



**DRAFT**  
**ENVIRONMENTAL**  
**SCAN REPORT**

**PREPARED FOR:**



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## ABBREVIATIONS AND ACRONYMS

APE.....	Area of Potential Effect
BA .....	Biological Assessment
BBER.....	Bureau of Business and Economic Research
BMPs.....	Best Management Practices
BO .....	Biological Opinion
CERCLIS .....	Comprehensive Environmental Response, Compensation and Liability Information System
CFR.....	Code of Federal Regulations
CO .....	Carbon Monoxide
CSKT.....	Confederated Salish and Kootenai Tribes
CWA.....	Clean Water Act
DEQ.....	Montana Department of Environmental Quality
EIS .....	Environmental Impact Statement
EO .....	Executive Order
EPA.....	U.S. Environmental Protection Agency
ESA.....	Endangered Species Act
FEIS .....	Final Environmental Impact Statement
FEMA.....	Federal Emergency Management Agency
FHWA.....	Federal Highway Administration
FPPA.....	Farmland Protection Policy Act
FWP.....	Montana Fish, Wildlife & Parks
GIS.....	Geographic Information System
GWIC.....	Groundwater Information Center
HUC.....	Hydrologic Unit Code
LUST .....	Leaking Underground Storage Tank
LWCF.....	Land and Water Conservation Funds
MBMG.....	Montana Bureau of Mines and Geology
MCA .....	Montana Code Annotated
MDT .....	Montana Department of Transportation
MEPA .....	Montana Environmental Policy Act
MFISH .....	Montana Fisheries Information System
MNHP .....	Montana Natural Heritage Program
NEPA .....	National Environmental Policy Act
NHPA.....	National Historic Preservation Act
NRCS .....	Natural Resource Conservation Service
NRHP.....	National Register of Historic Places
NRIS .....	Natural Resource Information System
ORV.....	Outstandingly Remarkable Value
PGA.....	Peak Ground Acceleration
Pb.....	Lead
PM <sub>2.5</sub> .....	Particulate Matter with a Diameter of 2.5 Micrometers or less
PM <sub>10</sub> .....	Particulate Matter with a Diameter of 10 Micrometers or less
PWS.....	Public Water Supply
ROD.....	Record of Decision
RP.....	Reference Post
Section 4(f).....	Section 4(f) of the 1966 Department of Transportation Act
Section 6(f).....	Section 6(f) of the National Land and Water Conservation Funds Act
SEIS .....	Supplemental Environmental Impact Statement
SO <sub>2</sub> .....	Sulfur Dioxide
TMDL.....	Total Maximum Daily Load
USACE .....	U.S. Army Corps of Engineers
USC .....	United States Code
USFS .....	U.S. Forest Service
USFWS .....	U.S. Fish and Wildlife Service
USGS .....	U.S. Geological Service



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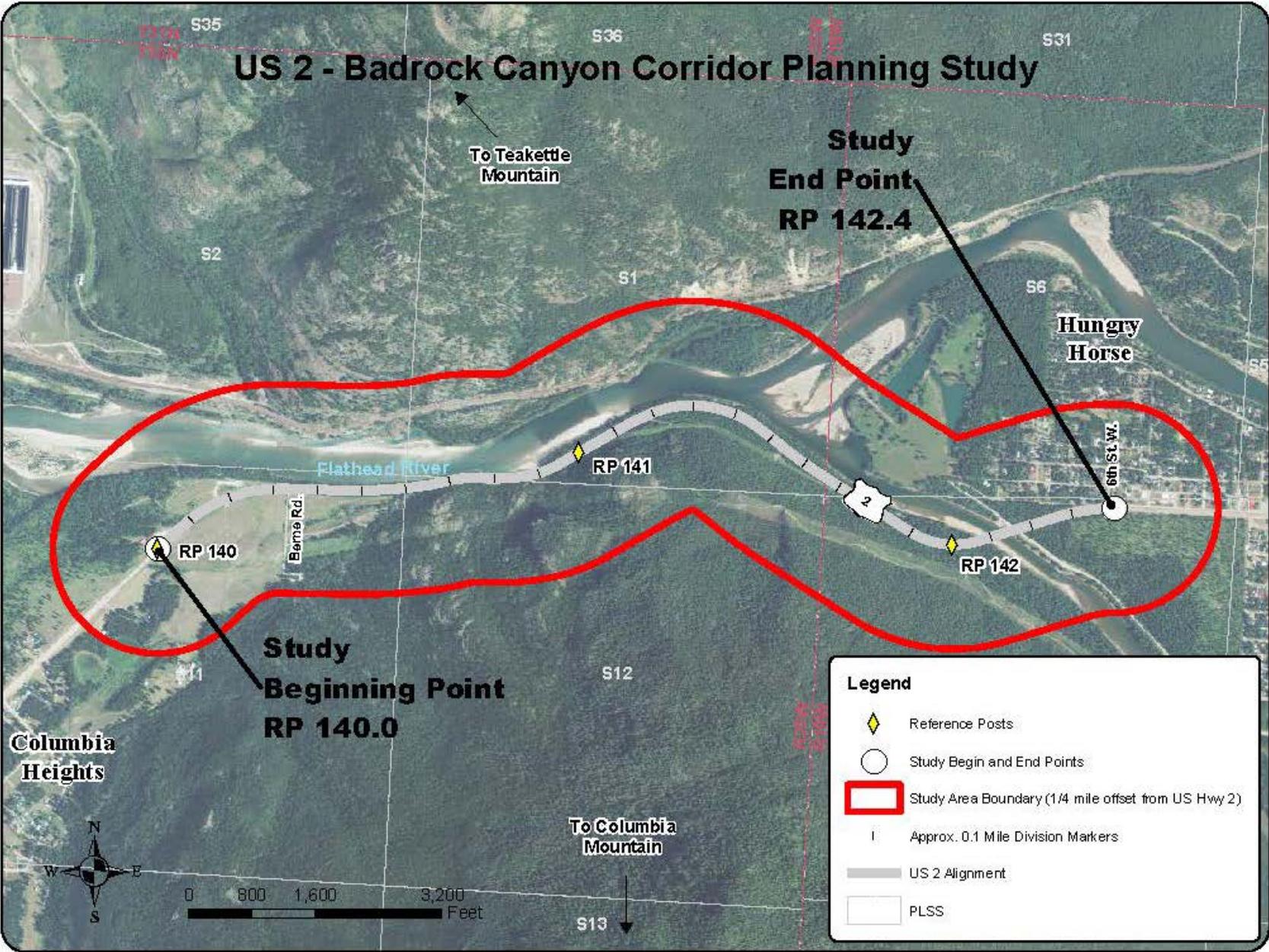
## 1.0 INTRODUCTION

### 1.1 Geographic Setting and Study Area

The study corridor is located in northwestern Montana in Flathead County. From west to east, communities in proximity to the study area include Columbia Falls, Hungry Horse, Martin City, and Coram. Through the study corridor, US 2 generally follows an east-west course. The main stem of the Flathead River is located north of US 2 through the corridor, and closely parallels the highway over a portion of the study area. US 2 crosses the South Fork of the Flathead River before entering Hungry Horse at the eastern end of the study corridor. Located within the Flathead National Forest, the Whitefish Mountain Range extends to the north of the study corridor and the Swan Mountain Range extends to the south. Rock outcroppings forming the lower slopes of Columbia Mountain directly parallel US 2 to the south over a portion of the corridor.

This study focuses on the portion of US 2 beginning at Reference Post (RP) 140.0 and ending at RP 142.4 (the approximate intersection of US 2 / 6<sup>th</sup> Street West). Figure 1-1 illustrates the study area.

Figure 1-1 Study Area



Source: MDI, 2011; NRIS, 2011; DOWL HKM, 2011.



## 1.2 Previous Planning Efforts in US 2 – Badrock Canyon Corridor

In 1995, a Final Environmental Impact Statement (FEIS) / Section 4(f) Evaluation was completed to assess the impacts of reconstructing 4.5 miles of US 2 from approximate Reference Post (RP) 138.3 to RP 142.7 between Columbia Heights and Hungry Horse in Flathead County, MT. A Record of Decision (ROD) on the FEIS was signed by FHWA on December 22, 1995. The ROD approved Alternative 1, which entailed a four- and five-lane design for the reconstruction of US 2. Pursuant to the EIS, MDT initiated two reconstruction projects within the Columbia Heights-Hungry Horse-West corridor. The Columbia Heights-East project extended from RP 138.3 to RP 140.1, and the Hungry Horse-West project extended from RP 140.1 to RP 142.7.

In the years following completion of the FEIS and ROD, Flathead County experienced substantial growth, which resulted in the need to update traffic volumes and accident rates. Federal and state regulations relevant to some project activities had changed. Additionally, other concerns were identified that required MDT to make design modifications or that had the potential to dictate new and more notable project design changes. Some of these design activities resulted in more accurate quantification of the environmental effects disclosed in the FEIS. Lastly, controversy surrounded the alternative approved in the ROD. For these reasons, MDT conducted a Re-evaluation of the FEIS and Section 4(f) Evaluation in 2002.

The Re-evaluation concluded the FEIS adequately described the impacts associated with reconstruction of US 2 within the limits of the Columbia Heights-East project. This reconstruction project proceeded and was completed in 2004. The Re-evaluation also concluded the FEIS adequately discussed the environmental effects of building a new bridge across the South Fork of the Flathead River. The Re-evaluation found that the preferred alternative discussion in the FEIS and ROD did not adequately address environmental effects of reconstructing US 2 through Badrock Canyon (RP 140.1 to RP 141.2) on an alignment that minimized or totally avoided rock excavation near Berne Memorial Park. Since the Re-evaluation, additional information regarding Native American cultural concerns in the area and potential impacts to a natural gas transmission pipeline was identified. The Re-evaluation called for a Supplemental Environmental Impact Statement (SEIS) to be prepared for this segment of the corridor.

In early 2011, the canyon community approached MDT regarding potential improvement to US 2 through Badrock Canyon. In lieu of preparing a SEIS at this time, MDT hosted an informational



meeting to identify possible concerns along the corridor. Based on comments provided during the meeting as well as written comments submitted during the comment period from May 12 to May 20, 2011, MDT determined there is local interest in pursuing further analysis of the corridor. This effort, referred to as Phase I, was completed in June 2011. Phase II will entail further analysis and completion the corridor study process for the portion of the corridor from US 2 between RP 140.0 and RP 142.4 (the approximate intersection of US 2/6<sup>th</sup> Street West).

Using information previously gathered as a baseline guide, this Environmental Scan provides an updated summary of physical, biological, social, and cultural resources in the US 2 – Badrock Canyon corridor. This report will serve as a planning level overview to assist in identifying constraints and opportunities in the corridor. Information provided in this report may be used in a future SEIS as called for in the Re-evaluation, or in other appropriate environmental documentation as determined based on the scope of an improvement. The Environmental Scan is not intended to satisfy NEPA/MEPA requirements for any forwarded improvement options.

## **2.0 PHYSICAL ENVIRONMENT**

### **2.1 Soil Resources and Prime Farmland**

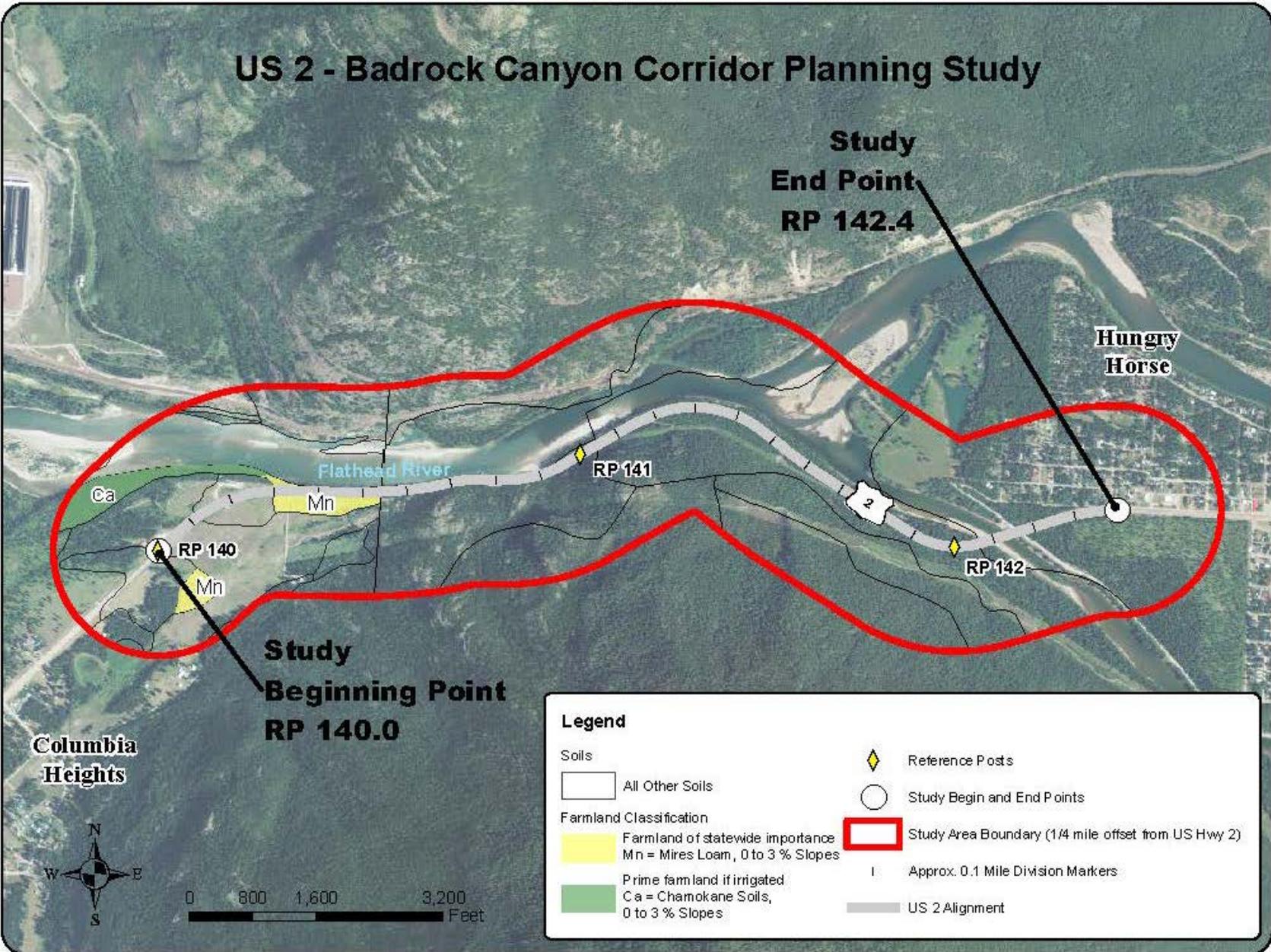
The Farmland Protection Policy Act (FPPA) of 1981 (Title 7 United States Code, Chapter 73, Sections 4201-4209) has as its purpose “to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to assure that federal programs are administered in a manner that, to the extent practicable, will be compatible with State, unit of local government, and private programs and policies to protect farmland.” Farmland is defined by the Act in Section 4201 as including prime farmland; unique farmland; and farmland, other than prime or unique farmland, that is of statewide or local importance.

