US 2 REST AREA SITING STUDY

Appendix C: Environmental Scan Report

March 2018

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Abbreviations and Acronyms

BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
CFR	Code of Federal Regulations
DEQ	Montana Department of Environmental Quality
DNRC	Montana Department of Natural Resources and Conservation
DOC	Department of Commerce
EO	Executive Order
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps
FPPA	Farmland Protection Policy Act
FWP	Montana Department of Fish, Wildlife, and Parks
GIS	Geographic Information System
GWIC	Groundwater Information Center
HUC	Hydrologic Unit Code
LUST	Leaking Underground Storage Tank
LWCFA	Land and Water Conservation Fund Act
MBMG	Montana Bureau of Mines and Geology
MBOG	Montana Board of Oil and Gas
MDT	Montana Department of Transportation
MEPA	Montana Environmental Policy Act
MPDES	Montana Pollutant Discharge Elimination System
MTNHP	Montana Natural Heritage Program
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
PM	Particulate Matter
RP	Reference Post
SFHA	Special Flood Hazard Area
SHPO	State Historic Preservation Office
SOC	Species of Concern
T&E	Threatened and Endangered
THPO	Tribal Historic Preservation Office
TMDL	Total Maximum Daily Load
TPA	TMDL Planning Area
US 2	United States Highway 2
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	US Geological Survey
UST	Underground Storage Tank
WRS	Water Resource Surveys

1.0 Introduction

The objective of this environmental scan report is to provide a planning-level overview of physical, biological, social, and cultural resources and identify potential constraints and opportunities within six discrete segments along the US 2 corridor as part of the US 2 Rest Area Siting Study. Information in this report was obtained from publicly available reports, websites, documentation, and an on-site field review of the six US 2 segments conducted in July 2017. This scan is not a detailed environmental investigation.

The intent of the US 2 Rest Area Siting Study is to examine needs and opportunities for new safety rest area sites along the highway corridor. If specific siting locations are forwarded from this study, an analysis for compliance with NEPA and MEPA and other applicable Montana environmental regulations will be completed as part of the MDT project development process. Information provided in this report may be forwarded into the NEPA and/or MEPA process.

1.1 Study Corridor and Study Segments

US 2 extends across the northern continental United States and is the northernmost east-west route in the country. It is an important northern corridor in Montana, extending approximately 666 miles across the length of the state. Entering Montana at its western border with Idaho, US 2 runs adjacent to the southern border of Glacier National Park; traverses the region known as the Hi-Line which includes Blackfeet, Fort Belknap, and Fort Peck Reservations; and continues to the North Dakota border east of Culbertson.

According to the 2014 Montana Rest Area Plan, siting of new safety rest areas should be determined for “corridor segments exceeding approximately one hour of travel time between stopping opportunities, including rest areas, parking areas, and cities and towns with 24-hour services.” Consistent with the plan, this study used 70-mile intervals representing the posted speed limit on US 2 to determine the need for stopping opportunities.

The study corridor consists of the length of US 2 extending from a western endpoint at the Troy Safety Rest Area to an eastern endpoint at the Culbertson Safety Rest Area. These safety rest areas are year-round, 24-hour facilities in good working condition with no major maintenance expected within the next 10 years.

Intervals of approximately 70 miles (equivalent to one hour of travel time) were identified in both the eastbound and westbound directions beginning from the corridor endpoints. Eastbound intervals are marked with a red symbol and westbound intervals are marked with a blue symbol on the study area map (Figure 1).

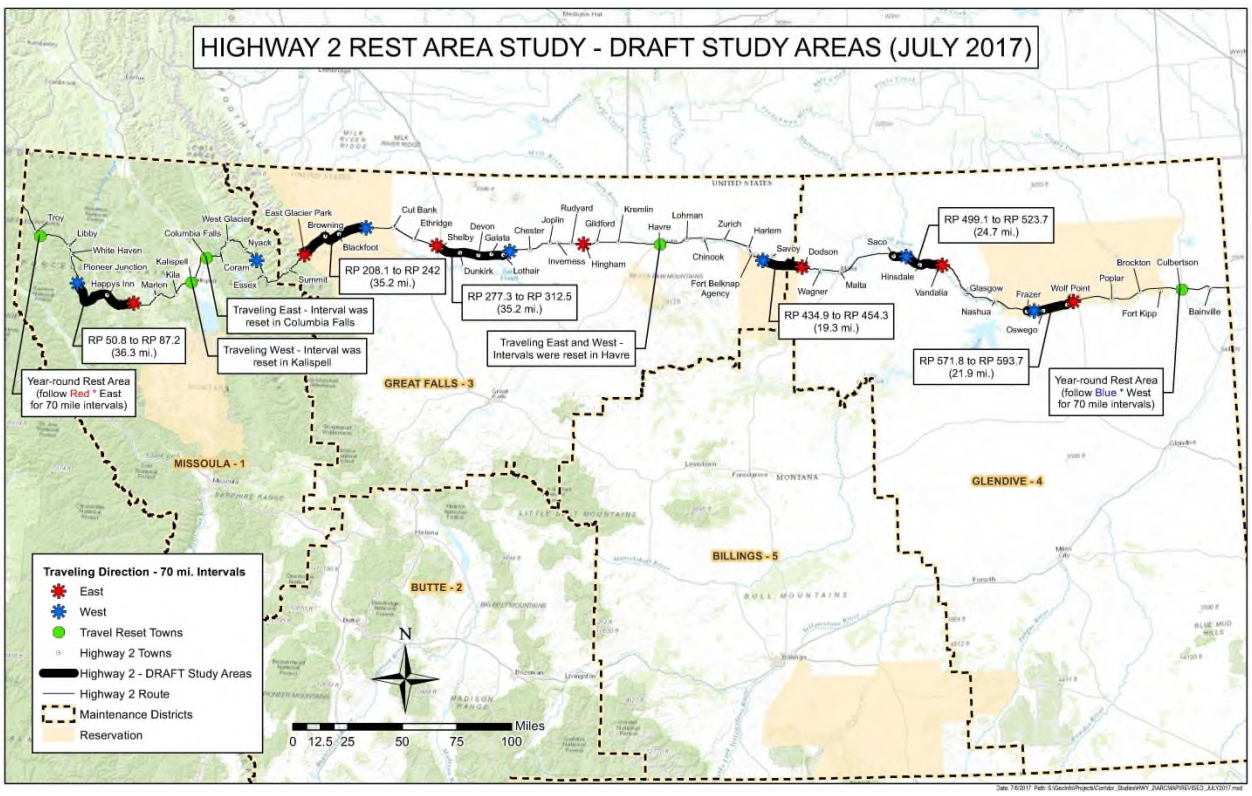
In addition to the safety rest areas at Troy and Culbertson, reset points (i.e., locations where the 70-mile interval was reset to zero) included urban areas with populations exceeding 5,000 people (including Kalispell, Columbia Falls, and Havre). These locations are marked with a green symbol in Figure 1. Smaller communities (such as Browning, Cut Bank, Shelby, Chinook, Glasgow, and Wolf Point) were not designated as reset points for this study. Additionally, the MDT-maintained safety rest area at Vandalia was not designated as a reset point because it is seasonal (i.e., not open year-round) and beyond its useful life.

The following six study segments were identified between the eastbound and westbound 70-mile interval markers. The study segments include an offset distance of 750 feet from the US 2 centerline (for a total distance of 1500 feet) to accommodate the footprint for a new safety rest area (Exhibits 1.0 to 6.0 in Attachment 1).

- Segment 1: RP 50.8 to 87.2 (36.3 miles)
- Segment 2: RP 208.1 to RP 242.0 (35.2 miles)
- Segment 3: RP 277.3 to RP 312.5 (35.2 miles)
- Segment 4: RP 434.9 to RP 454.3 (19.3 miles)
- Segment 5: RP 499.1 to RP 523.7 (24.7 miles)
- Segment 6: RP 571.8 to 593.7 (21.9 miles)

Ranging from approximately 20 to 35 miles each, the six study segments represent potential stretches of US 2 where a new safety rest area would be desirable to generally meet the spacing guidelines outlined in the Montana Rest Area Plan. This study will recommend specific locations within each segment that represent potentially favorable sites for safety rest area development. Depending on the specific recommended locations, resulting interval distances may vary somewhat from desired 70-mile spacing.

Figure 1: Study Area and Study Segments



Source: MDT 2017.

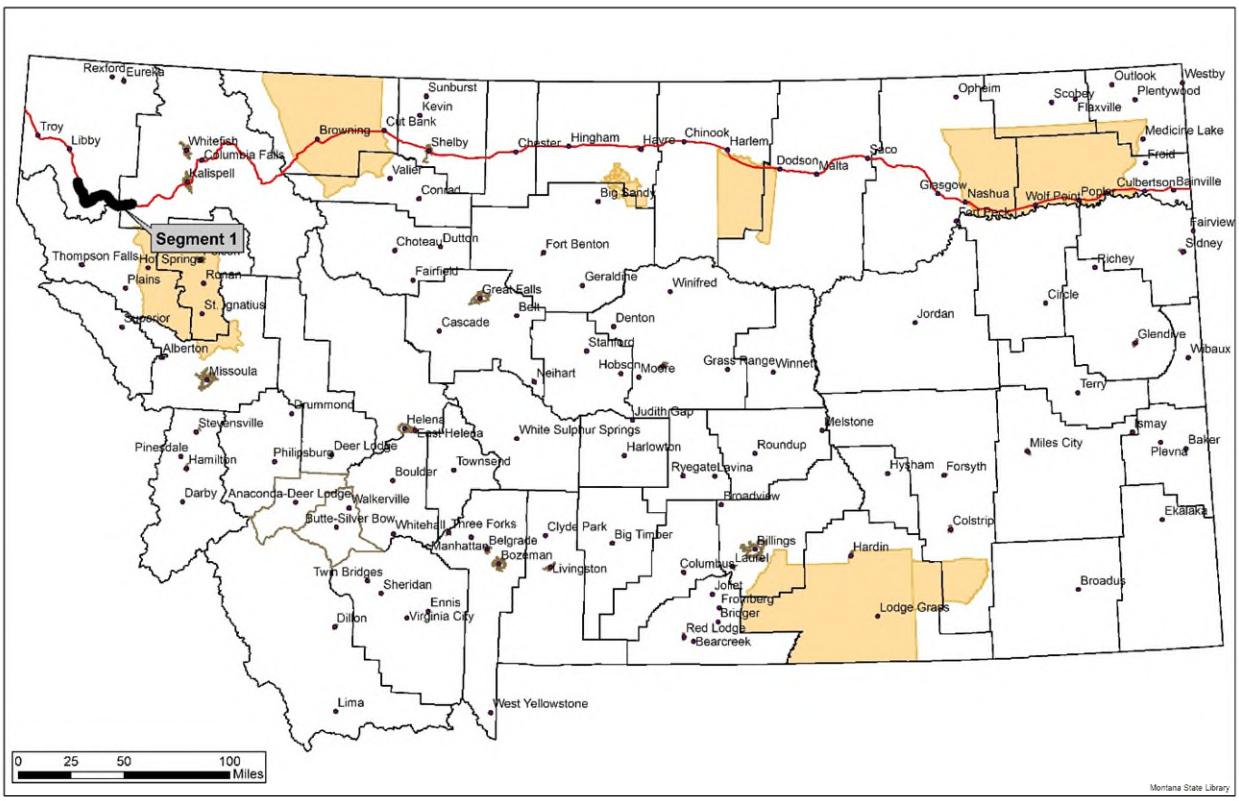
1.2 Report Organization

The following chapters outline environmental conditions according to study segment. The intent is for each chapter to serve as a stand-alone resource as MDT considers investment decisions

in specific geographic locations. While this report organization increases repetition of some information common to various resource areas, it provides a consolidated location containing all information relating to an individual location.

2.0 Segment 1 (RP 50.8 to RP 87.2)

Figure 2. Segment 1 Location



2.1 Physical Environment

Soil Resources and Prime Farmland

Soils information was reviewed to better understand the general soil characteristics within Segment 1 and to determine the presence of prime and unique farmland in the study segment to demonstrate compliance with the FPPA.

The FPPA is intended "to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to assure that federal programs are administered in a manner that, to the extent practicable, will be compatible with state, unit of local government, and private programs and policies to protect farmland." The term "farmland" refers to prime farmland; some prime if irrigated farmland; unique farmland; and farmland, other than prime or unique farmland, that is of statewide importance. Prime farmland soils are those that have the best combination of physical and chemical characteristics for producing food, feed, and forage; the area must also be available for these uses. Prime farmland can be either non-irrigated or lands that would be considered prime if irrigated. Farmland of statewide importance is land, in addition to prime and unique farmlands, that is of

statewide importance for the production of food, feed, forage, and oilseed crops. Developed land previously designated as prime farmland is no longer subject to the FPPA.

Soil surveys of Segment 1 are available from the USDA NRCS. A summary of the general soil characteristics and farmland designations for Segment 1 are presented below (Exhibit 1.1 in Attachment 1 and Attachment 2). The screening process for potential future safety rest areas will need to consider soil characteristics for constructability (e.g., clay soils). In addition, any siting options forwarded from this study that are within identified farmlands and are supported with federal funds will require a CPA-106 Farmland Conversion Impact Rating Form completed by MDT and coordinated with NRCS. The NRCS uses information from the impact rating form to keep inventory of the prime and important farmlands within the state.

NRCS soil survey information shows approximately 55 soils within Segment 1. From RP 50.8 to RP 56.7 silty glacial lake deposits (silty glaciolacustrine deposits) are prevalent. Glacial lake deposits (calcareous silty and clayey glaciolacustrine sediments) are also located from approximately RP 59 to RP 63 as well as RP 69 to RP 72. Along Fisher River and Pleasant Valley Fisher River (RP 56 to RP 64) mixed alluvium occurs. From RP 68 to RP 75, volcanic ash over alluvium or outwash is prevalent. In remaining areas, particularly RP 64 to RP 68 and RP 75 to RP 87.2, colluvial, alluvial, and lake deposits are dominant, as well as glacial till and drift, often overlain with volcanic ash.

NRCS soil surveys indicate the presence of farmland of statewide or local importance and prime farmland if irrigated within the study segment. These designations primarily occur on lands from RP 63.5 to RP 82. Lands designated prime farmland if irrigated are located near RP 66. The percentage of the study segment comprised of farmland of statewide or local importance or prime farmland if irrigated is moderate.

Geologic Resources

Information on the geology and seismicity in Segment 1 was obtained from published sources, including MBMG ArcGIS Map Service Layers and the USGS National Geologic Map Database Geolex Search website. Geologic mapping was reviewed for geological formations, rock types, and fault lines. Seismicity and potential seismic hazards were also reviewed.

The following provides a brief summary of the geologic and seismic conditions present in Segment 1 (refer to Exhibit 1.2 in Attachment 1). Geologic and seismicity information can help determine potential safety rest area design and construction issues and will need to be considered as safety rest area siting options are screened. Site-specific geotechnical evaluations will be required once potential sites are selected.

The majority of Segment 1 is underlain by Precambrian-aged (meta-sedimentary) bedrock of the Belt Supergroup. These rocks are typically hard and competent, and in some places excavation may be difficult.

Most of the bedrock underlying the study segment from RP 50.8 to RP 71.0 consists of the Upper Missoula Group (McNamara, Bonner, and Mount Shields Formations). The McNamara Formation consists of sandy argillite, thin bedded argillitic sandstone, and massive to medium bedded quartzite. The Bonner Formation consists of cross-bedded quartzite with minor interbedded argillite. The Mount Shields Formation is composed of thin-bedded siltstone, sandstone, quartzite, and shale. Some Paleozoic-aged bedrock occurs near RP 61 to RP 62 that consists mainly of limestone/dolomite, shale, and sandstone. The study segment from RP 65 to RP 66 and RP 71 to RP 73 is underlain by the Lower Missoula Group (Shepard and

Snowslip Formations) consisting of mainly siltite and argillite. The Piegan Group (Wallace and Helena Formations), which consists of mainly limestone/dolomite, quartzite, siltite, and argillite, underlies the study segment from RP 73 to RP 82. The bedrock underlying RP 82 to RP 87 consists of quartzite with siltite and argillite of the Ravalli Group, which includes the St. Regis, Revett, and Burke Formations.

