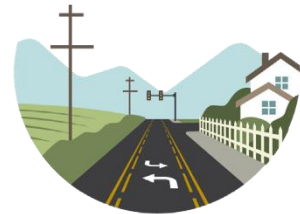
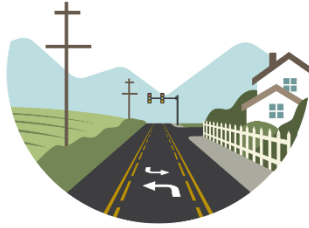


APPENDIX 3:

ENVIRONMENTAL SCAN



WEST RESERVE DRIVE
— CORRIDOR PLANNING STUDY —



WEST RESERVE DRIVE
— CORRIDOR PLANNING STUDY —

Kalispell, MT



FEBRUARY 2021

**ENVIRONMENTAL
SCAN**

Prepared for:



VISION ZERO
zero deaths · zero serious injuries
MONTANA DEPARTMENT
OF TRANSPORTATION

Prepared by:





TABLE OF CONTENTS

ACRONYMS	III
1.0 INTRODUCTION	1
1.1 Study Corridor Area.....	1
1.2 Study Background.....	1
1.3 Information Sources	2
2.0 PHYSICAL ENVIRONMENT	2
2.1 Land Ownership and Land Use	2
2.2 Soil Resources and Prime Farmland	2
2.3 Geologic Resources and Hazards	3
2.4 Hazardous Substances	4
2.5 Air Quality	8
2.6 Surface Waters	9
2.6.1 Water Quality.....	9
2.6.2 Wild and Scenic Rivers.....	11
2.7 Irrigation Features	11
2.8 Groundwater	11
2.9 Floodplains and Floodways	12
2.10 Wetlands.....	14
3.0 BIOLOGICAL RESOURCES	14
3.1 Vegetation.....	14
3.1.1 Noxious Weeds	15
3.2 General Wildlife Species	16
3.2.1 Mammals.....	16
3.2.2 Birds	17
3.2.3 Amphibians, Reptiles, and Invertebrates.....	17
3.2.4 Fisheries.....	17
3.3 Threatened and Endangered Species	17
3.4 State Species of Concern and Special Status Species.....	20
4.0 SOCIAL AND CULTURAL RESOURCES	22
4.1 Population Demographics and Economic Conditions	22
4.1.1 Environmental Justice.....	24
4.2 Recreational Resources	26
4.3 Cultural Resources.....	26
4.4 Section 4(f) Resources.....	27
4.5 Section 6(f) Resources.....	27
4.6 Noise.....	27
4.7 Visual Resources	28
5.0 CONCLUSIONS	28
REFERENCES.....	28
 FIGURES	
Figure 1. Employment Distribution by Industry	22
Figure 2. Income Distribution	23



TABLES

Table 1. Hazardous Sites within Study Corridor Area.....	5
Table 2. Water Quality and TMDL Status	10
Table 3. Land Cover Composition within Study Corridor Area and 1 Mile of Corridor	15
Table 4. Threatened and Endangered Species for Flathead County	18
Table 5. Documented Species of Concern and Special Status Species	20
Table 6. Population and Racial Makeup for Flathead County	24
Table 7. Populations below poverty level for Census Tracts, Flathead County, and state of Montana	25
Table 8. Minority Populations for Census Tracts, Flathead County, and the state of Montana	25

ATTACHMENTS

- Attachment 1: Study corridor area exhibits
- Attachment 2: NRCS Soil Survey Report
- Attachment 3: USGS Seismic Hazard Map
- Attachment 4: Flathead County Septic Permits
- Attachment 5: MTNHP Environmental Summary Report
- Attachment 6: Montana noxious weeds list
- Attachment 7: USEPA EJSCREEN Report



ACRONYMS

CECRA	Comprehensive Environmental Cleanup and Responsibility Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
DNRC	Montana Department of Natural Resources and Conservation
EO	Executive Order
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FPPA	Farmland Protection Policy Act
FWP	Montana Fish, Wildlife, and Parks
GWIC	Groundwater Information Center
HUC	Hydrologic Unit Code
LUST	Leaking Underground Storage Tank
LWCF	Land and Water Conservation Fund
MAAQs	Montana Ambient Air Quality Standards
MBMG	Montana Bureau of Mines and Geology
MBTA	Migratory Bird Treaty Act
MDEQ	Montana Department of Environmental Quality
MDT	Montana Department of Transportation
MEPA	Montana Environmental Policy Act
MPDES	Montana Pollutant Discharge Elimination System
MS4	Municipal Separate Storm Sewer System
MSATs	Mobile Source Air Toxics
MTNHP	Montana Natural Heritage Program
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
PM	Particulate Matter
RCRA	Resource Conservation and Recovery Act
RP	Reference Post
SFHA	Special Flood Hazard Area
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SOC	Species of Concern
TMDL	Total Maximum Daily Load
US 2	United States Highway 2
US 93	United States Highway 93
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank



1.0 INTRODUCTION

The Montana Department of Transportation (MDT) has initiated a corridor study of W. Reserve Dr., between the intersection with United States Highway 93 (US 93) and United States Highway 2 (US 2). A portion of Whitefish Stage Rd., within the Kalispell urban limits, 0.5 mile north of W. Reserve Dr. and 300 feet of south of W. Reserve Dr., is also included as part of this study. The goal of the W. Reserve Dr. Corridor Study is to develop a comprehensive long-range plan for managing the corridor and determining what, if anything, can be done to improve the corridor based on needs, public and agency input, and financial feasibility. This is a collaborative process with local jurisdictions, resource agencies, MDT, Federal Highway Administration (FHWA), and the public to identify transportation needs and potential solutions given environmental and funding constraints.

This environmental scan report provides a planning-level overview of physical, biological, social, and cultural resources and identifies potential constraints and opportunities within the W. Reserve Dr. and Whitefish Stage Rd. study limits. This scan is not a detailed environmental investigation. If specific improvement options are advanced from this study, a Phase I feasibility study and an analysis for compliance with the National and Montana Environmental Policy Acts (NEPA and MEPA) and other applicable state and federal regulations will be completed as part of the MDT project development process. Information provided in this report may be forwarded into the NEPA and/or MEPA process, at that time.

1.1 Study Corridor Area

The study corridor area for the W. Reserve Dr. Corridor Planning Study is located within Flathead County, Montana, just north and east of the Kalispell city limits. The study corridor area includes W. Reserve Dr. beginning at the intersection with US 93 (Reference Post [RP] 4.0) and continues east to the intersection with US 2 (RP 6.5). The study corridor area also includes 0.5 miles of Whitefish Stage Rd. north of W. Reserve Dr. and 300 feet of Whitefish Stage Rd. south of W. Reserve Dr. For the purposes of this planning study, the study limits include a 250-foot buffer from either side of the centerline of each roadway. The study corridor area is represented in **Exhibits 1 and 2 (Attachment 1)** and occurs within or partially within the following legally described areas:

- Sections 25 and 36 of Township 29 North, Range 22 West
- Sections 28, 29, 30, 31, 32, and 33 of Township 29 North, Range 21 West

1.2 Study Background

The City of Kalispell and the area surrounding the W. Reserve Dr. study corridor area, specifically in the area north of the study corridor area, have experienced substantial growth in recent years. This has resulted in increased commuter, homeowner, and commercial/construction traffic volumes on W. Reserve Dr., which has become a major east-west thoroughfare connecting US 93 to US 2. The Flathead valley has realized a 12 percent increase in population since 2010 resulting in traffic congestion along the route and strain on the existing infrastructure. In April 2020, the Transportation Commission approved a system change for W. Reserve Dr., removing it from the urban system and adding it to the primary system.

In addition to providing an east-west connection from US 93 to US 2, the W. Reserve Dr. corridor also serves several subdivisions and individual residences, farms, manufacturing, a large timber mill, and the commercial areas around US 93 and US 2.



1.3 Information Sources

Information presented in the various sections of this report was obtained from publicly-available reports, websites, data, and documentation from federal, state, and local agencies and from an on-site field review conducted in October 2020. The information presented includes the most recently available data as of November 2020. It is appropriate to review and update this information during future environmental analyses completed for any projects that may be forwarded from this study.

2.0 PHYSICAL ENVIRONMENT

2.1 Land Ownership and Land Use

W. Reserve Dr. and Whitefish Stage Rd. are within MDT and Flathead County right-of-way. A large parcel at the southwest quadrant of the W. Reserve Dr. and US 93 intersection is Montana State Trust Land. The remainder of the study corridor area is owned by private landowners. No lands under federal jurisdiction and no conservation easements are found within the area. **Exhibit 3 (Attachment 1)** shows existing landownership within and adjacent to the study corridor area.

The study corridor area and the lands adjacent to the study corridor area are primarily used for residential and commercial uses and crop production. The privately-owned Village Greens Golf Course and the Plum Creek Timber Mill are also located south of W. Reserve Dr. The study corridor area is located primarily within zoning districts designated by Flathead County¹, with only portions of the far western end of the corridor within city of Kalispell designated zoning districts². **Exhibit 4 (Attachment 1)** shows the zoning designations and land uses as outlined below. Exhibit 4 also shows the proposed city of Kalispell annexation boundary, which would incorporate lands west of the Whitefish River into the city at some point in the future.

- **Flathead County Zoning** encompasses all, but the very western end, of the study corridor area. From US 93 to Whitefish Stage Rd., lands immediately adjacent to W. Reserve Dr. are zoned as residential apartment, suburban residential, light industrial, two-family residential, and suburban agricultural. From Whitefish Stage Rd. to US 2, lands immediately adjacent to W. Reserve Dr. are zoned as two-family residential, agricultural, one-family residential, suburban residential, suburban agricultural, light industrial, general business, and heavy industrial. Lands adjacent to Whitefish Stage Rd. are zoned as two-family residential, agricultural, one-family residential, suburban residential, and suburban agricultural.
- **City of Kalispell Zoning** encompasses portions of the study corridor area near US 93. City zoning near US 93 include general business (B-2), general business with planned urban development (B-2/PUD), and industrial business with planned urban development (B-5/PUD).

Improvement options carried forward from this study will need to consider potential impacts to adjacent private landowners, as well as potential impacts to adjacent land use, should new right-of-way or easements on adjacent lands, new access points, or changes in access be required.

2.2 Soil Resources and Prime Farmland

The importance of farmlands to the national and local economy requires consideration of impacts from activities to, or on land adjacent to, prime or unique farmlands. Congress enacted the Farmland Protection Policy Act (FPPA) (7 U.S.C. 4201 et. seq.) as a subtitle of the 1981 Farm Bill. The FPPA is intended “to minimize the extent to which federal programs contribute to the



unnecessary and irreversible conversion of farmland to nonagricultural uses, and to assure that federal programs are administered in a manner that, to the extent practicable, are compatible with State, unit of local government, and private programs and policies to protect farmland.” The term “farmland” refers to prime farmland; some prime if irrigated farmland; unique farmland; and farmland, other than prime or unique farmland, that is of statewide importance. Prime farmland soils are those that have the best combination of physical and chemical characteristics for producing food, feed, and forage; the area must also be available for these uses. Prime farmland can be either non-irrigated or lands that would be considered prime if irrigated. Farmland of statewide importance is land, in addition to prime and unique farmlands, that is of statewide importance for the production of food, feed, forage, and oilseed crops. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land. However, projects that occur on farmland already in urban development or committed to urban development or are used for water storage are not subject to FPPA.

Soil surveys, which provide data on land classifications, including farmland, are available from the United States Department of Agriculture (USDA) Natural Resources Conservation Service³ (NRCS) (**Attachment 2**). Soil information from the NRCS soil survey (MT617) for the Upper Flathead Valley was reviewed to determine the presence of prime and unique farmland within the study corridor area and vicinity to demonstrate compliance with the FPPA. **Exhibit 5 (Attachment 1)** contains a map and descriptions of the farmland classification types found in the study corridor area and general vicinity. Within the study corridor area limits, approximately 78 acres (41.2 percent) of land are classified as prime farmland if irrigated, and 0.2 acre (0.1 percent) of land within the study corridor area limits is classified as farmland of statewide importance. The remainder of soils within the study corridor area are not classified as prime or unique farmland. Of the 78.02 acres classified as either prime farmland or farmland of statewide importance, only 8.8 acres are committed (zoned) to agricultural or suburban agriculture. The remaining acreage has already been developed or is zoned for future non-agricultural use.

Improvement options carried forward from this study, that become federally-funded projects, must consider impacts to farmland and farmland infrastructure, and potential effects if farmland is permanently removed from production or converted to non-agricultural uses. Coordination with the NRCS is required to determine the necessary NRCS processing requirements. This may require completion of a CPA-106 Farmland Conversion Impact Rating Form for Corridor Type Projects. The NRCS uses information from the impact rating form to keep inventory of prime and important farmlands within each state and conversion of farmland to nonagricultural use. Projects planned and completed without the assistance of a federal agency are not subject to the FPPA.

2.3 Geologic Resources and Hazards

The study corridor area is located within the Upper Flathead Valley to the north of Flathead Lake. The large northern portion of the Flathead Valley is located between the Swan Range to the east, the Salish Range to the west, and the Whitefish Range to the north. Bedrock in the area is Precambrian bedrock (>1 billion-year old Belt Supergroup rock), with depth to bedrock ranging from just a few feet to over 500 feet. The valley is filled with thick sequences of geologically young, unconsolidated glacial or glacial-lake deposits, and post-glacial alluvial sediments.

Exhibit 6 (Attachment 1) presents the surface geology within the study corridor area as depicted on the Kalispell 1° x 2° Quadrangle produced by United States Geological Survey⁴ (USGS). The study corridor area is primarily mapped as Quaternary Glacial Deposits that consist of glacial drift (Qg) and glacial lake deposits (Qgl). The eastern portion of the study corridor area is mapped as Quaternary Alluvium (Qal), which includes alluvium- gravel, sand, silt, and clay deposits likely



associated with the Flathead River. From this mapping, and from boring logs of nearby projects, it is anticipated that the glacial-related soils are predominately silts with clay and some fine sand. The less extensive alluvial portions will likely contain a mix of silt, sand, gravel, and clay.

A review of Montana Bureau of Mines and Geology (MBMG) Ground Water Information Center (GWIC) well logs for the area indicate a range of soils from clay, silt, sand to gravel. There is a prevalence of fine-grained soil at the surface. These soils are poor for the most part, with some areas that are fair. In general, the soils are anticipated to be frost susceptible, which can affect pavement and other foundation engineering design. These soils can become unworkably soft if moisture is present or introduced.

Montana is a seismically active state, with most of the seismic activity concentrated in the mountainous western third of the state. The Study corridor area is located within the Intermountain Seismic Belt, which extends through western Montana, from the Flathead Lake region in the northwest corner of the state to the Yellowstone National Park region where the borders of Montana, Idaho, and Wyoming meet. Several earthquakes have been documented within the Flathead Valley and surrounding mountain ranges. While there are no active faults mapped within the study corridor area, a 1.7 magnitude earthquake was documented south of W. Reserve Dr., near the Stillwater River, in 2018. In addition, the study corridor area is located within a Seismic Hazard Zone that is more likely to experience significant ground shaking⁵ (**Attachment 3**).

In 2017, MDT completed a statewide study of rockfall hazards and mitigation measures. A review of the MDT Rock Slope Asset Management Program database did not identify any sites within the study area that were identified as potential hazards.

Improvement options carried forward from this study that involve new construction, reconstruction or other substantial improvements will require geotechnical investigations to determine potential stability, erosion, and settlement concerns posed by surface geology and soil conditions.

2.4 Hazardous Substances

The Montana Department of Environmental Quality (MDEQ) administers and enforces the state's hazardous waste management rules and works to identify and clean up contaminated properties throughout the state. The most current database information on existing hazardous sites within Flathead County was provided by MDEQ. Hazardous site information was also obtained from the United States Environmental Protection Agency⁶ (USEPA), the MBMG database, and the National Pipeline Mapping System⁷. **Exhibit 7 (Attachment 1)** depicts the location of hazardous sites within the study corridor area. **Table 1** and the following text provide additional information on these hazardous sites. Additional investigation regarding locations of hazardous sites and potential contaminated soils may be warranted if improvement options are forwarded from this study.



Table 1. Hazardous Sites within Study Corridor Area

Hazardous Site	Name	Description	Location	Status
Remediation Response	Semitool, Inc	State Superfund	RP 5.0 (MDEQ) 655 W. Reserve Dr. – RP 4.7 (EPA)	Unknown
Hazardous Waste Generators	Applied Materials	Large Quantity Generator	655 W. Reserve Dr. – RP 4.7	Active
	Home Depot	Small Quantity Generator	RP 4.2	Active
	Steel Reality Manufacturing	Unknown	Near RP 6.1	Unknown
Underground Storage Tanks	Zip Trip	3 Gasoline Tanks	RP 4.0	Active
	Town Pump Kalispell 7	3 Gasoline Tanks 3 Diesel Tanks 1 DEF Tank	RP 4.1	Active
	Town Pump Kalispell 3	3 Gasoline Tanks 2 Diesel Tanks	US 2 Intersection	Active
	Village Mart Kalispell	Gasoline Tank	RP 5.0	Closed
	Robert M Rechtsteiner	Gasoline Tank	RP 6.0	Closed
	Tri City Lumber, Inc	Unknown	RP 6.3	Closed
	Lilienthal and Schuman Insulation	Unknown	RP 6.4	Closed
	Tri City Quick Stop	Gasoline Tank(s)	US 2 Intersection	Closed
Petroleum Release Tanks	Village Mart Kalispell	Release 2001	RP 5.0	Resolved
	Robert M Rechtsteiner	Release 1993	RP 6.0	Resolved
	Tri City Quick Stop	Release 1995	US 2 Intersection	Resolved
		Release 2003		Resolved
		Release 2007		Resolved
Pipelines	Northwestern Energy Kalispell Pipeline	Natural Gas	RP 5.8	Active
	Northwestern Energy Tap Line	Natural Gas	RP 5.7	Active

National Priority List (Superfund) Sites

Throughout the United States, thousands of contaminated sites exist due to hazardous waste being dumped, left out in the open, or improperly managed. These sites can include mining sites, manufacturing facilities, and processing plants. In response to these contaminated sites, Congress established the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) in 1980. The act allows USEPA to create a National Priority List of hazardous waste sites that are eligible for long-term remedial action financed under the federal Superfund program. These Superfund sites are identified for cleanup because they pose a risk to human health and/or the environment.

No National Priority List Superfund sites exist in or near the study area.



Remediation Response Sites

In Montana, the MDEQ State Superfund Unit uses the Comprehensive Environmental Cleanup and Responsibility Act (CECRA) and the Environmental Quality Protection Fund to investigate and clean up hazardous substances at sites not addressed under the federal Superfund National Priority List. These sites often include activities such as mining, smelting, petroleum refining, wood treating and railroad maintenance and fueling. There is one remediation response/hazardous waste release site within the study corridor area.

The Semitool, Inc site is a MDEQ listed site where unpermitted releases of hazardous materials occurred. The site is maintained by the state superfund unit; however, the MDEQ site report does not indicate whether the site is active or inactive, and it has no information other than to state that a notice letter, regarding a compliant-class V injection well, was issued on June 25, 1993. MDEQ shows the site south of W. Reserve Dr. on Whitefish State Rd.; however, the address for the facility is 655 W. Reserve Dr., which places it north of W. Reserve Dr. at the same location as the current Applied Materials facility. A website for Semitool, Inc states the business is permanently closed. USEPA also lists the Semitool, Inc site as a Resource Conservation and Recovery Act (RCRA) site but shows it as an inactive site located at 655 W. Reserve Dr. No additional information regarding the site or the release is included in the USEPA RCRA database.

Hazardous Waste Generators

Many businesses/industries generate hazardous waste. Generators of hazardous waste are regulated to ensure wastes are managed in ways that protect human health and the environment. Generators of hazardous waste are regulated based on the amount of hazardous waste they generate in a calendar month. MDEQ has listed two hazardous waste generators within or near the study corridor area. USEPA also lists a RCRA site near the study corridor area.

- **Applied Materials** is a MDEQ listed large quantity generator located north of the study corridor area, with its entrance at 655 W. Reserve Dr. It generated 86.461 tons of hazardous waste in its last reporting year (2018). Hazardous wastes generated at this site include lead, silver, methyl ethyl ketone, tetrachloroethylene, arsenic, barium, chromium, and a number of spent halogenated and nonhalogenated solvents.
- **Home Depot** is a MDEQ listed small quantity generator located south of W. Reserve Dr. at 2455 US 93 N. It generated 1.007 tons of hazardous waste in its last reporting year (2018). Hazardous wastes generated at this site include lead, methyl ethyl ketone, tetrachloroethylene, benzene, barium, and chromium.
- **Steel Reality Manufacturing** is a plastic fabrication company located north of the study corridor area on Scenic Drive. The site is listed on the USEPA RCRA Facilities database; however, no information on the site is provided. MDEQ does not list this site in their database.

Underground Storage Tanks

There are several regulated underground storage tanks (USTs) within the study corridor area. These USTs include active tanks and tanks that are permanently out of use.

- Three active USTs exist at the **Zip Trip 41** (RP 4.0). All three tanks are gasoline tanks.
- There are seven active USTs at the **Town Pump Kalispell #7** (RP 4.1). Three of the active tanks are gasoline tanks, three are diesel tanks, and one contains Diesel Exhaust Fluid.



- Five active USTs exist at the **Town Pump Kalispell #3** (US 2 Intersection). Three of the tanks are gasoline tanks and two are diesel tanks.
- One closed UST has been documented at the former **Village Mart Kalispell**, located at the intersection of W. Reserve Dr. and Whitefish Stage Rd. (RP 5.0). The Village Mart is no longer there, and the site has been redeveloped into a bank.
- One closed UST has been documented at a site called **Robert M Rechtsteiner**, located at 105 W. Reserve Dr. (RP 6.0).
- A closed UST has been recorded at **Tri City Lumber, Inc.**, located at 41 W. Reserve Dr. (RP 6.3)
- One closed UST has been recorded at **Lilienthal and Schuman Insulation**, located at 22 W. Reserve Dr. (RP 6.4).
- A closed UST has been recorded at the **Tri City Quick Stop**, located at the northwest corner of the W. Reserve Dr. and US 2 intersection.

Petroleum-Tank Releases

Several petroleum-tank releases have occurred within or adjacent to the study corridor area. All of the releases had claims for assistance from the Petroleum Tank Release Compensation Board and Cleanup Fund, except for one identified leaking underground storage tank (LUST). All petroleum tank releases have been resolved.

- **Village Mart Kalispell** (Facility ID #15-02334), located at the intersection of W. Reserve Dr. and Whitefish Stage Rd. (RP 5.0) had a listed petroleum release in 2001. The incident was resolved in 2011 and the UST tank was closed.
- **Robert M Rechtsteiner** (Facility ID #15-11654) had a listed petroleum release in 1993. The incident was resolved in 1994 and the UST tank was closed. Three separate locations are shown for this site in the available data. MDEQ shows the release near RP 6.04, while USEPA shows the release near RP 5.9 and the UST closure at RP 6.0. The address listed for the site is 105 W. Reserve Dr., which places it at the UST closure location (RP 6.0).
- At the **Tri City Quick Stop** (Facility ID #15-07490), located at the northwest corner of the W. Reserve Dr. and US 2 intersection, both MDEQ and USEPA list three petroleum releases. The first release was listed in 1995 and resolved in 1996. The second release was listed in 2003 and resolved in 2006. The third release was listed in 2007 and resolved in 2009. The site also shows an UST tank closure at this location.

Landfills

Landfills are facilities designed to receive specific kinds of waste, including municipal solid waste, construction and demolition debris, and hazardous waste. There are no active landfills within the study corridor area.

Pipelines

The National Pipeline Mapping System contains information on hazardous liquid and gas transmission pipelines under the jurisdiction of the United States Department of Transportation Pipeline and Hazardous Materials Safety Administration. Two natural gas pipelines cross the study corridor area. A primary natural gas pipeline, owned by Northwestern Energy, crosses W. Reserve Dr. at RP 5.8. A smaller natural gas pipeline spurs off the primary pipeline and parallels W. Reserve Dr. to the north. This tap line, called the Kalispell City Gate 2 tap line, crosses under



the Whitefish River and then crosses under W. Reserve Dr. at RP 5.7, where it extends 0.2 mile along the south side of W. Reserve Dr. before connecting into a large residential development.

Abandoned and Inactive Mine Sites

No mining prospects or abandoned/inactive mines are located within or near the study corridor area.

Open Cut Permits

Open cut permits are permits required for open cut mining and processing of materials such as bentonite, clay, scoria, soil materials, peat, sand or gravel. No permitted open cut mine sites are located within or near the study corridor area. Schellinger Construction Company does operate an open cut mine north of the study limits on Whitefish Stage Rd.

2.5 Air Quality

In accordance with the Clean Air Act of 1970, as amended, the USEPA is required to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The USEPA has set standards for six criteria pollutants, including carbon monoxide, nitrogen dioxide, ozone, particulate matter (PM₁₀ and PM_{2.5}), sulfur dioxide, and lead.

Montana has also established air quality standards for criteria pollutants, as well as for settleable particulate matter and visibility. These Montana Ambient Air Quality Standards (MAAQS) are found in the Administrative Rules of Montana 17.8.210-17.8.230.

Both the USEPA and MDEQ can designate communities or areas that continually exceed NAAQS or MAAQS thresholds as “non-attainment areas.” For non-attainment areas, states are required to develop a State Implementation Plan (SIP), which outlines how air pollution will be reduced in areas that do not meet NAAQS and how future attainment is ensured. An area that has been designated as nonattainment in the past, but that now complies with the NAAQS, is classified as a “maintenance” area.

A nonattainment area for PM₁₀ has been designated within the Kalispell Area⁸. The eastern portion of the W. Reserve Dr. study corridor area from Whitefish Stage Rd. to US 2 falls within the designated limits of the PM₁₀ nonattainment area. In addition, an area of concern for carbon monoxide has been designated within the Kalispell Area. An area of concern is an area that has not been legally designated as a nonattainment area. The Kalispell area of concern for carbon monoxide includes a delineated core area centered around downtown Kalispell and a broader study area limit in which the pollutant is being recorded and reviewed. The W. Reserve Dr. study corridor area is found within the designated broader study limits.

Transportation conformity is required by the Clean Air Act to ensure that federal funding and approval are given to transportation projects that are consistent with the air quality goals established by a SIP. Conformity to the SIP means that transportation activities will not cause new air quality violations, worsen existing violations, or delay timely attainment of NAAQS. Improvement options carried forward from this study will need to examine the current air quality status and determine if a project is subject to conformity requirements. In addition, depending on the scope of improvements being considered within the study corridor area, an evaluation of mobile source air toxics (MSATs) may be required. MSATs are compounds emitted from highway vehicles and off-road equipment which are known or suspected to cause cancer or other serious health and environmental effects.



2.6 Surface Waters

The study corridor area is found almost entirely within the USGS delineated Stillwater River (Flathead River) Watershed (hydrologic unit code [HUC] 17010210), which is divided into two sub watersheds. The western half of the study corridor area, from Whitefish Stage Rd. to US 93, lies within the Lower Stillwater River Sub Watershed (HUC 1701021004). The eastern half of the study corridor area, from just east of Whitefish Stage Rd. to 100 feet west of US 2, lies within the Whitefish River Sub Watershed (HUC 1701021005). The last 200 feet of the study corridor area on W. Reserve Dr., are found within the Flathead River – Columbia Fall Sub Watershed (HUC 1701020801) of the greater Flathead Lake Watershed (HUC 17010208).

Within the study corridor area, W. Reserve Dr. crosses two primary waterways via bridges: the Stillwater River at RP 4.28 and the Whitefish River at RP 5.74. Three, small unnamed intermittent drainages are also shown on topographic maps. They cross W. Reserve Dr. at RP 4.02, RP 4.92, and RP 6.04. While small culverts (24 inch) do cross the roadway at two of the drainage crossing locations, the channels are not very apparent and have likely been graded or realigned due to development in the area. **Exhibit 8 (Attachment 1)** presents identified surface waters within the study corridor area.

Bridge reconstruction or replacement, placement of fill, or bank stabilization may impact surface waters. Coordination with federal, state, and local agencies, including United States Army Corps of Engineers (USACE) and Montana Fish, Wildlife & Parks (FWP), will be necessary to determine appropriate permits based on the improvement options forwarded from this study. Impacts must be avoided and minimized to the maximum extent practicable. Impacts to surface waters may trigger compensatory mitigation.

2.6.1 Water Quality

The primary federal legislation focused on protection of water quality is the Clean Water Act (CWA). Section 303 subsection “d” of the CWA requires the State of Montana to develop a list, subject to USEPA approval, of water bodies that do not meet water quality standards. This responsibility falls to MDEQ. When water quality fails to meet state water quality standards, and beneficial uses of water (for drinking, aquatic habits, recreation, etc.) have been impaired, MDEQ determines the causes and sources of pollutants that are causing impairment and sets maximum pollutant levels, called total maximum daily loads (TMDL). MDEQ prepares an Integrated Water Quality Report every two years, as directed under the Montana Water Quality Act, listing the status of water quality for waterbodies under state jurisdiction.

The Stillwater River and the Whitefish River, within the study corridor area, are classified by MDEQ as Use Class B-2. Waters classified as B-2 are to be maintained suitable for drinking, culinary, and food processing purposes after conventional treatment; bathing, swimming, and recreation; growth and marginal propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers; and agricultural and industrial water supply.

The Final 2018 Integrated Water Quality Report⁹ and the Draft 2020 Integrated Water Quality Report¹⁰ and 303(d) list include both the Stillwater River and the Whitefish River, within the study corridor area, as impaired waterways, with both listed as not fully supporting aquatic life beneficial uses. This is due to sediment levels in the Stillwater River and temperature, oil and grease, and polychlorinated biphenyls in the Whitefish River. TMDLs are required to address these waterway impairments.



The study corridor area is located within the Flathead-Stillwater TMDL Planning Area. The Flathead – Stillwater Planning Area Nutrient, Sediment, and Temperature TMDLs and Water Quality Improvement Plan was developed in 2014 to address impaired waters within the planning area. Stillwater River is listed as Category 4(A), meaning all TMDLs are approved and implemented. Whitefish River is listed as Category 5, which indicates at least one designated use is not being supported or is threatened, and a TMDL is needed. **Table 2** provides beneficial uses, TMDL, and impairment information for both waterways. The published TMDL for any listed cause of impairment within the Stillwater and Whitefish Rivers, and potential impacts to water quality, must be considered for any projects brought forward from this corridor study.

Table 2. Water Quality and TMDL Status

Waterway	Use Class	Beneficial Uses Supported	Beneficial Uses not Supported	Cause of Impairment	TMDL Complete
Stillwater River – Logan Creek to Mouth (Flathead River)	B-2	Agriculture Drinking Water Recreation	Aquatic Life	Sediment	Yes
Whitefish River – Whitefish Lake to Mouth (Stillwater River)	B-2	Agriculture Drinking Water Recreation	Aquatic Life	Temperature	Yes
				Oil and Grease	No
				Polychlorinated biphenyls	No

Section 402 of the CWA established the National Pollutant Discharge Elimination System (NPDES) which regulates, amongst other discharges, storm water runoff from construction sites that disturb one or more acres. The USEPA administers the NPDES storm water permitting program for Indian Country within the State of Montana. On non-tribal lands in Montana, stormwater management is regulated by MDEQ through the Montana Pollutant Discharge Elimination System (MPDES) and provides coverage for storm water discharges through the MPDES Stormwater Construction General Permit. The applicability of the MPDES permit would need to be reviewed for any projects brought forward from the corridor study.

Small Municipal Separate Storm Sewer Systems (MS4s) for incorporated cities in Montana with a population of at least 10,000 people are regulated under MPDES General Permit MTR040000. Under this General Permit, MS4s are required to apply for, and obtain, authorization for the discharge of storm water into state waters per requirements of the General Permit. The City of Kalispell is a designated MS4; however, W. Reserve Dr. and Whitefish Stage Rd., within the study corridor area, primarily fall outside the currently designated MS4 boundary. Only a small segment of W. Reserve Dr. at the western study limits, from the US 93 intersection to Stillwater River is regulated under the MS4 and included in the Kalispell Stormwater Management Program¹¹.

As outlined in MDT’s Permanent Erosion and Sediment Control (PESC) Design Guidelines, PESC measures must be considered with projects disturbing one or more acre, or projects having the potential to adversely affect water quality. Incorporation of PESC measures will typically be limited to projects in proximity to sensitive resources, such as impaired waterways, or with scopes related to rehabilitation or reconstruction. The applicability of PESC measures will need to be reviewed for any projects carried forward from the corridor study.



2.6.2 Wild and Scenic Rivers

The Wild and Scenic Rivers Act, created by Congress in 1968, provides for the protection of certain rivers, and their immediate environments, that possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, or cultural resources, or other similar values. In Montana, portions of the North, South, and Middle Forks of the Flathead River and portions of the Missouri River downstream of Fort Benton were designated by Congress in 1976 as wild, scenic, or recreational components of the National Wild and Scenic River System. In 2018, East Rosebud Creek was added to the System. None of these rivers are within or near the study corridor area.

2.7 Irrigation Features

The 2007 USDA agricultural census shows Flathead County had 1,094 farms totaling 251,597 acres, with the average farm size at 230 acres. In 2017 the number of farms had increased to 1,146, but land in farms had decreased to 181,882 acres, with the average farm size at 159 acres. Of the 181,882 total farmed acres in the county, only 20,088 acres were irrigated using both surface water and groundwater¹².

Within the study corridor area several agricultural fields are located north of W. Reserve Dr. and along Whitefish Stage Rd. Maps from the Flathead County Montana Water Resources Survey (1965)¹³, prepared by the Department of Natural Resources and Conservation (DNRC), show no irrigation ditches, laterals, or canals within or adjacent to the study corridor area that can supply irrigation water to these fields. The survey does show individual pumps at the Stillwater River and Whitefish River. GWIC data also indicates several groundwater wells in the area are used primarily for irrigation. Through aerial review, one central pivot and a large lateral move sprinkler irrigation system were identified in agricultural fields east of Whitefish Stage Rd. and north of W. Reserve Dr. An irrigation hydrant and vents are also located west of Whitefish Stage Rd. (approximately 1,365 feet north of W. Reserve Dr.). Refer to **Exhibit 5 (Attachment 1)** for irrigation feature locations.

To help avoid or minimize impacts to agricultural operations, coordination with affected landowners is required if irrigation facilities, such as pumps, pivots or sprinkler systems, are affected by improvement options carried forward from this planning study.

2.8 Groundwater

Groundwater is found beneath the ground surface in the soil and rock. Gravity pulls excess soil moisture downward to a point where the spaces in the soil and rock become saturated. The top of this saturation zone is called the water table. Groundwater can be found in deep aquifers with little porosity, where it moves very slowly, or in highly porous material close to the surface, where it may move more rapidly. Groundwater is an important source for drinking water, agricultural, livestock, and industrial use¹⁴.

In the Flathead Valley, much of the groundwater is located in both shallow and deep aquifers. The Flathead Valley and surrounding river valleys have a complex array of alluvial and glacial deposits that store groundwater, with the glacial deposits and older valley fill holding the primary sources of groundwater. Groundwater flow in the Flathead Valley is generally from north to south, with the vertical distance to the water table ranging from 2 to 3 feet near the Flathead River up to a few hundred feet at locations further away from primary waterbodies. Almost all the municipal, domestic, industrial, and irrigation water use in the Flathead Valley comes from groundwater sources¹⁵.



In the greater Kalispell area, four distinct aquifer systems exist. The study corridor area lies above the Evergreen aquifer, which is a shallow, unconfined aquifer that sits atop low-permeability silt and clay. The aquifer extends over approximately 40 square miles between the Whitefish and Flathead Rivers. Well depths are generally around 25 feet and groundwater within the Evergreen aquifer flows south toward the confluence of the Whitefish and Flathead Rivers¹⁶.

According to the MBMG GWIC, there are over 84 wells located within 0.25 miles of the study corridor area¹⁷. Approximately 70 percent of these wells were drilled to depths of less than 100 feet. The most common uses for these wells are domestic use, industrial use, irrigation, and monitoring. Only 15 wells are located within the study corridor area. Well depths vary by individual location, but the drill depths in the study corridor area primarily range from 6 to 31 feet. Only two wells had depths over 100 feet (185 and 286 feet). Static water levels vary considerably but range from 8 to 92 feet below the ground surface. Of the 15 wells, 10 are used for domestic use, 2 are used for industrial use, 2 are used for irrigation, and 1 is an unknown use.

There are no public water supply wells within the study corridor area. The two closest public water supply wells are 500 feet south and 700 feet north of W. Reserve Dr. These wells are located at a local business or within a neighborhood off of Country Way. Public water supply wells have an MDEQ setback requirement that stipulates a 100-foot isolation zone in which no source of pollutant can be located.

Evergreen Water and Sewer District is the only water and sewer district within the study corridor area. The district is a stand-alone governmental entity formed under Montana law. The district's water system has been serving the Evergreen community since 1965 and provide 3,283 customers (3,130 domestic and 153 irrigation) with water. In 1994, the district became the Evergreen Water and Sewer District with 2,004 sewer customers (Evergreen 2020)¹⁸. Individual septic systems, however, appear to be prevalent within the study corridor area, with all parcels south of W. Reserve Dr., from the Stillwater River to the Whitefish River, and some parcels north of the roadway showing septic permits¹⁹.

Exhibit 8 (Attachment 1) shows the location of recorded groundwater wells within the study corridor area. The Evergreen Water and Sewer District is also shown on the exhibit. **Attachment 4** provides information on parcels with septic permits.

Impacts to groundwater, existing groundwater wells, and septic tanks must be considered for any improvement option carried forward from this study. Engineering and constructability constraints due to shallow groundwater must also be reviewed. Roadways can impact groundwater quality through contaminated stormwater that is conveyed off roadway surfaces and infiltrates to groundwater or through contaminated particles from hydrocarbon combustion or weathering pavement that collects on soils and infiltrates to groundwater during storm events and snow melt. Roadways can also impact groundwater recharge due to increases in impervious surfaces, which prevents infiltration or directs stormwater elsewhere. The study corridor area also includes several groundwater wells and septic tanks. Impacting one of these wells or tanks may be costly if replacement is required. In addition, shallow groundwater may require more expensive engineering practices and longer construction durations.

2.9 Floodplains and Floodways

A floodplain is any land susceptible to being inundated by floodwaters from any source. This can include low-lying areas that fill with water during storm events or snow melt or land adjacent to rivers or creeks that flood when waters within those channels rise out of the channel banks. The



regulatory floodway is found within a floodplain and is defined as the channel of the river or other watercourse and the land area directly adjacent to the channel, where encroachment is prohibited, that is needed in order to discharge base flood flows without cumulatively increasing the water-surface elevation by more than a designated height²⁰.

Executive Order (EO) 11988, Floodplain Management, requires federal agencies to avoid to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains, and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. Agencies are required to take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains.

To comply with the EO, a proposed project and its alternatives must be evaluated to determine the effects of any encroachments on the base floodplain. The base floodplain is the area covered by water from the 100-year flood and is a regulatory standard used by federal agencies and states to administer floodplain management programs. The 100-year flood is defined as a flood event that has a 1 percent chance of being equaled or exceeded in any given year.

In addition, Federal-aid Policy Guide, 23 CFR 650 – Subpart A, Bridges, Structures, and Hydraulics, provides policies and procedures for the location and hydraulic design of highway encroachments on floodplains, including direct Federal highway projects administered by FHWA. This regulation calls for the assessment of federally-funded highway projects in terms of impacts on flood risk, where such projects must avoid hazardous or incompatible use and development of floodplains, avoid longitudinal or substantial floodplain encroachment, minimize negative impacts on base flood elevations, restore and preserve natural and beneficial floodplain values, and be consistent with Federal Emergency Management Agency (FEMA), state, and local government standards for the administration of the National Flood Insurance Program.

Flood zones are geographic areas that FEMA has defined according to varying levels of flood risk. FEMA-issued flood insurance rate maps for Flathead County, Montana, indicate three flood zones within the study corridor area²¹. These flood zones are presented in **Exhibit 9 (Attachment 1)** and discussed further below.

Zone A: Special Flood Hazard Area (SFHA) - 100-Year Flood (flood event that has a 1 percent chance of being equaled or exceeded in any given year). No depths or base flood elevations have been determined. Flood Zone A is designated along the Stillwater River. Along W. Reserve Dr., the study corridor area crosses this flood zone from RP 4.26 to RP 4.3.

