest — Highest

Charts and Data

Rocky Mountain Lodgepole Pine Forest

This forested system is widespread in upper montane to subalpine zones of the Montana Rocky Mountains, and east into island ranges of north-central Montana and the Bighorn and Beartooth ranges of south-central Montana. These are montane to subalpine forests where the dominance of lodgepole pine (*Pinus contorta*) is related to fire history and topoedaphic conditions. In Montana, elevation ranges from 975 to 2,743 meters (3,200-9000 feet). These forests occur on flats to slopes of all degrees and aspect, as well as valley bottoms. Fire is frequent, and stand-replacing fires are common. Following stand-replacing fires, lodgepole pinewill rapidly colonize and develop into dense, even-aged stands. Most forests in this ecological system occur as early- to mid-successional forests persisting for 50-200 years on warmer, lower elevation forests, and 150-400 years in subalpine forests. They generally occur on dry to intermediate sites with a wide seasonal range of temperatures and long precipitation-free periods in summer. Snowfall is heavy and supplies the major source of

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Landcover

Tools

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Select Landcover Type

☑ **Show Landcover Highlight**

Identify Landcover By:
County

☑ **Show Identify Boundaries**

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Map Layers

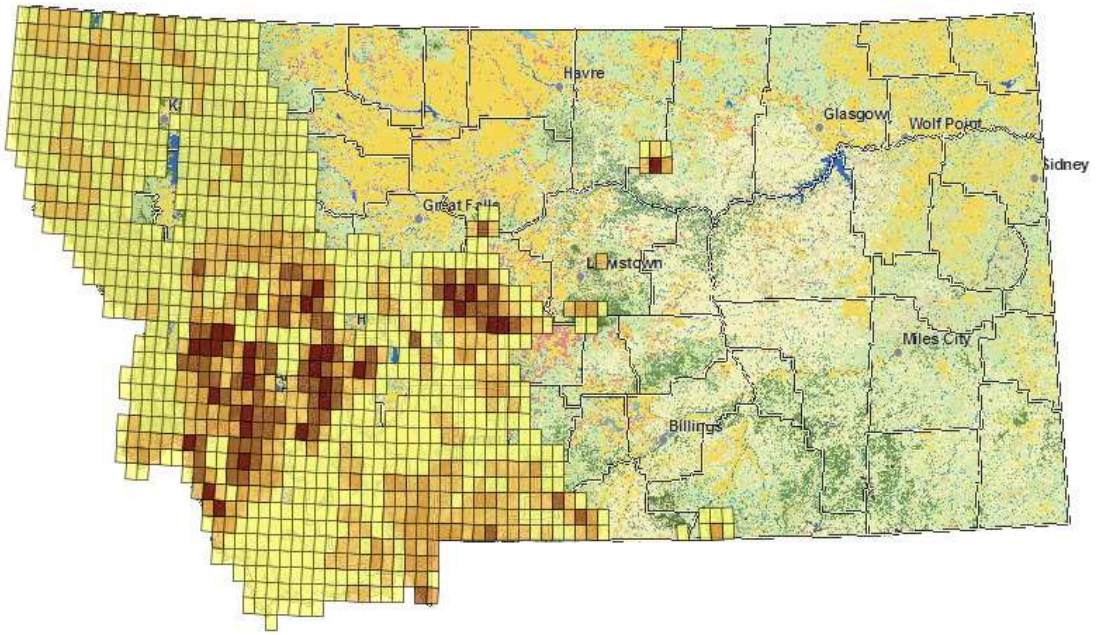
☑ **Towns**

☐ **Roads**

Base Layer Fader Control

Landcover — Hillshade

Search for Location



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Land Cover Questions?

