



E- Scan

Swan River - Bridge Street (Bigfork)

STPB 9015 (126)

UPN 9020000

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%	Percent
AAQM	Ambient Air Quality Monitoring
ACS	American Community Survey
APE	Area of Potential Effect
ARM	Administrative Rules of Montana
CO	Carbon monoxide
CDP	Census Designated Place
CECRA	Comprehensive Environmental Cleanup and Responsibility Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COE	United States Army Corps of Engineers
CRABS	Cultural Resource Annotated Bibliography System
CRIS	Cultural Resource Information System
CWA	Clean Water Act
DEQ	Montana Department of Environmental Quality
DNRC	Montana Department of Natural Resources and Conservation
DOJ	Department of Justice
EA	Environmental Assessment
ECOS-IPaC	Environmental Conservation Online System - Information, Planning and Conservation
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
E-Scan	Environmental Scan
FCWCD	Flathead County Weed Control District
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FPPA	Farmland Protection Policy Act
H ₂ S	Hydrogen sulfide
HUC	Hydrologic Unit Code
LWCFA	Land and Water Conservation Fund Act
MBMG	Montana Bureau of Mines and Geology

ABBREVIATIONS / ACRONYMS



MBTA	Migratory Bird Treaty Act
MCA	Montana Code Annotated
MDT	Montana Department of Transportation
MEPA	Montana Environmental Policy Act
MFISH	Montana Fisheries Information System
MFWP	Montana Fish, Wildlife and Parks
MNHP	Montana Natural Heritage Program
MT	Montana
NHNV	Natural Heritage Map Viewer
NAAQS	National Ambient Air Quality Standards
NPS	National Park Service
NEPA	National Environmental Policy Act
NO ₂	Nitrogen Dioxide
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NRIS	Natural Resource Information System
NWI	National Wetlands Inventory
O ₃	Ozone
Pb	Lead
PCB	Polychlorinated biphenyl
PM	Particulate Matter
RCRA	Resource Conservation and Recovery Act
SHPO	State Historic Preservation Office
SO ₂	Sulfur Dioxide
SOC	Species of Concern
TMDL	Total Maximum Daily Load
USC	United States Code
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	United States Geologic Survey
VCRA	Voluntary Cleanup and Redevelopment Act



1 INTRODUCTION

The Montana Department of Transportation (MDT) initiated the Swan River - Bridge Street (Bigfork) Feasibility Study to identify needs and potential options for the Swan River Bridge. The Swan River Bridge crosses the Swan River on Bridge Street within the unincorporated community of Bigfork, Montana (MT) in Flathead County. Located on county's road system, this bridge is under Flathead County jurisdiction and is not an MDT route or bridge.

The Swan River bisects Bigfork from the east, requiring bridge connections to travel from the north side of town to the south side and vice versa. Bridge Street and MT State Highway 35 are the only connections across the river for the community.

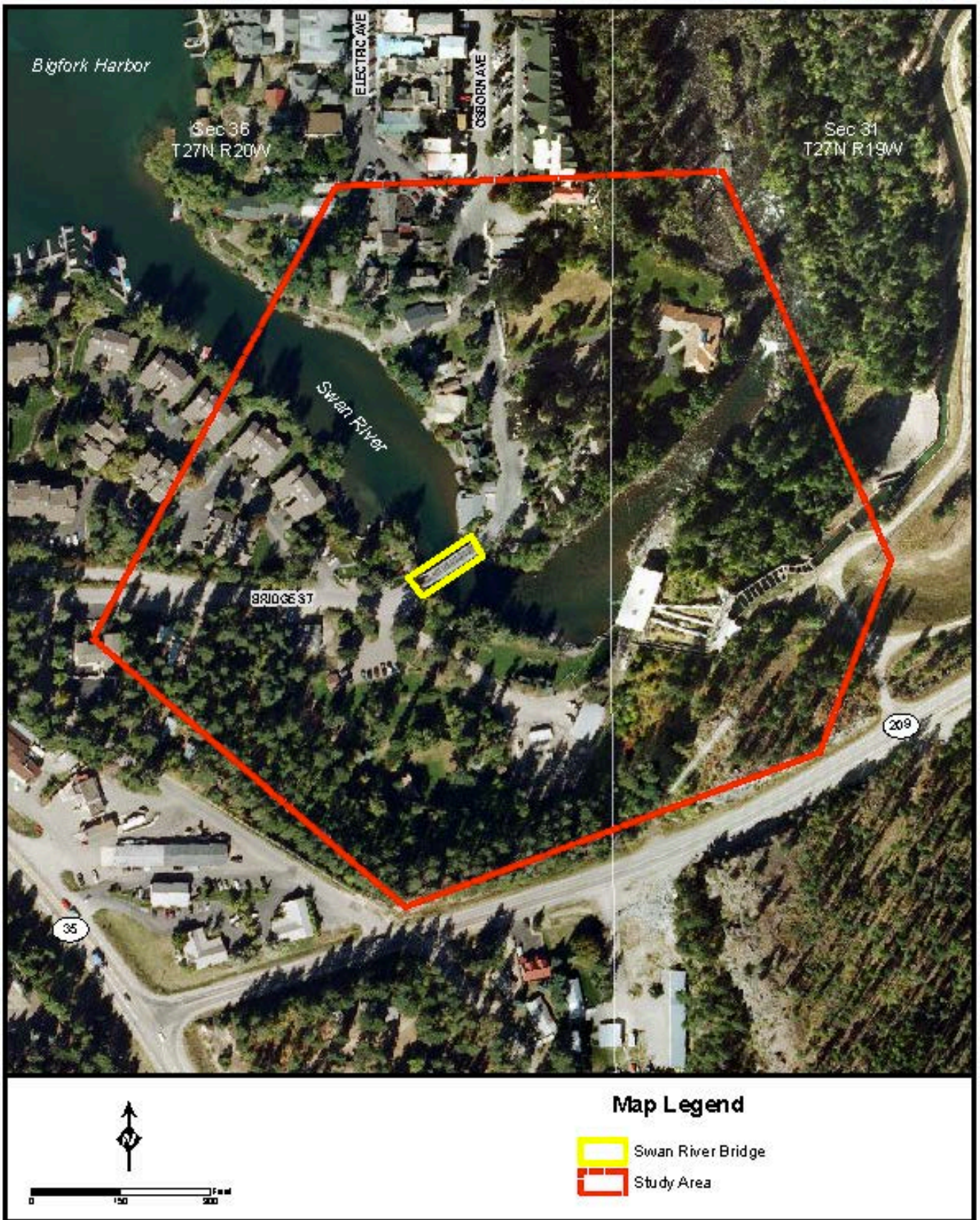
This effort is a planning-level study and does not include design, maintenance, or construction phases. Improvement options will be forwarded to the Flathead County Commission for their action. Project development would occur at a later date, based upon the County's direction.

This E-Scan Report will identify potential environmental concerns, if any, presented by the community, resource agencies, and other interested parties. It will provide a summary of physical, biological, social, and cultural characteristics to help the study team identify constraints and opportunities within the study area. The E-scan is not intended to satisfy National Environmental Policy Act (NEPA) or Montana Environmental Policy Act (MEPA) requirements; however, this information will feed into any future NEPA/MEPA process if a project is developed.

1.1 Study Area

The study area is centered on the Swan River Bridge and encompasses 25.8-acres located in Sections 31 and 36, Township 27 North, Range 20 West, as depicted in *Figure 1*.

Figure 1. Study Area





1.2 Potential Environmental Issues and Constraints Summary

The table below summarizes the potential environmental issues and constraints which are detailed in this report.

Table 1- Summary of Potential Environmental Issues and Constraints

Resource	Description
Hazardous Materials	<ul style="list-style-type: none"> • Due to the age of the bridge, it should be assumed that lead-based paint is present on the bridge. • The PacifiCorp transformer yard Superfund site is located within the study area, south of the bridge. DEQ is currently sampling the soil in the area for contamination and the results should be examined for impacts to any bridge improvement project. • Future coordination with DEQ and others is advised to monitor the underground contamination status. • Underground contamination should be anticipated in the area.
Soil Resources and Prime Farmland	<ul style="list-style-type: none"> • Farmland of state and unique purpose located within study area however, lands are urbanized and therefore no impacts are anticipated.
Surface Waters, Wetlands and Floodplains	<ul style="list-style-type: none"> • The Swan River is a “Water of the US” and is considered a Montana navigable water way. • Wetlands and the Swan River 100-year floodplain exist surrounding the bridge.
<i>Threatened and Endangered Species</i>	<ul style="list-style-type: none"> • Bull trout and Grizzly bear (threatened species) may be encountered within the study area. • The Spalding’s catchfly and Yellow-billed cuckoo (also threatened species) have the potential to be encountered within the study area. However habitat for these species are limited. • No species of concern have been identified within the study area. • The study area is used by migratory birds.
Noxious Weeds	<ul style="list-style-type: none"> • 13 noxious weed species are identified within the study area.
Cultural Resources	<ul style="list-style-type: none"> • Swan River Bridge is listed on the NRHP under both Criterion A and Criterion C and is subject to Section 4(f) regulations. • Changes to the bridge overhead truss portions are expected to affect the listing.
Recreational and Visual Resources	<ul style="list-style-type: none"> • Recreational resources exist at Sliter’s Park and on the Swan River itself. • Section 4(f) or Section 6(f) impacts are not currently anticipated at Sliter’s Park. • Visual impacts for the bridge, from Sliter’s Park, the historic fishing hole, and adjacent properties should be assessed if improvements are forwarded.



2 PHYSICAL ENVIRONMENT

2.1 Soil Resources and Prime Farmland

The Farmland Protection Policy Act (FPPA) denotes special consideration be given to soils considered as prime farmland, unique farmland, or farmland of statewide or local importance by the Natural Resource Conservation Service (NRCS). FPPA defines prime farmland to be land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor. Unique farmland is classified as land other than prime farmland that is used for production of specific high value food and fiber crops. Farmlands of statewide or local importance are of sufficiently high quality to warrant designation as important at a state or local level. The FPPA is intended to identify and minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. Farmland subject to FPPA requirements do not have to be currently utilized for agricultural purposes. FPPA regulations also do not apply to lands already in or committed to urban development.

The NRCS Web Soil Survey indicates farmlands of statewide and unique importance are located within the study area. Since lands within the study area are fully developed, the FPPA would not apply and any project improvements would not need to consider farmland impacts.

2.2 Geologic Resources

According to Montana Bureau of Mines and Geology (MBMG), the area within the study area is primarily composed of modern alluvial deposits (Qal) and open water. Qal includes sand, silt, clay and gravel deposited in modern stream channels, floodplains and beneath low stream terraces. The United States Geological Survey (USGS) Mineral Resources On-Line Spatial Data for Montana indicates the Mission Valley Section of the Mission Fault is located approximately 1.1 mile southeast of the study area (Raines and Johnson 1995) and (Stickney, Haller and Machette 2000). If improvement options are forwarded from this study, no impacts are anticipated.

2.3 Surface Waters

Swan River is the only surface water body located within the study area. According to the Watershed Boundary Dataset provided by the USGS and NRCS, the study area is located within the Lower Swan River Watershed (Hydrologic Unit Code [HUC] 1701021104), which drains approximately 326 square miles. Runoff through the study area is sheet flow until collected by Swan River, which drains first to Bigfork Harbor and then to Flathead Lake. Swan River has also been designated by the Montana Department of Environmental Quality (DEQ) and listed as a B-1 use class water body, meaning that it is suitable for multiple human consumptive uses after treatment; as well as, non-consumptive uses such as recreation and wildlife habitat (MT DEQ Undated C).

The DEQ 2014 and Draft 2016 Water Quality Integrated Reports do not list Assessment Unit MT76K001_010 within the study area as an impaired water body under Section 303(d) of the Clean Water Act (CWA). Flathead Lake, which Swan River flows into, has been listed as impaired for sedimentation/siltation (only 2014), mercury, polychlorinated biphenyls, nitrogen and phosphorus. These have a variety of sources, including municipal point source discharge from communities



surrounding the lake. The Bigfork Water & Sewer District is a trickling filter plant located on the northeast side of Flathead Lake downstream of the Swan River Bridge.

Swan River falls within the jurisdiction of the United States Army Corps of Engineers (COE) and is categorized as a “Water of the US” under Section 404 of the CWA. Section 404 authorizes the Secretary of the Army to issue permits for the discharge of dredge or fill into waters of the United States including wetlands. Encroachment into Waters of the US requires a permit from the federal government.

Swan River is not considered a wild or scenic river under the Wildlife Scenic River Act of 1968 nor is it a navigable waterway under Section 10 of the Rivers and Harbors Act of 1899. However, it is considered a Montana navigable waterway by the Department of Natural Resources (DNRC) and MDT as denoted in Appendix L of the Montana Right-of-Way Design Manual. Appendix L of the Montana Right-Of Way Design Manual denotes Montana navigable waters will need to comply with DNRC applicable permits including the completion of the Application Form for Licensing Structures and Improvements on Navigable Water Bodies (DS-432) which is submitted to the Flathead County Land Office.

Any improvement options forwarded from the feasibility study to project development would need to comply with applicable DEQ Total Maximum Daily Load (TMDL) standard, Section 404 of the CWA, and DNRC applicable permits.

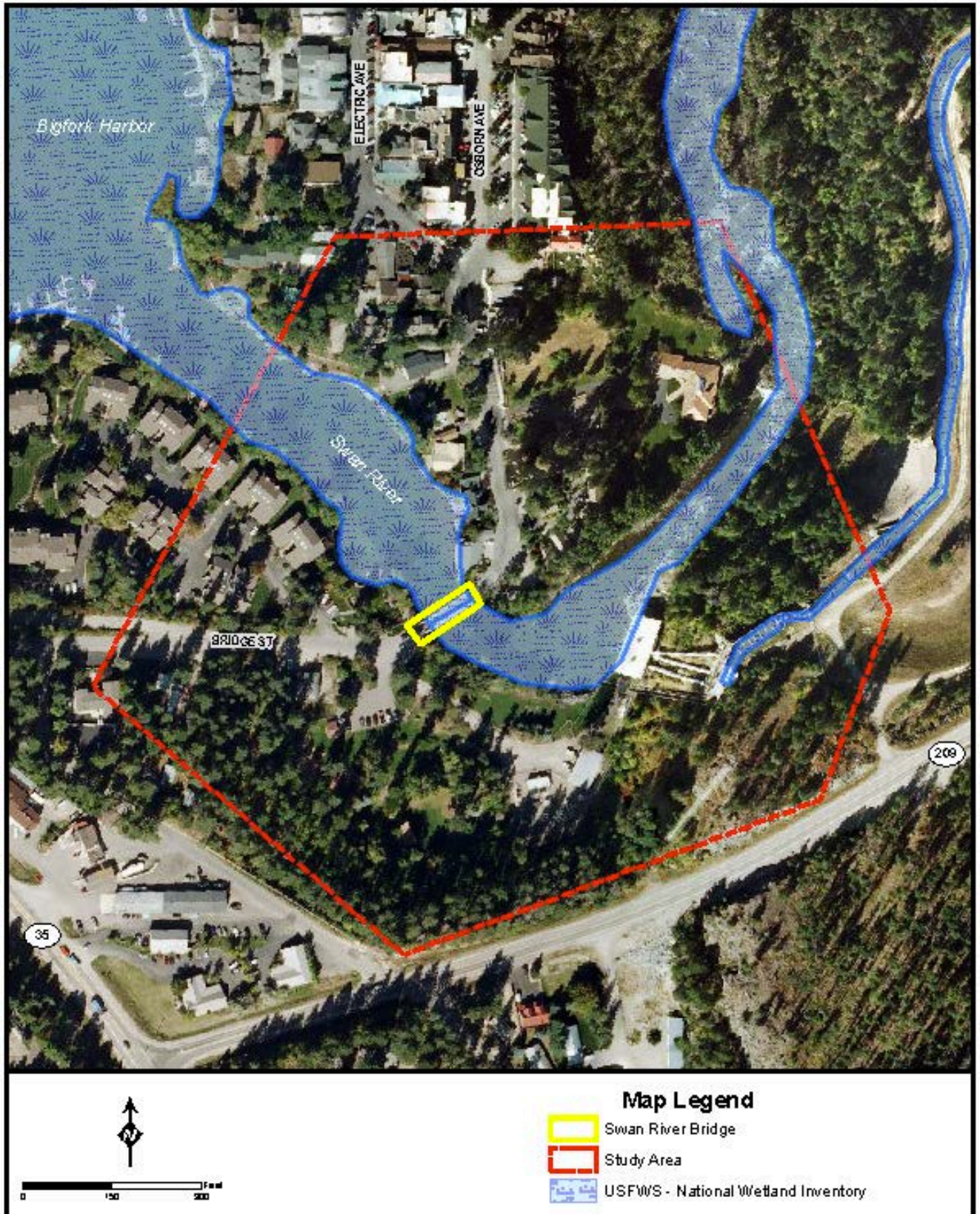
2.4 Wetlands

Wetlands are defined as 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 generally include swamps, marshes, bogs, and similar areas.

According to the United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI), wetlands associated with the Swan River may be present within the study area. Swan River has two Cowardin classifications (USFWS 2011). On the east side of the Swan River Bridge, the river is classified as an upper perennial riverine system with an unconsolidated bottom (R3UBH). The west side of the river, which flows into Bigfork Harbor, is classified as a limnetic lacustrine system with an unconsolidated bottom (L1UBHh) (USFWS Undated A). *Figure 2. Wetland Resources* provides a visual overview of NWI wetlands. Since these wetlands are associated with the Swan River, they would also fall within the jurisdiction of the COE and are categorized as “Waters of the US” under Section 404 of the CWA.

Any improvement options forwarded from the feasibility study to project development would require a field wetland delineation, and consideration of impacts and mitigation measures.

Figure 2. Wetland Resources





2.5 Floodplains and Floodways

Floodplains are areas of low-lying ground adjacent to a stream or river that experience occasional or periodic flooding. A regulatory floodway is the channel of a river or other watercourse and adjacent land areas within the floodplain that must be reserved in order to discharge a base flood without cumulatively increasing the water surface elevation more than a designated height.

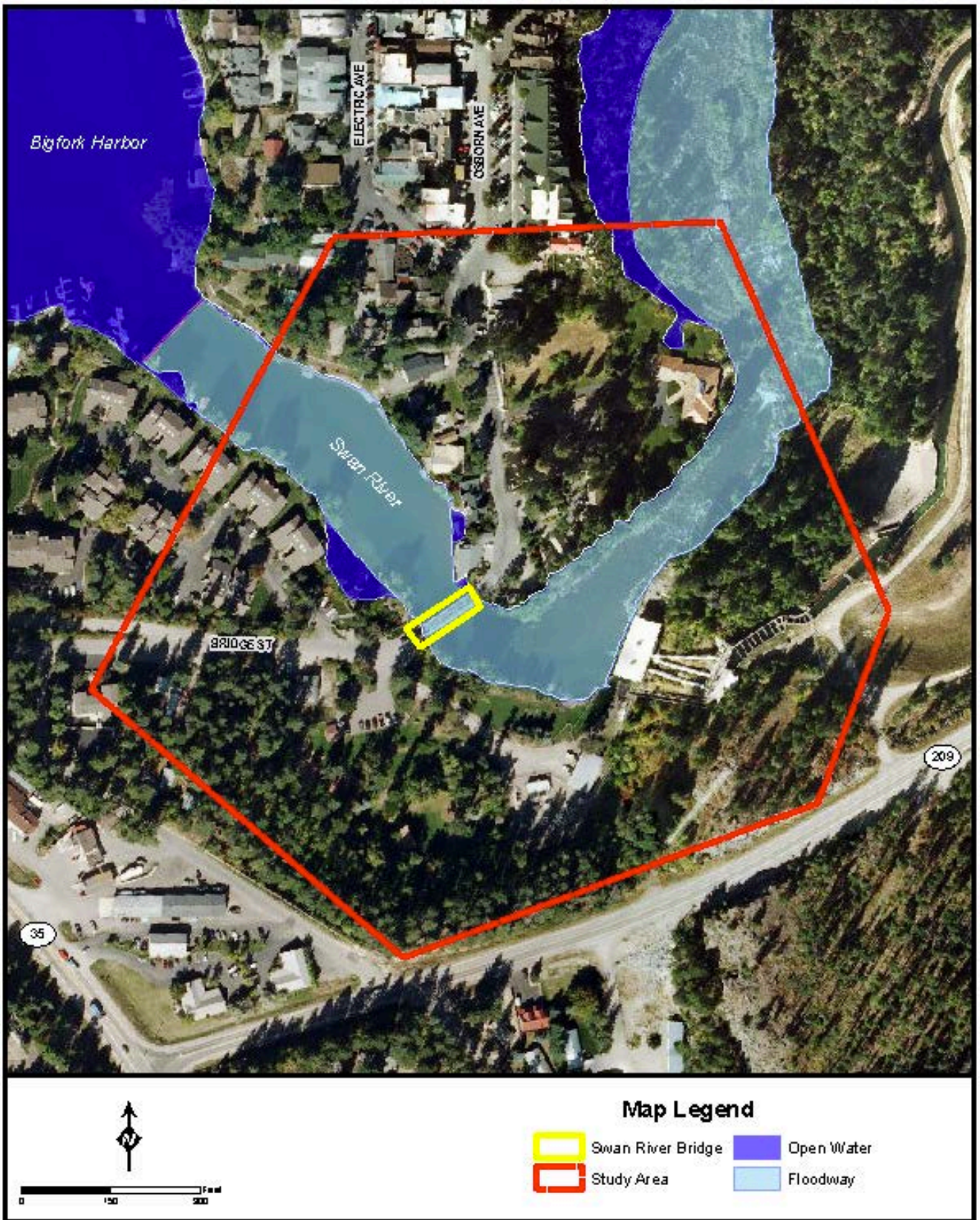
The Federal Emergency Management Agency (FEMA) Map Service Center lists the Swan River and Swan River Bridge within Zone AE of the Flood Insurance Rate Map (FIRM) Panel 30029C2315J (2015). Zone AE is a regulatory floodway and located within the 100 year floodplain, meaning the area has a one percent probability of flooding every year (FEMA Undated A, FEMA Undated B). *Figure 3. Floodways* depicts the floodway and floodplains within the study area.

Any improvement options forwarded from this feasibility study would need to be developed and analyzed to minimize impacts to the floodplain, floodway, and applicable recreational use. Project development would require coordination with the Flathead County Planning Floodplain Administrator to minimize impacts and obtain necessary permits.

2.6 Groundwater Resources

A shallow alluvial aquifer underlies the study area, with a depth to deep alluvium at approximately 100 feet (Smith 2004). In addition, no groundwater wells or designated sole or principal source aquifers are present within the study area.

Figure 3. Floodways





2.7 Hazardous Materials

Due to the age of the Swan River Bridge, the structure may be covered with lead-based paint and may have asbestos in the concrete abutments. Lead-based paint and asbestos pose the potential for contamination to water-craft users and pedestrians should the structure be reused, repaired or demolished. Future testing could confirm presence of contaminants. Bridge work over the river should be minimized when possible to reduce degradation into the river below.

Review of the DEQ, Montana Natural Resources Information System (NRIS) and the EPA hazardous materials databases (e.g., Comprehensive Response, Compensation and Liability Information System [CERCLA]; Resource Conservation and Recovery Act [RCRA]; Toxic Release Inventory; and National Priorities List) concluded that there is one state Superfund (Comprehensive Environmental Cleanup and Responsibility Act [CECRA]) hazardous release site within the study area. No other hazardous waste sites were identified within the vicinity of the study area (MT DEQ Undated a, USEPA 2016a, USEPA 2016b, USEPA 2015c).

The PacifiCorp transformer yard facility (CECRA Site #65) is a smaller portion of a 160-acre tract of land that is part of the PacifiCorp hydroelectric power plant located to the east of the Swan River Bridge within the study area see *Appendix A. PacifiCorp Transformer Yard Map*. From the early 1900s to mid-1980s, the facility included a power transformer plant, approximately 250 feet southeast of the Swan River Bridge. In the early 2000s, it was determined that a prior release of transformer fluid at the facility resulted in polychlorinated biphenyl (PCB) contamination. In 2003-2004, 73.7 tons of PCB impacted soils were excavated. A 2009 Environmental Protection Agency (EPA) CERCLA site inspection noted sediment from the Swan River was impacted with Arochlor 1254. In 2012 without DEQ oversight, PacifiCorp removed streambank soil contaminated with Arochlor 1254; however, isolated exceedances of sediment screening levels remain (MT DEQ Undated b). There are several proposed sediment sample locations near the bridge as depicted in *Appendix A*. Further remedial activities are anticipated through the Voluntary Cleanup and Redevelopment Act (VCRA) program. These efforts are currently ongoing. The hydroelectric power plant remains active. An Environmental Assessment (EA) is currently being completed by PacifiCorp for the transformer yard facility. As of November, 2016 this EA has not been submitted to DEQ.

If a project is advanced from this study, pre-construction sampling would likely need to occur around the abutments and on the south side of the bridge. Any sampling should be coordinated with DEQ and PacifiCorp. Future evaluation may include conducting subsurface investigation activities to determine the extent of soil and groundwater contamination with DEQ and PacifiCorp personnel. If contaminated materials are encountered during construction, handling and disposing of the contaminated material will need to be conducted in accordance with state, federal and local regulations.

2.8 Air Quality

The Clean Air Act, as amended, requires the EPA to establish air quality standards for pollutants considered harmful to public health and the environment by setting limits on emission levels of various types of air pollutants.

The study area is outside any defined ambient air quality, non-attainment areas, or air quality protection areas. Air quality requirements are not expected to impact the bridge feasibility study.



3 BIOLOGICAL RESOURCES

3.1 Biological Community

The study area is located in the ecoregion identified by the USGS as the Salish Mountains of the Northern Rockies. The northern portion of the Salish Mountains of the North Rockies ecoregion has more till deposits, precipitation and numerous perennial streams as compared to the southern region (Woods et al 2002). According to the Montana Natural Heritage Program (MNHP) Natural Heritage Map Viewer (NHMV), the majority of the study area, including the bridge area itself, consists of developed lands. The boundary also includes the forested riparian corridor and the Swan River which include native species such as firs, Engelmann spruce, ponderosa, lodgepole pines, and western larch.

The most common forms of wildlife found within the study area are species adapted to suburban life and tolerant of some level of human disturbance. These include mule and white-tailed deer, small mammals such as feral cats, squirrels and rodents. Per the MNHP NHMV, other species observed within the study area include common gartersnake, painted turtle, and terrestrial gartersnake (MNHP Undated A, MNHP Undated B, MNHP Undated C, MNHP Undated D, MNHP Undated E). **Appendix B. MNHP Species Occurrences** has a comprehensive list of recorded species.

Also per the MNHP NHMV, fifty-one species of birds have been observed within Sections 31 and 36 of Township 27 North, Range 20 West (MNHP Undated F). A list of these species can be found in **Appendix B MNHP Species Occurrences**. Several of these bird species are migratory, which receive protection under the Migratory Bird Treaty Act (MBTA) (916 USC § 703-711). The Bald and Golden Eagle Protection Act protects bald eagles from impacts of human initiated activities primarily around active, alternate, and historic nest sites (Montana Bald Eagle Working Group, 2010). Eagle nests typically require a ½ mile buffer. The nearest bald eagle nest is approximately 2 miles from the study area. Therefore, no project impacts to eagles are anticipated.

The review of the biological community is limited and intended only to provide a representation of the type and extent of wildlife and habitat within the study area. Any improvement options forwarded from the feasibility study to project development would comply with the MBTA and would analyze potential impacts to determine if mitigation measures are required.

3.2 Aquatic Resources

The Montana Fish, Wildlife and Parks (MFWP) Montana Fisheries Information System (MFISH) database lists a number of fish species that have been recorded in the 98-mile length of Swan River. However, according to the MNHP NHMV, none of these observations occurred within the study area. **Appendix C. MFISH Report** includes details of species occurrences. The bridge is located in a unique stretch of Swan River as fish move in and out from Flathead Lake within the proximity of the bridge. Some seasonal use is anticipated however; the bridge area is not part of a migratory corridor or a spawning or rearing habitat for fish. Therefore, any construction operations are expected to have minimal effect to Bull trout or western slope cutthroat trout. Additionally, no timing restrictions are anticipated for aquatic species.



3.3 Threatened and Endangered Species

The Endangered Species Act (ESA) of 1973, 50 CFR Part 402, as amended, protects federally listed endangered or threatened species and their habitats. An endangered species is one that is in danger of extinction throughout all or a significant portion of its range. A threatened species is one that is likely to become endangered in the foreseeable future. A proposed species is one that is officially proposed in the Federal Register to be listed under Section 4 of the ESA. A candidate species is a plant or animal for which the USFWS has sufficient information on its biological status and threats to propose it as endangered or threatened under the ESA, but for which development of a proposed listing regulation is precluded by other higher priority listing activities. Finally, critical habitat includes specific areas that are occupied by a species at the time of listing or unoccupied areas that are considered essential to the conservation of a species. Critical habitat must contain physical or biological features essential to conservation and may require special management considerations or protection.

According to the USFWS Environmental Conservation Online System - Information, Planning and Conservation (ECOS-IPaC) website, seven species and two designated critical habitats are listed within Flathead County. Based upon habitat requirements, the most likely listed species that may be encountered within the study area are the Bull Trout and Grizzly Bear. However, there is also potential to encounter the Spalding's catchfly and Yellow-billed cuckoo within the study area. These species are summarized in *Table 2- Federally Protected Species and Critical Habitats*. Any project forwarded from this study will need to consider impacts to threatened species.