The surficial deposits exposed along Segment 1 consist mainly of Quaternary glacial and alluvial deposits. Quaternary lake sediments are also mapped in the segment. The lake sediments consist of fine-grained soils. The glacial and alluvial deposits may contain coarse and fine-grained soils. Fine-grained soils can have poor drainage characteristics, be frost susceptible, and have settlement and stability issues. Liquefaction may also be an issue. The thickness of the glacial and alluvial deposits is likely highly variable and whether bedrock will be encountered during construction is unknown. Based on the published data reviewed, it does not appear that landslides have been mapped along Segment 1.

Numerous faults (mostly north-trending) are mapped along Segment 1. However, based on MBMG and USGS mapping, no Quaternary faults (which may be considered active) are present along Segment 1. The study segment is also located within the intermountain seismic belt. The MBMG peak horizontal acceleration (in percent of the acceleration of gravity) for Segment 1 ranges from about 8% to 11%. Earthquakes can induce movement along faults, rock fall, slope movement (landslides), and liquefaction. However, no significant historic earthquake epicenters are mapped in the vicinity of Segment 1, and the nearest epicenter is located 30 miles to the east.

Hazardous Substances

Reviews of the Montana DEQ database, MBMG database, USEPA database, MBOG, and the National Pipeline Mapping System were conducted to obtain available information on UST sites, LUST sites, petroleum release fund claims, remediation response sites, superfund sites, hazardous waste sites, mining districts, abandoned mine sites, open cut mines, oil and gas pipelines, and oil/gas wells.

A brief summary of the primary sites within Segment 1 are discussed below. Locations of hazardous substances are represented in Exhibit 1.2 in Attachment 1 and Attachment 3. Safety rest area sites carried forward from this study will need to consider contaminated soils and may require additional investigation/coordination in areas where pipelines, wells, or mines are located.

The DEQ database indicates the following UST, LUST, and petroleum release fund sites within the Segment 1.

- A LUST site and petroleum release fund site are located near RP 55.9; however, no buildings or structures are found at this location, and location data may not be correct. The LUST was resolved in 2003.
- A LUST site and petroleum release fund site are located near RP 66.4. The site is located at an MDT facility (Crystal Creek Section). The LUST was resolved in 1997.
- A LUST site was identified near RP 68.9; however, no buildings or structures are found at this location and location data may not be correct. The LUST was resolved in 1993.
- Two UST sites occur within the study segment at the Happy's Inn and Resort on the southwest side of US 2 near RP 72.2.

Segment 1 is located within the Cabinet Mining District from RP 50.8 to RP 80.3. Six open cut mines occur within the study segment near RP 55, RP 68.2, RP 73.6, RP 74.1, RP 81.3, and RP 85.7. One abandoned mine site is located north of US 2 near RP 85.2.

No oil/gas wells or oil or gas pipelines are located within Segment 1, nor are any USEPA designated superfund sites.

Air Quality

USEPA has established NAAQS for six criteria pollutants, including carbon monoxide, nitrogen dioxide, ozone, PM10 and PM2.5, sulfur dioxide, and lead. The USEPA designates communities that do not meet NAAQS as "non-attainment areas." States are required to develop a plan to control source emissions and ensure future attainment of NAAQS. A review of the DEQ website indicates no non-attainment areas for any of the criteria pollutants are located within Segment 1. The closest non-attainment areas are the Libby non-attainment areas for PM2.5 and PM10. The southern boundaries for these two non-attainment areas are approximately 5.8 miles and 11.8 miles, respectively, north of Segment 1.

According to Table 2, 40 CFR 93.126, safety rest areas are typically exempt from the requirements that a conformity determination be made. As a result, special design considerations are not anticipated to accommodate NAAQS in any future safety rest area project development process.

Surface Waters

USGS topographic maps, aerial photographs, and GIS data were reviewed for Segment 1 to identify the locations of surface waterbodies including rivers, streams, lakes, and reservoirs. The following provides a summary of the watersheds and surface waters located within Segment 1 (refer to Exhibit 1.3 in Attachment 1). The screening process for safety rest area siting options should consider potential impacts to surface waters and the costs that may be associated with permitting and potential mitigation. Coordination with federal, state, and local agencies may be necessary, as work within these surface waters may be regulated by the USACE, Montana FWP, and the DEQ. In addition, forwarded siting options may trigger the need to obtain coverage under MPDES for Storm Water Discharges Associated with Construction Activity and comply with the requirements outlined in MDT's Storm Water Management Plans.

Three watersheds comprise Segment 1. The Middle Kootenai Watershed (HUC 17010101) makes up the study segment from RP 50.8 to approximately RP 52.2. Swamp Creek is the primary drainage located within this portion of the segment. It parallels US 2 to the west before crossing the highway at RP 51.8. From here it flows north, paralleling US 2 on the west side for several miles before flowing into Libby Creek. Smaller drainages within this segment that flow into Swamp Creek include Reinhart Gulch.

Fisher Watershed (HUC 17010102) makes up the segment from RP 52.2 to approximately RP 73, with the Fisher River being the primary drainage. Silver Butte Fisher River and Pleasant Valley Fisher River merge just south of RP 60.6 to form the Fisher River, which parallels US 2 on the west side of the highway for several miles before crossing US 2 near RP 57.2. Fisher River flows north into the Kootenai River. From RP 52.2 to RP 60.6, named drainages and lakes that cross or parallel the study segment before flowing into Fisher River include Coyote Creek, Schrieber Lake, Schrieber Creek, Miller Creek, West Fisher Creek, Hunter Creek, and Silver Butte Fisher River. Before merging with Silver Butte Fisher River to form the Fisher River, Pleasant Valley Fisher River parallels US 2 just south/southeast of the highway from RP 60.6 to RP 65.7. It crosses the highway further to the east at RP 71.1. From RP 60.6 to RP 73 named

drainages that cross or parallel the study segment before flowing into Pleasant Valley Fisher River include Sedlak Creek, Raritan Creek, Houghton Creek, Raven Creek, and Crystal Creek. At the top of the watershed, on the south side of the highway from RP 69 to RP 73, are Loon Lake, Leon Lake, Horseshoe Lake, Lilypad Lake, Bootjack Lake, Crystal Lake, and Rainbow Lake. These lakes all provide surface/subsurface flows to Pleasant Valley Fisher River. In addition to the named drainages and lakes, there are several unnamed ephemeral and intermittent drainages within this watershed that cross or parallel the study segment.

From RP 73 to RP 87.2, Segment 1 is part of the Lower Clark Fork Watershed (HUC 17010213). All lakes and drainages within this portion of the study segment flow into Thompson River, located south of the study segment. Thompson River flows east and south before eventually flowing into the Clark Fork River. From RP 73 to RP 79.5, Upper Thompson Lake, Eli Lake, Middle Thompson Lake, and Lower Thompson Lake are all located just southwest of the highway. Tallulah Creek and Slimmer Creek also cross the highway within this portion of the study segment. From RP 79.5 to RP 85.5, Lang Creek, Twin Creek, and McGregor Creek cross and/or parallel the study segment. McGregor Lake is located within the study segment on the south side of the highway from RP 85.5 to 87.2. In addition to the named drainages and lakes, there are several unnamed ephemeral and intermittent drainages within this watershed that cross or parallel the study segment.

Total Maximum Daily Loads

Section 303 subsection “d” of the Clean Water Act requires the state of Montana to develop a list, subject to USEPA approval, of waterbodies that do not meet water quality standards. When water quality fails to meet state water quality standards, DEQ determines the causes and sources of pollutants in a sub-basin assessment and sets maximum pollutant levels, called TMDLs. TMDLs set by DEQ become the basis for implementation plans to restore water quality to a level that supports state-designated beneficial water uses. The implementation plans identify and describe pollutant controls and management measures to be undertaken (such as best management practices), the mechanisms by which the selected measures would be put into action, and the individuals and entities responsible for implementation projects. Federally recognized Indian tribes within Montana are also eligible to develop 303d lists for tribal lands.

The following provides a summary of listed 303d waterbodies within Segment 1. The screening process for safety rest area siting options will need to consider downstream TMDL standards and potential impacts to water quality within receiving waterbodies.

Segment 1 is located within the Fisher TPA and the Thompson TPA. Within the study segment, the Fisher River (MT76C001_010) from the Silver Butte/Pleasant Valley Junction to its mouth (Kootenai River) is listed as not fully supporting aquatic life due to high flow regimes from channelization and streambank modification. Raven Creek (MT76C001_030) is listed as not fully supporting aquatic life and primary recreation due to alteration in stream-side or littoral vegetative cover from forest roads, phosphorus (Total) from silviculture activities, and sedimentation/siltation from unknown sources. McGregor Creek (MT76N005_030) is also listed as not fully supporting aquatic life due to flow regime alternations caused by channelization, sedimentation/siltation from highway and bridge runoff, and water temperature due to hydro structure impacts on fish passage.

Wild and Scenic Rivers

The Wild and Scenic Rivers Act, created by Congress in 1968, provides for the protection of certain rivers, and their immediate environments, that possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, or cultural resources, or other similar values.

Based on a review of the United States National Park Service website, there are no wild or scenic rivers within or near Segment 1.

Irrigation

Applicable Montana County WRS Books were reviewed for information on irrigation infrastructure, districts, and practices within Segment 1. Larger ditches and canals are represented in Exhibit 1.3 in Attachment 1. Pages from WRS are provided in Attachment 4. Safety rest Area siting should avoid impacts to irrigation facilities to the greatest extent practicable, particularly where large ditches/canals and pivots are located as these are costly to mitigate. Any work within these irrigation ditches/canals may also be regulated by the USACE.

Very little irrigation activity/infrastructure occurs within Segment 1, with all identified irrigation being private. At the beginning of the study segment (RP 50.8) the Schnieder Ditch parallels US 2 primarily to the east. The ditch pulls water from Swamp Creek and flows north, crossing US 2 near RP 51.5 and again at RP 51. The ditch irrigates a private field just north of the study segment on the east side of US 2. Near RP 52.2, the small Sheffield Ditch pulls water off of Swamp Creek and flows east, crossing into the study segment on the west side of US 2. The ditch irrigates a small field also located on the west side of US 2. At RP 55.7, WRS maps show a small irrigation dam, called Waylett Dam, located just east of US 2 on Schreiber Creek. The dam appears to provide private irrigation to a field that is also located directly east of US 2. The Dyer (Beebe) Ditch pulls water out of Silver Butte Fisher River and flows north entering the study segment on the west side of US 2 near RP 60.1. The ditch parallels US 2 for approximately 0.5 mile, irrigating a large field. The ditch then flows into Fisher River. From RP 80.7 to RP 81.3, the Lang Drain Ditches and the Lang Ditch cross the study segment flowing south. The Lang Ditch brings irrigation water to a field on the south side of US 2.

Floodplains and Floodways

EO 11988, Floodplain Management, requires federal agencies to avoid to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains, and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities" for the following actions:

- acquiring, managing, and disposing of federal lands and facilities;
- providing federally undertaken, financed, or assisted construction and improvements; and
- conducting federal activities and programs affecting land use, including but not limited to, water and related land resources planning, regulation, and licensing activities.

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

FEMA-issued FIRMs for Lincoln and Flathead counties (3001570900C, 3001571000B, 3001571025B, 30029C2125G, 30029C2150G, and 30029C2175G), as well as FEMA's digital National Flood Hazard Layer, were reviewed for Segment 1.

The following provides a summary of the designated floodplains located within Segment 1. Exhibit 1.3 in Attachment 1 displays the FEMA digitized data where digital data was available. Digital data is not available for Lincoln County. Designated floodplains for Lincoln County are represented on FEMA FIRM numbers 3001570900C, 3001571000B, and 3001571025B. Safety rest area siting options should avoid areas designated within a 100-year floodplain.

The vast majority of Segment 1 is designated as Zone X or Zone C; however, several designated 100-year floodplains (Zone A) cross or parallel US 2 within the study segment.

- Zone A: SFHA - 100-Year Flood, No Base Flood Elevations Determined
- Zone C: Areas Outside the 500-Year Flood
- Zone X (unshaded): Areas Outside the 500-Year Flood

The 100-year floodplain for Swamp Creek parallels US 2 primarily on the east side of the highway from the start of the segment at RP 50.8 to RP 52.2. The 100-year floodplain for Schreiber Lake and Schreiber Creek parallel US 2 to the south from RP 53.3 to RP 55.5. At this location, the floodplain crosses the highway as the creek turns east to join the Fisher River. From RP 55.5 to RP 64, US 2 follows within or directly adjacent to the 100-year floodplains of Fisher River and Pleasant Valley Fisher River. Within this portion of the study segment, the 100-year floodplains for Miller Creek, West Fisher Creek, and Silver Butte Fisher River also cross the study segment as the creeks join the Fisher River. Loon Lake, Leon Lake, Horseshoe Lake, Lilypad Lake, Bootjack Lake, Crystal Lake, Rainbow Lake, Upper Thompson Lake, Eli Lake, Middle Thompson Lake, and Lower Thompson Lake (RP 69 to RP 79.5 on the south side of the US 2) also have designated 100-year floodplains (Zone A).

Wetlands

The USACE defines wetlands as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

USFWS NWI mapping data is available for Segment 1 from the NWI website and the MTNHP. NWI maps are based on the USFWS definition of wetlands, which does not follow the USACE definition that MDT uses in wetland determination and delineation. NWI maps are typically generated based on aerial and satellite imagery, and are not sufficiently accurate or detailed for MDT project wetland determination and/or delineation. At the study level, however, some useful information can be ascertained from NWI mapping on potential wetland locations.

The following provides a summary of the NWI wetlands located within Segment 1 (Exhibit 1.4 in Attachment 1). Safety rest area siting options should avoid and minimize adverse impacts to wetlands to the maximum extent practicable, and consider the costs that may be associated with permitting and potential mitigation. For federally funded projects, EO 11990 requires agencies to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. Section 404(b)(1) of the Clean Water Act requires the USACE to only permit discharges of dredge or fill materials into USACE jurisdictional wetlands that represent the least environmentally damaging practicable alternative, so long as the alternative does not have other significant adverse environmental consequences. Future wetland delineations would be required if safety rest area siting options are forwarded from the

study that could potentially impact wetlands. Work within USACE jurisdictional wetlands would require a Clean Water Act 404 permit. Unavoidable impacts to wetlands must be compensated through mitigation in accordance with USACE regulatory requirements and requirements of EO 11990.

A number of NWI wetlands occur within Segment 1. The vast majority of these are associated with the numerous creeks, rivers, and lakes that cross or parallel the highway. A large emergent wetland complex, likely associated with Schreiber Lake and Schreiber Creek, is located just southwest of US 2 from RP 53 to RP 54.3. A large portion of the study segment from RP 56.7 to RP 63.5 includes emergent, shrub/scrub, and forested wetlands that border the Fisher and Pleasant Valley Fisher Rivers. Emergent, shrub/scrub, and forested wetlands, associated with the large lake complex on the south side of US 2 from RP 69.2 to RP 78.5, are also found within the study segment. From RP 80.5 to RP 81, a large emergent wetland complex is shown on NWI mapping. Hydrology to this wetland is likely contributed from Lang Creek and McGregor Creek.

Groundwater

The MBMG GWIC was reviewed for Segment 1 to identify groundwater wells and general groundwater information. A summary is presented below. Additional information is provided in Exhibit 1.4 in Attachment 1 and Attachment 5. Impacts to existing wells will need to be considered during the screening of safety rest area siting options. Wells can be a costly item to mitigate if they are not avoided. Mitigation of a well usually involves drilling a new well for the owner in a new location that will not be impacted by the potential project. Well costs are based on per foot price; the deeper and higher volume needed results in a higher cost. In addition, groundwater levels will need to be considered for safety rest area constructability.
According to the MBMG GWIC, there are approximately 85 wells on record within or directly adjacent to Segment 1. Wells with recorded depths range from five feet within a wetland complex near RP 53.5 to 425 feet on a hillslope above Middle Thompson Lake near RP 77.7. Static water levels ranged from one foot near RP 62 along the Pleasant Valley Fisher River to 175 feet near RP 77.7 on a hillslope above Middle Thompson Lake.