Prime farmland soils are those that have the best combination of physical and chemical characteristics for producing food, feed, and forage. Prime farmland can be either non-irrigated or lands that would be considered prime if irrigated. Farmland of statewide importance is land, in addition to prime and unique farmlands, that is of statewide importance for the production of food, feed, fiber, forage, and oilseed crops.



As illustrated in Figure 2-1, areas at the western end of the study corridor have been classified as prime farmland if irrigated and farmland of statewide importance. The NRCS uses the CPA-106 Farmland Conversion Impact Rating Form for Linear Projects to maintain an inventory of the prime and important farmlands within the state. If construction activities associated with forwarded improvement options within the corridor were to impact these soils, a CPA-106 Farmland Conversion Impact Rating Form for Linear Projects would need to be completed. The process for completing this form requires mapping of the prime and important farmlands to be converted to non-farmable land, coordination with the NRCS, and final completion of the conversion form.

Figure 2-1 Soil Resources in Study Area



Source: NRIS, 2011; MDT, 2011; DOWL HKM, 2011.



## 2.2 Geologic Resources

### 2.2.1 Geologic Features

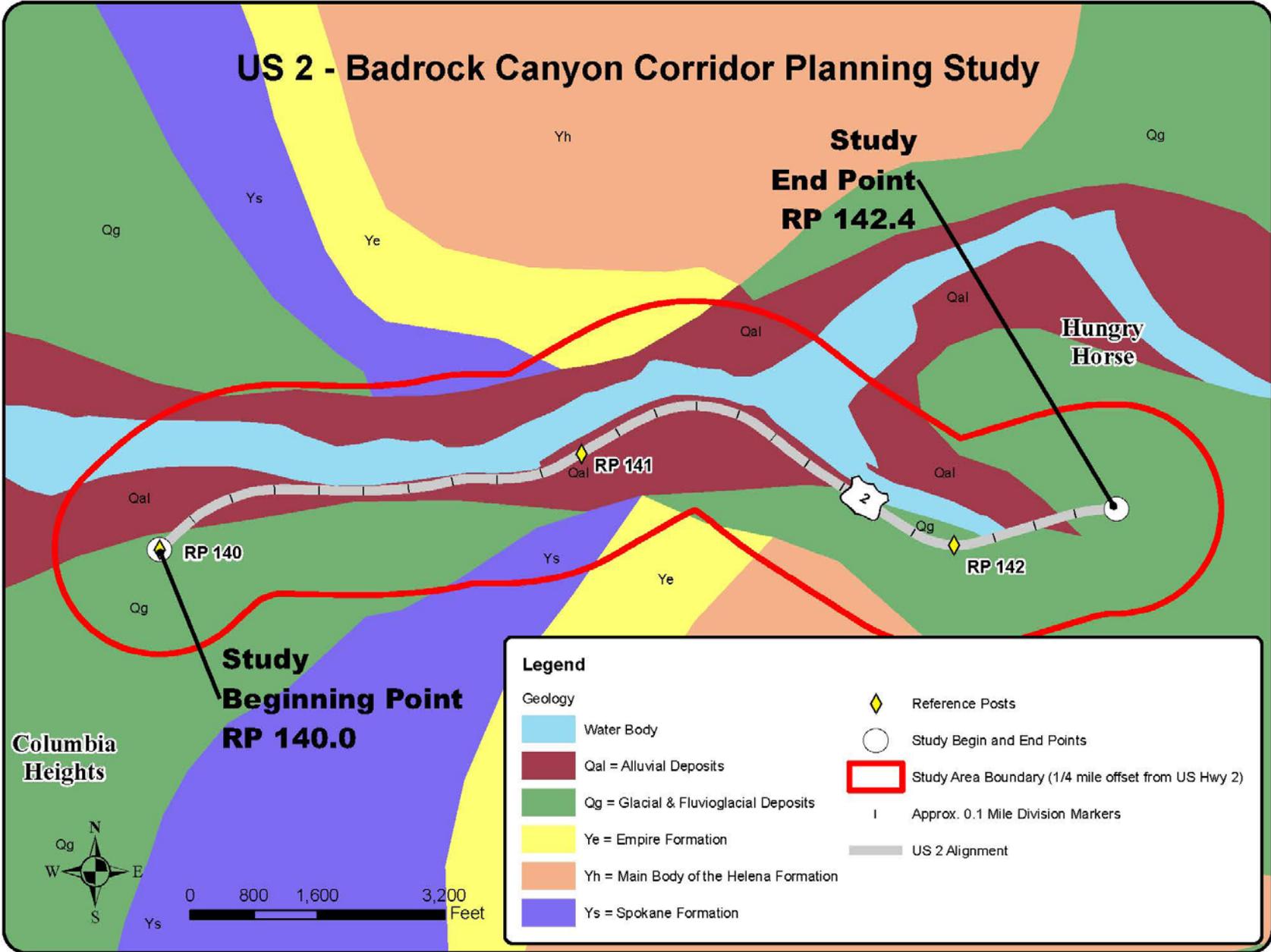
The study area is composed of the geologic features listed in Table 2.1 and illustrated in Figure 2-2. Alluvial deposits immediately border the Flathead River, while glacial and fluvio-glacial deposits spread further into outlying areas. Rock outcroppings bordering US 2 are composed of quartzite, siltite, and argillite ranging from 25 to 60 feet high within the study area. As illustrated in the geologic map for the Kalispell Quadrangle (Appendix 1), fault lines are located to the east and west of the immediate study area.

**Table 2.1 Geologic Features in Study Area**

Map Unit	Map Unit Description	
Qal	Alluvial deposits (Holocene)	Gravel, sand, silt, and clay deposits of stream and river channels, and floodplains.
Qg	Glacial and fluvio-glacial deposits (Pleistocene)	Dominantly till, outwash, and local glacial lake deposits.
Ye	Empire Formation (Middle Proterozoic)	Grayish green and pale olive gray argillite and siltite with subordinate thin beds of quartzite and sandy limestone. Thickness as much as 610 m.
Yh	Main body of the Helena Formation (Middle Proterozoic)	Cycles of basal white quartzite or intraclast beds overlain by couplets of green siltite and argillite, capped by dolomite beds. Calcite pods and ribbons (molar tooth structure) common.
Ys	Spokane Formation (Middle Proterozoic)	Red siltite and argillite in mudcracked couplets. Thickness as much as 1,500 m (492 ft).

Source: MBMG, 2007.

Figure 2-2 Geologic Resources in Study Area



## 2.2.2 Geologic Hazards

The 2008 U.S. Geological Survey (USGS) National Seismic Hazard Maps display earthquake ground motions for various probability levels across the United States. The maps are derived from seismic hazard curves calculated on a grid of sites across the United States that describe the frequency of exceeding a set of ground motions. Appendix 2 contains a map of the United States showing the levels of horizontal shaking that have a 2-in-100 chance of being exceeded in a 50-year period. Shaking (or peak ground acceleration, PGA) is expressed as a percentage of  $g$ , which is the acceleration of a falling object due to gravity. This map shows that the US 2 corridor is located in an area of mid-range hazard.

The 1995 FEIS and the 2002 Re-evaluation noted that the bedding and joint structure of the rocks in Badrock Canyon provide a potential for rockfalls. Geotechnical investigations conducted in support of the FEIS identified tension cracks and evidence of past movements in the large rock plates that comprise the outcrops.

If improvement options involving rock excavation are forwarded from this study, additional geotechnical analysis, including rock mapping and borings, would be needed to assess the stability of rock outcroppings in the study area.



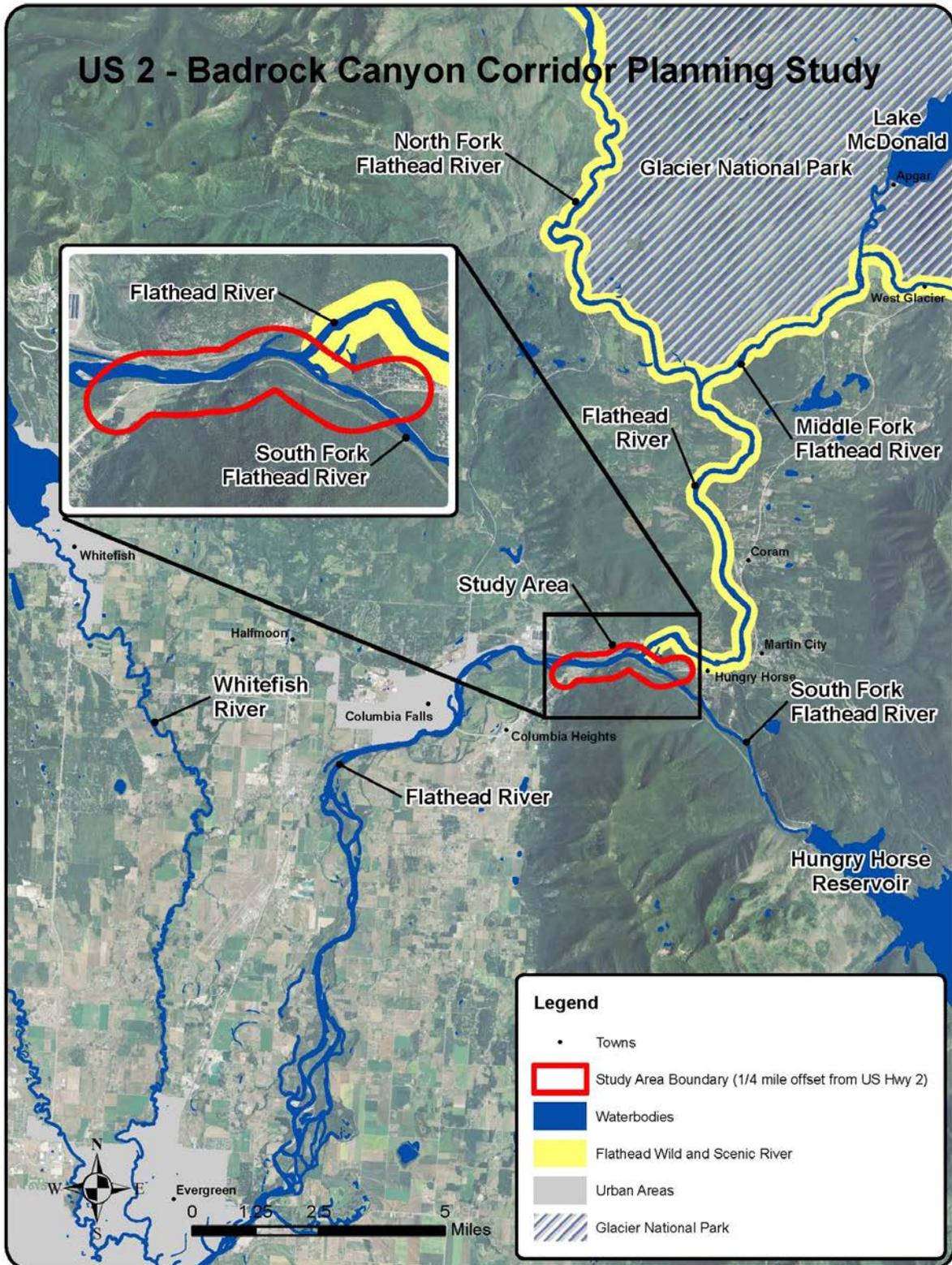
Unstable geologic features south of US 2

## 2.3 Water Resources

### 2.3.1 Surface Water

Surface water resources in the immediate study area include the main stem of the Flathead River and the South Fork of the Flathead River. Figure 2-3 illustrates water bodies in the study area vicinity.

Figure 2-3 Water Resources in Study Area



Source: NRIS, 2011; USGS, 2011; National Wild and Scenic Rivers, 2011; DOWL HKM, 2011.



### *Impairment*

In 1997, the Montana State Legislature assigned the Montana Department of Environmental Quality (DEQ) the responsibility under Section 401 of the federal Clean Water Act (CWA) (33 U.S.C. 1251 – 1376) and the Montana Water Quality Act (75-5-101 M.C.A., et seq) to monitor and assess the quality of Montana surface waters and to identify impaired or threatened stream segments and lakes. When water bodies fail to meet state water quality standards, DEQ also has the authority to determine the causes and sources of pollutants in a sub-basin assessment and establish maximum pollutant levels, called total maximum daily loads (TMDLs), within a watershed. The TMDLs become the basis for implementation plans to restore water quality to a level that supports its designated beneficial uses. Implementation plans are developed to identify and describe pollutant controls and management measures to be undertaken (such as Best Management Practices, or BMPs), the mechanisms by which the selected measures would be put into action, and the individuals and entities responsible for implementation projects.