Table 2- Federally Protected Species and Critical Habitats

Species	Critical Habitat in Flathead County	Habitat Requirements
Threatened Species		
Bull Trout (<i>Salvelinus confluentus</i>)	X	Cold water, stable stream and river channels. The species is a year-round resident in Flathead County. Flathead Lake, located 0.3-mile west of the study area, is the closest designated critical habitat. Swan Lake, which eventually flows into the portion of Swan River within the study area, is also designated critical habitat and is located approximately 5.1 miles to the southeast. Some seasonal use is anticipated however; the bridge area is not part of a migratory corridor or a spawning or rearing habitat. Therefore, any construction operations would have minimal effect to Bull trout.
Canada Lynx (<i>Lynx canadensis</i>)	X	Moist boreal forests with a high density of snowshoe hares (<i>Lepus americanus</i>) for prey. The species is a year-round resident in Flathead County. The closest designated critical habitat is located approximately 5.1 miles southeast of the study area. Boreal forests that would act as potential habitat are not located within the study area.
Grizzly Bear (<i>Ursus arctos horribilis</i>)		Meadows, seeps, riparian zones, mixed shrub fields and woodlands. The grizzly bear is known to be a year-round resident in Flathead County and does have potential habitat within the study area.
Spalding's Catchfly (<i>Silene spaldingii</i>)		Grasslands, sagebrush-steppe and open-canopy pine stands. Occasionally the species will be scattered with ponderosa pine or broadleaf shrubs. Potential habitat is present within the study area.
Yellow-billed Cuckoo (<i>Coccyzus americanus</i>)		Dense, wooded habitat consisting of willows and cottonwoods, adjacent to water bodies. The species is present in Flathead County during the summer and has potential habitat within the study area.
Candidate Species		
Meltwater Lednian Stonefly (<i>Lednia tumana</i>)		Cold water streams in high elevation alpine areas. The species is known to be a year-round resident in Flathead County, though not within the vicinity of the study area. Suitable habitat for this species is not present within the study area.
Whitebark Pine (<i>Pinus albicaulis</i>)		Alpine, subalpine and krummholz forests. Habitat for this species is not located within the study area.

Source(s): MNHP Undated A through J, USFWS Undated B through G, USFWS 2015b, USFWS 2015c, USFWS 2016.



3.4 Species of Concern

The MNHP and MFWP have developed a list of both plant and animal species of concern (SOC) that are native to Montana but considered to be “at risk” due to declining population trends, habitat threats and/or restricted distribution (MNHP Undated K). Species are assigned a state rank ranging from S1 (greatest concern) to S5 (least concern). Modifiers may be included on each rank, such as B (breeding), N (non-breeding) or M (migratory) (MNHP Undated). Eleven animal SOC and three plant SOC have recorded occurrences within Township 27 North, Range 20 West; however, none of these occurrences are located within the study area (MNHP Undated A through F). **Appendix B. MNHP Species Occurrences** contains a comprehensive list of recorded species. Any project forwarded from this study will need to consider impacts to species of concern.

3.5 Noxious Weeds

A noxious weed is any plant designated by a Federal, State or County government as injurious to public health, agriculture, recreation, wildlife or property.

The University of Montana Invaders Database System lists 33 regulated species that have been recorded in Flathead County since 1875; however, only the downy brome, Dyer’s woad, Eurasian watermilfoil and curlyleaf pondweed have been recorded in the county over about the past 10 years (2014). The Flathead County Weed Control District (FCWCD) lists nine additional species to be regulated within the county (Flathead County Undated). Of these nine species, Spotted Knapweed, Tansy Ragwort, Oxeye Daisy and Canada Thistle are known to occur within the study area. **Appendix D Noxious Weed Reports** provides an overview of all noxious weeds within Flathead County. Any improvement options forwarded from the feasibility study to project development would need to comply with all applicable weed laws and regulations, including FCWCD coordination, to develop appropriate weed prevention and control measures.



4 SOCIAL AND CULTURAL RESOURCES

4.1 Demographic and Economic Conditions

Social and economic conditions depend on the character and habits of people living within the vicinity of the study area. Business, employment, transportation, utilities, etc. are manmade factors that affect the social climate of a community. A brief review of the demographic and economic conditions within the study area was conducted to assess potential social and economics that may affect project development. In order to properly serve the village of Bigfork and the surrounding region, past, present and future social and economic conditions will be outlined.

4.1.1 Population and Growth

Since completion of the Swan River Bridge in 1912, Flathead County's population has increased by an average of 1.2% per decade until the early 2000s. Since 2000, the US Census Bureau, Census Designated Place (CDP) of Bigfork has had a population growth of 307.9%, thus outpacing Flathead County, the State of Montana and the US. According to the Bigfork Neighborhood Plan, this is due primarily to a shift in economic focus from timber harvesting to tourism, construction and small, high-tech manufacturing firms (Flathead County 2009).

Table 3- Population Growth (1910-2014) details these population trends.

No traffic projections (or traffic Level-of Service) were prepared as part of the feasibility study due to the community's desire, and MDT's concurrence, to maintain a single-lane bridge. Additionally, growth is not anticipated in the vicinity of the bridge that would result in a notable increase in traffic.

*Table 3- Population Growth (1910-2014)*¹

Location	Population Estimate								% Change from 2000-2014
	1910	1930	1950	1970	1990	2000	2010	2014	
Bigfork CDP	N/A	N/A	N/A	N/A	N/A	1,421	4,270	4,375	+307.9%
Flathead County	18,785	19,200	31,495	39,460	59,218	74,471	90,928	92,373	+24.0%
Montana	376,053	531,606	591,024	694,409	799,065	902,195	989,415	1,006,370	+11.5%
United States	92,228,496	123,202,624	151,325,798	203,211,926	246,709,873	281,421,906	308,745,538	314,107,084	+11.6%

Source(s): US Census Bureau 1996, US Census Bureau 2000a, US Census Bureau 2010a, US Census Bureau 2014a.

¹ Data is based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a 90 percent margin of error. In addition to sampling variability, the 2010-2014 ACS estimates are subject to non-sampling error, which is not represented in these tables.



4.1.2 Population and Demographics

According to the 2010-2014 ACS, Bigfork’s population is predominantly white with an American Indian and Alaska Native predominant minority. This is consistent with county and state trends. Since 2000, a majority of the nation has experienced a general shift to a predominantly older population. This is prevalent in the village of Bigfork. According to the Bigfork Neighborhood Plan, the trend in age is due to the number of retirees moving to the area (Flathead County, 2009). *Table 4- Demographic Characteristics (2000-2014)*¹ depicts an overview of trends between 2000 and 2014.

Table 4- Demographic Characteristics (2000-2014)¹

Location	Predominant Race		Predominant Minority		Predominant Age Group		Median Age	
	2000	2014	2000	2014	2000	2014	2000	2014
Bigfork CDP	White (97.3%)	White (98.0%)	American Indian and Alaska Native (1.1%)	American Indian and Alaska Native (0.8%)	45 to 54 (16.5%)	65 to 74 (15.5%)	50.5	49.9
Flathead County	White (96.3%)	White (95.4%)	American Indian and Alaska Native (1.1%)	American Indian and Alaska Native (1.7%)	35 to 44 (16.6%)	45 to 54 (14.8%)	39.0	41.9
Montana	White (90.6%)	White (89.4%)	American Indian and Alaska Native (6.2%)	American Indian and Alaska Native (6.5%)	35 to 44 (16.6%)	45 to 54 (13.9%)	37.5	39.8
United States	White (75.1%)	White (73.8%)	Black or African American (12.3%)	Black or African American (12.6%)	35 to 44 (16.6%)	45 to 53 (14.1%)	35.3	37.4

Source(s): US Census Bureau 2000a, US Census Bureau 2014a.

4.1.3 Employment and Income

According to the 2010-2014 ACS, Bigfork has a lower rate of unemployment and percentage of individuals living below the poverty level than Flathead County and US trends. Per capita and median household incomes for Bigfork are comparative to county, state and nationwide levels. *Table 5- Employment and Income Characteristics (2000-2014)*¹ details the employment and income trends.

Table 5- Employment and Income Characteristics (2000-2014)¹

Location	Per Capita Income (\$)		Median Household Income (\$)		Unemployment Rate (%)		Individuals Living Below Poverty Level (%)	
	2000	2014	2000	2014	2000	2014	2000	2014
Bigfork CDP	20,314	30,987	36,116	54,608	2.1	5.0	9.1	8.0
Flathead County	18,112	25,789	34,466	56,243	4.1	5.3	13.0	13.7
Montana	17,151	25,977	33,024	60,581	4.1	4.4	14.6	15.3
United States	21,587	28,556	41,994	53,482	3.7	5.8	12.4	15.6

Source(s): US Census Bureau 2000, US Census Bureau 2014b.

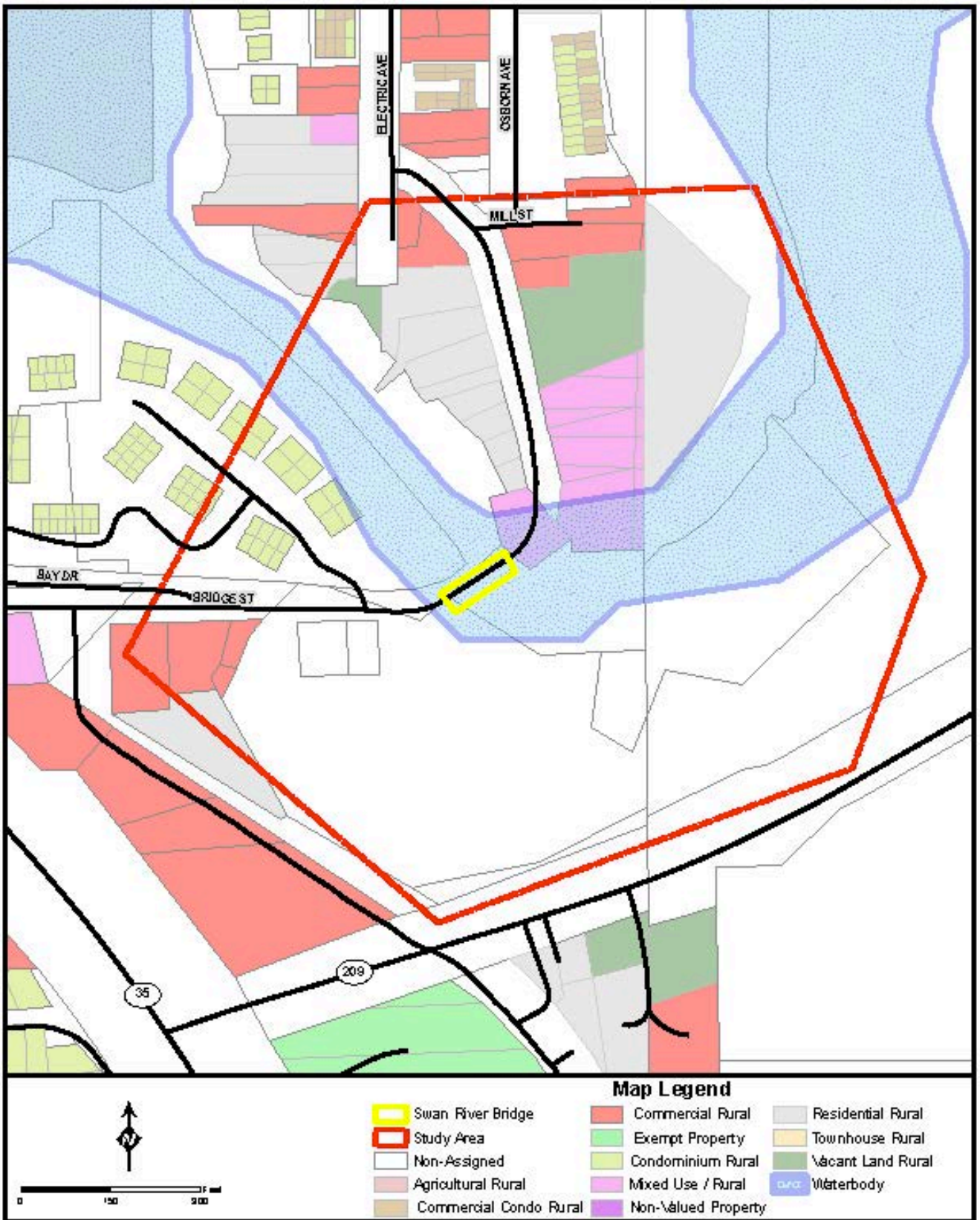


4.2 Land Ownership and Land Use

Land ownership within the study area is a mixture of private and public lands. Land use planning within Bigfork is guided by the Bigfork Neighborhood Plan which was developed in accordance with Section 11 of the 2015 Flathead County Growth Policy. According to Flathead County GIS, lands within the study area are a mixture of residential and commercial properties. Zoning within the study area is conducive to urban residential areas with high densities of single-family dwellings, differing categories of commercial uses, public lands, commercial centers or higher density retail nodes and outer boundaries of safe, healthy and efficient provision of public services (Flathead County Undated b). *Figure 4. Land Use* depicts parcel data within the study area. If improvement options are forwarded from this study that widen or realign the road or walkway, there is potential for minor impacts to land ownership and land use.



Figure 4. Land Use





4.3 Recreational Resources

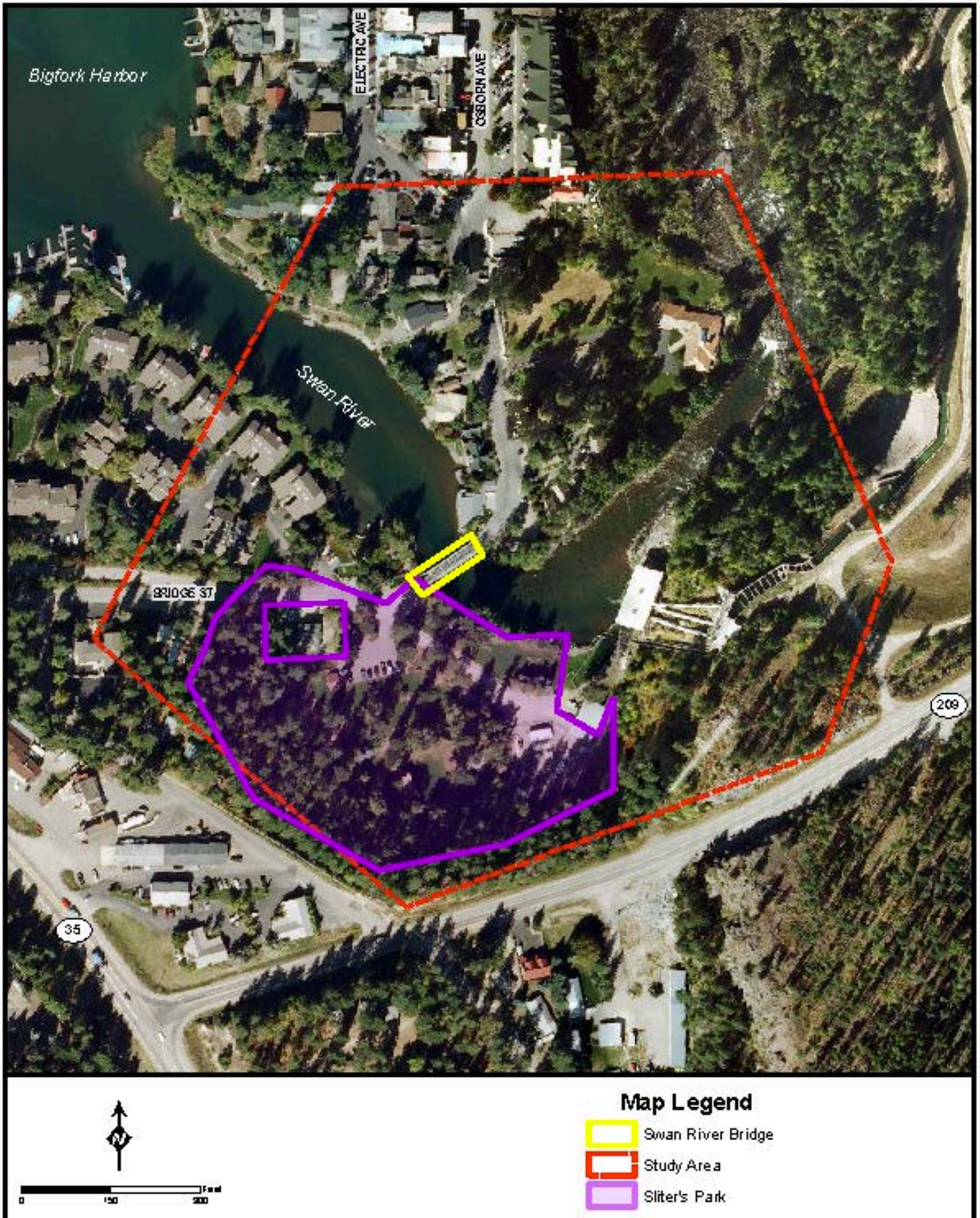
The study area includes the Swan River and Sliter's Park both of which provide numerous recreational opportunities. Sliter's Park is located adjacent to the Swan River Bridge and provides fishing, picnicking, playgrounds and hiking opportunities. Shown in *Figure 5*, this park parallels the Swan River which is known for kayaking, canoeing, swimming and fishing. Sliter's Park is privately owned by PacifiCorp and managed by the Flathead County Parks and Recreation through a partnership by both entities. This partnership agreement was not reviewed as part of this report. Sliter's Park and the Swan River Bridge are considered Section 4(f) resources within the study area.

The Swan River Bridge historical listing is discussed separately in Section 4.4.

According to the Flathead County Parks and Recreation Director, there have been no National Land and Water Conservation Fund Act (LWCFA) funds utilized at Sliter's Park. Therefore, no Section 6(f) impacts are anticipated due to funding.

Conversion of land or changes to the recreational use of Sliter's Park are not anticipated; therefore, no Section 4(f) impacts to Sliter's Park are anticipated. Any improvement options forwarded should review the Sliter's Park partnership agreement (to confirm funding sources) and should confirm that there are no impacts to recreation resources.

Figure 5. Recreational Resources





4.4 Cultural Resources

Section 106 of the National Historic Preservation Act of 1966 (16 USC § 470), as amended, requires that federally funded projects be evaluated for the effects on historic and cultural properties included in, or eligible for listing on, the National Register of Historic Places (NRHP). 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).

A search of the site records and manuscript files of the Montana State Historic Preservation Office (SHPO) covered the standard one-mile radius surrounding the proposed study area, as delineated in *Figure 6. Cultural Resources*. The locations of previously mapped sites, architectural features, site leads, and isolated finds were plotted on a USGS 1:24,000 scale quadrangle map. *Appendix E. SHPO Research Reports* contains the Cultural Resource Information System (CRIS) and Cultural Resource Annotated Bibliography System (CRABS) reports.

The file search indicated that 24 manuscripts are on file documenting cultural resource inventories conducted within the same one-mile radius. See *Figure 6. Cultural Resources* and *Table 6-Previously Recorded Cultural Resources*. These inventories were related to various road projects and other infrastructure development. The file search also revealed that 18 previously recorded cultural resources were located within a one mile radius of the study area. Nineteen sites were listed on the CRIS form; however, one of these (24FH0935) was determined to be a duplicate of site 24FH0743 by the SHPO (communication with S. Meredyk, 03/31/16). This site number (24FH0935) is, therefore, not included in the discussion and table.



Figure 6. Cultural Resources

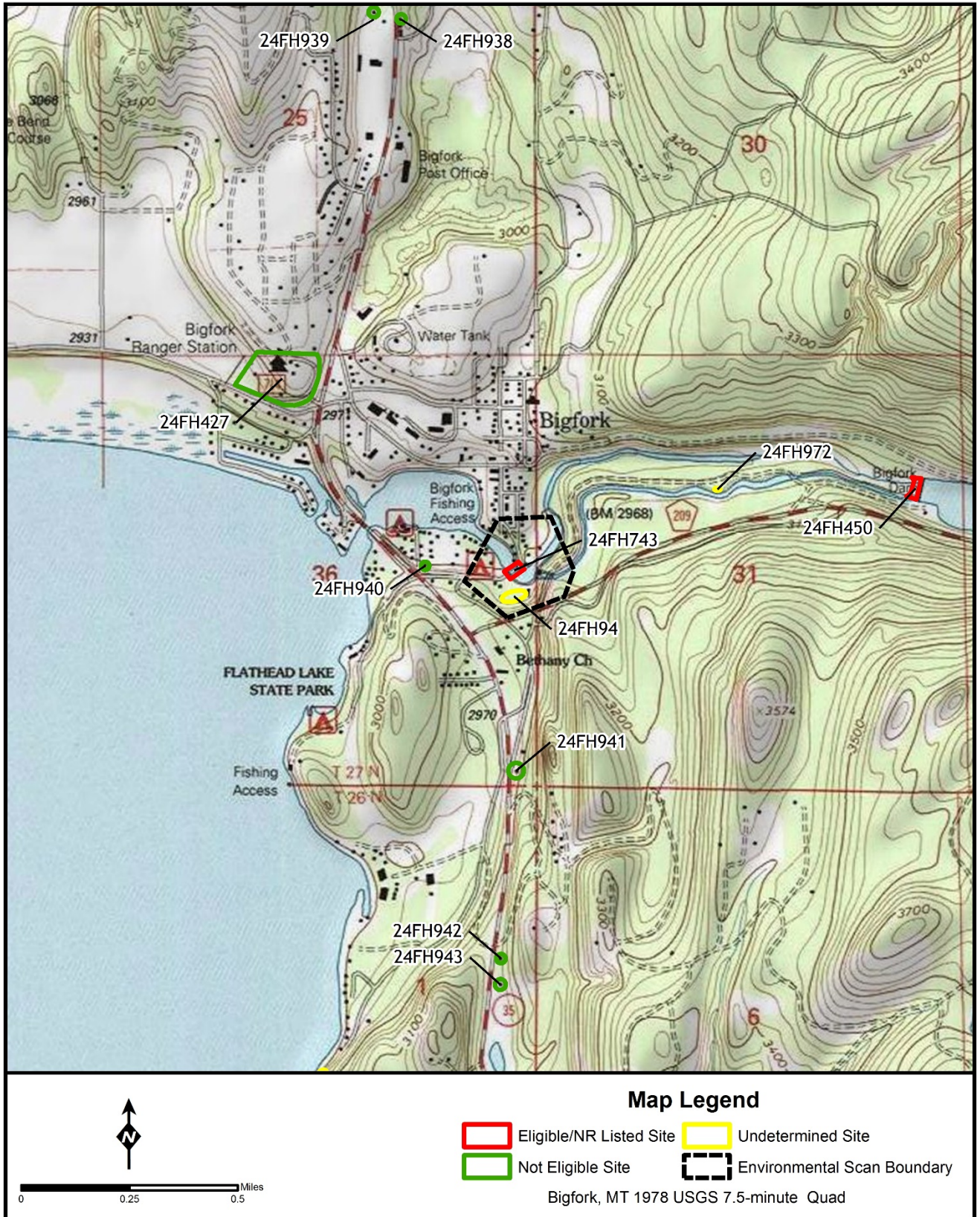




Table 6- Previously Recorded Cultural Resources

SITS	T	R	S	Site Type	Eligibility
24FH0942	26 N	20 W	1	Historic Residence	Ineligible
24FH0943	26 N	20 W	1	Historic Residence, Historic Building Foundation	Ineligible
24FH0944	26 N		1	Historic Residence, Historic Fence	Ineligible
24FH0855	26 N, 27 N	20 W	1, 36	Lithic Material Concentration	Undetermined
24FH450	27 N	19 W	31	Historic Irrigation System	CD*
24FH972	27 N	19 W	31	Historic Cairn/Land Marker	Undetermined
24FH673	27 N	19 W	32	Historic Road/Trail, Historic Vehicular/Foot Bridge	NR Listed*
24FH1037	27 N	19 W	32	Historic Road/Trail	Ineligible
24FH938	27 N	20 W	25	Historic Commercial Development, Historic Residence	Ineligible
24FH939	27 N	20 W	25	Historic Residence, Historic Log Structure	Ineligible
24FH14	27 N	20 W	35	Lithic Material Concentration, Firehearths or Roasting Pits, FCR	Undetermined
24FH1224	27 N	20 W	35	Historic Homestead/Farmstead	Ineligible
24FH427	27 N	20 W	36	Historic Ranger Station	Ineligible
24FH94	27 N	20 W	36	Fishing Site	Undetermined
24FH0421	27 N	20 W	36	Historic Log Structure	Ineligible
24FH941	27 N	20 W	36	Historic Residence	Ineligible
24FH940	27 N	20 W	36	Historic Residence	Ineligible
24FH743	27 N	20 W	36	Historic Vehicular/Foot Bridge	NR Listed*

*CD=Consensus Determination (Eligible); NR Listed=National Register Listed (Eligible)

Table 6 depicts three of the 18 sites are *Eligible*:

- 24FH0450 is an historic irrigation system and is Eligible by Consensus Determination;
- 24FH0673 (an historic road/trail and bridge) and
- 240743 (Swan River Bridge)

Four sites are unevaluated/undetermined. Eleven are *Not Eligible/Ineligible* for listing on the NRHP. Two of the previously recorded cultural resources are within the study area (24FH0743 and 24FH0094). It is possible that site 24FH0421 (historic log cabin) is within the study area, but the information provided in the site form did not allow for mapping of the site. No precise location information, maps or photos were available with this site form; however, this site is *Not Eligible/Ineligible* for listing on the NRHP, and therefore is not a Historic Property. If a project were forwarded from this study, the Swan River Bridge would need to be considered for impacts/mitigation and is discussed in further detail below.



4.4.1 Swan River Bridge (24FH0743)

The Swan River Bridge (24FH0743) is listed on the NRHP. The following is a summary description of the structure, as well as its significance and integrity, as excerpted from the nomination document prepared by Jon Axline (02/20/2015):

"The Swan River Bridge is a one-span steel pin-connected Pratt through truss structure that measures 120 feet in length and 16 feet wide. The bridge rests on concrete abutments. The structure retains good integrity and is a typical simple pin-connected Pratt through truss.

The bridge retains a high degree of integrity. It is representative of the type of steel pin-connected Pratt through truss bridges built in large numbers across Montana between 1888 and 1915. All of the bridge's basic structural components remain intact and mostly unchanged, merely displaying weathering from the past century. The bridge's integrity of design has been somewhat diminished by the addition of a sidewalk at an undetermined date and the addition of steel ribbon guardrails in the late twentieth century. The sidewalk, however, is not intrusive and is built of materials similar in appearance to that of the bridge itself. Though lacking documentation, the sidewalk may be more than 50 years old. The original guardrails are still present on the structure and the non-historic W-type guardrails are removable. The setting has been diminished by the encroachment of modern residential properties. The original road alignment, however, remains intact as does the bridge's association with the nearby Bigfork Dam powerhouse. The bridge retains integrity of materials, feeling, and association with Flathead County's early efforts to provide modern infrastructure to its residents when Bigfork expanded as a result of improvements made to the dam and powerhouse.

The Bigfork Bridge is eligible for listing on the National Register of Historic Places under criteria A and C at a local level of significance. Under Criterion A, the bridge was built during a period in Flathead County's history when it struggled to provide modern infrastructure to its residents during the height of the Homestead Boom between 1909 and 1918, and when the logging industry dominated the region's economy. The bridge is also associated with improvements made to the nearby Bigfork Dam and powerhouse. It stands as the oldest steel truss and the only pin-connected Pratt through truss remaining in Flathead County. Under Criterion C, the bridge is a good example of a steel pin-connected Pratt through truss structure built during a period when this type of steel bridge dominated county bridge construction in Montana. The bridge is typical of the many Pratt trusses built in the state between 1888 and 1915, when the Montana State Highway Commission standardized steel truss designs. The bridge retains good integrity and retains all of its original structural components in their original configuration."

The boundary of this site measures 120 feet by 18 feet, and includes the bridge structure, abutments, and the approaches on either side of the Swan River. The boundary also includes the portions of the Swan River that are spanned by the bridge.

Considering that the bridge itself is a Historic Property (24FH0743), a condition assessment and Section 4(f) determination of this structure will be necessary prior to rehabilitation or replacement.



The Section 4(f) determination includes the feasibility and prudent analysis and least harm analysis in conjunction with the Federal Highway Administration (FHWA).

In addition, it is recommended that a Memorandum of Agreement between the MDT and SHPO be prepared to define mutually agreed upon efforts needed to mitigate any adverse effects to the bridge that may occur during rehabilitation. A rehabilitation plan should be in place prior to repair or replacement, to address the materials and techniques used will maintain the integrity and significance of the bridge (24FH0743) to the greatest extent practicable.

4.5 Noise

Any improvement options forwarded from this study would be considered a Type II or Type III project, which does not fall under MDT traffic noise analysis or mitigation. No further review is anticipated.

4.6 Visual Resources

The visual quality of an area may be affected by changes to the existing bridge structure.

The proposed project is located along the riparian corridor of the Swan River. Within the study area are several visually sensitive areas, including the NRHP-Listed Swan River Bridge, one additional cultural resource (fishing site), one recreational park as well as views from the area to the bridge. In addition, the community of Bigfork is an important tourist destination and, therefore, relies on the aesthetically pleasing aspects present within the vicinity of the Swan River Bridge. These conditions will need to be considered if improvement options are forwarded from this study.

5 CONCLUSION

This e-scan scan has identified multiple existing physical, biological, social and cultural resources within the study area that may be affected by future proposed improvements. Any improvement options forwarded from this feasibility study to project development would need to comply with all applicable federal, state and local rules and regulations and would analyze potential impacts to determine appropriate prevention measures and necessary permits.