Shallow groundwater can be expected where the study segment is in close proximity to Swamp Creek (RP 50.8 to RP 52), the wetland complex around Schrieber Creek and Schrieber Lake (RP 53 to RP 54.5), Fisher River and Pleasant Valley Fisher River (RP 55 to RP 66), and lower lying areas near the lake complex from approximately RP 69 to RP 79.5 and from RP 85.5 to RP 87.2. Localized groundwater conditions may also be affected by perched aquifers and associated tributary drainages.

2.2 Biological Resources

Vegetation

Land cover along the US 2 corridor is significantly different on the west and east sides of the Continental Divide. Forest and woodland system land covers dominate the corridor west of the divide, while grassland system land covers dominate the corridor east of the divide. The following provides a description of the dominant land covers within and adjacent to (based on a three-mile buffer) Segment 1 based on the MTNHP Land Cover Reports (refer to Exhibit 1.5 in Attachment 1 and Attachment 6). Safety rest area siting considerations should look at options that minimize adverse impacts to more suitable wildlife habitat and areas where mature tree and shrub removal will be limited to the extent practicable.

Segment 1 is the only segment located west of the Continental Divide. Conifer forest and woodlands dominate the land cover within and adjacent to the study segment, with montane grassland land cover primarily bordering US 2 from RP 62 to RP 69. Harvested forest land cover is primarily dispersed along the Fisher River, where trees have mainly been removed for harvesting, agriculture, or grazing. Table 1 presents the primary land cover types (four percent or more) within and adjacent to the study segment.

Table 1: Segment 1 Primary Land Cover Types

% of Cover	Land Cover Type
29%	Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest
28%	Rocky Mountain Mesic Montane Mixed Conifer Forest
8%	Rocky Mountain Lower Montane, Foothill, and Valley Grassland
5%	Rocky Mountain Subalpine Mesic Spruce-Fir Forest and Woodland
5%	Harvested Forest-Tree Regeneration

Source: MTNHP Land Cover Reports, 2017.

General Wildlife Species

Segment 1 has minor development, is within or directly adjacent to national forest service lands, and includes large areas where native vegetation still exists. Wildlife species would include generalists; however, Segment 1 also provides greater opportunity for sensitive species and species with specific habitat needs. Mammal species likely to occur within the study segment include, but are not limited to, mule deer, white-tailed deer, coyote, raccoon, striped skunk, beaver, porcupine, and northern river otter. Bird species likely found within the study segment would be those typically found within northern Montana's forests and agricultural fields. Bird species likely to occur include, but are not limited to, American crow, American robin, Canada goose, common raven, mallard, belted kingfisher, red-winged blackbird, mountain bluebird, hooded merganser, and western tanager. Amphibians and reptiles likely to occur within Segment 1 include, but are not limited to, painted turtle, common gartersnake, northern leopard frog, Columbia spotted frog, and American bullfrog.

Threatened and Endangered Species

The federal list of T&E species is maintained by the USFWS. Species on this list receive protection under the ESA. An "endangered" species is in danger of extinction throughout all or a significant portion of its range. A "threatened" species is likely to become endangered in the foreseeable future. The USFWS also maintains a list of species that are candidates or proposed for possible addition to the federal list.

To determine which federally listed species may occur in the vicinity of Segment 1, the USFWS list for Lincoln and Flathead Counties and the MTNHP database for threatened or endangered species were reviewed for occurrences within and adjacent to the study segment. A three-mile buffer on each side of US 2 was used. According to the USFWS database, five threatened, two proposed threatened, and one candidate species are listed as potentially occurring along the US 2 corridor within Segment 1 (See Table 2 and Attachment 7). In addition to the species listed below, designated critical habitats for bull trout (the Fisher River) and Canada lynx are found within and adjacent to Segment 1.

Table 2: T&E Species with the Potential to Occur in Segment 1

Species	Status
Mammals	
Canada lynx *Lynx canadensis*	Threatened
North American wolverine *Gulo gulo luscus*	Proposed Threatened
Grizzly bear *Ursus arctos horribilis*	Threatened
Birds	
Yellow-billed cuckoo *Coccyzus americanus*	Threatened
Fish	
Bull trout *Salvelinus confluentus*	Threatened
Invertebrates	
Meltwater Lednian stonefly *Lednia tumana*	Proposed Threatened
Plants	
Spalding's campion *Silene spaldingii*	Threatened
Whitebark pine *Pinus albicaulis*	Candidate

Source: USFWS, 2017.

The MTNHP August 14, 2017, database search on T&E species is summarized below for Segment 1. Exhibit 1.6 in Attachment 1 displays recorded T&E occurrences. Potential effects to T&E species and their habitat will need to be considered during the safety rest area siting process.

According to the MTNHP database, documented occurrences of grizzly bear, North American wolverine, Canada lynx, and bull trout occur within the three-mile buffer for Segment 1. The MTNHP database also notes the potential for yellow-billed cuckoo to occur in the segment vicinity due to the presence of suitable habitat.

Species of Concern and Special Status Species

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

Special Status Species are species that have some legal protections in place, but are otherwise not Montana SOC. Bald eagles are considered special status species.

Bald eagles (special status species) and golden eagles (SOC) are also protected under the Bald and Golden Eagle Protection Act of 1940. The act prohibits anyone without a permit issued by the Secretary of the Interior, from taking bald or golden eagles, including their parts, nests, or eggs. The Act defines take as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb."

A search of the MTNHP SOC database on August 14, 2017, was conducted to determine SOC and special status species likely to occur within and adjacent to Segment 1. A three-mile buffer on each side of US 2 was used (see Exhibit 1.6 in Attachment 1 and Attachment 8). The following is a brief summary of the SOC and special status species with potential to occur / have recorded observations within or adjacent to Segment 1. The screening process for potential safety rest area siting options will need to consider the presence and extent of these species.

There are 25 wildlife SOC and seven plant SOC with known recorded observations within or directly adjacent to Segment 1. Wildlife species include mammals, birds, fish, and invertebrate species. Observations of bald eagle and bald eagle nests (a special status species) have also been recorded within the vicinity of Segment 1. Potential safety rest area siting options will need to consider proximity to known eagle nests as construction timing restrictions are required for work near active nests.

Sage Grouse Habitat Conservation Program

In Montana, the state has management authority over sage grouse as outlined under the 2015 Greater Sage Grouse Stewardship Act and Montana Governor's EOs 10-2014, 12-2015, and 21-2015. The Sage Grouse Habitat Conservation Program was created to facilitate implementation of the EOs across state government, by federal land management agencies, and private entities seeking to develop projects in key sage grouse habitats. The screening process for potential safety rest area siting options will need to consider sage grouse habitats designated as core area, general habitat, or connectivity. Sites within these areas must be reviewed under the Sage Grouse Habitat Conservation program to avoid and minimize impacts to sage grouse.

A review of the Montana Sage Grouse Habitat Conservation Map shows Segment 1 is not located within sage grouse habitats designated as core area, general habitat, or connectivity.

2.3 Social and Cultural Resources

Economy

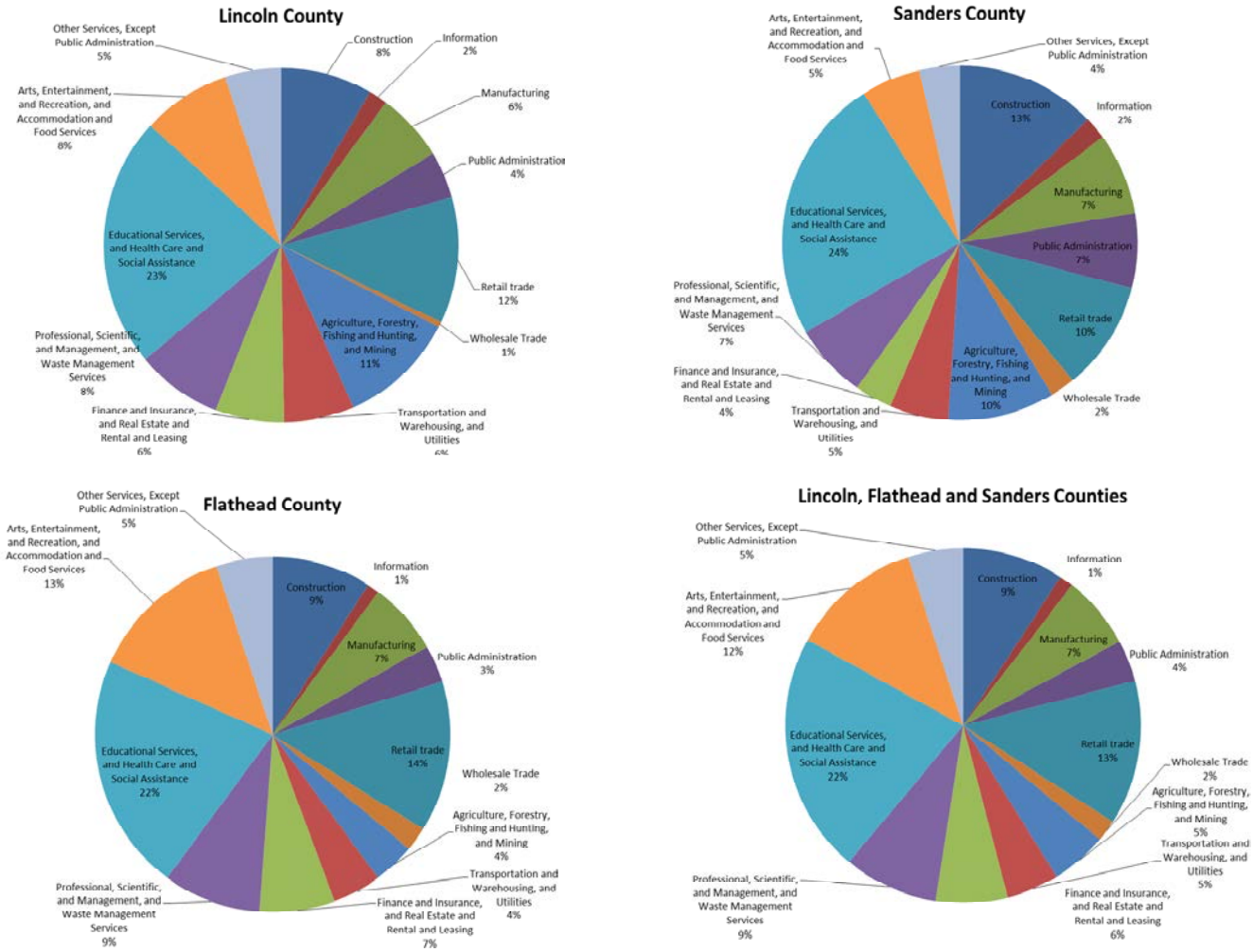
Northwestern and northeastern Montana have significant economic differences. Northwestern Montana is primarily a tourism based economy due to the presence of natural amenities such as Glacier National Park. Northcentral Montana and northeastern Montana have economies tied more closely to agriculture and resource extraction. Unemployment is expected to hold relatively constant across northern Montana over the coming years. Unemployment tends to be higher than state averages in the northwestern Montana, and on par or lower than statewide averages in central and northeastern Montana. Overall, the socio-economic traits of northern Montana can be expected to change very little over the coming years. The following summarizes the economic conditions within and near Segment 1.

Segment 1 is located in Lincoln County and Flathead County and is also near Sanders County. It is reasonable to consider all of these counties in a socioeconomic overview. The communities of Troy, Libby, Columbia Falls, Kalispell, and Whitefish are near this study segment.

Flathead County's tourism attractions and the resulting positive effects seem to be the primary driver of industry in these counties. Although the natural amenities of Lincoln and Sanders Counties are not as well known, these counties also attract tourists as one of their primary economic drivers. This is borne out by Figure 3 shows the mix of industry in the counties individually and together.

Arts, entertainment, and recreation make up a significant portion of the economy in all three counties. Construction, agriculture, and educational, heath care and social services also make up a significant portion of these three counties' economies. The similarity between Figure 3 and each of the other figures suggests that the mix of industries across these three counties is relatively constant.

Figure 3: Sanders, Flathead, and Lincoln County Industries

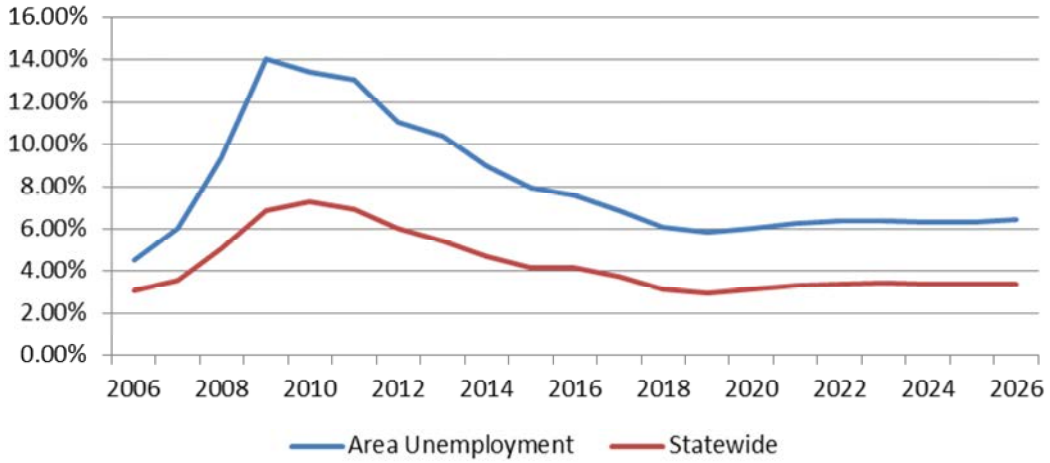


Source: United States Census, 2010-2014 American Community Survey 5-Year Estimates.

An average of past and forecasted unemployment rates in the three counties is displayed in Figure 4. Figure 4 also compares this rate to the past and forecasted unemployment rate

statewide.[1] Figure 4 shows that the unemployment rate has been higher in this area historically, relative to the rest of the state. The forecast suggests this trend will continue.

Figure 4: Area Unemployment



Source: United States Census, 2010-2014 American Community Survey 5-Year Estimates.

Like much of northwestern Montana, this area shows high rates of unemployment and an economy that relies heavily on tourism related activities. The highest unemployment rate displayed is 14.02% and was observed in 2009. The lowest rate of unemployment displayed is 4.49% and was observed in 2006.

Table 3 shows the comparison of some income and wealth measures between the three counties and the rest of the state.

Table 3: Sanders, Flathead, and Lincoln Income and Income and Wealth

Area	Montana	Sanders County	Flathead County	Lincoln County
Median Family Income (2014 $)	$46,766	$31,665	$46,858	$35,603
Per capita income (2014 $)	$25,977	$19,145	$25,789	$22,464
Retail Sales per capita (2012 $)	$15,544	$6,836	$16,543	$8,854

Source: United States Economic Census.

As Table 3 indicates, Flathead County is on par with the statewide averages for these measures of wealth and income. Sanders and Lincoln Counties, however, are lagging slightly behind in these measures of income and wealth.

Population and Demographics

Northern Montana has a small population, and only minimal growth is expected. The socio-economic characteristics of this area can be expected to remain constant in the future. The following summarizes population and demographic conditions within and near Segment 1.

[1] The forecasts were obtained using a vector auto regression model using the statewide unemployment rate and the unemployment rate from the 17 counties along Montana's Hi-Line as inputs. All other unemployment forecasts in this document were obtained using this method.

Table 4 displays the populations for Kalispell, Whitefish, Troy, and Libby. Table 5 summarizes the current populations of the three counties as well as demographic characteristics. The table shows that Flathead County has the largest population of the three. All counties are predominantly populated with people who identify as White Alone. People who identify as American Indian and Hispanic or Latino represent a smaller proportion of the population than what is average for Montana. The rate of owner occupied housing is greater than that of Montana on average for all three counties.

Table 4: Segment 1 Area Populations

City/Town	Kalispell	Whitefish	Troy	Libby
Population	22,053	7,073	957	2,691

Source: United States Census 2015 Estimates.