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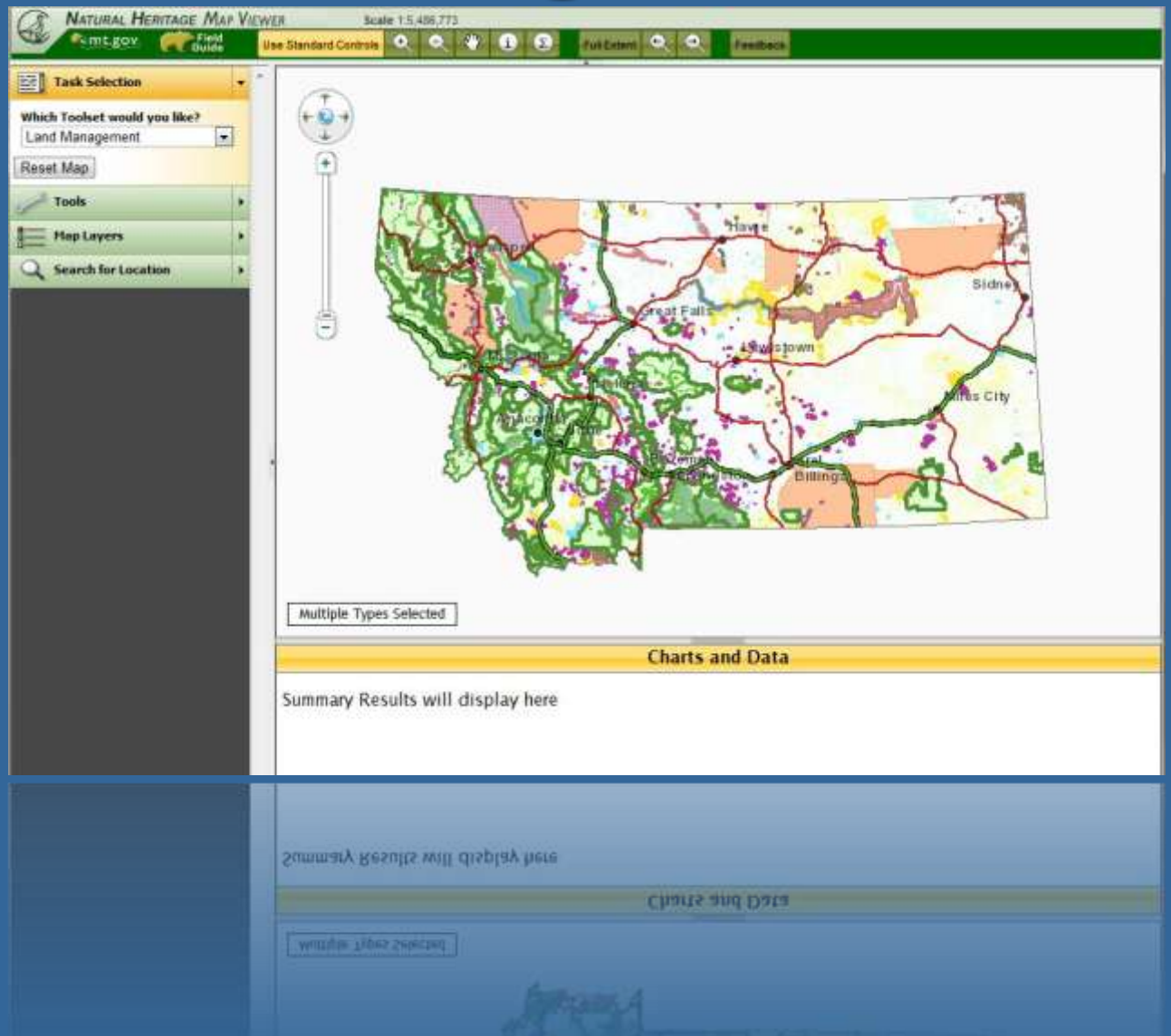
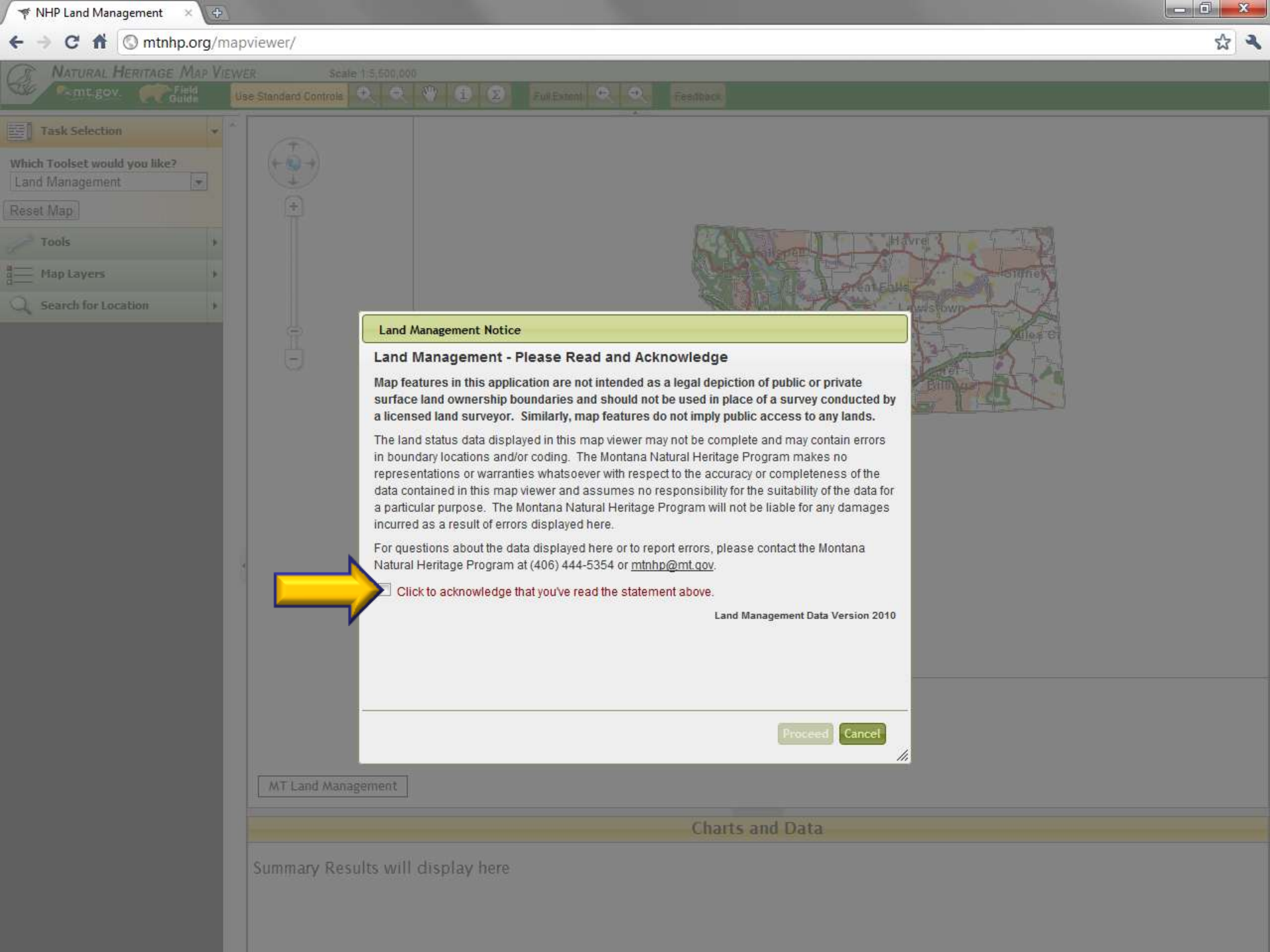
Land Management Tools