The study area lies within the Flathead Lake watershed (Hydraulic Unit Code [HUC] 17010208) and the South Fork Flathead River watershed (HUC 17010209), which are illustrated in Figure 2-4. Both of these watersheds are listed in the DEQ 2010 Integrated 303(d)/305(b) Water Quality Report for Montana. Within the study area, the main stem of the Flathead River from its headwaters to Flathead Lake is listed as Category 3, which indicates waters for which there is insufficient data to assess the use support of any applicable beneficial use. No use support determinations have been made for the main stem as of the 2010 reporting cycle. Additionally, the South Fork of the Flathead River from the Hungry Horse Dam to its mouth is listed as Category 4C, which indicates that non-pollutant-related use impairment has been identified and TMDLs are not required. Appendix 3 contains water quality reports for these two water bodies.

DEQ is using a TMDL planning process in the Flathead Lake watershed that incorporates a combination of a watershed scale hydrologic model, lake response models, and on-the-ground field efforts to further identify and quantify pollutant contributions from all significant sources. Used in combination, these methods are anticipated to yield the best available assessment of current water quality conditions. From initial efforts, DEQ has identified several primary causes of impairment to water quality in the Flathead Basin, including nutrients (nitrogen and

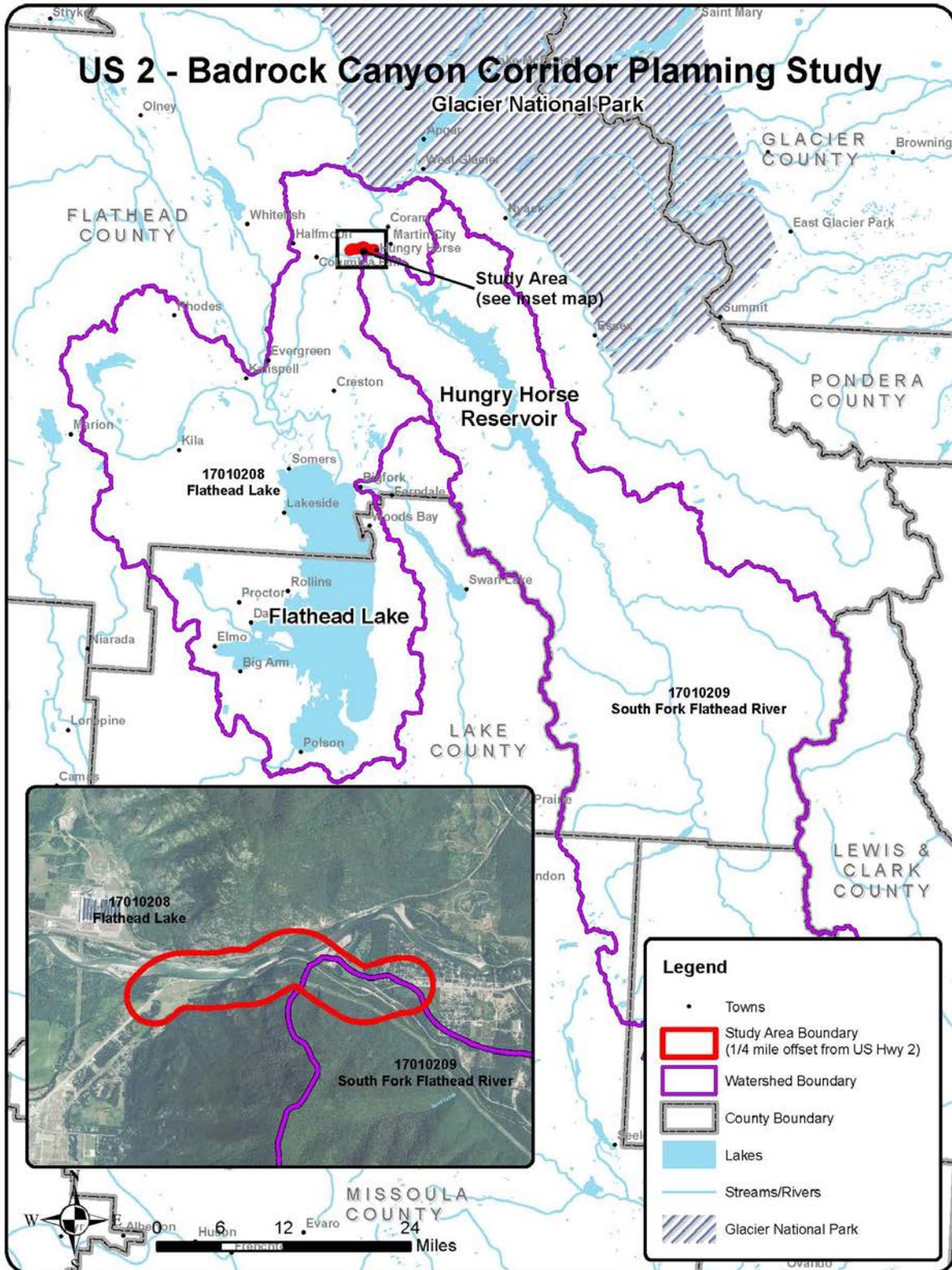


phosphorus), siltation/sediment, PCBs (polychlorinated biphenyls , which are a class of organic compounds), metals (mercury, arsenic, copper and lead), and thermal modification (temperature).

DEQ completed the *Phase I Nutrient Management Plan and Total Maximum Daily Load for Flathead Lake* in December 2001. Although Flathead Lake was the focus of the TMDL, the geographic scope of the plan included the entire Flathead Basin. In December 2004, DEQ prepared the *Water Quality Assessment and TMDLs for the Flathead River Headwaters Planning Area*. DEQ is currently in the process of developing TMDLs for impaired waters in the Flathead-Stillwater Planning Area, which includes all tributaries to the Flathead River, and developing Phase II allocations for nutrients in the Flathead Lake watershed. This process will yield individual TMDLs for all impaired rivers and lakes and a comprehensive management plan for the watershed. The TMDL development process is anticipated to be completed in 2013.

If improvement options are forwarded from this study, impacts to surface waters should be minimized to the extent practicable. Building on the analysis conducted in support of the FEIS effort, an updated water quality analysis will be required during the project development process.

Figure 2-4 Watersheds in Study Area Vicinity



Source: NRIS, 2011; USGS, 2011; DOWL HKM, 2011.



### *Wild and Scenic River Designation*

The National Wild and Scenic Rivers System was created by Congress in 1968 (Public Law 90-542; 16 U.S.C. 1271 et seq.) to preserve certain rivers with outstandingly remarkable natural, cultural, and recreational values (ORVs) in a free-flowing condition for the enjoyment of present and future generations.

Rivers may be designated by Congress or, if certain requirements are met, the Secretary of the Interior. Each river is administered by either a federal or state agency. Designated segments need not include the entire river and may include tributaries. For federally administered rivers, the designated boundaries generally average one-quarter mile on either bank in the lower 48 states in order to protect river-related values. Rivers may be classified as wild, scenic, or recreational as follows:

- Wild river areas — Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.
- Scenic river areas — Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.
- Recreational river areas — Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

Within the study area, the Middle Fork of the Flathead River upstream from its confluence with the South Fork of the Flathead River near Hungry Horse is designated as a Recreational River. Its values include recreation, scenery, historic sites, unique fisheries, and wildlife such as grizzly bears and wolves. Figure 2-3 illustrates the portion of the Middle Fork River within the study area.

A Management Corridor for the Middle Fork Recreational River segment has been designated and is administered by the USFS. The management corridor boundary is depicted in the FEIS and ranges from approximately one-third to two-thirds of a mile in width in the vicinity of the study area. As noted in the 2002 Re-evaluation, efforts were underway by a group of federal, state, and county agencies to develop a river management plan at the time of the FEIS. The intent of the plan was to address fisheries, wildlife, recreation, agriculture, and water quality issues along the Flathead River from the confluence of the South Fork and the main stem to the



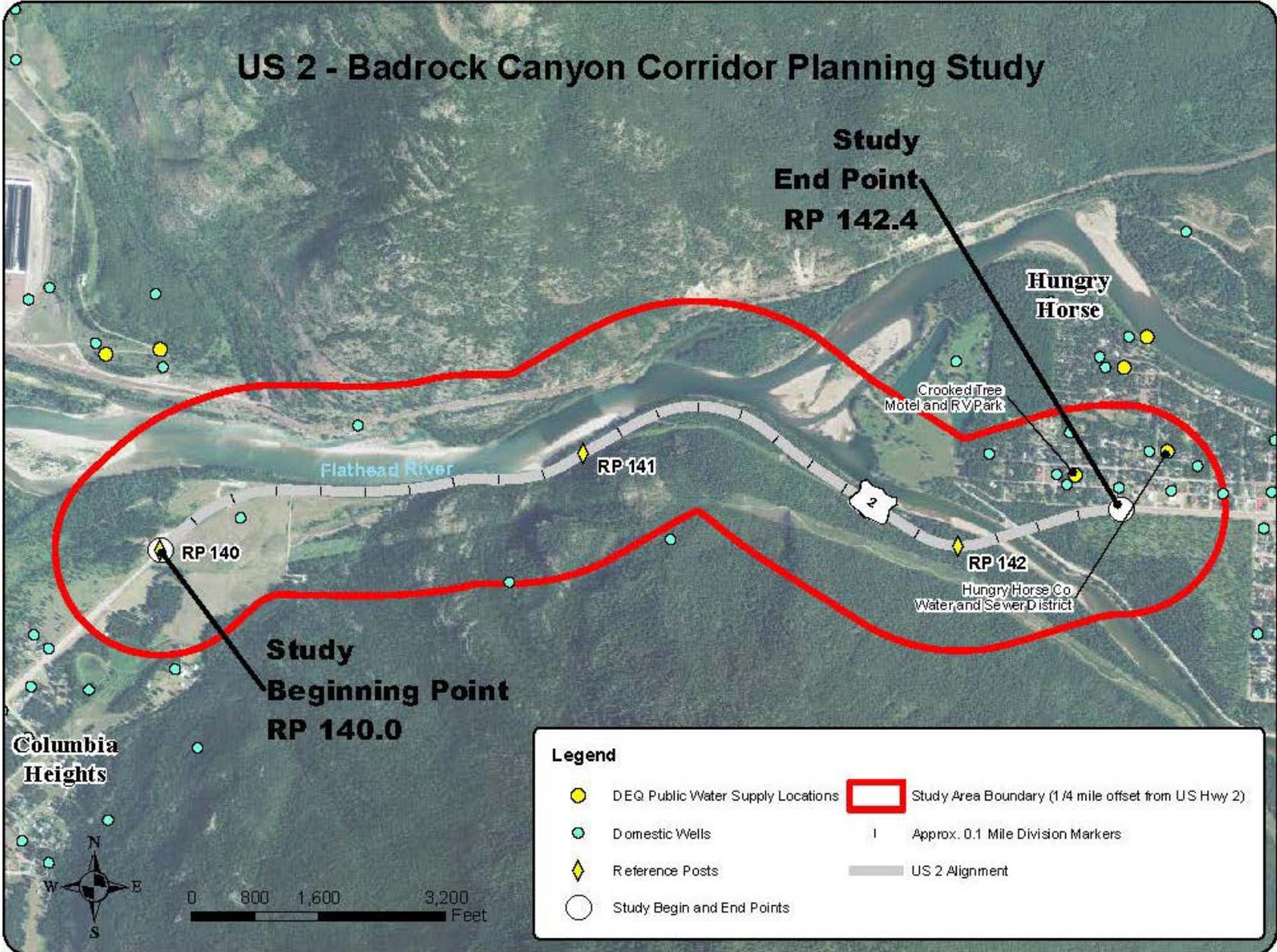
north shore of Flathead Lake. A river management plan was not developed and no regulatory changes relating to control of lands adjacent to the river were implemented at the time of the Re-evaluation.

If improvement options are forwarded from this study, MDT will coordinate with USFS during the project development process to identify potential effects on Middle Fork Flathead River ORVs and any measures needed to mitigate impacts to the Middle Fork Recreational River Corridor.

### **2.3.2 Groundwater**

There are a number of domestic and public water supplies within the study area, as illustrated in Figure 2-5. Yellow markers indicate public water supplies (PWS) serving 25 or more people per day as currently listed in the DEQ PWS database. Blue markers indicate approximate locations of domestic wells based on historic drilling records listed in the Montana Bureau of Mines and Geology (MBMG) Groundwater Information Center (GWIC) database. The GWIC database does not provide information on current usage or status of domestic wells. Locations of PWS and domestic wells were not verified in the field.

Figure 2-5 Groundwater Sources



Source: NRIS, 2011; DEQ, 2011; MBMG, 2011; MDT, 2011; DOWL HKM, 2011.

The Hungry Horse County Water and Sewer District PWS system is located at the east end of the study area in Hungry Horse. This system consists of two wells and is classified by DEQ as a Community PWS. The two wells are connected to a storage tank and then distributed to connections in town. The source water is not treated prior to distribution. According to surveys conducted by DEQ, the PWS has 354 active service connections that serve approximately 1,000 residents of Hungry Horse.

The Crooked Tree Motel and RV Park system is classified by DEQ as a Transient PWS. Its single well is also located at the east end of the study area in Hungry Horse. According to surveys conducted by DEQ, the PWS has 28 active service connections that serve approximately 84 transient persons and three residents. The motel and RV park has been classified as operating on a seasonal basis. The source is connected to a pressure control tank and then distributed to the service connections. The source water is not treated prior to distribution.

Coliform bacteria have been identified in several routine samples collected in past years at both the Hungry Horse County Water and Sewer District and the Crooked Tree Motel and RV Park systems. The most recent water quality violations occurred in 2009 and 2011. Appendix 4 contains reports from the DEQ PWS database with violation records for the PWS systems during the period 1990 to 2011.