Zone AE: SFHA - 100-Year Flood (flood event that has a 1 percent chance of being equaled or exceeded in any given year). Depths and base flood elevations are provided. Flood Zone AE is designated along the Whitefish River. Along W. Reserve Dr., the study corridor area crosses this flood zone from RP 5.6 to RP 5.8.

Zone X: Area of minimal flood hazard. Areas are outside the 500-Year Flood. All other areas within the study corridor area are designated at Flood Zone X.

In Flathead County, development activities in flood hazard areas are regulated under the Flathead County Floodplain and Floodway Management Regulations²². Improvement options that cross or encroach on delineated flood hazard areas must be evaluated, and coordination with the Flathead County floodplain administrator is required on design and potential permits.



2.10 Wetlands

The USACE defines wetlands as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands can typically be identified by the existence of three indicators: a dominance of hydrophytic vegetation, hydric soils, and prolonged periods of inundation or saturation. Wetlands examples include swamps, marshes, bogs, seasonal wet meadows, and fringe areas along streams and rivers.

United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI)²³ is a publicly available resource that provides detailed information on the abundance, characteristics, and distribution of the Nation's wetlands and deep-water habitats. While some useful information can be ascertained from the NWI maps, these wetlands are identified based on the USFWS definition of wetlands following USFWS's publication *Classification of Wetlands and Deepwater Habitats of the United States*. Wetlands are identified through aerial photo interpretation and are not defined following the USACE regulatory definition that MDT uses in wetland determination and delineation. The NWI definition of wetlands requires one or more of the three indicators of wetlands (wetland hydrology, vegetation, or soils) be present to be considered a wetland. USACE requires that all three indicators be present.

In addition, Montana Natural Heritage Program (MTNHP)²⁴, through the Montana Wetland Program, is currently in the process of digitally mapping wetlands and riparian areas throughout the state. Wetland and riparian areas are mapped following Federal Geographic Data Committee and USFWS NWI wetland and riparian standards.

NWI and MTNHP mapping for the study corridor area is presented in **Exhibit 10 (Attachment 1)**. Freshwater emergent wetlands and freshwater forested/shrub wetlands are indicated only along or near the Whitefish River.

Field-based wetland delineations are required if improvement options are forwarded from the study that could potentially impact wetlands. Future improvements will need to incorporate project design features to avoid and minimize adverse impacts to wetlands to the maximum extent practicable. Unavoidable impacts to wetlands may require compensatory mitigation in accordance with USACE regulatory requirements and requirements of Executive Order 11990. State and federal permits may also be required to construct improvements within wetlands, including CWA Section 404 authorization and CWA Section 401 certification.

3.0 BIOLOGICAL RESOURCES

3.1 Vegetation

The study corridor area is located within the Flathead Valley ecoregion of the Northern Rockies. This ecoregion is comprised of a primarily treeless, intermontane landscape, underlain with Quaternary glacial outwash, till, lake sediments, and alluvium. Natural vegetation is primarily foothills prairie, with local land use dominated by agricultural, rural residential, suburban, commercial activity, and orchards. Many wetlands, oxbow lakes, and sloughs occur in the upper Flathead Valley.

Within the study corridor area itself, the landscape has been heavily manipulated through agricultural practices and urban and residential development. Vegetation within the corridor is dominated by cultivated crops or landscape vegetation found on developed lands. Small pockets



of native vegetation cross the study corridor area at the Stillwater River and Whitefish River, this primarily includes native riparian vegetation consisting of species such as black cottonwood, aspen, chokecherry, bur oak, green ash, dogwood, and willow.

Table 3 presents the types of land cover along the study corridor area and within a one-mile area surrounding the study corridor area, as determined by MTNHP online mapping and the MTNHP Environmental Summary prepared for the study corridor area. Sub-systems with cover less than one percent of the study corridor area are not included in the table. Refer to **Exhibit 11 (Attachment 1)** and **Attachment 5** for more information on land cover composition and land cover descriptions.

Table 3. Land Cover Composition within Study Corridor Area and 1 Mile of Corridor

System and Sub-System	%
Human Land Use	82%
Cultivated Crops	25%
Low Intensity Residential	16%
Developed, Open Space	13%
Commercial/Industrial	13%
Other Roads	11%
Major Roads	2%
High Intensity Residential	2%
Grassland Systems	11%
Rocky Mountain Lower Montane, Foothill, and Valley Grassland	11%
Wetland and Riparian Systems	2%
Northern Rocky Mountain Lower Montane Riparian Woodland and Shrubland	2%

3.1.1 Noxious Weeds

Noxious weeds are weeds designated by federal, state, or local government officials that directly or indirectly cause problems or harm for agriculture, natural resources, wildlife, recreation, navigation, public health or the environment. Noxious weeds can be invasive or non-native and are generally highly aggressive. They can degrade native vegetative communities, damage riparian areas, compete with native plants, create fire hazards, degrade agricultural and recreational lands, and pose threats to the viability of livestock, humans, and wildlife.

Both the state of Montana (**Attachment 6**)²⁵ and Flathead County have established lists which designate specific weeds as priority noxious weeds. The Flathead County Noxious Weed List includes 10 priority weeds. These include baby’s breath (*Gypsophila paniculata*), Russian thistle (*Salsosa tragus*), tumble mustard (*Sisymbrium altissimum*), white campion (*Silene latifolia*), musk thistle (*Carduus nutans*), creeping bellflower (*Campanula rapunculoides*), scentless chamomile (*Matricaria perforate*), absinth wormwood (*Artemisia absinthium*), noble yarrow (*Achillea nobilis*), and kochia (*Kochia scoparia*). The Flathead County Weed Management Plan²⁶ provides guidance for managing noxious weeds in Flathead County and outlines the County Weed District’s roles and responsibilities. A 2015 distribution and abundance inventory for Flathead County noted 34 noxious weeds present, with Canada thistle (*Cirsium arvense*), spotted knapweed (*Centaurea stoebe*), oxeye daisy (*Leucanthemum vulgare*), orange hawkweed (*Hieracium aurantiacum*), and cheatgrass (*Bromus tectorum*) comprising the most acreage. According to the Environmental Summary compiled by MTNHP (**Attachment 5**), approximately 16 of these noxious weed species have been observed in the study corridor area and vicinity.



If improvements are forwarded from the study, field reviews for noxious weeds will commence prior to any ground disturbance, and coordination with the Flathead County Weed District will occur. Proposed projects will implement applicable best management practices, as outlined in the MDT Standard Specifications and the Flathead County Weed Management Plan.

3.2 General Wildlife Species

A majority of the study corridor area has been heavily disturbed by various agricultural practices and commercial and residential development. These changes to the landscape have negatively impacted the amount and quality of suitable wildlife habitat. Riparian areas along Stillwater River and Whitefish River bisect the study corridor area. These wooded corridors still possess specimens of native vegetation that was likely present in this area prior to its conversion to agriculture and urban/residential development. These are important corridors for wildlife moving from higher elevations down to the Flathead River valley.

3.2.1 Mammals

The MTNHP database records²⁷ and maps documented observations of species in a known location. Over 36 species of mammals have been recorded within the study corridor area and a 3-mile radius around the study corridor area. Most of these species tend to be generalists and are able to adapt to a wide range of environments and are more tolerant of human activities and land use changes. Some of these species include white-tailed deer, striped skunk, racoon, coyote, fox, deer mouse, and northern river otter.

FWP general and wintering distribution mapping for larger mammals shows the entire study corridor area and surrounding area provides general range for mule deer, moose, black bear, and mountain lion. The study corridor area and surrounding area provides general and winter range for white-tail deer.

MDT Maintenance Animal Incident Database includes recorded animal carcass collection data for the last 10 years. The data shows 13 animal carcasses were collected and documented along the study corridor area by MDT maintenance personnel. White-tail deer accounted for all but one of the carcasses collected along the study corridor area. The one remaining carcass was a fox. **Exhibit 12 (Attachment 1)** shows the locations of the collected carcasses. Carcasses were distributed throughout the corridor but tended to be more concentrated near the Stillwater and Whitefish River crossings. Carcass data may not accurately reflect animal-vehicle conflicts throughout the corridor, and not all carcasses result from vehicle collisions. Additionally, approved legislation has permitted the collection of deer, elk, antelope and moose killed on Montana roads for personal consumption. These factors may affect collections and incidents reported in the MDT Maintenance Animal Incident Database.

Improvements brought forward should utilize the most relevant and recently available data (e.g. salvage permits, MFWP databases) to investigate carcass retrieval and road-related wildlife mortality in the corridor.

If improvement options are forwarded from the study, impacts to habitat and other wildlife mitigation strategies will be considered during the project development process. Carcass data must continue to be reviewed to identify possible wildlife accommodation opportunities near both river crossing. Additional coordination with FWP area wildlife biologists will be undertaken for local expertise in the study corridor area.



3.2.2 Birds

The MTNHP database indicates there are more than 272 species of birds documented with the potential to occur and nest in or near the study corridor area. These species include representative songbirds, birds of prey, waterfowl, owls, and shorebirds, including several listed as species of concern (SOC) or special status species (discussed in Section 3.4 below).

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA). Under this strict liability law, it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. Direct disturbance of a nest occupied with birds or eggs is prohibited under the law. The destruction of unoccupied nests of eagles; colonial nesters such as cormorants, herons, and pelicans; and some ground nesters such as burrowing owls or bank swallows may also be prohibited under the MBTA.

Any improvements carried forward from this study will consider possible project constraints that may result from seasonal nesting of migratory birds.

3.2.3 Amphibians, Reptiles, and Invertebrates

According to the MTNHP database, amphibian and reptile species documented as occurring within the study corridor area and 3-mile vicinity include, but are not limited to, Columbia spotted frog, northern leopard frog, western toad, painted turtle, and terrestrial garter snake. Nearly 88 invertebrate species have also been observed in the area.

3.2.4 Fisheries

The Stillwater River and the Whitefish River are the two primary waterbodies that cross the study corridor area. No other drainages or tributaries to these two rivers, that provide suitable aquatic habitat, are within or adjacent to the study corridor area. Currently available information from Montana FWP's FishMT database²⁸ shows both the Stillwater and the Whitefish Rivers as supporting a variety of Montana native and non-native fish species. These include brook trout, bull trout, lake trout, lake whitefish, largescale sucker, longnose sucker, mountain whitefish, northern pike, northern pike minnow, peamouth, rainbow trout, redbside shiner, slimy sculpin, westslope cutthroat trout, and yellow perch.

In-water work that may affect fish and potential fish passage opportunities will be considered if a project is forwarded from this study. Permit conditions from regulatory and resource agencies may require incorporation of design measures to facilitate aquatic species passage.

3.3 Threatened and Endangered Species

Section 7(a)(2) of the Endangered Species Act (ESA), as amended, directs that all federal agencies must ensure the actions they authorize, fund, or carry out do not jeopardize the continued existence of endangered or threatened species and that such actions do not destroy or adversely modify designated critical habitat.

The federal list of threatened and endangered species is maintained by the USFWS. Species on this list receive protection under the ESA. An endangered species is in danger of extinction throughout all or a significant portion of its range. A threatened species is likely to become endangered in the foreseeable future. The USFWS also maintains a list of species that are candidates or proposed for possible addition to the federal list²⁹. **Table 4** shows the federally-listed threatened and endangered species for Flathead County as of June 10, 2020.



Table 4. Threatened and Endangered Species for Flathead County

Group	Species Name	Federal Status	Habitat Requirements ³⁰
Mammal Species	Canada Lynx <i>Lynx canadensis</i>	Threatened	<p>Canada lynx is a medium-sized North American wildcat. It prefers moist, cool, boreal spruce-fir forests with high populations of snowshoe hares. Suitable habitat includes subalpine forests at elevations ranging between 4,000- and 7,000-feet above sea level. Areas with continuous snow for over four months is also preferred.</p> <p><u>Critical Habitat:</u> Designated in Flathead County. No critical habitat within the study corridor area. Closest critical habitat is 8 miles east and 11 miles west of the study corridor area.</p>
	Grizzly Bear <i>Ursus arctos horribilis</i>	Threatened	<p>In Montana, grizzly bears prefer meadows, seeps, riparian zones, mixed shrub fields, closed timber, open timber, sidehill parks, snow chutes, and alpine slabrock habitats. Habitat is highly variable depending on the season and local populations.</p> <p><u>Critical Habitat:</u> Designated recovery ecosystem in Flathead County – Northern Continental Divide Ecosystem. Study corridor area is not located within ecosystem, which is found 8 miles east of the corridor.</p>
Bird Species	Yellow-billed Cuckoo (western population) <i>Coccyzus americanus</i>	Threatened	<p>Yellow-billed cuckoo is a medium-sized bird, approximately 12 inches in length, and weighs about two ounces. It prefers open woodland areas, parks, and large blocks of deciduous woodland for breeding habitat. They nest in tall cottonwood and willow riparian woodlands.</p> <p><u>Critical Habitat:</u> No critical habitat in Flathead County.</p>
Fish Species	Bull Trout <i>Salvelinus confluentus</i>	Threatened	<p>Bull trout are a cold-water fish grouped with the char within the salmonid family of fish. They prefer larger streams, rivers, and lakes but will spawn in smaller tributary streams. They will also spawn in headwater streams with clear gravel or bubble stream bottoms. Bull trout have relatively narrow, specific habitat requirements compared to many of the other salmonid species. These requirements are referred to generally as the “four Cs”: cold, clean, complex, and connected.</p> <p><u>Critical habitat:</u> Designated in Flathead County. No critical habitat within the study corridor area. Closest critical habitat is Flathead River 1.9 miles east/southeast of study corridor area.</p>



Group	Species Name	Federal Status	Habitat Requirements ³⁰
Invertebrate Species	Meltwater Lednian Stonefly <i>Lednia tumana</i>	Threatened	Meltwater lednian stonefly depends on extremely cold glacial fed streams at high elevation. They are known to only a few locations in Glacier National Park, on both the east and west side of the Divide between 5,282 feet and 7,650 feet in elevation. Their presence is closely tied to glacial runoff and they are usually collected from within less than 1,000 feet of the base of glaciers or snowmelt derived streams. <u>Critical Habitat:</u> No critical habitat currently designated.
Plant Species	Spalding's Campion <i>Silene spaldingii</i>	Threatened	Spalding's Campion is a perennial plant that is predominately found in open, mesic grasslands in valleys and foothills with deep and loamy soils. It typically occurs on northerly aspects and along draws and swales. In Montana, it exists in only a few locations in the northwest corner of the state. <u>Critical Habitat:</u> No critical habitat currently designated.
	Whitebark Pine <i>Pinus albicaulis</i>	Candidate	Whitebark pine is a hardy conifer that tolerates cold, snowy climates; steep slopes; poor soils; and windy exposures. It is primarily limited to subalpine and krummholtz habitats in most mountain ranges. In Montana, it is a major component of high-elevation forests and the timberline zone between approximately 5,900 and 9,300. <u>Critical Habitat:</u> No critical habitat currently designated.

Of the seven listed species within Flathead County, grizzly bear, bull trout, and yellow-billed cuckoo have the potential to occur within the study corridor area. Despite dispersed human uses, such as agriculture, and commercial/residential development, some habitat in the study corridor area is suitable habitat for these three species.

Grizzly Bear: The study corridor area is located within the known range for grizzly bear, and it is near the designated Northern Continental Divide Ecosystem for grizzly bear. MTNHP have recorded occurrences of grizzly bear within 3 miles of the study corridor area (**Attachment 5**).

Bull trout: Both the Whitefish River and the Stillwater River connect to the Flathead River. There are no known fish barriers between the study corridor area and the Flathead River, allowing bull trout to migrate upstream, crossing the study corridor area. FWP fisheries data indicates bull trout occurrences in both rivers. MTNHP data also indicates recorded occurrences of bull trout in the area.

Yellow-billed cuckoo: Wooded riparian vegetation is found along both the Stillwater and Whitefish Rivers. This wooded vegetation may provide some stopover or foraging habitat for yellow-billed cuckoo that may be in the area. The MTNHP database lists yellow-billed cuckoo as a species with potential occurrence in the general area.



Any improvements forwarded from the corridor study must undergo review for compliance with the provisions of the ESA. Because the listing status of species and critical habitat can change over time, an up-to-date list of potentially affected federally-listed species and designated critical habitat must be reviewed for any project carried forward from this study.

3.4 State Species of Concern and Special Status Species

Montana SOC are native plants or native animals breeding in the state that are considered “at risk” due to declining population trends, threats to their habitats, and/or restricted distribution. Designation of a species as a Montana SOC is not a statutory or regulatory classification. Instead, these designations provide a basis for resource managers and decision makers to direct limited resources to priority data collection needs and address conservation needs proactively. In Montana, each species is assigned a state rank that ranges from S1 (greatest concern) to S5 (least concern). Other state ranks include SU (unrankable due to insufficient information), SH (historically occurred), and SX (believed to be extinct). State ranks may be followed by modifiers, such as B (breeding) or N (non-breeding).

Montana special status species are species that have some legal protections in place but are otherwise not Montana Species of Concern. Bald Eagle is a special status species because it is no longer protected under the ESA and is also no longer a Montana SOC, but it is still protected under the Bald and Golden Eagle Protection Act of 1940.

According to the environmental summary provided by MTNHP, 11 SOC and 1 special status species have documented occurrences within the study corridor area or within a 3-mile radius around the study corridor area (**Attachment 5**). **Table 5** presents the SOC and special status species documented in the area, including their state rank and habitat needs. **Exhibits 13 and 14 (Attachment 1)** show the locations of these species in relation to the study corridor area.

Table 5. Documented Species of Concern and Special Status Species

Group	Species Name	State Rank	Habitat Description
Mammal Species	Little Brown Myotis <i>Myotis lucifugus</i>	S3	Forages over water. Summer day roosts include attics, barns, bridges, snags, loose bark, and bat houses. Maternity roosts are primarily buildings. Hibernacula include caves and mines.
	Hoary Bat <i>Lasiurus cinereus</i>	S3	Riparian and forested areas. Often forages over water sources embedded within forested terrain, both conifer and hardwood.
Bird Species	Great Blue Heron <i>Ardea herodias</i>	S3	Most nesting colonies found in cottonwoods along major rivers and lakes, with a smaller number occurring in riparian ponderosa pines and on islands in prairie wetlands.
	Veery <i>Catharus fuscescens</i>	S3B	Willow thickets and cottonwoods along streams and lakes. Found in riparian areas, valleys, and low-mountain canyons.
	Bald Eagle <i>Haliaeetus leucocephalus</i>	S4	Forest areas along rivers and lakes, wetlands, spring spawning streams, ungulate winter ranges, and open water areas.



Group	Species Name	State Rank	Habitat Description
Fish Species	Westslope Cutthroat Trout <i>Oncorhynchus clarkii lewisi</i>	S2	Cold water streams with more pool habitat and cover than uniform, simple habitat.
	Pygmy Whitefish <i>Prosopium coulteri</i>	S3	Deep cold-water lakes and their associated tributaries. Classified as adfluvial, hypolimnetic, and lacustrine for the Flathead Lake system.
Reptile Species	Northern Alligator Lizard <i>Elgaria coerulea</i>	S3	South-facing slopes in fine to coarse talus, in the open, often with some canopy cover of Douglas-fir, ponderosa pine, a variety of shrubby species, and a litter layer.
Invertebrate Species	Alberta Snowfly <i>Isocapnia integra</i>	S2	Small streams and large rivers
	Hooked Snowfly <i>Isocapnia crinita</i>	S2	Mountain streams and rivers.
Plant Species	Geyer's Onion <i>Allium geyeri</i> var. <i>geyeri</i>	S3	Valleys and grasslands that are moist in spring in Flathead County
	Small Yellow Lady's-slipper <i>Cypripedium parviflorum</i>	S3 S4	Fens, damp mossy woods, seepage areas, and moist forest-meadow ecotones in the valley to lower montane zones.

Bald and golden eagles are protected under the MBTA and the Bald and Golden Eagle Protection Act of 1940, which prohibits anyone, without a permit issued by the Secretary of the Interior, from taking bald eagles, including their parts, nests, or eggs. The Act defines take as pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb. According to bald eagle nesting data provided by MTNHP, 16 bald eagle nests have been identified and surveyed within a 3-mile radius of the study corridor area since 1993. Fifteen of these nests are located along the Flathead River, over 3-miles to the east/southeast. One nest is located within 1-mile northwest of the study corridor area along the Stillwater River. With the number of nests within a 3-mile radius, there is potential for bald eagles to forage and travel through the study corridor area. With regard to golden eagles, the MTNHP database does not document the species within the study corridor area or vicinity.

The greater sage grouse is also a Montana SOC protected under the Montana Greater Sage-Grouse Habitat Conservation Program. A review of the Montana Sage Grouse Habitat Conservation Map³¹ shows the study corridor area is not within core, general, or connectivity habitat for sage grouse. Therefore, consultation under the Montana Sage Grouse Habitat Conservation Program would not be required for any project carried forward from this study.

Should projects be carried forward from this corridor study, additional review of databases documenting SOC and special status species occurrences must be conducted, and an evaluation of habitats near proposed projects must be completed to determine suitability for SOC and special status species. Measures to avoid or minimize impacts to these species and their habitat will be incorporated into project designs and implementation.

4.0 SOCIAL AND CULTURAL RESOURCES

4.1 Population Demographics and Economic Conditions

Kalispell is the largest urban area in Flathead County and one of the fastest growing areas in Montana. The Kalispell area has experienced significant growth and supports a relatively large portion of the county’s consumption-based economic activity. Since the corridor is fully contained within Flathead County, demographic and economic conditions discussed in this section cover all of Flathead County.

The three primary industries in Flathead County are: 1) educational, healthcare, and social services; 2) arts, entertainment, recreation, accommodation/hospitality, and food services; and 3) retail trade. The county is home to the Kalispell Regional Medical Center, which is designated as a State Area Trauma Hospital by Department of Public Health and Human Services, making it one of the more important hospitals in the western region of the state. Flathead County also provides access to Glacier National Park. **Figure 1** displays Flathead County’s employment distribution by industry as compared to Montana and the United States. Flathead County has relatively more employment in the arts, entertainment, recreation, accommodation, and food services, and retail trade categories than Montana and the United States.

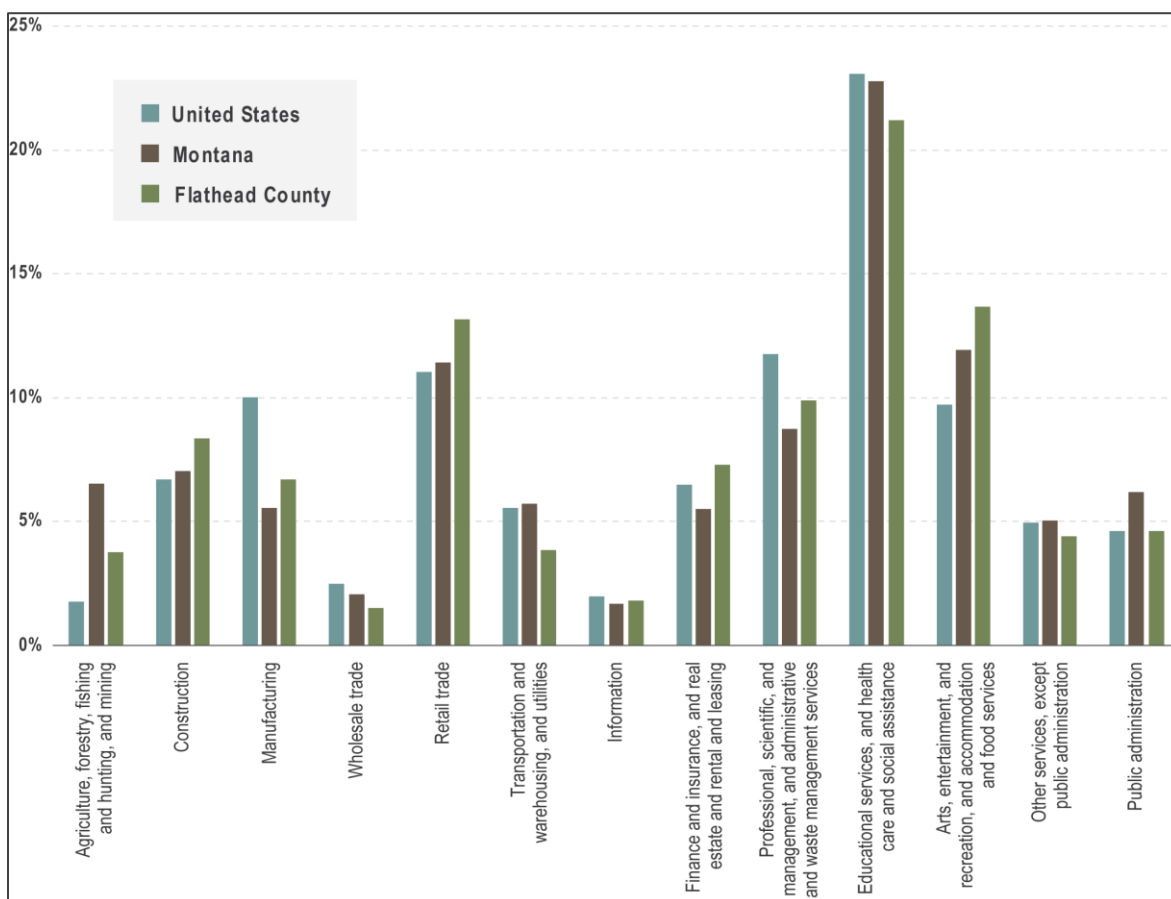


Figure 1. Employment Distribution by Industry



The number of employed civilians over the age of 16 in Flathead County is approximately 50,938. The unemployment rate in Flathead County is 1.7 percent as compared to 2.2 percent in Montana and 3.1 percent in the United States. The median household income in Flathead County is slightly lower than the median household income in Montana at \$53,193 and \$55,328, respectively. The median household income in the United States is \$61,937. **Figure 2** shows the income distribution of Flathead County as compared to Montana and the United States. Flathead County has a larger concentration of higher income households than the state, but relatively less than the United States at large. Flathead County is primarily different from both Montana and the United States in that it has higher concentrations of low to middle and very high-income households. Flathead County has relatively fewer households in the \$75,000-\$150,000 income categories relative to the United States and Montana. This suggests there is significant income stratification in the area, which is usually the case within areas that rely heavily on recreation-resort economies.

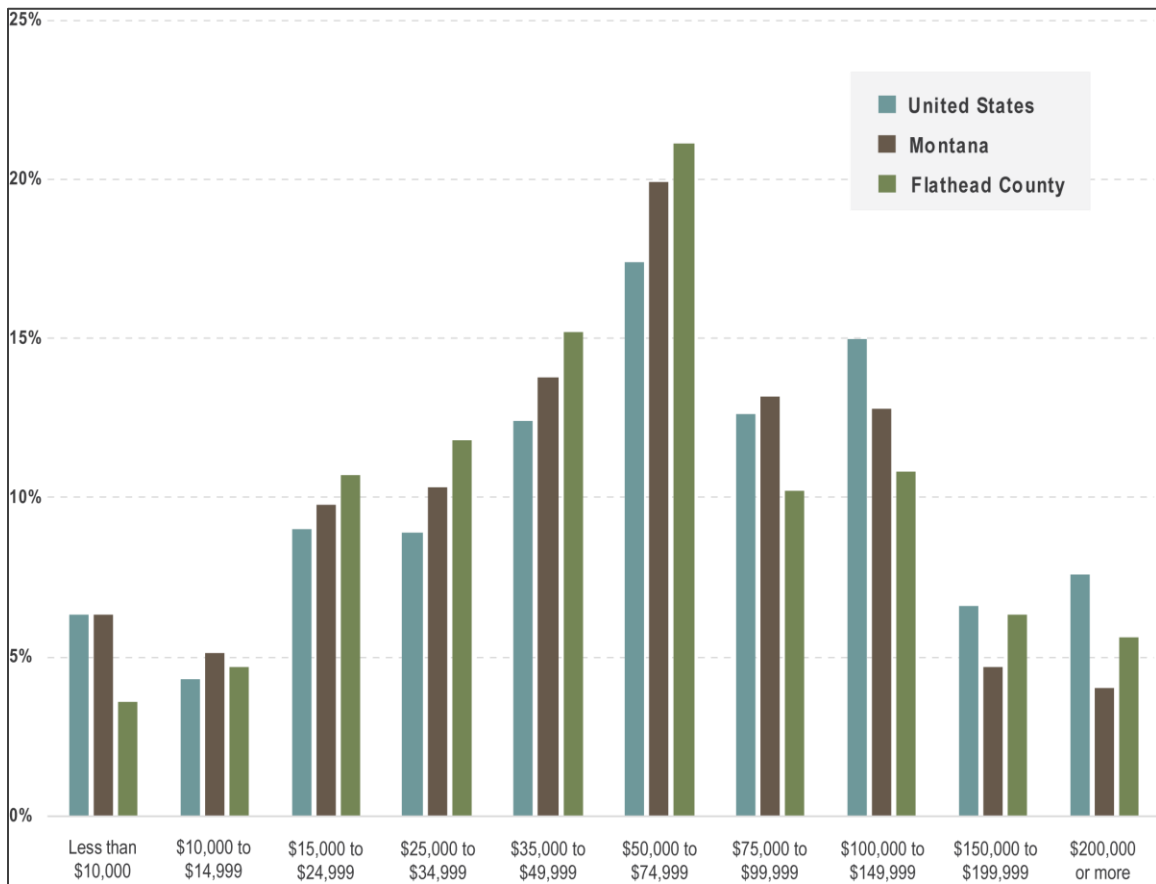


Figure 2. Income Distribution

Population and racial characteristics of Flathead County compared to Montana and the United States are represented in **Table 6**. These values are from the 2010 Census. Flathead County has a population of 102,106 which is about 10 percent of the 973,739 of individuals residing in Montana. Flathead County has a larger proportion of individuals who identify as white relative to the rest of the state and the United States as a whole. Flathead County has a smaller percentage of individuals who identify as Native Americans than Montana, but a larger percentage of its population is made up of Native Americans than the United States as a whole. Flathead County and Montana have very low numbers of individuals identifying as African American, relative to the



United States. Flathead County has a larger proportion of individuals who identify as Asian than Montana, but less than the United States. Flathead County has a similar proportion of Hispanic people in its populations relative to Montana as a whole. Both Flathead County and Montana have a much lower proportion of Hispanic people than the United States.

Table 6. Population and Racial Makeup for Flathead County

	Flathead County	Montana	United States
2018 Population	102,106	973,739	303,965,272
Race			
White	94.4%	88.6%	72.2%
Black or African American	0.4%	0.5%	12.7%
American Indian or Alaskan Native	2.0%	6.4%	0.9%
Asian	1.3%	0.8%	5.6%
Native Hawaiian and other Pacific Islander	0.0%	0.1%	0.2%
Some Other Race	0.4%	0.5%	5.0%
Two or More Races	1.5%	3.1%	3.4%
Hispanic Population			
Hispanic or Latino	2.8%	3.9%	18.3%
Not Hispanic or Latino	97.2%	96.1%	81.7%

From 2010 to 2018, Flathead County grew at an average annual rate of 1 percent compared to 0.75 percent for Montana and 0.67 percent for the United States over the same period. The population is projected to grow over the next 20 years at a rate greater than Montana as a whole. The rate of growth is expected to increase in Montana and Flathead County in the future, but the increase is anticipated to be more significant in Flathead County. This is supported by both American Community Survey data and Kalispell’s 2019 transportation plan update.

Under NEPA/MEPA, federal, state, and local agencies are directed to assess potential social and economic impacts anticipated from proposed actions. Improvement options carried forward from this study must consider impacts to neighborhoods and community cohesion, local and/or regional economies, as well as growth and development that may be induced by transportation improvements.

4.1.1 Environmental Justice

Title VI of the United States Civil Rights Act of 1964 prohibits recipients of federal financial assistance from discriminating based on race, color, or national origin in any program or activity. Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations – was issued in 1994 and directs that federal programs, policies, and activities do not have disproportionately high and adverse human health and environmental effects on minority and low-income populations.

The study corridor area is located in three Flathead County Census Tracts: Census Tract 6.01, Census Tract 7, and Census Tract 8. To determine potential low-income or minority populations within or near the study corridor area, American Community Survey data (2015-2019 5-Year Estimates)³² at the Census Tract level was compared with the percentages of corresponding county and state occurrences. **Tables 7 and 8** provide census data information for populations below the poverty level and minority populations.



Table 7. Populations below poverty level for Census Tracts, Flathead County, and state of Montana

	Total Population*	Below Poverty Level
Census Tract 6.01	5,062	264 / 5.2%
Census Tract 7	6,365	661 / 10.4%
Census Tract 8	8,755	818 / 3.3%
Flathead County	102,779	8,040 / 7.8%
State of Montana	1,042,682	131,882 / 12.6%

*Population from which estimate was determined

Table 8. Minority Populations for Census Tracts, Flathead County, and the state of Montana

	Total Population*	White	African American	Native American	Asian	Native Hawaiian or Pacific Islander	Hispanic or Latino	Other
Census Tract 6.01	5,062	4,831 / 95.4%	19 / 0.37%	94 / 1.8%	44 / 0.86%	0 / 0.0%	94 / 1.8%	10 / 0.19%
Census Tract 7	6,391	5,596 / 87.5%	0 / 0.0%	96 / 1.5%	20 / 0.31%	23 / 0.35%	778 / 12.1%	509 / 7.9%
Census Tract 8	8,781	8,300 / 94.5%	132 / 0.14%	79 / 0.89%	80 / 0.91%	0 / 0.0%	38 / 0.43%	0 / 0.0%
Flathead County	99,899	93,989 / 94%	440 / 0.44%	1,528 / 1.5%	698 / 0.69%	47 / 0.04%	2,829 / 2.8%	947 / 0.94%
State of Montana	1,050,649	930,204 / 88.5%	5,303 / 0.50%	66,839 / 6.3%	8,259 / 0.78%	807 / 0.07%	40,314 / 3.8%	7,076 / 0.67%

*Population from which estimate was determined

For people living below the poverty line, both Census Tracts 6.01 and 8 had percentages below Flathead County and state of Montana. Census Tract 7 had a slightly higher percentage than Flathead County and was lower than the state of Montana percentage. Based on the data evaluated, no relative concentrations of residents living below the poverty level were identified.

Populations of Black or African America, Native American, Asian, Native Hawaiian or Pacific Islander, and Other Race for all three Census Tracts were consistent or lower than percentages for Flathead County and state of Montana. The only notable difference was Hispanic or Latino and Other Race populations for Census Tract 7. These percentage were higher compared to Flathead County and state of Montana percentages. However, this percentage is likely not meaningfully higher than the percentages for the comparison populations and is likely not great enough to indicate a relative population concentration.

The USEPA has developed a new environmental justice mapping and screening tool called EJSCREEN. It is based on nationally consistent data and an approach that combines environmental and demographic indicators in maps and reports. The EJSCREEN report (**Attachment 7**) prepared for this study, indicates that minority and/or low-income populations are unlikely to be adversely affected by projects that may be forwarded from this study. The report indicates that most EJSCREEN environmental and demographic indicator values for the study corridor area are below comparable values for the State of Montana, USEPA Region, and the Nation.



4.2 Recreational Resources

Land ownership within the study corridor area is primarily private, with land use dominated by agricultural, residential, and commercial/industrial development. Very few recreational resources are located within the study corridor area. W. Reserve Dr. does provide a direct connection to US 93 and US 2, which provide direct routes to Glacier National Park, Whitefish Lake, and Flathead Lake.

Within the study corridor area, a paved, 8-foot wide, shared use path begins on the west side of the US 93 and W. Reserve Dr. intersection. The path does not extend into the study corridor area and, instead, extends 3.66 miles southwest along Alternative Route US 93. The path is maintained by MDT. A Flathead County maintained asphalt path that is 10-foot wide starts at the southeast corner of the US 93 and W. Reserve Dr. intersection. The path extends south, away from the study corridor area along US 93. In addition, several sidewalks within the study corridor area, or that begin in the study corridor area, have been designated as city trails. All of these paths and sidewalks are designated as part of the local transportation system. The Village Greens Golf Course is located directly south of the study limits, with access to the golf course provided from Whitefish Stage Rd. The golf course is privately owned, but open to the public through payment of a daily greens fee. Recreational resources identified with the study corridor area are shown on **Exhibit 15 (Attachment 1)**.

4.3 Cultural Resources

Cultural resources are properties that reflect the heritage of local communities, states, and nations. The National Historic Preservation Act (NHPA) of 1966, as amended, defines historic properties as sites, buildings, structures, districts (including landscapes), and objects included on, or eligible for inclusion on, the National Register of Historic Places (NRHP), as well as artifacts, records, and remains related to such properties.

To be considered eligible for listing on the NRHP, a property must meet at least one of the following criteria:

- A: Is associated with events that have made a significant contribution to the broad patterns of our history.
- B: Is associated with the lives of persons significant in our past.
- C: Embodies the distinctive characteristics of a type, period, or method of construction or that represents the work of a master, or that possess high artistic values, or that represents a significant distinguishable entity whose components may lack individual distinction.
- D: Yielded, or may likely yield, information important in prehistory or history (36 CFR Part 60.4).

Section 106 of the NHPA requires federal agencies to consider the effects that a subject undertaking may have on eligible historic properties, determine methods to avoid and minimize or mitigate any adverse effects, and to consult with the State Historic Preservation Office (SHPO) or Tribal Historic Preservation Office regarding those effect determinations.

In addition to the NHPA, federal directives, such as Section 4(f) of the US Department of Transportation Act, the Archaeological Resources Protection Act, and the Native American Graves Protection and Repatriation Act, and Montana directives, including the Montana Antiquities Act and the Montana Human Skeletal Remains and Burial Site Protection Act, outline requirements regarding effects of proposed undertakings on historic and archaeological resources and paleontological sites.



As part of this corridor study, a November 2020 file search, through the Montana SHPO, was conducted for each section of land the study corridor area crossed. While there were several eligible sites within the vicinity of the study corridor area, SHPO only identified one site within the study corridor area. This site is the historic Great Northern Railroad (Site 24FH0350), which is eligible for listing on the NRHP, and crosses the study corridor area at RP 6.3.

If improvement options are forwarded from this study, a cultural resources survey of the area of potential affect will be completed for unrecorded historic and archaeological properties. Potential direct and indirect effects to NRHP eligible properties within the area of potential effect will be considered under Section 106 of the NHPA.

4.4 Section 4(f) Resources

Section 4(f) of the U.S. Department of Transportation Act of 1966, was enacted to protect publicly-owned parks, recreation areas, wildlife and waterfowl refuges, and public and private historic sites of local, state, and national significance. Before approving a federally-funded project that uses a Section 4(f) property, FHWA must determine that there is no feasible and prudent alternative that avoids the Section 4(f) resource and that the project includes all possible planning to minimize harm; or, FHWA makes a finding that the project has a *de minimis* (minor) impact on the Section 4(f) property. Acquisition of new right-of-way is one type of use of a Section 4(f) property that will trigger a Section 4(f) review if publicly-owned resources or historic properties are present.

There are no publicly-owned parks, recreation areas, or wildlife and waterfowl refuges within the study corridor area. The paths and trails identified in Section 4.2 appear to all be associated with the local transportation system, and any impacts to these paths as part of an improvement option would not be considered a Section 4(f) use. The Great Northern Railroad grade, which crosses the study corridor area, is an historic site eligible for listing on the NRHP. If improvement options are forwarded from this study, potential direct and indirect effects to this site will be made under Section 106 of the NHPA. A Section 106 determination of "no adverse effect" or "no historic properties affected" would result in a *de minimis* impact. An "adverse effect" determination is a Section 4(f) use that triggers additional FHWA evaluation.

4.5 Section 6(f) Resources

The National Land and Water Conservation Fund (LWCF) Act, or Section 6(f), was enacted to preserve, develop, and assure the quality and quantity of outdoor recreation resources. Section 6(f) protection applies to all projects that impact recreational lands purchased or improved with LWCF funds. The Secretary of the Interior must approve any conversion of a LWCF property to a use other than public, outdoor recreation.

The Montana State Parks list of projects funded by LWCF within Flathead County was reviewed for Section 6(f) resources within the study corridor area. No Section 6(f) resources were identified.

4.6 Noise

Project construction and operation of a traffic facility can cause increases in noise levels that may affect sensitive noise receivers in the area. Type I projects involve construction of a highway on a new location or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment or increases the number of through-traffic lanes. These types of projects can potentially increase noise impacts in an area.



Sensitive noise receptors within the study corridor area primarily include adjacent residential properties. These receptors are found from approximately RP 4.3 to RP 6.2 on the south side of W. Reserve Dr. and RP 5.8 to RP 6.2 on the north side of W. Reserve Dr.

Improvement options carried forward from this study may require a noise analysis, consistent with MDT noise policies. Noise abatement measures will be considered if noise levels approach or substantially exceed noise abatement criteria.