6 REFERENCES

- Administrative Rules of Montana. (Undated). Designation of Noxious Weeds. Retrieved on 21 March 2016 from <http://www.mtrules.org/gateway/Subchapterhome.asp?scn=4.5.2>
- Environmental Laboratory. (1987). Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1. US Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Mississippi. Retrieved from <http://el.erdc.usace.army.mil/elpubs/pdf/wlman87.pdf>
- Environmental Laboratory. (2010). Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0). ERDC/EL TR-10-3. Vicksburg, Mississippi: U.S. Army Engineer Research and Development Center. Retrieved from http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/reg_supp/west_mt_finalsupp2.pdf
- Federal Emergency Management Agency. (Undated A). Floodway. Retrieved on 5 April 2016 from <https://www.fema.gov/floodway>
- Federal Emergency Management Agency. (Undated B). Zone AE and A1-30. Retrieved on 4 April 2016 from <https://www.fema.gov/zone-ae-and-a1-30>
- Federal Emergency Management Agency. (2015). Flood Insurance Rate Map Panel 30029C2315J. National Flood Insurance Program. Retrieved on 4 April 2016 from <https://msc.fema.gov/portal>
- Flathead County. (2016). GIS Shapefiles for Parcels, Floodplains, Lakes, and Geology. Retrieved on 4 April 2016 from <http://flathead.mt.gov/gis/downloads.php>
- Flathead County. (Undated). Flathead County Declared Noxious Weeds. Retrieved on 21 March 2016 from <https://flathead.mt.gov/weeds/FlatheadCountyDeclaredNoxiousWeeds.php>
- Flathead County. 2015. Flathead County Growth Policy. Retrieved on 5 April 2016 from https://flathead.mt.gov/planning_zoning/downloads.php
- Flathead County. Undated. Flathead County Parks. Retrieved on 5 April 2016 from https://flathead.mt.gov/parks_rec/parks.php
- Flathead County. (2009). Flathead County Parks & Recreation Master Plan. Retrieved on 5 April 2016 from https://flathead.mt.gov/planning_zoning/downloads.php
- Flathead County. (2009). Bigfork Neighborhood Plan, Adopted by the Flathead County Commissioner on June 2, 2009, Resolution #2208. Retrieved on 5 April 2016 from https://flathead.mt.gov/planning_zoning/documents/CompressedMASTERCopyofFinalBFNP.pdf
- Forstall, R.L. (1996). Population of the States and Counties of the United States: 1790 to 1990. US Census Bureau, Washington, D.C. Retrieved on 23 March 2016 from <http://www.census.gov/population/www/censusdata/PopulationofStatesandCountiesoftheUnitedStates1790-1990.pdf>
- Montana Department of Environmental Quality (MT DEQ). (Undated a) Interactive Web Mapping Application. Mapping DEQ's Data. Retrieved on 4 April 2016 from <http://svc.mt.gov/deq/wmadst/>



MT DEQ. (Undated b) Unpermitted Hazardous Substance Releases Report. PacifiCorp Transformer Yard. Retrieved on 4 April 2016 from <http://svc.mt.gov/deq/dst/#/app/srs/report/site/PCTY>

MT DEQ (Undated C) Montana's Clean Water Act Information Center. Frequently Asked Questions. Retrieved on 12 July, 2016 from <http://deq.mt.gov/water/WQPB/cwaic/faqs>

Montana Department of Transportation. (2011). Traffic Noise Analysis and Abatement Policy. Retrieved on 5 April 2016 from <https://www.mdt.mt.gov/business/contracting/docs/npolicy-2011.pdf>

Montana Bureau of Mine and Geology (MBMG). Undated. Online Web Mapping Application. Retrieved on 5 April 2016 from <http://data.mbm.g.mtech.edu/mapper/mapper.asp?view=Wells&>.

Montana Code Annotated. (2015). Title 7, Chapter 22, Part 21, County Weed Control. Retrieved on 21 March 2016 from http://leg.mt.gov/bills/mca_toc/7_22_21.htm

Montana Fish, Wildlife and Parks. (Undated). Montana Fisheries Information System Waterbody Report, Fish Distribution in the Swan River. Retrieved on <http://fwp.mt.gov/fishing/mFish/>

Montana Noxious Weed Summit Advisory Council, Weed Management Task Force. (2008). The Montana Weed Management Plan. Helena: Montana Department of Agriculture. Retrieved on 21 March 2016 from <http://agr.mt.gov/agr/Programs/Weeds/PDF/2008weedPlan.pdf>

Montana Natural Heritage Program (Undated A). Natural Heritage Map Viewer Montana Generalized Observations Report for All Amphibians. Retrieved on 25 March 2016 from <http://mtnhp.org/mapviewer/GenOBSReport.aspx>

Montana Natural Heritage Program (Undated B). Natural Heritage Map Viewer Montana Generalized Observations Report for ((All Invertebra)). Retrieved on 25 March 2016 from <http://mtnhp.org/mapviewer/GenOBSReport.aspx>

Montana Natural Heritage Program (Undated C). Natural Heritage Map Viewer Montana Generalized Observations Report for ((All Fish)). Retrieved on 25 March 2016 from <http://mtnhp.org/mapviewer/GenOBSReport.aspx>

Montana Natural Heritage Program (Undated D). Natural Heritage Map Viewer Montana Generalized Observations Report for ((All Mammals)). Retrieved on 25 March 2016 from <http://mtnhp.org/mapviewer/GenOBSReport.aspx>

Montana Natural Heritage Program (Undated E). Natural Heritage Map Viewer Montana Generalized Observations Report for ((All Reptiles)). Retrieved on 25 March 2016 from <http://mtnhp.org/mapviewer/GenOBSReport.aspx>

Montana Natural Heritage Program (Undated F). Natural Heritage Map Viewer Montana Generalized Observations Report for ((All Birds)). Retrieved on 25 March 2016 from <http://mtnhp.org/mapviewer/GenOBSReport.aspx>

Montana Natural Heritage Program. (Undated G). Bull Trout (*Salvelinus confluentus*). Retrieved on 4 April 2016 from <http://fieldguide.mt.gov/speciesDetail.aspx?elcode=AFCHA05020>

Montana Natural Heritage Program. (Undated H). Canada Lynx (*Lynx canadensis*). Retrieved on 4 April 2016 from <http://fieldguide.mt.gov/speciesDetail.aspx?elcode=AMAJH03010>



Montana Natural Heritage Program. (Undated I). Grizzly Bear (*Ursus arctos*). Retrieved on 25 March 2016 from <http://fieldguide.mt.gov/speciesDetail.aspx?elcode=AMAJB01020>

Montana Natural Heritage Program. (Undated J). Yellow-billed Cuckoo (*Coccyzus americanus*). Retrieved on 4 April 2016 from <http://fieldguide.mt.gov/speciesDetail.aspx?elcode=ABNRB02020>

Montana Natural Resource Information System. 2016. Montana Digital Atlas. Retrieved 5 April 2016 from http://mslapps.mt.gov/Geographic_Information/Applications/DigitalAtlas/

Montana State Library. (Undated). Montana Groundwater Information Center Water Well Data. Retrieved on 4 April 2016 from http://mslapps.mt.gov/Geographic_Information/Data/DataList/datalist_Details?did=%7BB40FCBD4-DA34-483A-A8C9-F9C1E95F7A21%7D

Montana State Library. (2013). Montana Public Water System Sources. Retrieved on 4 April 2016 from http://mslapps.mt.gov/Geographic_Information/Data/DataList/datalist_Details?did=%7BCDC1702D-810F-4055-B956-ED78662BA1F5%7D

Montana Bald Eagle Working Group. 2010. Montana Bald Eagle Management Guidelines: An Addendum to Montana Bald Eagle Management Plan, 1994, Montana Fish, Wildlife and Parks, Helena, Montana.

Raines, G.L. and B. R. Johnson. (1995). Digital representation of the Montana stage geologic map: a contribution to the Interior Columbia River Basin Ecosystem Management Project: U.S. Geological Survey Open-File Report 95-691, 21 p.; <http://mrddata.usgs.gov/geology/state/state.php?state=MT>

Rice, P.M. (2014). Invaders Database System. Division of Biological Sciences, University of Montana, Missoula, Montana. 59812-4824. Retrieved on 21 March 2016 from <http://invader.dbs.umt.edu/>

Smith, L.N. (2004). Depth to Deep Alluvium of the Deep Aquifer in Kalispell Valley: Flathead County, Montana. Montana Bureau of Mines and Geology. Retrieved on 4 April 2016 from <http://mbmaggwic.mtech.edu/gwcpmaps/gwaa02map08untiled.pdf>

Stickney, Michael C, Haller Kathleen M and Machette Michael N. (2000). Quaternary Faults and Seismicity in Western Montana. Montana Bureau of Mines and Geology Special Publication No. 114.

US Department of Agriculture, Farm Service Agency. (2015). National Agriculture Imagery Program Montana 2015 Imagery. Retrieved from <http://datagateway.nrcs.usda.gov/>

US Census Bureau. (2000a). Census 2000: Profile of General Demographic Characteristics for the United States, State of Montana, Flathead County and Bigfork Census-Designated Place. Retrieved on 18 and 21 March 2016 from <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

US Census Bureau. (2000b). Census 2000: Population, Housing Units, Area, and Density for the United States; State of Montana and Counties. Retrieved on 21 March 2016 from <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

US Census Bureau. (2010a). Census 2010: Profile of General Demographics Characteristics for the United States; State of Montana, Flathead County and Bigfork Census-Designated Place. Retrieved on 18 and 21 March 2016 from <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>



US Census Bureau. (2010b). Census 2010: Population, Housing Units, Area, and Density for the United States, State of Montana and Counties. Retrieved on 21 March 2016 from <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

US Census Bureau. (2014a). 2010-2014 American Community Survey 5-Year Estimates: ACS Demographic and Housing Estimates for the United States; State of Montana; Cascade, Flathead, Gallatin, Missoula and Yellowstone Counties; and Bigfork Census-Designated Place. Retrieved on 18 and 24 March 2016 from <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

US Department of the Interior. Land and Water Conservation Fund (LWCF). (2016). Detailed Listing of Grants Grouped by County. Retrieved on 6 April 2016 from <http://waso-lwcf.nrc.gov/public/index.cfm>

US Census Bureau. (2014b). 2010-2014 American Community Survey 5-Year Estimates: Selected Economic Characteristics for the United States; State of Montana, Flathead County and Bigfork Census-Designated Place. Retrieved on 18 March 2016 from <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

U.S. Environmental Protection Agency (USEPA). (2016a). Search for Superfund Sites Where You Live. National Priorities List (NPL) Sites. Last updated 17 February 2016. Retrieved on 4 April 2016, from <http://www.epa.gov/superfund/search-superfund-sites-where-you-live>

USEPA. (2016b). Toxics Release Inventory (TRI) Program. Last updated 20 January 2016. Retrieved 4 April 2016, from <http://www2.epa.gov/toxics-release-inventory-tri-program>

USEPA. (2016c). Resource Conservation and Recovery Act Information (RCRAInfo) database in Envirofacts: RCRAInfo Search. Last updated 11 March 2016. Retrieved on 4 April 2016, from <http://www.epa.gov/enviro/facts/rcrainfo/search.html>

US Fish and Wildlife Service. (Undated A). National Wetlands Inventory. Retrieved on 4 April 2016 from <http://www.fws.gov/wetlands/Data/Mapper.html>

US Fish and Wildlife Service. (Undated B). Final Critical Habitat KML Data for use with Google Earth for Bull Trout, Clark Fork River Basin Unit: 31. Retrieved on 4 April 2016 from <http://www.fws.gov/pacific/bulltrout/finalcrithab/index.cfm?unit=31>

US Fish and Wildlife Service. (Undated C). Critical Habitat Shapefiles for the Canada Lynx. Retrieved on 4 April 2016 from <http://www.fws.gov/mountain-prairie/species/mammals/lynx/criticalhabitat.htm>

US Fish and Wildlife Service. (Undated D). Bull Trout (*Salvelinus confluentus*). Retrieved on 25 March 2016 from https://ecos.fws.gov/tess_public/profile/speciesProfile.action?scode=E065

US Fish and Wildlife Service. (Undated E). Canada Lynx (*Lynx canadensis*). Retrieved on 25 March 2016 from https://ecos.fws.gov/tess_public/profile/speciesProfile.action?scode=A073

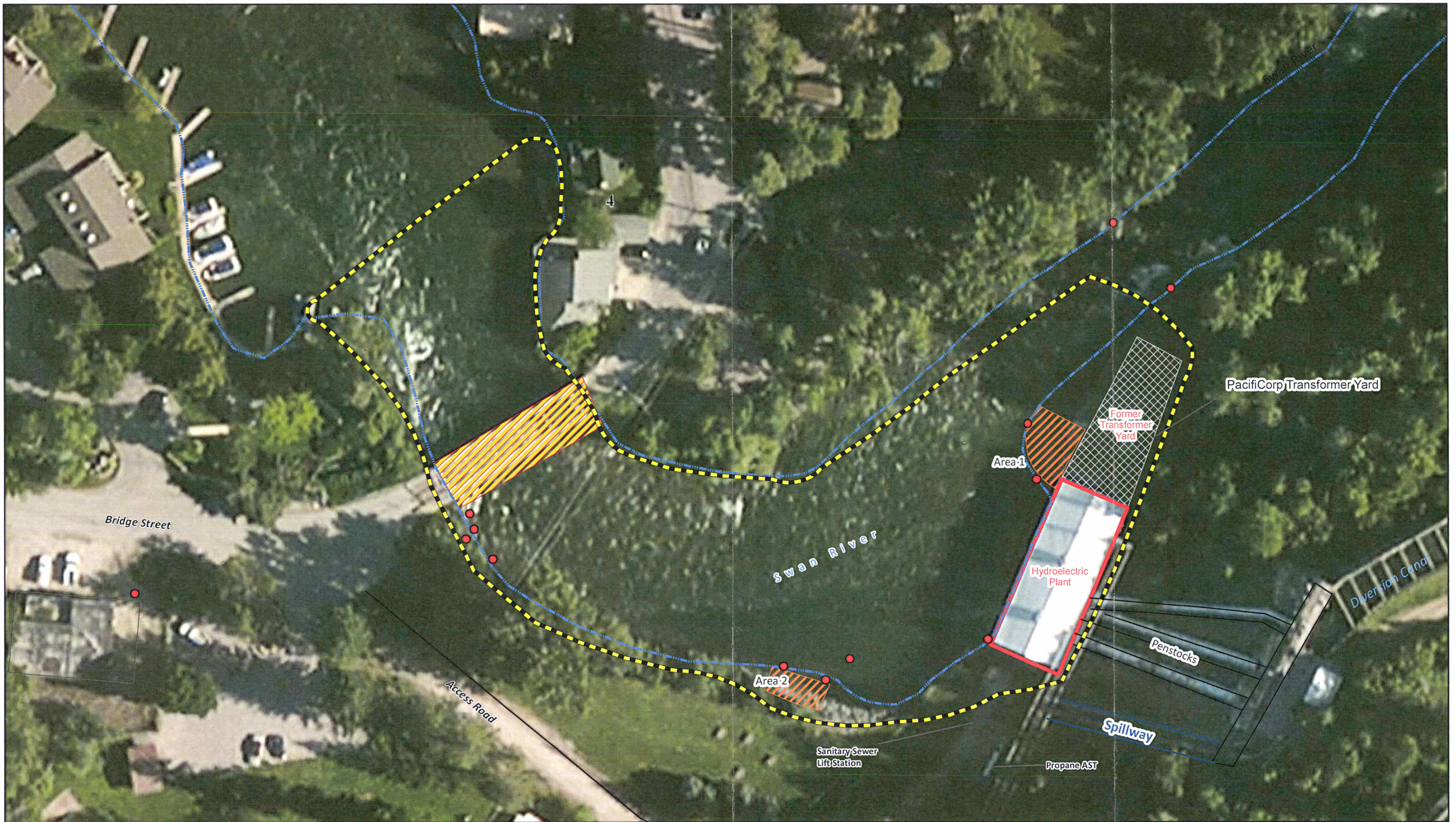
US Fish and Wildlife Service. (Undated F). Spalding's Catchfly (*Silene spaldingii*). Retrieved on 25 March 2016 from https://ecos.fws.gov/tess_public/profile/speciesProfile.action?scode=Q1P9#conservationPlans

US Fish and Wildlife Service. (Undated G). Yellow-Billed Cuckoo (*Coccyzus americanus*). Retrieved on 25 March 2016 from https://ecos.fws.gov/tess_public/profile/speciesProfile.action?scode=B06R



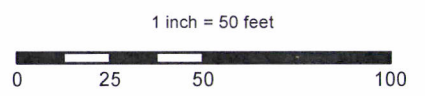
- US Fish and Wildlife Service. (2011). Wetlands and Deepwater Habitats Classification. Retrieved on 4 April 2016 from <http://www.fws.gov/wetlands/Documents/Wetlands-and-Deepwater-Habitats-Classification-chart.pdf>
- US Fish and Wildlife Service (2015a). Migratory Bird Treaty Act Protected Species (10.13 list). Retrieved on 4 April 2016 from <http://www.fws.gov/birds/management/managed-species/migratory-bird-treaty-act-protected-species.php>
- US Fish and Wildlife Service. (2015a). Meltwater Lednian Stonefly (*Lednia tumana*). Retrieved on 25 March 2016 from https://ecos.fws.gov/docs/candidate/assessments/2015/r6/I0EE_I01.pdf
- US Fish and Wildlife Service. (2015b). Whitebark Pine (*Pinus albicaulis*). Retrieved on 25 March 2016 from https://ecos.fws.gov/docs/candidate/assessments/2015/r6/R00E_P01.pdf
- US Fish and Wildlife Service. (2016). Swan River - Bridge Street (Bigfork) IPaC Trust Resources Report. Retrieved on 25 March 2016 from <http://ecos.fws.gov/ipac/>
- US Geological Survey. (2014). Mineral Resources On-Line Spatial Data. Retrieved on 4 April 2016 from <http://mrddata.usgs.gov/geology/state/map.html?x=-109.645565979702&y=47.0344825672421&z=6#>
- Woods, A.J., J.M. Omernik, J.A. Nesser, J. Sheldon, J.A. Comstock and S.H. Azevedo. (2002). Ecoregions of Montana, 2nd edition (color poster with map, descriptive text, summary tables, and photographs). Map scale 1:1,500,000. Retrieved on 25 March 2016 from <https://www.epa.gov/eco-research/ecoregion-download-files-state-region-8#pane-24>

APPENDIX A
PACIFICORP TRANSFORMER YARD MAP



Legend

- Proposed Sediment Sample Location
- Facility Boundary
- Excavation Area



PROPOSED SEDIMENT SAMPLE LOCATION

PacifiCorp Transformer Yard, Bigfork, MT

Job#: PERCM24	FIGURE 3
Date: 11/18/2015	

Path: M:\PERCM24\2015\Figures2_Sediment_Samples.mxd Author: jleprose

APPENDIX B
MNHP SPECIES OF CONCERN

Montana Natural Heritage - SOC Report

Animal Species of Concern

11 Species of Concern

1 Special Status Species

Filtered by the following criteria:

Township = 027N020W (based on mapped Species Occurrences)

Species List Last Updated 06/23/2015



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Introduction

Introduction

The Montana Natural Heritage Program (MTNHP) serves as the state's information source for animals, plants, and plant communities with a focus on species and communities that are rare and have declining trends and as a result are at risk or potentially at risk of extirpation in Montana.

This report on **Montana Animal Species of Concern** is produced jointly by the Montana Natural Heritage Program (MTNHP) and Montana Department of Fish, Wildlife, and Parks (MFWP). Species of Concern are native Montana animals that are considered to be "at risk" due to declining population trends, threats to their habitats, and/or restricted distribution.

Also included in this report are **Potential Animal Species of Concern** -- animals for which current, often limited, information suggests potential vulnerability or for which additional data for accurate status assessment can be made.

We also include **Special Status Species** which are species that have some legal protections in place, but are otherwise not Montana Species of Concern. Bald Eagle is a Special Status Species although it is no longer protected under the Endangered Species Act and is also no longer a Montana Species of Concern, it is still protected under the **Bald and Golden Eagle Protection Act** (U.S.C. 668-668c). Red Knot is not a Montana Species of Concern, having a state rank of **SNA** because of a lack of information on its migratory stopover use of Montana's wetlands. Hovulac is a Status Species because it is listed as Threatened in Montana under the Endangered Species Act (16 U.S.C. 1531-1544).

Over the last 200 years, 5 species with historic breeding ranges in Montana have been extirpated from the state; Woodland Caribou (*Rangifer tarandus*), Greater Prairie-Chicken (*Tympanuchus*), Passenger Pigeon (*Ectopistes migratorius*), Pilose Crayfish (*Pacifastacus gambelii*), and Rocky Mountain Locust (*Melanoplus spretus*). Designation as a Montana Animal Species of Concern is not a statutory or regulatory classification. Instead, these designations provide a basis for resource managers and decision-makers to make proactive decisions regarding conservation and data collection priorities in order to avoid additional extirpations.

Status determinations are made by MTNHP and MFWP biologists in consultation with representatives of the Montana Chapter of the Wildlife Society, the Montana Chapter of the American Ornithologists Union, and other experts. The process for evaluating and assigning status designations uses the Natural Heritage Program ranking system, described below, which forms the basis for identifying Montana Species of Concern.

How to Read the Lists

What Species are Included in this Report

Montana Species of Concern are defined as vertebrate animals with a state rank of S1, S2, or S3. Vertebrate species with a rank indicating uncertainty (SU), a "range rank" extending below S3 (S4), or those ranked S4 for which there is limited baseline information on status are considered Potential Species of Concern. Because documentation for invertebrates is typically less extensive than for vertebrates, only those ranked S1 or S2 are included as SOC. Invertebrates with a range rank extending below S2 (e.g., S2S3) are included as SOC only if their global ranks are G2G3 or G4G4 and their occurrence in Montana has been adequately documented. Other invertebrates of concern with global ranks other than G1, G2, or G3 and with state ranks below S2 or range ranks below S3S4 are treated as Potential Species of Concern.

Organization of List

Both the list of Species of Concern and the list of Potential Species of Concern are grouped taxonomically in the following order: mammals, birds, reptiles, amphibians, fish, and various invertebrates. Within each taxonomic group you can sort species by common name or scientific name.

County Distribution

This column lists the documented county distribution for each species, including extant and historical occurrences. Any occurrences that cross county boundaries are counted for each county. Occurrence records and specimen collections are only known from vague location information and the area mapped as the potential area of observation may be quite large, leading to more counties being counted.

Additions and Deletions

Species that have been added to or deleted from the SOC list due to changes in their state rank are reported in separate sections below; changes in global ranks are not tracked in this report.

Heritage Program Ranks

The international network of Natural Heritage Programs employs a standardized ranking system to denote **global** (range-wide) and **state** status (NatureServe 2006). Species are assigned ranging from 1 (highest risk, greatest concern) to 5 (demonstrably secure, least concern), reflecting the relative degree of risk to the species' viability, based upon available information, assigned by scientists at NatureServe (the international affiliate organization for the heritage network) in consultation with biologists in the natural heritage programs and other taxonomists.

A number of factors are considered in assigning state ranks — population size, area of occupancy in Montana, short and long-term population trends, threats, intrinsic vulnerability, and environment. Based on these factors, a preliminary rank is calculated and is reviewed by members of the Montana Chapter of the Wildlife Society and Montana Chapter of the American Ornithologists Union. A committee of biologists from MNHP and MFWP then review these rankings for consistent documentation and application of the criteria. Detailed documentation of the criteria process are available on the MTNHP website at: http://mtnhp.org/animal/2004_SOC_Criteria.pdf

Among other things, the combination of global and state ranks often helps describe the proportion of a species' range and/or total population occurring in Montana. For instance, a rank that Montana comprises most or a very significant portion of an animal's total population. In contrast, an animal ranked G5 S1 often occurs in Montana at the periphery of its much larger range, supporting a relatively small portion of its total population.

Rank		Definition
G1	S1	At high risk because of extremely limited and/or rapidly declining population numbers, range and/or habitat, making it highly vulnerable to global extinction or extirpation.
G2	S2	At risk because of very limited and/or potentially declining population numbers, range and/or habitat, making it vulnerable to global extinction or extirpation in the state.
G3	S3	Potentially at risk because of limited and/or declining numbers, range and/or habitat, even though it may be abundant in some areas.
G4	S4	Apparently secure, though it may be quite rare in parts of its range, and/or suspected to be declining.
G5	S5	Common, widespread, and abundant (although it may be rare in parts of its range). Not vulnerable in most of its range.
GX	SX	Presumed Extinct or Extirpated - Species is believed to be extinct throughout its range or extirpated in Montana. Not located despite intensive searches of historical sites and habitat, and small likelihood that it will ever be rediscovered.
GH	SH	Historical, known only from records usually 40 or more years old; may be rediscovered.
GNR	SNR	Not Ranked as of yet.
GU	SU	Unrankable - Species currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
GNA	SNA	A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities as a result of being: 1) not confidently present, 2) exotic or introduced; 3) a long distance migrant with accidental or irregular stopovers; or 4) a hybrid without conservation value.

Combination or Range Ranks

G#G# Indicates a range of uncertainty about the status of the species.
or e.g. G1G3 = Global Rank ranges between G1 and G3 inclusive

S#S#

Sub-rank

T# Rank of a subspecies or variety. Appended to the global rank of the full species, e.g. G4T3

Qualifiers

Q **Questionable** taxonomy that may reduce conservation priority-Distinctiveness of this entity as a taxon at the current level is questionable; resolution of this uncertainty may result in the entity being classified as a subspecies or hybrid, or inclusion of this taxon in another taxon, with the resulting taxon having a lower-priority (numerically higher) conservation status rank. Appended to the rank, e.g. G3Q

? **Inexact Numeric Rank** - Denotes uncertainty; inexactness.

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

B **Breeding** - Rank refers to the breeding population of the species in Montana. Appended to the state rank, e.g. S2B, S5N = At risk during breeding season, but common in the winter.

N **Nonbreeding** - Rank refers to the non-breeding population of the species in Montana. Appended to the state rank, e.g. S5B, S2N = Common during breeding season, but at risk in the winter.

M **Migratory** - Species occurs in Montana only during migration.

Federal Status

Designations in this column reflect the status of a species under the U.S. Endangered Species Act (ESA), or as "sensitive" by the U.S. Forest Service (USFS) or Bureau of Land Management

U.S. Fish and Wildlife Service (Endangered Species Act)

Status, if any, of a taxon under the federal Endangered Species Act of 1973 (16 U.S.C.A. § 1531-1543 (Supp. 1996)) is noted.

Designation Descriptions

- LE Listed endangered:** Any species in danger of extinction throughout all or a significant portion of its range (16 U.S.C. 1532(6)).
- LT Listed threatened:** Any species likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range (16 U.S.C. 1532(20)).
- C Candidate:** Those taxa for which sufficient information on biological status and threats exists to propose to list them as threatened or endangered. We encourage their conservation planning and partnerships; however, none of the substantive or procedural provisions of the Act apply to candidate species.
- DM Recovered, delisted, and being monitored** - Any previously listed species that is now recovered, has been delisted, and is being monitored.
- NL Not listed** - No designation.
- XE Experimental - Essential population** - An experimental population whose loss would be likely to appreciably reduce the likelihood of the survival of the species in the wild.
- XN Experimental - Nonessential population** - An experimental population of a listed species reintroduced into a specific area that receives more flexible management under the Act.
- CH Critical Habitat** - The specific areas (i) within the geographic area occupied by a species, at the time it is listed, on which are found those physical or biological features (I) of such species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by the species at the time it is listed, on which are found those physical or biological features (I) of such species and (II) that may require special management considerations or protection.
- PS Partial status** - status in only a portion of the species' range. Typically indicated in a "full" species record where an infraspecific taxon or population, that has a record in the status, but the entire species does not.
- PS:value Partial status** - status in only a portion of the species' range. The value of that status appears in parentheses because the entity with status is not recognized as a valid taxon (usually a population defined by geopolitical boundaries or defined administratively, such as experimental populations.)
- For example, Yellow-billed Cuckoo (*Coccyzus americanus*) is ranked **PS:C**. Partial Status - Candidate. Designated as a Candidate in the Western U.S. Distinct Population Segment (*occidentalis*)
- BGEPA The Bald and Golden Eagle Protection Act of 1940 (BGEPA)** - (16 U.S.C. 668-668c) prohibits anyone, without a permit issued by the Secretary of the Interior, from taking eagles, including their parts, nests, or eggs. The BGEPA provides criminal and civil penalties for persons who take, possess, sell, purchase, barter, offer to sell, purchase or transport, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof. The BGEPA defines take as pursue, shoot, snare, trap, capture, trap, collect, molest or disturb. "Disturb" means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by interfering with normal breeding, feeding, or sheltering behavior. In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations previously used nest site during a time when eagles are not present, if, upon the eagles return, such alterations agitate or bother an eagle to a degree that injures an eagle or interferes with normal breeding, feeding, or sheltering habits and causes, or is likely to cause, a loss of productivity or nest abandonment.
- MBTA The Migratory Bird Treaty Act (MBTA)** - (16 U.S.C. §§ 703-712, July 3, 1918, as amended 1936, 1960, 1968, 1969, 1974, 1978, 1986 and 1989) implements four treaties for the international protection of migratory birds. The statute's language is clear that actions resulting in a "taking" or possession (permanent or temporary) of a protected species, U.S. Fish and Wildlife Service (USFWS) permit or regulatory authorization, are a violation of the MBTA. The MBTA states, "Unless and except as permitted by regulations ... at any time, by any means, or in any manner to pursue, hunt, take, capture, kill ... possess, offer for sale, sell ... purchase ... ship, export, import ... transport or cause to be transported, any part, nest, or egg of any such bird [The Act] prohibits the taking, killing, possession, transportation, import and export of migratory birds, their eggs, or their parts, except when specifically authorized by the Department of the Interior." The word "take" is defined by regulation as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect." The USFWS maintains a list of species protected by the MBTA at 50 CFR 10.13. This list includes over 1000 species of migratory birds, including eagles and other raptors, waterfowl, shorebirds, seabirds, wading birds, and passerines. The USFWS also maintains a list of species not protected by the MBTA that are not native to the United States or species groups not explicitly covered under the MBTA; these include species such as the house sparrow, rock dove (pigeon), Eurasian collared-dove, and non-migratory upland game birds.
- BCC** The 1988 amendment to the Fish and Wildlife Conservation Act mandates the U.S. Fish and Wildlife Service to identify species, subspecies, and populations of all migratory birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act. **Birds of Conservation Concern 2008 (BCC 2008)** is a list of birds that are likely to become candidates for listing under the Endangered Species Act. The overall goal of this report is to accurately identify the migratory and non-migratory bird species (beyond those already designated as federally endangered) that represent the Service's highest conservation priorities.