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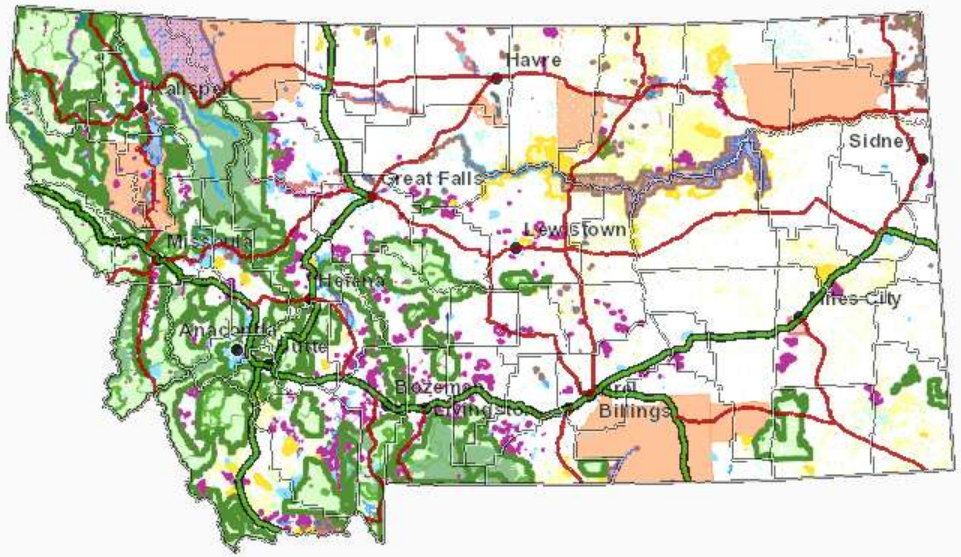