4.7 Visual Resources

The visual resources of an area include landforms, vegetation, water features, and physical modifications caused by human activities that give the landscape its visual character and aesthetic qualities. Visual resources are typically assessed based on the landscape character (what is seen), visual sensitivity (human preferences and values regarding what is seen), scenic integrity (degree of intactness and wholeness in landscape character), and landscape visibility (relative distance of seen areas) of a geographically defined view shed.

The study corridor area is characterized as primarily agricultural to the north, with mid- and high-density residential areas to the south, commercial and industrial areas primarily to the east and west, and the bisecting riparian corridors for Stillwater River and Whitefish River. Distant views of the Swan range are visible far to the east with the Salish Range far to the west. Potential projects carried forward from this study must consider effects on visual resources, particularly projects that may be located on a new alignment, involve expansion, or involve other changes that would alter the character of the existing landscape.

5.0 CONCLUSIONS

This environmental scan report identifies physical, biological, social, and cultural resources within the study corridor area that may be affected by potential future improvements. Project-level environmental analysis would be required for any improvements forwarded from this study. Information contained in this report may be used to support future NEPA/MEPA environmental documentation.

REFERENCES

¹ Flathead County Zoning. https://flathead.mt.gov/planning_zoning/zoning.php

² City of Kalispell Zoning Map. <https://cityofkalispell.maps.arcgis.com/apps/webappviewer/index.html?id=15ffcee230954486a69a29ffe2990b5>

³ NRCS Web Soil Survey. Accessed November 2020. <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>

⁴ USGS 1x2 Geologic quadrangle <https://pubs.usgs.gov/imap/i2267/kal250k-map.pdf>

⁵ USGS Seismic Hazards <https://rmt.d.mt.gov/Portals/62/aboutus/publications/files/NEHRP.pdf>

⁶ USEPA RCRA Facilities Database. <https://enviro.epa.gov/facts/rcrainfo/search.html>



-
- ⁷ National Pipeline Mapping System. NPMS Pipeline Mapping <https://www.npms.phmsa.dot.gov/>
- ⁸ MDEQ Air Quality Non-Attainment Areas.
<http://deq.mt.gov/Air/2017Air/Standards/airnonattainment>
- ⁹ MDEQ Final 2018 Integrated Water Quality Report & 303(d) list.
https://deq.mt.gov/Portals/112/Water/WQPB/CWAIC/Reports/IRs/2018/Appendix_A.pdf
- ¹⁰ MDEQ Draft 2020 Integrated Water Quality Report & 303(d) list
https://deq.mt.gov/Portals/112/Water/WQPB/CWAIC/Reports/IRs/2020/2020_IR_DRAFT.pdf
- ¹¹ City of Kalispell, Stormwater Management Program Permit Years 2017-2021, Updated March 01, 2020. <https://www.kalispell.com/DocumentCenter/View/547/Stormwater-Management-Program-SWMP-PDF?bidId=>
- ¹² USDA 2017 Census of Agriculture – Flathead County
https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/Montana/cp30029.pdf
- ¹³ DNRC Flathead WRS http://dnrc.mt.gov/divisions/water/water-rights/docs/survey-books/flatheadwrs_1965.pdf/view
- ¹⁴ MBMG Ground-Water Resources of the Flathead Lake Area: Flathead, Lake, Sanders, and Missoula Counties, Montana. http://www.mbmgt.mtech.edu/pdf/IP_4.pdf
- ¹⁵ Craig N. Kendall. Flathead National Forest. Flathead Watershed Sourcebook – Hydrology of the watershed. Accessed November 2020.
<http://www.flatheadwatershed.org/watershed/hydrology.shtml>
- ¹⁶ USEPA 2011. Summary of the Groundwater System of the Flathead Lake Basin. September 30, 2011.
<http://montanatmdflathead.pbworks.com/w/file/46871185/Groundwater%20Technical%20Mem>
- ¹⁷ MBMG GWIC Map. <https://mbmg.mtech.edu/mapper/mapper.asp?view=Wells&>
- ¹⁸ Evergreen water and sewer District. <https://evergreenwaterdistrict.com/about-us>
- ¹⁹ Flathead County Septic Permits.
<https://maps.flathead.mt.gov/portal/apps/webappviewer/index.html?id=6bfdfef0f17614543b49b2f0b89b4c3e4>
- ²⁰ FEMA Guidance for Flood Risk Analysis and Mapping. November 2019.
https://www.fema.gov/sites/default/files/202002/FloodwayAnalysis_and_Mapping_Nov_2019.pdf
- ²¹ FEMA Floodplain Maps for Flathead County Montana. <https://msc.fema.gov/portal/home>



- ²² Flathead County Flood Regulations
https://flathead.mt.gov/planning_zoning/documents/FloodplainRegulations--cleancopy-updatedtableofcontents_000.pdf
- ²³ USFWS NWI Mapping. <https://www.fws.gov/wetlands/data/mapper.html>
- ²⁴ MTNHP Wetland and Riparian Mapping. <http://mtnhp.org/wetlands/>
- ²⁵ Montana Noxious Weeds List.
<https://agr.mt.gov/Portals/168/Documents/Weeds/2019%20Montana%20Noxious%20Weed%20List.pdf?ver=2019-07-02-095540-487>
- ²⁶ Flathead County weed management plan <https://flathead.mt.gov/weeds/downloads.php>
- ²⁷ MTNHP Natural Heritage MapViewer. <http://mtnhp.org/mapviewer/>
- ²⁸ FWP FishMT database. <https://myfwp.mt.gov/fishMT/explore>
- ²⁹ USFWS Listed Species in Montana
https://www.fws.gov/montanafieldoffice/Endangered_Species/Listed_Species/TEClist.pdf
- ³⁰ FWP Montana Field Guide fieldguide.mt.gov
- ³¹ DNRC Montana Sage Grouse Habitat Conservation Map.
<https://sagegrouse.mt.gov/ProgramMap>
- ³² US Census. ACS Five Year Estimates 2015-2019
<https://data.census.gov/cedsci/table?q=United%20States&g=0100000US&tid=ACSDP1Y2017.DP05>

ATTACHMENT 1: STUDY CORRIDOR AREA EXHIBITS

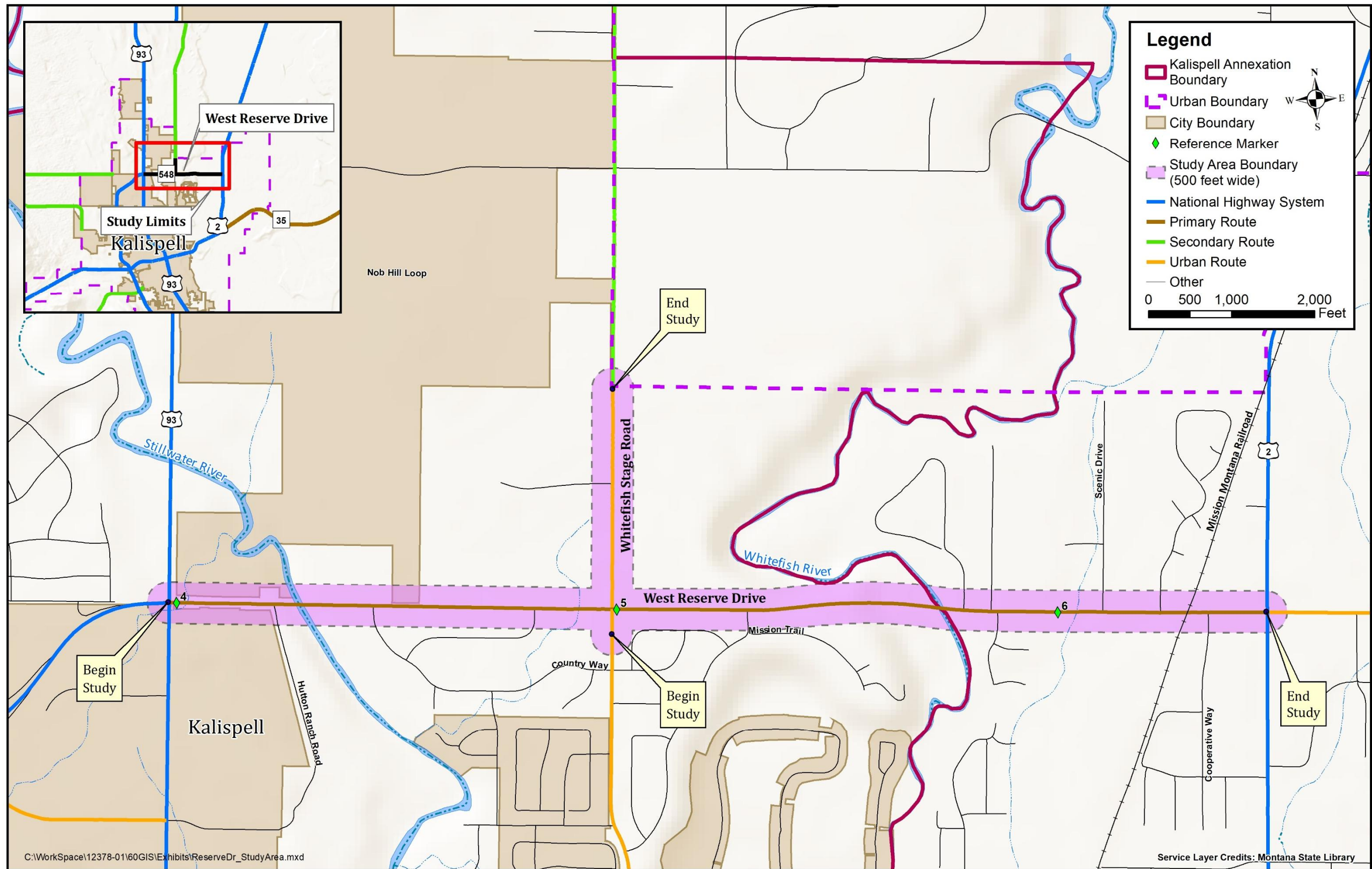


Exhibit 1: Study Corridor Location

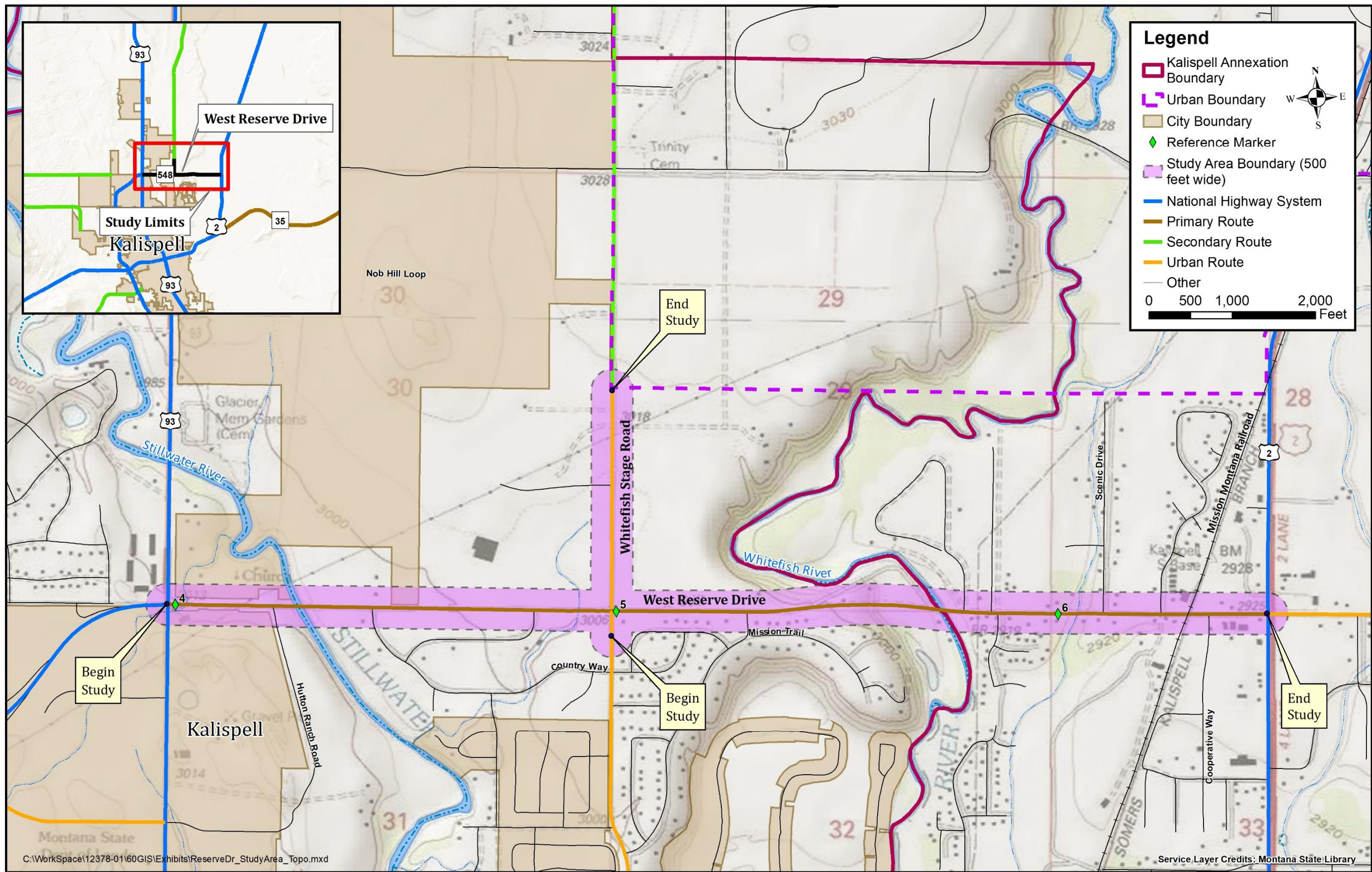


Exhibit 2: Study Corridor Topography

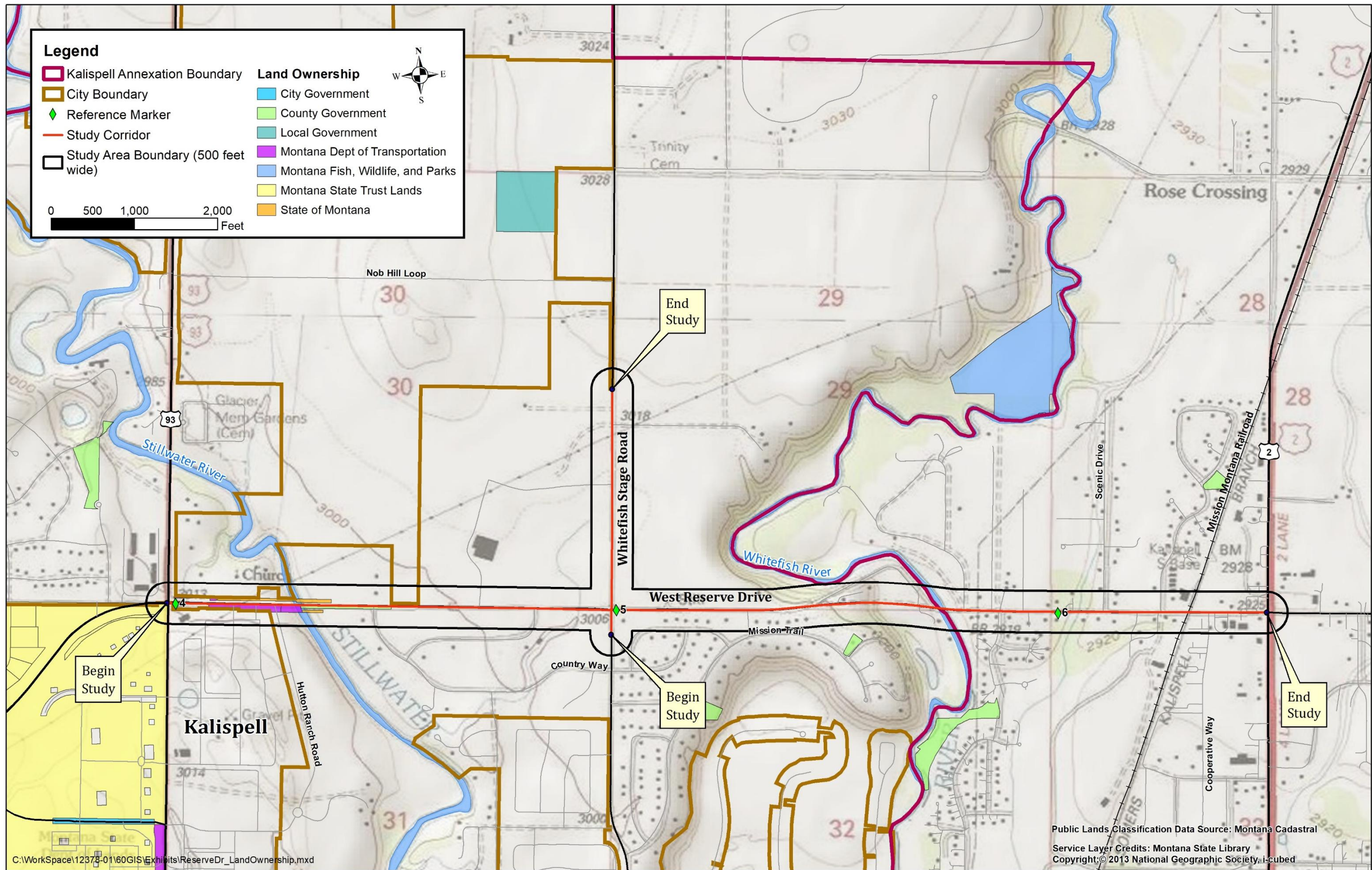


Exhibit 3: Land Ownership

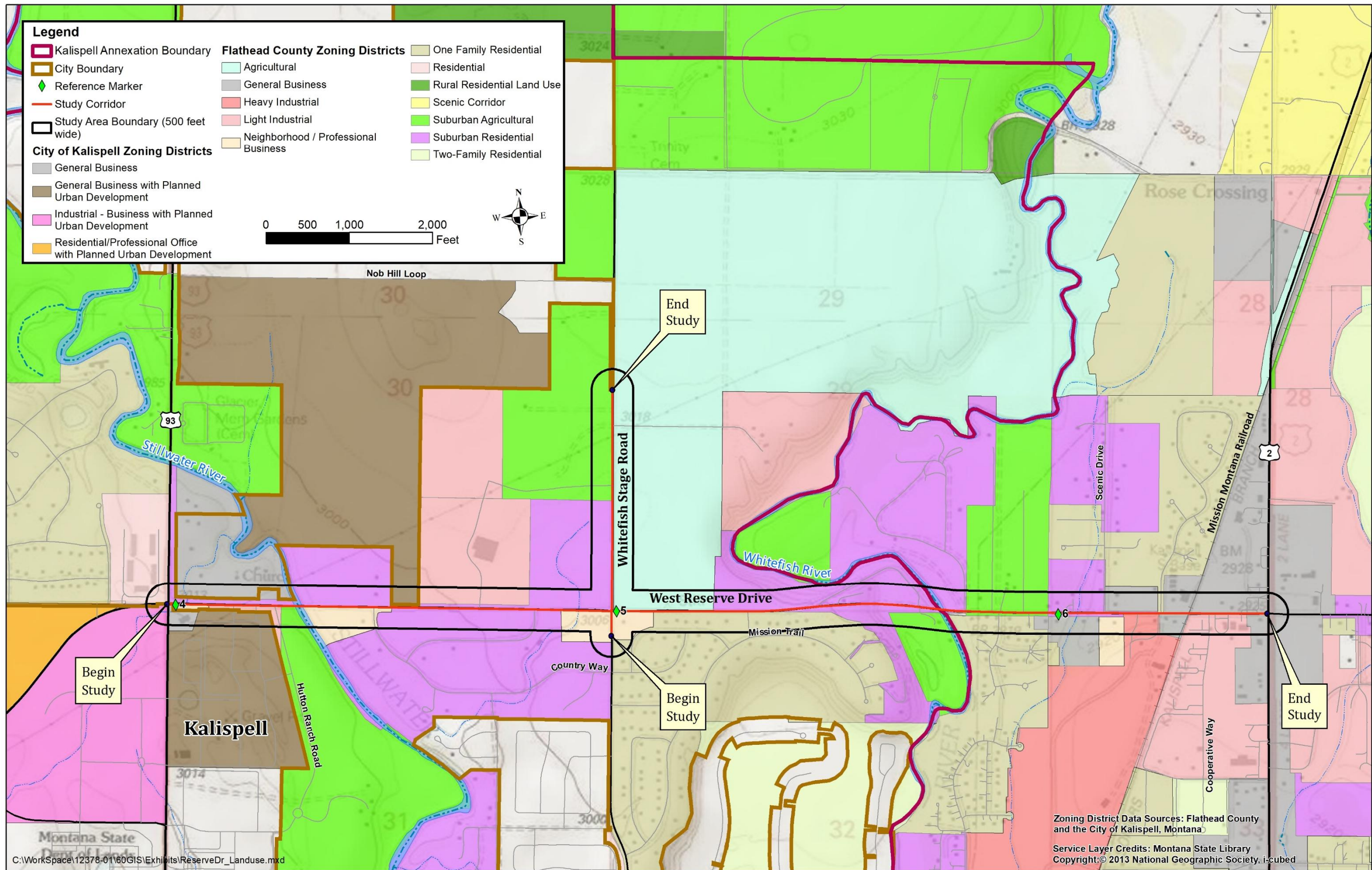


Exhibit 4: Designated Land Uses

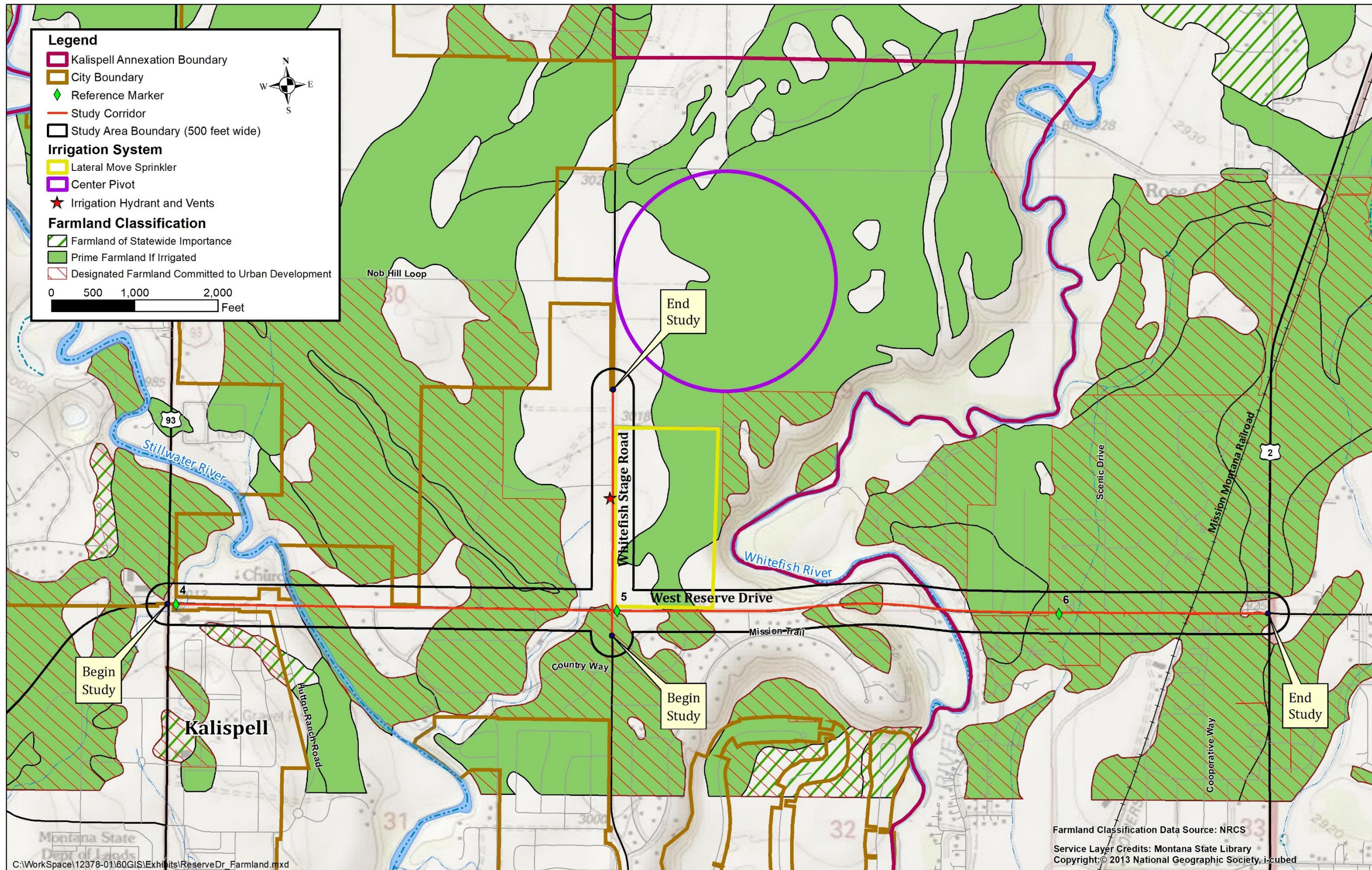


Exhibit 5: NRCS Farmland Classifications and Irrigation Features

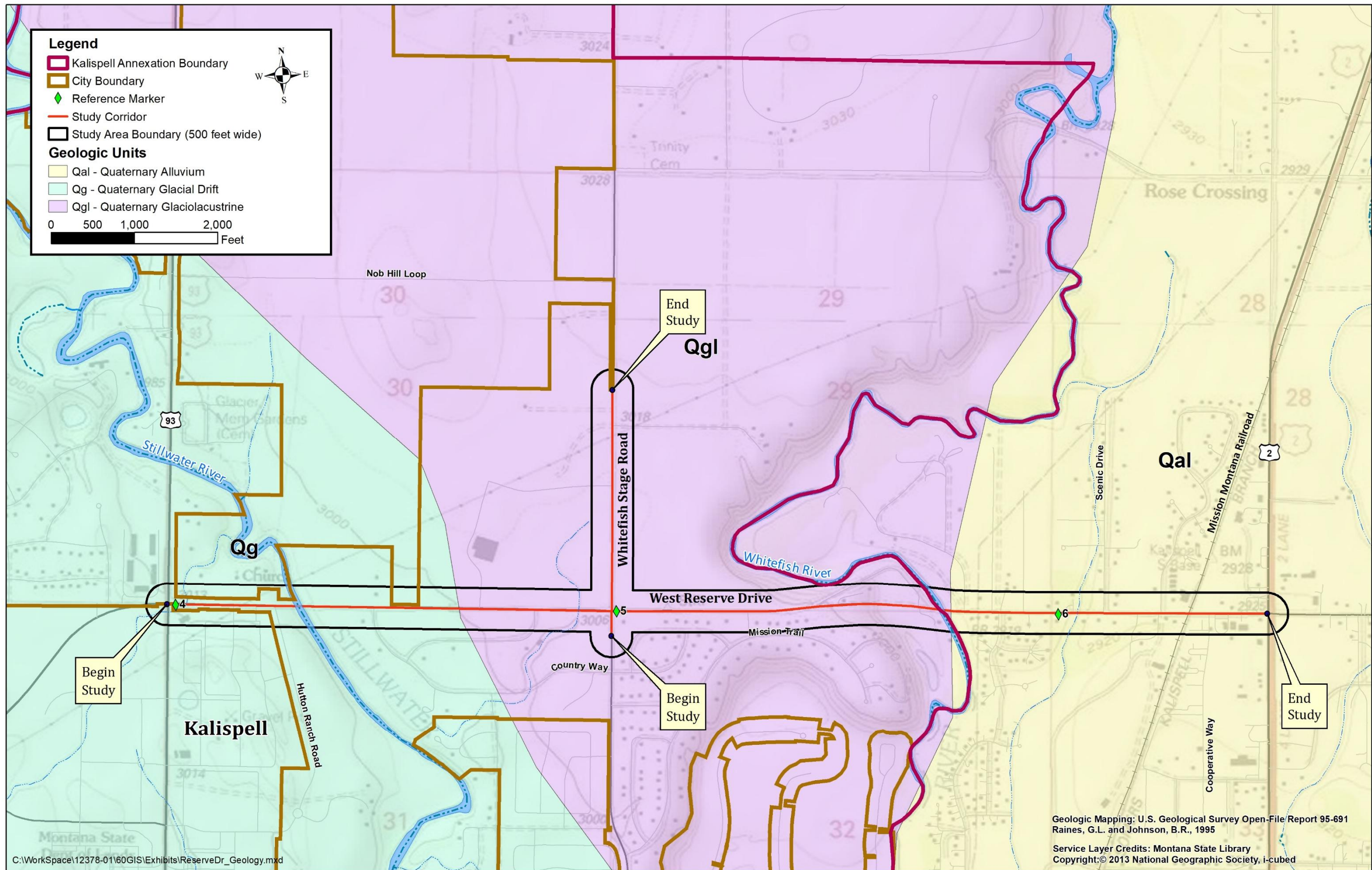
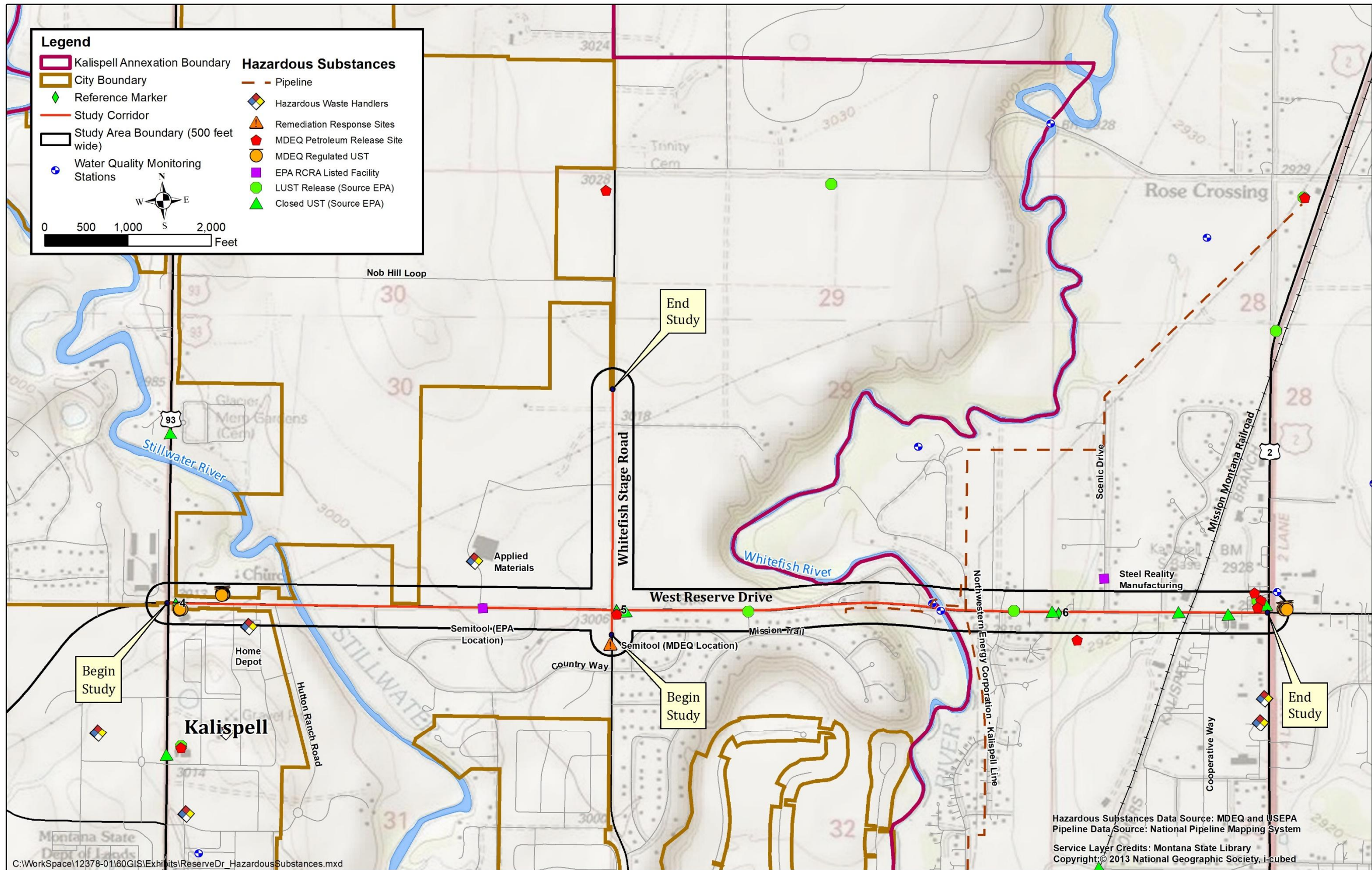
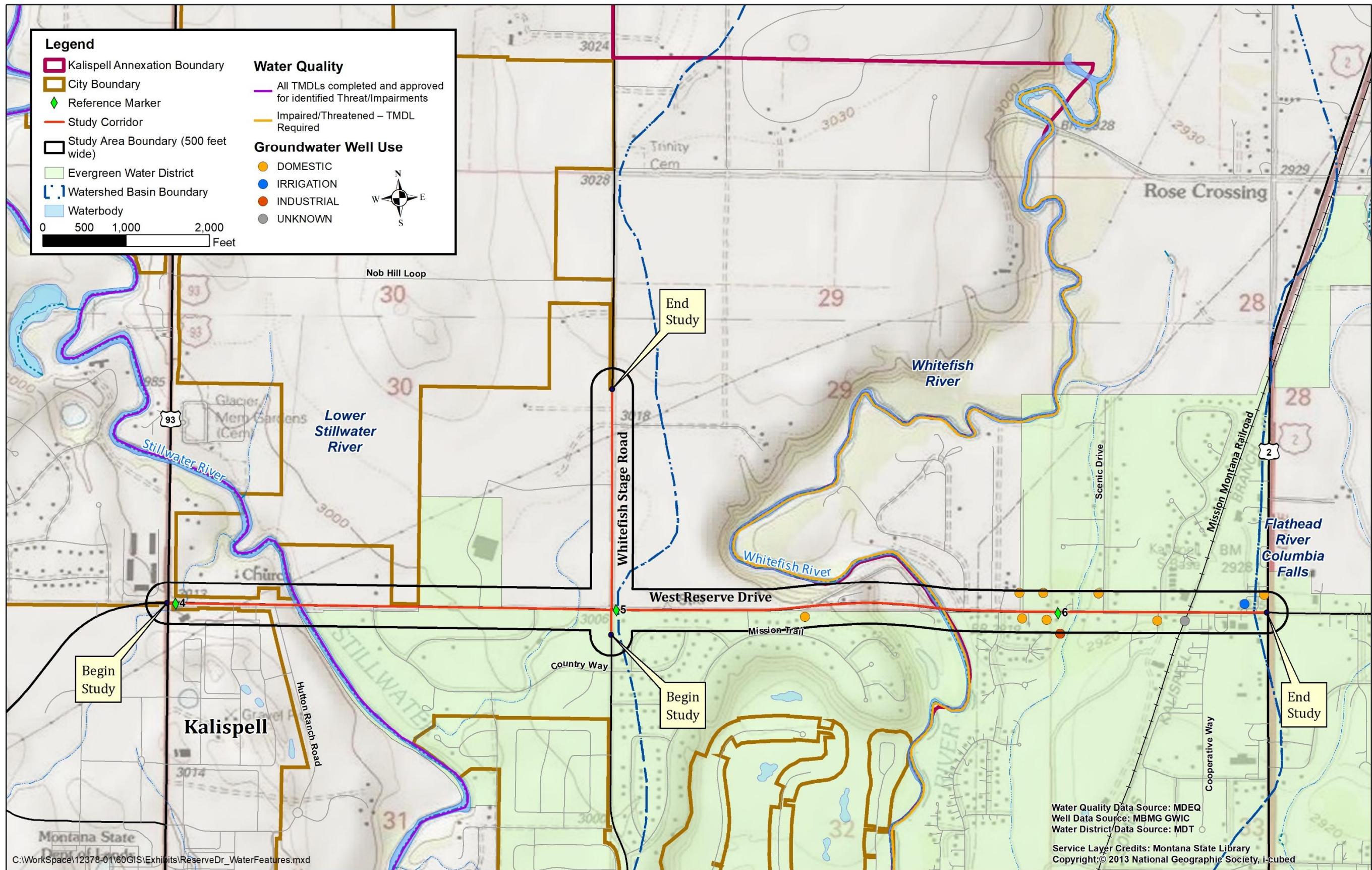


Exhibit 6: Geologic Resources





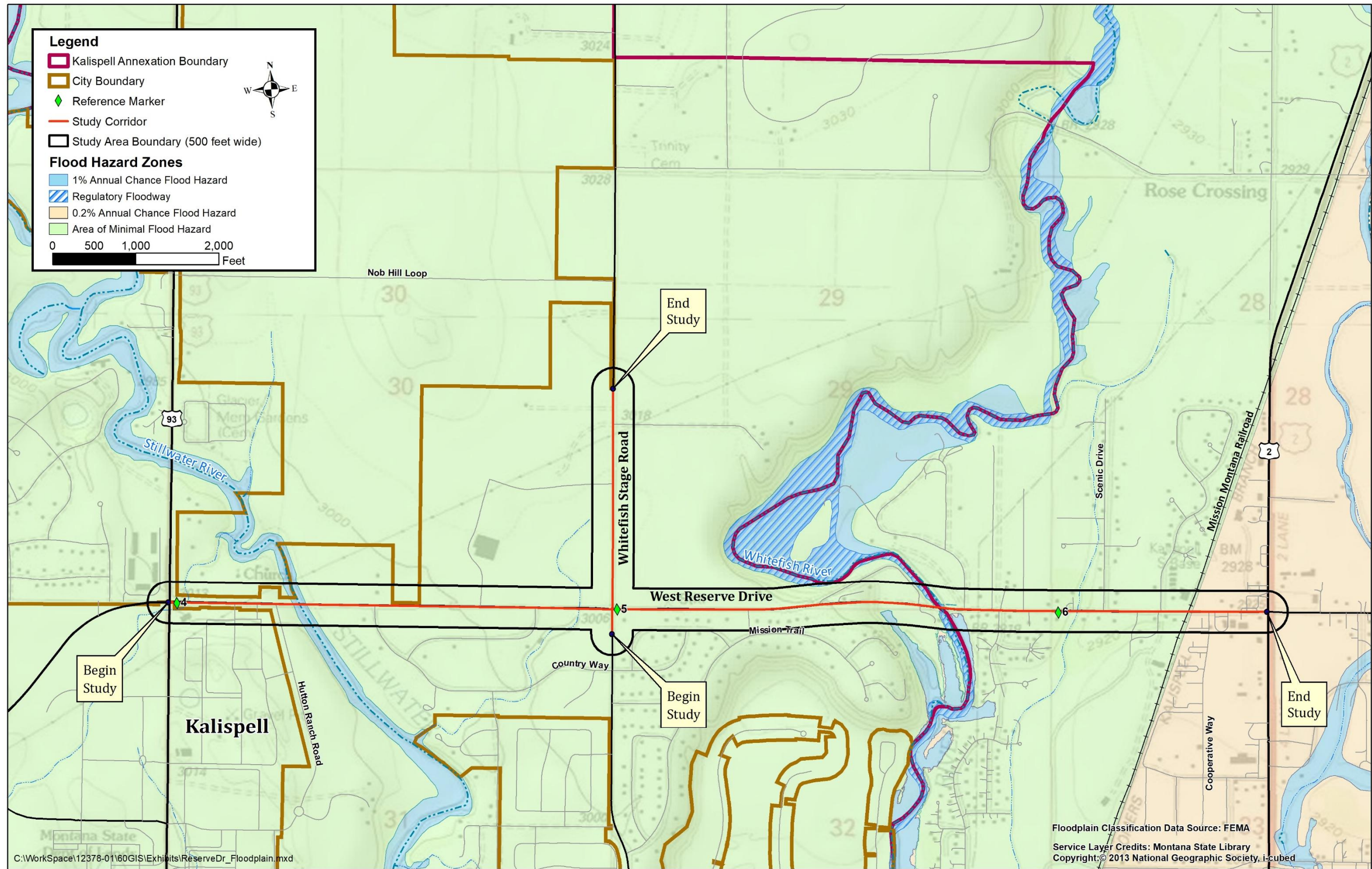
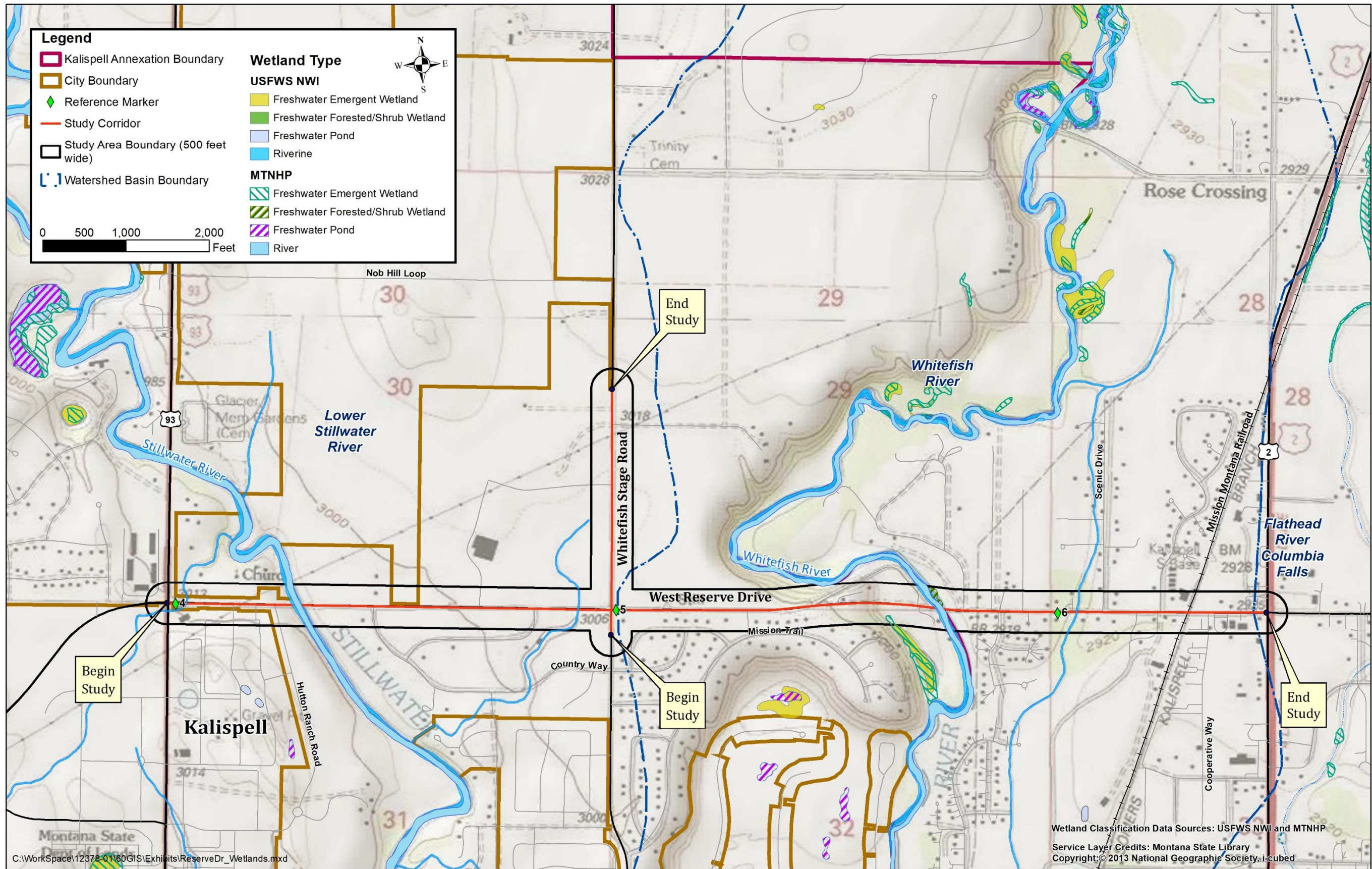