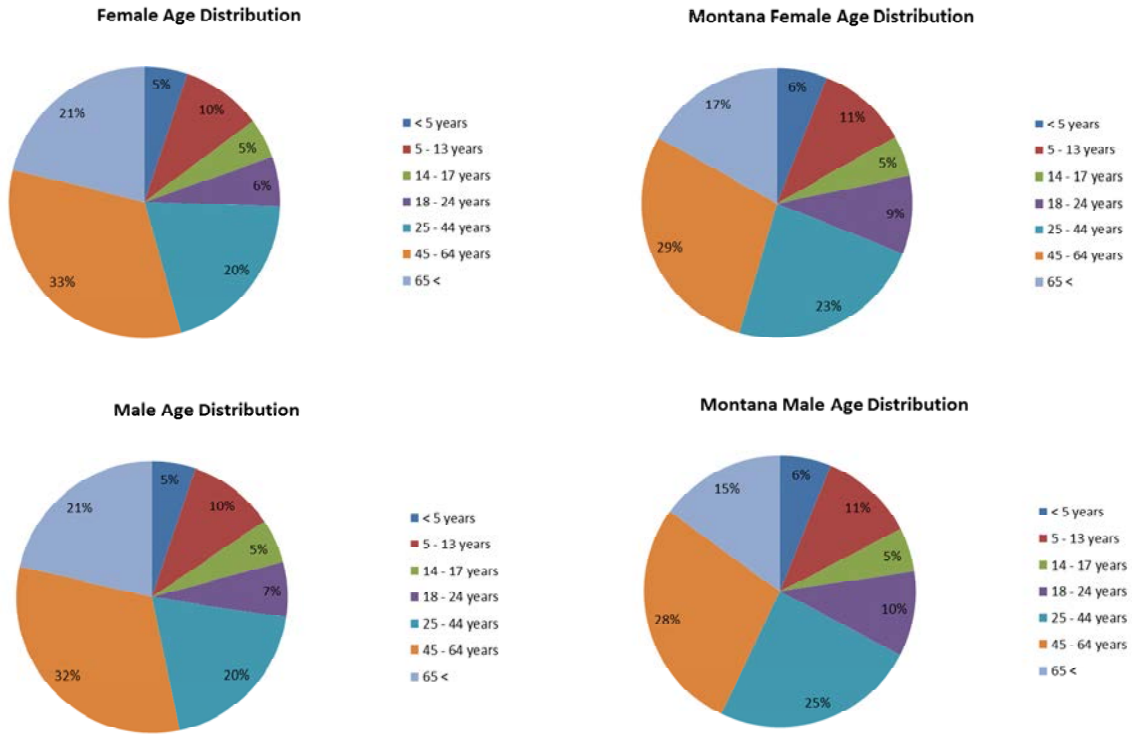
Table 5: Sanders, Flathead, and Lincoln County Population Demographics

Area	Montana	Sanders County	Flathead County	Lincoln County
Population	1,032,949	11,336	96,165	9,042
White Alone	77.1%	91.7%	95.2%	95.6%
American Indian	6.6%	4.4%	1.1%	1.4%
Hispanic or Latino	17.6%	2.9%	2.3%	2.3%
Housing Units	134,789,944	6,642	47,487	11,451
Owner Occupied Housing Rate	64.4%	74.9%	70.1%	78.2%

Source: United States Census 2015 Estimates.

Figure 5 shows the distribution of age by sex in the three counties and Montana. The distribution of age in the three counties is slightly more weighted toward the people of older ages than that of Montana generally.

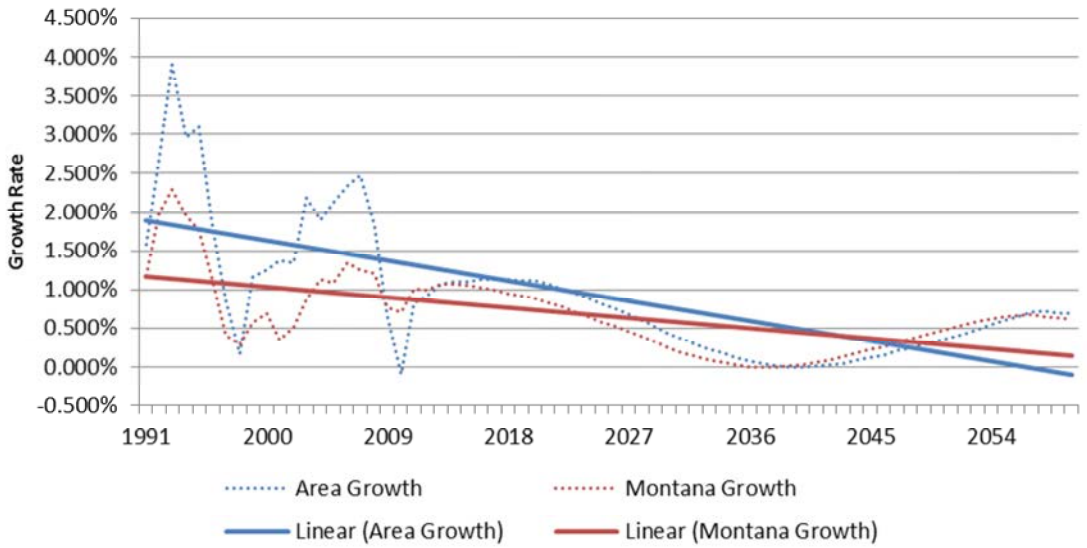
Figure 5: Sanders, Flathead, and Lincoln County Sex Distribution



Source: United States Census American Community Survey.

The projected population growth rate of the three counties combined and Montana is displayed in Figure 6. The chart shows that growth is expected across the three counties over the next 45 years; however, the rate of growth is expected to decrease. These counties are expected to grow at a rate of 1.011% for the next 10 years, which is higher than the expected 10-year growth for the state, 0.793%.

Figure 6: Flathead, Sanders, and Lincoln County Population Growth



Source: DOC 2013 Population Projections.

Environmental Justice

Title VI of the United States Civil Rights Act of 1964, as amended (USC 2000(d)) and EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, require that no minority, or, by extension, 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. If a project is forwarded from this study, environmental justice will need to be further evaluated during the project development process.

Land Ownership and Use

The following provides a description of the dominant land ownership and land uses within and adjacent to Segment 1 based on Montana Cadastral (refer to Exhibit 1.7 in Attachment 1). Because privately owned lands and developed lands may be more costly to acquire, safety rest area siting considerations should attempt to minimize impacts to privately owned lands and developed lands to the extent practicable.

Land ownership in Segment 1 is predominantly private and USFS, with some interspersed state, county, and federal owners. Specifically, USFS owns the majority of land from RP 50.8 to RP 55, with some private land near RP 52 and a MDT parcel near RP 53.5. Private land mainly borders US 2 from RP 55 to RP 87.2 with State Trust lands near RP 65, FWP intermittently from RP 70 to RP 79, and USFS lands near RP 85.

The majority of land use is Segment 1 is federally managed forests with bodies of water neighboring the study segment used primarily for recreation. Also, some crop/pasture land is sporadically located throughout.

Recreational Resources

Recreational resource information within Segment 1 was gathered during the July 2017 field review and through review of aerials and USFS and FWP resource lists. Recreational areas may be protected under Section 4(f) of the U.S. Department of Transportation Act of 1966, which was enacted to protect publicly owned parks, recreation areas, wildlife and waterfowl refuges, and public and private historic sites of local, state, and national significance. Federally funded transportation projects cannot impact these properties unless there are no feasible and prudent avoidance alternatives and all possible planning to minimize harm has occurred. 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 the 4(f) resource. “Use” can occur 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.”

In addition, the FWP LWCFA, or Section 6(f), list of sites by county was reviewed to determine the presence of Section 6(f) sites within the study segment. LWCFA was enacted to preserve, develop, and assure the quality and quantity of outdoor recreation resources. Section 6(f) protection applies to all projects that impact recreational lands purchased or improved with LWCFA funds. The Secretary of the Interior must approve any conversion of LWCFA property to a use other than public, outdoor recreation.

The following is a summary of the recreational resources found within Segment 1. Potential Section 4(f) resources and LWCFA resources are mapped in relation to the study segment in

Exhibit 1.7 (in Attachment 1). The screening process for potential safety rest area siting options will need to consider effects on recreational use in accordance with Section 4(f) and Section 6. For sites carried forward, a future reevaluation of Section 6(f) resources should take place to determine if any new Section 6(f) resources are present. As general guidance, converting these resources to a non-recreational purpose can be a difficult and time-consuming task and should be avoided if practicable.

Segment 1 is located primarily within lands under USFS jurisdiction with private and state lands interspersed throughout. Recreation on USFS lands includes fishing, camping, hiking, mountain biking, nature viewing, horse riding, hunting, boating, snowmobiling, and travel on forest service roads via car or all-terrain vehicle.

According the FWP database, there are no designated FWP fish access sites within the study segment. However, fishing occurs on Fisher River, Pleasant Valley Fisher River, Silver Butte Fisher River, and the many other perennial creeks and lakes in the area. Fishing within the rivers and creeks is accessed primarily via foot or at undesignated sites at US 2 bridge crossings.

Segment 1 also provides access to the surrounding Kootenai National Forest via a large number of forest service roads that connect with US 2. These include National Forest roads 6740, 6735, 232, 385, 231, 6734, 535, 257, 6729, 6725, 6730, and 6770.

There are also several state parks, campgrounds, and boat docks found within the study segment. These public resources are potential Section 4(f) recreational resources, and include the following.

- The USFS Pleasant Valley Campground is located east of US 2 at RP63.5. The campground has seven sites. There is also a stock area with feed bins and a corral.
- From Loon Lake to McGregor Lake (RP 69 to RP 80 and RP 85 to end of segment at RP 87.2), there are two state parks on the south and southwest side of the US 2. These include Thompson Chain-of-Lakes State Park and Logan State Park. Both State Parks include camping, picnicking, boating, fishing, and swimming. The state parks provide several public boat docks to access the various lakes within the study segment.
- USFS McGregor Lake Campground is located on the west side of McGregor Lake near RP 85.5. The campground has 27 sites and a public boat ramp. Day use picnic areas are also available near the beach.

In addition, LWCFA funds have been used at both state parks for various development projects.

Cultural Resources

The 666-mile US 2 corridor across Montana from the Idaho to North Dakota border is rich in historic properties. The complex history of the region is well represented in the large number of historic buildings, structures, and sites located along the highway. These include commercial buildings, service stations, motels, restaurants, and other operations that were and are dependent on the highway. The BNSF Railway (formerly the Great Northern Railway) was constructed across the Hi-Line in 1887 and extended to the west coast in 1892. The railroad deposited towns and stations in its wake, with most of the communities located along its length tracing their origins to the late nineteenth century.

US 2 is the primary east-west travel corridor in northern and northwestern Montana. The route passes through three Indian reservations (Fort Peck, Fort Belknap, and Blackfeet), around the southern tip of Glacier National Park, and two national forests (Flathead and Kootenai). Historic

properties have been recorded along its length from the Idaho to the North Dakota borders. The sites include archaeological sites, commercial buildings, service stations, motels, hotels, drive-in theaters, and residences. Most represent the change of focus in those communities from the railroad to the automobile in the twentieth century. In addition to the historic properties located in the communities through which the highway passes, irrigation ditches associated with the Bureau of Reclamation's Milk River Project, an active railroad grade (BNSF Railway), farms, ranches, and highway-related structures (i.e., bridges and overpasses) also occur. Also represented in the corridor are churches, schools, and government buildings. Structures include sand houses, maintenance section shops, and the former Glasgow Rest Area (determined ineligible for the National Register in 2016).

Historic development of the corridor began relatively late east of the continental divide. The Lame Bull Treaty of 1855 established the area from the continental divide to the mouth of the Milk River and from the Missouri River north to the Canadian line. The extermination of the great buffalo herds in the early 1880s coupled with the construction of the St. Paul, Minneapolis & Manitoba Railroad (later Great Northern Railway and the BNSF Railway) in 1887 began the process of breaking up the reservation. The railroad, moreover, deposited towns, stations, and watering stops along its length in Montana Territory. In 1892, James J. Hill extended the newly renamed Great Northern Railway from Havre westward to Seattle. The railroad allowed the agricultural development of eastern Montana and brought thousands of new people into the formerly remote area. The Newlands Reclamation Act of 1902, the Enlarged Homestead Act of 1909, and the creation of Glacier National Park in 1910 also caused the development of the area called the Hi-Line. In western Montana, development was also based on the railroad after 1892 with an emphasis on mining, logging, and agriculture.

The dawn of the automobile age caused a profound change in northern and northwestern Montana. In 1919, local and regional promoters established the Theodore Roosevelt International Highway. The 4,060-mile automobile route initially connected Portland, Maine, with Portland, Oregon, (the western terminus was later changed to Seattle). The route paralleled the Great Northern Railway from Minnesota, through North Dakota, Montana, and Idaho to the west coast. With the rising popularity of the automobile, the concentration of business districts on the railroad along the Hi-Line and northwestern Montana changed to the highway. New businesses (motels, tourist camps, drive-in restaurants and theaters, and services stations and garages) arose to serve the new mode of travel. All of those businesses are represented in the US 2 corridor. The American Association of State Highway Officials, Bureau of Public Roads, and Montana State Highway Commission re-designated the Roosevelt Highway as US 2 in 1926. The first highway commission projects to improve it began in 1919.

A large number of archaeological and historic properties likely occur along the US 2 corridor in Montana. Archaeological sites in the corridor include buried campsites, stone circle sites, bison kills, human burials, and rock art sites under federal, state, local, and private ownership.

The NHPA of 1966, as amended, defines historic properties as sites, buildings, structures, districts (including landscapes), and objects included on, or eligible for inclusion on, the NRHP, as well as artifacts, records, and remains related to such properties.
To be considered eligible for listing on the NRHP, a property must meet at least one of the following criteria:

A. Is associated with events that have made a significant contribution to the broad patterns of our history.
B. Is associated with the lives of persons significant in our past.
C. Embodies the distinctive characteristics of a type, period, or method of construction or

that represents the work of a master, or that possess high artistic values, or that represents a significant distinguishable entity whose components may lack individual distinction.

D. Yielded, or may likely yield, information important in prehistory or history (36 CFR Part 60.4).

Potential safety rest area siting options will need to consider recorded historic sites determined to be NRHP-eligible as identified through a Montana SHPO file search. In addition, cultural resource surveys will be necessary for siting options forwarded from this study.

Noise

Analysis of traffic noise is necessary for Type I projects, including "the addition of a new or substantial alternative of a weigh station, rest stop, ride-share lot or toll plaza" (23 CFR 772.5). Type I projects require a detailed noise analysis, consistent with FHWA requirements and MDT policy, which involves measuring ambient noise levels at selected receptors and modeling design year noise levels using projected traffic volumes. If noise levels approach or substantially exceed noise abatement criteria, noise abatement measures may be necessary.

Federal regulations define traffic noise receptors as discrete or representative locations of noise sensitive area(s) for various land uses, including residential developments, businesses, and public use areas. The study corridor traverses a variety of land uses. In some portions of the corridor, noise-sensitive receptors are located in proximity to US 2 right-of-way. In Segment 1, isolated residential development is found throughout the study segment; more concentrated development is found at Happy's Inn (±RP 72).

The screening process for potential safety rest area siting options will need to consider proximity to potential noise receptors. Options forwarded from this study may require a Type I noise analysis.