Bureau of Land Management

BLM Sensitive Species are defined by the BLM 6840 Manual as those that normally occur on BLM administered lands for which BLM has the capability to significantly affect the conservation of the species through management. Such species should be managed to the level of protection required by State laws or under the BLM policy for candidate species, whichever would provide better conservation. The State Director may designate additional categories of special status species as appropriate and applicable to his or her state's needs. The sensitive species designation, federally listed, proposed, or candidate species, may include such native species as those that:

- could become endangered in or extirpated from a state, or within a significant portion of its distribution in the foreseeable future.
- are under status review by the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service,
- are undergoing significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution,
- are undergoing significant current or predicted downward trends in population or density such that federally listed, proposed, candidate, or State listed status may become necessary,
- have typically small and widely dispersed populations,
- are inhabiting ecological refugia, specialized or unique habitats, or
- are State listed but which may be better conserved through application of BLM sensitive species status.

Designation Descriptions

- Sensitive** Denotes species listed as sensitive on BLM lands
- Special Status** Denotes species that are listed as Endangered or Threatened under the Endangered Species Act

U.S. Forest Service

U.S. Forest Service Manual (2670.22) defines Sensitive Species on Forest Service lands as those for which population viability is a concern as evidenced by a significant downward trend in habitat capacity. The Regional Forester (Northern Region) designates Sensitive species on National Forests in Montana. These designations were last updated in 2008 and apply only on USFS-administered lands.

Designation Descriptions

- Sensitive** Listed as a Sensitive Species by USFS Northern Region (R1)
- Endangered** Listed as Endangered under the Endangered Species Act
- Threatened** Listed as Threatened under the Endangered Species Act

Acknowledgements

MTNHP and MFWP staff work together on a daily basis to manage information used to evaluate the status of Montana's animal species. We extend our thanks to these individuals and private citizens who study and work to conserve species across Montana. We also thank a number of private citizens that spend a great deal of their free time contributing valuable information to statewide conservation efforts that can be better understood and managed.

Selected References

- Abbott, J.C. 2006. Odonata Central: An online resource for the Odonata of North America. Austin, TX. (Accessed: July 28, 2009). <http://www.odonatacentral.com>
- Acorn, J. 2004. *Damselflies of Alberta: flying neon toothpicks in grass*. Edmonton, Alberta: University of Alberta Press. 156 p.
- Brown, C.J.D. 1971. *Fishes of Montana*. Bozeman, MT: Montana State University. 207 p.
- Flath, D.L. 1984. Vertebrate species of special interest or concern. Helena, MT: Montana Department of Fish, Wildlife and Parks. 76 p.
- Flath, D.L. 1998. Species of special interest or concern. Helena, MT: Montana Department of Fish, Wildlife and Parks. 7 p.
- Frest, T.J. and E.J. Johannes. 1995. Interior Columbia Basin mollusk species of special concern. Final report to the Interior Columbia Basin Ecosystem Management Project, Walla Walla, WA. appendices.
- Foresman, K.R. 2001. *The wild mammals of Montana*. Special Publication No. 12. Lawrence, KS: The American Society of Mammalogists. 278 p.
- Hand, R.L. 1969. A distributional checklist of the birds of western Montana. Unpublished manuscript available from the Montana State Library, Helena, MT. 55 p.

Hendricks, P., B.A. Maxell, S. Lenard, C. Currier, and J. Johnson. 2006. Riparian bat surveys in eastern Montana. Report to the USDI Bureau of Land Management, Montana State of Natural Heritage Program. 13 p. + appendices.

Hendricks, P., B.A. Maxell, S. Lenard, and C. Currier. 2007. Land mollusk surveys on USFS Northern Region Lands: 2006. Report to the USDA Forest Service, Northern Region. Heler Heritage Program. 11 pp. + appendices.

Hendricks, P., B.A. Maxell, S. Lenard, and C. Currier. 2008. Surveys and predicted distribution models for land mollusks on USFS Northern Region Lands: 2007. Report to the USDA Region. Helena, MT: Montana Natural Heritage Program. 12 pp. + appendices.

Hoffman, R.L. 1999. Checklist of the millipeds of North and Middle America. Special Publication No. 8. Martinsville, VA: Virginia Museum of Natural History. 584 p.

Hoffmann, R.S. and D.L. Pattie. 1968. A guide to Montana mammals. Missoula, MT: University of Montana Printing Services. 133 p.

Holton, G.D. and H.E. Johnson. 2003. *A field guide to Montana fishes*. Third Edition. Helena, MT: Montana Department of Fish, Wildlife, and Parks. 95 p.

Kohler, S. 1980. Checklist of Montana butterflies (Rhopalocera). *Journal of the Lepidopterists' Society* 34(1):1-19.

Lenard, S., J. Carlson, J. Ellis, C. Jones, and C. Tilly. 2003. *P.D. Skaar's Montana bird distribution*. Sixth edition. Helena, MT: Montana Audubon. 144 p.

Lenard, S., B.A. Maxell, P. Hendricks, and C. Currier. 2007. Bat Surveys on USFS Northern Region 1 Lands in Montana: 2006. Report to the USDA Forest Service, Northern Region. I Program, Helena, Montana 23 pp. plus appendices.

Lewis, J.J. 2001. Three new species of subterranean assellids from western North America, with a synopsis of the species of the region (Crustacea: Isopoda: Asellidae). *Texas Memo Monographs* 5:1-15.

Maxell, B.A., J.K. Werner, P. Hendricks, and D. Flath. 2003. *Herpetology in Montana: a history, status summary, checklists, dichotomous keys, accounts for native, potentially native indexed bibliography*. Olympia, WA: Society for Northwestern Vertebrate Biology. Northwest Fauna 5: 1-138.

Miller, K.B. and D.L. Gustafson. 1996. Distribution records of the Odonata of Montana. *Bulletin of American Odonatology* 3(4):75-88.

[Montana Fish Wildlife and Parks]. 2005. Montana's comprehensive fish and wildlife conservation strategy. Helena, MT: Montana Fish, Wildlife & Parks. 658 p.

Montana Natural Heritage Program and Montana Fish Wildlife and Parks. 2009. Montana animal Species of Concern. Helena, MT: Montana Natural Heritage Program and Montana De and Parks. 17 p.

NatureServe. 2009. NatureServe Explorer: An on-line encyclopedia of life [web application]. Version 7.1. Arlington, VA. (Accessed: July 28, 2009). <http://www.natureserve.org/>

Opler, P.A., H. Pavulaan, R.E. Stanford, and M. Pogue (coordinators). 2006. Butterflies and moths of North America. Bozeman, MT: NBII Mountain Prairie Information Node. (Access <http://www.butterfliesandmoths.org/>)

Paulson, D.R. 2009. *Dragonflies and damselflies of the West*. Princeton, NJ: Princeton University Press. 535 p.

Pearson, D.L., C.B. Knisley, and C.J. Kazilek. 2006. *A field guide to the tiger beetles of the United States and Canada: identification, natural history, and distribution of the Cicindelic* University Press. 227 p.

Regan, T.J., L.L. Master, and G.A. Hammerson. 2004. Capturing expert knowledge for threatened species assessments: a case study using NatureServe conservation status ranks. *A* 107.

Roemhild, G. 1975. The damselflies (Zygoptera) of Montana. Montana Agricultural Experiment Station Research Report 87. Bozeman, MT: Montana State University. 53 p.

Saunders, A.A. 1921. A distributional list of the birds of Montana with notes on the migration and nesting of the better known species. Pacific Coast Avifauna Number 14. Berkeley, C Club. 194 p.

Stagliano, D.M. 2008. *Freshwater mussels of Montana*. Helena, MT: Montana Natural Heritage Program. 20 p.

Stagliano, D.M., G.M. Stephens, and W.R. Bosworth. 2007. Aquatic invertebrate Species of Concern on USFS Northern Region Lands. Report to USDA Forest Service, Northern Region Natural Heritage Program. 95 pp. + appendices.

Thompson, L.S. 1982. Distribution of Montana amphibians, reptiles, and mammals. Helena, MT: Montana Audubon Council. 24 p.

Wang, D. and J.R. Holsinger. 2001. Systematics of the subterranean amphipod genus *Stygobromus* (Crangonyctidae) in western North America, with emphasis on the hubbsi group.

Werner, J.K., B.A. Maxell, P. Hendricks, and D. Flath. 2004. *Amphibians and reptiles of Montana*. Missoula, MT: Mountain Press Publishing Company. 262 p.

Westfall, M.J., Jr. and M.L. May. 1996. *Damselflies of North America*. Gainesville, FL: Scientific Publishers. 650 p.

Westfall, M.J. Jr. and M.L. May. 2000. *Dragonflies of North America*. Revised Edition Gainesville, FL: Scientific Publishers. 940 p.

Wright, P.L. 1996. Status of rare birds in Montana with comments on known hybrids. *Northwest Naturalist* 77(3):57-85.

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Species of Concern

Species of Concern									
11 Species									
Filtered by the following criteria:									
Township = 027N020W (based on mapped Species Occurrences)									
MAMMALS (MAMMALIA)							2 SPECIES		
							TOWNSHIP = 027N020W (based on mapped Species Occurrences)		
SCIENTIFIC NAME COMMON NAME TAXA SORT	FAMILY (SCIENTIFIC) FAMILY (COMMON)	GLOBAL RANK	STATE RANK	USFWS	USFS	BLM	MNPS THREAT CATEGORY	HABITAT	
Lasiorus cinereus Hoary Bat	Vespertilionidae Bats	G3G4	S3					Riparian and forest	
Species Occurrences verified in these Counties: Beaverhead, Big Horn, Blaine, Broadwater, Carbon, Carter, Cascade, Chouteau, Custer, Daniels, Dawson, Deer Lodge, Fallon, Fergus, Flathead, Gallatin, Garfield, Glacier, Golden Valley, Granite, Hill, Jefferson, Judith Basin, Lake, Lewis and Clark, Liberty, Lincoln, Madison, McCone, Meagher, Mineral, Missoula, Musselshell, Park, Petroleum, Phillips, Pondera, Powder River, Powell, Prairie, Ravalli, Richland, Roosevelt, Rosebud, Sanders, Sheridan, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Treasure, Valley, Wheatland, Wibaux, Yellowstone									
Myotis lucifugus Little Brown Myotis	Vespertilionidae Bats	G3	S3					Generalist	
Species Occurrences verified in these Counties: Beaverhead, Big Horn, Blaine, Broadwater, Carbon, Carter, Cascade, Chouteau, Custer, Daniels, Dawson, Deer Lodge, Fallon, Fergus, Flathead, Gallatin, Garfield, Glacier, Golden Valley, Granite, Hill, Jefferson, Judith Basin, Lake, Lewis and Clark, Lincoln, Madison, McCone, Meagher, Mineral, Missoula, Musselshell, Park, Petroleum, Phillips, Pondera, Powder River, Powell, Prairie, Ravalli, Richland, Roosevelt, Rosebud, Sanders, Sheridan, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Treasure, Valley, Wheatland, Wibaux, Yellowstone									

BIRDS (AVES)										6 SPECIES
										TOWNSHIP = 027N020W (based on mapped Species Occurrences)
SCIENTIFIC NAME COMMON NAME TAXA SORT	FAMILY (SCIENTIFIC) FAMILY (COMMON)	GLOBAL RANK	STATE RANK	USFWS	USFS	BLM	MNPS THREAT CATEGORY	HABITAT		
Ardea herodias Great Blue Heron	Ardeidae Bitterns / Egrets / Herons / Night-Herons	G5	S3					Riparian forest		
Species Occurrences verified in these Counties: Beaverhead, Big Horn, Blaine, Broadwater, Carbon, Carter, Cascade, Chouteau, Custer, Dawson, Deer Lodge, Fallon, Fergus, Flathead, Gallatin, Garfield, Glacier, Golden Valley, Granite, Hill, Jefferson, Judith Basin, Lake, Lewis and Clark, Liberty, Lincoln, Madison, McCone, Meagher, Mineral, Missoula, Musselshell, Park, Petroleum, Phillips, Pondera, Powder River, Powell, Prairie, Ravalli, Richland, Roosevelt, Rosebud, Sanders, Sheridan, Silver Bow, Stillwater, Sweet Grass, Teton, Treasure, Valley, Wheatland, Wibaux, Yellowstone										
State Rank Reason: Small breeding population size, evidence of recent declines, and declining regeneration of riparian cottonwood forests due to altered hydrology and grazing.										
Certhia americana Brown Creeper	Certhiidae Creeppers	G5	S3					Moist conifer forests		
Species Occurrences verified in these Counties: Beaverhead, Broadwater, Carbon, Carter, Cascade, Chouteau, Deer Lodge, Fergus, Flathead, Gallatin, Glacier, Golden Valley, Granite, Jefferson, Judith Basin, Lake, Lewis and Clark, Lincoln, Madison, Meagher, Mineral, Missoula, Musselshell, Park, Pondera, Powder River, Powell, Ravalli, Rosebud, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Wheatland										
Coccythraustes vespertinus Evening Grosbeak	Fringillidae Finches	G5	S3					Conifer forest		
Species Occurrences verified in these Counties: Beaverhead, Broadwater, Carter, Cascade, Chouteau, Fergus, Flathead, Gallatin, Glacier, Golden Valley, Granite, Jefferson, Judith Basin, Lake, Lewis and Clark, Lincoln, Madison, Meagher, Mineral, Missoula, Musselshell, Park, Pondera, Powder River, Powell, Ravalli, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Wheatland										
State Rank Reason: Populations in Montana and across North America have experienced rangewide declines, although the causes of these declines are unclear (Bonter and Harvey 2008).										
Dryocopus pileatus Pileated Woodpecker	Picidae Woodpeckers	G5	S3					Moist conifer forests		
Species Occurrences verified in these Counties: Beaverhead, Broadwater, Cascade, Deer Lodge, Flathead, Gallatin, Glacier, Granite, Jefferson, Lake, Lewis and Clark, Lincoln, Madison, Meagher, Mineral, Missoula, Park, Powell, Ravalli, Sanders, Silver Bow										
Haemorhous cassinii Cassin's Finch	Fringillidae Finches	G5	S3					Drier conifer forest		
Species Occurrences verified in these Counties: Beaverhead, Big Horn, Broadwater, Carbon, Cascade, Chouteau, Custer, Deer Lodge, Fergus, Flathead, Gallatin, Glacier, Golden Valley, Granite, Jefferson, Judith Basin, Lake, Lewis and Clark, Lincoln, Madison, Meagher, Mineral, Missoula, Musselshell, Park, Petroleum, Phillips, Powder River, Powell, Ravalli, Rosebud, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Wheatland, Yellowstone										
Sterna hirundo Common Tern	Laridae Gulls / Terns	G5	S3B				SENSITIVE	Large rivers, lakes		
Species Occurrences verified in these Counties: Blaine, Broadwater, Cascade, Chouteau, Daniels, Flathead, Hill, Lake, McCone, Petroleum, Phillips, Roosevelt, Sheridan, Teton, Valley										
FISH (ACTINOPTERYGII)										3 SPECIES
										TOWNSHIP = 027N020W (based on mapped Species Occurrences)
SCIENTIFIC NAME COMMON NAME TAXA SORT	FAMILY (SCIENTIFIC) FAMILY (COMMON)	GLOBAL RANK	STATE RANK	USFWS	USFS	BLM	MNPS THREAT CATEGORY	HABITAT		
Oncorhynchus clarkii lewisi Westslope Cutthroat Trout	Salmonidae Trout	G4T3	S2				SENSITIVE	SENSITIVE	Mountain streams, rivers, lakes	
Species Occurrences verified in these Counties: Beaverhead, Broadwater, Cascade, Chouteau, Deer Lodge, Fergus, Flathead, Gallatin, Glacier, Granite, Jefferson, Judith Basin, Lake, Lewis and Clark, Lincoln, Madison, Meagher, Mineral, Missoula, Park, Pondera, Powell, Ravalli, Sanders, Silver Bow, Teton, Wheatland										
Prosopium coulteri Pygmy Whitefish	Salmonidae Trout	G5	S3					Deep cold lakes		
Species Occurrences verified in these Counties: Flathead, Lake, Lincoln, Missoula										
Salvelinus confluentus Bull Trout	Salmonidae Trout	G4	S2	LT			THREATENED	SPECIAL STATUS	Mountain streams, rivers, lakes	
Species Occurrences verified in these Counties: Deer Lodge, Flathead, Glacier, Granite, Lake, Lewis and Clark, Lincoln, Mineral, Missoula, Powell, Ravalli, Sanders										

Potential Species of Concern

<p>Potential Species of Concern 0 Species Filtered by the following criteria: Township = 027N020W (based on mapped Species Occurrences)</p>
--

Special Status Species

<p>Special Status Species 1 Species Filtered by the following criteria: Township = 027N020W (based on mapped Species Occurrences)</p>
--

BIRDS (AVES)										1 SPECIES
										TOWNSHIP = 027N020W (based on mapped Species Occurrences)
SCIENTIFIC NAME COMMON NAME TAXA SORT	FAMILY (SCIENTIFIC) FAMILY (COMMON)	GLOBAL RANK	STATE RANK	USFWS	USFS	BLM	MNPS THREAT CATEGORY	HABITAT		
Haliaeetus leucocephalus Bald Eagle	Accipitridae Hawks / Kites / Eagles	G5	S4	DM; BGPEPA; MBTA; BCC			SENSITIVE	SENSITIVE	Riparian forest	
Species Occurrences verified in these Counties: Beaverhead, Big Horn, Blaine, Broadwater, Carbon, Carter, Cascade, Chouteau, Custer, Dawson, Deer Lodge, Fallon, Fergus, Flathead, Gallatin, Garfield, Glacier, Golden Valley, Granite, Hill, Jefferson, Judith Basin, Lake, Lewis and Clark, Liberty, Lincoln, Madison, McCone, Meagher, Mineral, Missoula, Musselshell, Park, Petroleum, Phillips, Pondera, Powder River, Powell, Prairie, Ravalli, Richland, Roosevelt, Rosebud, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Treasure, Valley, Wheatland, Wibaux, Yellowstone										
State Rank Reason: Populations numbers have steadily increased since the 1980s and breeding pairs now occupy a high percentage of suitable habitat across the state. However the species is still protected under the Bald and Golden Eagle Protection Act of 1940.										

Additions To Statewide List

Species Removed From Statewide List

Species of Greatest Inventory Need

Citation for data on this website:
 Montana Animal Species of Concern Report. Montana Natural Heritage Program and Montana Fish, Wildlife and Parks. Retrieved on 4/4/2016, from <http://mtnhp.org/SpeciesOfConcern/?AorP=a>

Montana Natural Heritage - SOC Report

Plant Species of Concern

Species List Last Updated **06/23/2015**

3 Species of Concern

Filtered by the following criteria:

Township = 027N020W (based on mapped Species Occurrences)



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Natural Resource Information System
operated by the University of Montana.

Expand All | Collapse All

Introduction

Species of Concern

Species of Concern

3 Species

Filtered by the following criteria:

Township = 027N020W (based on mapped Species Occurrences)

FLOWERING PLANTS - MONOCOTS (LILIOPSIDA)										3 SPECIES
										TOWNSHIP = 027N020W (based on mapped Species Occurrences)
SCIENTIFIC NAME COMMON NAME TAXA SORT	FAMILY (SCIENTIFIC) FAMILY (COMMON)	GLOBAL RANK	STATE RANK	USFWS	USFS	BLM	MMNS THREAT CATEGORY	HABITAT		
Carex comosa Bristly Sedge	Cyperaceae Sedges	G5	S1S2				1	Wetland/Riparian		
Species Occurrences verified in these Counties: Flathead State Rank Reason: Only one known location in Montana on the shore of Flathead Lake. Occurrence is threatened by erosion caused by wave action and artificially high lake levels.										
Najas guadalupensis Guadalupe Water-nymph	Najadaceae Water-nymph Family	G5	S2S3					Aquatic		
Species Occurrences verified in these Counties: Carter, Cascade, Flathead, Lake, Ravalli State Rank Reason: Rare. Currently documented from a few fresh water sites in the western and central portions of the state. Species is poorly documented in Montana and additional information on population levels, trends and threats is needed.										
Wolffia columbiana Columbia Water-meal	Lemnaceae Duckweeds	G5	S2S3					Aquatic		
Species Occurrences verified in these Counties: Flathead, Lake, Missoula, Ravalli State Rank Reason: Rare. Known from several water bodies in the valleys of western Montana. Additional information on the species is needed within Montana to more precisely determine the species' conservation status.										

Potential Species of Concern

Potential Species of Concern

0 Species

Filtered by the following criteria:

Township = 027N020W (based on mapped Species Occurrences)

Special Status Species

Special Status Species

0 Species

Filtered by the following criteria:

Township = 027N020W (based on mapped Species Occurrences)

Additions To Statewide List

Species Removed From Statewide List

Citation for data on this website:
Montana Plant Species of Concern Report. Montana Natural Heritage Program. Retrieved on 4/4/2016, from <http://mtnhp.org/SpeciesOfConcern/?AorP=p>



Latitude 48.05615
 Longitude -114.06897
 48.06350 -114.07652



Montana Generalized Observations Report

Report generated 3/25/2016 7:54:53 PM

Generalized Observations for ((All Amphibians))



No Observations were found at this location with the filters selected.

Citation for this report:
 Montana Generalized Observations Report
 Generalized Observations for ((All Amphibians))
 Within Lat/Long: (48.05615, -114.06897) to (48.06350, -114.07652)
 Natural Heritage Map Viewer. Montana Natural Heritage Program.
 Retrieved on March 25, 2016, from <http://mtnhp.org/mapviewer/GenOBSReport.aspx>



Latitude 48.05615
Longitude -114.06897
48.06350 -114.07652



Montana Generalized Observations Report

Report generated 3/25/2016 7:55:36 PM

Generalized Observations for ((All Fish))



No Observations were found at this location with the filters selected.

Citation for this report:
 Montana Generalized Observations Report
 Generalized Observations for ((All Fish))
 Within Lat/Long: (48.05615, -114.06897) to (48.06350, -114.07652)
 Natural Heritage Map Viewer. Montana Natural Heritage Program.
 Retrieved on March 25, 2016, from <http://mtnhp.org/mapviewer/GenOBSReport.aspx>



Latitude 48.05615
Longitude -114.06897
48.06350 -114.07652



Montana Generalized Observations Report

Report generated 3/25/2016 7:56:40 PM

Generalized Observations for (All Invertebra)



No Observations were found at this location with the filters selected.

Citation for this report:
 Montana Generalized Observations Report
 Generalized Observations for (All Invertebra)
 Within Lat/Long: (48.05615, -114.06897) to (48.06350, -114.07652)
 Natural Heritage Map Viewer. Montana Natural Heritage Program.
 Retrieved on March 25, 2016, from <http://mtnhp.org/mapviewer/GenOBSReport.aspx>



Latitude 48.05615
 Longitude -114.06897
 48.06350 -114.07652



Montana Generalized Observations Report

Report generated 3/25/2016 7:51:15 PM

Generalized Observations for ((All Mammals))



No Observations were found at this location with the filters selected.

Citation for this report:
 Montana Generalized Observations Report
 Generalized Observations for ((All Mammals))
 Within Lat/Long: (48.05615, -114.06897) to (48.06350, -114.07652)
 Natural Heritage Map Viewer. Montana Natural Heritage Program.
 Retrieved on March 25, 2016, from <http://mtnhp.org/mapviewer/GenOBSReport.aspx>



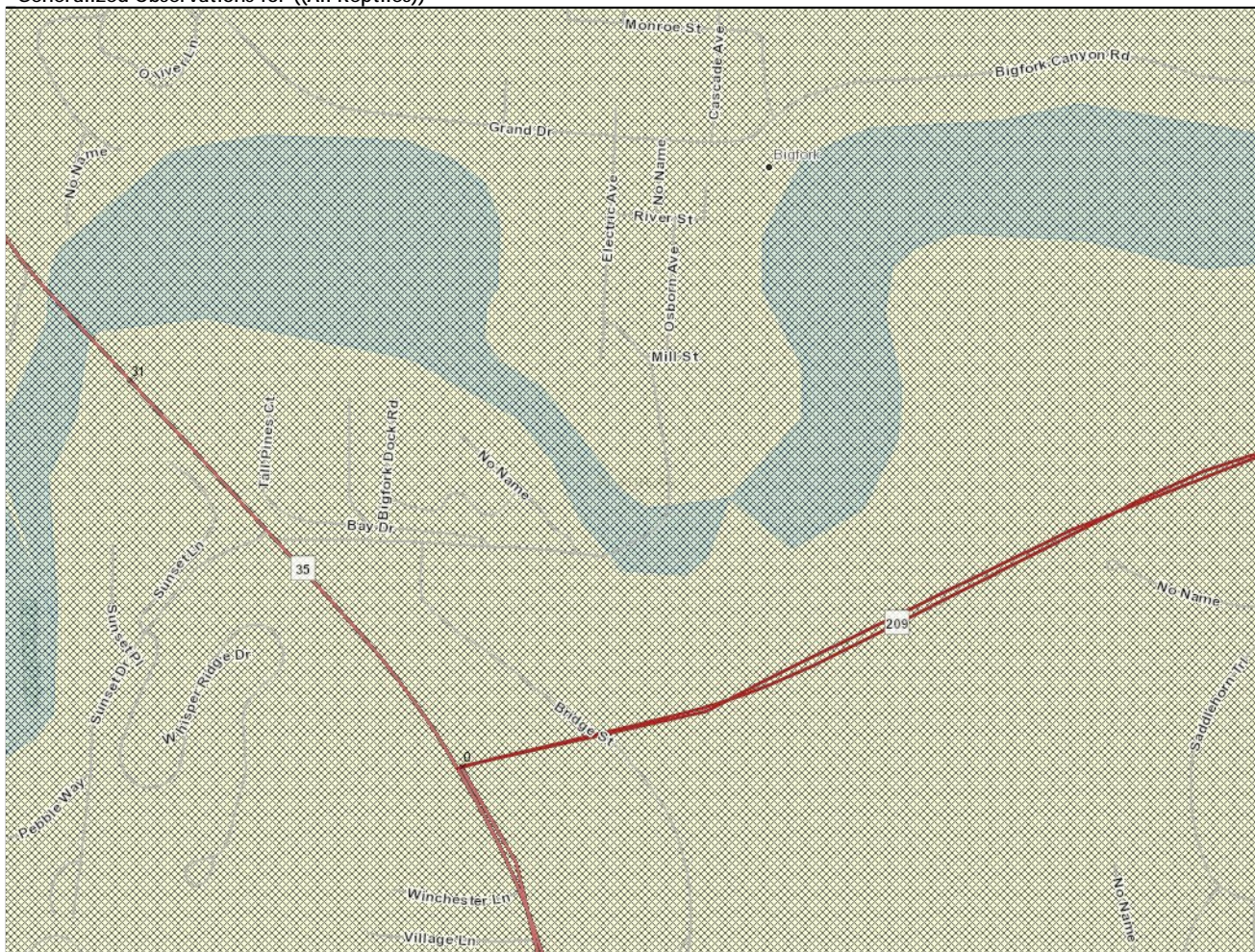
Latitude 48.05615
 Longitude -114.06897
 48.06350 -114.07652



Montana Generalized Observations Report

Report generated 3/25/2016 7:54:00 PM

Generalized Observations for ((All Reptiles))



⊕ Reptiles - Common Gartersnake (<i>Thamnophis sirtalis</i>)	Obs Count: 1	Earliest Obs: 1904	Recent Obs: 1904
⊕ Reptiles - Painted Turtle (<i>Chrysemys picta</i>)	Obs Count: 1	Earliest Obs:	Recent Obs:
⊕ Reptiles - Terrestrial Gartersnake (<i>Thamnophis elegans</i>)	Obs Count: 2	Earliest Obs: 1979	Recent Obs: 1979

Citation for this report:
 Montana Generalized Observations Report
 Generalized Observations for ((All Reptiles))
 Within Lat/Long: (48.05615, -114.06897) to (48.06350, -114.07652)
 Natural Heritage Map Viewer. Montana Natural Heritage Program.
 Retrieved on March 25, 2016, from <http://mtnhp.org/mapviewer/GenOBSReport.aspx>