Exhibit 9: FEMA Floodplain Boundaries



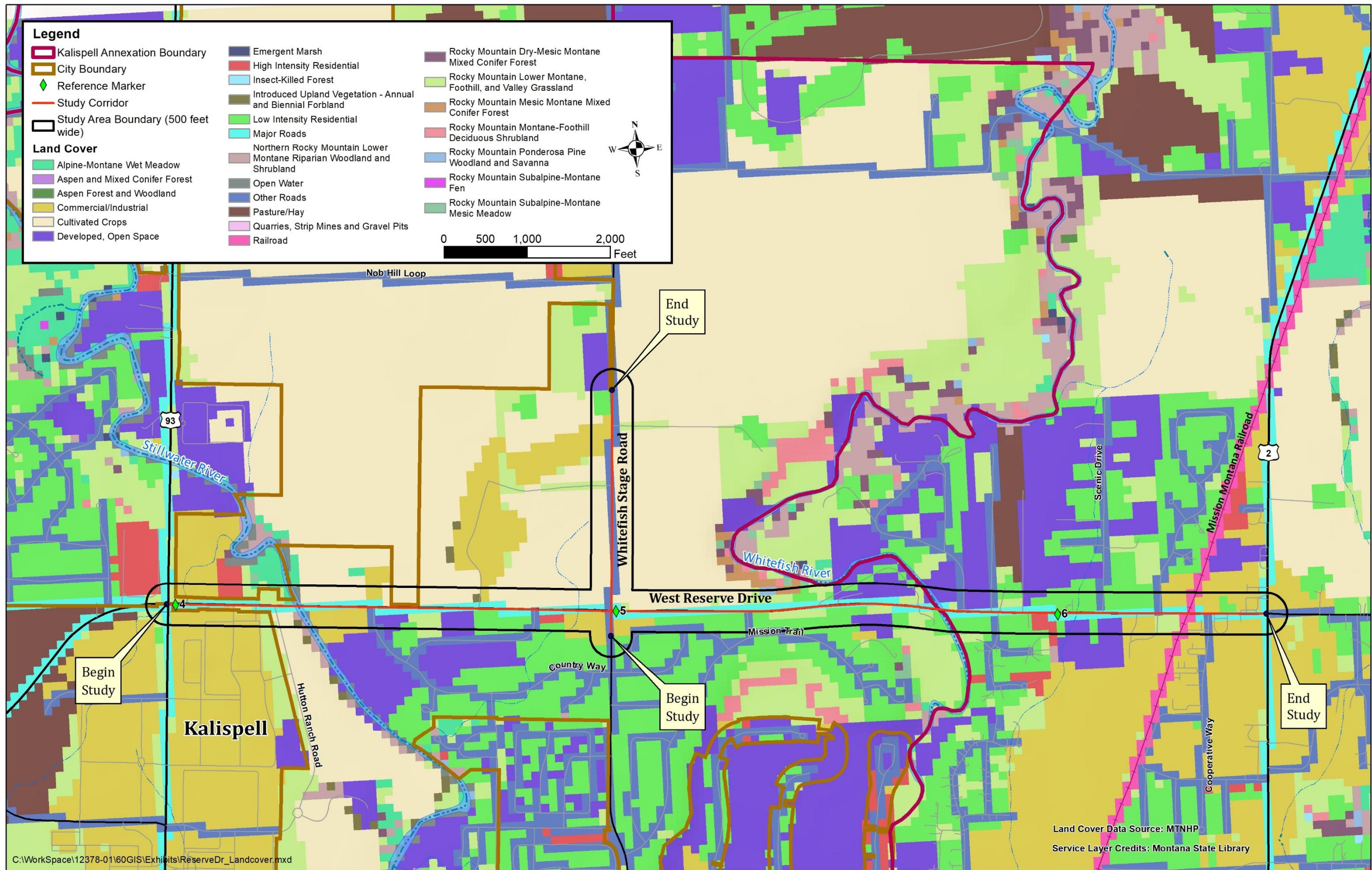
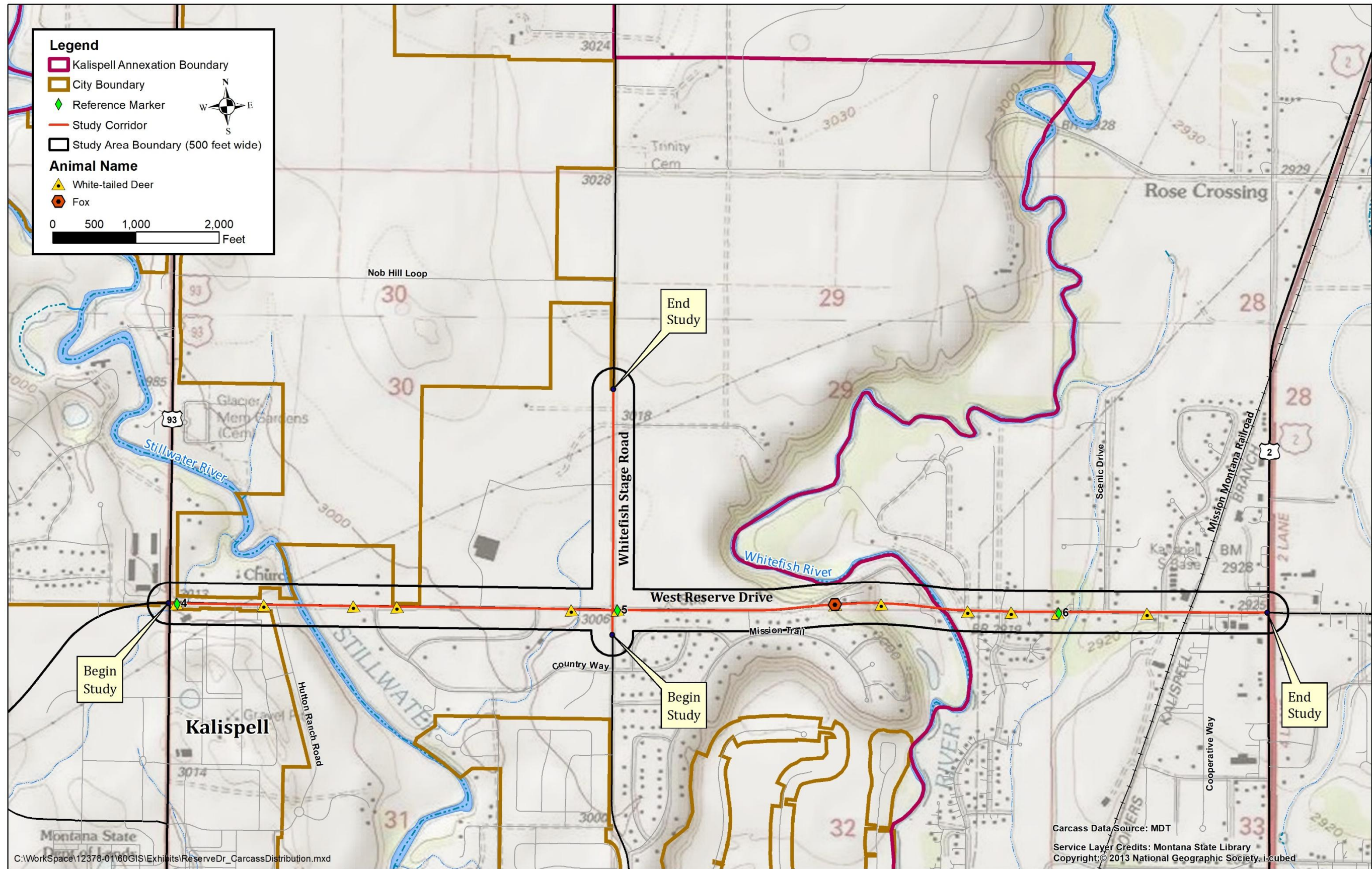


Exhibit 11: Land Cover



C:\Workspace\12378-01\GIS\Exhibits\ReserveDr_CarcassDistribution.mxd



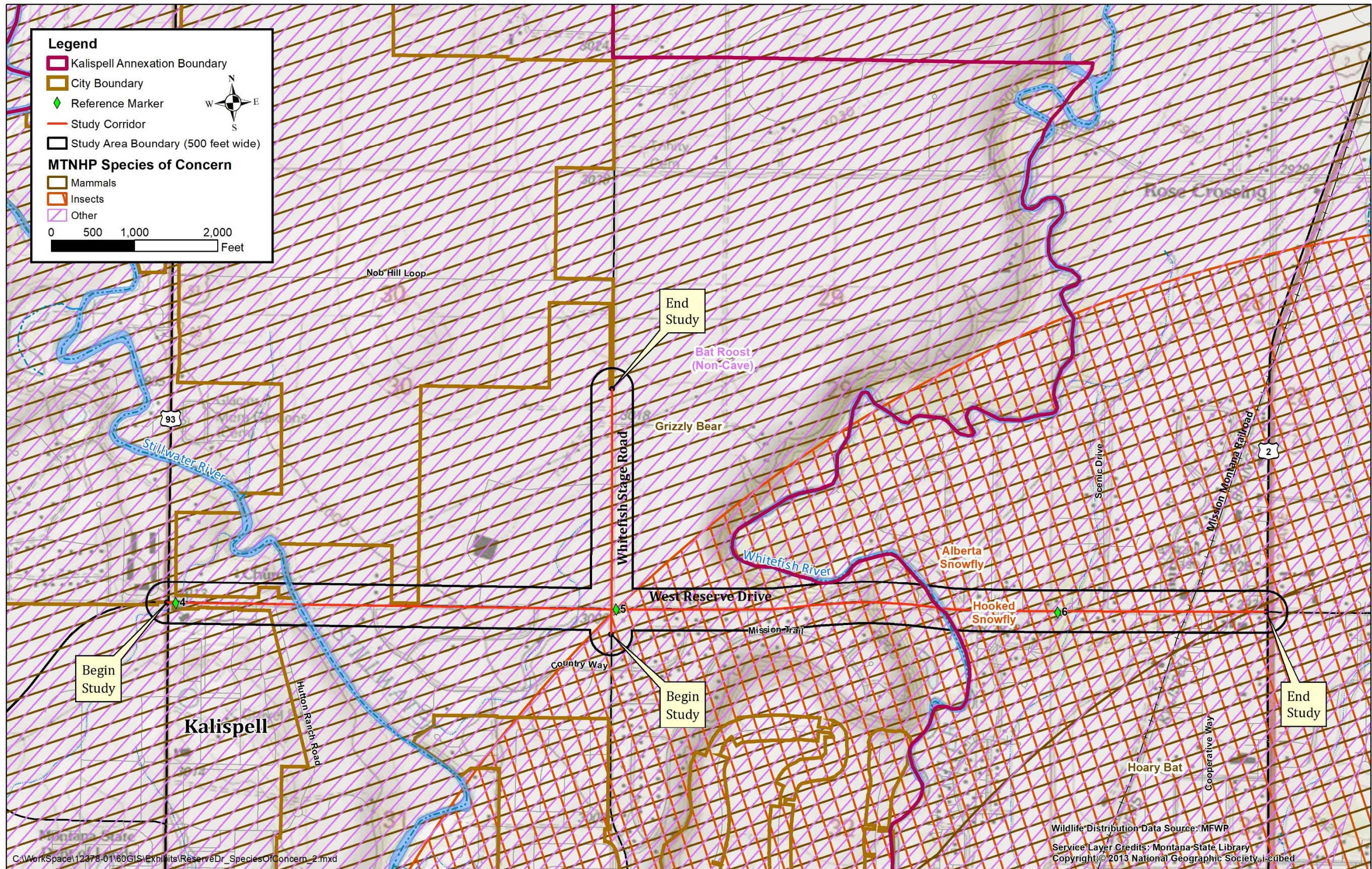
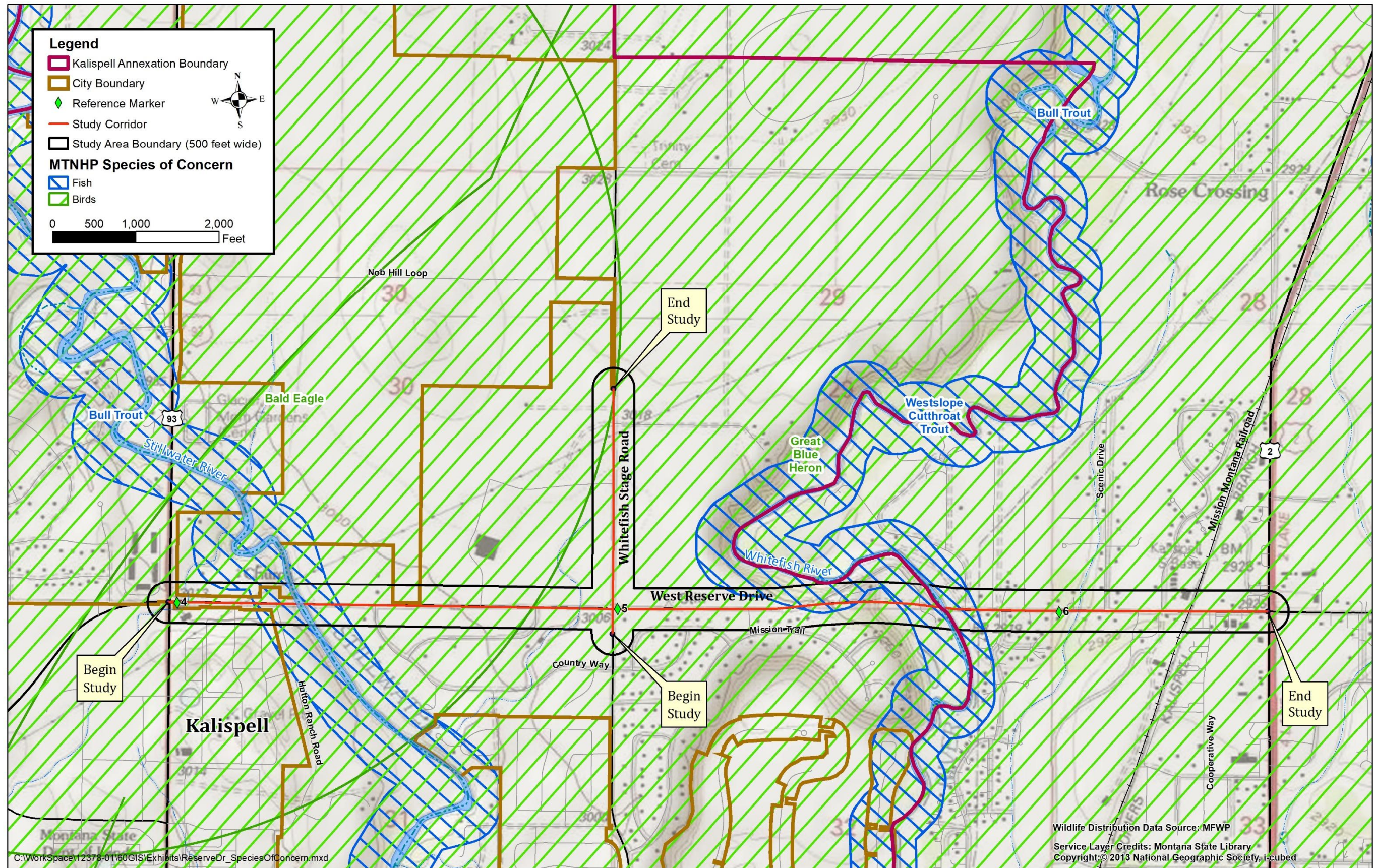


Exhibit 13: Species of Concern and Special Status Species
Mammals and Invertebrates



**Exhibit 14: Species of Concern and Special Status Species
 Birds and Fish**

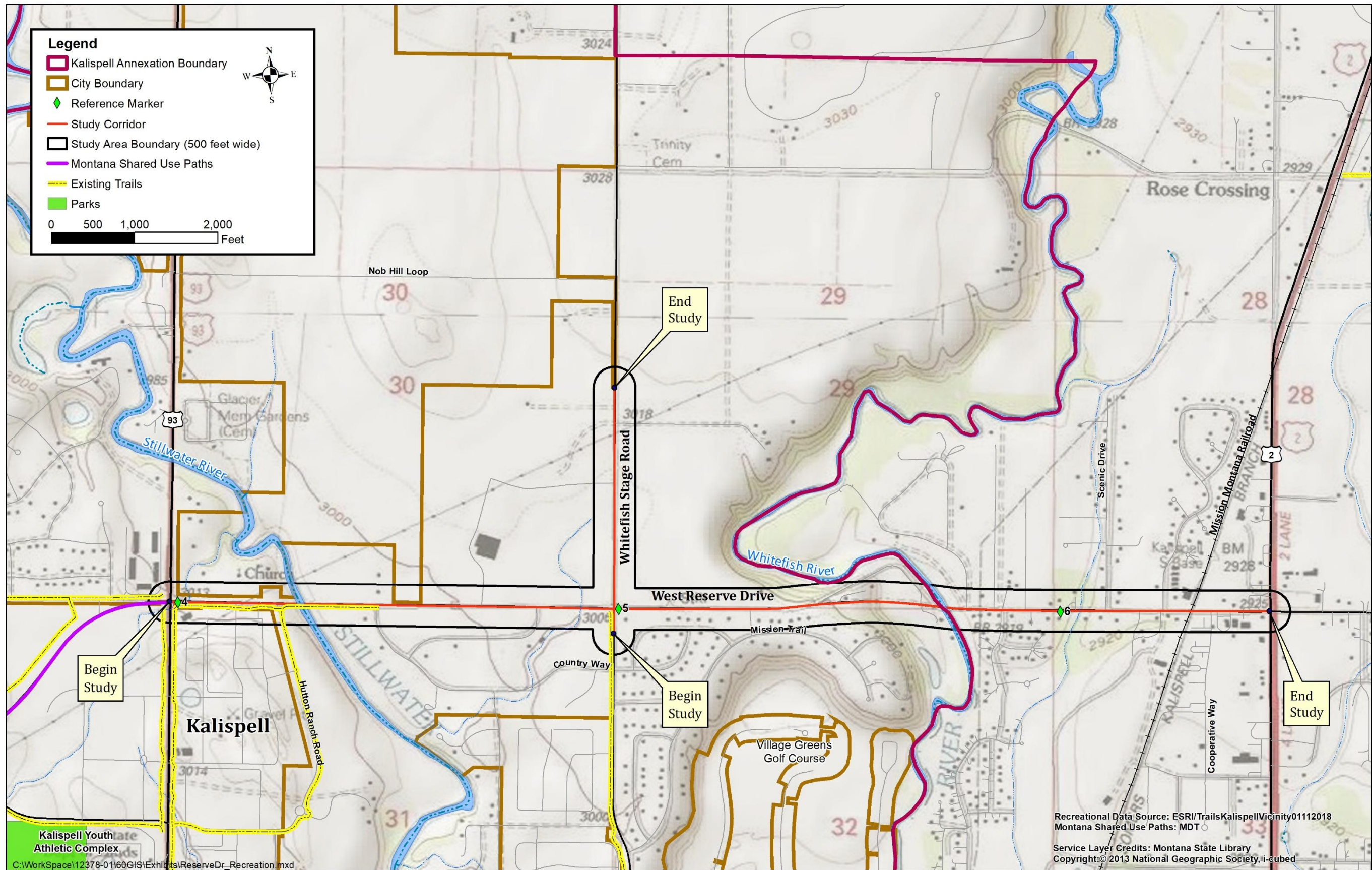


Exhibit 15: Recreational Resources

ATTACHMENT 2: NRCS SOIL SURVEY REPORT



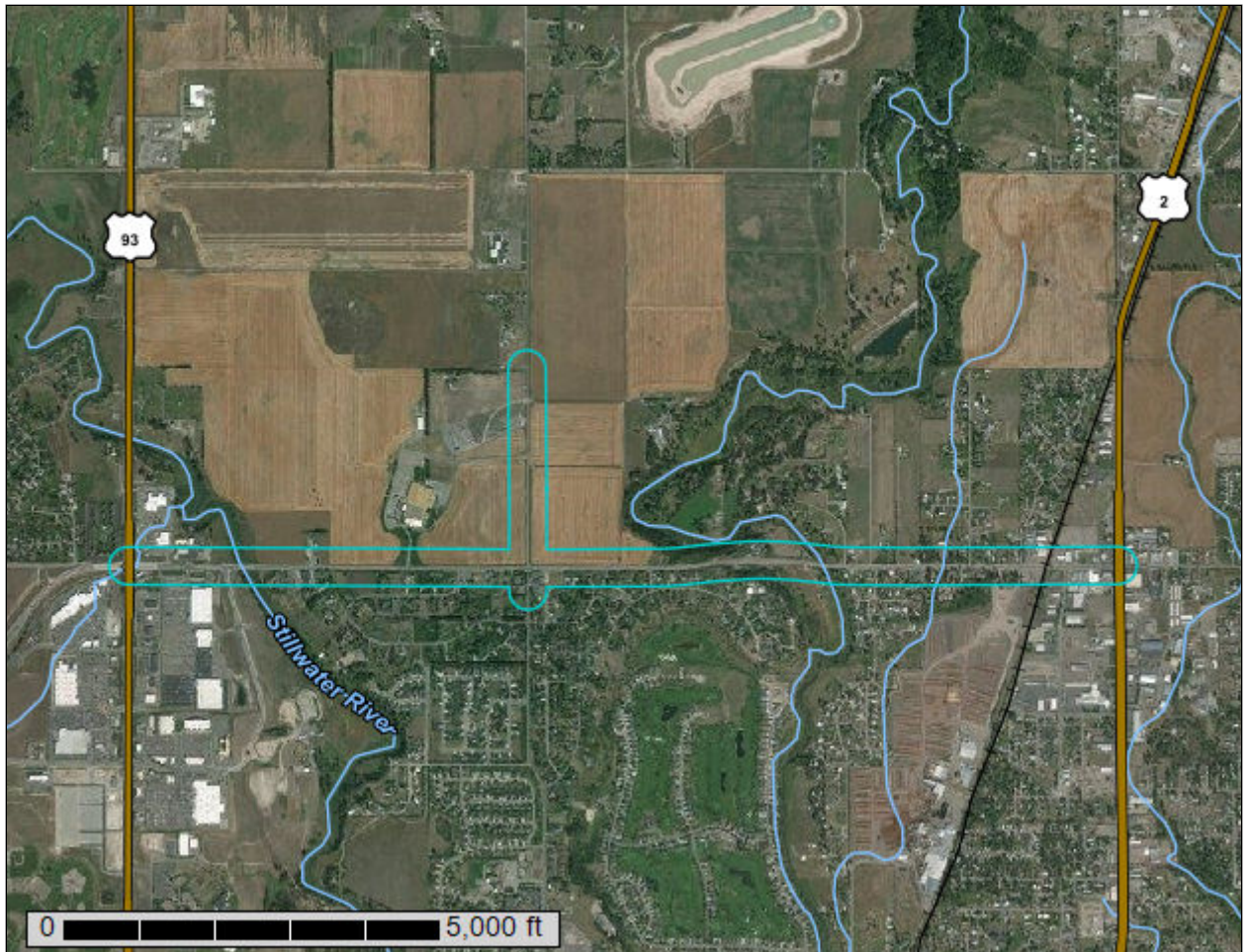
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Upper Flathead Valley Area, Montana



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

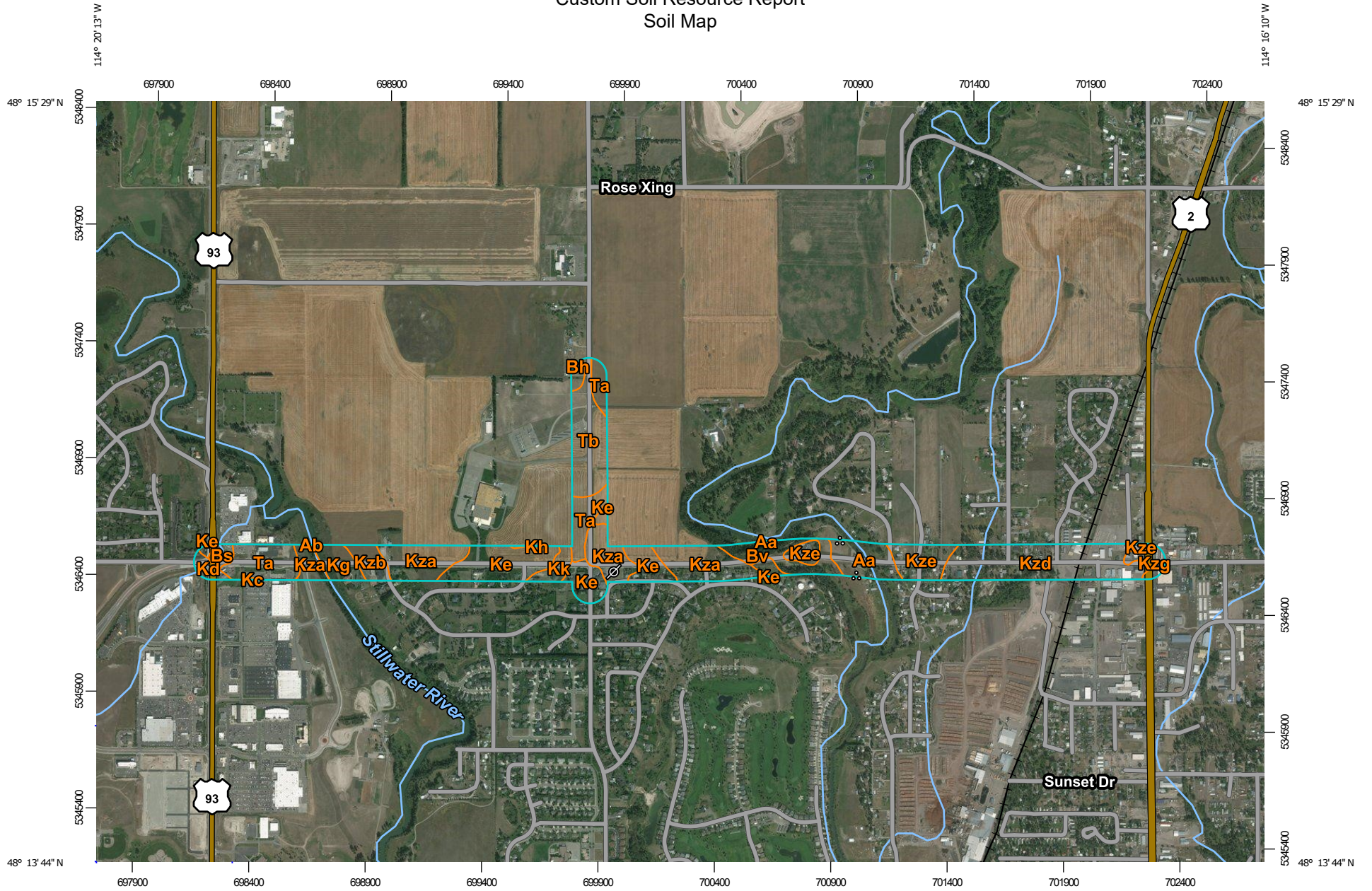
Contents

Preface	2
Soil Map	5
Soil Map.....	6
Legend.....	7
Map Unit Legend.....	8
Map Unit Descriptions.....	9
Upper Flathead Valley Area, Montana.....	11
Aa—Alluvial land, poorly drained.....	11
Ab—Alluvial land, well drained.....	12
Bh—Blanchard fine sand, 7 to 12 percent slopes, wind eroded.....	13
Bs—Blanchard very fine sandy loam, 0 to 7 percent slopes.....	14
Bv—Blanchard very fine sandy loam, 20 to 45 percent slopes.....	15
Kc—KalisPELL gravelly loam, moderately deep over gravel, 7 to 12 percent slopes.....	16
Kd—KalisPELL gravelly loam, moderately deep over gravel, 12 to 40 percent slopes.....	17
Ke—KalisPELL loam, 0 to 3 percent slopes.....	18
Kg—KalisPELL loam, 3 to 7 percent slopes.....	19
Kh—KalisPELL loam, 3 to 7 percent slopes, wind eroded.....	20
Kk—KalisPELL loam, 7 to 12 percent slopes.....	21
Kza—KalisPELL-Tuffit silt loams, 0 to 3 percent slopes.....	22
Kzb—KalisPELL-Tuffit silt loams, 3 to 7 percent slopes.....	24
Kzd—KiwaniS fine sandy loam, 0 to 4 percent slopes.....	26
Kze—KiwaniS loam, 0 to 3 percent slopes.....	27
Kzg—KiwaniS-Birch fine sandy loams, 0 to 5 percent slopes.....	28
Ta—Tally, Blanchard, and Flathead soils, 0 to 3 percent slopes.....	30
Tb—Tally, Blanchard, and Flathead soils, 0 to 3 percent slopes, eroded....	32
Soil Information for All Uses	35
Soil Reports.....	35
Land Classifications.....	35
Prime and other Important Farmlands.....	35
References	38

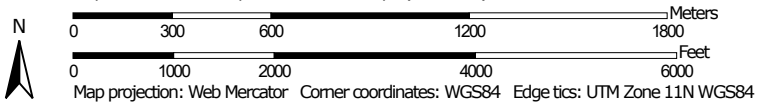
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map




Map Scale: 1:22,900 if printed on A landscape (11" x 8.5") sheet.



MAP LEGEND


Area of Interest (AOI)

 Area of Interest (AOI)




















Soils







 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Upper Flathead Valley Area, Montana
 Survey Area Data: Version 16, Jun 4, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 27, 2014—Nov 2, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Aa	Alluvial land, poorly drained	9.9	5.3%
Ab	Alluvial land, well drained	0.0	0.0%
Bh	Blanchard fine sand, 7 to 12 percent slopes, wind eroded	1.5	0.8%
Bs	Blanchard very fine sandy loam, 0 to 7 percent slopes	2.1	1.1%
Bv	Blanchard very fine sandy loam, 20 to 45 percent slopes	10.3	5.4%
Kc	Kalispell gravelly loam, moderately deep over gravel, 7 to 12 percent slopes	0.2	0.1%
Kd	Kalispell gravelly loam, moderately deep over gravel, 12 to 40 percent slopes	2.4	1.3%
Ke	Kalispell loam, 0 to 3 percent slopes	29.0	15.4%
Kg	Kalispell loam, 3 to 7 percent slopes	5.7	3.0%
Kh	Kalispell loam, 3 to 7 percent slopes, wind eroded	0.3	0.2%
Kk	Kalispell loam, 7 to 12 percent slopes	3.4	1.8%
Kza	Kalispell-Tuffit silt loams, 0 to 3 percent slopes	36.1	19.1%
Kzb	Kalispell-Tuffit silt loams, 3 to 7 percent slopes	4.7	2.5%
Kzd	Kiwanis fine sandy loam, 0 to 4 percent slopes	30.6	16.2%
Kze	Kiwanis loam, 0 to 3 percent slopes	12.2	6.5%
Kzg	Kiwanis-Birch fine sandy loams, 0 to 5 percent slopes	3.4	1.8%
Ta	Tally, Blanchard, and Flathead soils, 0 to 3 percent slopes	20.6	10.9%
Tb	Tally, Blanchard, and Flathead soils, 0 to 3 percent slopes, eroded	16.8	8.9%
Totals for Area of Interest		189.1	100.0%

Soil Information for All Uses

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Land Classifications

This folder contains a collection of tabular reports that present a variety of soil groupings. The reports (tables) include all selected map units and components for each map unit. Land classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Prime and other Important Farmlands

This table lists the map units in the survey area that are considered important farmlands. Important farmlands consist of prime farmland, unique farmland, and farmland of statewide or local importance. This list does not constitute a recommendation for a particular land use.

In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation's food supply.

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Custom Soil Resource Report

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

For some of the soils identified in the table as prime farmland, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

A recent trend in land use in some areas has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. It has the special combination of soil quality, growing season, moisture supply, temperature, humidity, air drainage, elevation, and aspect needed for the soil to economically produce sustainable high yields of these crops when properly managed. The water supply is dependable and of adequate quality. Nearness to markets is an additional consideration. Unique farmland is not based on national criteria. It commonly is in areas where there is a special microclimate, such as the wine country in California.

In some areas, land that does not meet the criteria for prime or unique farmland is considered to be *farmland of statewide importance* for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.

In some areas that are not identified as having national or statewide importance, land is considered to be *farmland of local importance* for the production of food, feed, fiber, forage, and oilseed crops. This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance.