In addition to the two public water supplies currently listed in the DEQ database, a spring is located at Berne Memorial Park. The Berne Memorial Park spring is not considered a public water supply. Water samples collected from the Berne Memorial Park spring have frequently shown the presence of coliform bacteria. In 2000, DEQ classified the Berne Memorial Park spring as groundwater under the influence of surface water and issued an order requiring MDT to treat the water, find an approved water source, or permanently disconnect the spring box and eliminate access to the water. After considering public comment and a variety of alternatives for maintaining and/or treating the water from the spring, MDT concluded the quality of



**Berne Memorial Park Spring**



water from the spring could not be guaranteed for safe public consumption and removed the piping from the spring outlet in October 2001. Shortly after MDT removed the piping, new piping was installed by an unknown party and consumption of water from the spring continues. On May 24, 2002, MDT posted signs warning the public that water may be contaminated and advising against human consumption.

If improvement options are forwarded from this study, impacts to domestic and public water supplies should be avoided where practicable.

### **2.3.3 Irrigation**

No irrigated farmland exists within the study area. Irrigation maps for Flathead County within the study area are provided in Appendix 5.

## **2.4 Wetlands (EO 11990)**

The U.S. Army Corps of Engineers (USACE) defines wetlands as those areas that are inundated or saturated by surface or groundwater 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.

Initial wetland delineations were conducted in 1993 in support of the FEIS. As part of the 2002 Re-evaluation effort, MDT retained a biological resources consultant to verify wetland boundaries delineated in 1993. Wetland delineations, mapping, and functional assessments for wetlands within the study area are provided in the Columbia Heights-Hungry Horse Draft Wetland Re-Evaluation Report prepared by Land & Water Consulting, Inc. on April 25, 2002 (Appendix 6). The 2002 report assessed wetlands in the study area using the 1999 MDT Montana Wetland Assessment Method, which assigns ratings for 12 wetland functions and values. Based on these ratings, wetlands were assigned an overall wetland category, with Category I being the highest (i.e., best) rating, and Category IV the lowest. The 2002 wetland report identified five wetland areas that occur within the current study area. Wetlands 4, 5B, 5D, and 6 were described as Category III wetlands, while Wetland Site 5C was identified as a Category II wetland. The 2002 report found that wetlands within the study area provide groundwater discharge/recharge, surface water storage, sediment/nutrient/toxicant removal, sediment/shoreline stabilization, production export/food chain support, and recreation potential. Additionally, Wetland 5C provides habitat for fish. Most sites were considered



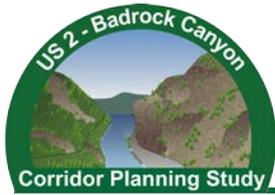
moderately to highly disturbed due to fill placement, proximity to the highway and other roads, hydrological alteration, and/or degradation associated with foot traffic and garbage placement.

A subsequent wetland verification / delineation was conducted by Parsons Brinckerhoff in 2004. Wetland locations and non-wetland channel locations were generally identical to those mapped in 2002, with some minor border modifications where sites had expanded or decreased in size since 2002. The 2004 assessment determined that the south riverbank is approximately 85% non-wetland, with the remaining 15% consisting of scattered two to four-foot wide wetland fringe from approximately Berne Memorial Park east to the study terminus. The remainder of the riverbank to the west study terminus is considered non-wetland. It was noted that the wetland at (former) station 177 may offer minor (0.1 to 0.2 acre) mitigation potential via expansion. No final mapping or data sheets were produced as part of the 2004 effort.

Wetland delineations were not conducted in support of this Environmental Scan. If improvement options are forwarded from this study, updated wetland delineations conducted according to standard USACE procedures would be needed to verify wetland boundaries in the study area. Wetland impacts should be avoided to the greatest extent practicable. All unavoidable wetland impacts will be mitigated as required by the USACE and in accordance with Federal Highway Administration (FHWA) and MDT policies and Executive Order (EO) 11990, Protection of Wetlands.

## **2.5 Floodplains (EO 11998) and Floodways**

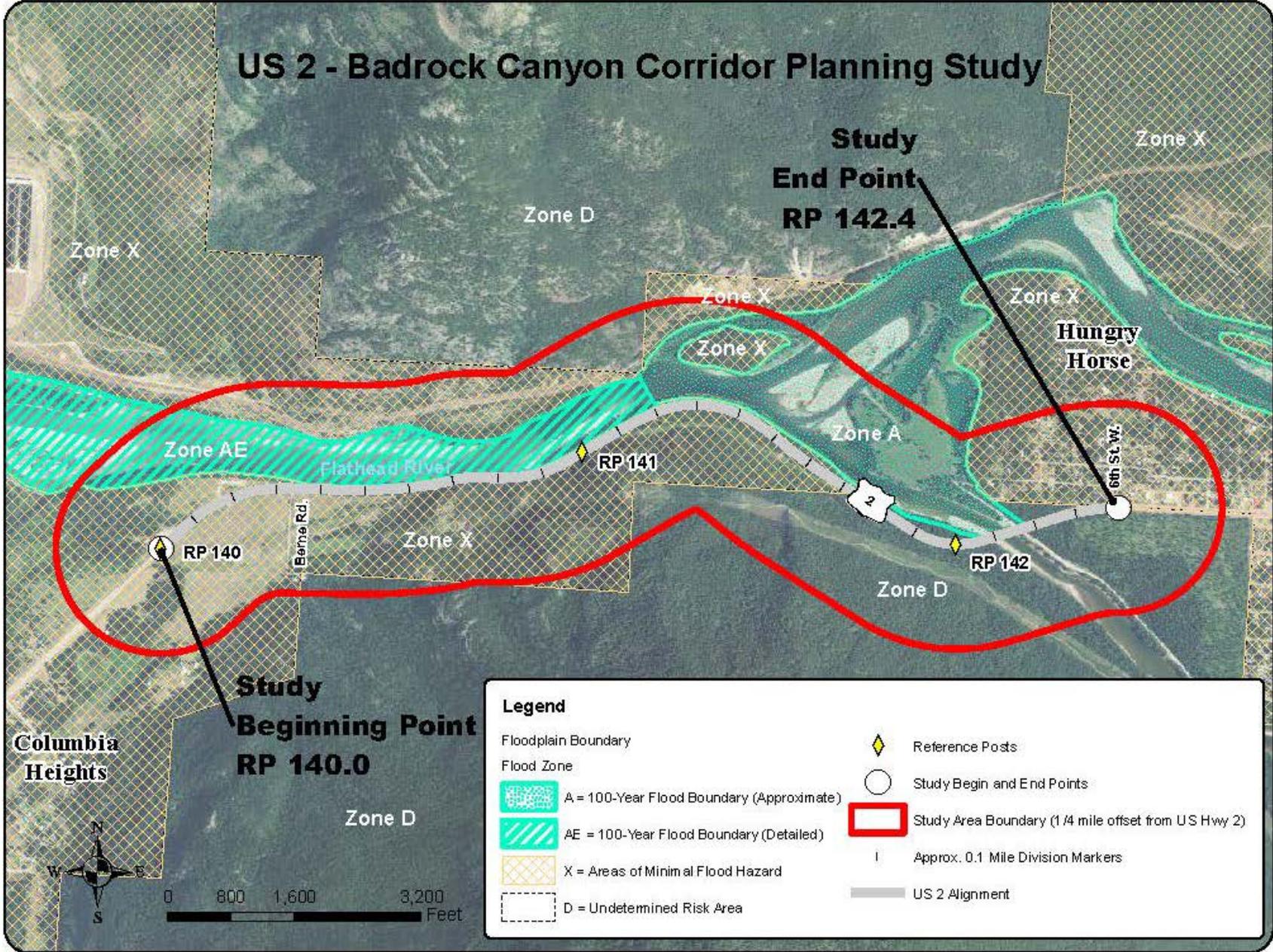
Executive Order (EO) 11988, Floodplain Management, requires federal agencies to avoid direct or indirect support of floodplain development whenever a practicable alternative exists. EO 11988 and 23 CFR 650 Part A require an evaluation of project alternatives to determine the extent of any encroachment into the base floodplain. The base flood (100-year flood) is the regulatory standard used by federal agencies and most states to administer floodplain management programs. A “floodplain” is defined as lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, with a one percent or greater chance of flooding in a given year. As described in FHWA’s floodplain regulation (23 CFR 650 Part A), floodplains provide natural and beneficial values serving as areas for fish, wildlife, plants, open space, natural flood moderation, water quality maintenance, and groundwater recharge.



Since the completion of the FEIS and Re-evaluation, the Federal Emergency Management Agency (FEMA) prepared updated floodplain mapping within the study corridor (effective September 2007). Within the study corridor, portions of US 2 encroach into the 100-year floodplain for the Flathead River and the portion of the South Fork of the Flathead River north of the current bridge crossing. Figure 2-6 illustrates floodplains within the study area. Appendix 7 contains FEMA floodplain mapping in the study area.

Impacts to floodplains would need to be identified and evaluated for improvement options forwarded from this study. Coordination with Flathead County would be conducted during the project development process to minimize floodplain impacts and obtain any necessary floodplain permits. Any increase in floodplain elevations within the study area may require a Letter of Map Revision (LOMR) and Conditional Letter of Map Revision (CLOMR) from FEMA.

Figure 2-6 Floodplains within Study Area



Source: NRIS, 2011; MDT, 2011; DOWL HKM, 2011.



## 2.6 Hazardous Substances

In support of this study, a review of the Montana Natural Resource Information System (NRIS) database was conducted to identify hazardous materials sites within the study area. Queries included leaking underground storage tank (LUST) sites, abandoned mine sites, remediation response sites, landfills, crude oil pipelines, EPA toxic release sites and Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS, also known as “Superfund”) sites, and hazardous waste handlers.

As listed in Table 2.2, a single leaking underground storage tank site was identified within the US 2 study corridor. Figure 2-7 illustrates the location of this site.

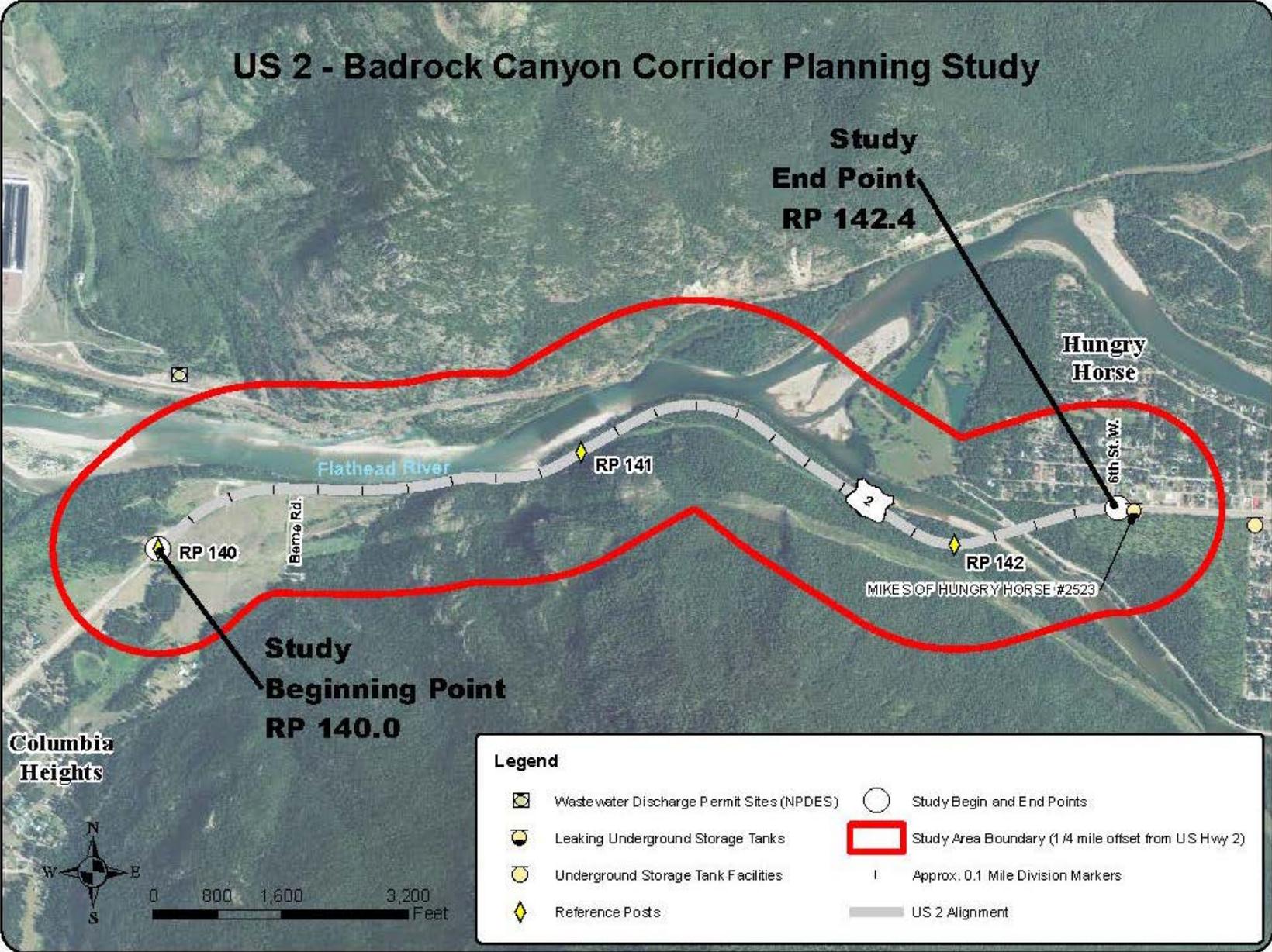
**Table 2.2 DEQ Leaking Underground Storage Tank Sites**

DEQ Facility Identification Number	Facility Name or Owner	Address	Confirmed Release Date	Resolution Date	Leaking Substance	Current Status	DEQ Leak No.
1509708	Mikes of Hungry Horse	8820 US Highway 2 E Hungry Horse	2/27/1995	7/29/1997	Gasoline	Four (4) tanks in use	1815

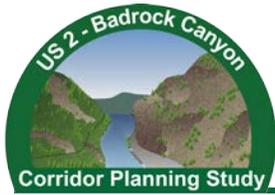
Source: NRIS, 2011.

Impacts to hazardous materials sites should be avoided. If contaminated soils or groundwater are encountered during construction activities, handling and disposing of the contaminated material will be conducted in accordance with applicable state, federal, and local laws and rules.