Visual Resources

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

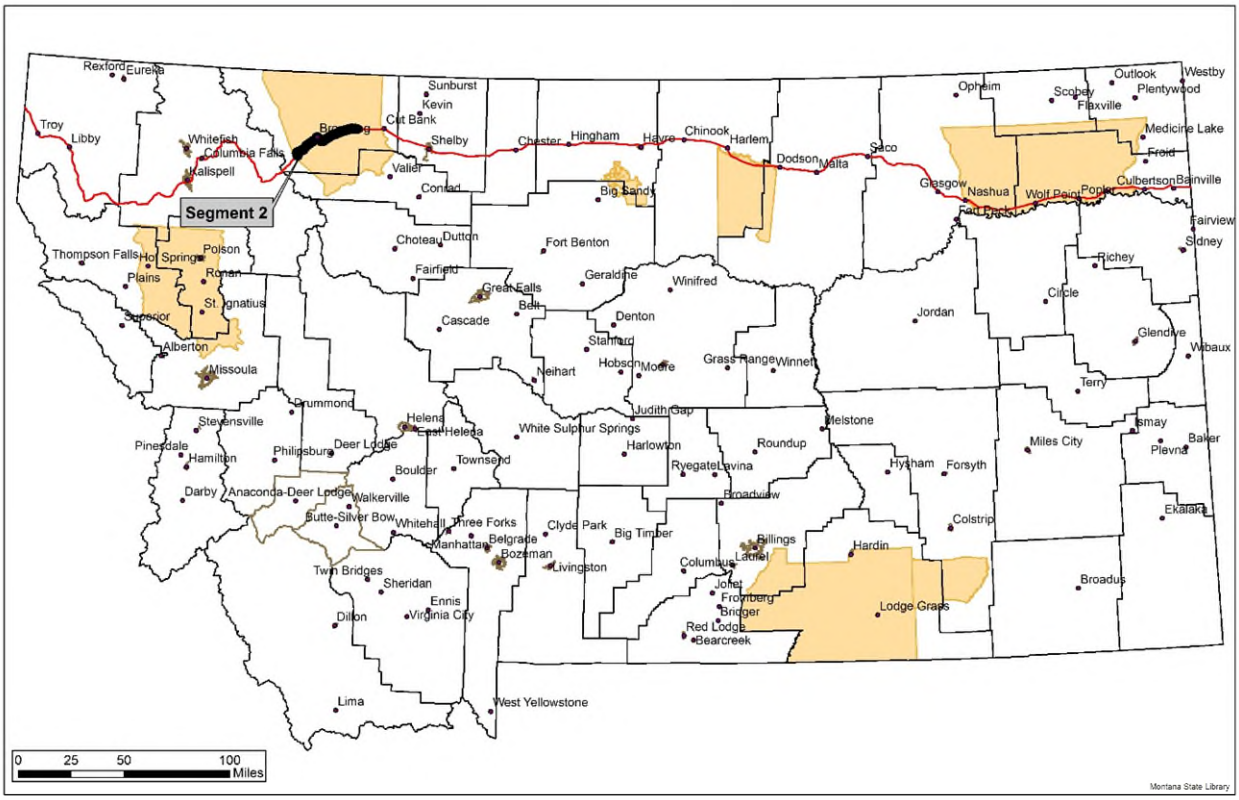
Views along the US 2 corridor are significantly different on the west and east sides of the Continental Divide. A mountainous, forested landscape, bisected by steep mountain creeks and rivers dominates the corridor west of the divide. Rolling grasslands and agricultural fields bisected by the large floodplains of the Marias, Milk, and Missouri Rivers dominate the corridor east of the divide.

Views from US 2 within Segment 1 are dominated by the steep, forested, river valleys of the Fisher River and Pleasant Valley Fisher River, with views of the Cabinet Mountains to the southwest and the Salish Mountains to the Northeast. From RP 69 to the end of the segment at RP 87.2, the corridor opens to include a series of lakes.

Evaluation of the potential effects on visual resources and viewshed opportunities will need to be conducted as part of the screening process for potential safety rest area siting options

3.0 Segment 2 (RP 208.1 to RP 242)

Figure 7. Segment 2 Location



3.1 Physical Environment

Soil Resources and Prime Farmland

Soils information was reviewed to better understand the general soil characteristics within Segment 2 and to determine the presence of prime and unique farmland in the study area to demonstrate compliance with the FPPA.

The FPPA is intended "to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to assure that federal programs are administered in a manner that, to the extent practicable, will be compatible with State, unit of local government, and private programs and policies to protect farmland." The term "farmland" refers to prime farmland; some prime if irrigated farmland; unique farmland; and farmland, other than prime or unique farmland, that is of statewide importance. Prime farmland soils are those that have the best combination of physical and chemical characteristics for producing food, feed, and forage; the area must also be available for these uses. Prime farmland can be either non-irrigated or lands that would be considered prime if irrigated. Farmland of statewide importance is land, in addition to prime and unique farmlands, that is of statewide importance for the production of food, feed, forage, and oilseed crops. Developed land previously designated as prime farmland is no longer subject to the FPPA.

Soil surveys of Segment 2 are available from the USDA NRCS. A summary of the general soil characteristics and farmland designations for Segment 2 are presented below (Exhibit 2.1 in Attachment 1 and Attachment 2). The screening process for potential future safety rest areas

will need to consider soil characteristics for constructability (e.g., clay soils). In addition, any siting options forwarded from this study that are within identified farmlands and are supported with federal funds will require a CPA-106 Farmland Conversion Impact Rating Form completed by MDT and coordinated with NRCS. The NRCS uses information from the impact rating form to keep inventory of the prime and important farmlands within the state.

Approximately 30 soils occur within Segment 2. The majority of soils are glacial till and outwash. However, near rivers and streams, alluvial deposits are common.

Only the very eastern portion of the study segment contains lands designated as farmland of statewide importance or prime farmland if irrigated. These designations occur from RP 239.5 to RP 242.0. The percentage of the study segment comprised of farmland of statewide importance or prime farmland if irrigated is very low.

Geologic Resources

Information on the geology and seismicity in Segment 2 was obtained from published sources, including MBMG ArcGIS Map Service Layers and the USGS National Geologic Map Database Geolex Search website. Geologic mapping was reviewed for geological formations, rock types, and fault lines. Seismicity and potential seismic hazards were also reviewed.

The following provides a brief summary of the geologic and seismic conditions present in Segment 2 (refer to Exhibit 2.2 in Attachment 1). Geologic and seismicity information can help determine potential safety rest area design and construction issues and will need to be considered as safety rest area siting options are screened. Site-specific geotechnical evaluations will be required once potential sites are selected.

Segment 2 crosses the northern Montana overthrust belt, which is a geologically complex, abundantly faulted area, where the geologic formations have been disturbed. The bedrock encountered along Segment 2 is younger, Cretaceous-aged bedrock that is less competent (and probably more fractured and disturbed). The bentonite beds present in some of the formations can be highly expansive, and soils derived from these bentonite beds may also have expansive characteristics.

The Marias River and Blackleaf Formations that underlie RP 208.1 to approximately RP 213 consist of mainly shale with some sandstone. Limestone and bentonite beds occur in the upper part of the Marias River Formation. The bedrock underlying RP 213 to RP 221 are the Two Medicine, Virgelle, and Telegraph Creek Formations which consist mainly of sandstone and mudstone. The St. Mary River and Horsethief Formations that underlie RP 221 to RP 235.5 consist of mudstone and sandstone. The Bearpaw shale contains some bentonite and sandstone beds and underlies RP 235.5 to RP 240. The Two Medicine Formation (mudstone with some sandstone) underlies RP 240 to RP 242.

The surficial deposits exposed along Segment 2 consist mainly of Quaternary glacial deposits. The glacial deposits along the study segment are described as gravelly to clayey till deposited by continental ice sheets that may contain gravel deposits. These soils may have a high frost susceptible. Poor drainage may also be an issue. The thickness of the glacial deposits in this area is typically one to 15 feet thick but can be more than 50 feet thick. Based on the published data reviewed, it does not appear that landslides have been mapped along Segment 2.

Numerous faults (mostly north-trending) are mapped along Segment 2. However, based on MBMG and USGS mapping, no Quaternary faults (which may be considered active) are present

along Segment 2. Segment 2 is also located within the intermountain seismic belt. The MBMG peak horizontal acceleration (in percent of the acceleration of gravity) for Segment 2 ranges from about 5% to 9%. Earthquakes can induce movement along faults, rock fall, slope movement (landslides), and liquefaction. However, no significant historic earthquake epicenters are mapped in the vicinity of Segment 2, and the nearest epicenter is located 40 miles to the southwest.

Hazardous Substances

Reviews of the Montana DEQ database, MBMG database, USEPA database, MBOG, and the National Pipeline Mapping System were conducted to obtain available information on UST sites, LUST sites, petroleum release fund claims, remediation response sites, superfund sites, hazardous waste sites, mining districts, abandoned mine sites, open cut mines, oil and gas pipelines, and oil/gas wells.

A brief summary of the primary sites within Segment 2 is discussed below. Locations of hazardous substances are represented in Exhibit 2.2 in Attachment 1 and Attachment 3. Safety rest area sites carried forward from this study will need to consider contaminated soils and may require additional investigation/coordination in areas where pipelines, wells, or mines are located.

Four LUST sites and three petroleum release fund sites are located within Segment 2, just north of RP 209, in East Glacier Park. The LUST site at the former Husky Station was resolved in 2003. The three other LUST sites at Oil West Services, Circle R Services, and the Glacier Park Lodge Service Station, have associated petroleum release funds. Of the three LUST sites, the Circle R Services site is the only one resolved (2006). Three UST sites are also located within the study segment in East Glacier Park. The USTs are just east of US 2 at the Bear Track Travel Center.

Within the city of Browning, 15 LUST sites, 11 petroleum release fund sites, 12 UST sites, and one hazardous waste site occur within the study segment. Of the 15 LUST sites, DEQ data shows that eight have been resolved. The hazardous waste site is the Browning High School, which is labeled as a large quantity generator.

Segment 2 is not located within a mining district, and no open cut mines or abandoned mines are located within the study segment.

Northwestern Energy has two in-service gas transmission pipelines within the study segment. The pipelines parallel US 2 on the southeast side of the roadway near RP 208 and again from approximately RP 210.5 to RP 212 where the pipelines cross the highway. From the highway crossing, the pipelines parallel the study segment to the northwest. At approximately RP 215.5, the pipelines continue north and away from US 2. There are no oil/gas wells or well directionals within the study segment; however, several oil/gas wells are located adjacent to the study segment near RP 213, RP 236, and RP 238.5.

There are no USEPA designated superfund sites within Segment 2.

Air Quality

USEPA has established NAAQS for six criteria pollutants, including carbon monoxide, nitrogen dioxide, ozone, PM10 and PM2.5, sulfur dioxide, and lead. The USEPA designates communities that do not meet NAAQS as “non-attainment areas.” States are required to develop a plan to control source emissions and ensure future attainment of NAAQS. A review

of the DEQ website indicates no non-attainment areas for any of the criteria pollutants are located within or near Segment 2.

According to Table 2, 40 CFR 93.126, safety rest areas are typically exempt from the requirements that a conformity determination be made. As a result, special design considerations are not anticipated to accommodate NAAQS in any future safety rest area project development process.

Surface Waters

USGS topographic maps, aerial photographs, and GIS data were reviewed for Segment 2 to identify the locations of surface waterbodies including rivers, streams, lakes, and reservoirs.

The following provides a summary of the watersheds and surface waters located within Segment 2 (refer to Exhibit 2.3 in Attachment 1). The screening process for safety rest area siting options should consider potential impacts to surface waters and the costs that may be associated with permitting and potential mitigation. Coordination with federal, tribal, and local agencies may be necessary, as work within these surface waters may be regulated by the USACE and tribal laws and regulations (e.g., Blackfeet Tribe Aquatic Lands Protection Ordinance 90-A). In addition, forwarded siting options may trigger the need to obtain coverage under NPDES for Storm Water Discharges Associated with Construction Activity and comply with the requirements outlined in MDT's Storm Water Management Plans.

Segment 2 is comprised of two watersheds. The very southern portion of the segment (RP 208.1 to RP 214.8) is located in the Two Medicine Watershed (HUC 10030201). The remainder of the segment is within the Cut Bank Watershed (HUC 10030202).

Midvale Creek, Two Medicine River, and Elk Creek are the named drainages that cross the study segment within the Two Medicine Watershed (RP 208.1 to RP 214.8). Two Medicine River is the primary drainage and flows southeast for several miles before merging with Cut Bank Creek to form the Marias River. In addition to the named drainages, there are a number of unnamed ephemeral and intermittent drainages within this watershed that cross or parallel the study segment.

The Cut Bank Watershed makes up the majority of Segment 2, with Willow Creek and Wasteway Coulee being the primary drainages located within this portion of the segment. Willow Creek crosses the study segment at RP 229.3. It then parallels the segment for 3.5 miles before crossing again at RP 233.1. Wasteway Coulee first crosses the study segment near RP 236. It then parallels the highway for three miles, crossing and recrossing the highway again at RP 237.8 and RP 238.3. From the study segment, both Willow Creek and Wasteway Coulee flow northeast into Cut Bank Creek. Depot Creek and Flat Iron Creek are also named drainages that cross the study segment. Depot Creek crosses just outside of Browning near RP 222. Flat Iron Creek crosses at RP 229.6. Both creeks flow into Willow Creek. In addition to the named drainages, there are several unnamed ephemeral and intermittent drainages within this watershed that cross or parallel the study segment.

Total Maximum Daily Loads

Section 303 subsection "d" of the Clean Water Act requires the state of Montana to develop a list, subject to USEPA approval, of waterbodies that do not meet water quality standards. When water quality fails to meet state water quality standards, DEQ determines the causes and sources of pollutants in a sub-basin assessment and sets maximum pollutant levels, called TMDLs. TMDLs set by DEQ become the basis for implementation plans to restore water quality

to a level that supports state-designated beneficial water uses. The implementation plans identify and describe pollutant controls and management measures to be undertaken (such as best management practices), the mechanisms by which the selected measures would be put into action, and the individuals and entities responsible for implementation projects. Federally recognized Indian tribes within Montana are also eligible to develop 303d lists for tribal lands.

Waterbodies on Indian Reservations (Blackfeet, Fort Belknap, and Fort Peck) are not included in the DEQ 303d list, as tribal lands are not under state jurisdiction. Segment 2 is located within the Blackfeet TPA. Waterbodies within this segment are not listed in the DEQ 303d Water Quality Report; however, the screening process for safety rest area siting options will still need to consider potential impacts to water quality within receiving waterbodies.

Wild and Scenic Rivers

The Wild and Scenic Rivers Act, created by Congress in 1968, provides for the protection of certain rivers, and their immediate environments, that possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, or cultural resources, or other similar values. Based on a review of the United States National Park Service website, there are no wild or scenic rivers within Segment 2. The closest wild and scenic river is the Middle Fork of the Flathead River, which crosses US 2 approximately 22 miles southwest of Segment 2.

Irrigation

Applicable Montana County WRS Books were reviewed for information on irrigation infrastructure, districts, and practices within Segment 2. Larger ditches and canals are represented in Exhibit 2.3 in Attachment 1. Pages from WRS are provided in Attachment 4. Safety rest Area siting should avoid impacts to irrigation facilities to the greatest extent practicable, particularly where large ditches/canals and pivots are located as these are costly to mitigate. Any work within these irrigation ditches/canals may also be regulated by the USACE.

Irrigation water on the Blackfeet Reservation is primarily supplied through the Blackfeet Irrigation Project, which is owned and operated by the BIA. While a number of irrigation ditches and canals occur in the vicinity of Segment 2, no “in use” ditches/canals were identified in the Glacier County WRS that cross or parallel the study segment. At RP 209.5, a portion of the study segment crosses the private East Glacier Park Hotel Company Sprinkler System, which irrigates the Glacier Park Lodge Golf Course.

Floodplains and Floodways

EO 11988, Floodplain Management, requires federal agencies to avoid to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains, and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities" for the following actions:

- acquiring, managing, and disposing of federal lands and facilities;
- providing federally undertaken, financed, or assisted construction and improvements; and
- conducting federal activities and programs affecting land use, including but not limited to, water and related land resources planning, regulation, and licensing activities.

In addition, Federal-aid Policy Guide, 23 CFR 650, Bridges, Structures, and Hydraulics, provides “policies and procedures for the location and hydraulic design of highway

encroachments on flood plains, including direct Federal highway projects administered by the FHWA." This regulation calls for the assessment of federally funded highway projects in terms of impacts on flood risk, where such projects must avoid hazardous or incompatible use and development of floodplains, avoid longitudinal or substantial floodplain encroachment, minimize negative impacts on base flood elevations, restore and preserve natural and beneficial floodplain values, and be consistent with FEMA, state, tribal and local government standards for the administration of the National Flood Insurance Program.

FEMA-issued FIRMs for the Blackfeet Reservation, as well as FEMA's digital National Flood Hazard Layer, were reviewed for Segment 2. Safety rest area siting options should avoid areas designated within a 100-year floodplain.

Segment 2 is located within the Blackfeet Reservation. FIRM maps and floodplain digital data do not currently exist for the reservation except within the city of Browning (FEMA FIRM number 3000300001B). The FIRM map shows the city north of US 2 as within a 100-year floodplain (Zone A), likely associated with Willow Creek. South of US 2, the city is designated as Zone C.