Report—Prime and other Important Farmlands

Custom Soil Resource Report

Prime and other Important Farmlands—Upper Flathead Valley Area, Montana		
Map Symbol	Map Unit Name	Farmland Classification
Aa	Alluvial land, poorly drained	Not prime farmland
Ab	Alluvial land, well drained	Not prime farmland
Bh	Blanchard fine sand, 7 to 12 percent slopes, wind eroded	Not prime farmland
Bs	Blanchard very fine sandy loam, 0 to 7 percent slopes	Not prime farmland
Bv	Blanchard very fine sandy loam, 20 to 45 percent slopes	Not prime farmland
Kc	Kalispell gravelly loam, moderately deep over gravel, 7 to 12 percent slopes	Farmland of statewide importance
Kd	Kalispell gravelly loam, moderately deep over gravel, 12 to 40 percent slopes	Not prime farmland
Ke	Kalispell loam, 0 to 3 percent slopes	Prime farmland if irrigated
Kg	Kalispell loam, 3 to 7 percent slopes	Prime farmland if irrigated
Kh	Kalispell loam, 3 to 7 percent slopes, wind eroded	Prime farmland if irrigated
Kk	Kalispell loam, 7 to 12 percent slopes	Not prime farmland
Kza	Kalispell-Tuffit silt loams, 0 to 3 percent slopes	Not prime farmland
Kzb	Kalispell-Tuffit silt loams, 3 to 7 percent slopes	Not prime farmland
Kzd	Kiwanis fine sandy loam, 0 to 4 percent slopes	Prime farmland if irrigated
Kze	Kiwanis loam, 0 to 3 percent slopes	Prime farmland if irrigated
Kzg	Kiwanis-Birch fine sandy loams, 0 to 5 percent slopes	Not prime farmland
Ta	Tally, Blanchard, and Flathead soils, 0 to 3 percent slopes	Not prime farmland
Tb	Tally, Blanchard, and Flathead soils, 0 to 3 percent slopes, eroded	Not prime farmland

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

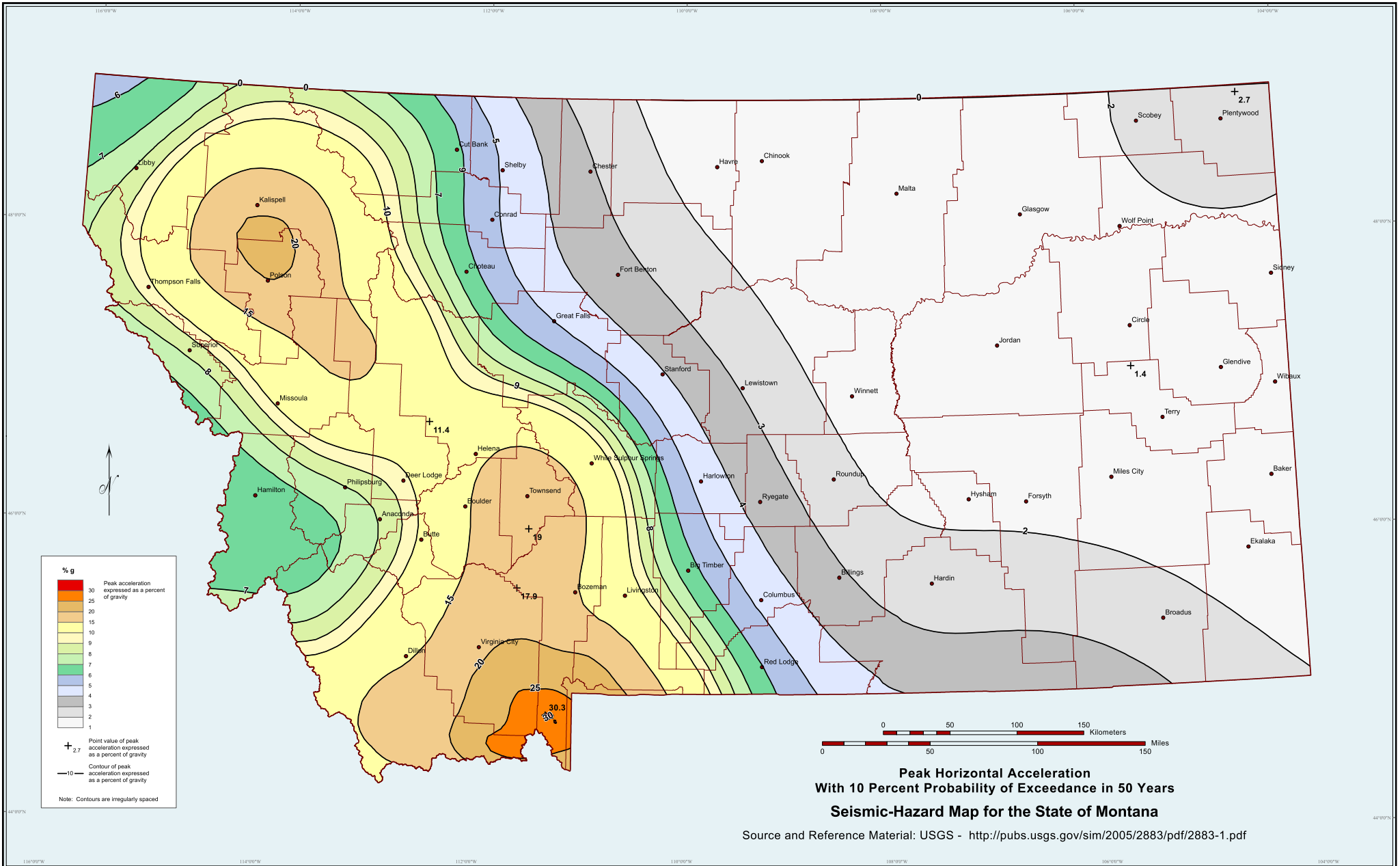
Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

ATTACHMENT 3: USGS SEISMIC HAZARD MAP

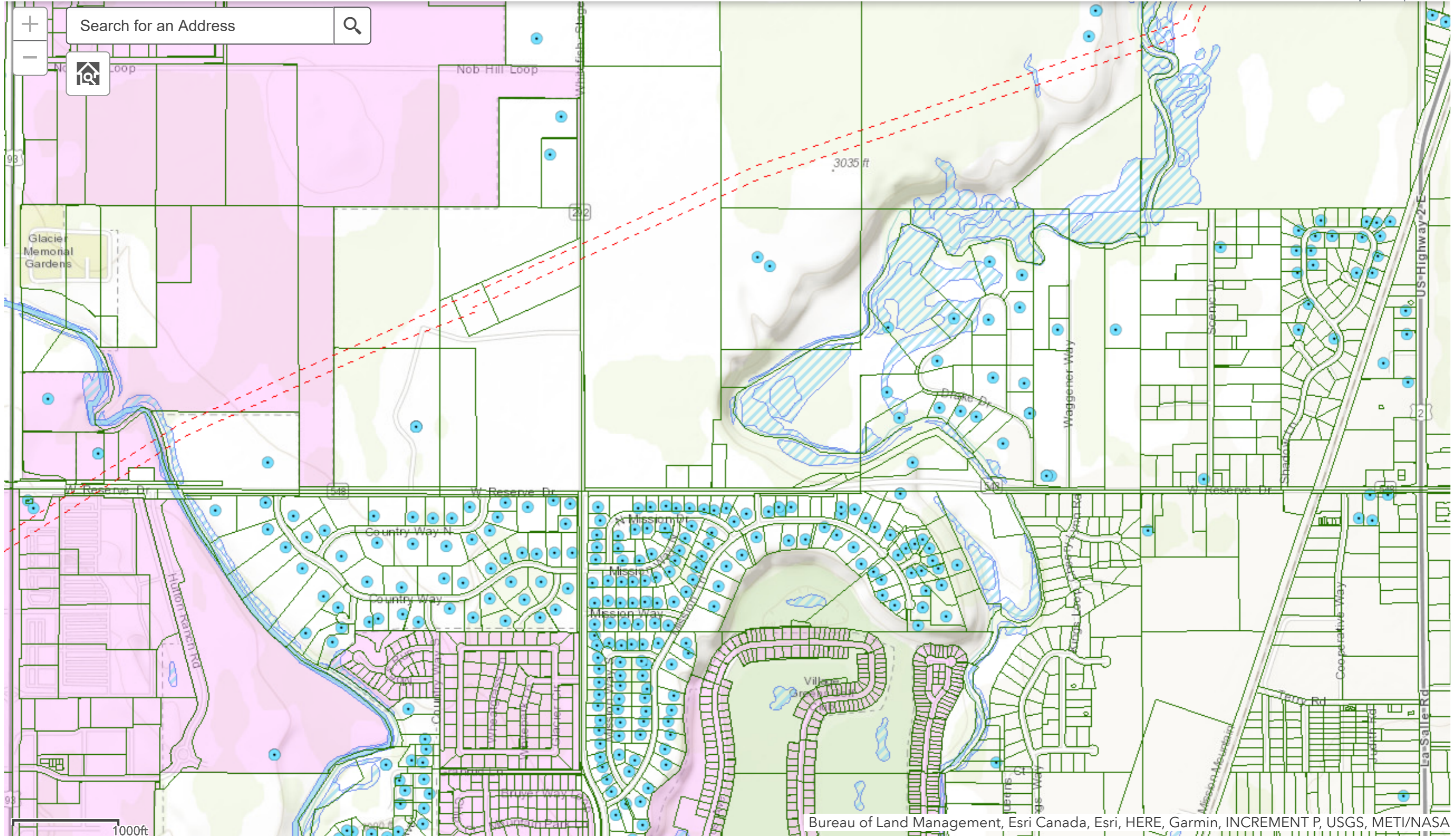


ATTACHMENT 4: FLATHEAD COUNTY SEPTIC PERMITS



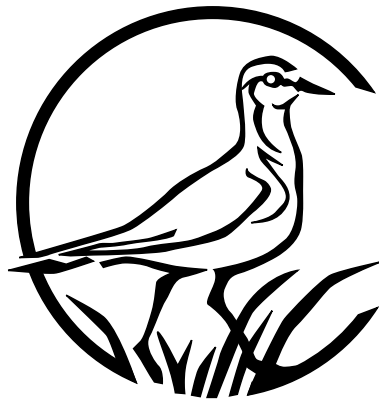
Flathead County Septic Permit Lookup

Flathead County GIS Department



-114.301 48.242 Degrees

ATTACHMENT 5: MTNHP ENVIRONMENTAL SUMMARY REPORT



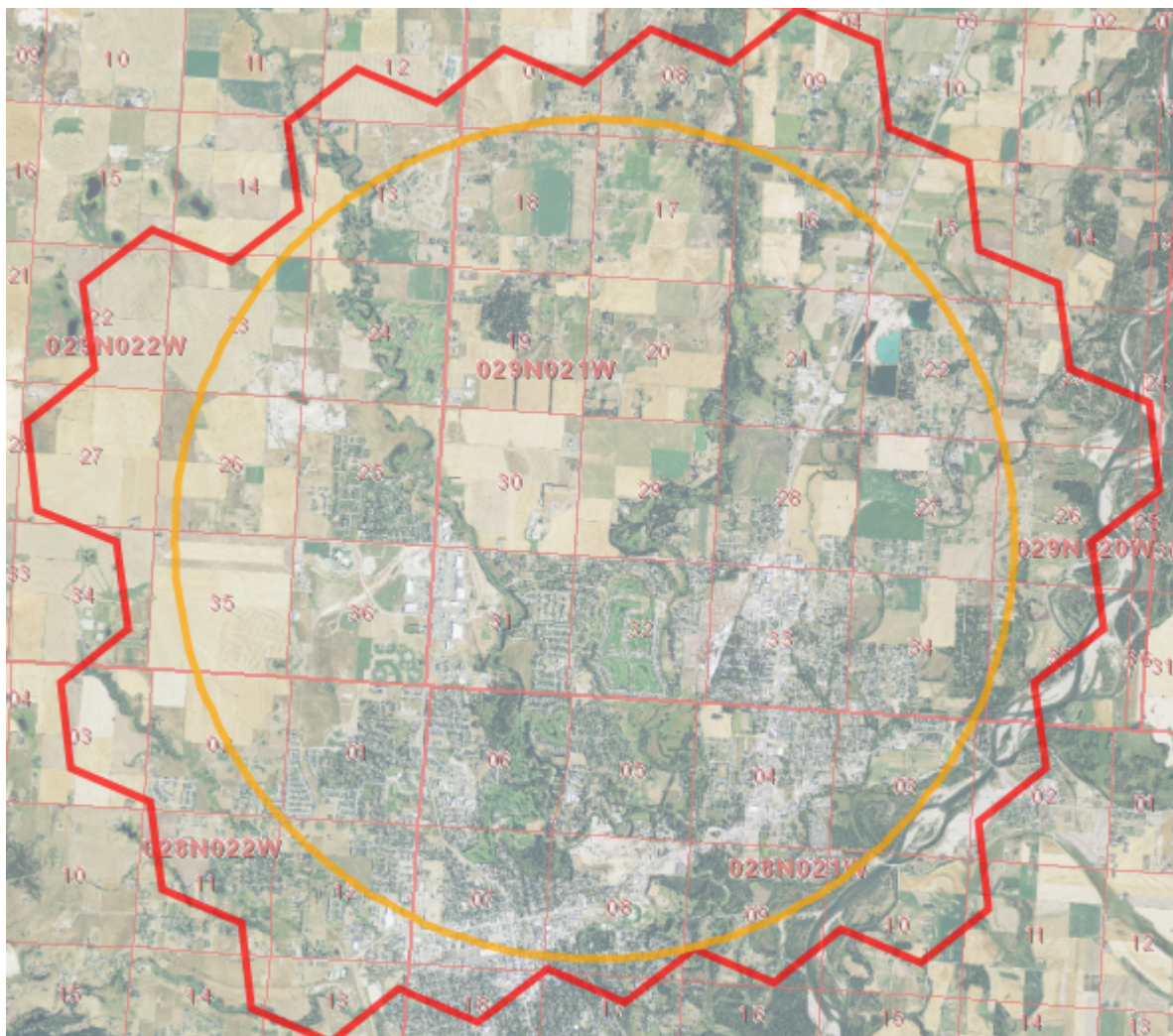
MONTANA Natural Heritage Program

1515 East 6th Avenue
Helena, MT 59620
(406) 444-5363
mtnhp.org



Latitude Longitude
48.18657 -114.22329
48.30067 -114.38901

Summarized by:
21mdt0006 WestReserveDrive Kalispell
(Custom Area of Interest)



Suggested Citation

Montana Natural Heritage Program. Environmental Summary Report.
for Latitude 48.18657 to 48.30067 and Longitude -114.22329 to -114.38901. Retrieved on 11/10/2020.

The Montana Natural Heritage Program is a program of the Montana State Library's Natural Resource Information System. It is operated as a special program under the Office of the Vice President for Research and Creative Scholarship at the University of Montana, Missoula.

The Montana Natural Heritage Program is part of NatureServe – a network of over 80 similar programs in states, provinces and nations throughout the Western Hemisphere, working to provide comprehensive status and distribution information for species and ecosystems.



Environmental Summary

Table of Contents

- [Species Report](#)
- [- Other Observed](#)
- [- Other Potential Species](#)
- [Structured Surveys](#)
- [Land Cover](#)
- [Wetland and Riparian](#)
- [Land Management](#)
- [Biological Reports](#)
- [Invasive and Pest Species](#)
- [Introduction to Montana Natural Heritage Program](#)
- [Data Use Terms and Conditions](#)
- [Suggested Contacts for Natural Resource Agencies](#)
- [Introduction to Native Species](#)
- [Introduction to Land Cover](#)
- [Introduction to Wetland and Riparian](#)
- [Introduction to Land Management](#)
- [Introduction to Invasive and Pest Species](#)
- [Additional Information Resources](#)

Introduction to Environmental Summary Report

The Environmental Summary report for your area of interest consists of introductory and related materials in this PDF and an Excel workbook with worksheets summarizing information managed in the Montana Natural Heritage Program's (MTNHP) databases for: (1) species occurrences; (2) other observed species without Species Occurrences; (3) other species potentially present based on their range, presence of associated habitats, or predictive distribution model output if available; (4) structured surveys (organized efforts following a protocol capable of detecting one or more species); (5) land cover mapped as ecological systems; (6) wetland and riparian mapping; (7) land management categories; and (8) biological reports associated with plant and animal observations. In order to do this in a consistent manner across Montana and allow for rapid delivery of summaries, we have intersected this information with a uniform grid of hexagons that have been used for planning efforts across the western United States (e.g. Western Association of Fish and Wildlife Agencies - [Crucial Habitat Assessment Tool](#)). Each hexagon is one square mile in area and approximately one kilometer in length on each side. Summary information for each data layer is then stored with each hexagon and those summaries are added up to an overall summary for the report area you have requested. Users should be aware that summaries do not correspond to the exact boundaries of the polygon they have specified, but instead are a summary across all hexagons intersected by the polygon they specified.

In presenting this information, MTNHP is working towards assisting the user with rapidly assessing the known or potential species and biological communities, land management categories, and biological reports associated with the report area. We remind users that this information is likely incomplete and may be inaccurate as surveys to document species are lacking in many areas of the state, species' range polygons often include regions of unsuitable habitat, methods of predicting the presence of species or communities are constantly improving, and information is constantly being added and updated in our databases. **Field verification by professional biologists of the absence or presence of species and biological communities in a report area will always be an important obligation of users of our data. Users are encouraged to only use this environmental summary report as a starting point for more in depth analyses and are encouraged to contact state, federal, and tribal resource management agencies for additional data or management guidelines relevant to your efforts. Please see the Appendix for introductory materials to each section of the report, additional information resources, and a list of relevant agency contacts.**



MONTANA
Natural Heritage
Program

Apogram of the Montana State Library's
Natural Resource Information System
operated by the University of Montana.

Legend

Model Icons

- Suitable (native range)
- Optimal Suitability
- Moderate Suitability
- Low Suitability
- Suitable (introduced range)

Habitat Icons

- Common
- Occasional

Range Icons

- Introduced
- Year-round
- Summer
- Winter
- Migratory
- Historic

Num Obs

Count of obs with
'good precision'
(<=1000m)
+ indicates
additional 'poor
precision' obs
(1001m-10,000m)



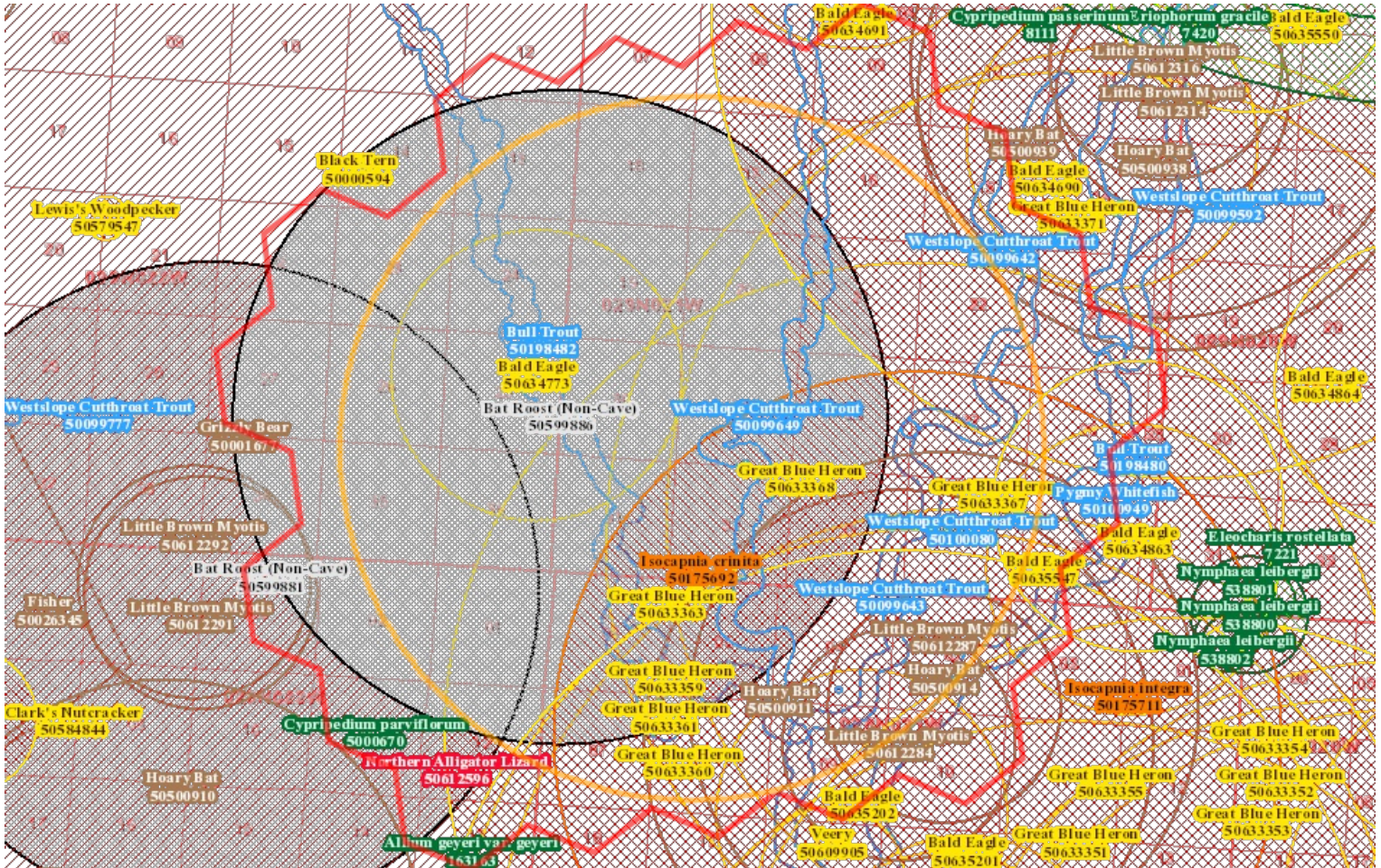
Latitude 48.18657
Longitude -114.22329
48.30067 -114.38901

Native Species

Summarized by: **21mdt0006 WestReserveDrive Kalispell (Custom Area of Interest)**

Filtered by:

MT_Status='Species of Concern', 'Special Status', 'Important Animal Habitat', 'Potential SOC'



Species Occurrences

	USFWS	Sec7	# SO	# Obs	Predictive Model	Associated Habitat	Range
<input checked="" type="checkbox"/> F - Bull Trout (<i>Salvelinus confluentus</i>) SOC		7	2	1 +		Not Assigned	Y
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S2 USFWS: LT; CH USFS: Threatened, Critical Habitat on Forests (BD, BRT, HLC, KOOT, LOLO) BLM: THREATENED FWP SWAP: SGCN2 Delineation Criteria Stream reaches and standing water bodies where the species is believed to be present based on the professional judgement of a fisheries biologist, potentially supported by habitat assessment, direct capture, or confirmed presence in adjacent areas. In order to reflect the importance of adjacent terrestrial habitats to survival, stream reaches are buffered 100 meters, standing water bodies greater than 1 acre are buffered 50 meters, and standing water bodies less than 1 acre are buffered 30 meters into the terrestrial habitat based on PACFISH/INFISH Riparian Conservation Area standards. (Last Updated: Mar 30, 2018) Predictive Models: ■ 55% Suitable (native range) (deductive)							
<input checked="" type="checkbox"/> F - Westslope Cutthroat Trout (<i>Oncorhynchus clarkii lewisi</i>) SOC			6	7 +		Not Assigned	Y
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5T4 State: S2 USFS: Sensitive - Known on Forests (BD, BRT, CG, HLC, KOOT, LOLO) BLM: SENSITIVE FWP SWAP: SGCN2 Delineation Criteria Stream reaches and standing water bodies where the species presence has been confirmed through direct capture or where they are believed to be present based on the professional judgement of a fisheries biologist due to confirmed presence in adjacent areas. In order to reflect the importance of adjacent terrestrial habitats to survival, stream reaches are buffered 100 meters, standing water bodies greater than 1 acre are buffered 50 meters, and standing water bodies less than 1 acre are buffered 30 meters into the terrestrial habitat based on PACFISH/INFISH Riparian Conservation Area standards. (Last Updated: Sep 15, 2020) Predictive Models: ■ 45% Suitable (native range) (deductive)							

F - Pygmy Whitefish (<i>Prosopium coulteri</i>) SOC	1		Not Assigned	Y
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S3 FWP SWAP: SGCN3, SGIN Delineation Criteria Standing water bodies where the species presence has been confirmed through direct capture or where they are believed to be present based on the professional judgement of a fisheries biologist due to confirmed presence in adjacent areas. In order to reflect the importance of adjacent terrestrial habitats to survival, standing water bodies greater than 1 acre are buffered 50 meters, and standing water bodies less than 1 acre are buffered 30 meters into the terrestrial habitat based on PACFISH/INFISH Riparian Conservation Area standards. (Last Updated: May 08, 2015) Predictive Models: <input checked="" type="checkbox"/> 12% Suitable (native range) (deductive)				
B - Great Blue Heron (<i>Ardea herodias</i>) SOC	9	8 +		Y S M
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3 USFWS: MBTA FWP SWAP: SGCN3 Delineation Criteria Confirmed nesting area buffered by a minimum distance of 6,500 meters in order to be conservative about encompassing the areas commonly used for foraging near the breeding colony and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. (Last Updated: Mar 24, 2020) Predictive Models: <input checked="" type="checkbox"/> 10% Optimal (inductive), <input checked="" type="checkbox"/> 69% Moderate (inductive), <input type="checkbox"/> 21% Low (inductive) Associated Habitats: <input checked="" type="checkbox"/> 6% Common				
M - Little Brown Myotis (<i>Myotis lucifugus</i>) SOC	4	2		Y
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G3 State: S3 FWP SWAP: SGCN3 Delineation Criteria Confirmed area of occupancy based on the documented presence (mistnet captures, definitively identified acoustic recordings, or definitively identified roosting individuals) of adults or juveniles. Point observation location is buffered by a distance of 1,600 meters in order to encompass the greater than 1,500 meters foraging distance reported for the species in New Brunswick, Canada and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. When cave locations are involved, point observations are mapped in the center of a one-square mile hexagon to protect the exact location of the cave entrance as per the Federal Cave Resource Protection Act and associated regulations (U.S. Code Title 16 Chapter 63, Code of Federal Regulations Title 43 Subtitle A Part 37). The outer edges of the hexagon are then buffered by a distance of 1,600 meters and otherwise by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. All of the one-square mile hexagons intersecting this buffered area are presented as the Species Occurrence record. (Last Updated: Jan 03, 2020) Predictive Models: <input checked="" type="checkbox"/> 64% Moderate (inductive), <input type="checkbox"/> 36% Low (inductive) Associated Habitats: <input checked="" type="checkbox"/> 48% Common, <input type="checkbox"/> 52% Occasional				
B - Bald Eagle (<i>Haliaeetus leucocephalus</i>) SSS	6	37 +		Y
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Special Status Species - Native Species Global: G5 State: S4 USFWS: DM; BGEPA; MBTA; BCC10; BCC11; BCC17 USFS: Sensitive - Known on Forests (BD, BRT, CG, HLC, KOOT, LOLO) BLM: SENSITIVE PIF: 2 Delineation Criteria Confirmed nesting area buffered by a minimum distance of 2,000 meters in order to be conservative about encompassing the breeding territory and area commonly used for re-nesting and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. (Last Updated: Mar 30, 2020) Predictive Models: <input checked="" type="checkbox"/> 57% Moderate (inductive), <input type="checkbox"/> 38% Low (inductive) Associated Habitats: <input checked="" type="checkbox"/> 9% Common, <input type="checkbox"/> 22% Occasional				
B - Veery (<i>Catharus fuscescens</i>) SOC	1	1		S M
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2 Delineation Criteria Observations with evidence of breeding activity buffered by a minimum distance of 300 meters in order to be conservative about encompassing home ranges and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. (Last Updated: Jan 03, 2020) Predictive Models: <input checked="" type="checkbox"/> 31% Moderate (inductive), <input type="checkbox"/> 57% Low (inductive) Associated Habitats: <input checked="" type="checkbox"/> 5% Common, <input type="checkbox"/> 1% Occasional				
M - Hoary Bat (<i>Lasiurus cinereus</i>) SOC	5	2		S M
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G3G4 State: S3 BLM: SENSITIVE FWP SWAP: SGCN3 Delineation Criteria Confirmed area of occupancy based on the documented presence (mistnet captures, definitively identified acoustic recordings, and definitively identified roosting individuals) of adults or juveniles during the active season. Point observation location is buffered by a minimum distance of 3,500 meters in order to be conservative about encompassing the maximum reported foraging distance for the congeneric <i>Lasiurus borealis</i> and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. (Last Updated: May 14, 2019) Predictive Models: <input checked="" type="checkbox"/> 26% Moderate (inductive), <input type="checkbox"/> 71% Low (inductive) Associated Habitats: <input checked="" type="checkbox"/> 26% Common, <input type="checkbox"/> 66% Occasional				
M - Grizzly Bear (<i>Ursus arctos</i>) SOC	7	1	+	Y
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G4 State: S2S3 USFWS: PS; LT; XN USFS: Threatened on Forests (BD, CG, HLC, KOOT, LOLO) BLM: THREATENED FWP SWAP: SGCN2-3 Delineation Criteria Species Occurrence polygons represent the greatest extent of 1) Recovery Zone Boundaries, 2) Demographic Monitoring Areas, and 3) Current Known Distribution within Montana as defined in the 2018 Grizzly Bear Recovery Program annual report. This includes the Bitterroot Recovery Zone, which is not currently occupied by a resident population of Grizzly Bears. (Last Updated: Jul 05, 2019) Predictive Models: <input type="checkbox"/> 98% Low (inductive) Associated Habitats: <input checked="" type="checkbox"/> 23% Common				
R - Northern Alligator Lizard (<i>Elgaria coerulea</i>) SOC	1	1		Y
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3 FWP SWAP: SGCN3, SGIN Delineation Criteria Confirmed breeding area based on the presence of a resident animal of any age. Point observation location is buffered by a minimum distance of 200 meters in order to encompass habitats supporting other individuals and probable maximum home range sizes. Otherwise the point observation is buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. (Last Updated: Jan 03, 2020) Predictive Models: <input type="checkbox"/> 52% Low (inductive) Associated Habitats: <input checked="" type="checkbox"/> 6% Common, <input type="checkbox"/> 40% Occasional				
I - Isocapnia integra (<i>Alberta Snowfly</i>) SOC	1	+	Not Available Not Assigned	Y

[View in Field Guide](#) [View Range Maps](#)

[Species of Concern - Native Species](#) Global: **G4G5** State: **S2**

Delineation Criteria Confirmed breeding area based on the presence of a resident animal of any age. Point observation location is buffered by a minimum distance of 100 meters in order to encompass the home range of the individual as well as adjacent habitat likely to support other individuals and otherwise is buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. (Last Updated: Mar 22, 2016)

V - Allium geyeri var. geyeri (*Geyer's Onion*) **SOC** 1 1 Not Available Not Assigned **Y**

[View in Field Guide](#) [View Range Maps](#)

[Species of Concern - Native Species](#) Global: **G4G5T4** State: **S3**

V - Cypripedium parviflorum (*Small Yellow Lady's-slipper*) **PSOC** 1 2 Not Available Not Assigned **Y**

[View in Field Guide](#) [View Range Maps](#)

[Potential Species of Concern - Native Species](#) Global: **G5** State: **S3S4** USFS: **Sensitive - Known on Forests (CG, HLC, KOOT, LOLO)** **Sensitive - Suspected on Forests (BRT)** MNPS: **2**

I - Isocapnia crinita (*Hooked Snowfly*) **SOC** 1 + Not Available Not Assigned

[View in Field Guide](#)

[Species of Concern - Native Species](#) Global: **G5** State: **S2**

Delineation Criteria Confirmed breeding area based on the presence of a resident animal of any age. Point observation location is buffered by a minimum distance of 100 meters in order to encompass the home range of the individual as well as adjacent habitat likely to support other individuals and otherwise is buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. (Last Updated: Mar 22, 2016)

O - Bat Roost (Non-Cave) (*Bat Roost (Non-Cave)*) **IAH** 2 Not Available Not Assigned

[View in Field Guide](#)

[Important Animal Habitat - Native Species](#) Global: **GNR** State: **SNR**

Delineation Criteria Confirmed area of occupancy based on the documented presence of adults or juveniles of any bat species at non-cave natural roost sites (e.g. rock outcrops, trees), below ground human created roost sites (e.g. mines), and above ground human created roost sites (e.g., bridges, buildings). Point observation locations are buffered by a distance of 4,500 meters in order to encompass the 95% confidence interval for nightly foraging distance reported for Townsend's Big-eared Bat (a resident Montana bat Species of Concern) and otherwise by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. (Last Updated: Oct 22, 2019)



MONTANA
Natural Heritage
Program

A program of the Montana State Library's
Natural Resource Information System
operated by the University of Montana.

Legend			
Model Icons	Habitat Icons	Range Icons	Num Obs
Suitable (native range)	Common	Introduced	Count of obs with 'good precision' (<=1000m)
Optimal Suitability	Occasional	Year-round	+ indicates additional 'poor precision' obs (1001m-10,000m)
Moderate Suitability		Summer	
Low Suitability		Winter	
Suitable (introduced range)		Migratory	
		Historic	



Latitude 48.18657
Longitude -114.22329
48.30067 -114.38901

Native Species

Summarized by: 21mdt0006 WestReserveDrive Kalispell (Custom Area of Interest)

Filtered by:

MT_Status='Species of Concern', 'Special Status', 'Important Animal Habitat', 'Potential SOC'

Other Observed Species

	USFWS Sec7	# Obs	Predictive Model	Associated Habitat	Range
<input type="checkbox"/> B - Hooded Merganser (<i>Lophodytes cucullatus</i>) PSOC		6 +			
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Potential Species of Concern - Native Species Global: G5 State: S4 USFWS: MBTA FWP SWAP: SGIN PIF: 2 Predictive Models: 40% Optimal (inductive), 60% Moderate (inductive) Associated Habitats: 8% Common, 1% Occasional					
<input type="checkbox"/> B - Rufous Hummingbird (<i>Selasphorus rufus</i>) PSOC		3			
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Potential Species of Concern - Native Species Global: G4 State: S4B USFWS: MBTA PIF: 3 Predictive Models: 2% Optimal (inductive), 76% Moderate (inductive), 21% Low (inductive) Associated Habitats: 47% Common, 7% Occasional					
<input type="checkbox"/> B - Barrow's Goldeneye (<i>Bucephala islandica</i>) PSOC		1 +			
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Potential Species of Concern - Native Species Global: G5 State: S4 USFWS: MBTA FWP SWAP: SGIN PIF: 2 Predictive Models: 95% Moderate (inductive), 5% Low (inductive) Associated Habitats: 8% Common					
<input type="checkbox"/> B - Bobolink (<i>Dolichonyx oryzivorus</i>) SOC		1			
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA FWP SWAP: SGCN3 PIF: 3 Predictive Models: 74% Moderate (inductive), 26% Low (inductive) Associated Habitats: 71% Common, 1% Occasional					
<input type="checkbox"/> V - Impatiens aurella (<i>Pale-yellow Jewel-weed</i>) SOC		1		Not Assigned	
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G4 State: S3 Predictive Models: 67% Moderate (inductive), 33% Low (inductive)					
<input type="checkbox"/> M - Silver-haired Bat (<i>Lasiorycteris noctivagans</i>) PSOC		2			
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Potential Species of Concern - Native Species Global: G3G4 State: S4 Predictive Models: 43% Moderate (inductive), 57% Low (inductive) Associated Habitats: 26% Common, 61% Occasional					
<input type="checkbox"/> B - Black Tern (<i>Chlidonias niger</i>) SOC		1 +			
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G4G5 State: S3B USFWS: MBTA; BCC11 BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2 Predictive Models: 36% Moderate (inductive), 64% Low (inductive) Associated Habitats: 2% Common, 2% Occasional					
<input type="checkbox"/> B - Pileated Woodpecker (<i>Dryocopus pileatus</i>) SOC		15 +			
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3 USFWS: MBTA FWP SWAP: SGCN3 PIF: 2 Predictive Models: 12% Moderate (inductive), 36% Low (inductive) Associated Habitats: 5% Common, 1% Occasional					
<input type="checkbox"/> B - Horned Grebe (<i>Podiceps auritus</i>) SOC		2 +			
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA; BCC11; BCC17 BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2 Predictive Models: 10% Moderate (inductive), 86% Low (inductive) Associated Habitats: 2% Common, 1% Occasional					
<input type="checkbox"/> B - Evening Grosbeak (<i>Coccothraustes vespertinus</i>) SOC		3 +			
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3 USFWS: MBTA FWP SWAP: SGCN3 Predictive Models: 7% Moderate (inductive), 60% Low (inductive) Associated Habitats: 29% Common, 1% Occasional					
<input type="checkbox"/> B - Golden Eagle (<i>Aquila chrysaetos</i>) SOC		+			
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3 USFWS: BGEPA; MBTA; BCC17 BLM: SENSITIVE FWP SWAP: SGCN3 Predictive Models: 62% Low (inductive) Associated Habitats: 21% Common, 31% Occasional					

<input type="checkbox"/> B - Varied Thrush (<i>Ixoreus naevius</i>) SOC	1 +				
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA FWP SWAP: SGCN3 PIF: 3 Predictive Models: 48% Low (inductive) Associated Habitats: 6% Common, 1% Occasional					
<input type="checkbox"/> B - Cassin's Finch (<i>Haemorhous cassinii</i>) SOC	2				
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3 USFWS: MBTA; BCC10 FWP SWAP: SGCN3 PIF: 3 Predictive Models: 48% Low (inductive) Associated Habitats: 5% Common					
<input type="checkbox"/> B - Pacific Wren (<i>Troglodytes pacificus</i>) SOC	+				
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3 USFWS: MBTA FWP SWAP: SGCN3 PIF: 2 Predictive Models: 33% Low (inductive) Associated Habitats: 5% Common, 1% Occasional					
<input type="checkbox"/> M - Fisher (<i>Pekania pennanti</i>) SOC	+				
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3 USFS: Sensitive - Known on Forests (BD, BRT, HLC, KOOT, LOLO) BLM: SENSITIVE FWP SWAP: SGCN3 Predictive Models: 24% Low (inductive) Associated Habitats: 5% Common, 2% Occasional					
<input type="checkbox"/> B - Great Gray Owl (<i>Strix nebulosa</i>) SOC	+				
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3 USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN3, SGIN PIF: 3 Predictive Models: 14% Low (inductive) Associated Habitats: 7% Common, 1% Occasional					
<input type="checkbox"/> B - Brown Creeper (<i>Certhia americana</i>) SOC	3 +				
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3 USFWS: MBTA FWP SWAP: SGCN3 PIF: 1 Predictive Models: 12% Low (inductive) Associated Habitats: 5% Common, 1% Occasional					
<input type="checkbox"/> B - Black Swift (<i>Cypseloides niger</i>) SOC	3				
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G4 State: S1B USFWS: MBTA; BCC10 USFS: Species of Conservation Concern on Forests (FLAT) FWP SWAP: SGCN1, SGIN PIF: 2 Predictive Models: 12% Low (inductive) Associated Habitats: 2% Common					
<input type="checkbox"/> B - Peregrine Falcon (<i>Falco peregrinus</i>) SOC	1				
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G4 State: S3 USFWS: DM; MBTA; BCC10; BCC11; BCC17 USFS: Sensitive - Known on Forests (BD, BRT, CG, HLC, KOOT, LOLO) BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2 Predictive Models: 5% Low (inductive) Associated Habitats: 24% Common, 1% Occasional					
<input type="checkbox"/> F - Lake Trout (<i>Salvelinus namaycush</i>) SOC	+		Not Assigned		
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S2 FWP SWAP: SGCN2 Predictive Models: 33% Suitable (introduced range) (deductive)					
<input type="checkbox"/> B - Trumpeter Swan (<i>Cygnus buccinator</i>) SOC	5	Not Available			
View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G4 State: S3 USFWS: MBTA USFS: Sensitive - Known on Forests (BD, CG) BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 1 Associated Habitats: 8% Common, 1% Occasional					
<input type="checkbox"/> I - Ophiogomphus occidentis (<i>Sinuus Snaketail</i>) PSOC	1	Not Available			
View in Field Guide View Associated Habitat View Range Maps Potential Species of Concern - Native Species Global: G5 State: S2S4 Associated Habitats: 7% Common					
<input type="checkbox"/> I - Rhionaeschna multicolor (<i>Blue-eyed Darter</i>) PSOC	1	Not Available			
View in Field Guide View Associated Habitat View Range Maps Potential Species of Concern - Native Species Global: G5 State: S2S4 Associated Habitats: 2% Common					
<input type="checkbox"/> B - American White Pelican (<i>Pelecanus erythrorhynchos</i>) SOC	1	Not Available			
View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G4 State: S3B USFWS: MBTA FWP SWAP: SGCN3 PIF: 3 Associated Habitats: 2% Common					



MONTANA
**Natural Heritage
Program**

A program of the Montana State Library's
Natural Resource Information System
operated by the University of Montana.