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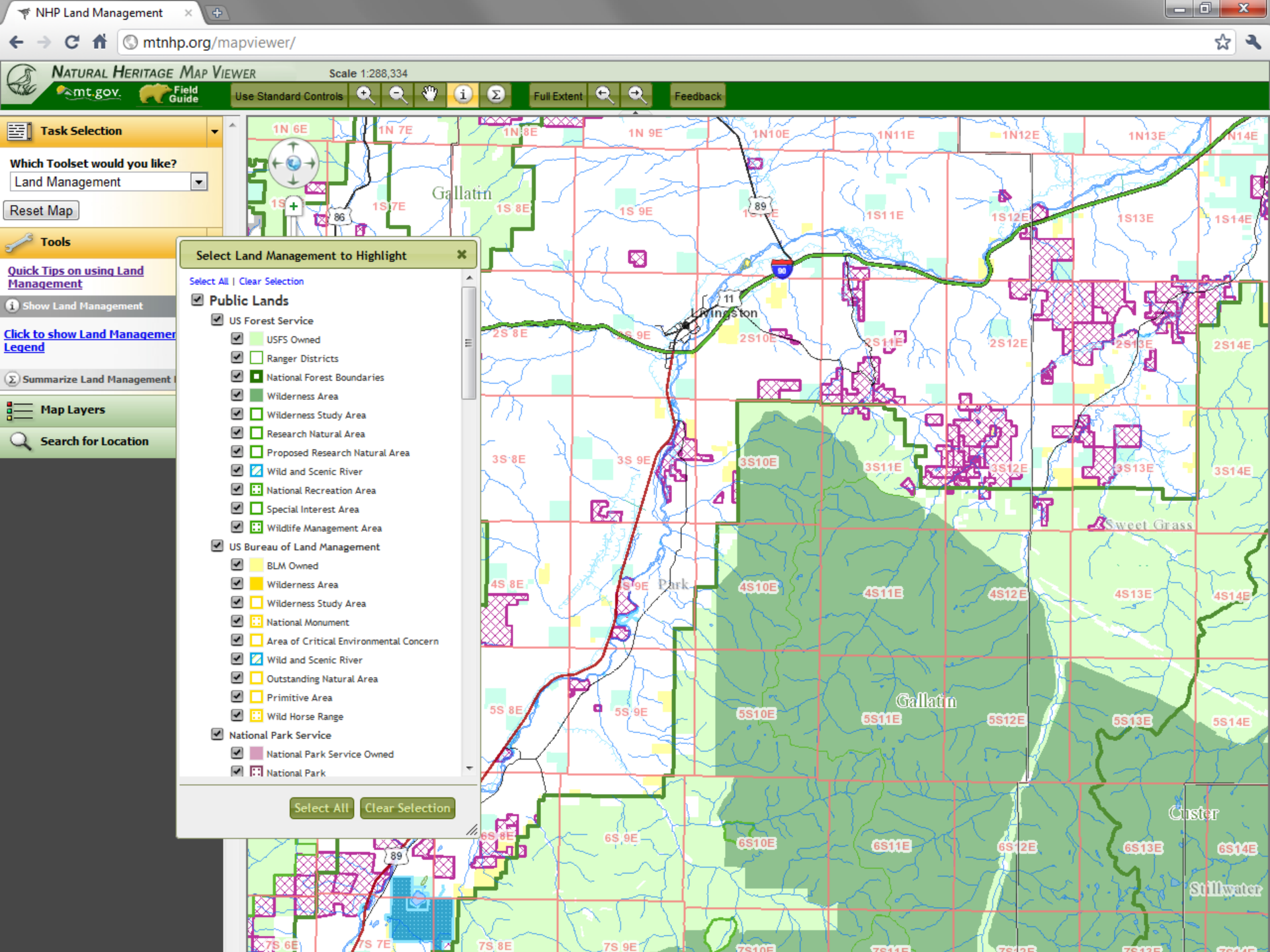
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USFS Owned
Ranger Districts
National Forest Boundaries
Wilderness Area
Wilderness Study Area
Research Natural Area
Proposed Research Natural Area
Wild and Scenic River
National Recreation Area
Special Interest Area
Wildlife Management Area
US Bureau of Land Management
BLM Owned
Wilderness Area
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Wild Horse Range
National Park Service
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Custer
Stillwater
Livingston