- Zone A: SFHA - 100-Year Flood, No Base Flood Elevations Determined
- Zone C: Areas Outside the 500-Year Flood

Wetlands

The USACE defines wetlands as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

USFWS NWI mapping data is available for Segment 2 from the NWI website and MTNHP. NWI maps are based on the USFWS definition of wetlands, which does not follow the USACE definition that MDT uses in wetland determination and delineation. NWI maps are typically generated based on aerial and satellite imagery, and are not sufficiently accurate or detailed for MDT project wetland determination and/or delineation. At the study level, however, some useful information can be ascertained from NWI mapping on potential wetland locations.

The following provides a summary of the NWI wetlands located within Segment 2 (Exhibit 2.4 in Attachment 1). Safety rest area siting options should avoid and minimize adverse impacts to wetlands to the maximum extent practicable, and consider the costs that may be associated with permitting and potential mitigation. For federally funded projects, EO 11990 requires agencies to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. Section 404(b)(1) of the Clean Water Act requires the USACE to only permit discharges of dredge or fill materials into USACE jurisdictional wetlands that represent the least environmentally damaging practicable alternative, so long as the alternative does not have other significant adverse environmental consequences. Future wetland delineations would be required if safety rest area siting options are forwarded from the study that could potentially impact wetlands. Work within USACE jurisdictional wetlands would require a Clean Water Act 404 permit. Unavoidable impacts to wetlands must be compensated through mitigation in accordance with USACE regulatory requirements and requirements of EO 11990. In addition, any work within wetlands on the Blackfeet Reservation require permitting and mitigation under the Blackfeet Tribe Aquatic Lands Protection Ordinance 90-A.

Segment 2 is a unique area where numerous glacial pothole wetlands and wet meadows occur. Several fringe wetlands along adjacent creeks also occur in this area. NWI mapping shows emergent glacial pothole wetlands making up the vast majority of the study segment from RP

213 to the end of the segment at RP 242. These potholes are scattered throughout this portion of the segment on both sides of the highway. Large emergent wet meadows fed by high groundwater and/or small drainages are found within the study segment at RP 225 and from RP 239 to RP 240. An emergent wetland associated with Flat Iron Creek crosses the study segment at RP 229.6, and large emergent wetland complexes associated with Willow Creek and Wasteway Coulee cross and/or parallel the study segment at RP 233.1 and from RP 236 to RP 239.

Groundwater

The MBMG GWIC was reviewed for Segment 2 to identify groundwater wells and general groundwater information. A summary is presented below. Additional information is provided in Exhibit 2.4 in Attachment 1 and Attachment 5. Impacts to existing wells will need to be considered during the screening of safety rest area siting options. Wells can be a costly item to mitigate if they are not avoided. Mitigation of a well usually involves drilling a new well for the owner in a new location that will not be impacted by the potential project. Well costs are based on per foot price; the deeper and higher volume needed results in a higher cost. In addition, groundwater levels will need to be considered for safety rest area constructability.

There are approximately 83 GWIC wells on record within or directly adjacent to Segment 2. Wells with recorded depths range from nine feet at East Glacier Park near RP 209.4 to 200 feet near RP 240.4. Very few wells have recorded static water levels. Wells with static water levels recorded range from 13 feet near RP 209.4 at East Glacier Park to 50 feet near RP 240.4.

In the western portion of the study segment from RP 208.1 to about RP 210, the controlling factor will be the numerous creeks and the Two Medicine River that cross or parallel US 2. Once into the glacial topography, the geohydrology will be much more complex. The entire segment is dotted with pothole/depressional wetlands, and shallow groundwater can be expected along the majority of the segment.

3.2 Biological Resources

Vegetation

Land cover along the US 2 corridor is significantly different on the west and east sides of the Continental Divide. Forest and woodland system land covers dominate the corridor west of the divide, while grassland system land covers dominate the corridor east of the divide. The following provides a description of the dominant land covers within and adjacent to (based on a three-mile buffer) Segment 2 based on the MTNHP Land Cover Reports (refer to Exhibit 2.5 in Attachment 1 and Attachment 6). Safety rest area siting considerations should look at options that minimize adverse impacts to more suitable wildlife habitat and areas where mature tree and shrub removal will be limited to the extent practicable.

A combination of montane grassland, agriculture, and lowland/prairie grassland dominate the land cover within and adjacent to Segment 2. Montane grasslands interspersed with agricultural land are primarily found along the segment from RP 208.1 to RP 224. Agricultural lands, interspersed with lowland/prairie grasslands, and areas of introduced vegetation make up the remainder of the study segment from RP 224 to RP 242. The small developed areas of Browning and East Glacier Park are also located within the Segment 2. Table 6 presents the primary land cover types (four percent or more) within and adjacent to the study segment.

Table 6: Segment 2 Primary Land Cover Types

% of Cover	Land Cover Type
34%	Rocky Mountain Lower Montane, Foothill, and Valley Grassland
23%	Cultivated Crops
12%	Great Plains Mixedgrass Prairie
5%	Introduced Upland Vegetation - Annual and Biennial Forbland
4%	Great Plains Shrubland

Source: MTNHP Land Cover Reports, 2017.

General Wildlife Species

Segment 2 has minor development, is directly adjacent to national forest or national park service lands, and includes large areas where native vegetation still exists. Wildlife species would include generalists; however, Segment 2 also provides greater opportunity for sensitive species and species with specific habitat needs. Mammal species likely to occur within the study segment include, but are not limited to, mule deer, white-tailed deer, coyote, raccoon, striped skunk, beaver, porcupine, prairie dog, and northern river otter. Bird species likely found within the study segment would be those typically found within northern Montana's forests, prairie grasslands, and agricultural fields. Bird species likely to occur include, but are not limited to, American crow, American robin, Canada goose, common raven, mallard, belted kingfisher, red-winged blackbird, mountain bluebird, hooded merganser, western meadowlark, and western tanager. Amphibians and reptiles likely to occur within Segment 2 include, but are not limited to, painted turtle, prairie rattlesnake, common gartersnake, northern leopard frog, Columbia spotted frog, and American bullfrog.

Threatened and Endangered Species

The federal list of T&E species is maintained by the USFWS. Species on this list receive protection under the ESA. An "endangered" species is in danger of extinction throughout all or a significant portion of its range. A "threatened" species is likely to become endangered in the foreseeable future. The USFWS also maintains a list of species that are candidates or proposed for possible addition to the federal list.

To determine which federally listed species may occur in the vicinity of Segment 2, the USFWS list for Glacier County and the MTNHP database for T&E species were reviewed for occurrences within and adjacent to the study segment. A three-mile buffer on each side of US 2 was used. According to the USFWS database, two threatened, three proposed threatened, and one candidate species are listed as potentially occurring along the US 2 corridor within Segment 2 (See Table 7 and Attachment 7). In addition to the species listed below, designated critical habitat for Canada lynx is found directly adjacent to Segment 2.

Table 7: T&E Species with the Potential to Occur in Segment 2

Species	Status
Mammals	
Canada lynx *Lynx canadensis*	Threatened
North American wolverine *Gulo gulo luscus*	Proposed Threatened
Grizzly bear *Ursus arctos horribilis*	Threatened
Invertebrates	
Meltwater Lednian stonefly *Lednia tumana*	Proposed Threatened
Western glacier stonefly *Zapada glacier*	Proposed Threatened
Plants	
Whitebark pine *Pinus albicaulis*	Candidate

Source: USFWS, 2017.

The MTNHP August 14, 2017, database search on T&E species is summarized below for Segment 2. Exhibit 2.6 in Attachment 1 displays recorded T&E occurrences. Potential effects to T&E species and their habitat will need to be considered during the safety rest area siting process.

According to the MTNHP database, occurrences of grizzly bear, Canada lynx, and North American wolverine have been documented within the three-mile buffer for Segment 2.

Species of Concern and Special Status Species

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

Special Status Species are species that have some legal protections in place, but are otherwise not Montana SOC. Bald eagles are considered special status species.

Bald eagles (special status species) and golden eagles (SOC) are also protected under the Bald and Golden Eagle Protection Act of 1940. The act prohibits anyone without a permit issued by the Secretary of the Interior, from taking bald or golden eagles, including their parts, nests, or eggs. The Act defines take as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb."

A search of the MTNHP SOC database on August 14, 2017, was conducted to determine SOC and special status species likely to occur within and adjacent to Segment 2. A three-mile buffer

on each side of US 2 was used (see Exhibit 2.6 in Attachment 1 and Attachment 8). The following is a brief summary of the SOC and special status species with potential to occur / have recorded observations within or adjacent to Segment 2. The screening process for potential safety rest area siting options will need to consider the presence and extent of these species.

Within and adjacent to Segment 2, there are recorded observations of 12 wildlife SOC and eight plant SOC. Wildlife species include fish species, bird species, mammals, and mollusks. Observations of bald eagle and a bald eagle nest (a special status species) and observations of golden eagle have also been recorded within the vicinity of Segment 2. Potential safety rest area siting options will need to consider proximity to known eagle nests as construction timing restrictions are required for work near active nests.

Sage Grouse Habitat Conservation Program

In Montana, the state has management authority over sage grouse as outlined under the 2015 Greater Sage Grouse Stewardship Act and Montana Governor's EOs 10-2014, 12-2015, and 21-2015. The Sage Grouse Habitat Conservation Program was created to facilitate implementation of the EOs across state government, by federal land management agencies, and private entities seeking to develop projects in key sage grouse habitats. The screening process for potential safety rest area siting options will need to consider sage grouse habitats designated as core area, general habitat, or connectivity. Sites within these areas must be reviewed under the Sage Grouse Habitat Conservation program to avoid and minimize impacts to sage grouse.

A review of the Montana Sage Grouse Habitat Conservation Map shows Segment 2 is not located within sage grouse habitats designated as core area, general habitat, or connectivity.

3.3 Social and Cultural Resources

Economy

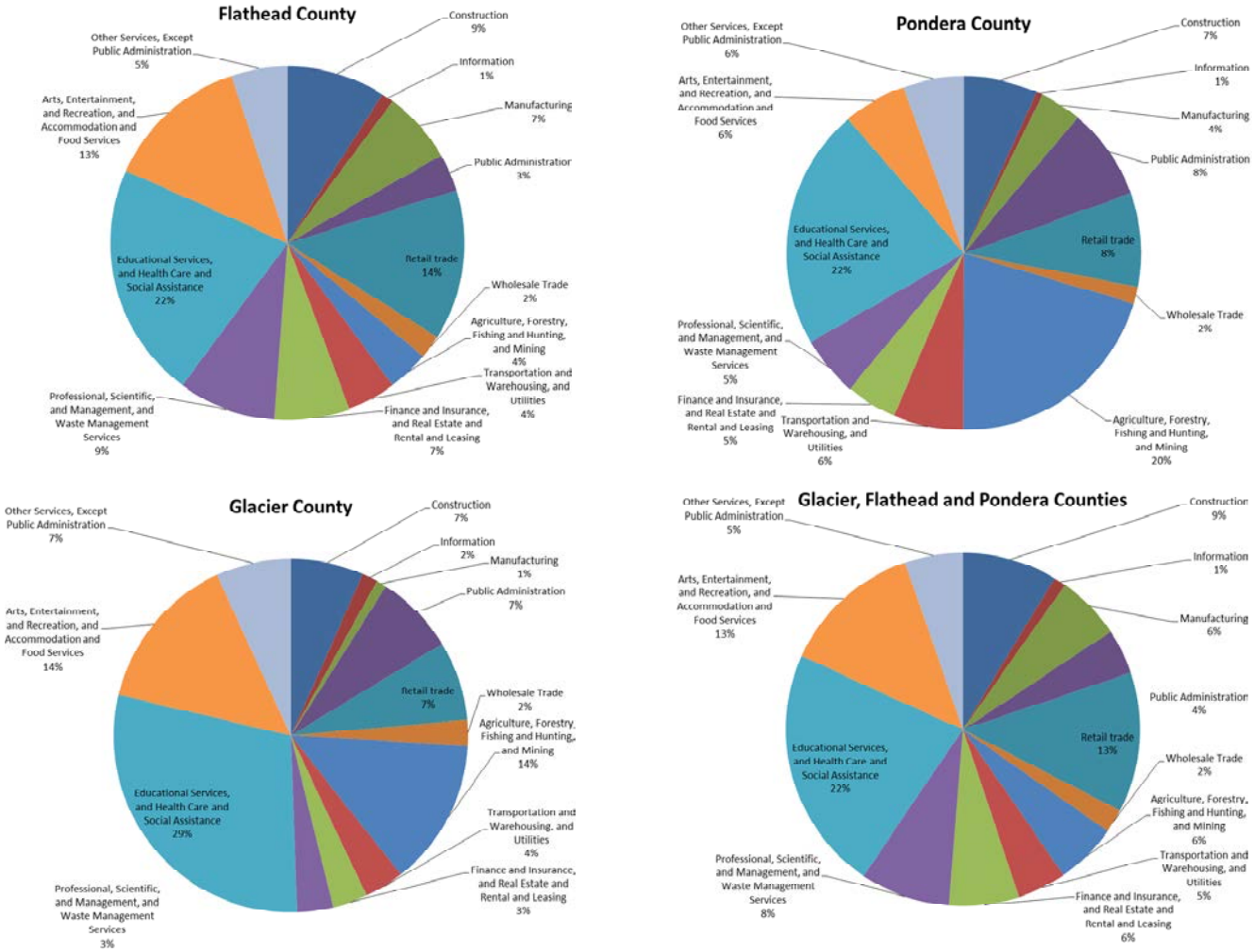
Northwestern and northeastern Montana have significant economic differences. Northwestern Montana is primarily a tourism based economy due to the presence of natural amenities such as Glacier National Park. Northcentral Montana and northeastern Montana have economies tied more closely to agriculture and resource extraction. Unemployment is expected to hold relatively constant across northern Montana over the coming years. Unemployment tends to be higher than state averages in the northwestern Montana, and on par or lower than statewide averages in central and northeastern Montana. Overall, the socio-economic traits of northern Montana can be expected to change very little over the coming years. The following summarizes the economic conditions within and near Segment 2.

The study segment stretches through Glacier County near the border of Glacier National Park. This means the area experiences relatively high volumes of traffic and economic activity, especially during the summer months. Although the segment does not actually enter Flathead or Pondera County, including information about these counties in this overview is appropriate due to proximity. The segment includes some of the Blackfeet Indian Reservation. Cities that would have an impact on the segment include Browning and Whitefish.

Figure 8 displays the distribution of employment across industry types in the three counties both individually and combined. The figure shows that the mix of business is similar in Glacier and Pondera counties. Both counties have similar proportions of agriculture and education and health care service jobs. Glacier County also has a relatively large portion of its businesses classified as public administration. This is likely due to the presence of the Blackfeet Indian

Reservation. This mixture of businesses is typical of northwestern Montana, which is largely supported economically by the tourism industry.

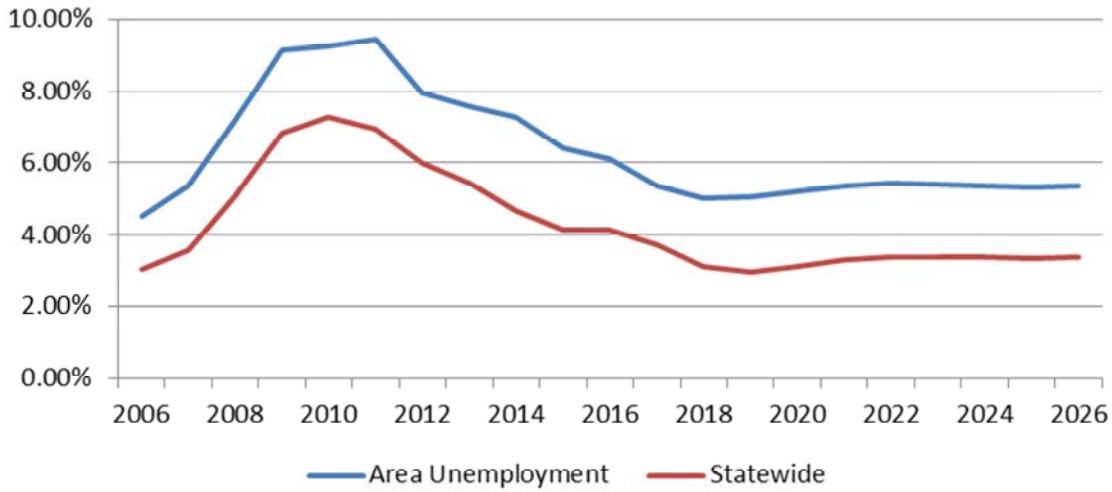
Figure 8: Glacier, Flathead, and Pondera County Industries



Source: United States Census, 2010-2014 American Community Survey 5-Year Estimates.