Legend			
Model Icons	Habitat Icons	Range Icons	Num Obs
Suitable (native range)	Common	Introduced	Count of obs with 'good precision' (<=1000m)
Optimal Suitability	Occasional	Year-round	+ indicates additional 'poor precision' obs (1001m-10,000m)
Moderate Suitability		Summer	
Low Suitability		Winter	
Suitable (introduced range)		Migratory	
		Historic	



Latitude 48.18657 Longitude -114.22329
48.30067 -114.38901

Native Species

Summarized by: **21mdt0006 WestReserveDrive Kalispell** (*Custom Area of Interest*)

Filtered by:

MT_Status='Species of Concern', 'Special Status', 'Important Animal Habitat', 'Potential SOC'

Other Potential Species

	USFWS Sec7	Predictive Model	Associated Habitat	Range
V - Carex scoparia (<i>Pointed Broom Sedge</i>) SOC			Not Assigned	
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S1S2 Predictive Models: 38% Optimal (inductive), 60% Moderate (inductive), 2% Low (inductive)				
B - Lewis's Woodpecker (<i>Melanerpes lewis</i>) SOC				
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G4 State: S2B USFWS: MBTA; BCC10; BCC17 BLM: SENSITIVE FWP SWAP: SGCN2 PIF: 2 Predictive Models: 12% Optimal (inductive), 50% Moderate (inductive), 38% Low (inductive) Associated Habitats: 5% Common, 1% Occasional				
B - Western Screech-Owl (<i>Megascops kennicottii</i>) PSOC				
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Potential Species of Concern - Native Species Global: G4G5 State: S3S4 USFWS: MBTA FWP SWAP: SGIN PIF: 3 Predictive Models: 2% Optimal (inductive), 62% Moderate (inductive), 31% Low (inductive) Associated Habitats: 23% Common, 1% Occasional				
V - Carex crawei (<i>Crawe's Sedge</i>) SOC			Not Assigned	
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S2S3 MNPS: 2 Predictive Models: 100% Moderate (inductive), 0% Low (inductive)				
V - Eleocharis rostellata (<i>Beaked Spikerush</i>) SOC				
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3 USFS: Sensitive - Known on Forests (BD, CG, HLC) Species of Conservation Concern on Forests (FLAT) MNPS: 3 Predictive Models: 100% Moderate (inductive), 0% Low (inductive) Associated Habitats: 1% Common				
V - Utricularia intermedia (<i>Flatleaf Bladderwort</i>) SOC				
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S2 USFS: Sensitive - Known on Forests (KOOT) MNPS: 3 Predictive Models: 100% Moderate (inductive) Associated Habitats: 1% Common				
V - Psilocarphus brevissimus (<i>Dwarf woolly-heads</i>) SOC			Not Assigned	
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G4 State: S2S3 USFS: Sensitive - Known on Forests (KOOT) MNPS: 3 Predictive Models: 100% Moderate (inductive)				
B - American Bittern (<i>Botaurus lentiginosus</i>) SOC				
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA; BCC11; BCC17 BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 3 Predictive Models: 86% Moderate (inductive), 14% Low (inductive) Associated Habitats: 6% Common				
M - Porcupine (<i>Erethizon dorsatum</i>) PSOC				
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Potential Species of Concern - Native Species Global: G5 State: S4 FWP SWAP: SGIN Predictive Models: 83% Moderate (inductive), 17% Low (inductive) Associated Habitats: 44% Common				
B - Short-eared Owl (<i>Asio flammeus</i>) PSOC				
View in Field Guide View Predicted Models View Associated Habitat View Range Maps Potential Species of Concern - Native Species Global: G5 State: S4 USFWS: MBTA; BCC11; BCC17 PIF: 3 Predictive Models: 71% Moderate (inductive), 29% Low (inductive) Associated Habitats: 52% Common, 14% Occasional				
M - Water Vole (<i>Microtus richardsoni</i>) PSOC				

	View in Field Guide View Predicted Models View Associated Habitat View Range Maps Potential Species of Concern - Native Species Global: G5 State: S4 Predictive Models: 57% Moderate (inductive), 26% Low (inductive) Associated Habitats: 5% Common, 1% Occasional	
<input type="checkbox"/>	B - Long-billed Curlew (<i>Numenius americanus</i>) SOC	
	View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA; BCC10; BCC11; BCC17 BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2 Predictive Models: 48% Moderate (inductive), 52% Low (inductive) Associated Habitats: 16% Common, 7% Occasional	
<input type="checkbox"/>	M - Townsend's Big-eared Bat (<i>Corynorhinus townsendii</i>) SOC	
	View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G4 State: S3 USFS: Sensitive - Known on Forests (BD, BRT, CG, HLC, KOOT, LOLO) BLM: SENSITIVE FWP SWAP: SGCN3 Predictive Models: 45% Moderate (inductive), 52% Low (inductive) Associated Habitats: 24% Common, 24% Occasional	
<input type="checkbox"/>	A - Western Toad (<i>Anaxyrus boreas</i>) SOC	
	View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G4 State: S2 USFS: Sensitive - Known on Forests (BD, BRT, CG, HLC, KOOT, LOLO) BLM: SENSITIVE FWP SWAP: SGCN2 Predictive Models: 40% Moderate (inductive), 60% Low (inductive) Associated Habitats: 11% Common, 45% Occasional	
<input type="checkbox"/>	M - Fringed Myotis (<i>Myotis thysanodes</i>) SOC	
	View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G4 State: S3 BLM: SENSITIVE FWP SWAP: SGCN3 Predictive Models: 38% Moderate (inductive), 60% Low (inductive) Associated Habitats: 25% Common, 33% Occasional	
<input type="checkbox"/>	V - Epipactis gigantea (<i>Giant Helleborine</i>) SOC	
	View in Field Guide View Predicted Models View Range Maps USFS: Sensitive - Known on Forests (BD, HLC, LOLO) Sensitive - Suspected on Forests (BRT, CG, KOOT) Species of Conservation Concern on Forests (FLAT) MNPS: 2 Predictive Models: 19% Moderate (inductive), 31% Low (inductive)	
<input type="checkbox"/>	V - Trichophorum cespitosum (<i>Tufted Club-rush</i>) SOC	
	View in Field Guide View Predicted Models View Associated Habitat View Range Maps USFS: Sensitive - Known on Forests (BD, HLC, KOOT) Species of Conservation Concern on Forests (FLAT) MNPS: 3 Predictive Models: 17% Moderate (inductive), 43% Low (inductive) Associated Habitats: 2% Common	
<input type="checkbox"/>	M - Yuma Myotis (<i>Myotis yumanensis</i>) SOC	
	View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3 FWP SWAP: SGIN Predictive Models: 14% Moderate (inductive), 79% Low (inductive) Associated Habitats: 39% Common, 10% Occasional	
<input type="checkbox"/>	V - Petasites frigidus var. frigidus (<i>Arctic Sweet Coltsfoot</i>) SOC	
	View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5T5 State: S2 USFS: Species of Conservation Concern on Forests (FLAT) MNPS: 2 Predictive Models: 14% Moderate (inductive), 21% Low (inductive) Associated Habitats: 5% Common	
<input type="checkbox"/>	V - Schoenoplectus subterminalis (<i>Water Bulrush</i>) SOC	
	View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3 USFS: Sensitive - Known on Forests (HLC, KOOT, LOLO) MNPS: 2 Predictive Models: 12% Moderate (inductive), 88% Low (inductive) Associated Habitats: 2% Common	
<input type="checkbox"/>	B - Meesia triquetra (<i>Meesia Moss</i>) SOC	
	View in Field Guide View Predicted Models View Range Maps USFS: Sensitive - Known on Forests (BRT, CG, KOOT) Sensitive - Suspected on Forests (LOLO) Species of Conservation Concern on Forests (FLAT) Predictive Models: 12% Moderate (inductive), 86% Low (inductive)	
<input type="checkbox"/>	V - Elodea bifoliata (<i>Long-sheath Waterweed</i>) SOC	
	View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G4G5 State: S2? MNPS: 3 Predictive Models: 12% Moderate (inductive), 83% Low (inductive) Associated Habitats: 2% Common	
<input type="checkbox"/>	B - Yellow-billed Cuckoo (<i>Coccyzus americanus</i>) SOC	
	View in Field Guide View Predicted Models View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3B USFWS: PS: LT; MBTA; BCC10 USFS: Threatened on Forests (BRT, LOLO) BLM: THREATENED FWP SWAP: SGCN3, SGIN PIF: 2 Predictive Models: 12% Moderate (inductive), 60% Low (inductive) Associated Habitats: 5% Common	
<input type="checkbox"/>	V - Potamogeton obtusifolius (<i>Blunt-leaved Pondweed</i>) SOC	

View in Field Guide View Predicted Models View Associated Habitat View Range Maps		USFS: Sensitive - Known on Forests (HLC)	
Species of Concern - Native Species Global: G5 State: S3 Sensitive - Suspected on Forests (LOLO) MNPS: 2			
Predictive Models: 12% Moderate (inductive), 19% Low (inductive) Associated Habitats: 2% Common			
B - Tennessee Warbler (<i>Leiothlypis peregrina</i>) PSOC			
View in Field Guide View Predicted Models View Associated Habitat View Range Maps			
Potential Species of Concern - Native Species Global: G5 State: S3S4B USFWS: MBTA			
Predictive Models: 12% Moderate (inductive), 12% Low (inductive) Associated Habitats: 5% Common			
V - Mimulus ampliatus (<i>Stalk-leaved Monkeyflower</i>) SOC		Not Assigned	
View in Field Guide View Predicted Models View Range Maps			
Species of Concern - Native Species Global: G3 State: S3 USFS: Sensitive - Known on Forests (KOOT)			
Predictive Models: 10% Moderate (inductive), 7% Low (inductive)			
V - Dryopteris cristata (<i>Crested Shieldfern</i>) SOC			
View in Field Guide View Predicted Models View Associated Habitat View Range Maps			
Species of Concern - Native Species Global: G5 State: S3 USFS: Sensitive - Known on Forests (BRT, KOOT, LOLO)		Species of Conservation Concern on Forests (FLAT) MNPS: 3	
Predictive Models: 5% Moderate (inductive), 5% Low (inductive) Associated Habitats: 1% Common			
V - Silene spaldingii (<i>Spalding's Catchfly</i>) SOC		7	
View in Field Guide View Predicted Models View Associated Habitat View Range Maps			
Species of Concern - Native Species Global: G2 State: S2 USFWS: LT USFS: Threatened on Forests (KOOT, LOLO) MNPS: 1			
Predictive Models: 2% Moderate (inductive), 90% Low (inductive) Associated Habitats: 16% Common, 1% Occasional			
V - Brasenia schreberi (<i>Watershield</i>) SOC			
View in Field Guide View Predicted Models View Associated Habitat View Range Maps			
Species of Concern - Native Species Global: G5 State: S1S2 USFS: Sensitive - Known on Forests (KOOT, LOLO) MNPS: 4			
Predictive Models: 2% Moderate (inductive), 17% Low (inductive) Associated Habitats: 2% Common			
V - Lobelia kalmii (<i>Kalm's Lobelia</i>) SOC		Not Assigned	
View in Field Guide View Predicted Models View Range Maps			
Species of Concern - Native Species Global: G5 State: S3			
Predictive Models: 2% Moderate (inductive), 12% Low (inductive)			
B - Brewer's Sparrow (<i>Spizella breweri</i>) SOC		Not Assigned	
View in Field Guide View Predicted Models View Range Maps			
Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA; BCC10; BCC17 BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2			
Predictive Models: 100% Low (inductive)			
B - Clark's Nutcracker (<i>Nucifraga columbiana</i>) SOC			
View in Field Guide View Predicted Models View Associated Habitat View Range Maps			
Species of Concern - Native Species Global: G5 State: S3 USFWS: MBTA USFS: Species of Conservation Concern on Forests (FLAT)		FWP SWAP: SGCN3 PIF: 3	
Predictive Models: 62% Low (inductive) Associated Habitats: 7% Common			
B - Black-backed Woodpecker (<i>Picoides arcticus</i>) SOC			
View in Field Guide View Predicted Models View Associated Habitat View Range Maps			
Species of Concern - Native Species Global: G5 State: S3 USFWS: MBTA		USFS: Sensitive - Known on Forests (BD, BRT, CG, HLC, KOOT, LOLO) BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 1	
Predictive Models: 62% Low (inductive) Associated Habitats: 5% Common			
M - Canada Lynx (<i>Lynx canadensis</i>) SOC		7	
View in Field Guide View Predicted Models View Associated Habitat View Range Maps			
Species of Concern - Native Species Global: G5 State: S3 USFWS: LT; CH USFS: Threatened on Forests (BD, BRT)		Threatened, Critical Habitat on Forests (CG, HLC, KOOT, LOLO)	
BLM: THREATENED FWP SWAP: SGCN3			
Predictive Models: 60% Low (inductive) Associated Habitats: 5% Common, 1% Occasional			
A - Northern Leopard Frog (<i>Lithobates pipiens</i>) SOC			
View in Field Guide View Predicted Models View Associated Habitat View Range Maps			
Species of Concern - Native Species Global: G5 State: S1,S4 USFS: Sensitive - Known on Forests (CG, HLC, KOOT)		Sensitive - Suspected on Forests (BRT, LOLO) BLM: SENSITIVE	
FWP SWAP: SGCN1			
Predictive Models: 45% Low (inductive) Associated Habitats: 2% Common, 14% Occasional			
B - Scorpidium scorpioides (<i>A Scorpidium Moss</i>) SOC		Not Assigned	
View in Field Guide View Predicted Models View Range Maps			
Species of Concern - Native Species Global: G5 State: S2 USFS: Sensitive - Known on Forests (HLC, KOOT)		Species of Conservation Concern on Forests (FLAT)	
Predictive Models: 40% Low (inductive)			
V - Botrychium hesperium (<i>Western Moonwort</i>) SOC		Not Assigned	

View in Field Guide	View Predicted Models	View Range Maps			
Species of Concern - Native Species Global: G4 State: S3 USFS: Sensitive - Known on Forests (BD, KOOT) MNPS: 2					
Predictive Models: <input type="checkbox"/> 36% Low (inductive)					
R - Western Skink (<i>Plestiodon skiltonianus</i>) SOC <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>					
View in Field Guide	View Predicted Models	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G5 State: S3 FWP SWAP: SGCN3, SGIN					
Predictive Models: <input type="checkbox"/> 31% Low (inductive) Associated Habitats: <input checked="" type="checkbox"/> 21% Common, <input type="checkbox"/> 1% Occasional					
V - Centunculus minimus (<i>Chaffweed</i>) SOC <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>					
View in Field Guide	View Predicted Models	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G5 State: S2					
Predictive Models: <input type="checkbox"/> 24% Low (inductive) Associated Habitats: <input checked="" type="checkbox"/> 1% Common					
M - Wolverine (<i>Gulo gulo</i>) SOC <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>					
View in Field Guide	View Predicted Models	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G4 State: S3 USFWS: P USFS: Proposed on Forests (BD, BRT, CG, HLC, KOOT, LOLO)					
BLM: SENSITIVE FWP SWAP: SGCN3					
Predictive Models: <input type="checkbox"/> 21% Low (inductive) Associated Habitats: <input checked="" type="checkbox"/> 3% Common, <input type="checkbox"/> 5% Occasional					
L - Collema curtisporum (<i>Pustulate Tarpaper Lichen</i>) SOC <input type="checkbox"/> Not Assigned <input type="checkbox"/>					
View in Field Guide	View Predicted Models	View Range Maps			
Species of Concern - Native Species Global: G3 State: S1 USFS: Sensitive - Known on Forests (KOOT) Species of Conservation Concern on Forests (FLAT)					
Predictive Models: <input type="checkbox"/> 21% Low (inductive)					
V - Carex chordorrhiza (<i>Creeping Sedge</i>) SOC <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>					
View in Field Guide	View Predicted Models	View Associated Habitat	View Range Maps		
USFS: Sensitive - Known on Forests (KOOT) Sensitive - Suspected on Forests (LOLO)					
Species of Concern - Native Species Global: G5 State: S3 Species of Conservation Concern on Forests (FLAT) MNPS: 3					
Predictive Models: <input type="checkbox"/> 14% Low (inductive) Associated Habitats: <input checked="" type="checkbox"/> 1% Common					
V - Scheuchzeria palustris (<i>Pod Grass</i>) SOC <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>					
View in Field Guide	View Predicted Models	View Associated Habitat	View Range Maps		
USFS: Sensitive - Known on Forests (BD, KOOT, LOLO) Sensitive - Suspected on Forests (BRT) MNPS: 2					
Species of Concern - Native Species Global: G5 State: S3 Species of Conservation Concern on Forests (FLAT) MNPS: 2					
Predictive Models: <input type="checkbox"/> 14% Low (inductive) Associated Habitats: <input checked="" type="checkbox"/> 1% Common					
V - Botrychium michiganense (<i>Michigan Moonwort</i>) SOC <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>					
View in Field Guide	View Predicted Models	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G3 State: S2					
Predictive Models: <input type="checkbox"/> 12% Low (inductive) Associated Habitats: <input checked="" type="checkbox"/> 1% Common					
M - Northern Bog Lemming (<i>Synaptomys borealis</i>) SOC <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>					
View in Field Guide	View Predicted Models	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G5 State: S2 USFS: Sensitive - Known on Forests (BD, BRT, HLC, KOOT, LOLO)					
FWP SWAP: SGCN2, SGIN					
Predictive Models: <input type="checkbox"/> 10% Low (inductive) Associated Habitats: <input checked="" type="checkbox"/> 6% Common, <input type="checkbox"/> 1% Occasional					
M - Hoary Marmot (<i>Marmota caligata</i>) PSOC <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>					
View in Field Guide	View Predicted Models	View Associated Habitat	View Range Maps		
Potential Species of Concern - Native Species Global: G5 State: S3S4 FWP SWAP: SGIN					
Predictive Models: <input type="checkbox"/> 10% Low (inductive) Associated Habitats: <input checked="" type="checkbox"/> 2% Common					
V - Eriophorum gracile (<i>Slender Cottongrass</i>) SOC <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>					
View in Field Guide	View Predicted Models	View Associated Habitat	View Range Maps		
USFS: Sensitive - Known on Forests (CG, KOOT) Species of Conservation Concern on Forests (FLAT) MNPS: 2					
Species of Concern - Native Species Global: G5 State: S3 Species of Conservation Concern on Forests (FLAT) MNPS: 2					
Predictive Models: <input type="checkbox"/> 10% Low (inductive) Associated Habitats: <input checked="" type="checkbox"/> 1% Common					
V - Lycopodium inundatum (<i>Northern Bog Clubmoss</i>) SOC <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>					
View in Field Guide	View Predicted Models	View Associated Habitat	View Range Maps		
USFS: Sensitive - Suspected on Forests (KOOT) Species of Conservation Concern on Forests (FLAT) MNPS: 3					
Species of Concern - Native Species Global: G5 State: S2 Species of Conservation Concern on Forests (FLAT) MNPS: 3					
Predictive Models: <input type="checkbox"/> 10% Low (inductive) Associated Habitats: <input checked="" type="checkbox"/> 1% Common					
V - Ophioglossum pusillum (<i>Adder's Tongue</i>) SOC <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>					
View in Field Guide	View Predicted Models	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G5 State: S3 USFS: Sensitive - Known on Forests (KOOT) MNPS: 3					
Predictive Models: <input type="checkbox"/> 7% Low (inductive) Associated Habitats: <input checked="" type="checkbox"/> 2% Common, <input type="checkbox"/> 5% Occasional					
R - Snapping Turtle (<i>Chelydra serpentina</i>) SOC <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>					

View in Field Guide	View Predicted Models	View Associated Habitat	View Range Maps	
Species of Concern - Native Species Global: G5 State: S3 BLM: SENSITIVE FWP SWAP: SGCN3, SGIN				
Predictive Models: <input type="checkbox"/> 7% Suitable (introduced range) (deductive) Associated Habitats: <input checked="" type="checkbox"/> 2% Common				
<input type="checkbox"/> B - Loggerhead Shrike (<i>Lanius ludovicianus</i>) SOC			Not Available <input type="checkbox"/>	M
View in Field Guide	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G4 State: S3B USFWS: MBTA; BCC10; BCC17 BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2				
Associated Habitats: <input checked="" type="checkbox"/> 38% Common, <input type="checkbox"/> 33% Occasional				
<input type="checkbox"/> M - Western Pygmy Shrew (<i>Sorex eximius</i>) SOC			Not Available <input type="checkbox"/>	Y
View in Field Guide	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: GNR State: S3 FWP SWAP: SGCN3				
Associated Habitats: <input checked="" type="checkbox"/> 30% Common				
<input type="checkbox"/> M - Bison (<i>Bos bison</i>) SOC			Not Available <input type="checkbox"/>	H
View in Field Guide	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G4 State: S2 FWP SWAP: SGCN2				
Associated Habitats: <input checked="" type="checkbox"/> 23% Common, <input type="checkbox"/> 1% Occasional				
<input type="checkbox"/> B - Ferruginous Hawk (<i>Buteo regalis</i>) SOC			Not Available <input type="checkbox"/>	M
View in Field Guide	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G4 State: S3B USFWS: MBTA; BCC10; BCC17 BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2				
Associated Habitats: <input checked="" type="checkbox"/> 18% Common, <input type="checkbox"/> 1% Occasional				
<input type="checkbox"/> B - Sharp-tailed Grouse (<i>Tympanuchus phasianellus</i>) SOC			Not Available <input type="checkbox"/>	H
View in Field Guide	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G5 State: SX,S4 FWP SWAP: SGCN1 PIF: 2				
Associated Habitats: <input checked="" type="checkbox"/> 16% Common, <input type="checkbox"/> 36% Occasional				
<input type="checkbox"/> V - Botrychium pallidum (<i>Pale Moonwort</i>) SOC			Not Available <input type="checkbox"/>	Y
View in Field Guide	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G3 State: S1S2 MNPS: 2				
Associated Habitats: <input checked="" type="checkbox"/> 16% Common				
<input type="checkbox"/> B - Black-crowned Night-Heron (<i>Nycticorax nycticorax</i>) SOC			Not Available <input type="checkbox"/>	M
View in Field Guide	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA FWP SWAP: SGCN3 PIF: 3				
Associated Habitats: <input checked="" type="checkbox"/> 8% Common				
<input type="checkbox"/> B - White-faced Ibis (<i>Plegadis chihi</i>) SOC			Not Available <input type="checkbox"/>	M
View in Field Guide	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2				
Associated Habitats: <input checked="" type="checkbox"/> 8% Common				
<input type="checkbox"/> I - Limenitis arthemis (<i>Red-spotted Admiral</i>) PSOC			Not Available <input type="checkbox"/>	Y
View in Field Guide	View Associated Habitat	View Range Maps		
Potential Species of Concern - Native Species Global: G5 State: S2S3				
Associated Habitats: <input checked="" type="checkbox"/> 7% Common, <input type="checkbox"/> 1% Occasional				
<input type="checkbox"/> B - Common Tern (<i>Sterna hirundo</i>) SOC			Not Available <input type="checkbox"/>	S M
View in Field Guide	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2				
Associated Habitats: <input checked="" type="checkbox"/> 7% Common				
<input type="checkbox"/> I - Euphydryas gillettii (<i>Gillette's Checkerspot</i>) SOC			Not Available <input type="checkbox"/>	Y
View in Field Guide	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G3 State: S2				
Associated Habitats: <input checked="" type="checkbox"/> 6% Common, <input type="checkbox"/> 16% Occasional				
<input type="checkbox"/> I - Somatochlora walshii (<i>Brush-tipped Emerald</i>) SOC			Not Available <input type="checkbox"/>	Y
View in Field Guide	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G5 State: S1S2				
Associated Habitats: <input checked="" type="checkbox"/> 6% Common, <input type="checkbox"/> 2% Occasional				
<input type="checkbox"/> B - Northern Hawk Owl (<i>Surnia ulula</i>) SOC			Not Available <input type="checkbox"/>	WM
View in Field Guide	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G5 State: S3 USFWS: MBTA FWP SWAP: SGCN3, SGIN				
Associated Habitats: <input checked="" type="checkbox"/> 6% Common, <input type="checkbox"/> 1% Occasional				
<input type="checkbox"/> B - Harlequin Duck (<i>Histrionicus histrionicus</i>) SOC			Not Available <input type="checkbox"/>	S M
View in Field Guide	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G4 State: S2B USFWS: MBTA USFS: Sensitive - Known on Forests (BD, CG, HLC, KOOT, LOLO) FWP SWAP: SGCN2 PIF: 1				
Associated Habitats: <input checked="" type="checkbox"/> 5% Common, <input type="checkbox"/> 2% Occasional				

B - Boreal Chickadee (<i>Poecile hudsonicus</i>)	SOC	Not Available		Y
View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3 USFWS: MBTA FWP SWAP: SGCN3 Associated Habitats: <input checked="" type="checkbox"/> 5% Common, <input type="checkbox"/> 1% Occasional				
I - Polygonia progne (<i>Gray Comma</i>)	SOC	Not Available		Y
View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S2 Associated Habitats: <input checked="" type="checkbox"/> 5% Common				
V - Senecio eremophilus (<i>Desert Groundsel</i>)	SOC	Not Available		Y
View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S1S2 Associated Habitats: <input checked="" type="checkbox"/> 5% Common				
B - Alder Flycatcher (<i>Empidonax alnorum</i>)	SOC	Not Available		M
View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA FWP SWAP: SGCN3 Associated Habitats: <input checked="" type="checkbox"/> 5% Common				
B - Franklin's Gull (<i>Leucophaeus pipixcan</i>)	SOC	Not Available		M
View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2 Associated Habitats: <input checked="" type="checkbox"/> 4% Common, <input type="checkbox"/> 36% Occasional				
I - Aeshna constricta (<i>Lance-tipped Darner</i>)	PSOC	Not Available		Y
View in Field Guide View Associated Habitat View Range Maps Potential Species of Concern - Native Species Global: G5 State: S1S3 Associated Habitats: <input checked="" type="checkbox"/> 4% Common				
I - Aeshna eremita (<i>Lake Darner</i>)	PSOC	Not Available		Y S W
View in Field Guide View Associated Habitat View Range Maps Potential Species of Concern - Native Species Global: G5 State: S3S4 Associated Habitats: <input checked="" type="checkbox"/> 4% Common				
B - Boreal Owl (<i>Aegolius funereus</i>)	PSOC	Not Available		Y
View in Field Guide View Associated Habitat View Range Maps Potential Species of Concern - Native Species Global: G5 State: S3S4 USFWS: MBTA FWP SWAP: SGIN PIF: 3 Associated Habitats: <input checked="" type="checkbox"/> 3% Common, <input type="checkbox"/> 5% Occasional				
I - Argia vivida (<i>Vivid Dancer</i>)	PSOC	Not Available		Y
View in Field Guide View Associated Habitat View Range Maps Potential Species of Concern - Native Species Global: G5 State: S3S5 Associated Habitats: <input checked="" type="checkbox"/> 2% Common, <input type="checkbox"/> 7% Occasional				
I - Somatochlora albicincta (<i>Ringed Emerald</i>)	PSOC	Not Available		Y
View in Field Guide View Associated Habitat View Range Maps Potential Species of Concern - Native Species Global: G5 State: S1S3 Associated Habitats: <input checked="" type="checkbox"/> 2% Common, <input type="checkbox"/> 6% Occasional				
I - Somatochlora minor (<i>Ocellated Emerald</i>)	PSOC	Not Available		Y
View in Field Guide View Associated Habitat View Range Maps Potential Species of Concern - Native Species Global: G5 State: S2S4 Associated Habitats: <input checked="" type="checkbox"/> 2% Common, <input type="checkbox"/> 6% Occasional				
B - Black-necked Stilt (<i>Himantopus mexicanus</i>)	SOC	Not Available		M
View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA FWP SWAP: SGCN3 PIF: 3 Associated Habitats: <input checked="" type="checkbox"/> 2% Common, <input type="checkbox"/> 6% Occasional				
I - Colias gigantea (<i>Giant Sulphur</i>)	PSOC	Not Available		Y
View in Field Guide View Associated Habitat View Range Maps Potential Species of Concern - Native Species Global: G5 State: S3 Associated Habitats: <input checked="" type="checkbox"/> 2% Common, <input type="checkbox"/> 5% Occasional				
B - Forster's Tern (<i>Sterna forsteri</i>)	SOC	Not Available		S M
View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2 Associated Habitats: <input checked="" type="checkbox"/> 2% Common, <input type="checkbox"/> 5% Occasional				
B - Caspian Tern (<i>Hydroprogne caspia</i>)	SOC	Not Available		M

View in Field Guide	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G5 State: S2B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN2 PIF: 2				
Associated Habitats: <input checked="" type="checkbox"/> 2% Common, <input type="checkbox"/> 5% Occasional				
<input type="checkbox"/> I - <i>Aeshna juncea</i> (<i>Sedge Darner</i>) PSOC			Not Available	<input type="checkbox"/> Y
View in Field Guide	View Associated Habitat	View Range Maps		
Potential Species of Concern - Native Species Global: G5 State: S3S5				
Associated Habitats: <input checked="" type="checkbox"/> 2% Common, <input type="checkbox"/> 2% Occasional				
<input type="checkbox"/> I - <i>Eitheca spinigera</i> (<i>Spiny Baskettail</i>) PSOC			Not Available	<input type="checkbox"/> Y
View in Field Guide	View Associated Habitat	View Range Maps		
Potential Species of Concern - Native Species Global: G5 State: S3S5				
Associated Habitats: <input checked="" type="checkbox"/> 2% Common, <input type="checkbox"/> 2% Occasional				
<input type="checkbox"/> I - <i>Leucorrhinia borealis</i> (<i>Boreal Whiteface</i>) SOC			Not Available	<input type="checkbox"/> Y
View in Field Guide	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G5 State: S1				
Associated Habitats: <input checked="" type="checkbox"/> 2% Common, <input type="checkbox"/> 2% Occasional				
<input type="checkbox"/> I - <i>Sympetrum madidum</i> (<i>Red-veined Meadowhawk</i>) PSOC			Not Available	<input type="checkbox"/> Y
View in Field Guide	View Associated Habitat	View Range Maps		
Potential Species of Concern - Native Species Global: G5 State: S2S3				
Associated Habitats: <input checked="" type="checkbox"/> 2% Common, <input type="checkbox"/> 2% Occasional				
<input type="checkbox"/> I - <i>Aeshna sitchensis</i> (<i>Zigzag Darner</i>) PSOC			Not Available	<input type="checkbox"/> Y
View in Field Guide	View Associated Habitat	View Range Maps		
Potential Species of Concern - Native Species Global: G5 State: S2S3				
Associated Habitats: <input checked="" type="checkbox"/> 2% Common, <input type="checkbox"/> 1% Occasional				
<input type="checkbox"/> I - <i>Coenagrion interrogatum</i> (<i>Subarctic Bluet</i>) SOC			Not Available	<input type="checkbox"/> Y
View in Field Guide	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G5 State: S1S2				
Associated Habitats: <input checked="" type="checkbox"/> 2% Common, <input type="checkbox"/> 1% Occasional				
<input type="checkbox"/> B - <i>Gray-crowned Rosy-Finch</i> (<i>Leucosticte tephrocotis</i>) SOC			Not Available	<input type="checkbox"/> Y WM
View in Field Guide	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G5 State: S2B,S5N USFWS: MBTA FWP SWAP: SGCN2, SGIN				
Associated Habitats: <input checked="" type="checkbox"/> 2% Common				
<input type="checkbox"/> I - <i>Argia emma</i> (<i>Emma's Dancer</i>) PSOC			Not Available	<input type="checkbox"/> Y
View in Field Guide	View Associated Habitat	View Range Maps		
Potential Species of Concern - Native Species Global: G5 State: S3S5				
Associated Habitats: <input checked="" type="checkbox"/> 2% Common				
<input type="checkbox"/> I - <i>Gomphus graslinellus</i> (<i>Pronghorn Clubtail</i>) PSOC			Not Available	<input type="checkbox"/> Y
View in Field Guide	View Associated Habitat	View Range Maps		
Potential Species of Concern - Native Species Global: G5 State: S3S5				
Associated Habitats: <input checked="" type="checkbox"/> 2% Common				
<input type="checkbox"/> I - <i>Ladona julia</i> (<i>Chalk-fronted Corporal</i>) PSOC			Not Available	<input type="checkbox"/> Y
View in Field Guide	View Associated Habitat	View Range Maps		
Potential Species of Concern - Native Species Global: G5 State: S3S4				
Associated Habitats: <input checked="" type="checkbox"/> 2% Common				
<input type="checkbox"/> I - <i>Somatochlora semicircularis</i> (<i>Mountain Emerald</i>) PSOC			Not Available	<input type="checkbox"/> Y
View in Field Guide	View Associated Habitat	View Range Maps		
Potential Species of Concern - Native Species Global: G5 State: S3S5				
Associated Habitats: <input checked="" type="checkbox"/> 2% Common				
<input type="checkbox"/> V - <i>Bidens beckii</i> (<i>Beck Water-marigold</i>) SOC			Not Available	<input type="checkbox"/> Y
View in Field Guide	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G5 State: S2 USFS: Sensitive - Known on Forests (KOOT, LOLO) MNPS: 3				
Associated Habitats: <input checked="" type="checkbox"/> 2% Common				
<input type="checkbox"/> V - <i>Braya humilis</i> (<i>Low Braya</i>) SOC			Not Available	<input type="checkbox"/> Y
View in Field Guide	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G5 State: S2 MNPS: 2				
Associated Habitats: <input checked="" type="checkbox"/> 2% Common				
<input type="checkbox"/> V - <i>Heteranthera dubia</i> (<i>Water Star-grass</i>) SOC			Not Available	<input type="checkbox"/> Y
View in Field Guide	View Associated Habitat	View Range Maps		
Species of Concern - Native Species Global: G5 State: S1S2 MNPS: 2				
Associated Habitats: <input checked="" type="checkbox"/> 2% Common				

<input type="checkbox"/> V - <i>Hornungia procumbens</i> (<i>Hutchinsia</i>) SOC	Not Available <input type="text"/>	<input type="checkbox"/> Y
View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S2 MNPS: 3 Associated Habitats: <input checked="" type="checkbox"/> 2% Common		
<input type="checkbox"/> V - <i>Nymphaea leibergii</i> (<i>Pygmy Water-lily</i>) SOC	Not Available <input type="text"/>	<input type="checkbox"/> Y
View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S1 MNPS: 3 Associated Habitats: <input checked="" type="checkbox"/> 2% Common		
<input type="checkbox"/> V - <i>Ranunculus orthorhynchus</i> (<i>Straightbeak Buttercup</i>) SOC	Not Available <input type="text"/>	<input type="checkbox"/> Y
View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S1S2 MNPS: 1 Associated Habitats: <input checked="" type="checkbox"/> 2% Common		
<input type="checkbox"/> V - <i>Ranunculus pedatifidus</i> (<i>Northern Buttercup</i>) SOC	Not Available <input type="text"/>	<input type="checkbox"/> Y
View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3 MNPS: 2 Associated Habitats: <input checked="" type="checkbox"/> 2% Common		
<input type="checkbox"/> V - <i>Trichophorum alpinum</i> (<i>Hudson's Bay Bulrush</i>) SOC	Not Available <input type="text"/>	<input type="checkbox"/> Y
View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S2 USFS: Species of Conservation Concern on Forests (FLAT) MNPS: 2 Associated Habitats: <input checked="" type="checkbox"/> 2% Common		
<input type="checkbox"/> V - <i>Wolffia columbiana</i> (<i>Columbia Water-meal</i>) SOC	Not Available <input type="text"/>	<input type="checkbox"/> Y
View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S2S3 Associated Habitats: <input checked="" type="checkbox"/> 2% Common		
<input type="checkbox"/> B - Common Loon (<i>Gavia immer</i>) SOC	Not Available <input type="text"/>	<input type="checkbox"/> S <input type="checkbox"/> M
View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA USFS: Sensitive - Known on Forests (KOOT, LOLO) FWP SWAP: SGCN3 PIF: 1 Associated Habitats: <input checked="" type="checkbox"/> 2% Common		
<input type="checkbox"/> B - LeConte's Sparrow (<i>Ammodramus leconteii</i>) SOC	Not Available <input type="text"/>	<input type="checkbox"/> S <input type="checkbox"/> M
View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA FWP SWAP: SGCN3 PIF: 3 Associated Habitats: <input checked="" type="checkbox"/> 2% Common		
<input type="checkbox"/> B - Clark's Grebe (<i>Aechmophorus clarkii</i>) SOC	Not Available <input type="text"/>	<input type="checkbox"/> M
View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA FWP SWAP: SGCN3 PIF: 3 Associated Habitats: <input checked="" type="checkbox"/> 2% Common		
<input type="checkbox"/> I - <i>Aeshna tuberculifera</i> (<i>Black-tipped Darner</i>) PSOC	Not Available <input type="text"/>	<input type="checkbox"/> Y
View in Field Guide View Associated Habitat View Range Maps Potential Species of Concern - Native Species Global: G5 State: S2S4 Associated Habitats: <input checked="" type="checkbox"/> 1% Common, <input type="checkbox"/> 7% Occasional		
<input type="checkbox"/> I - <i>Leucorrhinia glacialis</i> (<i>Crimson-ringed Whiteface</i>) PSOC	Not Available <input type="text"/>	<input type="checkbox"/> Y
View in Field Guide View Associated Habitat View Range Maps Potential Species of Concern - Native Species Global: G5 State: S3 Associated Habitats: <input checked="" type="checkbox"/> 1% Common, <input type="checkbox"/> 7% Occasional		
<input type="checkbox"/> B - Northern Goshawk (<i>Accipiter gentilis</i>) SOC	Not Available <input type="text"/>	<input type="checkbox"/> Y <input type="checkbox"/> WM
View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S3 USFWS: MBTA FWP SWAP: SGCN3 PIF: 2 Associated Habitats: <input checked="" type="checkbox"/> 1% Common, <input type="checkbox"/> 5% Occasional		
<input type="checkbox"/> B - Flammulated Owl (<i>Psiloscops flammeolus</i>) SOC	Not Available <input type="text"/>	<input type="checkbox"/> S <input type="checkbox"/> M
View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G4 State: S3B USFWS: MBTA; BCC10 USFS: Sensitive - Known on Forests (BD, BRT, HLC, KOOT, LOLO) Sensitive - Suspected on Forests (CG) Species of Conservation Concern on Forests (FLAT) BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 1 Associated Habitats: <input checked="" type="checkbox"/> 1% Common, <input type="checkbox"/> 5% Occasional		
<input type="checkbox"/> I - <i>Aeshna subarctica</i> (<i>Subarctic Darner</i>) SOC	Not Available <input type="text"/>	<input type="checkbox"/> Y
View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S1S2 Associated Habitats: <input checked="" type="checkbox"/> 1% Common, <input type="checkbox"/> 4% Occasional		
<input type="checkbox"/> I - <i>Somatochlora hudsonica</i> (<i>Hudsonian Emerald</i>) PSOC	Not Available <input type="text"/>	<input type="checkbox"/> Y

View in Field Guide	View Associated Habitat	View Range Maps	
Potential Species of Concern - Native Species			Global: G5 State: S2S4
Associated Habitats: <input checked="" type="checkbox"/> 1% Common, <input type="checkbox"/> 4% Occasional			
I - <i>Enallagma clausum</i> (<i>Alkali Bluet</i>) PSOC			Not Available <input type="text"/> <input type="button" value="Y"/>
View in Field Guide	View Associated Habitat	View Range Maps	
Potential Species of Concern - Native Species			Global: G5 State: S2S4
Associated Habitats: <input checked="" type="checkbox"/> 1% Common, <input type="checkbox"/> 2% Occasional			
I - <i>Rhionaeschna californica</i> (<i>California Darner</i>) PSOC			Not Available <input type="text"/> <input type="button" value="Y"/>
View in Field Guide	View Associated Habitat	View Range Maps	
Potential Species of Concern - Native Species			Global: G5 State: S3S5
Associated Habitats: <input checked="" type="checkbox"/> 1% Common, <input type="checkbox"/> 2% Occasional			
V - <i>Botrychium ascendens</i> (<i>Upward-lobed Moonwort</i>) SOC			Not Available <input type="text"/> <input type="button" value="Y"/>
View in Field Guide	View Associated Habitat	View Range Maps	
Species of Concern - Native Species			Global: G3 State: S3 USFS: Sensitive - Known on Forests (HLC, KOOT) MNPS: 2
Associated Habitats: <input checked="" type="checkbox"/> 1% Common			
V - <i>Botrychium crenulatum</i> (<i>Wavy Moonwort</i>) SOC			Not Available <input type="text"/> <input type="button" value="Y"/>
View in Field Guide	View Associated Habitat	View Range Maps	
Species of Concern - Native Species			Global: G4 State: S3 USFS: Sensitive - Known on Forests (BD, HLC, KOOT, LOLO) MNPS: 2
Associated Habitats: <input checked="" type="checkbox"/> 1% Common			
V - <i>Botrychium lineare</i> (<i>Linearleaf Moonwort</i>) SOC			Not Available <input type="text"/> <input type="button" value="Y"/>
View in Field Guide	View Associated Habitat	View Range Maps	
Species of Concern - Native Species			Global: G3 State: S1S2 MNPS: 4
Associated Habitats: <input checked="" type="checkbox"/> 1% Common			
V - <i>Botrychium montanum</i> (<i>Mountain Moonwort</i>) PSOC			Not Available <input type="text"/> <input type="button" value="Y"/>
View in Field Guide	View Associated Habitat	View Range Maps	
Potential Species of Concern - Native Species			Global: G3 State: S3S4
Associated Habitats: <input checked="" type="checkbox"/> 1% Common			
V - <i>Botrychium paradoxum</i> (<i>Peculiar Moonwort</i>) SOC			Not Available <input type="text"/> <input type="button" value="Y"/>
View in Field Guide	View Associated Habitat	View Range Maps	
Species of Concern - Native Species			USFS: Sensitive - Known on Forests (BD, HLC, KOOT) Sensitive - Suspected on Forests (LOLO) Global: G3G4 State: S3 Species of Conservation Concern on Forests (FLAT) BLM: SENSITIVE MNPS: 2
Associated Habitats: <input checked="" type="checkbox"/> 1% Common			
V - <i>Botrychium pedunculosum</i> (<i>Stalked Moonwort</i>) SOC			Not Available <input type="text"/> <input type="button" value="Y"/>
View in Field Guide	View Associated Habitat	View Range Maps	
Species of Concern - Native Species			USFS: Sensitive - Known on Forests (KOOT) Global: G3G4 State: S2 Species of Conservation Concern on Forests (FLAT) MNPS: 3
Associated Habitats: <input checked="" type="checkbox"/> 1% Common			
V - <i>Botrychium simplex</i> (<i>Least Moonwort</i>) SOC			Not Available <input type="text"/> <input type="button" value="Y"/>
View in Field Guide	View Associated Habitat	View Range Maps	
Species of Concern - Native Species			Global: G5 State: S2
Associated Habitats: <input checked="" type="checkbox"/> 1% Common			
V - <i>Cyrtopodium fasciculatum</i> (<i>Clustered Lady's-slipper</i>) SOC			Not Available <input type="text"/> <input type="button" value="Y"/>
View in Field Guide	View Associated Habitat	View Range Maps	
Species of Concern - Native Species			USFS: Sensitive - Known on Forests (KOOT, LOLO) Sensitive - Suspected on Forests (LOLO) Global: G4 State: S3 Species of Conservation Concern on Forests (FLAT) MNPS: 1
Associated Habitats: <input checked="" type="checkbox"/> 1% Common			
V - <i>Cyrtopodium passerinum</i> (<i>Sparrow's-egg Lady's-slipper</i>) SOC			Not Available <input type="text"/> <input type="button" value="Y"/>
View in Field Guide	View Associated Habitat	View Range Maps	
Species of Concern - Native Species			USFS: Sensitive - Known on Forests (HLC, KOOT) Sensitive - Suspected on Forests (LOLO) Global: G5 State: S2S3 Species of Conservation Concern on Forests (FLAT) MNPS: 2
Associated Habitats: <input checked="" type="checkbox"/> 1% Common			
V - <i>Dichantheium oligosanthes</i> var. <i>scribnerianum</i> (<i>Scribner's Panic Grass</i>) SOC			Not Available <input type="text"/> <input type="button" value="Y"/>
View in Field Guide	View Associated Habitat	View Range Maps	
Species of Concern - Native Species			Global: G5T5 State: S1S2
Associated Habitats: <input checked="" type="checkbox"/> 1% Common			
V - <i>Drosera anglica</i> (<i>English Sundew</i>) SOC			Not Available <input type="text"/> <input type="button" value="Y"/>
View in Field Guide	View Associated Habitat	View Range Maps	
Species of Concern - Native Species			Global: G5 State: S3 USFS: Sensitive - Known on Forests (BD, BRT, CG, HLC, KOOT, LOLO) MNPS: 2
Associated Habitats: <input checked="" type="checkbox"/> 1% Common			

<input type="checkbox"/> V - Drosera rotundifolia (<i>Roundleaf Sundew</i>) PSOC	Not Available <input type="text"/>	Y
<p> View in Field Guide View Associated Habitat View Range Maps Potential Species of Concern - Native Species Global: G5 State: S3S4 Associated Habitats: <input checked="" type="checkbox"/> 1% Common </p>		
<input type="checkbox"/> V - Lathyrus bijugatus (<i>Latah Tule Pea</i>) SOC	Not Available <input type="text"/>	Y
<p> View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G4 State: S2S3 USFS: Sensitive - Known on Forests (KOOT) Associated Habitats: <input checked="" type="checkbox"/> 1% Common </p>		
<input type="checkbox"/> V - Lycopodium dendroideum (<i>Treelike Clubmoss</i>) SOC	Not Available <input type="text"/>	Y
<p> View in Field Guide View Associated Habitat View Range Maps Species of Concern - Native Species Global: G5 State: S2 USFS: Sensitive - Known on Forests (KOOT) MNPS: 3 Associated Habitats: <input checked="" type="checkbox"/> 1% Common </p>		



Structured Surveys

Summarized by: 21mdt0006 WestReserveDrive Kalispell (*Custom Area of Interest*)

The Montana Natural Heritage Program (MTNHP) records information on the locations where more than 80 different types of well-defined repeatable survey protocols capable of detecting an animal species or suite of animal species have been conducted by state, federal, tribal, university, or private consulting biologists. Examples of structured survey protocols tracked by MTNHP include: visual encounter and dip net surveys for pond breeding amphibians, point counts for birds, call playback surveys for selected bird species, visual surveys of migrating raptors, kick net stream reach surveys for macroinvertebrates, visual encounter cover object surveys for terrestrial mollusks, bat acoustic or mist net surveys, pitfall and/or snap trap surveys for small terrestrial mammals, track or camera trap surveys for large mammals, and trap surveys for turtles. Whenever possible, photographs of survey locations are stored in MTNHP databases.