Figure 2-7 Hazardous Materials Sites in Study Area



Source: NRIS, 2011; MDT, 2011; DOWL HKM, 2011.



## 2.7 Air Quality

The Clean Air Act of 1970 established six criteria pollutants for which the U.S. Environmental Protection Agency (EPA) was required to set National Ambient Air Quality Standards. These national air quality standards are federal health-based standards that set allowable concentrations and exposure limits for each of the six criteria pollutants.

The Environmental Protection Agency and the Montana Department of Environmental Quality (DEQ), regulate the concentration of pollutants in the outdoor air and contaminant emissions from air pollution sources. DEQ and EPA designate regions as being either attainment or non-attainment areas for each individual air pollutant. Attainment status is a measure of whether air quality in an area complies with the National Ambient Air Quality Standards.

The study area is not located in a nonattainment area for any pollutant, including particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), Carbon Monoxide (CO), Lead (Pb), or Sulfur Dioxide (SO<sub>2</sub>). The study corridor is located approximately 1.5 miles directly east of the Columbia Falls Nonattainment Area for Particulate Matter (PM<sub>10</sub>), which is illustrated in Appendix 8. If improvement options are forwarded from this study, an updated air quality analysis would be required based on current traffic volumes.

## 3.0 BIOLOGICAL RESOURCES

Using data from the 1995 FEIS and the 2002 Re-evaluation as a baseline guide, updated biological resources data was obtained from the USFWS list of endangered, threatened, proposed, and candidate species for Montana counties (January 2011); the Montana Natural Heritage Program (MNHP) database; and the Montana Fisheries Information System (MFISH) database. This limited data review is in no way intended to be a complete biological survey of the study area. If improvement options are forwarded from the study, an updated biological survey of the study area will need to be completed in accordance with accepted MDT practices during the project development process.

### 3.1 Fish and Wildlife

The 1995 FEIS identified a number of predators and furbearers expected to occur in the study area vicinity, including coyotes, red fox, skunk, bobcat, black and grizzly bears, wolf, muskrat, mink, marten, and wolverine. Ungulate species expected to occur in the study area vicinity



include white-tailed deer, mule deer, and elk. The FEIS noted that moose are infrequently observed in the area, while white-tailed deer frequently use pastures and haylands adjoining the right-of-way at the western end of the study area throughout the year and often cross US 2 to access the river.

Appendix 9 includes 2011 fish distribution reports from the MFISH database for the Flathead River and South Fork of the Flathead River. As noted in these reports, fish species commonly found within the Flathead River and South Fork of the Flathead River in the vicinity of the study area include bull trout, lake trout, lake whitefish, largescale sucker, mountain whitefish, pygmy whitefish, rainbow trout, slimy sculpin, and westslope cutthroat trout.

### 3.1.1 Threatened and Endangered Wildlife Species

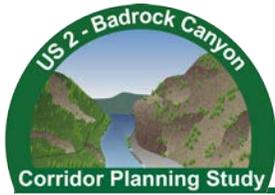
The Endangered Species Act (ESA) was enacted by Congress in 1973 to protect and recover imperiled species and the ecosystems upon which they depend. In Montana, the ESA is administered by the U.S. Fish and Wildlife Service (USFWS). Under the ESA, species may be listed as either endangered or threatened. The term “endangered” means a species is in danger of extinction throughout all or a significant portion of its range. “Threatened” means a species is likely to become endangered within the foreseeable future. The USFWS also maintains a list of candidate and proposed species for possible addition to the federal list.

Three threatened and two candidate animal species are expected to occur in Flathead County, as listed in Table 3.1. Additionally, the study area falls within federally designated Critical Habitat for bull trout and Canada lynx.

**Table 3.1 Threatened and Endangered Wildlife Species in Flathead County**

Category	Scientific Name	Common Name	Federal Status
Fish	<i>Salvelinus confluentus</i>	Bull Trout	Listed Threatened, Designated Critical Habitat
Mammal	<i>Ursus arctos horribilis</i>	Grizzly Bear	Listed Threatened
Mammal	<i>Lynx canadensis</i>	Canada Lynx	Listed Threatened, Designated Critical Habitat
Insect	<i>Lednia tumana</i>	Meltwater Lednian Stonefly	Candidate
Mammal	<i>Gulo gulo luscus</i>	Wolverine	Candidate

Source: USFWS, 2011.



As part of the FEIS effort, a Biological Assessment (BA) was prepared in 1991 for four species that were federally listed at that time (grizzly bear, bald eagle, peregrine falcon, and gray wolf). Following formal consultation, the USFWS issued a Biological Opinion (BO) in 1992. A supplemental BA was completed in 2001 that addressed changes in species listings, including the listing of bull trout. In May 2011, the USFWS published a direct final rule delisting gray wolves in Montana. No threatened or endangered species were observed in the study area during field surveys conducted in 2004 and 2011.

If improvement options are forwarded from this study, consultation with USFWS will be required and an updated evaluation of potential impacts to all endangered, threatened, proposed, or candidate species will need to be completed during the project development process.

### **3.1.2 Wildlife and Fish Species of Concern**

Montana animal species of concern are native animals breeding in the state that are considered to be “at risk” due to declining population trends, threats to their habitats, and/or restricted distribution. Designation of a species 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 direct limited resources to priority data collection needs and address conservation needs proactively. Each species is assigned a state rank that ranges from S1 (greatest concern) to S5 (least concern). Other state ranks include SU (unrankable due to insufficient information), SH (historically occurred), and SX (believed to be extinct). State ranks may be followed by modifiers, such as B (breeding), N (non-breeding), or M (migratory).

Table 3.2 lists the animal species of concern documented by MNHP within Township 30N, Range 19 West, Sections 6 and 7 and Township 30N, Range 20 West, Sections 1, 11, and 12 in Flathead County as of October 2011 and confirmed during a resource agency meeting on January 9, 2012. Species previously listed in Section 3.1.1 are not repeated in Table 3.2.



Table 3.2 Animal Species of Concern in Study Area Vicinity

Group Name	Scientific Name	Common Name	State Rank
Mammals	<i>Martes pennanti</i>	Fisher	S3
Birds	<i>Falco peregrinus</i>	Peregrine Falcon	S3
	<i>Haliaeetus leucocephalus</i>	Bald Eagle	S3
Fish	<i>Oncorhynchus clarkii lewisi</i>	Westslope Cutthroat Trout	S2
	<i>Prosopium coulteri</i>	Pygmy Whitefish	S3
Invertebrates	<i>Prophyaon humile</i>	Smoky Taildropper	S2S3

Source: MNHP, 2011.

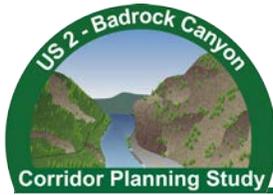
The FEIS and the Re-evaluation noted that the Couer d’Alene salamander (*Plethodon idahoensis*), a species of concern, may occur in the rock outcrops of Badrock Canyon, although its presence was not verified. A Couer d’Alene salamander survey was conducted at seeps and springs in the Berne Park area in 2004. Based on the survey, it was determined that limited habitat exists in the area and no salamanders were found at the time. No other species of concern were observed during field surveys conducted in 2004 and 2011.

If improvement options are forwarded from this study, an updated evaluation of potential impacts to all species of concern will need to be completed during the project development process.

### 3.1.3 Wildlife Movement and Traffic Concerns

The 1995 FEIS noted that local ungulate species are found in substantial numbers both north of the Flathead River and south of US 2. In 2011, FWP submitted comments to MDT noting that the area at the mouth of Badrock Canyon is often used by animals moving between Teakettle Mountain to the north and Columbia Mountain to the south. Animal species expected to use this corridor include mule and white-tailed deer, black and grizzly bears, elk, moose, mountain lions, wolves and many other smaller animals.

The Great Northern Environmental Stewardship Area (GNESA) group has identified and mapped wildlife movement areas of concern in this corridor. The group has identified Badrock Canyon as a key conservation area. Several locations within the study corridor are known wildlife crossing points for whitetail deer, sheep, black bear, and mountain lion. Appendix 10 contains a map illustrating the Great Northern Environmental Stewardship Area.



Of the eight crashes involving wild animals that occurred in the corridor during the period 2006 to 2010, six (75 percent) occurred in the first-half-mile of the corridor from RP 140.0 to 140.5 west of the canyon. Similarly, maintenance data indicate that 11 (85 percent) of the 13 total carcasses collected from 2006 to 2010 were recorded in the first half-mile of the corridor from RP 140.0 to 140.5. No carcasses were observed during field surveys in 2004 and 2011 that might indicate usage or movement patterns or conflict points with vehicles.

During the project development process, MDT will coordinate with FWP to determine what measures may be needed to address wildlife crossings within the corridor.

### 3.2 Vegetation

The 1995 FEIS identified a number of distinct land types in the corridor, including wetlands, riparian communities, and upland communities. Field surveys conducted in 2004 indicated that general vegetation communities included disturbed right-of-way and pasture, coniferous forest, mixed conifer/deciduous forest, and cottonwood forest.

#### 3.2.1 Threatened and Endangered Plant Species

As noted previously, the federal list of endangered and threatened species is maintained by the USFWS. Species on this list receive protection under ESA. As with animal species, the term “endangered” indicates a species that is in danger of extinction throughout all or a significant portion of its range, while the term “threatened” indicates a species that is likely to become endangered in the foreseeable future. Table 3.3 presents threatened and candidate plant species expected to occur in Flathead County.

**Table 3.3 Threatened and Endangered Plant Species in Flathead County**

Category	Scientific Name	Common Name	Federal Status
Flowering plant	<i>Silene spaldingii</i>	Spalding's catchfly	Listed Threatened
Conifers and Cycads	<i>Pinus albicaulis</i>	Whitebark pine	Candidate

Source: USFWS, 2011.

The FEIS noted that *Silene spaldingii* was observed in the vicinity of the study area in the 1890s, but has not been observed in more recent times. If improvement options are forwarded from the study, an evaluation of potential impacts to all endangered, threatened, proposed, or candidate plant species will need be conducted during the project development process.



### 3.2.2 Plant Species of Concern

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

Table 3.4 lists the plant species of concern documented by the MNHP within Township 30N, Range 19 West, Sections 6 and 7 and Township 30N, Range 20 West, Sections 1, 11, and 12 in Flathead County as of October 2011. These results are not intended as a final assessment of sensitive species within the study area or as a substitute for on-site surveys.

**Table 3.4 Plant Species of Concern in Study Area Vicinity**

Group Name	Scientific Name	Common Name	State Rank
Ferns and Fern Allies	<i>Asplenium trichomanes</i>	Maidenhair Spleenwort	SH
	<i>Botrychium sp. (SOC)</i>	Moonworts	S1S3
Flowering Plants - Dicots	<i>Castilleja cervina</i>	Deer Indian Paintbrush	SH
	<i>Cirsium brevistylum</i>	Short-styled Thistle	S1S2
	<i>Lathyrus bijugatus</i>	Latah Tule Pea	S1
Bryophytes	<i>Aloina brevirostris</i>	Aloina moss	S1
	<i>Grimmia brittoniae</i>	Britton's dry rock moss	S2

Source: MNHP, 2011.

The FEIS noted that *Asplenium trichomanes* was observed in the vicinity of the study area in the 1890s, but has not been observed in more recent times. As documented in the Re-evaluation, *Grimmia brittoniae* was discovered in May 1997 on a partially shaded, seasonally wet vertical cliff face near US 2 within Badrock Canyon. Prior to the 1997 discovery, the moss had not been seen in the Columbia Falls area since 1896.

If improvement options are forwarded from the corridor study, MNHP should be contacted to determine if any new plant species of concern have been documented in the study area and on-site surveys may need to be completed during the project development process to determine any potential impacts to listed plant species of concern.



### 3.2.3 Noxious Weeds

Noxious weeds can degrade habitat, choke streams, crowd native plants, create fire hazards, poison and injure livestock and humans, and foul recreation sites. Areas with a history of disturbance are at particular risk of weed encroachment. There are 32 noxious weeds and three regulated plant species in Montana, as designated by the Montana Statewide Noxious Weed List (effective September 2010). The 1995 FEIS notes that spotted knapweed is commonly found between Columbia Heights and Badrock Canyon and can also be found along the existing US 2 right-of-way at the South Fork Flathead River crossing.

If improvement options are forwarded from the study, the study area will need to be surveyed for noxious weeds during the project development process. Any construction activities resulting from a forwarded project should abide by the MDT Roadside Vegetation Management Plan – Integrated Weed Management Component. County Weed Control Supervisors should be contacted prior to any construction activities regarding specific measures for weed control. To reduce the spread and establishment of noxious weeds and to re-establish permanent vegetation, areas disturbed by any project will be seeded with desirable plant species.

## 4.0 SOCIAL AND CULTURAL RESOURCES

### 4.1 Demographic and Economic Conditions

Under the National and Montana Environmental Policy Acts (NEPA/MEPA) and associated implementing regulations, state and federal agencies are required to assess potential social and economic impacts resulting from proposed actions. FHWA guidelines also recommend consideration of impacts to neighborhoods and community cohesion, social groups including minority populations, impacts on the local and/or regional economies, as well as growth and development that may be induced by transportation improvements. Demographic and economic information presented in this section is intended to assist in identifying human populations that might be affected by improvements to US 2 within the study corridor.

Although not always directly connected, regional economic growth and growth in human populations often correlate with growth in traffic volumes. Demographic and economic growth trends provide a context for understanding changes in traffic volumes over time. For purposes of this study, however, population growth rates are not used directly in calculating projected traffic volumes.



### 4.1.1 Population Characteristics

The study area is located in Flathead County, Montana. Flathead County is the state’s third most populous county and one of the fastest growing counties in the state. As documented in the FEIS, Flathead County experienced strong population growth during the 1980s and 1990s. Continuing this trend, Flathead County grew faster than the State of Montana and the United States over the 2000 to 2010 period, as presented in Table 4.1. Five of the six communities in the study area vicinity exceeded Flathead County’s growth rate over this period, while Hungry Horse declined in population.