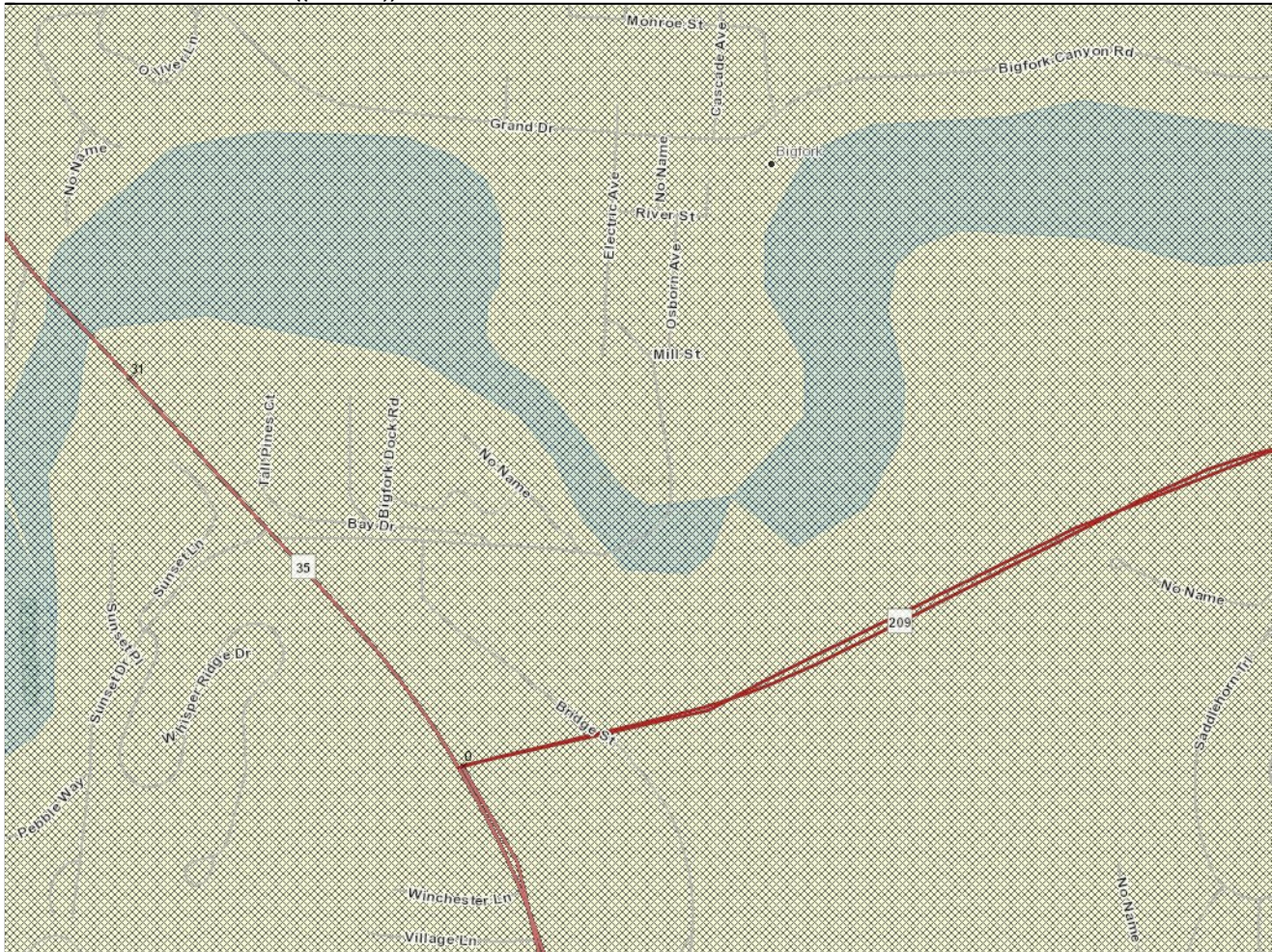
Latitude 48.05615
Longitude -114.06897
48.06350 -114.07652



Montana Generalized Observations Report

Report generated 3/25/2016 7:52:46 PM

Generalized Observations for ((All Birds))



+	Birds - American Crow (<i>Corvus brachyrhynchos</i>)	Obs Count: 2	Earliest Obs: 2001	Recent Obs: 2007
+	Birds - American Goldfinch (<i>Spinus tristis</i>)	Obs Count: 1	Earliest Obs: 2007	Recent Obs: 2007
+	Birds - American Robin (<i>Turdus migratorius</i>)	Obs Count: 1	Earliest Obs: 2007	Recent Obs: 2007
+	Birds - Bald Eagle (<i>Haliaeetus leucocephalus</i>)	Obs Count: 2	Earliest Obs: 2001	Recent Obs: 2009
+	Birds - Black-billed Magpie (<i>Pica hudsonia</i>)	Obs Count: 1	Earliest Obs: 2001	Recent Obs: 2001
+	Birds - Black-capped Chickadee (<i>Poecile atricapillus</i>)	Obs Count: 3	Earliest Obs: 2001	Recent Obs: 2009
+	Birds - Black-headed Grosbeak (<i>Pheucticus melanocephalus</i>)	Obs Count: 1	Earliest Obs: 2007	Recent Obs: 2007
+	Birds - Blue Jay (<i>Cyanocitta cristata</i>)	Obs Count: 1	Earliest Obs: 2001	Recent Obs: 2001
+	Birds - Bohemian Waxwing (<i>Bombycilla garrulus</i>)	Obs Count: 1	Earliest Obs: 2001	Recent Obs: 2001
+	Birds - Brown Creeper (<i>Certhia americana</i>)	Obs Count: 1	Earliest Obs: 2009	Recent Obs: 2009
+	Birds - Brown-headed Cowbird (<i>Molothrus ater</i>)	Obs Count: 1	Earliest Obs: 2007	Recent Obs: 2007
+	Birds - Bufflehead (<i>Bucephala albeola</i>)	Obs Count: 2	Earliest Obs: 2001	Recent Obs: 2012
+	Birds - California Gull (<i>Larus californicus</i>)	Obs Count: 1	Earliest Obs: 2009	Recent Obs: 2009
+	Birds - Calliope Hummingbird (<i>Selasphorus calliope</i>)	Obs Count: 1	Earliest Obs: 2007	Recent Obs: 2007
+	Birds - Canada Goose (<i>Branta canadensis</i>)	Obs Count: 1	Earliest Obs: 2012	Recent Obs: 2012
+	Birds - Cassin's Finch (<i>Haemorhous cassinii</i>)	Obs Count: 1	Earliest Obs: 2007	Recent Obs: 2007
+	Birds - Cassin's Vireo (<i>Vireo cassinii</i>)	Obs Count: 1	Earliest Obs: 2007	Recent Obs: 2007
+	Birds - Cedar Waxwing (<i>Bombycilla cedrorum</i>)	Obs Count: 1	Earliest Obs: 2007	Recent Obs: 2007
+	Birds - Chestnut-backed Chickadee (<i>Poecile rufescens</i>)	Obs Count: 2	Earliest Obs: 2001	Recent Obs: 2009
+	Birds - Chipping Sparrow (<i>Spizella passerina</i>)	Obs Count: 1	Earliest Obs: 2007	Recent Obs: 2007

+	Birds - Common Goldeneye (<i>Bucephala clangula</i>)	Obs Count: 2	Earliest Obs: 2001	Recent Obs: 2012
+	Birds - Common Merganser (<i>Mergus merganser</i>)	Obs Count: 2	Earliest Obs: 2001	Recent Obs: 2009
+	Birds - Common Raven (<i>Corvus corax</i>)	Obs Count: 3	Earliest Obs: 2001	Recent Obs: 2009
+	Birds - Dark-eyed Junco (<i>Junco hyemalis</i>)	Obs Count: 1	Earliest Obs: 2007	Recent Obs: 2007
+	Birds - Downy Woodpecker (<i>Picoides pubescens</i>)	Obs Count: 1	Earliest Obs: 2001	Recent Obs: 2001
+	Birds - Golden-crowned Kinglet (<i>Regulus satrapa</i>)	Obs Count: 1	Earliest Obs: 2001	Recent Obs: 2001
+	Birds - Greater Scaup (<i>Aythya marila</i>)	Obs Count: 1	Earliest Obs: 1984	Recent Obs: 1984
+	Birds - Hairy Woodpecker (<i>Picoides villosus</i>)	Obs Count: 3	Earliest Obs: 2001	Recent Obs: 2009
+	Birds - Hammond's Flycatcher (<i>Empidonax hammondii</i>)	Obs Count: 1	Earliest Obs: 2007	Recent Obs: 2007
+	Birds - Herring Gull (<i>Larus argentatus</i>)	Obs Count: 1	Earliest Obs: 2001	Recent Obs: 2001
+	Birds - Hooded Merganser (<i>Lophodytes cucullatus</i>)	Obs Count: 3	Earliest Obs: 2000	Recent Obs: 2009
+	Birds - House Finch (<i>Haemorhous mexicanus</i>)	Obs Count: 1	Earliest Obs: 2001	Recent Obs: 2001
+	Birds - Mallard (<i>Anas platyrhynchos</i>)	Obs Count: 2	Earliest Obs: 2001	Recent Obs: 2012
+	Birds - Mountain Chickadee (<i>Poecile gambeli</i>)	Obs Count: 3	Earliest Obs: 2001	Recent Obs: 2012
+	Birds - Mourning Dove (<i>Zenaidura macroura</i>)	Obs Count: 2	Earliest Obs: 2001	Recent Obs: 2007
+	Birds - Northern Flicker (<i>Colaptes auratus</i>)	Obs Count: 2	Earliest Obs: 2001	Recent Obs: 2007
+	Birds - Pileated Woodpecker (<i>Dryocopus pileatus</i>)	Obs Count: 2	Earliest Obs: 2007	Recent Obs: 2009
+	Birds - Pine Siskin (<i>Spinus pinus</i>)	Obs Count: 2	Earliest Obs: 2001	Recent Obs: 2007
+	Birds - Red-breasted Nuthatch (<i>Sitta canadensis</i>)	Obs Count: 3	Earliest Obs: 2001	Recent Obs: 2009
+	Birds - Red-tailed Hawk (<i>Buteo jamaicensis</i>)	Obs Count: 1	Earliest Obs: 2009	Recent Obs: 2009
+	Birds - Red-winged Blackbird (<i>Agelaius phoeniceus</i>)	Obs Count: 1	Earliest Obs: 2007	Recent Obs: 2007
+	Birds - Ring-billed Gull (<i>Larus delawarensis</i>)	Obs Count: 1	Earliest Obs: 2012	Recent Obs: 2012
+	Birds - Rough-legged Hawk (<i>Buteo lagopus</i>)	Obs Count: 1	Earliest Obs: 2001	Recent Obs: 2001
+	Birds - Ruby-crowned Kinglet (<i>Regulus calendula</i>)	Obs Count: 1	Earliest Obs: 2009	Recent Obs: 2009
+	Birds - Swainson's Thrush (<i>Catharus ustulatus</i>)	Obs Count: 1	Earliest Obs: 2007	Recent Obs: 2007
+	Birds - Tree Swallow (<i>Tachycineta bicolor</i>)	Obs Count: 1	Earliest Obs: 2007	Recent Obs: 2007
+	Birds - Warbling Vireo (<i>Vireo gilvus</i>)	Obs Count: 1	Earliest Obs: 2007	Recent Obs: 2007
+	Birds - Western Bluebird (<i>Sialia mexicana</i>)	Obs Count: 1	Earliest Obs: 2009	Recent Obs: 2009
+	Birds - Western Tanager (<i>Piranga ludoviciana</i>)	Obs Count: 1	Earliest Obs: 2007	Recent Obs: 2007
+	Birds - Western Wood-Pewee (<i>Contopus sordidulus</i>)	Obs Count: 1	Earliest Obs: 2007	Recent Obs: 2007
+	Birds - Wild Turkey (<i>Meleagris gallopavo</i>)	Obs Count: 3	Earliest Obs: 2001	Recent Obs: 2009

Citation for this report:
Montana Generalized Observations Report
Generalized Observations for (All Birds)
Within Lat/Long: (48.05615,-114.06897) to (48.06350,-114.07652)
Natural Heritage Map Viewer. Montana Natural Heritage Program.
Retrieved on March 25, 2016, from <http://mtnhp.org/mapviewer/GenOBSReport.aspx>

APPENDIX C
MFISH REPORT

Swan River

River Mile: 0 to 91.8**Miles:** 91.8**Total Stream Miles:** 91.8**HUC:** Swan (17010211)**Tributary To:** Flathead Lake**Regions:** Region 1**Counties:** Flathead; Lake; Missoula**Fish Distribution**[Download Data](#)

Begin Mile	End Mile	Species	Abundance	Use Type	Life History	Origin	Genetic Status	Data Rating	Data Source
41.1	47.1	Brook Stickleback	Unknown	Year-round resident	Not applicable	Native	Not Applicable	No Survey, Professional judgment	FWP
0	14.9	Brook Trout	Common	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FWP
22.9	77.8	Brook Trout	Common	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FWP
9.2	14.9	Brook X Bull Trout hybrid	Rare	Unknown	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FWP
23.4	47.4	Brook X Bull Trout hybrid	Common	Year-round resident	Resident	Not applicable	Not Applicable	Extrapolated from multiple surveys/observations	FWP
0	14.9	Bull Trout	Rare	Primarily migrating	Not applicable	Native	Hybridized and Pure populations exist in stream based on genetic analysis	Extrapolated from multiple surveys/observations	FWP
23.3	77.6	Bull Trout	Abundant	Primarily migrating	Not applicable	Native	Hybridized and Pure populations exist in stream based on genetic analysis	Extrapolated from multiple surveys/observations	FWP
82	90.7	Bull Trout	Abundant	Primarily migrating	Not applicable	Native	Hybridized and Pure populations exist in stream based on genetic analysis	Extrapolated from multiple surveys/observations	FWP
72.7	73.7	Central Mud Minnow	Unknown	Unknown	Unknown	Introduced	Not Applicable	Extrapolated from a single survey/observation	MSU
22.9	63.1	Kokanee	Rare	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FWP

63.1	77.8	Kokanee	Rare	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FWP
0	14.8	Lake Trout	Rare	Year-round resident	Not applicable	Introduced	Not Applicable	No Survey, Professional judgment	FWP
23.4	77.6	Lake Trout	Rare	Year-round resident	Unknown	Introduced	Not Applicable	No Survey, Professional judgment	FWP
0	0.6	Lake Whitefish	Incidental	Year-round resident	Not applicable	Introduced	Not Applicable	No Survey, Professional judgment	FWP
0.6	14.9	Largemouth Bass	Unknown	Year-round resident	Not applicable	Introduced	Not Applicable	No Survey, Professional judgment	FWP
0	14.9	Largescale Sucker	Common	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from multiple surveys/observations	FWP
22.9	41.1	Largescale Sucker	Common	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from multiple surveys/observations	FWP
41.1	77.8	Largescale Sucker	Common	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from multiple surveys/observations	FWP
0	41.1	Longnose Dace	Rare	Year-round resident	Not applicable	Native	Not Applicable	No Survey, Professional judgment	FWP
50.6	52.6	Longnose Dace	Rare	Year-round resident	Not applicable	Native	Not Applicable	No Survey, Professional judgment	FWP
0	14.9	Longnose Sucker	Common	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from a single survey/observation	FWP
22.9	77.8	Longnose Sucker	Common	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from a single survey/observation	FWP
0	14.9	Mountain Whitefish	Abundant	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from multiple surveys/observations	FWP
22.9	77.8	Mountain Whitefish	Abundant	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from multiple surveys/observations	FWP
0	14.9	Northern Pike	Common	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FWP
0	14.9	Northern Pike Minnow	Common	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from a single survey/observation	FWP
22.9	77.8	Northern Pike Minnow	Common	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from multiple surveys/observations	FIS
0	14.9	Peamouth	Common	Year-round resident	Not applicable	Native	Not Applicable	No Survey, Professional judgment	FWP
22.9	41.1	Peamouth	Rare	Year-round	Not	Native	Not	No Survey,	FWP

				resident	applicable		Applicable	Professional judgment	
50.6	52.6	Peamouth	Rare	Year-round resident	Adfluvial	Native	Not Applicable	No Survey, Professional judgment	FWP
0	0.6	Pygmy Whitefish	Unknown	Year-round resident	Not applicable	Native	Not Applicable	No Survey, Professional judgment	FWP
0	14.9	Rainbow Trout	Common	Both resident and Fluvial/Adfluvial populations	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FWP
22.9	77.8	Rainbow Trout	Common	Both resident and Fluvial/Adfluvial populations	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FWP
0	14.9	Redside Shiner	Common	Year-round resident	Not applicable	Native	Not Applicable	No Survey, Professional judgment	FWP
22.9	41.1	Redside Shiner	Common	Year-round resident	Not applicable	Native	Not Applicable	No Survey, Professional judgment	FWP
50.6	52.6	Redside Shiner	Common	Year-round resident	Not applicable	Native	Not Applicable	No Survey, Professional judgment	FWP
0	77.8	Sculpin	Common	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from multiple surveys/observations	FWP
38.5	40.9	Slimy Sculpin	Abundant	Year-round resident	Not applicable	Native	Not Applicable	No Survey, Professional judgment	FWP
50.6	52.6	Slimy Sculpin	Abundant	Year-round resident	Not applicable	Native	Not Applicable	No Survey, Professional judgment	FWP
47.1	47.5	Surveyed;no bull trout captured	Not Applicable	Not Applicable	Not applicable	Not applicable	Not Applicable	Extrapolated from a single survey/observation	FWP
0	77.5	Westslope Cutthroat Trout	Common	Year-round resident	Resident	Native	Potentially hybridized with records of contaminating species	Extrapolated from multiple surveys/observations	FS
77.5	83.7	Westslope Cutthroat Trout	Common	Year-round resident	Resident	Native	Hybridized and Pure populations exist in stream based on genetic analysis	Extrapolated from multiple surveys/observations	FS
83.7	91.7	Westslope Cutthroat Trout	Abundant	Year-round resident	Resident	Native	Potentially unaltered with no record of stocking	Extrapolated from multiple surveys/observations	FS

Population Surveys

[Download Data](#)

Section: BELOW DAM**River Miles: 0 to 0.1**

Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
9/23/1994	Rumsey, Scott	Largescale Sucker	4	no estimate, counts only	Total number captured or presence only	-	-	-	N/A	Snorkeling/Diver	Medium quality	FWP
9/23/1994	Rumsey, Scott	Mountain Whitefish	30	no estimate, counts only	Total number captured or presence only	-	-	-	N/A	Snorkeling/Diver	Medium quality	FWP
9/23/1994	Rumsey, Scott	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	-	10	-	in	Snorkeling/Diver	Medium quality	FWP
9/19/1994	Rumsey, Scott	Rainbow Trout	18	no estimate, counts only	Total number captured or presence only	-	-	-	N/A	Snorkeling/Diver	Medium quality	FWP

Section: BELOW POWERHOUSE**River Miles: 0 to 0.1**

Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
9/23/1994	Rumsey, Scott	Rainbow Trout	25	no estimate, counts only	Total number captured or presence only	-	-	-	N/A	Snorkeling/Diver	Medium quality	FWP
9/21/1994	Rumsey, Scott	Mountain Whitefish	0	no estimate, counts only	Total number captured or presence only	-	-	-	N/A	Snorkeling/Diver	Medium quality	FWP
9/21/1994	Rumsey, Scott	Westslope Cutthroat Trout	3	no estimate, counts only	Total number captured or presence only	-	10	-	in	Snorkeling/Diver	Medium quality	FWP

Section: Diversion Canal Removal**River Miles: 0 to 1**

Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source

9/20/1994	Rumsey, Scott	Longnose Sucker	20	per mile	Total number captured or presence only	-	-	2	in	Backpack shocking	Medium quality	FWP
9/20/1994	Rumsey, Scott	Mountain Whitefish	93	per mile	Total number captured or presence only	-	-	2.8	in	Backpack shocking	Medium quality	FWP
9/20/1994	Rumsey, Scott	Rainbow Trout	189	per mile	Total number captured or presence only	1.2	18.7	6.6	in	Backpack shocking	Medium quality	FWP
9/20/1994	Rumsey, Scott	Westslope Cutthroat Trout	28	per mile	Total number captured or presence only	2.8	12.2	9.3	in	Backpack shocking	Medium quality	FWP
9/23/1993	Rumsey, Scott	Bull Trout	1	per mile	Total number captured or presence only	-	-	12.9	in	Backpack shocking	Medium quality	FWP
9/23/1993	Rumsey, Scott	Mountain Whitefish	11	per mile	Total number captured or presence only	-	-	-	N/A	Backpack shocking	Medium quality	FWP
9/23/1993	Rumsey, Scott	Northern Pike	1	per mile	Total number captured or presence only	-	-	10	in	Backpack shocking	Medium quality	FWP
9/23/1993	Rumsey, Scott	Rainbow Trout	99	per mile	Total number captured or presence only	3	16.2	9	in	Backpack shocking	Medium quality	FWP
9/23/1993	Rumsey, Scott	Westslope Cutthroat Trout	6	per mile	Total number captured or presence only	-	13.3	11.1	in	Backpack shocking	Medium quality	FWP
9/30/1991	Rumsey, Scott	Mountain Whitefish	40	per mile	Total number captured or	5.5	10.5	7.4	in	Backpack shocking	Medium quality	FWP

					presence only							
9/30/1991	Rumsey, Scott	Rainbow Trout	124	per mile	Total number captured or presence only	2.8	18.1	8.4	in	Backpack shocking	Medium quality	FWP
9/30/1991	Rumsey, Scott	Westslope Cutthroat Trout	10	per mile	Total number captured or presence only	3.5	11.4	9.1	in	Backpack shocking	Medium quality	FWP
10/2/1990	Rumsey, Scott	Mountain Whitefish	112	per mile	Total number captured or presence only	5	10.6	6.9	in	Backpack shocking	Medium quality	FWP
10/2/1990	Rumsey, Scott	Rainbow Trout	154	per mile	Total number captured or presence only	2.5	19.3	5.4	in	Backpack shocking	Medium quality	FWP
10/2/1990	Rumsey, Scott	Westslope Cutthroat Trout	9	per mile	Total number captured or presence only	2.3	13.6	10.7	in	Backpack shocking	Medium quality	FWP
10/16/1989	Rumsey, Scott	Brook Trout	1	per mile	Total number captured or presence only	-	-	9.4	in	Backpack shocking	Medium quality	FWP
10/16/1989	Rumsey, Scott	Bull Trout	1	per mile	Total number captured or presence only	-	-	15.2	in	Backpack shocking	Medium quality	FWP
10/16/1989	Rumsey, Scott	Kokanee	2	per mile	Total number captured or presence only	10.6	11	10.8	in	Backpack shocking	Medium quality	FWP
10/16/1989	Rumsey, Scott	Mountain Whitefish	365	per mile	Total number captured or presence only	4.1	14.7	6.9	in	Backpack shocking	Medium quality	FWP
10/16/1989	Rumsey, Scott	Rainbow Trout	95	per mile	Total number	3.3	17.1	8.9	in	Backpack shocking	Medium quality	FWP

					captured or presence only							
10/16/1989	Rumsey, Scott	Westslope Cutthroat Trout	24	per mile	Total number captured or presence only	-	13.5	10.4	in	Backpack shocking	Medium quality	FWP
9/27/1988	Rumsey, Scott	Mountain Whitefish	74	per mile	Total number captured or presence only	3.4	13.2	9.6	in	Backpack shocking	Medium quality	FWP
9/27/1988	Rumsey, Scott	Rainbow Trout	48	per mile	Total number captured or presence only	2.1	14.3	7.6	in	Backpack shocking	Medium quality	FWP
9/27/1988	Rumsey, Scott	Westslope Cutthroat Trout	36	per mile	Total number captured or presence only	3.2	11	8.6	in	Backpack shocking	Medium quality	FWP

Section: T27N R19W S31

River Miles: 0.5 to 1.6

Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
10/6/2008	Chane, Ian	Largescale Sucker	65	no estimate, counts only	Total number captured or presence only	45	213	118	mm	Electrofishing	Good quality	SCP
10/6/2008	Chane, Ian	Mountain Whitefish	4	no estimate, counts only	Total number captured or presence only	272	510	344	mm	Electrofishing	Good quality	SCP
10/6/2008	Chane, Ian	Rainbow Trout	226	no estimate, counts only	Total number captured or presence only	25	510	186	mm	Electrofishing	Good quality	SCP
10/6/2008	Chane, Ian	Sculpin	6	no estimate, presence only	Total number captured or presence only	-	-	-	N/A	Electrofishing	Good quality	SCP

Section: Bigfork Hydro Power Canal**River Miles:** 1 to 1.1

Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
9/11/2007	Chane, Ian	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	-	-	-	N/A	Dip net	Low quality	SCP
9/10/2007	Chane, Ian	Largescale Sucker	91	no estimate, counts only	Total number captured or presence only	-	-	-	N/A	Backpack shocking	Low quality	SCP
9/10/2007	Chane, Ian	Mountain Whitefish	25	no estimate, counts only	Total number captured or presence only	-	-	-	N/A	Backpack shocking	Low quality	SCP
9/10/2007	Chane, Ian	Northern Pike	7	no estimate, counts only	Total number captured or presence only	-	-	-	N/A	Backpack shocking	Low quality	SCP
9/10/2007	Chane, Ian	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	-	-	-	N/A	Backpack shocking	Low quality	SCP
9/10/2007	Chane, Ian	Rainbow Trout	34	no estimate, counts only	Total number captured or presence only	-	-	-	N/A	Backpack shocking	Low quality	SCP

Section: N/A**River Miles:** 2.4 to 7.9

Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
6/30/1993	Rumsey, Scott	Brook Trout	1	no estimate, counts only	Total number captured or presence only	-	-	-	N/A	Boat shocking with boom	Medium quality	FWP
6/30/1993	Rumsey, Scott	Mountain Whitefish	225	no estimate, counts only	Total number captured or	3.1	15.2	-	in	Boat shocking with boom	Medium quality	FWP

					presence only							
6/30/1993	Rumsey, Scott	Rainbow Trout	36	no estimate, counts only	Total number captured or presence only	2.1	14	-	in	Boat shocking with boom	Medium quality	FWP
4/18/1991	Rumsey, Scott	Brook Trout	1	per 1000 ft.	Total number captured or presence only	6.5	-	-	in	Boat shocking with boom	Medium quality	FWP
4/18/1991	Rumsey, Scott	Mountain Whitefish	2	per 1000 ft.	Total number captured or presence only	4.5	12.7	-	in	Boat shocking with boom	Medium quality	FWP
4/18/1991	Rumsey, Scott	Rainbow Trout	14	per 1000 ft.	Total number captured or presence only	2.7	17.9	-	in	Boat shocking with boom	Medium quality	FWP

Section: N/A

River Miles: 6.2 to 6.3

Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
8/7/2008	USGS,	Surveyed; no fish captured	0	no estimate, counts only	Total number captured or presence only	-	-	-	N/A	Boat shocking - mobile anode	Good quality	GS

Section: Lower Swan

River Miles: 8 to 14.3

Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
9/1/1992	Rumsey, Scott	Brook Trout	82	no estimate, counts only	Peterson mark-recapture	4.6	13.7	-	in	Boat shocking with boom	Medium quality	FWP
9/1/1992	Rumsey, Scott	Bull Trout	31	no estimate, counts only	Peterson mark-recapture	4.5	19.4	-	in	Boat shocking with boom	Medium quality	FWP
9/1/1992	Rumsey, Scott	Rainbow Trout	707	per mile	Peterson mark-recapture	4	21.5	-	in	Boat shocking with boom	Medium quality	FWP
9/1/1992	Rumsey, Scott	Westslope Cutthroat Trout	25	no estimate, counts	Peterson mark-recapture	5.5	13.3	-	in	Boat shocking with boom	Medium quality	FWP

				only								
8/1/1990	Rumsey, Scott	Brook Trout	264	per mile	Peterson mark-recapture	4.5	14.4	-	in	Boat shocking with boom	Medium quality	FWP
8/1/1990	Rumsey, Scott	Bull Trout	62	no estimate, counts only	Total number captured or presence only	4.5	22.4	-	in	Boat shocking with boom	Medium quality	FWP
8/1/1990	Rumsey, Scott	Mountain Whitefish	1,436	per mile	Peterson mark-recapture	5	18.4	-	in	Boat shocking with boom	Medium quality	FWP
8/1/1990	Rumsey, Scott	Rainbow Trout	564	per mile	Peterson mark-recapture	4	21.9	-	in	Boat shocking with boom	Medium quality	FWP
8/1/1990	Rumsey, Scott	Westslope Cutthroat Trout	34	no estimate, counts only	Total number captured or presence only	6.5	17.9	-	in	Boat shocking with boom	Medium quality	FWP

**Section: Middle Swan
River Miles: 23.9 to 27.6**

Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
8/1/1995	Rumsey, Scott	Rainbow Trout	818	per mile	Peterson mark-recapture	3.5	17.4	-	in	Boat shocking with boom	Medium quality	FWP
8/1/1991	Rumsey, Scott	Brook Trout	364	per mile	Peterson mark-recapture	3	14.4	-	in	Boat shocking with boom	Medium quality	FWP
8/1/1991	Rumsey, Scott	Bull Trout	32	no estimate, counts only	Total number captured or presence only	2.8	11.4	-	in	Boat shocking with boom	Medium quality	FWP
8/1/1991	Rumsey, Scott	Mountain Whitefish	1,098	per mile	Peterson mark-recapture	3.5	17.4	-	in	Boat shocking with boom	Medium quality	FWP
8/1/1991	Rumsey, Scott	Rainbow Trout	1,045	per mile	Peterson mark-recapture	4	19.9	-	in	Boat shocking with boom	Medium quality	FWP
8/1/1991	Rumsey, Scott	Westslope Cutthroat Trout	64	no estimate, counts only	Total number captured or presence only	6.5	10.9	-	in	Boat shocking with boom	Medium quality	FWP
9/1/1989	Rumsey, Scott	Brook Trout	30	no estimate, counts only	Total number captured or presence only	4.5	11.4	-	in	Boat shocking with boom	Medium quality	FWP

					only							
9/1/1989	Rumsey, Scott	Bull Trout	17	no estimate, counts only	Total number captured or presence only	4.5	18.4	-	in	Boat shocking with boom	Medium quality	FWP
9/1/1989	Rumsey, Scott	Kokanee	1	no estimate, counts only	Total number captured or presence only	-	-	-	N/A	Boat shocking with boom	Medium quality	FWP
9/1/1989	Rumsey, Scott	Rainbow Trout	422	per mile	Peterson mark-recapture	4	20.5	-	in	Boat shocking with boom	Medium quality	FWP
9/1/1989	Rumsey, Scott	Westslope Cutthroat Trout	13	no estimate, counts only	Total number captured or presence only	7.5	13.4	-	in	Boat shocking with boom	Medium quality	FWP
10/1/1982	Rumsey, Scott	Brook Trout	248	per mile	Peterson mark-recapture	2	11.4	-	in	Boat shocking with boom	Medium quality	FWP
10/1/1982	Rumsey, Scott	Bull Trout	28	no estimate, counts only	Total number captured or presence only	3.2	23.2	-	in	Boat shocking with boom	Medium quality	FWP
10/1/1982	Rumsey, Scott	Mountain Whitefish	189	no estimate, counts only	Total number captured or presence only	3.2	18.9	-	in	Boat shocking with boom	Medium quality	FWP
10/1/1982	Rumsey, Scott	Rainbow Trout	300	per mile	Peterson mark-recapture	2.4	20.1	-	in	Boat shocking with boom	Medium quality	FWP