MTNHP does not typically manage information on structured surveys for plants; surveys for invasive species may be a future exception.

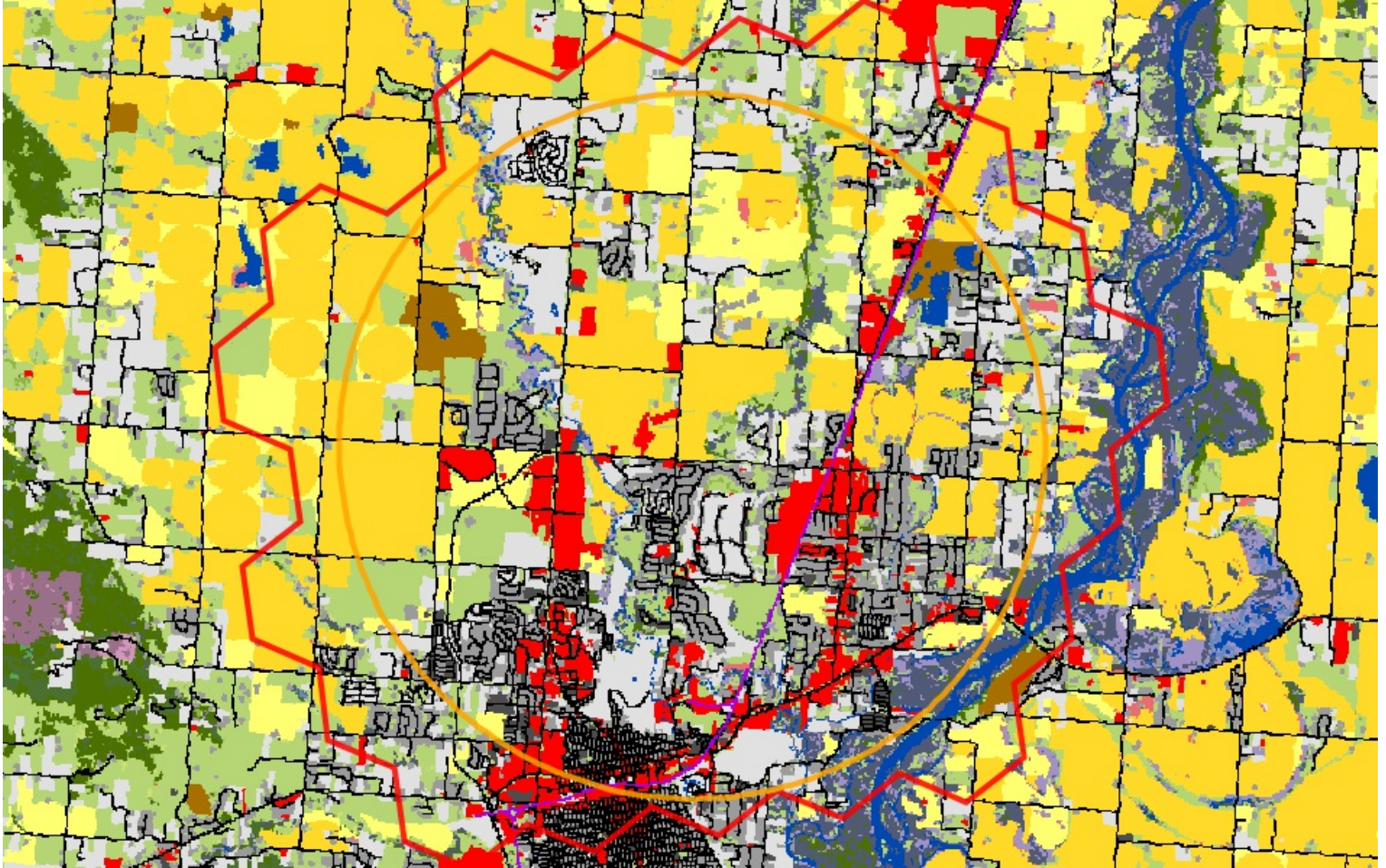
Within the report area you have requested, structured surveys are summarized by the number of each type of structured survey protocol that has been conducted, the number of species detections/observations resulting from these surveys, and the most recent year a survey has been conducted.

B-Bald Eagle Nest (<i>Bald Eagle Nest Survey</i>)	Survey Count: 1	Obs Count: 1	Recent Survey: 2010
B-Long-billed Curlew (<i>Long-billed Curlew, Road-based, Point Count</i>)	Survey Count: 6	Obs Count:	Recent Survey: 2012
E-Eastern Heath Snail (<i>Eastern Heath Snail Survey</i>)	Survey Count: 7	Obs Count:	Recent Survey: 2012
E-Invasive Mussel Plankton Tow (<i>Plankton tows for veligers of Invasive Mussels</i>)	Survey Count: 2	Obs Count:	Recent Survey: 2018
E-Kicknet (<i>Kicknet Collection Survey for Invasive Mussels and Snails</i>)	Survey Count: 3	Obs Count:	Recent Survey: 2018
E-Noxious Weed, Road-based (<i>Noxious Weed Road-based Visual Surveys</i>)	Survey Count: 40	Obs Count: 336	Recent Survey: 2003
E-Noxious Weed, Visual (<i>Noxious Weed Visual Surveys</i>)	Survey Count: 4	Obs Count: 38	Recent Survey: 2008
E-Visual Aquatic Invasives (<i>Visual Encounter Surveys for Aquatic Invasives on Shorelines or Underwater</i>)	Survey Count: 3	Obs Count:	Recent Survey: 2018
F-Fish Electrofishing (<i>Fish Electrofishing Surveys</i>)	Survey Count: 13	Obs Count: 21	Recent Survey: 2011
F-Fish Trapping/Netting (<i>Fish Trapping or Netting Surveys</i>)	Survey Count: 6	Obs Count: 2	Recent Survey: 2008
I-Mosquito CDC Trap (<i>Montana Mosquito Surveillance Project</i>)	Survey Count: 132	Obs Count: 698	Recent Survey: 2017
M-Bat Acoustic (<i>Bat Acoustic Survey</i>)	Survey Count: 3	Obs Count: 9	Recent Survey: 2010
M-Bat Roost (Active Season) (<i>Bat Roost (Active Season) Survey</i>)	Survey Count: 1	Obs Count: 1	Recent Survey: 2019
P-Algal scraping (<i>Algal Scraping</i>)	Survey Count: 20	Obs Count: 1113	Recent Survey: 2012



Land Cover

Summarized by: **21mdt0006 WestReserveDrive Kalispell** (*Custom Area of Interest*)



Human Land Use Agriculture

Cultivated Crops

**23% (6,217
Acres)**

These areas used for the production of crops, such as corn, soybeans, small grains, sunflowers, vegetables, and cotton, typically on an annual cycle. Agricultural plant cover is variable depending on season and type of farming. Other areas include more stable land cover of orchards and vineyards.



Grassland Systems

Montane Grassland

Rocky Mountain Lower Montane, Foothill, and Valley Grassland

15% (3,988 Acres)

This grassland system of the northern Rocky Mountains is found at lower montane to foothill elevations in mountains and valleys throughout Montana. These grasslands are floristically similar to Big Sagebrush Steppe but are defined by shorter summers, colder winters, and young soils derived from recent glacial and alluvial material. They are found at elevations from 548 - 1,650 meters (1,800-5,413 feet). In the lower montane zone, they range from small meadows to large open parks surrounded by conifers; below the lower treeline, they occur as extensive foothill and valley grasslands. Soils are relatively deep, fine-textured, often with coarse fragments, and non-saline. Microphytic crust may be present in high-quality occurrences. This system is typified by cool-season perennial bunch grasses and forbs (>25%) cover, with a sparse shrub cover (<10%). Rough fescue (*Festuca campestris*) is dominant in the northwestern portion of the state and Idaho fescue (*Festuca idahoensis*) is dominant or co-dominant throughout the range of the system. Bluebunch wheatgrass (*Pseudoroegneria spicata*) occurs as a co-dominant throughout the range as well, especially on xeric sites. Western wheatgrass (*Pascopyrum smithii*) is consistently present, often with appreciable coverage (>10%) in lower elevation occurrences in western Montana and virtually always present, with relatively high coverages (>25%), on the edge of the Northwestern Great Plains region. Species diversity ranges from a high of more than 50 per 400 square meter plot on mesic sites to 15 (or fewer) on xeric and disturbed sites. Most occurrences have at least 25 vascular species present. Farmland conversion, noxious species invasion, fire suppression, heavy grazing and oil and gas development are major threats to this system.



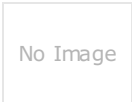
Human Land Use

Developed

Developed, Open Space

13% (3,573 Acres)

Vegetation (primarily grasses) planted in developed settings for recreation, erosion control, or aesthetic purposes. Impervious surfaces account for less than 20% of total cover. This category often includes highway and railway rights of way and graveled rural roads.



Human Land Use

Developed

Other Roads

10% (2,757 Acres)

County, city and or rural roads generally open to motor vehicles.



Human Land Use

Developed

Low Intensity Residential

10% (2,740 Acres)

Includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 20-50% of total cover. These areas most commonly include single-family housing units in rural and suburban areas. Paved roadways may be classified into this category.



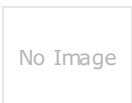
Human Land Use

Agriculture

Pasture/Hay

7% (1,985 Acres)

These agriculture lands typically have perennial herbaceous cover (e.g. regularly-shaped plantings) used for livestock grazing or the production of hay. There are obvious signs of management such as irrigation and haying that distinguish it from natural grasslands. Identified CRP lands are included in this land cover type.



Human Land Use

Developed

Commercial / Industrial

7% (1,747 Acres)

Businesses, industrial parks, hospitals, airports; utilities in commercial/industrial areas.



4% (1,197 Acres)

Wetland and Riparian Systems Floodplain and Riparian

Northern Rocky Mountain Lower Montane Riparian Woodland and Shrubland

This ecological system is found throughout the Rocky Mountain and Colorado Plateau regions. In Montana, sites occur at elevations of 609-1,219 meters (2,000-4,000 feet) west of the Continental Divide. East of the Continental Divide, this system ranges up to 1,676 meters (5,500 feet). It generally comprises a mosaic of multiple communities that are tree-dominated with a diverse shrub component. It is dependent on a natural hydrologic regime with annual to episodic flooding, so it is usually found within the flood zone of rivers, on islands, sand or cobble bars, and along streambanks. It can form large, wide occurrences on mid-channel islands in larger rivers, or narrow bands on small, rocky canyon tributaries and well-drained benches. It is also typically found in backwater channels and other perennially wet but less scoured sites, such as floodplains, swales and irrigation ditches. In some locations, occurrences extend into moderately high intermountain basins where the adjacent vegetation is sage steppe. Black cottonwood (*Populus balsamifera* ssp. *trichocarpa*) is the key indicator species. Other dominant trees may include boxelder maple (*Acer negundo*), narrowleaf cottonwood (*Populus angustifolia*), eastern cottonwood (*Populus deltoides*), Douglas-fir (*Pseudotsuga menziesii*), peachleaf willow (*Salix amygdaloides*), or Rocky Mountain juniper (*Juniperus scopulorum*). Dominant shrubs include Rocky Mountain maple (*Acer glabrum*), thinleaf alder (*Alnus incana*), river birch (*Betula occidentalis*), redbud (*Cornus sericea*), hawthorne (*Crataegus* species), chokecherry (*Prunus virginiana*), skunkbush sumac (*Rhus trilobata*), willows (*Salix* species), rose (*Rosa* species), silver buffaloberry (*Shepherdia argentea*), or snowberry (*Symphoricarpos* species).



2% (559 Acres)

Wetland and Riparian Systems Open Water

Open Water

All areas of open water, generally with less than 25% cover of vegetation or soil



2% (477 Acres)

Wetland and Riparian Systems Wet meadow

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.

Additional Limited Land Cover

- 1% (361 Acres) ■ [Quarries, Strip Mines and Gravel Pits](#)
- 1% (359 Acres) ■ [High Intensity Residential](#)
- 1% (345 Acres) ■ [Major Roads](#)
- 1% (143 Acres) ■ [Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest](#)
- <1% (133 Acres) ■ [Railroad](#)
- <1% (100 Acres) ■ [Introduced Upland Vegetation - Annual and Biennial Forbland](#)
- <1% (55 Acres) ■ [Rocky Mountain Montane-Foothill Deciduous Shrubland](#)
- <1% (44 Acres) ■ [Rocky Mountain Mesic Montane Mixed Conifer Forest](#)
- <1% (37 Acres) ■ [Rocky Mountain Subalpine-Montane Mesic Meadow](#)
- <1% (29 Acres) ■ [Rocky Mountain Ponderosa Pine Woodland and Savanna](#)
- <1% (9 Acres) ■ [Emergent Marsh](#)
- <1% (4 Acres) ■ [Insect-Killed Forest](#)
- <1% (1 Acres) ■ [Aspen and Mixed Conifer Forest](#)
- <1% (0 Acres) ■ [Aspen Forest and Woodland](#)
- <1% (0 Acres) ■ [Rocky Mountain Subalpine-Montane Fen](#)



Wetland and Riparian

Summarized by: **21mdt0006 WestReserveDrive Kalispell** (Custom Area of Interest)



Wetland and Riparian Mapping

[Explain](#)

P - Palustrine

UB - Unconsolidated Bottom

F - Semipermanently Flooded	26 Acres
x - Excavated	26 Acres PUBFx

P - Palustrine, UB - Unconsolidated Bottom

Wetlands where mud, silt or similar fine particles cover at least 25% of the bottom, and where vegetation cover is less than 30%.

AB - Aquatic Bed

F - Semipermanently Flooded	144 Acres
(no modifier)	42 Acres PABF
h - Diked/Impounded	24 Acres PABFh
x - Excavated	78 Acres PABFx

P - Palustrine, AB - Aquatic Bed

Wetlands with vegetation growing on or below the water surface for most of the growing season.

G - Intermittently Exposed	39 Acres
(no modifier)	28 Acres PABG
x - Excavated	11 Acres PABGx

US - Unconsolidated Shore

C - Seasonally Flooded	<1 Acres
(no modifier)	<1 Acres PUSC

P - Palustrine, US - Unconsolidated Shore

Wetlands with less than 75% areal cover of stones, boulders, or bedrock. AND with less than 30% vegetative cover AND the wetland is irregularly exposed due to seasonal or irregular flooding and subsequent drying.

EM - Emergent

A - Temporarily Flooded	273 Acres
(no modifier)	272 Acres PEMA

P - Palustrine, EM - Emergent

Wetlands with erect, rooted herbaceous vegetation present during most of the growing season.

x - Excavated	1 Acres	PEMAx
C - Seasonally Flooded	54 Acres	
(no modifier)	53 Acres	PEMC
h - Diked/Impounded	1 Acres	PEMCh
F - Semipermanently Flooded	15 Acres	
(no modifier)	14 Acres	PEMF
h - Diked/Impounded	1 Acres	PEMFh
x - Excavated	<1 Acres	PEMFx

SS - Scrub-Shrub

A - Temporarily Flooded	175 Acres	
(no modifier)	175 Acres	PSSA
C - Seasonally Flooded	6 Acres	
(no modifier)	6 Acres	PSSC
F - Semipermanently Flooded	7 Acres	
(no modifier)	7 Acres	PSSF

P - Palustrine, SS - Scrub-Shrub

Wetlands dominated by woody vegetation less than 6 meters (20 feet) tall. Woody vegetation includes tree saplings and trees that are stunted due to environmental conditions.

R - Riverine (Rivers)

2 - Lower Perennial

UB - Unconsolidated Bottom

F - Semipermanently Flooded	27 Acres	
(no modifier)	27 Acres	R2UBF

H - Permanently Flooded	26 Acres	
(no modifier)	26 Acres	R2UBH

R - Riverine (Rivers), 2 - Lower Perennial, UB - Unconsolidated Bottom

Stream channels where the substrate is at least 25% mud, silt or other fine particles.

AB - Aquatic Bed

G - Intermittently Exposed	1 Acres	
(no modifier)	1 Acres	R2ABG

R - Riverine (Rivers), 2 - Lower Perennial, AB - Aquatic Bed

Stream channels with vegetation growing on or below the water surface for most of the growing season.

US - Unconsolidated Shore

A - Temporarily Flooded	78 Acres	
(no modifier)	78 Acres	R2USA

C - Seasonally Flooded	9 Acres	
(no modifier)	9 Acres	R2USC

R - Riverine (Rivers), 2 - Lower Perennial, US - Unconsolidated Shore

Shorelines with less than 75% areal cover of stones, boulders, or bedrock and less than 30% vegetation cover. The area is also irregularly exposed due to seasonal or irregular flooding and subsequent drying.

3 - Upper Perennial

UB - Unconsolidated Bottom

H - Permanently Flooded	398 Acres	
(no modifier)	398 Acres	R3UBH

R - Riverine (Rivers), 3 - Upper Perennial, UB - Unconsolidated Bottom

Stream channels where the substrate is at least 25% mud, silt or other fine particles.

Rp - Riparian

1 - Lotic

SS - Scrub-Shrub (no modifier)

151 Acres **Rp1SS**

Rp - Riparian, 1 - Lotic, SS - Scrub-Shrub

This type of riparian area is dominated by woody vegetation that is less than 6 meters (20 feet) tall. Woody vegetation includes tree saplings and trees that are stunted due to environmental conditions.

FO - Forested (no modifier)

899 Acres **Rp1FO**

Rp - Riparian, 1 - Lotic, FO - Forested

This riparian class has woody vegetation that is greater than 6 meters (20 feet) tall.

EM - Emergent (no modifier)

190 Acres **Rp1EM**

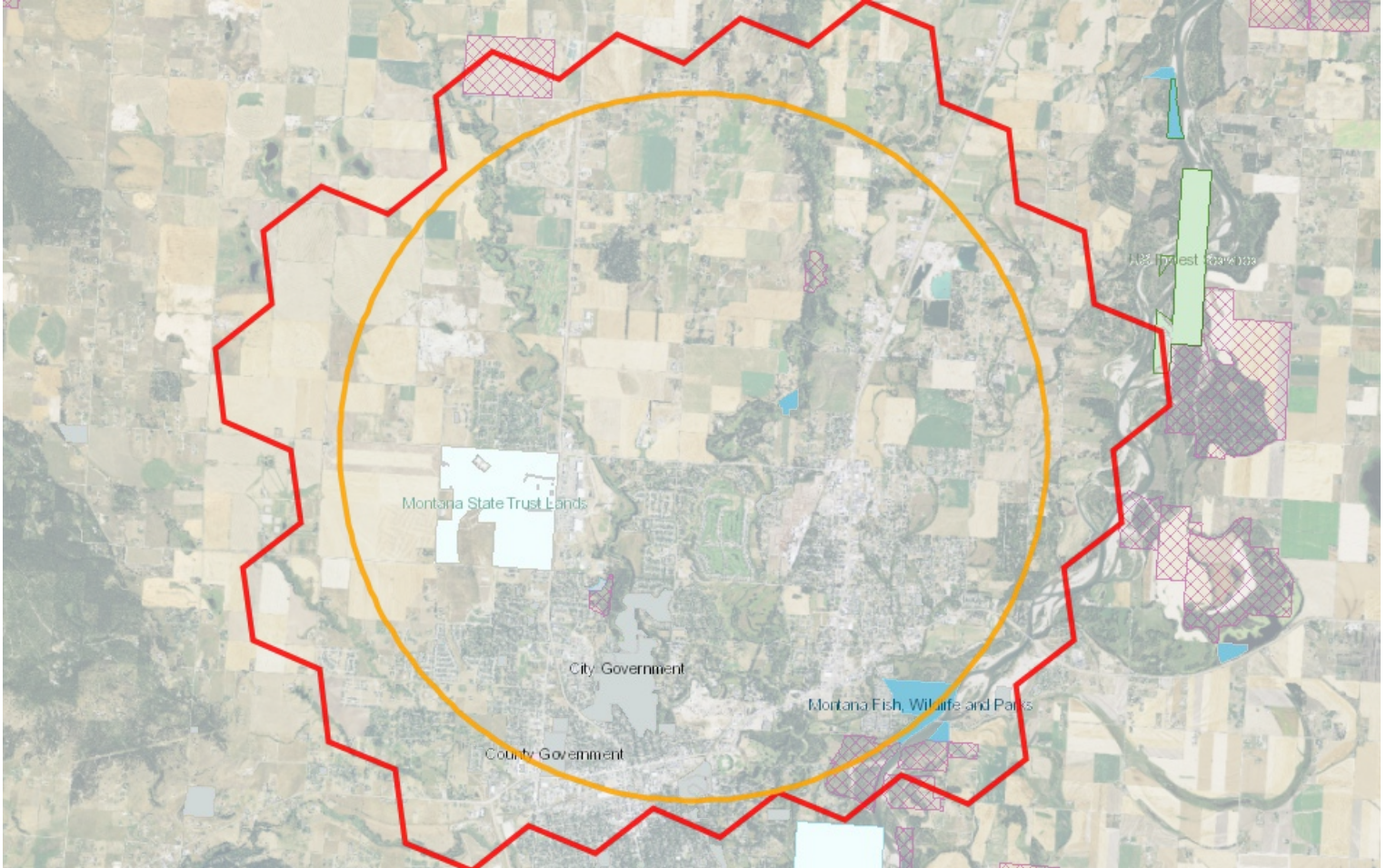
Rp - Riparian, 1 - Lotic, EM - Emergent

Riparian areas that have erect, rooted herbaceous vegetation during most of the growing season.



Land Management

Summarized by: **21mdt0006 WestReserveDrive Kalispell** (Custom Area of Interest)



Land Management Summary

[Explain](#)

	Ownership	Tribal	Easements	Other Boundaries (possible overlap)
Public Lands	1,169 Acres (4%)			
Federal	18 Acres (<1%)			
US Forest Service	12 Acres (<1%)			
USFS Owned	12 Acres (<1%)			
USFS Ranger Districts				16 Acres
Flathead National Forest, Hungry Horse Ranger District				16 Acres
USFS National Forest Boundaries				16 Acres
Flathead National Forest				16 Acres
US Government	6 Acres (<1%)			
US Government Owned	6 Acres (<1%)			
State	671 Acres (2%)			
Montana State Trust Lands	524 Acres (2%)			
MT State Trust Owned	524 Acres (2%)			
Montana Fish, Wildlife and Parks	147 Acres (1%)			
MTFWP Owned	147 Acres (1%)			
MTFWP Fishing Access Sites				132 Acres
Old Steel Bridge Fishing Access Site				127 Acres
Shady Lane Fishing Access Site				5 Acres
MTFWP Wildlife Habitat Protection Areas				4 Acres
Buffalo Head Park Wildlife Habitat Protection Area				4 Acres

Land Management Summary

[Explain](#)

	Ownership	Tribal	Easements	Other Boundaries (possible overlap)
+ Local	480 Acres (2%)			
+ Local Government	480 Acres (2%)			
Local Government Owned	480 Acres (2%)			
+ Conservation Easements			424 Acres (2%)	
+ Private			255 Acres (1%)	
Montana Land Reliance			229 Acres (1%)	
Flathead Land Trust			26 Acres (<1%)	
+ Federal			169 Acres (1%)	
US Department of Agriculture			30 Acres (<1%)	
US Government			139 Acres (1%)	
Private Lands or Unknown Ownership	25,267 Acres (94%)			







Biological Reports

Summarized by: **21mdt0006 WestReserveDrive Kalispell** (*Custom Area of Interest*)

Within the report area you have requested, citations for all reports and publications associated with plant or animal observations in Montana Natural Heritage Program (MTNHP) databases are listed and, where possible, links to the documents are included.

The MTNHP plans to include reports associated with terrestrial and aquatic communities in the future as allowed for by staff resources. If you know of reports or publications associated with species or biological communities within the report area that are not shown in this report, please let us know: mtnhp@mt.gov

-  Confluence Consulting, Inc. 2015. **Ashley Creek, Flathead county, Montana: Montana Department of Transportation Stream Mitigation Monitoring Report; Year 2015**
-  Confluence Consulting, Inc. 2016. Spring Creek Mitigation Site, Flathead County, Montana: Montana Department of Transportation Stream Mitigation Monitoring Report: Year 2016. Bozeman, MT: Confluence Consulting, Inc. 18 p plus appendices.
-  Confluence Consulting, Inc. 2017. **Bowser Creek, Flathead County, Montana: Montana Department of Transportation Stream Mitigation Monitoring Report; Year 2017**. Bozeman, MT: Confluence Consulting, Inc. 18 p plus appendices.
-  Land & Water Consulting. 2001. Lawrence park, Kalispell, Montana, Montana Department of Transportation Wetland Mitigation Monitoring Report: Year 2001. Helena, MT: Land & Water Consulting. 10 p plus appendices.
- Lesica, P. and D. Hanna. 2017. **Noteworthy Collections**. MadroÃ±o 64(4):114-115.



MONTANA
**Natural Heritage
Program**

A program of the Montana State Library's
Natural Resource Information System
operated by the University of Montana.

Legend

Model Icons

- Suitable (native range)
- Optimal Suitability
- Moderate Suitability
- Low Suitability
- Suitable (introduced range)

Habitat Icons

- Common
- Occasional

Range Icons

- Suspect (invasive / pest)
- Documented (invasive / pest)
- Released (biocontrol)
- Established (biocontrol)

Num Obs

Count of obs with
'good precision'
(<=1000m)
+ indicates
additional 'poor
precision' obs
(1001m-10,000m)



Latitude 48.18657
Longitude -114.22329
48.30067 -114.38901

Invasive and Pest Species

Summarized by: **21mdt0006 WestReserveDrive Kalispell** (*Custom Area of Interest*)

	# Obs	Predictive Model	Associated Habitat	Range
Noxious Weeds: Priority 1A				
<input type="checkbox"/> V - Centaurea solstitialis (<i>Yellow Starthistle</i>) N1A			Not Assigned	
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 1A - Non-native Species Global: GNR State: SNA Predictive Models: 64% Optimal (inductive), 36% Moderate (inductive)				
<input type="checkbox"/> V - Isatis tinctoria (<i>Dyer's Woad</i>) N1A			Not Assigned	
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 1A - Non-native Species Global: GNR State: SNA Predictive Models: 2% Optimal (inductive), 98% Moderate (inductive)				
Noxious Weeds: Priority 1B				
<input type="checkbox"/> V - Chondrilla juncea (<i>Rush Skeletonweed</i>) N1B	4		Not Assigned	
View in Field Guide View Predicted Models Noxious Weed: Priority 1B - Non-native Species Global: GNR State: SNA Predictive Models: 86% Optimal (inductive), 14% Moderate (inductive)				
<input type="checkbox"/> V - Echium vulgare (<i>Blueseed</i>) N1B			Not Assigned	
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 1B - Non-native Species Global: GNR State: SNA Predictive Models: 62% Moderate (inductive), 36% Low (inductive)				
Noxious Weeds: Priority 2A				
<input type="checkbox"/> V - Hieracium aurantiacum (<i>Orange Hawkweed</i>) N2A	29		Not Assigned	
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2A - Non-native Species Global: GNR State: SNA Predictive Models: 45% Optimal (inductive), 55% Moderate (inductive)				
<input type="checkbox"/> V - Hieracium caespitosum (<i>Meadow Hawkweed</i>) N2A	4		Not Assigned	
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2A - Non-native Species Global: GNR State: SNA Predictive Models: 100% Moderate (inductive)				
<input type="checkbox"/> V - Hieracium praealtum (<i>Kingdevil Hawkweed</i>) N2A			Not Assigned	
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2A - Non-native Species Global: GNR State: SNA Predictive Models: 57% Moderate (inductive), 36% Low (inductive)				
<input type="checkbox"/> V - Lepidium latifolium (<i>Perennial Pepperweed</i>) N2A			Not Assigned	
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2A - Non-native Species Global: GNR State: SNA Predictive Models: 14% Moderate (inductive), 81% Low (inductive)				
<input type="checkbox"/> V - Ranunculus acris (<i>Tall Buttercup</i>) N2A	26		Not Assigned	
View in Field Guide View Range Maps Noxious Weed: Priority 2A - Non-native Species Global: G5 State: SNA				
Noxious Weeds: Priority 2B				
<input type="checkbox"/> V - Linaria dalmatica (<i>Dalmatian Toadflax</i>) N2B	10		Not Assigned	
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2B - Non-native Species Global: G5 State: SNA Predictive Models: 24% Optimal (inductive), 69% Moderate (inductive), 7% Low (inductive)				
<input type="checkbox"/> V - Hypericum perforatum (<i>Common St. John's-wort</i>) N2B	32		Not Assigned	
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2B - Non-native Species Global: GNR State: SNA Predictive Models: 7% Optimal (inductive), 88% Moderate (inductive), 5% Low (inductive)				
<input type="checkbox"/> V - Linaria vulgaris (<i>Yellow Toadflax</i>) N2B	2		Not Assigned	

View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2B - Non-native Species Global: GNR State: SNA Predictive Models: 5% Optimal (inductive), 79% Moderate (inductive), 16% Low (inductive)		73		Not Assigned	
V - <i>Leucanthemum vulgare</i> (<i>Oxeye Daisy</i>) N2B					
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2B - Non-native Species Global: GNR State: SNA Predictive Models: 2% Optimal (inductive), 95% Moderate (inductive), 2% Low (inductive)		62		Not Assigned	
V - <i>Cirsium arvense</i> (<i>Canada Thistle</i>) N2B					
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2B - Non-native Species Global: G5 State: SNA Predictive Models: 100% Moderate (inductive)		87		Not Assigned	
V - <i>Centaurea stoebe</i> (<i>Spotted Knapweed</i>) N2B					
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2B - Non-native Species Global: GNR State: SNA Predictive Models: 98% Moderate (inductive), 2% Low (inductive)		35		Not Assigned	
V - <i>Cynoglossum officinale</i> (<i>Common Hound's-tongue</i>) N2B					
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2B - Non-native Species Global: GNR State: SNA Predictive Models: 76% Moderate (inductive), 24% Low (inductive)		26		Not Assigned	
V - <i>Convolvulus arvensis</i> (<i>Field Bindweed</i>) N2B					
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2B - Non-native Species Global: GNR State: SNA Predictive Models: 69% Moderate (inductive), 31% Low (inductive)		1		Not Assigned	
V - <i>Lepidium draba</i> (<i>Whitetop</i>) N2B					
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2B - Non-native Species Global: GNR State: SNA Predictive Models: 57% Moderate (inductive), 43% Low (inductive)				Not Assigned	
V - <i>Acroptilon repens</i> (<i>Russian Knapweed</i>) N2B					
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2B - Non-native Species Global: GNR State: SNA Predictive Models: 40% Moderate (inductive), 60% Low (inductive)		4		Not Assigned	
V - <i>Euphorbia virgata</i> (<i>Leafy Spurge</i>) N2B					
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2B - Non-native Species Global: GNRTNR State: SNA Predictive Models: 40% Moderate (inductive), 60% Low (inductive)				Not Assigned	
V - <i>Centaurea diffusa</i> (<i>Diffuse Knapweed</i>) N2B					
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2B - Non-native Species Global: GNR State: SNA Predictive Models: 33% Moderate (inductive), 64% Low (inductive)				Not Assigned	
V - <i>Berteroa incana</i> (<i>Hoary False-alyssum</i>) N2B					
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2B - Non-native Species Global: GNR State: SNA Predictive Models: 12% Moderate (inductive), 83% Low (inductive)		41		Not Available Not Assigned	
V - <i>Tanacetum vulgare</i> (<i>Common Tansy</i>) N2B					
View in Field Guide View Range Maps Noxious Weed: Priority 2B - Non-native Species Global: GNR State: SNA					
Regulated Weeds: Priority 3					
V - <i>Bromus tectorum</i> (<i>Cheatgrass</i>) R3		2		Not Assigned	
View in Field Guide View Predicted Models View Range Maps Regulated Weed: Priority 3 - Non-native Species Global: GNR State: SNA Predictive Models: 55% Moderate (inductive), 45% Low (inductive)					
V - <i>Elaeagnus angustifolia</i> (<i>Russian Olive</i>) R3				Not Assigned	
View in Field Guide View Predicted Models View Range Maps Regulated Weed: Priority 3 - Non-native Species Global: GNR State: SNA Predictive Models: 5% Moderate (inductive), 71% Low (inductive)					
Biocontrol Species					
I - <i>Oberea erythrocephala</i> (<i>Red-headed Leafy Spurge Stem Borer</i>) BIOCNTRL				Not Assigned	
View in Field Guide View Predicted Models View Range Maps Biocontrol Species - Non-native Species Global: GNR State: SNA Predictive Models: 79% Optimal (inductive), 19% Moderate (inductive), 2% Low (inductive)					

<input type="checkbox"/> I - <i>Cyphocleonus achates</i> (<i>Knapweed Root Weevil</i>) BIOCNTL		Not Assigned	<input type="checkbox"/> R
<p> View in Field Guide View Predicted Models View Range Maps Biocontrol Species - Non-native Species Global: GNR State: SNA Predictive Models: 45% Optimal (inductive), 55% Moderate (inductive) </p>			
<input type="checkbox"/> I - <i>Mecinus janthinus</i> (<i>Yellow Toadflax Stem-boring Weevil</i>) BIOCNTL		Not Assigned	<input type="checkbox"/> R
<p> View in Field Guide View Predicted Models View Range Maps Biocontrol Species - Non-native Species Global: GNR State: SNA Predictive Models: 40% Optimal (inductive), 40% Moderate (inductive), 17% Low (inductive) </p>			
<input type="checkbox"/> I - <i>Mecinus janthiniformis</i> (<i>Dalmatian Toadflax Stem-boring Weevil</i>) BIOCNTL		Not Assigned	<input type="checkbox"/> R
<p> View in Field Guide View Predicted Models View Range Maps Biocontrol Species - Non-native Species Global: GNR State: SNA Predictive Models: 90% Moderate (inductive), 10% Low (inductive) </p>			
<input type="checkbox"/> I - <i>Aphthona lacertosa</i> (<i>Brown-legged Leafy Spurge Flea Beetle</i>) BIOCNTL		Not Assigned	<input type="checkbox"/> R
<p> View in Field Guide View Predicted Models View Range Maps Biocontrol Species - Non-native Species Global: GNR State: SNA Predictive Models: 88% Moderate (inductive), 7% Low (inductive) </p>			
<input type="checkbox"/> I - <i>Aphthona nigriscutis</i> (<i>Black Dot Leafy Spurge Flea Beetle</i>) BIOCNTL		Not Assigned	<input type="checkbox"/> R
<p> View in Field Guide View Predicted Models View Range Maps Biocontrol Species - Non-native Species Global: GNR State: SNA Predictive Models: 24% Moderate (inductive), 48% Low (inductive) </p>			

Introduction to Montana Natural Heritage Program



P.O. Box 201800 • 1515 East Sixth Avenue • Helena, MT 59620-1800 • fax 406.444.0266 • tel 406.444.0241 • mtnhp.org

INTRODUCTION

The Montana Natural Heritage Program (MTNHP) is Montana's source for reliable and objective information on Montana's native species and habitats, emphasizing those of conservation concern. MTNHP was created by the Montana legislature in 1983 as part of the Natural Resource Information System (NRIS) at the Montana State Library (MSL). MTNHP is "a program of information acquisition, storage, and retrieval for data relating to the flora, fauna, and biological community types of Montana" (MCA 90-15-102). MTNHP's activities are guided by statute (MCA 90-15) as well as through ongoing interaction with, and feedback from, principal data source agencies such as Montana Fish, Wildlife, and Parks, the Montana Department of Environmental Quality, the Montana Department of Natural Resources and Conservation, the Montana University System, the US Forest Service, and the US Bureau of Land Management. The enabling legislation for MTNHP provides the State Library with the option to contract the operation of the Program. Since 2006, MTNHP has been operated as a program under the Office of the Vice President for Research and Creative Scholarship at the University of Montana (UM) through a renewable 2-year contract with the MSL. Since the first staff was hired in 1985, the Program has logged a long record of success, and developed into a highly respected, service-oriented program. MTNHP is widely recognized as one of the most advanced and effective of over 80 natural heritage programs throughout the Western Hemisphere.

VISION

Our vision is that public agencies, the private sector, the education sector, and the general public will trust and rely upon MTNHP as the source for information and expertise on Montana's species and habitats, especially those of conservation concern. We strive to provide easy access to our information in order for users to save time and money, speed environmental reviews, and inform decision making.

CORE VALUES

- We endeavor to be a single statewide source of accurate and up-to-date information on Montana's plants, animals, and aquatic and terrestrial biological communities.
- We actively listen to our data users and work responsively to meet their information and training needs.
- We strive to provide neutral, trusted, timely, and equitable service to all of our information users.
- We make every effort to be transparent to our data users in setting work priorities and providing data products.

CONFIDENTIALITY

All information requests made to the Montana Natural Heritage Program are considered library records and are protected from disclosure by the Montana Library Records Confidentiality Act (MCA 22-1-11).

INFORMATION MANAGED

Information managed at the Montana Natural Heritage Program includes: (1) lists of, and basic information on, plant and animal species and biological communities; (2) plant and animal surveys, observations, species occurrences, predictive distribution models, range polygons, and conservation status ranks; and (3) land cover and wetland and riparian mapping and the conservation status of these and other biological communities.

Data Use Terms and Conditions


- 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. The information is not intended as natural resource management guidelines or prescriptions or a determination of environmental impacts. MTNHP recommends consultation with appropriate state, federal, and tribal resource management agencies and authorities in the area where your project is located.
- Information on the status and spatial distribution of biological resources produced by MTNHP are intended to inform parties of the state-wide status, known occurrence, or the likelihood of the presence of those resources. **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.**
- MTNHP does not portray its data as exhaustive or comprehensive inventories of rare species or biological communities. **Field verification of the absence or presence of sensitive species and biological communities will always be an important obligation of users of our data.**
- MTNHP responds equally to all requests for products and services, regardless of the purpose or identity of the requester.
- Because MTNHP constantly updates and revises its databases with new data and information, products will become outdated over time. Interested parties are encouraged to obtain the most current information possible from MTNHP, rather than using older products. We add, review, update, and delete records on a daily basis. Consequently, we strongly advise that you update your MTNHP data sets at a minimum of every three months for most applications of our information.
- MTNHP data require a certain degree of biological expertise for proper analysis, interpretation, and application. Our staff is available to advise you on questions regarding the interpretation or appropriate use of the data that we provide. Contact information for MTNHP staff is posted at: <http://mtnhp.org/contact.asp>
- The information provided to you by MTNHP may include sensitive data that if publicly released might jeopardize the welfare of threatened, endangered, or sensitive species or biological communities. This information 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 MTNHP 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.
- MTNHP and appropriate staff members should be appropriately acknowledged as an information source in any third-party product involving MTNHP data, reports, papers, publications, or in maps that incorporate MTNHP graphic elements.
- Sources of our data include museum specimens, published and unpublished scientific literature, field surveys by state and federal agencies and private contractors, and reports from knowledgeable individuals. MTNHP actively solicits and encourages additions, corrections and updates, new observations or collections, and comments on any of the data we provide.
- MTNHP staff and contractors do not cross or survey privately-owned lands without express permission from the landowner. However, the program cannot guarantee that information provided to us by others was obtained under adherence to this policy.