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Natural Heritage Map Viewer

Scale 1:576,669

mt.gov | Field Guide | Use Standard Controls | Full Extent | Feedback

Task Selection

Which Toolset would you like?

Land Management

Reset Map

Tools

Quick Tips on using Land Management

Show Land Management

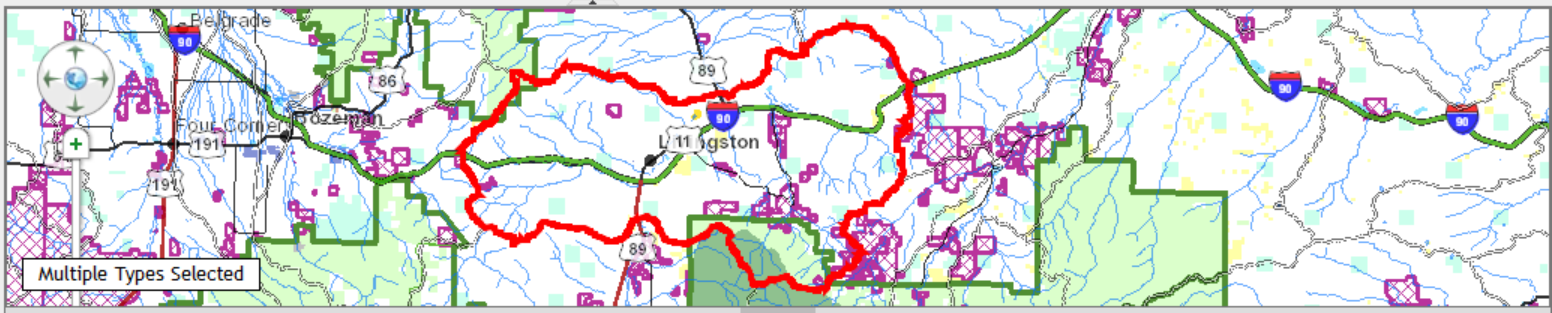
Summarize Land Management By

5th Code Watershed

Show Summarize Boundaries

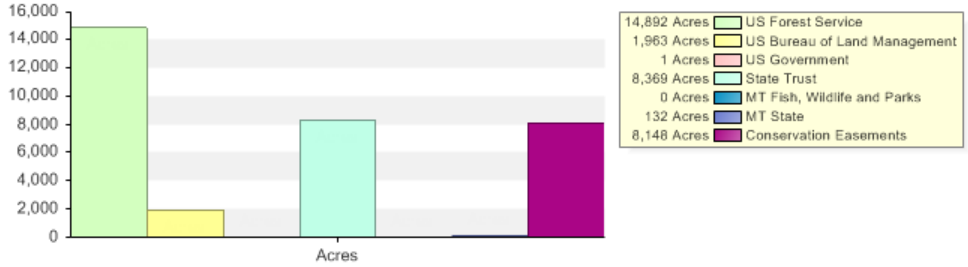
Map Layers

Search for Location



Charts and Data

5th Code Watershed
Yellowstone River-Livingston
(1007000205) - **186,069 Acres (0.2% of Montana)**