Section: N/A
River Miles: 24.8 to 24.9

Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
8/5/2008	USGS,	Surveyed; no fish captured	0	no estimate, counts only	Total number captured or presence only	-	-	-	N/A	Boat shocking - mobile anode	Good quality	GS

Section: GOAT TO PIPER
River Miles: 30 to 30.1

Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source

8/15/1995	Rumsey, Scott	Mountain Whitefish	60	no estimate, counts only	Total number captured or presence only	2	8.3	-	in	Boat shocking with boom	Medium quality	FWP
8/15/1995	Rumsey, Scott	Rainbow Trout	60	no estimate, counts only	Total number captured or presence only	2.1	6.4	-	in	Boat shocking with boom	Medium quality	FWP
8/15/1995	Rumsey, Scott	Sculpin	55	no estimate, counts only	Total number captured or presence only	1.8	4.9	-	in	Boat shocking with boom	Medium quality	FWP
8/15/1995	Rumsey, Scott	Surveyed;no bull trout captured	0	no estimate, counts only	Total number captured or presence only	2.1	6.4	-	in	Boat shocking with boom	Medium quality	FWP

Section: Point Pleasant to Fatty
River Miles: 35.6 to 41.8

Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
7/26/2001	Rumsey, Scott	Brook Trout	0.3	per km	Catch per unit effort	156	256	195	mm	Electrofishing	Good quality	FWP
7/26/2001	Rumsey, Scott	Brook X Bull Trout hybrid	1	no estimate, counts only	Total number captured or presence only	-	-	270	mm	Electrofishing	Good quality	FWP
7/26/2001	Rumsey, Scott	Bull Trout	1	no estimate, counts only	Total number captured or presence only	-	-	128	mm	Electrofishing	Good quality	FWP
7/26/2001	Rumsey, Scott	Mountain Whitefish	297	no estimate, counts only	Total number captured or presence only	114	406	255	mm	Electrofishing	Good quality	FWP
7/26/2001	Rumsey, Scott	Rainbow Trout	8.6	per km	Catch per unit effort	94	484	282	mm	Electrofishing	Good quality	FWP
7/26/2001	Rumsey, Scott	Rainbow X Cutthroat Trout	1	no estimate, counts only	Total number captured or	-	-	405	mm	Electrofishing	Good quality	FWP

					presence only							
7/26/2001	Rumsey, Scott	Sculpin	2	no estimate, counts only	Total number captured or presence only	70	83	76.5	mm	Electrofishing	Good quality	FWP
7/26/2001	Rumsey, Scott	Westslope Cutthroat Trout	0	per km	Catch per unit effort	162	362	278	mm	Electrofishing	Good quality	FWP
7/27/1999	Rumsey, Scott	Brook Trout	0.8	per km	Catch per unit effort	170	180	175	mm	Electrofishing	Good quality	FWP
7/27/1999	Rumsey, Scott	Rainbow Trout	5.9	per km	Catch per unit effort	109	462	213	mm	Electrofishing	Good quality	FWP
7/27/1999	Rumsey, Scott	Westslope Cutthroat Trout	0.3	per km	Catch per unit effort	198	323	254	mm	Electrofishing	Good quality	FWP
7/26/1996	Rumsey, Scott	Brook Trout	1.1	per km	Catch per unit effort	145	262	196	mm	Electrofishing	Good quality	FWP
7/26/1996	Rumsey, Scott	Rainbow Trout	6.7	per km	Catch per unit effort	99	447	191	mm	Electrofishing	Good quality	FWP
7/26/1996	Rumsey, Scott	Westslope Cutthroat Trout	0.1	per km	Catch per unit effort	-	-	292	mm	Electrofishing	Good quality	FWP
8/11/1992	Rumsey, Scott	Brook Trout	2.6	per km	Catch per unit effort	155	348	234	mm	Electrofishing	Good quality	FWP
8/11/1992	Rumsey, Scott	Rainbow Trout	13.5	per km	Catch per unit effort	64	513	257	mm	Electrofishing	Good quality	FWP
8/11/1992	Rumsey, Scott	Westslope Cutthroat Trout	0.6	per km	Catch per unit effort	221	295	257	mm	Electrofishing	Good quality	FWP
8/6/1990	Rumsey, Scott	Brook Trout	1.3	per km	Catch per unit effort	104	302	198	mm	Electrofishing	Good quality	FWP
8/6/1990	Rumsey, Scott	Rainbow Trout	6.5	per km	Catch per unit effort	114	478	267	mm	Electrofishing	Good quality	FWP
8/6/1990	Rumsey, Scott	Westslope Cutthroat Trout	0.2	per km	Catch per unit effort	175	358	267	mm	Electrofishing	Good quality	FWP

Section: Fatty bridge to Piper bridge
River Miles: 41.8 to 48.3

Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
7/26/2004	Rumsey, Scott	Brook Trout	11	no estimate, counts	Total number captured	133	280	213.7	mm	Electrofishing	Good quality	FWP

				only	or presence only							
7/26/2004	Rumsey, Scott	Brook X Bull Trout hybrid	14	no estimate, counts only	Total number captured or presence only	201	580	333.9	mm	Electrofishing	Good quality	FWP
7/26/2004	Rumsey, Scott	Bull Trout	7	no estimate, counts only	Total number captured or presence only	161	585	305.6	mm	Electrofishing	Good quality	FWP
7/26/2004	Rumsey, Scott	Mountain Whitefish	308	no estimate, counts only	Total number captured or presence only	75	308	237	mm	Electrofishing	Good quality	FWP
7/26/2004	Rumsey, Scott	Rainbow Trout	61	no estimate, counts only	Total number captured or presence only	126	478	190.1	mm	Electrofishing	Good quality	FWP
7/26/2004	Rumsey, Scott	Westslope Cutthroat Trout	11	no estimate, counts only	Total number captured or presence only	175	295	224	mm	Electrofishing	Good quality	FWP
7/15/2003	Rumsey, Scott	Brook Trout	0.2	per 1000 ft.	Catch per unit effort	138	328	241	mm	Electrofishing	Good quality	FWP
7/15/2003	Rumsey, Scott	Brook X Bull Trout hybrid	0.1	per 1000 ft.	Catch per unit effort	288	540	465	mm	Electrofishing	Good quality	FWP
7/15/2003	Rumsey, Scott	Bull Trout	0.4	per 1000 ft.	Catch per unit effort	128	634	240	mm	Electrofishing	Good quality	FWP
7/15/2003	Rumsey, Scott	Kokanee	0.2	per 1000 ft.	Catch per unit effort	155	264	191	mm	Electrofishing	Good quality	FWP
7/15/2003	Rumsey, Scott	Largescale Sucker	0	per 1000 ft.	Catch per unit effort	502	530	516	mm	Electrofishing	Good quality	FWP
7/15/2003	Rumsey, Scott	Mountain Whitefish	8.4	per 1000 ft.	Catch per unit effort	122	590	253	mm	Electrofishing	Good quality	FWP
7/15/2003	Rumsey, Scott	Northern Pike Minnow	0	per 1000 ft.	Catch per unit effort	-	-	440	mm	Electrofishing	Good quality	FWP
7/15/2003	Rumsey, Scott	Rainbow Trout	1.5	per 1000 ft.	Catch per unit effort	13	486	192	mm	Electrofishing	Good quality	FWP

7/15/2003	Rumsey, Scott	Sculpin	0.3	per 1000 ft.	Catch per unit effort	77	118	120	mm	Electrofishing	Good quality	FWP
7/15/2003	Rumsey, Scott	Westslope Cutthroat Trout	0.3	per 1000 ft.	Catch per unit effort	168	366	227	mm	Electrofishing	Good quality	FWP
7/17/2002	Rumsey, Scott	Brook Trout	0.2	per 1000 ft.	Catch per unit effort	143	271	204	mm	Electrofishing	Good quality	FWP
7/17/2002	Rumsey, Scott	Brook X Bull Trout hybrid	0.1	per 1000 ft.	Catch per unit effort	270	582	437	mm	Electrofishing	Good quality	FWP
7/17/2002	Rumsey, Scott	Bull Trout	0.1	per 1000 ft.	Catch per unit effort	125	750	406	mm	Electrofishing	Good quality	FWP
7/17/2002	Rumsey, Scott	Kokanee	0.1	per 1000 ft.	Catch per unit effort	165	265	191	mm	Electrofishing	Good quality	FWP
7/17/2002	Rumsey, Scott	Largescale Sucker	0	per 1000 ft.	Catch per unit effort	-	-	504	mm	Electrofishing	Good quality	FWP
7/17/2002	Rumsey, Scott	Longnose Sucker	0	per 1000 ft.	Catch per unit effort	-	-	486	mm	Electrofishing	Good quality	FWP
7/17/2002	Rumsey, Scott	Mountain Whitefish	4.2	per 1000 ft.	Catch per unit effort	105	408	261	mm	Electrofishing	Good quality	FWP
7/17/2002	Rumsey, Scott	Rainbow Trout	0.6	per 1000 ft.	Catch per unit effort	98	442	216	mm	Electrofishing	Good quality	FWP
7/17/2002	Rumsey, Scott	Sculpin	0	per 1000 ft.	Catch per unit effort	-	-	192	mm	Electrofishing	Good quality	FWP
7/17/2002	Rumsey, Scott	Westslope Cutthroat Trout	0.2	per 1000 ft.	Catch per unit effort	177	427	251	mm	Electrofishing	Good quality	FWP

Section: Piper to Fatty
River Miles: 41.9 to 48.6

Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
8/11/2011	Rosenthal, Leo	Brook Trout	7	no estimate, counts only	Total number captured or presence only	184	309	228.3	mm	Boat shocking with boom	Good quality	FIS
8/11/2011	Rosenthal, Leo	Brook X Bull Trout hybrid	2	no estimate, counts only	Total number captured or presence only	280	398	339	mm	Boat shocking with boom	Good quality	FIS
8/11/2011	Rosenthal, Leo	Bull Trout	7	no estimate,	Total number	181	380	287.7	mm	Boat shocking with boom	Good quality	FIS

				counts only	captured or presence only								
8/11/2011	Rosenthal, Leo	Kokanee	1	no estimate, counts only	Total number captured or presence only	226	226	226	mm	Boat shocking with boom	Good quality	FIS	
8/11/2011	Rosenthal, Leo	Mountain Whitefish	115	no estimate, counts only	Total number captured or presence only	132	380	208	mm	Boat shocking with boom	Good quality	FIS	
8/11/2011	Rosenthal, Leo	Rainbow Trout	21	no estimate, counts only	Total number captured or presence only	128	483	180.4	mm	Boat shocking with boom	Good quality	FIS	
8/11/2011	Rosenthal, Leo	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	219	225	222	mm	Boat shocking with boom	Good quality	FIS	
8/10/2011	Rosenthal, Leo	Brook Trout	8	no estimate, counts only	Total number captured or presence only	152	310	222.9	mm	Boat shocking with boom	Good quality	FIS	
8/10/2011	Rosenthal, Leo	Brook X Bull Trout hybrid	3	no estimate, counts only	Total number captured or presence only	276	396	324.3	mm	Boat shocking with boom	Good quality	FIS	
8/10/2011	Rosenthal, Leo	Bull Trout	1	no estimate, counts only	Total number captured or presence only	174	174	174	mm	Boat shocking with boom	Good quality	FIS	
8/10/2011	Rosenthal, Leo	Kokanee	1	no estimate, counts only	Total number captured or presence only	229	229	229	mm	Boat shocking with boom	Good quality	FIS	
8/10/2011	Rosenthal, Leo	Mountain Whitefish	120	no estimate, counts only	Total number captured or presence only	124	370	227.6	mm	Boat shocking with boom	Good quality	FIS	

8/10/2011	Rosenthal, Leo	Rainbow Trout	16	no estimate, counts only	Total number captured or presence only	112	432	206.3	mm	Boat shocking with boom	Good quality	FIS
8/10/2011	Rosenthal, Leo	Westslope Cutthroat Trout	4	no estimate, counts only	Total number captured or presence only	147	229	199	mm	Boat shocking with boom	Good quality	FIS
7/23/2009	Rosenthal, Leo	Brook X Bull Trout hybrid	1	no estimate, counts only	Total number captured or presence only	450	450	450	mm	Boat shocking with boom	Good quality	FIS
7/23/2009	Rosenthal, Leo	Bull Trout	3	no estimate, counts only	Total number captured or presence only	125	189	158.7	mm	Boat shocking with boom	Good quality	FIS
7/23/2009	Rosenthal, Leo	Mountain Whitefish	55	no estimate, counts only	Total number captured or presence only	141	329	226.9	mm	Boat shocking with boom	Good quality	FIS
7/23/2009	Rosenthal, Leo	Rainbow Trout	12	no estimate, counts only	Total number captured or presence only	116	230	165.3	mm	Boat shocking with boom	Good quality	FIS
8/1/2008	Rosenthal, Leo	Brook Trout	6	no estimate, counts only	Total number captured or presence only	158	362	249.5	mm	Boat shocking with boom	Good quality	FIS
8/1/2008	Rosenthal, Leo	Brook X Bull Trout hybrid	1	no estimate, counts only	Total number captured or presence only	245	245	245	mm	Boat shocking with boom	Good quality	FIS
8/1/2008	Rosenthal, Leo	Bull Trout	1	no estimate, counts only	Total number captured or presence only	169	169	169	mm	Boat shocking with boom	Good quality	FIS
8/1/2008	Rosenthal, Leo	Rainbow Trout	14	no estimate, counts only	Total number captured or	106	268	161.4	mm	Boat shocking with boom	Good quality	FIS

					presence only							
8/1/2008	Rosenthal, Leo	Westslope Cutthroat Trout	4	no estimate, counts only	Total number captured or presence only	202	372	252.8	mm	Boat shocking with boom	Good quality	FIS
7/31/2008	Rosenthal, Leo	Brook Trout	5	no estimate, counts only	Total number captured or presence only	185	262	234.2	mm	Boat shocking with boom	Good quality	FIS
7/31/2008	Rosenthal, Leo	Brook X Bull Trout hybrid	2	no estimate, counts only	Total number captured or presence only	210	394	302	mm	Boat shocking with boom	Good quality	FIS
7/31/2008	Rosenthal, Leo	Bull Trout	1	no estimate, counts only	Total number captured or presence only	410	410	410	mm	Boat shocking with boom	Good quality	FIS
7/31/2008	Rosenthal, Leo	Rainbow Trout	26	no estimate, counts only	Total number captured or presence only	104	417	183.9	mm	Boat shocking with boom	Good quality	FIS
7/26/2006	Rosenthal, Leo	Brook Trout	25	no estimate, counts only	Total number captured or presence only	129	431	212.1	mm	Boat shocking with boom	Good quality	FIS
7/26/2006	Rosenthal, Leo	Brook X Bull Trout hybrid	5	no estimate, counts only	Total number captured or presence only	202	420	309.4	mm	Boat shocking with boom	Good quality	FIS
7/26/2006	Rosenthal, Leo	Bull Trout	8	no estimate, counts only	Total number captured or presence only	124	230	176.8	mm	Boat shocking with boom	Good quality	FIS
7/26/2006	Rosenthal, Leo	Mountain Whitefish	311	no estimate, counts only	Total number captured or presence only	67	387	231.5	mm	Boat shocking with boom	Good quality	FIS
7/26/2006	Rosenthal, Leo	Northern Pike	1	no estimate,	Total number	255	255	255	mm	Boat shocking with boom	Good quality	FIS

		Minnow		counts only	captured or presence only							
7/26/2006	Rosenthal, Leo	Rainbow Trout	98	no estimate, counts only	Total number captured or presence only	103	445	186.2	mm	Boat shocking with boom	Good quality	FIS
7/26/2006	Rosenthal, Leo	Sculpin	5	no estimate, counts only	Total number captured or presence only	71	106	91.8	mm	Boat shocking with boom	Good quality	FIS
7/26/2006	Rosenthal, Leo	Westslope Cutthroat Trout	5	no estimate, counts only	Total number captured or presence only	178	355	277.4	mm	Boat shocking with boom	Good quality	FIS
7/26/2006	Rosenthal, Leo	Westslope X Rainbow	8	no estimate, counts only	Total number captured or presence only	142	512	246.4	mm	Boat shocking with boom	Good quality	FIS
7/25/2006	Rosenthal, Leo	Brook Trout	7	no estimate, counts only	Total number captured or presence only	216	339	258.3	mm	Boat shocking with boom	Good quality	FIS
7/25/2006	Rosenthal, Leo	Brook X Bull Trout hybrid	7	no estimate, counts only	Total number captured or presence only	198	641	364	mm	Boat shocking with boom	Good quality	FIS
7/25/2006	Rosenthal, Leo	Bull Trout	6	no estimate, counts only	Total number captured or presence only	221	304	256.7	mm	Boat shocking with boom	Good quality	FIS
7/25/2006	Rosenthal, Leo	Mountain Whitefish	300	no estimate, counts only	Total number captured or presence only	34	353	233.3	mm	Boat shocking with boom	Good quality	FIS
7/25/2006	Rosenthal, Leo	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	444	444	444	mm	Boat shocking with boom	Good quality	FIS

7/25/2006	Rosenthal, Leo	Rainbow Trout	48	no estimate, counts only	Total number captured or presence only	118	484	200.8	mm	Boat shocking with boom	Good quality	FIS
7/25/2006	Rosenthal, Leo	Sculpin	2	no estimate, counts only	Total number captured or presence only	97	105	101	mm	Boat shocking with boom	Good quality	FIS
7/25/2006	Rosenthal, Leo	Westslope Cutthroat Trout	3	no estimate, counts only	Total number captured or presence only	201	217	209	mm	Boat shocking with boom	Good quality	FIS
7/25/2006	Rosenthal, Leo	Westslope X Rainbow	4	no estimate, counts only	Total number captured or presence only	171	223	195	mm	Boat shocking with boom	Good quality	FIS

Section: Upper (Cygnet)
River Miles: 45 to 45.2

Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
10/1/1982	Rumsey, Scott	Brook Trout	306	per mile	Peterson mark-recapture	2.8	11.4	-	in	Bank shocking	Medium quality	FWP
10/1/1982	Rumsey, Scott	Rainbow Trout	348	per mile	Peterson mark-recapture	2.4	9.5	-	in	Bank shocking	Medium quality	FWP

Section: Mussel Survey
River Miles: 48.6 to 48.7

Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
7/12/2007	Stagliano, David	Surveyed;no mussels found	0	no estimate, presence only	Catch per unit effort	-	-	-	N/A	Visual Observation	Medium quality	NHP

Section: Mussel Survey
River Miles: 52.4 to 52.5

Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
7/12/2007	Stagliano, David	Surveyed;no mussels found	0	no estimate, presence only	Catch per unit effort	-	-	-	N/A	Visual Observation	Medium quality	NHP

Section: Mussel Survey												
River Miles: 57.2 to 57.3												
Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
7/11/2007	Stagliano, David	Surveyed;no mussels found	0	no estimate, presence only	Catch per unit effort	-	-	-	N/A	Visual Observation	Medium quality	NHP
Section: Mussel Survey												
River Miles: 63 to 63.1												
Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
7/11/2007	Stagliano, David	Surveyed;no mussels found	0	no estimate, presence only	Catch per unit effort	-	-	-	N/A	Visual Observation	Medium quality	NHP
Section: Mussel Survey												
River Miles: 69.2 to 69.3												
Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
7/11/2007	Stagliano, David	Surveyed;no mussels found	0	no estimate, presence only	Catch per unit effort	-	-	-	N/A	Visual Observation	Medium quality	NHP
Section: N/A												
River Miles: 73.1 to 73.2												
Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
8/15/1996	MSU Vertebrate Collection,	Central Mud Minnow	2	no estimate, counts only	Total number captured or presence only	-	-	-	N/A	Unknown	Unknown	MSU
Section: Mussel Survey												
River Miles: 73.1 to 73.2												
Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
7/11/2007	Stagliano, David	Surveyed;no mussels found	0	no estimate, presence only	Catch per unit effort	-	-	-	N/A	Visual Observation	Medium quality	NHP
Section: Mussel Survey												
River Miles: 77.5 to 77.6												
Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
9/17/2009	Gardner,	Surveyed;no	0	no	Catch per	-	-	-	N/A	Visual	Medium	FS

	Beth	mussels found	estimate, presence only	unit effort						Observation	quality	
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Section: Mussel Survey
River Miles: 82.4 to 82.5

Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
7/11/2007	Stagliano, David	Surveyed;no mussels found	0	no estimate, presence only	Catch per unit effort	-	-	-	N/A	Visual Observation	Medium quality	NHP

Section: N/A
River Miles: 84.2 to 84.3

Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
9/29/2011	Stephens, Andrea	Westslope Cutthroat Trout	26	no estimate, counts only	Total number captured or presence only	40	190	94	mm	Backpack shocking	Medium quality	SCP

Section: N/A
River Miles: 84.3 to 84.4

Date	Collector	Species	Est.	Sec. Unit	Method	Length				Gear	Data	
						Min	Max	Avg.	Unit		Rating	Source
9/29/2011	Stephens, Andrea	Westslope Cutthroat Trout	11	no estimate, counts only	Total number captured or presence only	60	180	117	mm	Backpack shocking	Medium quality	SCP

Genetic Samples

[Download Data](#)

Date: 12/30/1997			
Sample #: 1259			
Collector: Rumsey, Scott		Target Species: Bull Trout	
River Miles: 11.9 to 12		# of Fish: 1	
Analysis Type: Allozymes		Comments:	
Analyzer: Kanda, Naohisa			
Species Name	Percent	Count	Hybrid
Brook X Bull Trout hybrid	-	1	F1
Date: 12/4/1991			
Sample #: 1612			
Collector: Dotson, Thurston		Target Species: Kokanee	
River Miles: 0 to 0.1		# of Fish: 50	
Analysis Type: Allozymes		Comments:	
Analyzer: Sage, Kevin			
Species Name	Percent	Count	Hybrid
Kokanee	100	-	-

Fish Stocking

No Data Found

Habitat Measurements[Download Data](#)

Section: Point Pleasant to Fatty					
River Miles: 35.6 to 41.8					
Date	Time	Collector	Parameter	Value	Unit
7/26/2001		Rumsey, Scott	Water Temp	59	Deg F
7/26/2001		Rumsey, Scott	Water Temp	57	Deg F
7/25/2001		Rumsey, Scott	Water Temp	55	Deg F
7/27/1999		Rumsey, Scott	Water Temp	60	Deg F
7/26/1996		Rumsey, Scott	Water Temp	60	Deg F
8/11/1992		Rumsey, Scott	Water Temp	56	Deg F
8/6/1990		Rumsey, Scott	Water Temp	64	Deg F
Section: Fatty bridge to Piper bridge					
River Miles: 41.8 to 48.3					
Date	Time	Collector	Parameter	Value	Unit
7/26/2004		Rumsey, Scott	Water Temp	64	Deg F
7/26/2004		Rumsey, Scott	Water Temp	57	Deg F
7/15/2003		Rumsey, Scott	Water Temp	60	Deg F
7/15/2003		Rumsey, Scott	Water Temp	55	Deg F
7/14/2003		Rumsey, Scott	Water Temp	56	Deg F
7/16/2002		Rumsey, Scott	Water Temp	56	Deg F
7/15/2002		Rumsey, Scott	Water Temp	60	Deg F
7/15/2002		Rumsey, Scott	Water Temp	64	Deg F

Bull Trout Core Areas

Begin Mile	End Mile
30.0530	30.2640
60.69	61.0390
77.6240	91.80

Bull Trout Node Areas

Begin Mile	End Mile
23.29	77.81

Angling Days Per Year[Download Data](#)

River Miles: 0 to 14.7								
Year	Total		Resident		Non Resident		Ranking	
	Days Fished(+S.D.)	Trips	Days Fished(+S.D.)	Trips	Days Fished(+S.D.)	Trips	State	Region
2009	6,329 (+- 1,331)	109	4,928 (+- 1,275)	86	1,401 (+- 385)	23	111	22
2007	7,360 (+- 2,193)	104	4,849 (+- 2,053)	72	2,511 (+- 771)	32	74	13
2005	5,988 (+- 926)	116	4,206 (+- 836)	88	1,782 (+- 398)	28	101	20
River Miles: 22.9 to 90.7								
Year	Total		Resident		Non Resident		Ranking	
	Days Fished(+S.D.)	Trips	Days Fished(+S.D.)	Trips	Days Fished(+S.D.)	Trips	State	Region
2009	2,169 (+- 648)	35	1,131 (+- 387)	22	1,038 (+- 520)	13	195	43
2007	2,477 (+- 1,170)	34	973 (+- 376)	17	1,504 (+- 1,108)	17	142	28

2005	2,518 (+- 868)	39	783 (+- 298)	16	1,735 (+- 816)	23	162	34
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Fisheries Resource Value[Download Data](#)

Begin Mile	End Mile	Sport Class	Habitat Class	Final Rating
0	0.6	3	3	Substantial (3)
0.6	7.3	4	3	Substantial (3)
7.3	14.6	3	3	Substantial (3)
22.9	61.5	2	1	Outstanding (1)
61.5	77.8	3	1	Outstanding (1)
82.2	90.7	3	1	Outstanding (1)

Dewatered Concern Areas

No Data Found

FWP Instream Flow Protection/Quantification

No Data Found

FWP Water Leases

No Data Found

Protected Areas[Download Data](#)

River Miles: 22.9 to 23.3		
Protection Type	Reason (fish)	Reason (wildlife)
NWPPC Wildlife Protected Area	no data	<ul style="list-style-type: none"> Bald eagle nesting territory (within 2.5 mi. Of reach) High density nesting osprey populations Bald eagle winter concentration area (high density) Great blue heron rookeries present
River Miles: 23.3 to 23.9		
Protection Type	Reason (fish)	Reason (wildlife)
NWPPC Wildlife Protected Area	no data	<ul style="list-style-type: none"> High density nesting osprey populations Great blue heron rookeries present
River Miles: 23.9 to 27.3		
Protection Type	Reason (fish)	Reason (wildlife)
NWPPC Wildlife Protected Area	no data	<ul style="list-style-type: none"> High density nesting osprey populations Great blue heron rookeries present

Special Fishing Regulations[Download Data](#)

Section: entire river	
Regulation:	
	Closed to angling June 1 through September 30 within a 150-yard radius of the Woodward Creek and Lion Creek stream mouths, unless posted at a greater distance.
	Walleye: All walleye caught must be killed immediately, kept and the entire fish turned in to FWP. Anglers must report the walleye harvest within 24 hours of capture by calling the Kalispell FWP Headquarters Office (406-752-5501). The whole fish must be turned in to any FWP Office within 10 days and during regular business hours.
Section: Piper Creek Bridge downstream to Swan Lake	
Regulation:	
	Artificial lures only.
	Catch-and-release for Cutthroat Trout and Rainbow Trout.

Section: Swan Lake outlet downstream to the Highway 35 Bridge	
Regulation:	
	Open entire year.
	Catch-and-release for Cutthroat Trout.