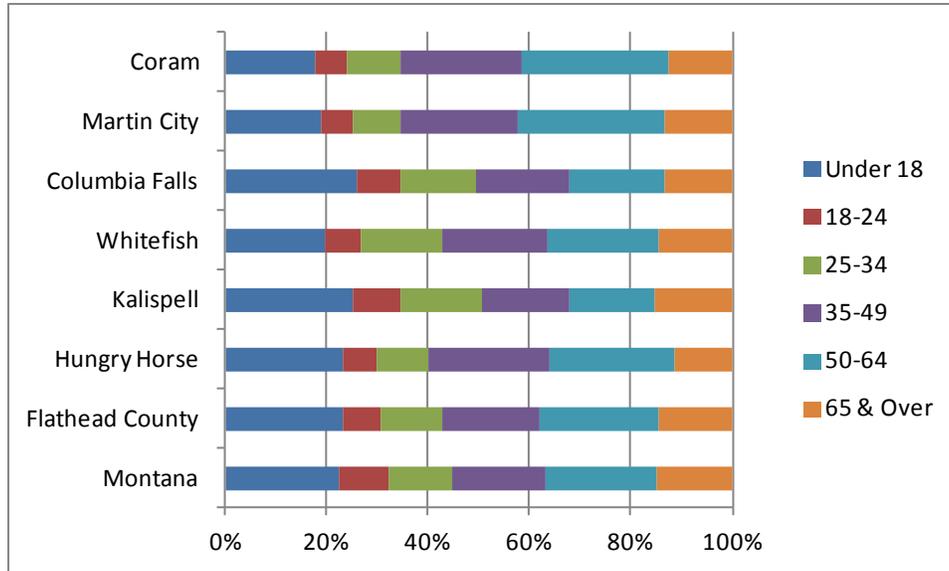
**Table 4.1 Population Growth (2000 – 2010)**

Location	Population		Percent Growth	Compound Annual Growth Rate
	2000	2010		
United States	281,421,906	308,745,538	9.7%	0.93%
Montana	902,195	989,415	9.7%	0.93%
Flathead County	74,471	90,928	22.1%	2.02%
Kalispell	14,223	19,927	40.1%	3.43%
Whitefish	5,032	6,357	26.3%	2.36%
Columbia Falls City	3,645	4,688	28.6%	2.55%
Hungry Horse CDP	934	826	-11.6%	-1.22%
Martin City CDP	331	500	51.1%	4.21%
Coram CDP	337	539	59.9%	4.81%

Source: MDT, 2011; US Census Bureau, 2011. CDP = Census Designated Place

As presented in Figure 4-1, age distribution varies among communities in the study area vicinity. The Cities of Columbia Falls and Kalispell have a larger percentage of children under the age of 18 while the communities of Coram, Martin City, and Hungry Horse have a larger percentage of people in the 35 to 64 age range as compared to Flathead County and the state of Montana.

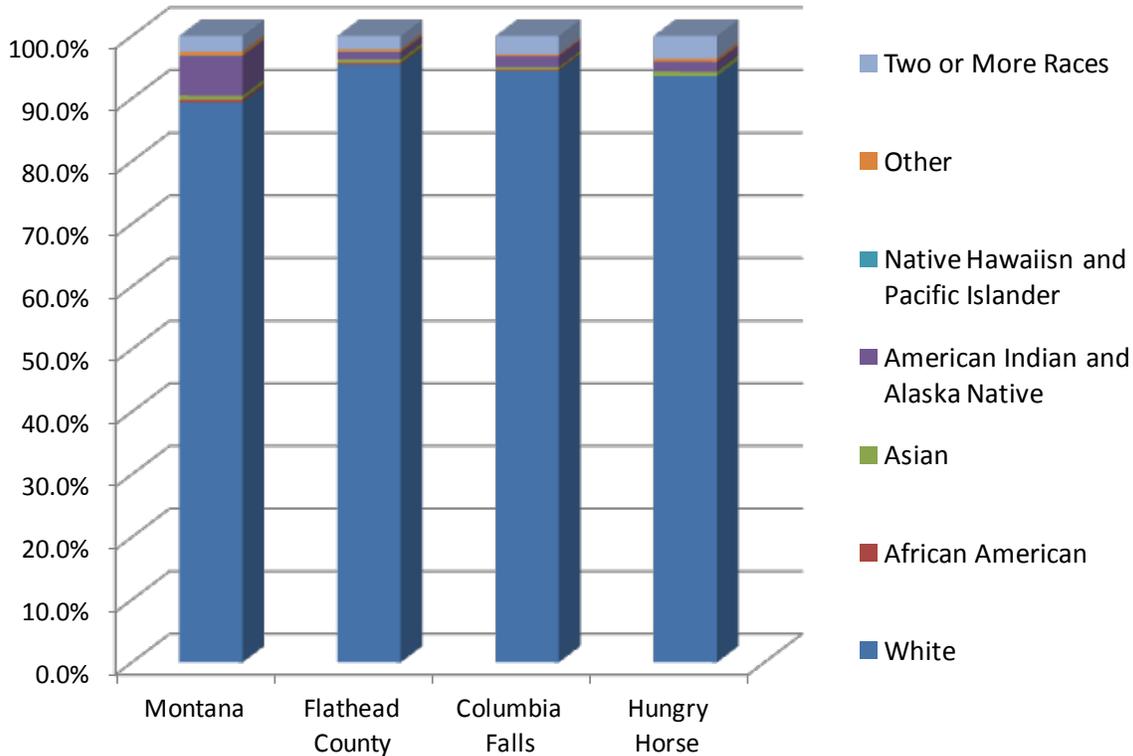
Figure 4-1 Age Distribution (2010)



Source: US Census Bureau, 2011.

A greater percentage of people identify themselves as white, and American Indians account for a smaller percentage of the population in the study area vicinity and in Flathead County as compared to Montana as a whole. Racial composition is illustrated in Figure 4-2.

Figure 4-2 Race Alone or in Combination with Other Races (2010)



Source: US Census Bureau, 2011.

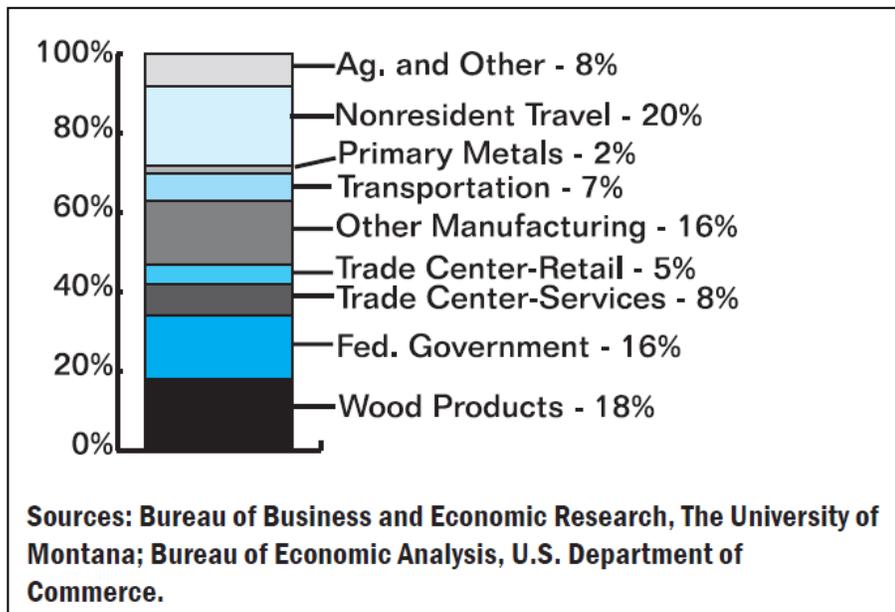
In addition to the community of Hungry Horse, which is designated as a Census Designated Place (CDP), the study area overlaps Census tracts 1, 2.01, and 2.02 as defined by the 2010 US Census. Census tracts are composed of smaller Census blocks. Appendix 11 contains a map illustrating Census tract and Census block boundaries within the study area vicinity and a spreadsheet presenting racial composition within these areas. Apart from the CDP of Hungry Horse, Census blocks overlapping the study area are sparsely populated, with low numbers of racial minority populations.

#### 4.1.2 Employment and Income

Figure 4-3 illustrates Flathead County’s labor income from basic industries as identified by the Montana Bureau of Business and Economic Research (BBER). The largest income-generating industries in the county from 2008 to 2010 were non-resident travel, federal government, wood products, and other manufacturing. The area is a minor retail trade center for northwestern Montana. Shopping, medical, and entertainment establishments in Kalispell and

Whitefish serve nearby communities. Larger trade centers in the greater region include Missoula and Spokane, WA.

**Figure 4-3 Labor Income in Basic Industries, Flathead County (2008 – 2010)**



Source: BBER, 2011.

According to the 2006-2010 American Community Survey five-year estimates, the majority of residents in the immediate study area vicinity commuted to a location outside their place of residence using a motorized vehicle. Commuters generally drove alone, with mean travel time to work ranging from 13 to 24 minutes. Table 4.2 presents commuting statistics for the resident populations of Columbia Falls, Coram, Hungry Horse, and Martin City.



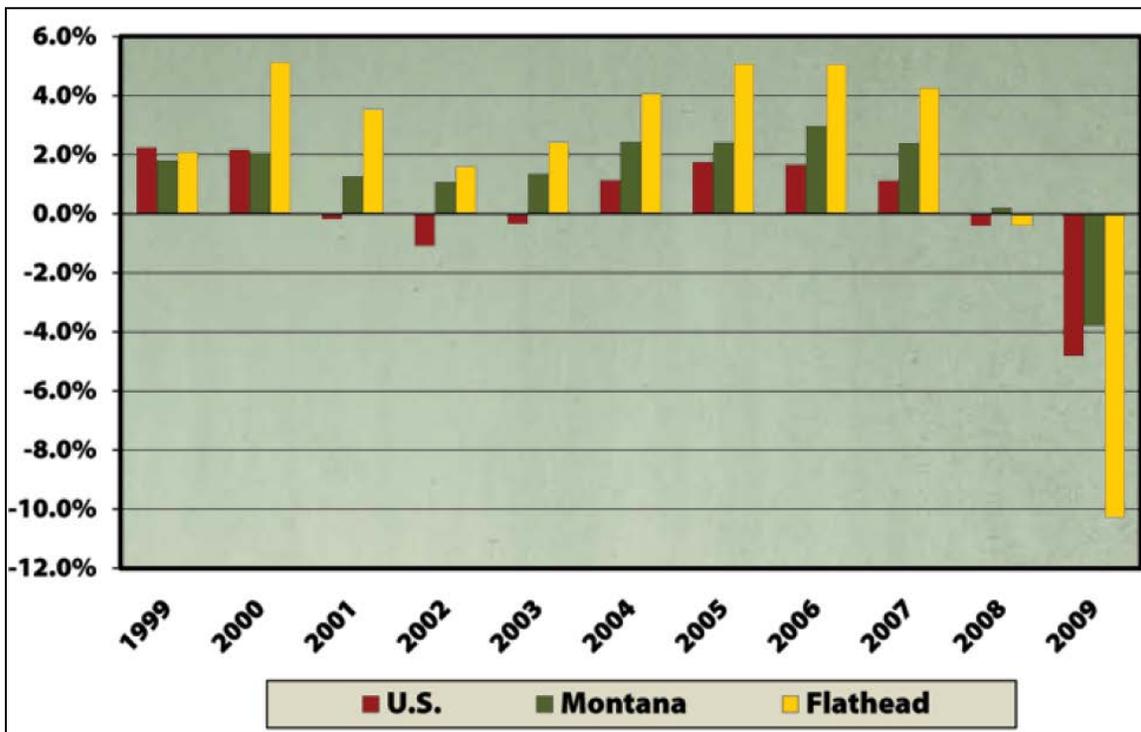
Table 4.2 Commuting Statistics (2006-2010)

Subject		Columbia Falls	Coram	Hungry Horse	Martin City
<b>Place of Work</b>	Worked in place of residence	38.9%	4.2%	6.2%	26.6%
	Worked outside place of residence	61.1%	95.8%	93.8%	73.4%
<b>Means of Transportation</b>	Car, truck, or van	92.7%	95.8%	100.0%	73.4%
	Drove alone	77.3%	95.8%	82.4%	73.4%
	Carpooled	15.3%	0.0%	17.6%	0.0%
	Public Transportation	0.5%	0.0%	0.0%	0.0%
	Walked	2.4%	4.2%	0.0%	20.9%
	Bicycle	0.7%	0.0%	0.0%	0.0%
	Taxicab, motorcycle, or other means	0.0%	0.0%	0.0%	0.0%
	Worked at home	3.8%	0.0%	0.0%	5.6%
<b>Travel Time to Work</b>	Less than 10 minutes	34.7%	8.8%	54.2%	3.6%
	10 to 14 minutes	20.6%	9.6%	0.0%	56.9%
	15 to 19 minutes	4.8%	18.8%	1.8%	13.2%
	20 to 24 minutes	16.0%	11.3%	27.8%	0.0%
	25 to 29 minutes	7.3%	0.0%	14.5%	0.0%
	30 to 34 minutes	14.7%	23.8%	1.8%	18.6%
	35 to 44 minutes	0.0%	27.9%	0.0%	0.0%
	45 to 59 minutes	0.0%	0.0%	0.0%	7.8%
	60 or more minutes	1.8%	0.0%	0.0%	0.0%
	Mean travel time to work (minutes)	15.0	23.8	12.7	16.9

Source: US Census Bureau, 2011.

As illustrated in Figure 4-4, Flathead County experienced a decrease in employment of over 10 percent in 2009, more than double the state and national trends compared to 2008. This followed years of employment growth significantly higher than the state or nation between 2000 and 2007.

Figure 4-4 Percent Change in Employment (1999-2009)



Source: Montana Department of Labor, 2011.