Suggested Contacts for 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, federal, and tribal 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, and Parks

Fish Species	Zachary Shattuck zshattuck@mt.gov (406) 444-1231 or Eric Roberts eroberts@mt.gov (406) 444-5334
American Bison Black-footed Ferret Black-tailed Prairie Dog Bald Eagle Golden Eagle Common Loon Least Tern Piping Plover Whooping Crane	Lauri Hanauska-Brown LHanauska-Brown@mt.gov (406) 444-5209
Grizzly Bear Greater Sage Grouse Trumpeter Swan Big Game Upland Game Birds Furbearers	John Vore jvore@mt.gov (406) 444-3940
Managed Terrestrial Game and Nongame Animal Data	Smith Wells – MFWP Data Analyst smith.wells@mt.gov (406) 444-3759
Fisheries Data	Ryan Alger – MFWP Data Analyst ryan.alger@mt.gov (406) 444-5365
Wildlife and Fisheries Scientific Collector’s Permits	http://fwp.mt.gov/doingBusiness/licenses/scientificWildlife/ Kammi McClain for Wildlife Kammi.McClain@mt.gov (406) 444-2612 Kim Wedde for Fisheries kim.wedde@mt.gov (406) 444-5594
Fish and Wildlife Recommendations for Subdivision Development	Renee Lemon RLemon@mt.gov (406) 444-3738 and see http://fwp.mt.gov/fishAndWildlife/livingWithWildlife/buildingWithWildlife/subdivisionRecommendations/
Regional Contacts 	Region 1 (Kalispell) (406) 752-5501 Region 2 (Missoula) (406) 542-5500 Region 3 (Bozeman) (406) 994-4042 Region 4 (Great Falls) (406) 454-5840 Region 5 (Billings) (406) 247-2940 Region 6 (Glasgow) (406) 228-3700 Region 7 (Miles City) (406) 234-0900

United States Fish and Wildlife Service:

Information Planning and Conservation (IPAC) website: <http://ecos.fws.gov/ipac/>

Montana Ecological Services Field Office: <http://www.fws.gov/montanafieldoffice/> (406) 449-5225


Bureau of Land Management

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

Regional Office – Missoula, Montana Contacts			
Wildlife Program Leader	Tammy Fletcher	tammyfletcher@fs.fed.us	(406) 329-3588
Wildlife Ecologist	Cara Staab	cstaab@fs.fed.us	(406) 329-3677
Fish Program Leader	Scott Spaulding	scottspaulding@fs.fed.us	(406) 329-3287
Fish Ecologist	Cameron Thomas	cathomas@fs.fed.us	(406) 329-3087
TES Program	Lydia Allen	lrallen@fs.fed.us	(406) 329-3558
Interagency Grizzly Bear Coordinator	Scott Jackson	sjackson03@fs.fed.us	(406) 329-3664
Regional Botanist	Steve Shelly	sshelly@fs.fed.us	(406) 329-3041
Invasive Species Program Manager	Michelle Cox	michelle.cox2@usda.gov	(406) 329-3669

Tribal Nations

	<ul style="list-style-type: none"> Assiniboine & Gros Ventre Tribes – Fort Belknap Reservation Assiniboine & Sioux Tribes – Fort Peck Reservation Blackfoot Tribe - Blackfoot Reservation Chippewa Creek Tribe - Rocky Boy's Reservation Crow Tribe – Crow Reservation Little Shell Chippewa Tribe Northern Cheyenne Tribe – Northern Cheyenne Reservation Salish & Kootenai Tribes - Flathead Reservation
---	--

Natural Heritage Programs and Conservation Data Centers in Surrounding States and Provinces

- [Alberta Conservation Information Management System](#)
- [British Columbia Conservation Data Centre](#)
- [Idaho Natural Heritage Program](#)
- [North Dakota Natural Heritage Program](#)
- [Saskatchewan Conservation Data Centre](#)
- [South Dakota Natural Heritage Program](#)
- [Wyoming Natural Diversity Database](#)

Invasive Species Management Contacts and Information

Aquatic Invasive Species

[Montana Fish, Wildlife, and Parks Aquatic Invasive Species staff](#)

[Montana Department of Natural Resources and Conservation's Aquatic Invasive Species Grant Program](#)

[Montana Invasive Species Council \(MISC\)](#)

[Upper Columbia Conservation Commission \(UC3\)](#)

Noxious Weeds

[Montana Weed Control Association Contacts Webpage](#)

[Montana Biological Weed Control Coordination Project](#)

[Montana Department of Agriculture - Noxious Weeds](#)

[Montana Weed Control Association](#)

[Montana Fish, Wildlife, and Parks - Noxious Weeds](#)

[Montana State University Integrated Pest Management Extension](#)

[Integrated Noxious Weed Management after Wildfires](#)

Introduction to Native Species

Within the report area you have requested, separate summaries are provided for: (1) Species Occurrences (SO) for plant and animal Species of Concern, Special Status Species (SSS), Important Animal Habitat (IAH) and some Potential Plant Species of Concern; (2) other observed non Species of Concern or Species of Concern without suitable documentation to create Species Occurrence polygons; and (3) other non-documented species that are potentially present based on their range, predicted suitable habitat model output, or presence of associated habitats. Each of these summaries provides the following information when present for a species: (1) the number of [Species Occurrences](#) and associated delineation criteria for construction of these polygons that have long been used for considerations of documented Species of Concern in environmental reviews; (2) the number of observations of each species; (3) the geographic range polygons for each species that the report area overlaps; (4) predicted relative habitat suitability classes that are present if a predicted suitable habitat model has been created; (5) the percent of the report area that is mapped as commonly associated or occasionally associated habitat as listed for each species in the [Montana Field Guide](#); and (6) a variety of conservation status ranks and links to species accounts in the [Montana Field Guide](#). Details on each of these information categories are included under relevant section headers below or are defined on our [Species Status Codes](#) page. In presenting this information, the Montana Natural Heritage Program (MTNHP) is working towards assisting the user with rapidly determining what species have been documented and what species are potentially present in the report area. We remind users that this information is likely incomplete as surveys to document native and introduced species are lacking in many areas of the state, information on introduced species has only been tracked relatively recently, the MTNHP's staff and resources are restricted by declining budgets, and information is constantly being added and updated in our databases. **Thus, field verification by professional biologists of the absence or presence of species and biological communities will always be an important obligation of users of our data.**

If you are aware of observation datasets that the MTNHP is missing, please report them to the Program Botanist apipp@mt.gov or Senior Zoologist dbachen@mt.gov. If you have observations that you would like to contribute, you can submit animal observations using our online data entry system at <http://mtnhp.org/AddObs/>, plant and animal observations via Excel spreadsheets posted at <http://mtnhp.org/observations.asp>, or to the Program Botanist or Senior Zoologist.

Observations

The MTNHP manages information on more than 1.8 million animal and plant observations that have been reported by professional biologists and private citizens from across Montana. The majority of these observations are submitted in digital format from standardized databases associated with research or monitoring efforts and spreadsheets of incidental observations submitted by professional biologists and amateur naturalists. At a minimum, accepted observation records must contain a credible species identification (i.e. appropriate geographic range, date, and habitat and, if species are difficult to identify, a photograph and notes on key identifying features), a date or date range, observer name, locational information (ideally with latitude and longitude in decimal degrees), notes on numbers observed, and species behavior or habitat use (e.g., is the observation likely associated with reproduction). Bird records are also required to have information associated with date-appropriate breeding or overwintering status of the species observed. MTNHP reviews observation records to ensure that they are mapped correctly, occur within date ranges when the species is known to be present or detectable, occur within the known seasonal geographic range of the species, and occur in appropriate habitats. MTNHP also assigns each record a locational uncertainty value in meters to indicate the spatial precision associated with the record's mapped coordinates. Only records with locational uncertainty values of 10,000 meters or less are included in environmental summary reports and number summaries are only provided for records with locational uncertainty values of 1,000 meters or less.

Species Occurrences

The MTNHP evaluates plant and animal observation records for species of higher conservation concern to determine whether they are worthy of inclusion in the [Species Occurrence](#) (SO) layer for use in environmental reviews; observations not worthy of inclusion in this layer include long distance dispersal events, migrants observed away from key migratory stopover habitats, and winter observations. An SO is a polygon depicting what is known about a species occupancy from direct observation with a defined level of locational uncertainty and any inference that can be made about adjacent habitat use from the latest peer-reviewed science. If an observation can be associated with a map feature that can be tracked (e.g., a wetland boundary for a wetland associated plant) then this polygon feature is used to represent the SO. Areas that can be inferred as probable occupied habitat based on direct observation of a species location and what is known about the foraging area or home range size of the species may be incorporated into the SO. Species Occurrences generally belong to one of the following categories:

Plant Species Occurrences

A documented location of a specimen collection or observed plant population. In some instances, adjacent, spatially separated clusters are considered subpopulations and are grouped as one occurrence (e.g., the subpopulations occur in ecologically similar habitats, and their spatial proximity likely allows them to interbreed). Tabular information for multiple observations at the same SO location is generally linked to a single polygon. Plant SO's are only created for Species of Concern and Potential Species of Concern.

Animal Species Occurrences

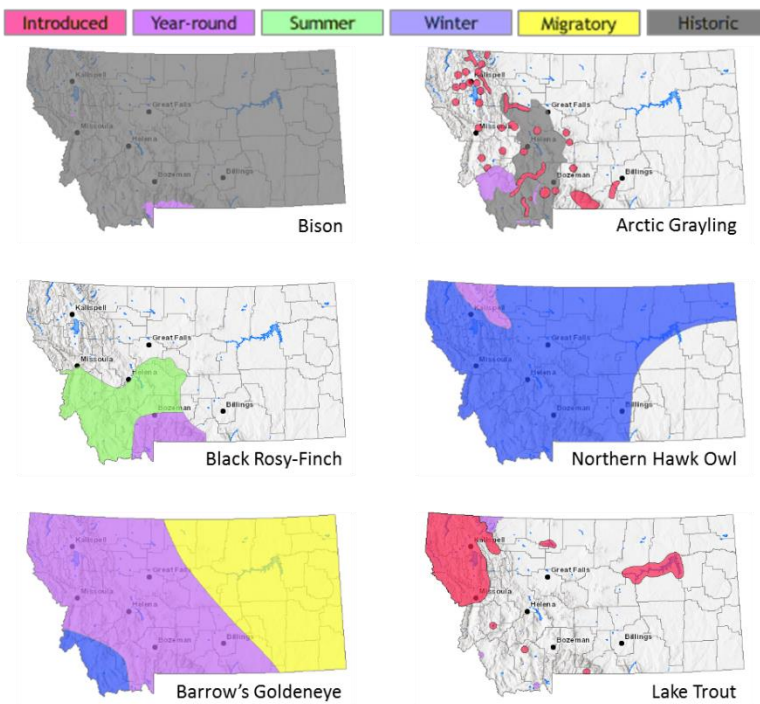
The location of a verified observation or specimen record typically known or assumed to represent a breeding population or a portion of a breeding population. Animal SO's are generally: (1) buffers of terrestrial point observations based on documented species' home range sizes; (2) buffers of stream segments to encompass occupied streams and immediate adjacent riparian habitats; (3) polygonal features encompassing known or likely breeding populations (e.g., a wetland for some amphibians or a forested portion of a mountain range for some wide ranging carnivores); or (4) combinations of the above. Tabular information for multiple observations at the same SO location is generally linked to a single polygon. Species Occurrence polygons may encompass some unsuitable habitat in some instances in order to avoid heavy data processing associated with clipping out habitats that are readily assessed as unsuitable by the data user (e.g., a point buffer of a terrestrial species may overlap into a portion of a lake that is obviously inappropriate habitat for the species). Animal SO's are only created for Species of Concern and Special Status Species (e.g., Bald Eagle).

Other Occurrence Polygons

These include significant biological features not included in the above categories, such as Important Animal Habitats like bird rookeries and bat roosts, and peatlands or other wetland and riparian communities that support diverse plant and animal communities.

Geographic Range Polygons

Geographic range polygons have not yet been defined for most plant species. Native year-round, summer, winter, migratory and historic geographic range polygons as well as polygons for introduced populations have



been defined for most animal species for which there are enough observations, surveys, and knowledge of appropriate seasonal habitat use to define them (see examples to left). These native or introduced range polygons bound the extent of known or likely occupied habitats for non-migratory and relative sedentary species and the regular extent of known or likely occupied habitats for migratory and long-distance dispersing species; polygons may include unsuitable intervening habitats. For most species, a single polygon can represent the year-round or seasonal range, but breeding ranges of some colonial nesting water birds and some introduced species are represented more patchily when supported by data. Some ranges are mapped more broadly than actual distributions in order to be visible on statewide maps (e.g., fish).

Predicted Suitable Habitat Models

Recent predicted suitable habitat suitability models have not yet been created for most plant species. For animal species for which models have been completed, the environmental summary report includes simple, rule-based, associations with streams for fish and other aquatic species and mathematically complex Maximum Entropy models (Phillips et al. 2006, *Ecological Modeling* 190:231-259) constructed from a variety of statewide biotic and abiotic layers and presence only data for individual species contributed to Montana Natural Heritage Program databases for most terrestrial species. For the Maximum Entropy models, we reclassified 90 x 90-meter continuous model output into suitability classes (unsuitable, low, moderate, and optimal) then aggregated that into the one square mile hexagons used in the environmental summary report; this is the finest spatial scale we suggest using this information in management decisions and survey planning. Full model write ups for individual species that discuss model goals, inputs, outputs, and evaluation in much greater detail are posted on the MTNHP's [Predicted Suitable Habitat Models](#) page. Evaluations of predictive accuracy and specific limitations are included with the metadata for models of individual species. **Model outputs should not be used in place of on-the-ground surveys for species. Instead model outputs should be used in conjunction with habitat evaluations to determine the need for on-the-ground surveys for species.** We suggest that the percentage of predicted optimal and moderate suitable habitat within the report area be used in conjunction with geographic range polygons and the percentage of commonly associated habitats to generate lists of potential species that may occupy broader landscapes for the purposes of landscape-level planning.

Associated Habitats

Within the boundary of the intersected hexagons, we provide the approximate percentage of commonly or occasionally associated habitat for vertebrate animal species that regularly breed, overwinter, or migrate through the state; a detailed list of commonly and occasionally associated habitats is provided in individual species accounts in the [Montana Field Guide](#). We assigned common or occasional use of each of the 82 ecological systems mapped in Montana by: (1) using personal knowledge and reviewing literature that

summarizes the breeding, overwintering, or migratory habitat requirements of each species; (2) evaluating structural characteristics and distribution of each ecological system relative to the species' range and habitat requirements; (3) examining the observation records for each species in the state-wide point observation database associated with each ecological system; and (4) calculating the percentage of observations associated with each ecological system relative to the percent of Montana covered by each ecological system to get a measure of numbers of observations versus availability of habitat. Species that breed in Montana were only evaluated for breeding habitat use, species that only overwinter in Montana were only evaluated for overwintering habitat use, and species that only migrate through Montana were only evaluated for migratory habitat use. In general, species were listed as associated with an ecological system if structural characteristics of used habitat documented in the literature were present in the ecological system or large numbers of point observations were associated with the ecological system. However, species were not listed as associated with an ecological system if there was no support in the literature for use of structural characteristics in an ecological system, even if point observations were associated with that system. Common versus occasional association with an ecological system was assigned based on the degree to which the structural characteristics of an ecological system matched the preferred structural habitat characteristics for each species as represented in the scientific literature. The percentage of observations associated with each ecological system relative to the percent of Montana covered by each ecological system was also used to guide assignment of common versus occasional association.

We suggest that the percentage of commonly associated habitat within the report area be used in conjunction with geographic range polygons and the percentage of predicted optimal and moderate suitable habitat from predictive models to generate lists of potential species that may occupy broader landscapes for the purposes of landscape-level planning. Users of this information should be aware that land cover mapping accuracy is particularly problematic when the systems occur as small patches or where the land cover types have been altered over the past decade. Thus, particular caution should be used when using the associations in assessments of smaller areas (e.g., evaluations of public land survey sections).

Introduction to Land Cover

Land Use/Land Cover is one of 15 [Montana Spatial Data Infrastructure](#) framework layers considered vital for making statewide maps of Montana and understanding its geography. The layer records all Montana natural vegetation, land cover and land use, classified from satellite and aerial imagery, mapped at a scale of 1:100000, and interpreted with supporting ground-level data. The baseline map is adapted from the Northwest ReGAP (NWGAP) project land cover classification, which used 30m resolution multi-spectral Landsat imagery acquired between 1999 and 2001. Vegetation classes were drawn from the Ecological System Classification developed by NatureServe (Comer et al. 2003). The land cover classes were developed by Anderson et al. (1976). The NWGAP effort encompasses 12 map zones. Montana overlaps seven of these zones. The two NWGAP teams responsible for the initial land cover mapping effort in Montana were Sanborn and NWGAP at the University of Idaho. Both Sanborn and NWGAP employed a similar modeling approach in which Classification and Regression Tree (CART) models were applied to Landsat ETM+ scenes. The Spatial Analysis Lab within the Montana Natural Heritage Program was responsible for developing a seamless Montana land cover map with a consistent statewide legend from these two separate products. Additionally, the Montana land cover layer incorporates several other land cover and land use products (e.g., MSDI Structures and Transportation themes and the Montana Department of Revenue Final Land Unit classification) and reclassifications based on plot-level data and the latest NAIP imagery to improve accuracy and enhance the usability of the theme. Updates are done as partner support and funding allow, or when other MSDI datasets can be incorporated. Recent updates include fire perimeters and agricultural land use (annually), energy developments such as wind, oil and gas installations (2014), roads, structures and other impervious surfaces (various years): and local updates/improvements to specific ecological systems (e.g., central Montana grassland and sagebrush ecosystems). Current and previous versions of the Land Use/Land Cover layer with full metadata are available for download at the Montana State Library's [Geographic Information Clearinghouse](#).

Within the report area you have requested, land cover is summarized by acres of Level 1, Level 2, and Level 3 Ecological Systems.

Literature Cited

- Anderson, J.R. E.E. Hardy, J.T. Roach, and R.E. Witmer. 1976. A land use and land cover classification system for use with remote sensor data. U.S. Geological Survey Professional Paper 964.
- Comer, P., D. Faber-Langendoen, R. Evans, S. Gawler, C. Josse, G. Kittel, S. Menard, M. Pyne, M. Reid, K. Schulz, K. Snow, and J. Teague. 2003. Ecological systems of the United States: A working classification of U.S. terrestrial systems. NatureServe, Arlington, VA.

Introduction to Wetland and Riparian

Within the report area you have requested, wetland and riparian mapping is summarized by acres of each classification present. Summaries are only provided for modern MTNHP wetland and riparian mapping and not for outdated (NWI Legacy) or incomplete (NWI Scalable) mapping efforts; [described here](#). MTNHP has made all three of these datasets and associated metadata available for separate download on the [Montana Wetland and Riparian Framework MSDI download page](#).

Wetland and Riparian mapping is one of 15 [Montana Spatial Data Infrastructure](#) framework layers considered vital for making statewide maps of Montana and understanding its geography. The wetland and riparian framework layer consists of spatial data representing the extent, type, and approximate location of wetlands, riparian areas, and deepwater habitats in Montana.

Wetland and riparian mapping is completed through photointerpretation of 1-m resolution color infrared aerial imagery acquired from 2005 or later. A coding convention using letters and numbers is assigned to each mapped wetland. These letters and numbers describe the broad landscape context of the wetland, its vegetation type, its water regime, and the kind of alterations that may have occurred. Ancillary data layers such as topographic maps, digital elevation models, soils data, and other aerial imagery sources are also used to improve mapping accuracy. Wetland mapping follows the federal Wetland Mapping Standard and classifies wetlands according to the Cowardin classification system of the National Wetlands Inventory (NWI) (Cowardin et al. 1979, FGDC Wetlands Subcommittee 2013). Federal, State, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands differently than the NWI. Similar coding, based on U.S. Fish and Wildlife Service conventions, is applied to riparian areas (U.S. Fish and Wildlife Service 2009). These are mapped areas where vegetation composition and growth is influenced by nearby water bodies, but where soils, plant communities, and hydrology do not display true wetland characteristics. **These data are intended for use in publications at a scale of 1:12,000 or smaller. Mapped wetland and riparian areas do not represent precise boundaries and digital wetland data cannot substitute for an on-site determination of jurisdictional wetlands.**

A detailed overview, with examples, of both wetland and riparian classification systems and associated codes can be found at: http://mtnhp.org/help/MapView/WetRip_Classification.asp

Literature Cited

- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Fish and Wildlife Service, FWS/OBS-79/31. Washington, D.C. 103pp.
- Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, D.C.
- U.S. Fish and Wildlife Services. 2009. A system for mapping riparian areas in the western United States. Division of Habitat and Resource Conservation, Branch of Resource and Mapping Support, Arlington, Virginia.

Introduction to Land Management

Within the report area you have requested, land management information is summarized by acres of federal, state, and local government lands, tribal reservation boundaries, private conservation lands, and federal, state, local, and private conservation easements. Acreage for “Owned”, “Tribal”, or “Easement” categories represents non-overlapping areas that may be totaled. However, “Other Boundaries” represents managed areas such as National Forest boundaries containing private inholdings and other mixed ownership which may cause boundaries to overlap (e.g. a wilderness area within a forest). Therefore, acreages may not total in a straight-forward manner.

Because information on land stewardship is critical to effective land management, the Montana Natural Heritage Program (MTNHP) began compiling ownership and management data in 1997. The goal of the Montana Land Management Database is to manage a single, statewide digital data set that incorporates information from both public and private entities. The database assembles information on public lands, private conservation lands, and conservation easements held by state and federal agencies and land trusts and is updated on a regular basis. Since 2011, the Information Management group in the Montana State Library’s Digital Library Division has taken an increasingly active role in managing layers of the Montana Land Management Database in partnership with the MTNHP.

Public and private conservation land polygons are attributed with the name of the entity that owns it. The data are derived from the statewide Montana Cadastral Parcel layer. Conservation easement data shows land parcels on which a public agency or qualified land trust has placed a conservation easement in cooperation with the land owner. The dataset contains no information about ownership or status of the mineral estate. For questions about the dataset or to report errors, please contact the Montana Natural Heritage Program at (406) 444-5363 or mtnhp@mt.gov. You can download various components of the Land Management Database and view associated metadata at the Montana State Library’s [GIS Data List](#) at the following links:

[Public Lands](#)

[Conservation Easements](#)

[Private Conservation Lands](#)

[Managed Areas](#)

Map features in the Montana Land Management Database or summaries provided in this report are not intended as a legal depiction of public or private surface land ownership boundaries and should not be used in place of a survey conducted by a licensed land surveyor. Similarly, map features do not imply public access to any lands. The Montana Natural Heritage Program makes no representations or warranties whatsoever with respect to the accuracy or completeness of this data and assumes no responsibility for the suitability of the data for a particular purpose. The Montana Natural Heritage Program will not be liable for any damages incurred as a result of errors displayed here. Consumers of this information should review or consult the primary data and information sources to ascertain the viability of the information for their purposes.

Introduction to Invasive and Pest Species

Within the report area you have requested, separate summaries are provided for: Aquatic Invasive Species, Noxious Weeds, Agricultural Pests, and Forest Pests that have been documented or potentially occur there based on their known distribution in the state. Definitions for each of these invasive and pest species categories can be found on our [Species Status Codes](#) page.

Each of these summaries provides the following information when present for a species: (1) the number of observations of each species; (2) the geographic range polygons for each species, if developed, that the report area overlaps; (3) predicted relative habitat suitability classes that are present if a predicted suitable habitat model has been created; (4) the percent of the report area that is mapped as commonly associated or occasionally associated habitat as listed for each species in the [Montana Field Guide](#); and (5) and links to species accounts in the [Montana Field Guide](#). Details on each of these information categories are included under relevant section headers under the Introduction to Native Species above or are defined on our [Species Status Codes](#) page. In presenting this information, the Montana Natural Heritage Program (MTNHP) is working towards assisting the user with rapidly determining what invasive and pest species have been documented and what species are potentially present in the report area. We remind users that this information is likely incomplete as surveys to document introduced species are lacking in many areas of the state, information on introduced species has only been tracked relatively recently, the MTNHP's staff and resources are restricted by declining budgets, and information is constantly being added and updated in our databases. **Thus, field verification by professional biologists of the absence or presence of species will always be an important obligation of users of our data.**

If you are aware of observation or survey datasets for invasive or pest species that the MTNHP is missing, please report them to the Program Coordinator bmaxell@mt.gov Program Botanist apipp@mt.gov or Senior Zoologist dbachen@mt.gov. If you have observations that you would like to contribute, you can submit animal observations using our online data entry system at <http://mtnhp.org/AddObs/>, plant and animal observations via Excel spreadsheets posted at <http://mtnhp.org/observations.asp>, or to the Program Botanist or Senior Zoologist.

Additional Information Resources

[Home Page for Montana Natural Heritage Program \(MTNHP\)](#)

[MTNHP Staff Contact Information](#)

[Montana Field Guide](#)

[MTNHP Species of Concern Report - Animals and Plants](#)

[MTNHP Species Status Codes - Explanation](#)

[MTNHP Predicted Suitable Habitat Models](#) (for select Animals and Plants)

[MTNHP Request Information page](#)

[Montana Cadastral](#)

[Montana Code Annotated](#)

[Montana Department of Environmental Quality](#)

[Montana Fisheries Information System](#)

[Montana Fish, Wildlife, and Parks Subdivision Recommendations](#)

[Montana GIS Data Layers](#)

[Montana GIS Data Bundler](#)

[Montana Greater Sage-Grouse Project Submittal Site](#)

[Montana Ground Water Information Center](#)

[Montana Legislative Environmental Policy Office Publications](#)

(Including Index of Environmental Permits required in Montana and Guide to the Montana Environmental Policy Act)

[Montana Environmental Policy Act \(MEPA\)](#)

[MEPA Analysis Resource List](#)

[Laws, Treaties, Regulations, and Permits on Animals and Plants](#)

[Montana Spatial Data Infrastructure Layers](#)

[Montana State Historic Preservation Office Review and Compliance](#)

[Montana Water Information System](#)

[Montana Web Map Services](#)

[National Environmental Policy Act](#)

[Penalties for Misuse of Fish and Wildlife Location Data](#) (MCA 87-6-222)

[U.S. Fish and Wildlife Service Information for Planning and Conservation](#) (Section 7 Consultation)

[Web Soil Survey Tool](#)

ATTACHMENT 6: MONTANA NOXIOUS WEEDS LIST

Montana Noxious Weed List

Effective: June 21, 2019

PRIORITY 1A These weeds are not present or have a very limited presence in Montana. Management criteria will require eradication if detected, education, and prevention:

- (a) Yellow starthistle (*Centaurea solstitialis*)
- (b) Dyer's woad (*Isatis tinctoria*)
- (c) Common reed (*Phragmites australis* ssp. *australis*)
- (d) Medusahead (*Taeniatherum caput-medusae*)

PRIORITY 1B These weeds have limited presence in Montana.

Management criteria will require eradication or containment and education:

- (a) Knotweed complex (*Polygonum cuspidatum*, *P. sachalinense*, *P. x bohemicum*, *Fallopia japonica*, *F. sachalinensis*, *F. x bohémica*, *Reynoutria japonica*, *R. sachalinensis*, and *R. x bohémica*)
- (b) Purple loosestrife (*Lythrum salicaria*)
- (c) Rush skeletonweed (*Chondrilla juncea*)
- (d) Scotch broom (*Cytisus scoparius*)
- (e) Blueweed (*Echium vulgare*)

PRIORITY 2A These weeds are common in isolated areas of Montana. Management criteria will require eradication or containment where less abundant. Management shall be prioritized by local weed districts:

- (a) Tansy ragwort (*Senecio jacobaea*, *Jacobaea vulgaris*)
- (b) Meadow hawkweed complex (*Hieracium caespitosum*, *H. praealtum*, *H. floridundum*, and *Pilosella caespitosa*)
- (c) Orange hawkweed (*Hieracium aurantiacum*, *Pilosella aurantiaca*)
- (d) Tall buttercup (*Ranunculus acris*)
- (e) Perennial pepperweed (*Lepidium latifolium*)
- (f) Yellowflag iris (*Iris pseudacorus*)
- (g) Eurasian watermilfoil (*Myriophyllum spicatum*, *Myriophyllum spicatum x Myriophyllum sibiricum*)
- (h) Flowering rush (*Butomus umbellatus*)
- (i) Common buckthorn (*Rhamnus cathartica* L.)
- (j) Ventenata (*Ventenata dubia*)

PRIORITY 2B These weeds are abundant in Montana and widespread in many counties. Management criteria will require eradication or containment where less abundant. Management shall be prioritized by local weed districts:

- (a) Canada thistle (*Cirsium arvense*)
- (b) Field bindweed (*Convolvulus arvensis*)
- (c) Leafy spurge (*Euphorbia esula*)
- (d) Whitetop (*Cardaria draba*, *Lepidium draba*)
- (e) Russian knapweed (*Acroptilon repens*, *Rhaponticum repens*)
- (f) Spotted knapweed (*Centaurea stoebe*, *C. maculosa*)
- (g) Diffuse knapweed (*Centaurea diffusa*)
- (h) Dalmatian toadflax (*Linaria dalmatica*)
- (i) St. Johnswort (*Hypericum perforatum*)
- (j) Sulfur cinquefoil (*Potentilla recta*)
- (k) Common tansy (*Tanacetum vulgare*)
- (l) Oxeye daisy (*Leucanthemum vulgare*)
- (m) Houndstongue (*Cynoglossum officinale*)
- (n) Yellow toadflax (*Linaria vulgaris*)
- (o) Saltcedar (*Tamarix* spp.)
- (p) Curlyleaf pondweed (*Potamogeton crispus*)
- (q) Hoary alyssum (*Berteroa incana*)

PRIORITY 3 Regulated Plants: (NOT MONTANA LISTED NOXIOUS WEEDS)

These regulated plants have the potential to have significant negative impacts. The plant may not be intentionally spread or sold other than as a contaminant in agricultural products. The state recommends research, education and prevention to minimize the spread of the regulated plant.

- (a) Cheatgrass (*Bromus tectorum*)
- (b) Hydrilla (*Hydrilla verticillata*)
- (c) Russian olive (*Elaeagnus angustifolia*)
- (d) Brazilian waterweed (*Egeria densa*)
- (e) Parrot feather watermilfoil (*Myriophyllum aquaticum* or *M. brasiliense*)

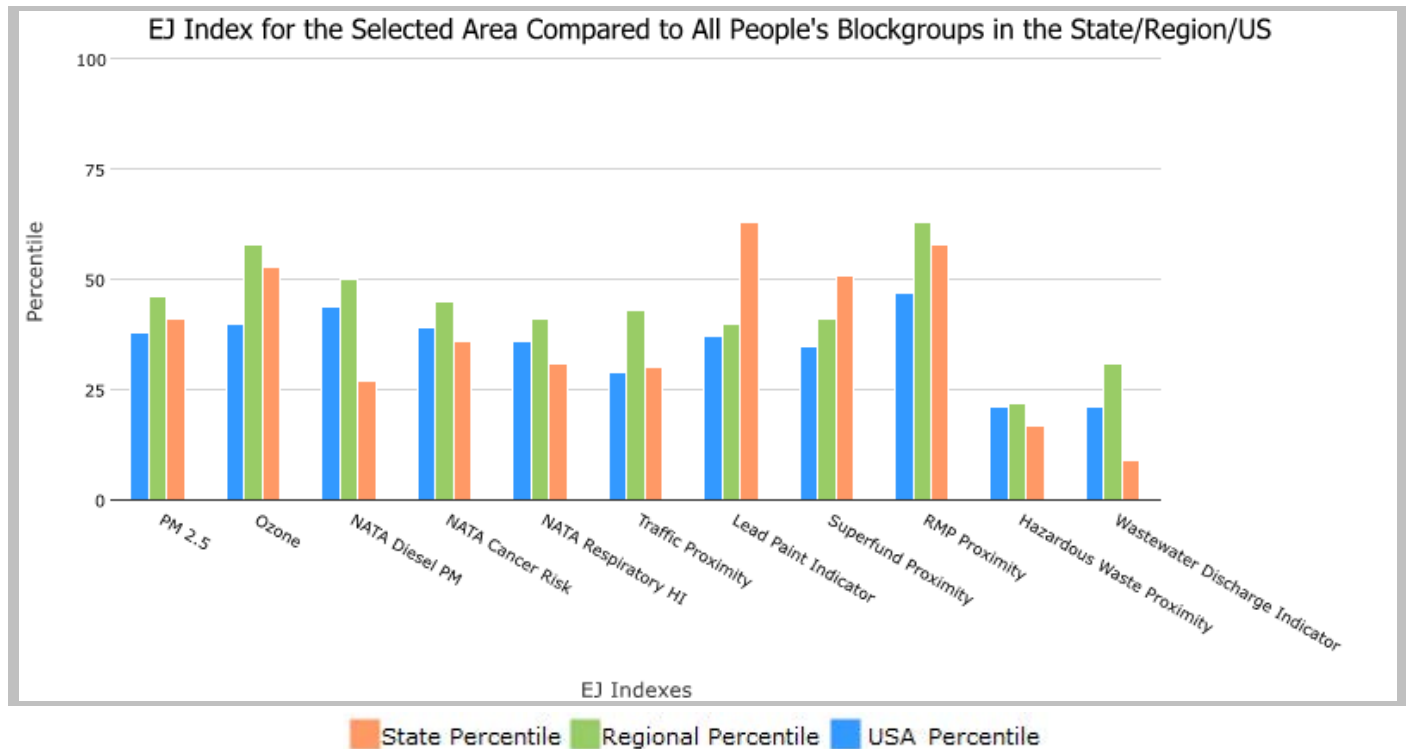
ATTACHMENT 7: USEPA EJS SCREEN REPORT

0.5 miles Ring around the Area, MONTANA, EPA Region 8

Approximate Population: 2,284

Input Area (sq. miles): 4.26

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	41	46	38
EJ Index for Ozone	53	58	40
EJ Index for NATA* Diesel PM	27	50	44
EJ Index for NATA* Air Toxics Cancer Risk	36	45	39
EJ Index for NATA* Respiratory Hazard Index	31	41	36
EJ Index for Traffic Proximity and Volume	30	43	29
EJ Index for Lead Paint Indicator	63	40	37
EJ Index for Superfund Proximity	51	41	35
EJ Index for RMP Proximity	58	63	47
EJ Index for Hazardous Waste Proximity	17	22	21
EJ Index for Wastewater Discharge Indicator	9	31	21

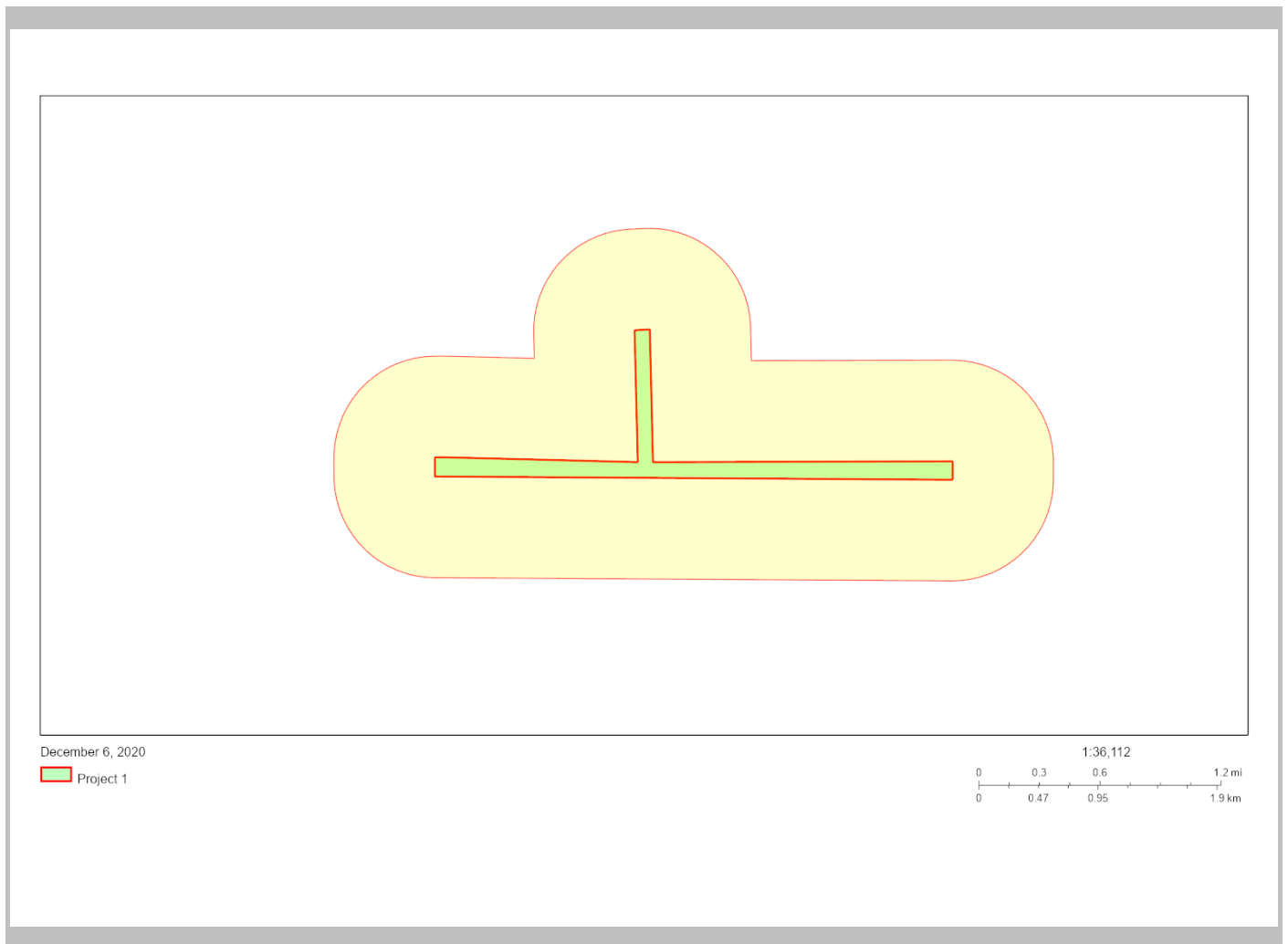


This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

0.5 miles Ring around the Area, MONTANA, EPA Region 8

Approximate Population: 2,284

Input Area (sq. miles): 4.26



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	1

EJSCREEN Report (Version 2019)



0.5 miles Ring around the Area, MONTANA, EPA Region 8

Approximate Population: 2,284

Input Area (sq. miles): 4.26

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in $\mu\text{g}/\text{m}^3$)	7.12	5.82	80	6.4	60	8.3	20
Ozone (ppb)	35.9	39.2	17	49.2	4	43	13
NATA* Diesel PM ($\mu\text{g}/\text{m}^3$)	0.162	0.113	74	0.423	<50th	0.479	<50th
NATA* Cancer Risk (lifetime risk per million)	24	18	92	23	60-70th	32	<50th
NATA* Respiratory Hazard Index	0.36	0.24	95	0.31	60-70th	0.44	<50th
Traffic Proximity and Volume (daily traffic count/distance to road)	200	190	71	460	50	750	48
Lead Paint Indicator (% Pre-1960 Housing)	0.12	0.29	36	0.22	56	0.28	40
Superfund Proximity (site count/km distance)	0.048	0.12	43	0.11	50	0.13	41
RMP Proximity (facility count/km distance)	0.088	0.49	34	0.62	16	0.74	12
Hazardous Waste Proximity (facility count/km distance)	0.64	0.42	78	0.63	71	4	56
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	0.00077	0.00061	89	80	56	14	65
Demographic Indicators							
Demographic Index	21%	24%	56	26%	48	36%	33
Minority Population	15%	13%	76	24%	44	39%	31
Low Income Population	27%	34%	39	29%	53	33%	46
Linguistically Isolated Population	0%	0%	84	2%	55	4%	45
Population With Less Than High School Education	5%	7%	44	8%	46	13%	30
Population Under 5 years of age	6%	6%	56	7%	43	6%	52
Population over 64 years of age	14%	17%	39	13%	61	15%	52

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: <https://www.epa.gov/national-air-toxics-assessment>.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.