Figure 9 displays the past and forecasted average unemployment rate in the three counties compared to the statewide unemployment rate. The average unemployment rate in these three counties is expected to hold relatively constant, as is the statewide unemployment rate. The unemployment rate in these counties has been higher historically, relative to the rest of the state, and it is expected to remain higher than the rest of the state. The highest unemployment rate in the three counties is 9.46% which was observed in 2011. The lowest rate of unemployment is 4.51% and was observed in 2006.

Figure 9: Glacier, Flathead, and Pondera County Unemployment



Source: United States Census, 2010-2014 American Community Survey 5-Year Estimates.

Table 8 displays some measures of wealth from the three counties compared to the state. Flathead and Pondera Counties are close to the statewide averages on most of the wealth measures in Table 8. Pondera County lags in the retail sales category. Glacier County has lower measures in all three categories. These measures are significantly lower than both the other counties in question and the state. This suggests some income issues exist in Glacier County.

Table 8: Flathead, Glacier, and Pondera County Wealth Measures

Area	Montana	Flathead County	Glacier County	Pondera County
Median Family Income (2014 $)	$46,766	$46,858	$33,493	$40,969
Per capita income (2014 $)	$25,977	$25,789	$16,710	$22,868
Retail Sales per capita (2012 $)	$15,544	$16,543	$9,389	$9,074

Source: United State Economic Census.

Population and Demographics

Northern Montana has a small population, and only minimal growth is expected. The socio-economic characteristics of this area can be expected to remain constant in the future. The following summarizes population and demographic conditions within and near Segment 2. Table 9 displays the populations of the larger cities near study Segment 2. Both cities are not very large. Table 10 displays the populations, demographic characteristics, and housing information from each county and Montana.

Table 9: Segment 2 Area Populations

City	Browning	Whitefish
Population	1,053	7,073

Source: United States Census 2015 and 2013 Estimates.

Table 10: Glacier, Flathead, and Pondera County Population Demographics

Area	Montana	Glacier County	Flathead County	Pondera County
Population	1,032,949	13,647	96,165	6,184
White Alone	77.1%	33.4%	95.2%	82.6%
American Indian	6.6%	62.8%	1.1%	14.2%
Hispanic or Latino	17.6%	2.7%	2.3%	2.1%
Housing Units	134,789,944	5,314	47,487	2,634
Owner Occupied Housing Rate	64.4%	58.6%	70.1%	68.7%

Source: United States Census 2015 Estimates.

Flathead County has a very limited American Indian population relative to both the statewide average and the other counties in the study segment. Pondera County is home to more than double the percentage of American Indians than the statewide average. Most Glacier County residents identify as American Indian. Glacier County is home to the Blackfeet Indian Reservation. All three counties have a Hispanic or Latino population that makes up approximately 2% of their total population. Flathead and Pondera Counties have a higher rate of owner occupied housing rate than the wider state. Glacier County has a lower owner occupied housing rate than the state average.

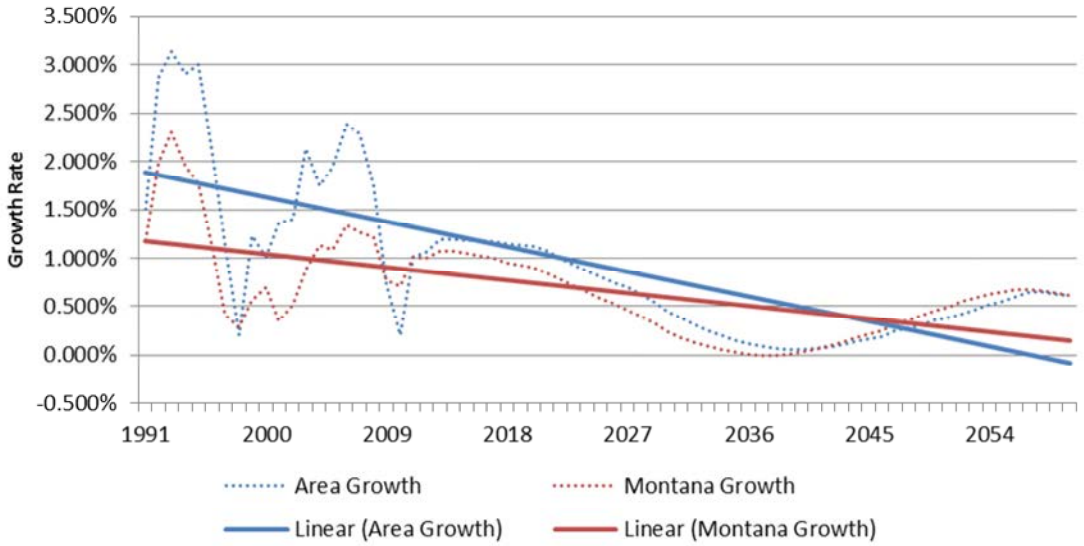
Figure 10 displays the age distribution by sex in Glacier, Flathead, and Pondera counties and the age distribution by sex around the state. The age distribution is similar between the sexes. The largest group in is the 45-64-years of age category. The next largest group is the 25-44 years of age category. This group is followed by people older than 65 years of age. The three counties have a similar distribution of age by sex as the state.

Figure 10: Glacier, Flathead, and Pondera County Age Distribution by Sex

Source: United States Census American Community Survey.

Figure 11 displays the observed and forecasted population growth rates for the three counties from 1991 to 2060. The three counties are expected to experience growth rates less than 1% over the next 45 years; however, the long-term trend is a reduction in the rate of population growth. The 10-year projected growth rate is 1.007% which is higher than the statewide growth rate of 0.793%.

Figure 11: Glacier, Flathead, and Pondera County Population Growth



Source: Department of Commerce 2013 Population Projections.

Environmental Justice

Title VI of the United States Civil Rights Act of 1964, as amended (USC 2000(d)) and EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, require that no minority, or, by extension, 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. If a project is forwarded from this study, environmental justice will need to be further evaluated during the project development process.

Land Ownership and Use

The following provides a description of the dominant land ownership and land uses within and adjacent to Segment 2 based on Montana Cadastral (refer to Exhibit 2.7 in Attachment 1). Because privately owned lands and developed lands may be more costly to acquire, safety rest area siting considerations should attempt to minimize impacts to privately owned lands and developed lands to the extent practicable.

Land ownership in Segment 2 is entirely located on the Blackfeet Reservation. The BNSF Railway runs adjacent to US 2 from RP 208.1 to RP 209.5 and near RP 212, RP 220, RP 223, RP 230 to 233, and RP 234 to RP 239. Additionally, Browning is located near RP 221.5.

The majority of land use in Segment 2 is crop/pasture with mixed urban development near Browning and intermittent emergent wetlands and bodies of water.

Recreational Resources

Recreational resource information within Segment 2 was gathered during the July 2017 field review and through review of aerials and USFS and FWP resource lists. Recreational areas may be protected under Section 4(f) of the U.S. Department of Transportation Act of 1966, which was enacted to protect publicly owned parks, recreation areas, wildlife and waterfowl refuges, and public and private historic sites of local, state, and national significance. Federally funded transportation projects cannot impact these properties unless there are no feasible and prudent avoidance alternatives and all possible planning to minimize harm has occurred. 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 the 4(f) resource. "Use" can occur 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."

In addition, the FWP National LWCFA, or Section 6(f), list of sites by county was reviewed to determine the presence of Section 6(f) sites within the study segment. LWCFA was enacted to preserve, develop, and assure the quality and quantity of outdoor recreation resources. Section 6(f) protection applies to all projects that impact recreational lands purchased or improved with LWCFA funds. The Secretary of the Interior must approve any conversion of LWCFA property to a use other than public, outdoor recreation.

The following is a summary of the recreational resources found within Segment 2. Potential Section 4(f) resources and LWCFA resources are mapped in relation to the study segment in Exhibit 2.7 (in Attachment 1). The screening process for potential safety rest area siting options will need to consider effects on recreational use in accordance with Section 4(f) and Section 6. For sites carried forward, a future reevaluation of Section 6(f) resources should take place to determine if any new Section 6(f) resources are present. As general guidance, converting these resources to a non-recreational purpose can be a difficult and time-consuming task and should be avoided if practicable.

Segment 2 is located on the Blackfeet Reservation, and recreation within the segment is limited. Recreation may include fishing, hunting, golfing, and access to the eastern portion of Glacier National Park.

There are no designated fish access sites within the study segment. However, fishing likely occurs on Midvale Creek, Two Medicine River, Willow Creek, and the many other perennial creeks in the area. A fishing permit is required for all non-tribal members that fish on the Blackfeet Reservation. Fishing within the rivers and creeks is accessed primarily via foot or at undesignated sites at US 2 bridge crossings.

Overnight camping is also permitted on the reservation lakes. The only lake within the vicinity of Segment 2 is Kipp Lake, located southeast of the study segment at RP 229. Access to the lake is via a small dirt road at RP 229.5.

At the southwestern end of the segment is East Glacier Park. The town provides the east entrance into Glacier National Park at RP 209.3. The Glacier Park Lodge Golf Course is located directly west of US 2 near RP 209.5. The golf course is open to the public.

The Glacier Park Lodge Golf Course was the only identified potential Section 4(f) resource within the study segment. The segment is located on the Blackfeet Reservation. The Blackfeet are a federally recognized Indian Tribe, considered a sovereign nation. Lands owned by them are not considered to be "publicly owned" within the meaning of Section 4(f), nor open to the general public. Therefore, Section 4(f) does not automatically apply. Significant parks, recreation areas, or wildlife and waterfowl refuges owned by the tribe could be considered a Section 4(f) resource; however, no such resources are found within the study segment.

The FWP LWCFA site list by county shows LWCFA funds allotted to the Browning School District Recreation Facility, within the city of Browning.

Cultural Resources

The 666-mile US 2 corridor across Montana from the Idaho to North Dakota border is rich in historic properties. The complex history of the region is well represented in the large number of historic buildings, structures, and sites located along the highway. These include commercial buildings, service stations, motels, restaurants, and other operations that were and are dependent on the highway. The BNSF Railway (formerly the Great Northern Railway) was constructed across the Hi-Line in 1887 and extended to the west coast in 1892. The railroad deposited towns and stations in its wake, with most of the communities located along its length tracing their origins to the late nineteenth century.

US 2 is the primary east-west travel corridor in northern and northwestern Montana. The route passes through three Indian reservations (Fort Peck, Fort Belknap, and Blackfeet), around the southern tip of Glacier National Park, and two national forests (Flathead and Kootenai). Historic properties have been recorded along its length from the Idaho to the North Dakota borders. The sites include archaeological sites, commercial buildings, service stations, motels, hotels, drive-in theaters, and residences. Most represent the change of focus in those communities from the railroad to the automobile in the twentieth century. In addition to the historic properties located in the communities through which the highway passes, irrigation ditches associated with the Bureau of Reclamation's Milk River Project, an active railroad grade (BNSF Railway), farms, ranches, and highway-related structures (i.e., bridges and overpasses) also occur. Also represented in the corridor are churches, schools, and government buildings. Structures include sand houses, maintenance section shops, and the former Glasgow Rest Area (determined ineligible for the National Register in 2016).

Historic development of the corridor began relatively late east of the continental divide. The Lame Bull Treaty of 1855 established the area from the continental divide to the mouth of the Milk River and from the Missouri River north to the Canadian line. The extermination of the great buffalo herds in the early 1880s coupled with the construction of the St. Paul, Minneapolis & Manitoba Railroad (later Great Northern Railway and the BNSF Railway) in 1887 began the process of breaking up the reservation. The railroad, moreover, deposited towns, stations, and watering stops along its length in Montana Territory. In 1892, James J. Hill extended the newly renamed Great Northern Railway from Havre westward to Seattle. The railroad allowed the agricultural development of eastern Montana and brought thousands of new people into the formerly remote area. The Newlands Reclamation Act of 1902, the Enlarged Homestead Act of 1909, and the creation of Glacier National Park in 1910 also caused the development of the area called the Hi-Line. In western Montana, development was also based on the railroad after 1892 with an emphasis on mining, logging, and agriculture.

The dawn of the automobile age caused a profound change in northern and northwestern Montana. In 1919, local and regional promoters established the Theodore Roosevelt

International Highway. The 4,060-mile automobile route initially connected Portland, Maine, with Portland, Oregon, (the western terminus was later changed to Seattle). The route paralleled the Great Northern Railway from Minnesota, through North Dakota, Montana, and Idaho to the west coast. With the rising popularity of the automobile, the concentration of business districts on the railroad along the Hi-Line and northwestern Montana changed to the highway. New businesses (motels, tourist camps, drive-in restaurants and theaters, and services stations and garages) arose to serve the new mode of travel. All of those businesses are represented in the US 2 corridor. The American Association of State Highway Officials, Bureau of Public Roads, and Montana State Highway Commission re-designated the Roosevelt Highway as US 2 in 1926. The first highway commission projects to improve it began in 1919.

A large number of archaeological and historic properties likely occur along the US 2 corridor in Montana. Archaeological sites in the corridor include buried campsites, stone circle sites, bison kills, human burials, and rock art sites under federal, state, local, and private ownership.

The NHPA of 1966, as amended, defines historic properties as sites, buildings, structures, districts (including landscapes), and objects included on, or eligible for inclusion on, the NRHP, as well as artifacts, records, and remains related to such properties.

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

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

Potential safety rest area siting options will need to consider recorded historic sites determined to be NRHP-eligible as identified through a SHPO and/or THPO file search. In addition, cultural resource surveys will be necessary for siting options forwarded from this study.

Noise

Analysis of traffic noise is necessary for Type I projects, including “the addition of a new or substantial alternative of a weigh station, rest stop, ride-share lot or toll plaza” (23 CFR 772.5). Type I projects require a detailed noise analysis, consistent with FHWA requirements and MDT policy, which involves measuring ambient noise levels at selected receptors and modeling design year noise levels using projected traffic volumes. If noise levels approach or substantially exceed noise abatement criteria, noise abatement measures may be necessary.

Federal regulations define traffic noise receptors as discrete or representative locations of noise sensitive area(s) for various land uses, including residential developments, businesses, and public use areas. The study corridor traverses a variety of land uses. In some portions of the corridor, noise-sensitive receptors are located in proximity to US 2 right-of-way. In Segment 2, isolated residential development is found throughout the segment, with more concentrated development at East Glacier Park (±RP 209) and Browning (±RP 221-222).

The screening process for potential safety rest area siting options will need to consider proximity to potential noise receptors. Options forwarded from this study may require a Type I noise analysis.