As of September 2011, Flathead County had a higher rate of unemployment than the state as a whole. Table 4.3 presents employment statistics for Flathead County and Montana.

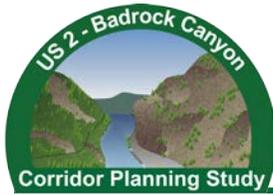
Table 4.3 Employment Statistics (2011)

Area	Total Labor Force	Employed	Unemployed	Unemployment Rate
Montana	502,217	468,156	34,061	6.8
Flathead County	43,404	39,097	4,307	9.9

Source: MT Department of Labor and Industry, County Labor Force Statistics, September 2011.

Note: Data is not seasonally adjusted.

According to the 2010 American Community Survey (ACS) estimates available from the U.S. Census Bureau, 14.4% of the Flathead County population was estimated as living below the poverty level, approximately equivalent to the state poverty level of 14.6%. American Community Survey estimates for the 2005-2009 period indicate that 22.3% of the Hungry Horse civilian labor force was estimated to be unemployed and approximately 36.4% was estimated to earn an income below the poverty level.



### **4.1.3 Neighborhoods and Community Cohesion**

The unincorporated community of Hungry Horse is the only community located within the study area. US 2 generally runs through the center of Hungry Horse. Within the study area, US 2 is located along the southern boundary of the community. A number of businesses flank US 2 through Hungry Horse, while residential neighborhoods are located to the north and south of the highway. If a project is forwarded from the study, impacts to neighborhoods and community cohesion should be considered.

## **4.2 Environmental Justice**

Title VI of the US Civil Rights Act of 1964, as amended (U.S.C. 2000(d)) and Executive Order (EO) 12898 require that no minority or low-income person shall be disproportionately adversely impacted by any project receiving federal funds. For transportation projects, this means that no particular minority or low-income person may be disproportionately isolated, displaced, or otherwise subjected to adverse effects resulting from a project.

Based on a review of available block-level Census data, racial minority and low-income persons likely live in the vicinity of the study corridor. Concentrations of racial minorities and low-income populations are likeliest to occur at the east end of the study area within the community of Hungry Horse. The population within the study area does not differ significantly from Flathead County and the state of Montana in terms of racial diversity, although the community of Hungry Horse has a higher unemployment rate and a higher percentage of the population living below the poverty level. If a project is forwarded from the study, environmental justice issues will need to be further evaluated during the project development process.

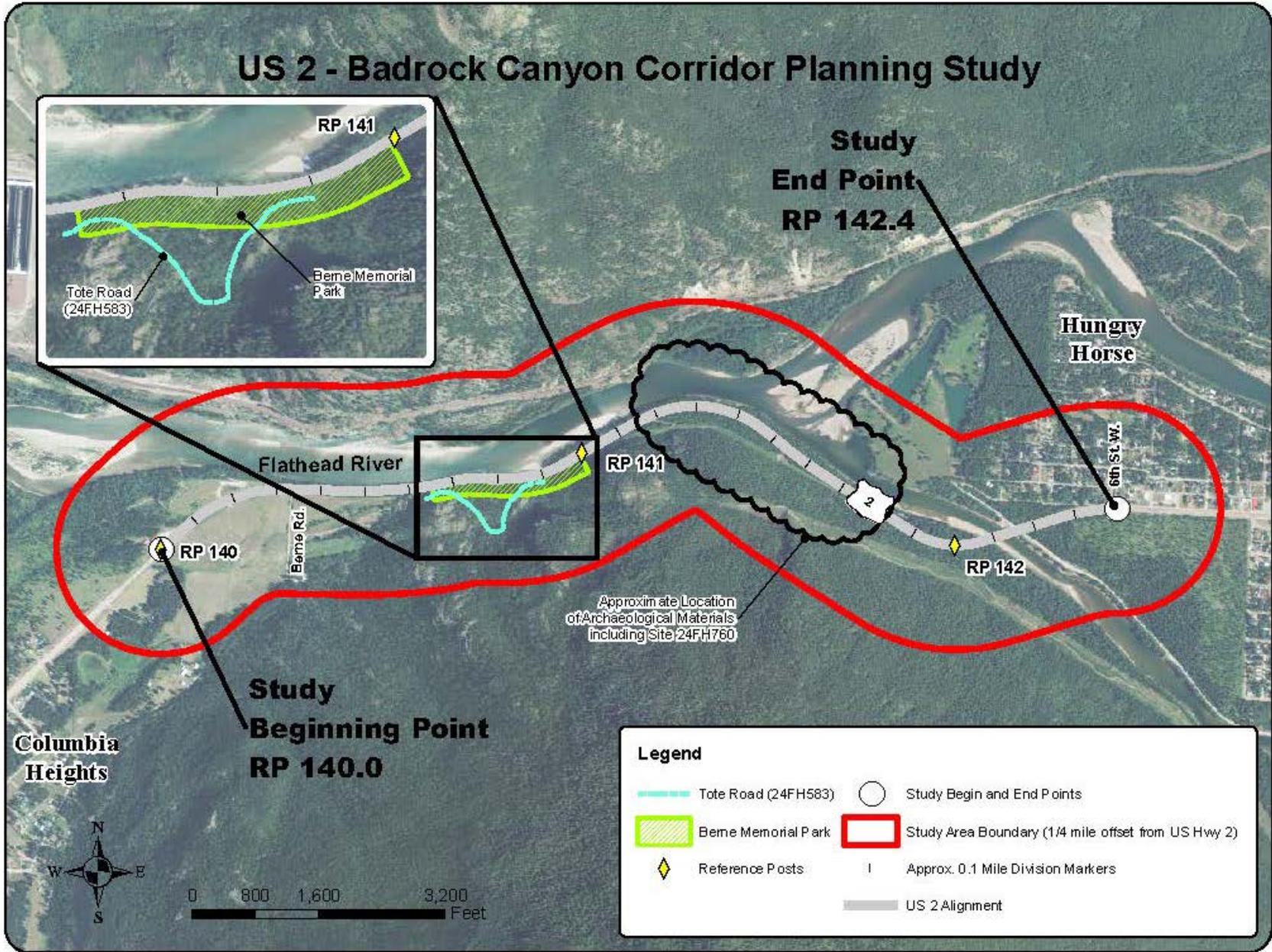
## **4.3 Cultural and Archaeological Resources**

Federally-funded projects forwarded from the study would require a cultural resource survey of the Area of Potential Effect (APE) as specified in Section 106 of the National Historic Preservation Act (NHPA) (36 CFR 800). Section 106 requires federal agencies to “take into account the effects of their undertakings on historic properties.” The purpose of the Section 106 process is to identify historic properties that could be affected by the undertaking, assess the effects of the project and investigate methods to avoid, minimize or mitigate adverse effects on historic properties. Special protections to these properties are afforded under Section 4(f) of the Transportation Act.



Three known cultural features exist in Badrock Canyon, including the historic Tote Road (24FH583); a pre-contact archaeological site (24FH760); and the Badrock Canyon Cultural Landscape. These features are illustrated in Figure 4-5. Information about cultural features in the study area is drawn from previous studies; no field surveys were conducted for the Environmental Scan Report.

Figure 4-5 Cultural and Archaeological Resources in Study Area



Source: MDT, 2011; MDT, 1995; Parsons Brinkerhoff, 2004; DOWL HKM, 2011.



As noted in the FEIS, the Tote Road was built in 1890-1891 as a supply road for construction of the Great Northern Railway. The Tote Road served as a travel route through Badrock Canyon until it was replaced by another road in 1911. The western and eastern termini of the Tote Road are located several hundred feet to the south of the current US 2 alignment; the middle portion of the Tote Road arcs further south on the lower slopes of Columbia Mountain. The Tote Road is considered eligible for listing on the National Register of Historic Places (NRHP).

As noted in the 2002 Re-evaluation, site 24FH760 is located on both sides of the existing US 2 alignment east of Berne Memorial Park. The site is marked by lithic materials. A surficial inspection of site 24FH760 and the south bank of the Flathead River within the study area was conducted in 2004. The survey documented additional archaeological materials in the river bank upstream (east) of site 24FH760. The study determined that more archaeological deposits are likely present upstream and downstream from site 24FH760. Site 24FH760 is considered eligible for listing on the NRHP.

The Confederated Salish and Kootenai Tribes (CSKT) consider the entire Badrock Canyon to have special historical and cultural significance. The cliffs in Badrock Canyon are considered extremely important to members of the CSKT. As referenced in the Re-evaluation, the Chairman of the CSKT sent correspondence to MDT in 2000 stating that the CSKT consider Badrock Canyon to be a sacred cultural landscape. To date, the canyon has not yet been evaluated for eligibility for listing on the NRHP.

If improvement options are forwarded from the study, impacts to significant cultural and archaeological resources should be avoided or minimized to the greatest extent practicable. Additional archaeological testing would be necessary to establish the nature and significance of materials discovered in proximity to Site 24FH760. Additional assessment would also be needed to determine the canyon's eligibility for listing on the NRHP as a cultural landscape, the cultural landscape's physical extents and defining characteristics, and the feasibility of avoiding or minimizing impacts to the landscape. Consultation with the CSKT and SHPO would be required to identify mitigation measures for any unavoidable impacts to cultural and archaeological resources.

#### **4.4 Land Ownership and Land Use**

Within the study area, US 2 is bordered by land held in private ownership, lands owned by MDT, and land areas administered by USFS. Figure 4-6 illustrates land ownership within the study area. As noted in the Re-evaluation, MDT acquired a series of parcels owned by the Simpson Family Trust following completion of the FEIS. The parcels comprised a large private landholding south of US 2 between

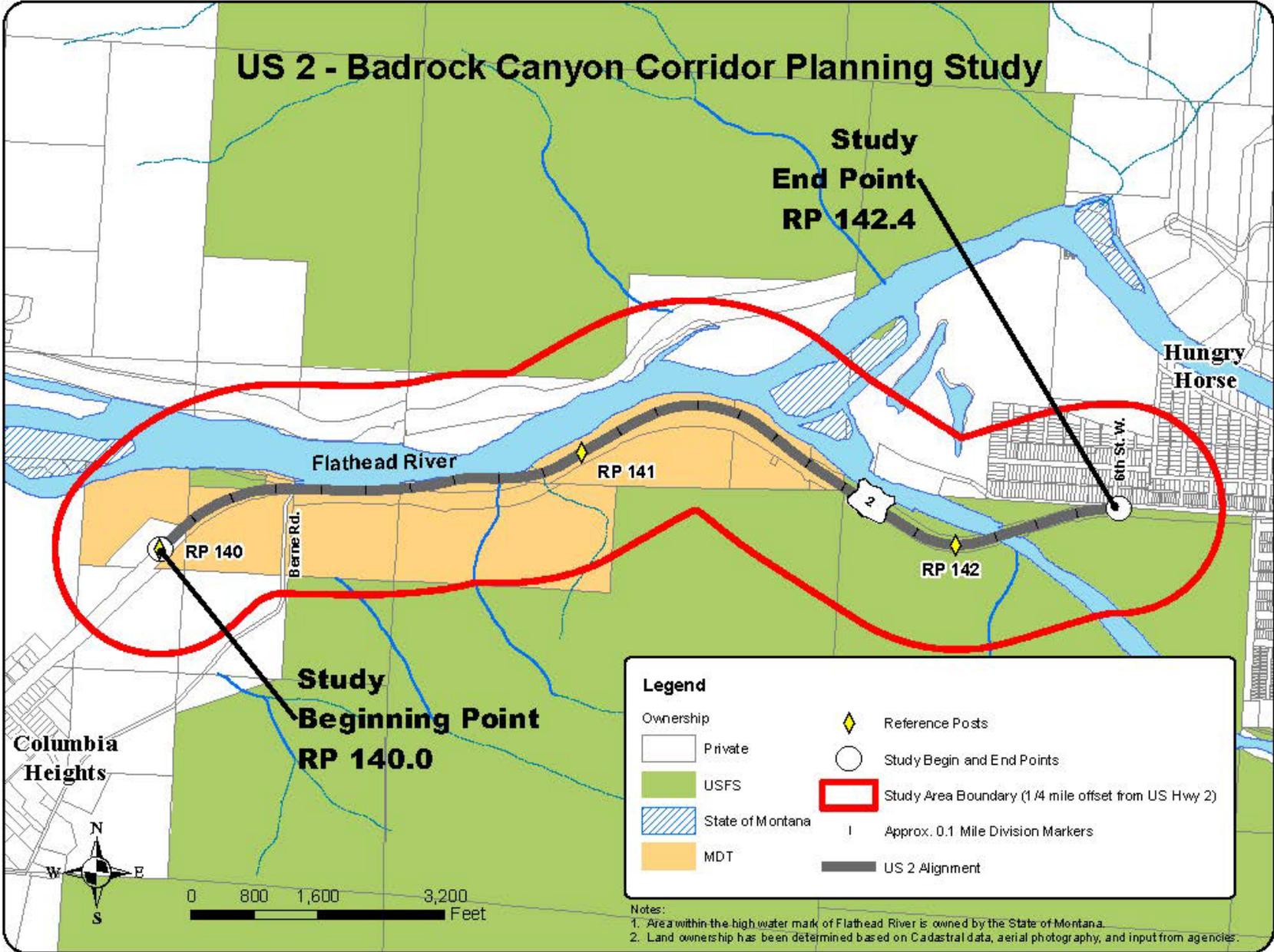


Berne Road and Hungry Horse. This acquisition provided MDT with right-of-way for roadway improvements and prevented the development of incompatible land uses along US 2. MDT obtained an easement from USFS for the portions of US 2 traversing USFS land areas at the eastern end of the study corridor.

Land uses within the study area are illustrated in Figure 4-7 and generally include pasture land at the western end of the study area, exposed rock outcroppings and forested areas through the canyon, and residential areas at the east end of the study area.