Stream Restoration Projects

No Data Found

FWP Management

Begin Mile	End Mile	Region	District	Water Type
0	91.8	1	Western	Trout Water

Fishing Logs[Download Data](#)

Quarters based on calendar year (example: qtr 1 is Jan - Mar)					
Year	Quarter	Log Number	Species	# Caught	Hours
2015	4	5841	Bull Trout	1	2
2015	4	5841	Rainbow Trout	3	2
2015	3	5	Rainbow Trout	7	1
2015	3	5841	Rainbow Trout	8	6
2015	3	5841	Surveyed; no fish captured	0	1
2015	3	6577	Rainbow Trout	2	2.50
2015	2	6888	Surveyed; no fish captured	0	1.50

References[Download Data](#)

Author	Title	Year	Publisher	Repository ID
Beattie, Will, And Pat Clancey	Effect Of The Operation Of Kerr And Hungry Horse Dams On The Reproductive Success Of Kokanee In The Flathead System; March 1987,annual Progress Report Fy 1986	1987	Bonneville Power Administration	
Beattie, Will, Pat Clancey, And Ray Zubik	Effect Of Operation Of The Kerr And Hungry Horse Dams On The Reproductive Success Of Kokanee In The Flathead System; May 1988,final Report Fy 1987	1988	Bonneville Power Administration	
Boland, Ralph W.	Ia, Stream Habitat Evaluation, July 1, 1986 Through June 30, 1987; July 1987,statewide Fish Habitat Investigation	1987	Montana Department of Fish, Wildlife, and Parks	
Boland, Ralph W.	Ia, Stream Habitat Evaluation, July 1, 1984 To June 30, 1985; September, 1985,statewide Fish Habitat Investigation	1985	Montana Department of Fish, Wildlife, and Parks	
Chane, Ian	Report of fish taken under Scientific Collector Permit SCP-02-08	2008		36773
Chane, Ian	Report of fish taken under Scientific Collector Permit SCP-04-07	2007		33527
Clancey, Pat, And Dan Downing	Madison River / Ennis Reservoir Fisheries And Madison River Drainage Westslope Cutthroat Trout Conservation And Restoration Program: 2000 Annual Report to PPL Montana and Turner Enterprises, Inc., Bozeman; April 2001	2001	Montana Fish, Wildlife & Parks, PPL Montana, Turner Enterprises, Inc.	17407
Cleasby, Tom	Report of fish taken under Scientific Collector Permit SCP-24-08	2008		36770
Deleray, Mark	Flathead Lake and River Drainage West, Statewide Fisheries Management	2004	Montana Fish, Wildlife & Parks	17920

Delaray, Mark, Ladd Knotek, Scott Rumsey, and Tom Weaver	Element 1, Project 1 and 2, SBAS Project No. 3131, Flathead Lake And River System Fisheries Status Report; June 1999	1999	Montana Department of Fish, Wildlife, and Parks	11076
Domrose, Robert	Ia, Inventory Of Waters Of The Project Area, July 1, 1986 To June 30, 1987; August 31, 1987,northwest Montana Fishery Study	1987	Montana Department of Fish, Wildlife, and Parks	39620
Domrose, Robert	Ia, Inventory Of Waters Of The Project Area, July 1, 1985 To June 30, 1986; September 15, 1986,northwest Montana Fishery Study	1986	Montana Department of Fish, Wildlife, and Parks	39621
Domrose, Robert	Ib, Fish Management Surveys, April 1, 1973 To March 31, 1974; September 18, 1974,northwest Montana Fisheries Study	1974	Montana Fish and Game Department	39923
Domrose, Robert J.	Ia, Inventory Of Waters Of The Project Area, July 1, 1984 To June 30, 1985,northwest Montana Fishery Study	1985	Montana Department of Fish, Wildlife, and Parks	39623
Domrose, Robert J.	I, Inventory Of Waters Of The Project Area, April 1, 1968 To March 31, 1969; May 22, 1970,northwest Montana Fisheries Study	1970	Montana Fish and Game Department	39911
Domrose, Robert J.	I, Inventory Of Waters Of The Project Area, July 1, 1966 To June 30, 1967; May 15, 1968,northwest Montana Fishery Study	1968	Montana Fish and Game Department	39909
Eco Northwest	Economic Valuation Of Potential Losses Of Fish Populations In The Swan River Drainage: Final Report; September 1984	1984	Montana Department of Fish, Wildlife, and Parks	18058
Eco Northwest	Economic Valuation Of Potential Losses Of Fish Populations In The Swan River Drainage: Final Draft; July 25 1984	1984	Montana Department of Fish, Wildlife, and Parks	18078
Elser, Al	Instream Flow Recommendations For Aquatic Life, Kootenai And Clark Fork River Basins; March 5, 1974	1974	Montana Fish and Game Department	45649
Fraley, John J., And Bradley B. Shepard	Life History, Ecology And Population Status Of Migratory Bull Trout (Salvelinus confluentus) In The Flathead Lake And River System, Montana	1989	Northwest Science	18106
Fraley, John J., Steve L. McMullin, And Patrick J. Graham. Montana Dept. of Fish, Wildlife and Parks.	Effects Of Hydroelectric Operations On The Kokanee Population In The Flathead River System, Montana	1986	North American Journal of Fisheries Management	18117
Fraley, John, And Janet Decker-Hess	Effects Of Stream And Lake Regulation On Reproductive Success Of Kokanee In The Flathead River System, Montana, U.S.A.	1987	Regulated Rivers: Research & Management	28141
Fraley, John, Brian Marotz, Janet Decker-Hess, Will Beattie, Ray Zubik. Montana Dept. of Fish, Wildlife and Parks.	Mitigation, Compensation, And Future Protection For Fish Populations Affected By Hydropower Development In The Upper Columbia System, Montana, U. S. A.	1989	Regulated Rivers: Research & Management	18133
Fraley, John, Bruce May, Pat Clancey, and Will Beattie	Fisheries Evaluation Program For The Flathead Lake / River System And Hungry Horse And Libby Reservoirs; Prepared January 1986, Revised August 1986, March 1987.	1987	Montana Department of Fish, Wildlife, and Parks	18119
Fraley, John,	Fisheries Evaluation And Monitoring Program For The		Montana Department of	

Bruce May, Pat Clancey, and Will Beattie	Flathead Lake / River System And Hungry Horse And Libby Reservoirs; Prepared January 1986, Revised August 1986	1986	Fish, Wildlife, and Parks	18118
Fraley, John, Tom Weaver, And Jim Vashro. Montana Dept. of Fish, Wildlife and Parks	Cumulative Effects Of Human Activities On Bull Trout (Salvelinus confluentus) In The Upper Flathead Drainage, Montana	1989	Headwaters Hydrology. American Water Resources Association.	18130
Fredenberg, Wade	Evaluation Of Electrofishing-induced Spinal Injuries Resulting From Field Electrofishing Surveys In Montana	1992	Montana Department of Fish, Wildlife, and Parks	19225
Fredenberg, Wade, And Patrick Graham	Census Of Kokanee Fishermen On The Flathead River; October 1982	1982	Montana Department of Fish, Wildlife, and Parks, Bureau of Reclamation	18082
Fredenberg, Wade, Pat Dwyer, And Rick Barrows	Experimental Bull Trout Hatchery,progress Report, 1993-1994	1995	Creston Fish and Wildlife Center,Bozeman Fish Technology Center	
Habitat Protection Bureau, Fishery Division	Fish Habitat Protection And Restoration Activities In Addition To The River Restoration Program; December 1994	1994	Montana Department of Fish, Wildlife, and Parks	19359
Hanzel, D. A.	Iii, Survey Of Cutthroat Trout And Dolly Varden In The Flathead River And Tributaries Above Flathead Lake; April 15, 1966,northwest Montana Fishery Study	1966	Montana Fish and Game Department	39907
Hanzel, Delano A.	Va, Survey And Inventory Of Coldwater And Warmwater Ecosystems: Flathead Lake - River System Study, July 1, 1992 Through June 30, 1993; September 8, 1993, Statewide Fisheries Investigations	1993	Montana Department of Fish, Wildlife, and Parks	17486
Hanzel, Delano A.	Va, Survey And Inventory Of Coldwater And Warmwater Ecosystems: Flathead Lake - River System Study, July 1, 1991 Through June 30, 1992; September 17, 1992, Statewide Fisheries Investigations	1992	Montana Department of Fish, Wildlife, and Parks	17294
Hanzel, Delano A.	Iii, Survey Of Cutthroat And Dolly Varden Trout In Flathead River And Tributaries Above Flathead Lake, July 1, 1972 To June 30, 1973; October 15, 1963,northwest Montana Fishery Study	1963	Montana Fish and Game Department	39903
Hanzel, Delano A.	The Distribution Of The Cutthroat Trout (salmo Clarki) In Montana; May, 1959	1959	Montana State College (Montana State University),Proceedings of the Montana Academy of Sciences	28168
Hanzel, Delano A., John Fraley, And Will Beattie	Va, Survey And Inventory Of Coldwater And Warmwater Ecosystems: Flathead Lake-river System Study, July 1, 1987 Through June 30, 1988; August 15, 1988,statewide Fisheries Investigations	1988	Montana Department of Fish, Wildlife, and Parks	34714
Huston, Joe E.	Ia, Survey And Inventory Of Coldwater Streams: Northwest Montana Coldwater Stream Investigations, July 1, 1993 Through June 30, 1994; September 16, 1994, Statewide Fisheries Investigations	1994	Montana Department of Fish, Wildlife, and Parks	17373
Huston, Joe E.	Ia, Survey And Inventory Of Coldwater Streams: Northwest Montana Coldwater Stream Investigations, July 1, 1992 Through June 30, 1993; August 26, 1993, Statewide Fisheries Investigations	1993	Montana Department of Fish, Wildlife, and Parks	17477
Huston, Joe E.	Ia, Survey And Inventory Of Coldwater Streams: Northwest Montana Coldwater Stream Investigations, July 1, 1991 Through June 30, 1992; August 5, 1992, Statewide	1992	Montana Department of Fish, Wildlife, and	17298

	Fisheries Investigations		Parks	
Huston, Joe E.	Ia, Survey And Inventory Of Coldwater Streams: Northwest Montana Coldwater Stream Investigations, July 1, 1989 Through June 30, 1990; August 15, 1990, Statewide Fisheries Investigations	1990	Montana Department of Fish, Wildlife, and Parks	17208
Huston, Joe E.	Ia, Survey And Inventory Of Coldwater Streams: Northwest Montana Coldwater Stream Investigations, July 1, 1988 Through June 30, 1989; July 10, 1989, statewide Fisheries Investigations	1989	Montana Department of Fish, Wildlife, and Parks	34618
Huston, Joe E.	Survey And Inventory Of Coldwater Streams: Northwest Montana Coldwater Stream Investigations, July 1, 1987 Through June 30, 1988; August 24, 1988, statewide Fisheries Investigations	1988	Montana Department of Fish, Wildlife, and Parks	34704
Hutten, Jeff	Bull Trout Core Habitat & Nodal Areas. November 1999	1999	Montana Department of Fish, Wildlife, and Parks	38107
Kanda, Naohisa	Genetic Letter To Scott Rumsey, 5/7/1999	1999	University of Montana	
Knotek, Ladd	Review of Crucial Areas Project	2009		
Leary, Robb	Genetic Letter To Scott Rumsey, 2/20/1996	1996	University of Montana	8013
Leathe, Stephen A., And Michael D. Enk	Cumulative Effects Of Micro-Hydro Development On The Fisheries Of The Swan River Drainage, Montana: Volume I: Final Summary Report; April 1985. Contract Nos. DE-A179-82BP36717 And DE-A179-83BP9802, Project 82-19	1985	Bonneville Power Administration. Montana Dept. of Fish, Wildlife and Parks. U.S. Forest Service, Flathead N.F.	18105
Leathe, Stephen A., And Patrick J. Graham	Cumulative Effects Of Micro-hydro Development On The Fisheries Of The Swan River Drainage, Montana; First Annual Progress Report (Covering Field Season July - November 1982). Agreement No. DE-A179-82BP36717.	1983	Bonneville Power Administration, Montana Dept. of Fish, Wildlife and Parks	18070
Leathe, Stephen A., And Patrick J. Graham. Montana Dept. of Fish, Wildlife and Parks	Flathead Lake Fish Food Habits Study; October 1982: Final Report	1982	Environmental Protection Agency. Steering Committee for Flathead River Basin Environmental Impact Study.	18109
Leathe, Stephen A., Michael D. Enk, And Patrick J. Graham	An Evaluation Of The Potential Cumulative Bioeconomic Impacts Of Proposed Small-scale Hydro Development On The Fisheries Of The Swan River Drainage, Montana	1985	Symposium on Small Hydropower and Fisheries, Denver, Co., May 1-3, 1985	17825
Leathe, Stephen A., Steve Bartelt, And Lani M. Morris	Cumulative Effects Of Micro-hydro Development On The Fisheries Of The Swan River Drainage, Montana, Volume II. Technical Information; July 1985, contract No. De-a179-82bp36717 Project 82-19	1985	Bonneville Power Administration	31592
Marotz, Brian L., Craig Althen, Bill Lonon, and Daniel Gustafson. Montana Dept. of Fish, Wildlife and Parks. Dept. of Biology, Montana State Univ., Bozeman	Model Development To Establish Integrated Operational Rule Curves For Hungry Horse And Libby Reservoirs, Montana: Final Report 1996; January 1996	1996	Bonneville Power Administration	18127
Mendelsohn, Rob, And Ed Whitelaw, ECO Northwest,	Literature Review Of Methodologies To Evaluate Recreation Associated With Fish In The Swan River	1983	Montana Department of Fish, Wildlife, and	18071

Ltd.	Drainage; June 30 1983: Draft Report; June 30, 1983		Parks	
Montana Dept. Of Fish, Wildlife And Parks	Appendix A: Assessment Of Methods For Valuing The Potential Loss Of Fish Populations In The Swan River Drainage: Revised Version of Literature Review Of Methodologies To Evaluate Recreation Associated With Fish In The Swan River Drainage; [1983 ?]	[1983 ?]	Montana Department of Fish, Wildlife, and Parks	18072
Montana Dept. Of Fish, Wildlife And Parks	Memorandum Of Understanding And Conservation Agreement For Westslope Cutthroat Trout (oncorhynchus Clarki Lewisi) In Montana; May 1999	1999	Montana Department of Fish, Wildlife, and Parks	18671
Montana Dept. Of Fish, Wildlife And Parks	Montana Unauthorized Fish Introduction Database; March 1998	1998	Montana Department of Fish, Wildlife, and Parks	19382
Montana Dept. Of Fish, Wildlife And Parks	Montana Warmwater Fisheries Management Plan 1997-2006; March 1997	1997	Montana Department of Fish, Wildlife, and Parks	29202
Montana Dept. Of Fish, Wildlife And Parks	Montana Warm Water Fish Management Plan; March 1987	1987	Montana Department of Fish, Wildlife, and Parks	19165
Montana Fish, Wildlife And Parks, Kalispell, Montana Confederated Salish And Kootenai Tribes Of The Flathead Reservation	Flathead Lake And River Fisheries Co-management Plan: 2001-2010; November 2000	2000	Montana Department of Fish, Wildlife, and Parks. Confederated Salish and Kootenai Tribes of the Flathead Reservation	24872
Msu Vertebrate Collection,	Various Vertebrate Catalog Cards, 2/5/2003	2003	Mt. State University	
Muhlfeld, Clint C., et al.	Observer Error Structure in Bull Trout Redd Counts in Montana Streams: Implications for Inference on True Redd Numbers	2006	American Fisheries Society	19305
Ostle, Bernard	Statistics In Research	1954	Ames, Iowa: Iowa State College Press	
Parks Division, Montana Dept. Of Fish, Wildlife And Parks	1988 Montana Statewide Comprehensive Outdoor Recreation Plan (scorp); April 28, 1988	1988	Montana Department of Fish, Wildlife, and Parks	28968
Petersen, Adam and Daigle, Bill	Fish species distribution and abundance edits associated with the Crucial Areas and Connectivity Assessment. Biologists reviewed existing distribution maps in Dec, 2008 - Jan 2009.	2009	Montana Fish, Wildlife and Parks	
Roulson, Leanne H., Garcia And Associates, Bozeman, MT	Water Leases And Yellowstone Cutthroat Trout Fry Outmigration From Four Tributaries Of The Upper Yellowstone River, Project Year 2000; May 11, 2001. J5011	2001	Montana Department of Fish, Wildlife, and Parks	18019
Rumsey, Scott	Regional Mris Updates 2000, 4/1/2000	2000	Montana Department of Fish, Wildlife, and Parks	
Rumsey, Scott	Evaluation Of Spawning Gravel Placement In The Swan River Below Bigfork Dam; 1984-1985 Spawn Years, January 1984 Through September 1985; January 1986,flathead Lake Fisheries Investigations	1986	Montana Department of Fish, Wildlife, and Parks	39132
Rumsey, Scott	la, Seasonal, Area And Depth Distribution Of Cutthroat Trout, Bull Trout, And Lake Trout In Flathead Lake, July 1, 1984 To June 30, 1985; August 29, 1985,flathead Lake	1985	Montana Department of Fish, Wildlife, and	39130

	Fisheries Investigations		Parks	
Rumsey, Scott	Ia Supplement, Preliminary Evaluation Of Spawning Gravel Placement Below Bigfork Dam, 1983 Spawn Year; March 1984	1984	Montana Department of Fish, Wildlife, and Parks	39136
Sage, Kevin	Genetic letter to Thurston Dotson, 3/2/1993	1993	University of Montana	
Shepard, Bradley B., Stephen A. Leathe, Thomas M. Weaver, Michael D. Enk.	Monitoring Levels Of Fine Sediment Within Tributaries To Flathead Lake, And Impacts Of Fine Sediment On Bull Trout Recruitment	1984	Montana Department of Fish, Wildlife, and Parks	18115
Stagliano, David	Mussel Database	2010	Montana Natural Heritage Program	47452
Stanford, J. A., T. J. Stuart, And B. K. Ellis. Univ. of Montana Biological Station, Bigfork, Montana	Limnology of Flathead Lake: Final Report; December 1983	1983	Environmental Protection Agency. Steering Committee for Flathead River Basin Environmental Impact Study	18060
Stanford, Jack A., F. Richard Hauer, And Tom J. Stuart. Flathead Research Group, Univ. of Montana Biological Station, Bigfork. In affiliation with North Texas State Univ.	Annual Report Of Work Completed During 1978-79 On Limnology Of Flathead Lake - River Ecosystem, Montana	[1980]	Flathead Basin Environmental Impact Study. Environmental Protection Agency.	18128
Stefanich, Frank A.	Iiia, Natural Reproduction Of Kokanee In Flathead Lake And Tributaries; April 27, 1953	1953	Montana Fish and Game Department	39844
Stefanich, Frank A.	Iia, Inventory Of The Project Area's Waters From The Standpoint Of Physical And Chemical Characteristics; May 27, 1952	1952	Montana Fish and Game Department	39827
Stefanich, Frank A.	Northwest Montana Fishery Study; March 31, 1952,ia, Contribution Of Hatchery-reared Trout To Total Catch,ii, Inventory Of The Project Area's Waters From The Standpoint Of Physical And Chemical Characteristics,iib, Inventory Of The Project Area's Waters From The Standpoint Of Fish Response To Environment,iiia, Natural Reproduction Of Kokanee In Flathead Lake And Tributaries,iva, Establishing Measures Of Abundance Of Cutthroat Trout In Ashley Lake,ivb, Developing Measures To Determine Kokanee Abundance In Flathead Lake,va, Effectiveness Of Smith Lake Rearing Pond,via, Grayling Spawning Areas For Rogers Lake,vii, The Effects Of Logging On Pinkham's Fish Population	1952	Montana Fish and Game Department	17114
Stefanich, Frank A.	Northwest Montana Fishery Study; December 29, 1951	1951	Montana Fish and Game Department	39836
Stephens, Andrea and Beth Gardner	Report of Fish Taken Under Scientific Collector Permit 29-11	2011	Other Private	57537
The Montana Bull Trout Scientific Group	Flathead River Drainage Bull Trout Status Report (Including Flathead Lake, the North and Middle Forks of the Flathead River and the Stillwater and Whitefish rivers)	August 1995	The Montana Bull Trout Restoration Team	19074
The Montana Bull Trout Scientific	The Relationship Between Land Management Activities And Habitat Requirements Of Bull Trout; May 1998	1998	The Montana Bull Trout Restoration Team	11231

Group				
The Montana Bull Trout Scientific Group	Swan River Drainage Bull Trout Status Report (including Swan Lake); February 1996	1996	The Montana Bull Trout Restoration Team	19068
The Montana Bull Trout Scientific Group	The Role Of Hatcheries And Fish Transplants In Bull Trout Recovery; August, 1995	1995	The Montana Bull Trout Restoration Team	34558
Thomas, Ginger	Bull Trout In Montana; August, 1992, Status Report	1992	Montana Department of Fish, Wildlife, and Parks	19093
Usfs Et Al	Wsct Assessment, 1/1/2003	2003	U.S. Forest Service	
Vashro, James E.	Va, Survey And Inventory Of Coldwater And Warmwater Ecosystems: Flathead Lake - River System Study, July 1, 1993 Through June 30, 1994; September 23, 1994, Statewide Fisheries Investigations	1994	Montana Department of Fish, Wildlife, and Parks	17379
Vincent, E. Richard	Whirling Disease Report, 1997-98; January 12, 2000,project 3860	2000	Montana Department of Fish, Wildlife, and Parks	29152
Weaver, Thomas M.	Coal Creek Fisheries Monitoring Study No. IX and Forest-wide Fisheries Monitoring - 1990; May 1991. Contract No. P.O 43-0385-004-08	1991	U.S. Forest Service, Flathead National Forest	17824
Weaver, Thomas M.	Coal Creek Fisheries Monitoring Study No. VIII and Forest-wide Fisheries Monitoring - 1989; May 1990. Contract No. P.O. 44-0385-9-0347	1990	U.S. Forest Service, Flathead National Forest	17821
Weaver, Thomas M.	Coal Creek Fisheries Monitoring Study No. VII and Forest-wide Fisheries Monitoring - 1988; February 1989. Contract No. P. O. 53-0385-8-2925.	1989	U.S. Forest Service	8549
Weaver, Thomas M., And John J. Fraley	Coal Creek Fisheries Monitoring Study No. VI and Forest-Wide Fisheries Monitoring - 1987; February 1988	1988	U.S. Forest Service, Flathead N.F.	18140
Zubik, Raymond J., And John Fraley	Determination Of Fishery Losses In The Flathead System Resulting From The Construction Of Hungry Horse Dam; January 1987,final Completion Report 1986,contract No. De-a179-85bp2368 Project No. 85-23	1987	Bonneville Power Administration	
Zubik, Raymond J., And John Fraley. Montana Dept. of Fish, Wildlife and Parks	Determination Of Fishery Losse In The Flathead System Resulting From The Construction Of Hungry Horse Dam: Final Completion Report - 1986; January 1987. Contract No. DE-AI79-85BP23638. Project No. 85-23	1987	Bonneville Power Administration	18142
fredenberg, Wade;Patrick DeHaan;William Arden	Genetic Analysis and Photo Documentation of Hybridization between Bull Trout and Brook Trout in the Swan River Basin, Montana;December 1, 2007	2007	Creston Fish & Wildlife Center;Abernathy Fish Technology Center	32698

APPENDIX D
NOXIOUS WEEDS REPORT



Monday, March 21, 2016

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Query By Area

5 Northwestern States:

- [Query by Name](#)
- [Query From List](#)
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You queried the area of Flathead County in Montana from 1875 to 2016 for All Species.

Results of Query

Other Services:

- [INVADERS Data Entry](#)
- [Weed Alert Service](#)
- [State/Provincial Noxious Weed Lists](#)
- [Biocontrol Service](#)
- [Blackfoot Weed Management](#)
- [ID/MT Risk Assessment](#)
- [Verification System](#)

There are 430 species for this query.

Exotic Noxious

230 48

Database queried on: March 21, 2016 Database last updated on: July 27, 2014

Genus	Species	Common Name	Exotic	Noxious In
Artemisia	absinthium	absinth wormwood	×	WA
Elymus	alaskanus	Alaskan wheatgrass		
Rhamnus	alnifolia	alder buckthorn		
Medicago	sativa	alfalfa	×	
Papaver	pygmaeum	alpine poppy		
Trifolium	hybridum	alsike clover	×	
Vicia	americana	American vetch		
Poa	annua	annual bluegrass	×	
Purshia	tridentata	antelope bitter brush		
Balsamorhiza	sagittata	arrowleaf balsamroot		
Petasites	sagittatus	arrowleaf coltsfoot		
Gypsophila	paniculata	baby's breath	×	WA
Populus	balsamifera	balsam poplar		
Carex	rostrata	beaked sedge		
Eleocharis	rostellata	beaked spikerush		
Agropyron	caninum	bearded wheatgrass		

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Thelypteris	phegopteris	beechn fern		
Agrostis	sp.	bentgrass		
Artemisia	biennis	biennial wormwood		
Centaurea	macrocephala	bighead knapweed	×	OR,WA
Lomatium	macrocarpum	bigseed desert parsley		
Veronica	biloba	bilobed speedwell	×	
Ranunculus	pedatifidus	birdfoot buttercup		
Sagina	procumbens	birdseye pearlwort	×	
Lotus	corniculatus	birdsfoot trefoil	×	
Erigeron	acris	bitter fleabane		
Solanum	dulcamara	bittersweet nightshade	×	
Polygonum	convolvulus	black bindweed	×	
Hyoscyamus	niger	black henbane	×	ID,WA
Medicago	lupulina	black medic	×	
Brassica	nigra	black mustard	×	
Solanum	nigrum	black nightshade	×	
Silene	vulgaris	bladder campion	×	
Chenopodium	capitatum	blite goosefoot		
Chorispora	tenella	blue mustard	×	
Myosotis	micrantha	blue scorpion grass	×	
Agropyron	spicatum	bluebunch wheatgrass		
Echium	vulgare	blueweed	×	WA
Potamogeton	obtusifolius	blunt leaved pondweed		
Lycopodium	inundatum	bog clubmoss		
Acer	negundo	box elder		
Carex	comosa	bristly sedge		
Plantago	major	broadleaf plantain		
Centaurea	jacea	brown knapweed	×	WA
Plantago	lanceolata	buckhorn plantain	×	
Poa	bulbosa	bulbous bluegrass	×	
Cirsium	vulgare	bull thistle	×	OR,WA
Erysimum	repandum	bushy wallflower	×	
Ranunculus	sp.	buttercup		
Botrychium	hesperium	camomile grape fern		
Poa	compressa	Canada bluegrass	×	

Cirsium	arvense	Canada thistle	×	ID,MT,OR,WA,WY
Campanula	medium	Canterbury bells	×	
Geranium	carolinianum	Carolina geranium		
Asperugo	procumbens	catchweed	×	
Galium	aparine	catchweed bedstraw		
Nepeta	cataria	catnip	×	
Bromus	secalinus	cheat	×	
Stellaria	media	chickweed	×	
Cichorium	intybus	chicory	×	
Lepidium	perfoliatum	clasping pepperweed	×	
Anemone	multifida	cliff anemone		
Madia	glomerata	cluster tarweed		
Campanula	glomerata	clustered bellflower	×	
Xerophyllum	tenax	common beargrass		
Anchusa	officinalis	common bugloss	×	OR,WA
Arctium	minus	common burdock	×	WY
Carum	carvi	common caraway	×	
Prunus	virginiana	common chokecherry		
Elodea	canadensis	common elodea		
Oenothera	biennis	common evening primrose		
Senecio	vulgaris	common groundsel	×	
Galeopsis	tetrahit	common hemp nettle	×	
Humulus	lupulus	common hop		
Chenopodium	album	common lambquarters	×	
Lysimachia	verticillata	common loosestrife	×	
Malva	rotundifolia	common mallow	×	
Mimulus	guttatus	common monkey flower		
Verbascum	thapsus	common mullein	×	
Vinca	minor	common periwinkle	×	
Portulaca	oleracea	common purslane	×	
Tragopogon	porrifolius	common salsify	×	
Veronica	officinalis	common speedwell	×	

Tanacetum	vulgare	common tansy	×	MT,WA,WY
Holcus	lanatus	common velvetgrass	×	
Wolffia	columbiana	common watermeal		
Epilobium	ciliatum	common willow herb		
Achillea	millefolium	common yarrow		
Silene	conoidea	cone catchfly	×	
Ranunculus	arvensis	corn buttercup	×	
Agrostemma	githago	corn cockle	×	
Lithospermum	arvense	corn gromwell	×	
Veronica	arvensis	corn speedwell	×	
Spergula	arvensis	corn spurry	×	
Centaurea	cyanus	cornflower	×	
Vaccaria	pyramidata	cowcockle	×	
Campanula	rapunculoides	creeping bellflower	×	
Agrostis	stolonifera	creeping bentgrass	×	
Ranunculus	repens	creeping buttercup	×	
Thymus	serpyllum	creeping thyme	×	
Oxalis	corniculata	creeping woodsorrel	×	
Dryopteris	cristata	crested shield fern		
Agropyron	cristatum	crested wheatgrass	×	
Secale	cereale	cultivated rye	×	WA
Triticum	aestivum	cultivated wheat	×	
Rumex	crispus	curly dock	×	
Potamogeton	crispus	curlyleaf pondweed	×	
Erigeron	compositus	cut leaved daisy		
Euphorbia	cyparissias	cypress spurge	×	
Linaria	dalmatica	dalmatian toadflax	×	ID,MT,OR,WA,WY
Hesperis	matronalis	damesrocket	×	
Taraxacum	officinale	dandelion	×	
Castilleja	cervina	deer paintbrush		
Dianthus	armeria	deptford pink	×	
Centaurea	diffusa	diffuse knapweed	×	ID,MT,OR,WA,WY
Erucastrum	gallicum	dog mustard	×	
Polygonum	douglasii	Douglas' knotweed		
Bromus	tectorum	downy brome	×	

Arabis	drummondii	Drummond's rockcress		
Alyssum	desertorum	dwarf alyssum	×	
Malva	neglecta	dwarf mallow	×	
Rubus	pubescens	dwarf red blackberry		
Chaenorrhinum	minus	dwarf snapdragon	×	
Isatis	tinctoria	dyer's woad	×	ID,MT,OR,WA,WY
Erigeron	eatonii	Eaton's daisy		
Myriophyllum	spicatum	Eurasian watermilfoil	×	ID,MT,OR,WA
Berberis	vulgaris	European barberry	×	
Rhamnus	cathartica	European buckthorn	×	
Sorbus	aucuparia	European mountain ash	×	
Lappula	echinata	European sticktight	×	
Festuca	sp.	fescue		
Chrysanthemum	parthenium	feverfew	×	
Cardamine	oligosperma	few seeded bittercress		
Convolvulus	arvensis	field bindweed	×	ID,MT,OR,WA,WY
Filago	arvensis	field filago	×	
Equisetum	arvense	field horsetail		OR
Thlaspi	arvense	field pennycress	×	
Viola	arvensis	field violet	×	
Potentilla	quinquefolia	fiveleaf cinquefoil		
Potamogeton	zosteriformis	flatstem pondweed		
Thesium	linophyllum	flaxleaf	×	
Descurainia	sophia	flixweed	×	
Butomus	umbellatus	flowering rush	×	
Poa	palustris	fowl bluegrass	×	
Hordeum	jubatum	foxtail barley		
Nymphaea	odorata	fragrant waterlily		
Allium	fibrillum	fringed onion		
Erigeron	lackschewitzii	front mountain erigeron		
Atriplex	hortensis	garden orach	×	
Eruca	sativa	garden rocket	×	
Veronica	chamaedrys	germander speedwell	×	

Epipactis	gigantea	giant helleborine		
Polygonum	sachalinense	giant knotweed	×	OR,WA
Gilia	sp.	gilia		
Gentiana	glauca	glaucous gentian		
Crepis	intermedia	gray hawksbeard		
Arctium	lappa	great burdock	×	
Drosera	anglica	great sundew		
Setaria	viridis	green foxtail	×	
Carex	oederi	green sedge		
Rumex	acetosa	green sorrel	×	
Hieracium	greenei	Greene's hawkweed		
Eriophorum	viridicarinatum	green-keeled cotton-grass		
Glecoma	hederacea	ground ivy	×	
Lycopodium	obscurum	groundpine		
Silene	dichotoma	hairy catchfly	×	
Bromus	commutatus	hairy chess	×	
Solanum	sarrachoides	hairy nightshade	×	
Vicia	villosa	hairy vetch	×	
Phalaris	aquatica	Harding grass	×	
Campanula	rotundifolia	harebell		
Conringia	orientalis	hare's ear mustard	×	
Prunella	vulgaris	healall		
Lamium	amplexicaule	henbit	×	
Viburnum	opulus	highbush cranberry		
Berteroa	incana	hoary alyssum	×	
Cardaria	draba	hoary cress	×	ID,MT,OR,WA,WY
Arabis	holboellii	Holboell's rockcress		
Trifolium	agrarium	hop clover	×	
Aesculus	hippocastanum	horsechestnut		
Conyza	canadensis	horseweed		
Cynoglossum	officinale	houndstongue	×	MT,OR,WA,WY
Eriophorum	hudsonianus	Hudson cotton grass		
Tragopogon	miscellus	hybrid salsify	×	
Hyssopus	officinalis	hyssop	×	
Potamogeton	illinoensis	Illinois pondweed		
Agropyron	intermedium	intermediate wheatgrass	×	