Land Management Explanation

Expand All | Collapse All | Printable Report

Land Management Summary

	Other Boundaries	Total Land
Public Lands		25,357 Acres (14%)
US Forest Service		14,892 Acres (8%)
US Forest Service		14,892 Acres (8%)
USFS Ranger Districts	16,261 Acres (9%)	
Gallatin - Livingston	14,927 Acres (8%)	
Gallatin - Bozeman	1,195 Acres (1%)	
Gallatin - Big Timber	139 Acres (0%)	
USFS National Forest Boundaries	16,261 Acres (9%)	
Gallatin National Forest	16,261 Acres (9%)	
USFS Wilderness Areas	4,670 Acres (3%)	
Absaroka-Beartooth Wilderness	4,670 Acres (3%)	
US Bureau of Land Management		1,963 Acres (1%)
US Bureau of Land Management		1,963 Acres (1%)
BLM Wilderness Study Areas	69 Acres (<1%)	
Yellowstone Island Wilderness Study Area	69 Acres (0%)	
US Government		1 Acres (<1%)
US Government - Other		1 Acres (<1%)

NHP Land Management | Montana Land Managem...
mtnhp.org/mapviewer/LandManagementReport.aspx?v=6&d=1007000205

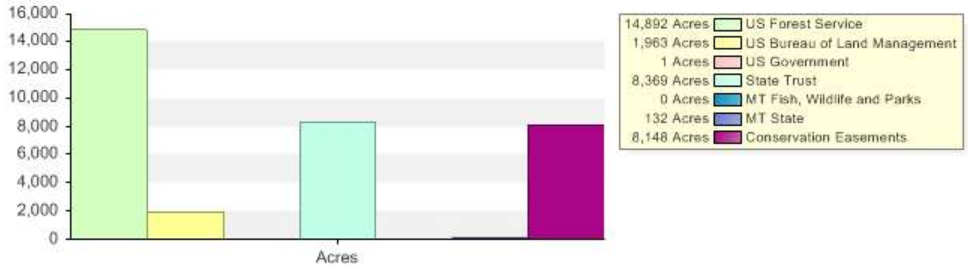
MONTANA Natural Heritage Program
A program of the University of Montana and Natural Resource Information Systems, Montana State Library

Printed Report

Montana Land Management Summary

Report generated 2/21/2011 12:53:42 PM

5th Code Watershed
Yellowstone River-Livingston (1007000205) **- 186,069 Acres (0.2% of Montana)**



Land Management Explanation

Land Management Summary

Expand All | Collapse All

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Public Lands		25,357 Acres (14%)
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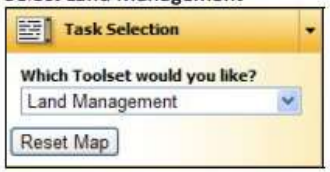
US Government		1 Acres (<1%)
US Government - Other		1 Acres (<1%)
US Government		1 Acres (0%)
State Trust		8,369 Acres (4%)
Montana State Trust Lands		8,369 Acres (4%)
MT Fish, Wildlife and Parks		Acres (<1%)
MTFWP Fishing Access Sites	16 Acres (<1%)	
Sheep Mountain Fishing Access Site	7 Acres (0%)	
Springdale Bridge Fishing Access Site	4 Acres (0%)	
Mayor's Landing Fishing Access Site	3 Acres (0%)	
Highway 89 Bridge Fishing Access Site	2 Acres (0%)	
MT State		132 Acres (<1%)

Displaying Land Management Information

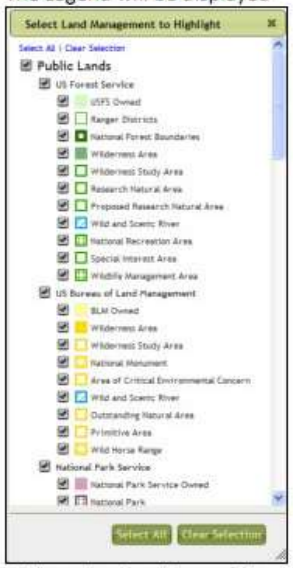
- Open the **Task Selection** slider in the left sidebar
  Select **Land Management**



- Open the Tools slider
  Select **Show Land Management**
  (use the link Click to Show Land Management Legend to open the legend if it's not already showing)

  You will see that your current map tool has switched to the Identify Map Items tool:

- The Legend will be displayed



- Click on the check boxes ❑ to the left of a legend item to turn that item on or off on the map.
  The legend is a hierarchical tree, so clicking on a parent will also turn on all of the sub-categories.
- To display all Land Management categories, you can click on **Select All**. To clear all items, click on **Clear Selection**.

Questions?
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MapViewer Demonstration

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