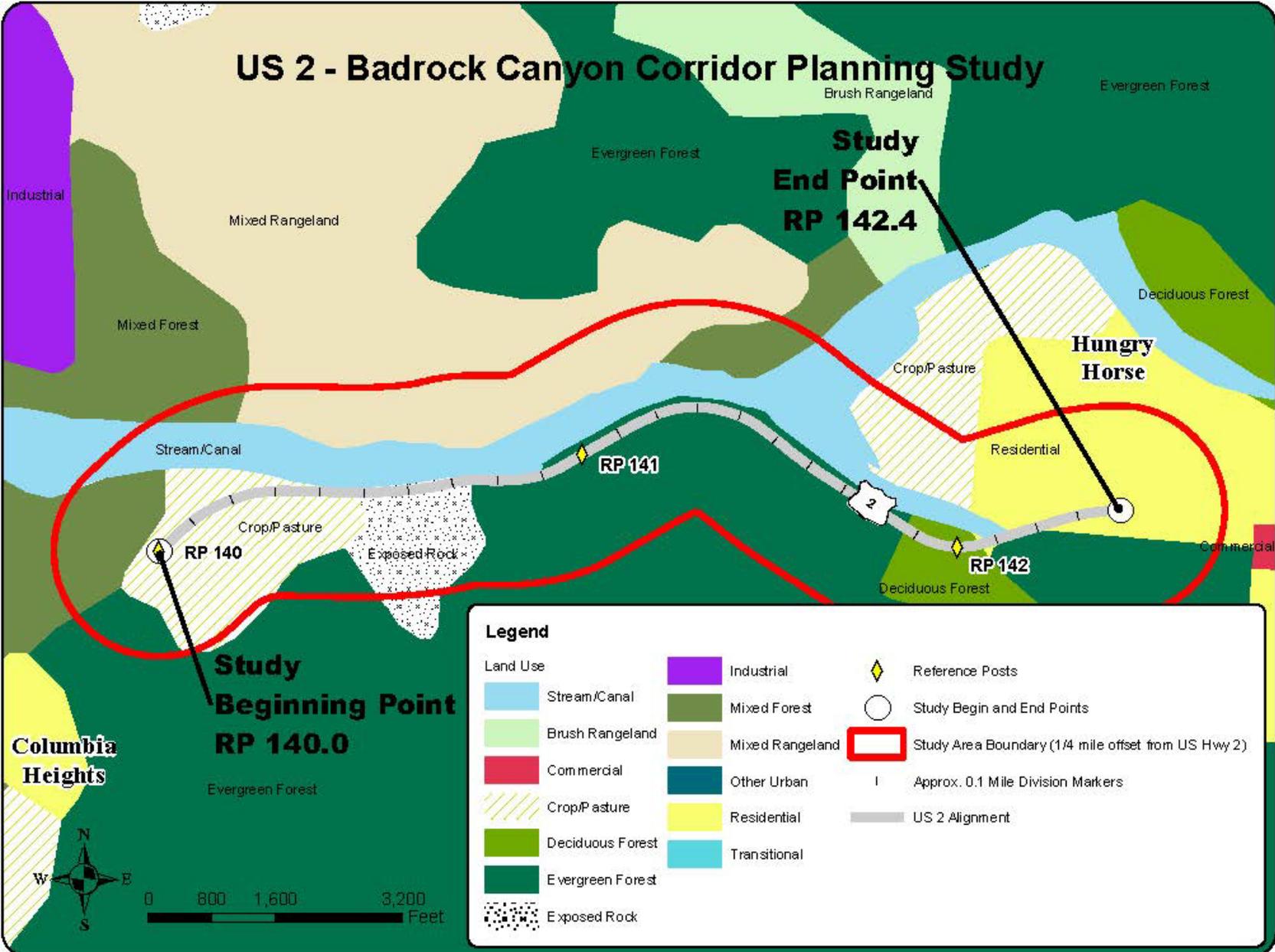
The land adjacent to US 2 within the study area is currently zoned by Flathead County as a scenic corridor, which is defined in the 2011 Flathead County Zoning Regulations as an overlay or standing district intended to protect the scenic vistas and provide greater traffic safety along the highway corridors by restricting the number, size and location of outdoor advertising signs and billboards.

Figure 4-6 Land Ownership in Study Area



Source: NRIS, 2011; MDT, 2012; DOWL HKM, 2012.

Figure 4-7 Land Use in Study Area



Source: NRIS, 2011; MDI, 2011; DOWL HKM, 2011.

## 4.5 Recreational Resources

The US 2 – Badrock Canyon corridor serves as a gateway to a variety of recreational opportunities. US 2 is the only route accessing the West Glacier entrance to Glacier National Park. The FEIS noted that dispersed recreational opportunities on public lands near the corridor include hunting, hiking, fishing, cross country skiing, floating, berry picking, and camping.

In 1953, the Simpson family conveyed a 100-foot-wide strip of land to the State Highway Commission for use as “a roadside park (including use of a part thereof as a Port of Entry station) and for a highway right of way.”<sup>1</sup> The bargain and sale deed, which is contained in Appendix 12, specified that the property could not be used for any commercial purposes. This area is known as Berne Memorial Park and is used by hikers and picnickers. Although the bargain and sale deed indicates that the roadside park area is offset 100 feet from the roadway centerline, the park is generally understood to include the roadside pullout directly adjacent to US 2.

Anglers, boaters, and other recreational users access the Flathead River throughout the study area. A designated river access site is located at the west end of the corridor near RP 140.2 on land owned and maintained by USFS. Vehicles can enter the site directly from US 2 to access a parking area and boat ramp. Dispersed access sites are located along the highway corridor, primarily from Berne Memorial Park upstream to the South Fork Flathead River Bridge. A rock outcropping known as Fisherman’s Rock is located directly adjacent to the Flathead River north of US 2 and Berne Memorial Park. An unpaved pullout near RP 141.4 provides access from US 2 to the river. A small frontage road under the South Fork Flathead River Bridge near RP 142.1 also provides river access.



Fisherman’s Rock

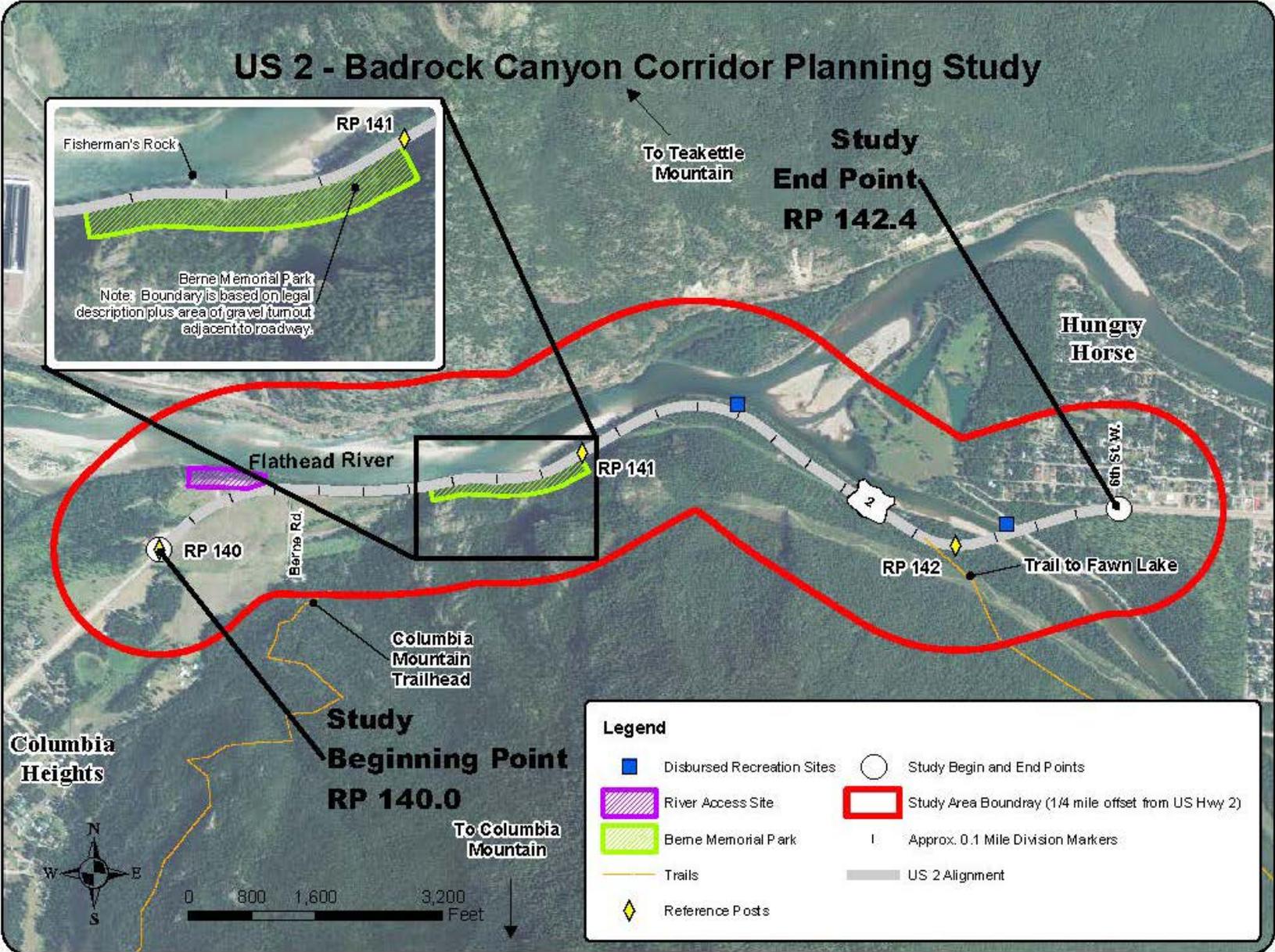
<sup>1</sup> Following execution of the bargain and sale deed, the Port of Entry station was located west of the canyon closer to Columbia Falls.



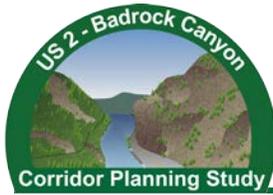
The FEIS noted that two USFS trails can be accessed from US 2 in the study area. The trailhead for the Columbia Mountain trail is located at the western end of the study area and may be accessed from US 2 via Berne Road or Monte Vista Drive. A second trail that leads to Fawn Lake can be accessed by a primitive road that joins US 2 near the bridge crossing the South Fork of the Flathead River. Recreational resources in the study area are illustrated in Figure 4-8.

Impacts to recreational access will be considered during the project development process if improvement options are forwarded from this study.

Figure 4-8 Recreational Resources in Study Area Vicinity



Source: MDT, 2012; MDT, 1995; USFS, 2012; DOWL HKM, 2012.



## 4.6 Protected Resources

### 4.6.1 Section 4(f) Resources

Section 4(f) refers to the section of the Department of Transportation Act of 1966 (49 USC 303) that established the requirement for consideration of park and recreational lands, wildlife and waterfowl refuges, and historic sites in transportation project development. Prior to approving a project that “uses” a Section 4(f) resource, FHWA must find that there is no prudent or feasible alternative that completely avoids Section 4(f) resources. A “use” occurs when land is permanently incorporated into a transportation facility or when there is a temporary occupancy of the land that is adverse to a Section 4(f) resource. Constructive “use” can also occur when a project’s proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are “substantially impacted.” FHWA cannot approve impacts to these resources unless there is “no feasible and prudent alternative” and the proposed plan includes “all possible planning to minimize harm to the property.”

The FEIS evaluated 11 properties located within the general corridor for their eligibility as Section 4(f) resources. Of these, only Berne Memorial Park and the Tote Road were determined eligible for Section 4(f) protection.

Since that time, additional cultural, archaeological, and recreational resources have been identified in the corridor. Known and potential Section 4(f) resources within the study area are listed in Table 4.4 and illustrated in Figure 4-7. Fisherman’s Rock was listed in the FEIS as a feature of Berne Memorial Park and is therefore not listed separately in Table 4.3.

**Table 4.4 Known and Potential Section 4(f) Resources within the Study Area**

Name	Type of 4(f) Resource
Tote Road	Historic
Archaeological Site (24FH760)	Historic
Other potential archaeological site(s) near Site 24FH760	Historic
Badrock Canyon Cultural Landscape	Historic
Berne Memorial Park	Recreational
Columbia Mountain Trailhead	Recreational
Fawn Lake Trailhead	Recreational

Source: DOWL HKM, 2011.



#### **4.6.2 Section 6(f) Resources**

Section 6(f) of the Land and Water Conservation Funds (LWCF) Act applies to all projects that impact recreational lands purchased or improved with land and water conservation funds. The Secretary of the Interior must approve any conversion of property acquired or developed with assistance under this Act to a use other than public outdoor recreation. Based on a review of the LWCF list by county published by FWP, there are no LWCF sites located within the study area.

#### **4.7 Noise**

Badrock Canyon is relatively undeveloped, although there are a number of residential and commercial developments at the western and eastern ends of the study area near Columbia Heights and Hungry Horse. In addition to these developments, the FEIS and Re-evaluation identified Berne Memorial Park as a sensitive noise receptor. If improvement options are forwarded from the study, the noise analysis would need to be updated.

#### **4.8 Visual Resources**

Visual resources refer to the landscape character (what is seen), visual sensitivity (human preferences and values regarding what is seen), scenic integrity (degree of intactness and wholeness in landscape character), and landscape visibility (relative distance of seen areas) of a geographically defined view shed.

As detailed in the FEIS, the western end of the study area is characterized by gently rolling terrain bordered by steep mountains. Teakettle Mountain to the north and Columbia Mountain to the south are dominant visual features. Extending on either side of US 2, grasslands and pasturelands are interspersed with stands of cottonwoods, aspens, and conifers. Moving east into Badrock Canyon, US 2 is bordered by the Flathead River to the north and the lower slopes of Columbia Mountain to the south. Railroad tracks are visible across the river to the north. Steep rock outcroppings serve as the dominant visual element in the Berne Memorial Park vicinity. Thick forest cover extends on both sides of US 2 east of Berne Memorial Park to Hungry Horse and generally obstructs views of the river in this area.

If improvement options are forwarded from this study, further evaluation of the potential effects on visual resources would be conducted and effects would be minimized to the extent practicable.



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