Agrostis	interrupta	interrupted apera	×	
Carex	eburnea	ivory sedge		
Bromus	japonicus	Japanese brome	×	
Polygonum	cuspidatum	Japanese knotweed	×	OR,WA
Chenopodium	botrys	Jerusalem oak goosefoot	×	
Poa	pratensis	Kentucky bluegrass	×	
Viola	renifolia	kidney leaved violet		
Hieracium	piloselloides	kingdevil hawkweed	×	MT,OR
Arctostaphylos	uva-ursi	kinnikinnick		
Scleranthus	annuus	knawel	×	
Kochia	scoparia	kochia	×	OR,WA
Polygonum	persicaria	ladysthumb	×	
Trifolium	procumbens	large hop clover	×	
Camelina	sativa	largeseed falseflax	×	
Euphorbia	esula	leafy spurge	×	ID,MT,OR,WA,WY
Arabis	lemmonii	Lemmon's rockcress		
Carex	lenticularis	lentil fruited sedge		
Drosera	linearis	linear leaved sundew		
Delphinium	bicolor	little larkspur		
Arabis	microphylla	littleleaf rockcress		
Erigeron	corymbosus	long leaved fleabane		
Veronica	longifolia	longleaf speedwell	×	
Cenchrus	longispinus	longspine sandbur		WA
Gnaphalium	palustre	lowl cudweed		
Arabis	lyallii	Lyall's rockcress		
Arabis	lyrata	lyre leaved rockcress		
Draba	macounii	Macoun's draba		
Asplenium	trichomanes	maidenhair spleenwort		
Marchantia	polymorpha	many form marchantia moss		
Chenopodium	gigantospermum	mapleleaf goosefoot	×	
Cannabis	sativa	marijuana	×	

Aster	hesperius	marsh aster		
Galium	palustre	marsh bedstraw	×	
Polygonum	hydropiper	marshpepper smartweed	×	
Anthemis	cotula	mayweed chamomile	×	
Aster	campestris	meadow aster		
Oenothera	pilosella	meadow eveningprimrose		
Festuca	pratensis	meadow fescue	×	
Alopecurus	pratensis	meadow foxtail	×	
Hieracium	pratense	meadow hawkweed	×	ID,MT,OR,WA
Tragopogon	pratensis	meadow salsify	×	
Amsinckia	menziesii	Menzies' fiddleneck		
Botrychium	minganense	Mingan Island moonwort		
Ranunculus	verecundus	modest buttercup		
Euphorbia	lathyris	mole plant	×	
Robinia	hispida	moss locust		
Sedum	acre	mossy stonecrop	×	
Verbascum	blattaria	moth mullein	×	
Utricularia	intermedia	mountain bladderwort		
Botrychium	montanum	mountain moonwort		
Cerastium	vulgatum	mouseear chickweed	×	
Artemisia	vulgaris	mugwort	×	
Carduus	nutans	musk thistle	×	ID,OR,WA,WY
Collomia	linearis	narrow leaf collomia		
Chenopodium	murale	nettleleaf goosefoot	×	
Silene	noctiflora	nightflowering catchfly	×	
Lomatium	triternatum	nine leaf lomatium		
Achillea	nobilis	noble yarrow	×	
Ophioglossum	pusillum	northern adderstongue		
Galium	boreale	northern bedstraw		
Goodyera	repens			

		northern rattlesnake plantain		
Acer	platanoides	Norway maple	×	
Arabis	nuttallii	Nuttall's rockcress		
Chenopodium	glaucum	oakleaf goosefoot	×	
Papaver	somniferum	opium poppy	×	
Arnica	fulgens	orange arnica		
Hieracium	aurantiacum	orange hawkweed	×	ID,MT,OR,WA
Lonicera	ciliosa	orange honeysuckle		
Dactylis	glomerata	orchardgrass	×	
Eleocharis	obtusa	ovoid spike rush		
Chrysanthemum	leucanthemum	oxeye daisy	×	MT,WA,WY
Corydalis	sempervirens	pale corydalis		
Carex	livida	pale sedge		
Polygonum	lapathifolium	pale smartweed	×	
Cardamine	pensylvanica	Pennsylvania bittercress		
Sonchus	arvensis	perennial sowthistle	×	ID,WA,WY
Veronica	persica	Persian speedwell	×	
Matricaria	matricarioides	pineapple weed	×	
Lathyrus	bijugatus	pinewoods peavine		
Microsteris	gracilis	pink microsteris		
Carduus	acanthoides	plumeless thistle	×	OR,WA,WY
Scheuchzeria	palustris	pod grass		
Potamogeton	sp.	pondweed		
Carex	paupercula	poor sedge		
Sphenopholis	obtusata	prairie wedgescale		
Lactuca	serriola	prickly lettuce	×	
Verbena	bracteata	prostrate vervain		
Lythrum	salicaria	purple loosestrife	×	ID,OR,WA,WY
Calamagrostis	purpurascens	purple reedgrass		
Veronica	peregrina	purslane speedwell		
Antennaria	sp.	pussy-toes		
Nymphaea	tetragona	pygmy water lily		
Agropyron	repens	quackgrass	×	OR,WY
Trifolium	arvense	rabbitfoot clover	×	
Vulpia	myuros	rattail fescue	×	
Senecio	indecorus			

		rayless mountain butterweed		
Actaea	rubra	red baneberry		
Trifolium	pratense	red clover	×	
Sambucus	racemosa	red elderberry		
Festuca	rubra	red fescue	×	
Cornus	stolonifera	red osier dogwood		
Spergularia	rubra	red sandspurry	×	
Taraxacum	laevigatum	red seeded dandelion	×	
Rumex	acetosella	red sorrel	×	
Amaranthus	retroflexus	redroot pigweed		
Erodium	cicutarium	redstem filaree	×	
Phalaris	arundinacea	reed canarygrass	×	WA
Arabis	sp.	rockcress		
Delphinium	ajacis	rocket larkspur	×	
Acer	glabrum	Rocky Mountain maple		
Crepis	tectorum	rooftop hawksbeard	×	
Carex	chordorrhiza	rope root sedge		
Rosa	sp.	rose		
Lychnis	coronaria	rose campion	×	
Antennaria	microphylla	rosy pussy toes		
Potentilla	norvegica	rough cinquefoil		
Poa	trivialis	roughstalk bluegrass	×	
Orchis	rotundifolia	round leaved orchis		
Chondrilla	juncea	rush skeletonweed	×	ID,MT,OR,WA
Centaurea	repens	Russian knapweed	×	ID,MT,OR,WA,WY
Salsola	iberica	Russian thistle	×	
Onobrychis	viciifolia	sainfoin	×	
Tragopogon	sp.	salsify		
Gaura	coccinea	scarlet gaura		
Matricaria	maritima	scentless chamomile	×	WA
Onopordum	acanthium	Scotch thistle	×	ID,OR,WA,WY
Triglochin	maritimum	seaside arrow grass		
Erigeron	pumilus	shaggy fleabane		
Capsella	bursa-pastoris	shepherd's purse	×	
Mimulus	breviflorus			

		short flowered monkey flower	
Cirsium	brevistylum	short styled thistle	
Myriophyllum	sibiricum	shortspike watermilfoil	
Medicago	falcata	sickle medic	×
Potentilla	anserina	silverweed cinquefoil	
Potentilla	argentea	silvery cinquefoil	×
Festuca	octoflora	sixweeks fescue	
Potentilla	gracilis	slender cinquefoil	
Eriophorum	gracile	slender cotton grass	
Oxytropis	campestris	slender crazyweed	
Carex	tenuiflora	slender flowered sedge	
Thelypodium	sagittatum	slender thelypody	
Trifolium	dubium	small hop clover	×
Tofieldia	pusilla	small tofieldia	
Carex	stenoptila	small winged sedge	
Cypripedium	calceolus	small yellow lady's slipper	
Camelina	microcarpa	smallseed false flax	×
Aster	laevis	smooth aster	
Bromus	inermis	smooth brome	×
Silene	csereii	smooth catchfly	×
Erigeron	glabellus	smooth daisy	
Amaranthus	hybridus	smooth pigweed	×
Achillea	ptarmica	sneezeweed	×
Symphoricarpos	sp.	snowberry	
Bromus	mollis	soft brome	×
Echinops	ruthenicus	southern globe thistle	×
Najas	guadalupensis	southern naiad	
Sonchus	sp.	sow-thistle	
Silene	spaldingii	Spalding's catchfly	
Cypripedium	passerinum	sparrow's egg lady's slipper	
Erigeron	lonchophyllus	spear leaf fleabane	
Mentha	spicata	spearmint	×

Sonchus	asper	spiny sowthistle	×	
Centaurea	maculosa	spotted knapweed	×	ID,MT,OR,WA,WY
Scolochloa	festucacea	sprangletop	×	
Osmorhiza	chilensis	spreading sweetroot		
Arabis	divaricarpa	spreadingpod rockcress		
Myosotis	verna	spring forget me not		
Veronica	verna	spring speedwell	×	
Draba	verna	spring whitlowgrass	×	
Halenia	deflexa	spurred gentian		
Hypericum	perforatum	St. Johnswort	×	MT,OR,WA,WY
Rhus	typhina	staghorn sumac		
Cerastium	viscosum	sticky chickweed	×	
Urtica	dioica	stinging nettle		
Potentilla	recta	sulfur cinquefoil	×	MT,OR,WA
Euphorbia	helioscopia	sun spurge	×	
Petasites	frigidus	sweet coltsfoot		
Senecio	foetidus	sweet marsh butterweed		
Viola	odorata	sweet violet	×	
Ranunculus	acris	tall buttercup	×	MT
Festuca	arundinacea	tall fescue	×	
Arrhenatherum	elatus	tall oatgrass	×	
Sisymbrium	altissimum	tall tumbled mustard	×	
Senecio	jacobaea	tansy ragwort	×	ID,MT,OR,WA
Agropyron	dasystachyum	thick spiked wheatgrass		
Erigeron	filifolius	thread leaf fleabane		
Juncus	triglumis	three flowered rush		
Dracocephalum	thymiflorum	thyme leaved dragonhead	×	
Arenaria	serpyllifolia	thymeleaf sandwort	×	
Veronica	serpyllifolia	thymeleaf speedwell	×	
Phleum	pratense	timothy	×	
Arabis	glabra	tower mustard	×	
Botrychium	ascendens			

		triangular-lobed moonwort	
Myosotis	scorpioides	true forget me not	×
Scirpus	cespitosus	tufted clubrush	
Aconitum	x bicolor	two-colored monkshood	×
Vaccinium	myrtilloides	velvetleaf blueberry	
Vicia	sp.	vetch	
Lepidium	virginicum	Virginia pepperweed	
Erysimum	cheiranthoides	wallflower mustard	×
Scirpus	subterminalis	water clubrush	
Bidens	beckii	water marigold	
Polygonum	amphibium	water smartweed	
Veronica	anagallis- aquatica	water speedwell	×
Nasturtium	officinale	watercress	×
Sium	suave	waterparsnip	
Brasenia	schreberi	watershield	
Zosterella	dubia	waterstargrass	
Botrychium	crenulatum	wavy moonwort	
Atriplex	heterosperma	weedy orache	×
Symphotrichum	ascendens	western aster	
Clematis	occidentalis	western blue virginsbower	
Androsace	occidentalis	western fairy candelabra	
Lithospermum	ruderales	western gromwell	
Toxicodendron	rydbergii	western poison ivy	
Tragopogon	dubius	western salsify	×
Amelanchier	alnifolia	western serviceberry	
Kalmia	occidentalis	western swamp laurel	
Cicuta	douglasii	western waterhemlock	
Silene	latifolia	white catchfly	×
Trifolium	repens	white clover	×
Aster	falcatus	white prairie aster	
Melilotus	alba	white sweetclover	×

Monarda	fistulosa	wild bergamot		
Avena	fatua	wild oat	×	
Pastinaca	sativa	wild parsnip	×	
Panicum	miliaceum	wild proso millet	×	OR
Draba	nemorosa	wood whitlowgrass		
Fragaria	vesca	woods strawberry		
Erigeron	lanatus	woolly daisy		
Hieracium	scouleri	woolly hawkweed		
Sedum	stenopetalum	wormleaf stonecrop		
Alyssum	alyssoides	yellow alyssum	×	
Geum	aleppicum	yellow avens		
Penstemon	confertus	yellow penstemon		
Rhinanthus	crista-galli	yellow rattle		
Barbarea	vulgaris	yellow rocket	×	
Carex	flava	yellow sedge		
Collomia	tinctoria	yellow staining collomia		
Centaurea	solstitialis	yellow starthistle	×	ID,MT,OR,WA
Melilotus	officinalis	yellow sweetclover	×	
Linaria	vulgaris	yellow toadflax	×	ID,MT,OR,WA,WY
Iris	pseudacorus	yellowflag iris	×	MT,WA

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Weeds

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Flathead County Declared Noxious Weeds

PRIORITY 2A

These weeds are common in isolated areas of Flathead County, Montana. Management criteria will require eradication or containment where less abundant. Management shall be prioritized by local weed districts.

- Baby's breath (*Gypsophila paniculata*)
- Russian thistle (*Salsosa tragus*)
- Tumble mustard (*Sisymbrium altissimum*)
- White campion (*Silene latifolia*)

PRIORITY 3

Regulated Plants: (NOT FLATHEAD COUNTY 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.

- Creeping Bellflower (*Campanula rapunculoides*)
- Scentless Chamomile (*Matricaria perforate*)
- Absinth Wormwood (*Artemisia absinthium*)
- Common Yarrow (*Achillea millefolium*)
- Kochia (*Kochia scoparia*)

Flathead County Government

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APPENDIX E
SHPO RESEARCH REPORTS

Township:26 N	Range:19W	Section:6
MCKAY	KATHRYN L.	
5 /19/2000	<i>CULTURAL RESOURCE INVENTORY AND EVALUATION OF THE BIGFORK NORTH AND SOUTH ROADWAY RECONSTRUCTION PROJECT, BIG FORK MONTANA, FLATHEAD AND LAKE COUNTIES</i>	
CRABS Document Number:	FH 4 23322	Agency Document Number: STPP 52-1(18)27 CN 4035
Township:26 N	Range:20W	Section:1
DAVIS	LESLIE B.	
10 /18/1978	<i>WAYFARER STATE PARK</i>	
CRABS Document Number:	FH 6 3219	Agency Document Number:
Township:26 N	Range:20W	Section:1
MCKAY	KATHRYN L.	
5 /19/2000	<i>CULTURAL RESOURCE INVENTORY AND EVALUATION OF THE BIGFORK NORTH AND SOUTH ROADWAY RECONSTRUCTION PROJECT, BIG FORK MONTANA, FLATHEAD AND LAKE COUNTIES</i>	
CRABS Document Number:	FH 4 23322	Agency Document Number: STPP 52-1(18)27 CN 4035
Township:26 N	Range:20W	Section:1
MCKAY	KATHRYN L.	
5 / /2000	<i>CULTURAL RESOURCE INVENTORY AND EVALUATION OF THE BIGFORK - NORTH AND SOUTH ROADWAY CONSTRUCTION PROJECT, BIGFORK, MONTANA, FLATHEAD AND LAKE COUNTIES</i>	
CRABS Document Number:	LA 4 23015	Agency Document Number: STPP 52-1(18)27
Township:26 N	Range:20W	Section:1
CHURCH	TIM	
6 / /1988	<i>REPORT ON CULTURAL RESOURCE MONITORING AT TWO SITES IN REGIONS ONE AND TWO, LAKE AND MISSOULA COUNTIES, MONTANA</i>	
CRABS Document Number:	LA 6 12272	Agency Document Number: 00
Township:26 N	Range:20W	Section:1
MCKAY	KATHRYN L.	
5 / /2000	<i>CULTURAL RESOURCE INVENTORY AND EVALUATION OF THE BIGFORK - NORTH AND SOUTH ROADWAY CONSTRUCTION PROJECT, BIGFORK, MONTANA, FLATHEAD AND LAKE COUNTIES</i>	
CRABS Document Number:	LA 4 23015	Agency Document Number: STPP 52-1(18)27
Township:26 N	Range:20W	Section:1
MCKAY	KATHRYN L.	
5 / /2000	<i>CULTURAL RESOURCE INVENTORY AND EVALUATION OF THE BIGFORK - NORTH AND SOUTH ROADWAY CONSTRUCTION PROJECT, BIGFORK, MONTANA, FLATHEAD AND LAKE COUNTIES</i>	
CRABS Document Number:	LA 4 23015	Agency Document Number: STPP 52-1(18)27
Township:26 N	Range:20W	Section:1
AXLINE	JON A.	
4 /20/1994	<i>DISTRICT 1 SLOPE FLATTENING</i>	
CRABS Document Number:	FH 4 15932	Agency Document Number: STPHS 0002(93)

Township:27 N Range:19W Section:31

GRAY DALE M.

10 / /1990 *BIGFORK DIVERSION DAM - 24FH450*

CRABS Document Number: FH 6 11635 Agency Document Number:

Township:27 N Range:19W Section:31

HERITAGE RESEARCH CENTER, LTD.

7 /3 /2000 *CULTURAL RESOURCE INVESTIGATION: RE-EVALUATION OF THE BIGFORK DIVERSION DAM*

CRABS Document Number: FH 6 23031 Agency Document Number:

Township:27 N Range:19W Section:32

MARSHIK JOEL M.

8 /3 /1995 *BR 9015(11) SWAN RIVER BRIDGE (WEST OF FERNDALE) FLATHEAD COUNTY, MONTANA*

CRABS Document Number: FH 4 17729 Agency Document Number: BR 9015(11)

Township:27 N Range:19W Section:32

BEERY DEREK S., ET AL.

7 /13 /2005 *CULTURAL RESOURCES INVESTIGATIONS REPORT ASSOCIATED WITH THE BIG FORK HYDROELECTRIC PROJECT, FERC PROJECT IN FLATHEAD COUNTY, MONTANA*

CRABS Document Number: FH 6 27960 Agency Document Number: FERC PROJECT 2652-007

Township:27 N Range:20W Section:25

GRAY DALE M.

5 /1 /1997 *CULTURAL RESOURCE INVENTORY AND ASSESSMENT: PROPOSED POST OFFICE FACILITY BIGFORK, FLATHEAD COUNTY, MONTANA*

CRABS Document Number: FH 6 19482 Agency Document Number:

Township:27 N Range:20W Section:25

SAMDAHL ROD

6 /11 /1997 *TREASURE STATE CONCRETE - MERRIS SITE*

CRABS Document Number: FH 5 19418 Agency Document Number:

Township:27 N Range:20W Section:25

MCKAY KATHRYN L.

5 /19 /2000 *CULTURAL RESOURCE INVENTORY AND EVALUATION OF THE BIGFORK NORTH AND SOUTH ROADWAY RECONSTRUCTION PROJECT, BIG FORK MONTANA, FLATHEAD AND LAKE COUNTIES*

CRABS Document Number: FH 4 23322 Agency Document Number: STPP 52-1(18)27 CN 4035

Township:27 N Range:20W Section:25

MCKAY KATHRYN L.

5 / /2000 *CULTURAL RESOURCE INVENTORY AND EVALUATION OF THE BIGFORK - NORTH AND SOUTH ROADWAY CONSTRUCTION PROJECT, BIGFORK, MONTANA, FLATHEAD AND LAKE COUNTIES*

CRABS Document Number: LA 4 23015 Agency Document Number: STPP 52-1(18)27

Township:27 N	Range:20W	Section:25
MCKAY	KATHRYN L.	
5 / /2000	<i>CULTURAL RESOURCE INVENTORY AND EVALUATION OF THE BIGFORK - NORTH AND SOUTH ROADWAY CONSTRUCTION PROJECT, BIGFORK, MONTANA, FLATHEAD AND LAKE COUNTIES</i>	
CRABS Document Number:	LA 4 23015	Agency Document Number: STPP 52-1(18)27
Township:27 N	Range:20W	Section:35
WALKER-KUNTZ	PATRICK J.	
4 /19/1999	<i>KERR NORTH SHORE EROSION CONTROL PROJECT (FOR LEGACY CONSULTING SERVICES, BUTTE, MT)</i>	
CRABS Document Number:	FH 6 22247	Agency Document Number:
Township:27 N	Range:20W	Section:35
MCCORMICK	MARY E.	
2 / /1987	<i>CULTURAL RESOURCE LITERATURE SEARCH FLATHEAD LAKE</i>	
CRABS Document Number:	LA 6 4390	Agency Document Number:
Township:27 N	Range:20W	Section:35
BERGSTROM	MICHAEL W.	
2 /19/1990	<i>CULTURAL RESOURCE INVENTORY ALONG NORTH FLATHEAD LAKE AT TWO SHORELINE EROSION CONTROL DEMONSTRATION PROJECT SITES</i>	
CRABS Document Number:	FH 6 3248	Agency Document Number:
Township:27 N	Range:20W	Section:35
HALL	DANIEL S.	
12 / /2002	<i>CULTURAL RESOURCE SURVEY: BIGFORK 404 APPLICATION, BIGFORK MONTANA</i>	
CRABS Document Number:	FH 6 26062	Agency Document Number:
Township:27 N	Range:20W	Section:35
DEAVER	SHERRI	
5 /15/1989	<i>RE-EXAMINATION OF 18 CULTURAL RESOURCES ADJACENT TO FLATHEAD LAKE, LAKE AND FLATHEAD COUNTIES, MONTANA</i>	
CRABS Document Number:	LA 6 4396	Agency Document Number: 00
Township:27 N	Range:20W	Section:35
EMERSON	STEPHEN	
11 / /2012	<i>CULTURAL RESOURCES SURVEY FOR THE BONNEVILLE POWER ADMINISTRATIONS'S DIAMOND B RANCH AND OSPREY VIEW CONSERVATION PROJECTS, FLATHEAD COUNTY, MONTANA</i>	
CRABS Document Number:	FH 6 34014	Agency Document Number: 1991-013-00
Township:27 N	Range:20W	Section:36
SCOTT	SARA	
3 / /2015	<i>HERITAGE RESOURCES INVENTORY FOR PROPOSED IMPROVEMENTS TO WEST SHORE AND WAYFARERS STATE PARKS, FLATHEAD AND LAKE COUNTIES, MONTANA.</i>	
CRABS Document Number:	FH 6 37678	Agency Document Number:

Township:27 N Range:20W Section:36

MCCORMICK MARY E.

2 / /1987 CULTURAL RESOURCE LITERATURE SEARCH FLATHEAD LAKE

CRABS Document Number: LA 6 4390 Agency Document Number:

Township:27 N Range:20W Section:36

AXLINE JON A.

4 /20/1994 DISTRICT 1 SLOPE FLATTENING

CRABS Document Number: FH 4 15932 Agency Document Number: STPHS 0002(93)

Township:27 N Range:20W Section:36

DEAVER SHERRI

5 /15/1989 RE-EXAMINATION OF 18 CULTURAL RESOURCES ADJACENT TO FLATHEAD LAKE, LAKE AND FLATHEAD COUNTIES, MONTANA

CRABS Document Number: LA 6 4396 Agency Document Number: 00

Township:27 N Range:20W Section:36

WATKINS MARTY

1 /20/1990 MONTANA HISTORICAL AND ARCHITECTURAL INVENTORY, PARCHEN SUMMER CABIN (WAYFARER'S STATE RECREATION AREA)

CRABS Document Number: FH 6 3247 Agency Document Number:

Township:27 N Range:20W Section:36

MCLEAN GARY A., ET AL.

8 /26/1980 ARCHAEOLOGICAL TEST EXCAVATIONS: BIG FORK RANGER STATION

CRABS Document Number: FH 1 2941 Agency Document Number:

Township:27 N Range:20W Section:36

MCKAY KATHRYN L.

5 /19/2000 CULTURAL RESOURCE INVENTORY AND EVALUATION OF THE BIGFORK NORTH AND SOUTH ROADWAY RECONSTRUCTION PROJECT, BIG FORK MONTANA, FLATHEAD AND LAKE COUNTIES

CRABS Document Number: FH 4 23322 Agency Document Number: STPP 52-1(18)27 CN 4035

Township:27 N Range:20W Section:36

MCKAY KATHRYN L.

5 / /2000 CULTURAL RESOURCE INVENTORY AND EVALUATION OF THE BIGFORK - NORTH AND SOUTH ROADWAY CONSTRUCTION PROJECT, BIGFORK, MONTANA, FLATHEAD AND LAKE COUNTIES

CRABS Document Number: LA 4 23015 Agency Document Number: STPP 52-1(18)27

Township:27 N Range:20W Section:36

MCKAY KATHRYN L.

5 / /2000 CULTURAL RESOURCE INVENTORY AND EVALUATION OF THE BIGFORK - NORTH AND SOUTH ROADWAY CONSTRUCTION PROJECT, BIGFORK, MONTANA, FLATHEAD AND LAKE COUNTIES

CRABS Document Number: LA 4 23015 Agency Document Number: STPP 52-1(18)27

Township:27 N Range:20W Section:36
CAYWOOD JANENE M., ET AL.

3 /11/1991 EVALUATION OF REGION 1 FOREST SERVICE-OWNED BUILDINGS FOR ELIGIBILITY TO THE NATIONAL REGISTER OF HISTORIC PLACES

CRABS Document Number: ZZ 1 13017 Agency Document Number:

Township:27 N Range:20W Section:36
CHURCH TIM

6 / /1988 REPORT ON CULTURAL RESOURCE MONITORING AT TWO SITES IN REGIONS ONE AND TWO, LAKE AND MISSOULA COUNTIES, MONTANA

CRABS Document Number: LA 6 12272 Agency Document Number: 00

Township:27 N Range:20W Section:36
CHOQUETTE WAYNE T.

5 /1/1981 PROPOSED P.P.L. PARK ON THE SWAN RIVER

CRABS Document Number: FH 6 3225 Agency Document Number:

Township:27 N Range:20W Section:36
DAVIS LESLIE B.

10 /18/1978 WAYFARER STATE PARK

CRABS Document Number: FH 6 3219 Agency Document Number:

Township:27 N Range:20W Section:36
SHARROCK FLOYD W.

10 /18/1978 ARCHAEOLOGICAL SURVEY, BIG FORK RANGER STATION

CRABS Document Number: FH 1 2919 Agency Document Number:

Township:27 N Range:20W Section:36
MCLEAN GARY A.

8 /26/1980 ARCHAEOLOGICAL TEST EXCAVATIONS: BIG FORK RANGER STATION

CRABS Document Number: FH 1 2939 Agency Document Number:

Site #	Twp	Rng	Sec	Qs	Site Type1	Site Type 2	Time Period	Owner	NR Status
24FH0942	26 N	20 W	1	NE	Historic Residence	Null	Historic More Than One Decade	Private	Ineligible
24FH0943	26 N	20 W	1	NE	Historic Residence	Historic Building Foundation	Historic More Than One Decade	Private	Ineligible
24FH0944	26 N	20 W	1	SE	Historic Residence	Historic Fence	Historic More Than One Decade	Private	Ineligible
24FH0855	26 N	20 W	1		Lithic Material Concentration	Null	No Data	State Owned	undetermined
24FH0450	27 N	19 W	31	NE	Historic Irrigation System	Null	Historic More Than One Decade	Private	CD
24FH0972	27 N	19 W	31	NW	Historic Cairn/Land Marker	Null	Historic Period	Private	undetermined
24FH0673	27 N	19 W	32	SE	Historic Road/Trail	Historic Vehicular/Foot Bridge	Historic More Than One Decade	State Owned	NR Listed
24FH1037	27 N	19 W	32	SE	Historic Road/Trail	Null	Historic Period	MDOT	Ineligible
24FH1037	27 N	19 W	32	SE	Historic Road/Trail	Null	Historic Period	MDOT	Ineligible
24FH0938	27 N	20 W	25	NE	Historic Commercial Development	Historic Residence	Historic More Than One Decade	Private	Ineligible
24FH0939	27 N	20 W	25	NE	Historic Residence	Historic Log Structure	Historic More Than One Decade	Private	Ineligible
24FH0014	27 N	20 W	35	NE	Lithic Material Concentration	Firehearths or Roasting Pits, FCR	No Data	No Data	undetermined
24FH1224	27 N	20 W	35	NW	Historic Homestead/Farmstead	Null	1930-1939	State Owned	Ineligible
24FH0935	27 N	20 W	36	NE	Historic Vehicular/Foot Bridge	Null	Historic More Than One Decade	MDOT Other	undetermined
24FH0855	27 N	20 W	36	NW	Lithic Material Concentration	Null	No Data	State Owned	undetermined
24FH0427	27 N	20 W	36	NW	Historic Ranger Station	Null	Historic More Than One Decade	Forest Service	Ineligible
24FH0094	27 N	20 W	36	SE	Fishing Site	Null	No Indication of Time	Other	undetermined
24FH0421	27 N	20 W	36	SE	Historic Log Structure	Null	1890-1899	State Owned	Ineligible
24FH0941	27 N	20 W	36	SE	Historic Residence	Null	Historic More Than One Decade	Private	Ineligible
24FH0940	27 N	20 W	36	SE	Historic Residence	Null	Historic More Than One Decade	Private	Ineligible
24FH0743	27 N	20 W	36	SE	Historic Vehicular/Foot Bridge	Null	Historic More Than One Decade	State Owned	NR Listed