Visual Resources

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

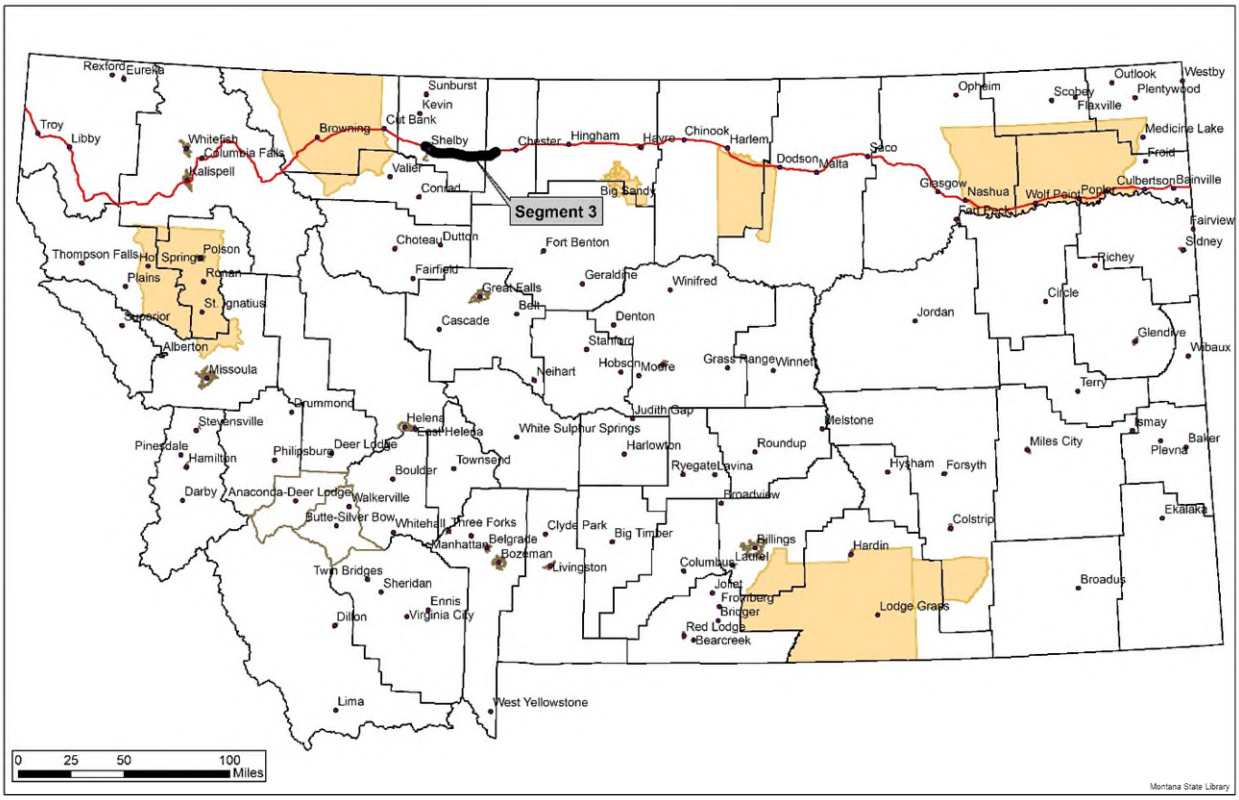
Views along the US 2 corridor are significantly different on the west and east sides of the Continental Divide. A mountainous, forested landscape, bisected by steep mountain creeks and rivers dominates the corridor west of the divide. Rolling grasslands and agricultural fields bisected by the large floodplains of the Marias, Milk, and Missouri Rivers dominate the corridor east of the divide.

Views from US 2 within Segment 2 primarily include rolling grasslands dotted with numerous wetland potholes. Scenic views to the east of Glacier National Park and the Lewis Range can also be seen from US 2 within the study segment.

Evaluation of the potential effects on visual resources and viewshed opportunities will need to be conducted as part of the screening process for potential safety rest area siting options.

4.0 Segment 3 (RP 277.3 to RP 312.5)

Figure 12. Segment 3 Location



4.1 Physical Environment

Soil Resources and Prime Farmland

Soils information was reviewed to better understand the general soil characteristics within Segment 3 and to determine the presence of prime and unique farmland in the study segment to demonstrate compliance with the FPPA.

The FPPA is intended "to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to assure that federal programs are administered in a manner that, to the extent practicable, will be compatible with state, unit of local government, and private programs and policies to protect farmland." The term "farmland" refers to prime farmland; some prime if irrigated farmland; unique farmland; and farmland, other than prime or unique farmland, that is of statewide importance. Prime farmland soils are those that have the best combination of physical and chemical characteristics for producing food, feed, and forage; the area must also be available for these uses. Prime farmland can be either non-irrigated or lands that would be considered prime if irrigated. Farmland of statewide importance is land, in addition to prime and unique farmlands, that is of statewide importance for the production of food, feed, forage, and oilseed crops. Developed land previously designated as prime farmland is no longer subject to the FPPA.

Soil surveys of Segment 3 are available from the USDA NRCS. A summary of the general soil characteristics and farmland designations for Segment 3 are presented below (Exhibit 3.1 in Attachment 1 and Attachment 2). The screening process for potential future safety rest areas

will need to consider soil characteristics for constructability (e.g., clay soils). In addition, any siting options forwarded from this study that are within identified farmlands and are supported with federal funds will require a CPA-106 Farmland Conversion Impact Rating Form completed by MDT and coordinated with NRCS. The NRCS uses information from the impact rating form to keep inventory of the prime and important farmlands within the state.

Soil survey information shows approximately 55 soils within Segment 3. The majority of surficial soils in this segment are mapped as alluvium or till, with some interspersed glacial deposits. Alluvium deposits are primarily located where creeks and drainages cross the study segment, including from RP 277 to RP 281, RP 287 to RP 290, and RP 296 to RP 306. Remaining portions of the segment include primarily till, clayey till, and fine-loamy till.

NRCS soil surveys indicate that almost the entire study segment is designated as farmland of statewide importance or prime farmland if irrigated. Only small sections of the segment, including the area around Shelby (RP 277.3 to RP 278.9), near RP 280, RP 281 to RP 281.5, RP 296 to RP 298, RP 300 to RP 301.8, RP 303.4 to RP 304, RP 307 to RP 308.6, and near RP 311 have not been designated. The percentage of the study segment comprised of farmland of statewide importance or prime farmland if irrigated is high.

Geologic Resources

Information on the geology and seismicity in Segment 3 was obtained from published sources, including MBMG ArcGIS Map Service Layers and the USGS National Geologic Map Database Geolex Search website. Geologic mapping was reviewed for geological formations, rock types, and fault lines. Seismicity and potential seismic hazards were also reviewed.

The following provides a brief summary of the geologic and seismic conditions present in Segment 3 (refer to Exhibit 3.2 in Attachment 1). Geologic and seismicity information can help determine potential safety rest area design and construction issues and will need to be considered as safety rest area siting options are screened. Site-specific geotechnical evaluations will be required once potential sites are selected.

Within Segment 3, the Kevin Member of the Marias River Formation (Cretaceous) underlies RP 277.3 to approximately RP 308.4 and consists of mainly shale with bentonite beds. RP 308.4 to RP 312.5 is underlain by the Telegraph Creek Formation (Cretaceous) which consists of interbedded sandy shale and sandstone. The bedrock encountered along Segment 3 is younger, Cretaceous-aged bedrock that is less competent (and probably more fractured and disturbed). Bentonite beds and soils derived from bentonite may have expansive characteristics.

Quaternary glacial till covers most of Segment 3, and these soils may have low to moderate frost susceptibility and drainage issues. Areas underlain by these materials typically exhibit hummocky topography. Based on the published data reviewed, it does not appear that landslides have been mapped along Segment 3.

No faults are mapped along Segment 3. Based on MBMG and USGS mapping, the closest Quaternary faults (which may be considered active) are located 25 miles north of the study segment in the Sweet Grass Hills. Segment 3 is located east of the intermountain seismic belt in an area where the historic seismicity is relatively low. The MBMG peak horizontal acceleration (in percent of the acceleration of gravity) for Segment 3 ranges from about 2% to 4%. No significant historic earthquake epicenters are mapped in the vicinity of the study segment, and the nearest epicenter is located about 95 miles to the southwest.

Hazardous Substances

Reviews of the Montana DEQ database, MBMG database, USEPA database, MBOG, and the National Pipeline Mapping System were conducted to obtain available information on UST sites, LUST sites, petroleum release fund claims, remediation response sites, superfund sites, hazardous waste sites, mining districts, abandoned mine sites, open cut mines, oil and gas pipelines, and oil/gas wells.

A brief summary of the primary sites within Segment 3 are discussed below. Locations of hazardous substances are represented in Exhibit 3.2 in Attachment 1 and Attachment 3. Safety rest area sites carried forward from this study will need to consider contaminated soils and may require additional investigation/coordination in areas where pipelines, wells, or mines are located.

From RP 278 to RP 281.5, Segment 3 crosses through the city of Shelby where. 31 LUST sites, 12 petroleum release fund sites, 21 UST sites, four remediation response sites, and two hazardous waste sites are located. Of the 31 LUST sites, 23 have been resolved. The remediation response sites include two spills near the Interstate 15 interchange; the Treasure State Refinery, in operation from 1938 to 1947, near RP 278.6 on southwest side of US 2; and the present day Burlington Northern facility near RP 279.5. Hazardous waste sites include the Shelby Refinery (inactive) listed as a small quantity generator at RP 279.6, and the MDT facility (active) listed as a small quantity generator at RP 278.5.

At RP 303.2 two UST sites are located within the study segment on the north side of US 2. In the community of Lothair, one LUST site, which was resolved in 1996, and one petroleum release fund site are located at RP 309.1 just north of US 2.

Segment 3 is not located within a mining district, and there are no open cut mines or abandoned mines within the study segment.

Two in-service Northwestern Energy gas transmission pipelines cross the study segment at RP 278.3 and RP 293. A number of oil/gas wells are adjacent to the study segment; however, at RP 287.8, RP 299.8, RP 301.9, RP 302.2, and RP 304.8, wells occur within the segment on both the north and south sides of US 2. These are primarily gas wells or wells labeled as dry holes.

There are no USEPA designated superfund sites within Segment 3.

Air Quality

USEPA has established NAAQS for six criteria pollutants, including carbon monoxide, nitrogen dioxide, ozone, PM10 and PM2.5, sulfur dioxide, and lead. The USEPA designates communities that do not meet NAAQS as “non-attainment areas.” States are required to develop a plan to control source emissions and ensure future attainment of NAAQS. A review of the DEQ website indicates no non-attainment areas for any of the criteria pollutants are located within or near Segment 3.

According to Table 2, 40 CFR 93.126, safety rest areas are typically exempt from the requirements that a conformity determination be made. As a result, special design considerations are not anticipated to accommodate NAAQS in any future safety rest area project development process.

Surface Waters

USGS topographic maps, aerial photographs, and GIS data were reviewed for Segment 3 to identify the locations of surface waterbodies including rivers, streams, lakes, and reservoirs.

The following provides a summary of the watersheds and surface waters located within Segment 3 (refer to Exhibit 3.3 in Attachment 1). The screening process for safety rest area siting options should consider potential impacts to surface waters and the costs that may be associated with permitting and potential mitigation. Coordination with federal, state, and local agencies may be necessary, as work within these surface waters may be regulated by the USACE, Montana FWP, and the DEQ. In addition, forwarded siting options may trigger the need to obtain coverage under MPDES for Storm Water Discharges Associated with Construction Activity and comply with the requirements outlined in MDT's Storm Water Management Plans.

The Marias Watershed (HUC 10030203) and the Willow Watershed (HUC 10030204) encompass Segment 3. From RP 277.3 to approximately RP 283.3, the study segment is within the Marias Watershed. From RP 283.3 to the end of the segment at RP 312.5, the segment is within the Willow Watershed.

There are no primary or named drainages that cross the study segment within the Marias Watershed. Surface waters that do cross this portion of the study segment primarily include small ephemeral and intermittent drainages that generally flow south directly into the Marias River. One small lake, Virden Lake, is located within the study segment, at RP 277.5, on the north side of US 2.

Within the Willow Watershed portion of the study segment, Willow Creek is the primary drainage, crossing the study segment near RP 303. From the study segment, Willow Creek flows south and southeast into Lake Elwell (Tiber Reservoir), which is part of the Marias River. Dodge Coulee, Coyote Coulee, Clift Coulee, and Galata Ravine are all named drainages that cross the study segment at RP 296.7, RP 298.6, RP 304.8, and RP 306.2, respectively. Dodge Coulee and Coyote Coulee flow north into West Fork Willow Creek, which parallels the study segment on the north side from RP 296.3 to RP 300. From here West Fork Willow Creek crosses the study segment, flowing southeast into Willow Creek. Clift Coulee and Galata Ravine both flow southwest through the study segment, joining Willow Creek south of US 2. Several small intermittent and ephemeral drainages also cross the study segment within this watershed.

Total Maximum Daily Loads

Section 303 subsection "d" of the Clean Water Act requires the state of Montana to develop a list, subject to USEPA approval, of waterbodies that do not meet water quality standards. When water quality fails to meet state water quality standards, DEQ determines the causes and sources of pollutants in a sub-basin assessment and sets maximum pollutant levels, called TMDLs. TMDLs set by DEQ become the basis for implementation plans to restore water quality to a level that supports state-designated beneficial water uses. The implementation plans identify and describe pollutant controls and management measures to be undertaken (such as best management practices), the mechanisms by which the selected measures would be put into action, and the individuals and entities responsible for implementation projects. Federally recognized Indian tribes within Montana are also eligible to develop 303d lists for tribal lands.

The following provides a summary of listed 303d waterbodies within Segment 3. The screening process for safety rest area siting options will need to consider downstream TMDL standards and potential impacts to water quality within receiving waterbodies.

Segment 3 is located within the Marias-Willow TPA. No waterbodies within this segment are listed as having an impairment in the DEQ 303d Water Quality Report. However, Eagle Creek, which crosses the highway just east of the study segment at RP 313 and flows southeast below (south of) the study segment, is listed as not fully supporting aquatic life due to alteration in stream-side or littoral vegetative cover from agriculture, and nitrogen (Total) from grazing in riparian and shoreline zones.

Wild and Scenic Rivers

The Wild and Scenic Rivers Act, created by Congress in 1968, provides for the protection of certain rivers, and their immediate environments, that possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, or cultural resources, or other similar values. Based on a review of the United States National Park Service website, there are no wild or scenic rivers within or near Segment 3.

Irrigation

Applicable Montana County WRS Books were reviewed for information on irrigation infrastructure, districts, and practices within Segment 3. Larger ditches and canals are represented in Exhibit 3.3 in Attachment 1. Pages from WRS are provided in Attachment 4. Safety rest Area siting should avoid impacts to irrigation facilities to the greatest extent practicable, particularly where large ditches/canals and pivots are located as these are costly to mitigate. Any work within these irrigation ditches/canals may also be regulated by the USACE.

WRS maps for Toole and Liberty Counties are not provided for the entire study segment, and the maps that are available show very little irrigation activity/infrastructure within Segment 3. The Sunset Memorial Garden sprinklers occur near RP 277.9 on the south side of US 2. A ditch associated with the Shelby flood dams and ditches crosses US 2 at RP 280.3. No other irrigation structures are located within the study segment.

Floodplains and Floodways

EO 11988, Floodplain Management, requires federal agencies to avoid to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains, and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities" for the following actions:

- acquiring, managing, and disposing of federal lands and facilities;
- providing federally undertaken, financed, or assisted construction and improvements; and
- conducting federal activities and programs affecting land use, including but not limited to, water and related land resources planning, regulation, and licensing activities.

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

FEMA-issued FIRMs for Toole and Liberty counties, as well as FEMA's digital National Flood Hazard Layer, were reviewed for Segment 3. Safety rest area siting options should avoid areas designated within a 100-year floodplain.

Based on the FEMA database, FEMA has not completed a floodplain study within Toole or Liberty counties to determine flood hazards; therefore, FIRMs and digital mapping for Segment 3 are not available.

Wetlands

The USACE defines wetlands as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

USFWS NWI mapping data is available for Segment 3 from the NWI website and the MTNHP. NWI maps are based on the USFWS definition of wetlands, which does not follow the USACE definition that MDT uses in wetland determination and delineation. NWI maps are typically generated based on aerial and satellite imagery, and are not sufficiently accurate or detailed for MDT project wetland determination and/or delineation. At the study level, however, some useful information can be ascertained from NWI mapping on potential wetland locations.

The following provides a summary of the NWI wetlands located within Segment 3 (Exhibit 3.4 in Attachment 1). Safety rest area siting options should avoid and minimize adverse impacts to wetlands to the maximum extent practicable, and consider the costs that may be associated with permitting and potential mitigation. For federally funded projects, EO 11990 requires agencies to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. Section 404(b)(1) of the Clean Water Act requires the USACE to only permit discharges of dredge or fill materials into USACE jurisdictional wetlands that represent the least environmentally damaging practicable alternative, so long as the alternative does not have other significant adverse environmental consequences. Future wetland delineations would be required if safety rest area siting options are forwarded from the study that could potentially impact wetlands. Work within USACE jurisdictional wetlands would require a Clean Water Act 404 permit. Unavoidable impacts to wetlands must be compensated through mitigation in accordance with USACE regulatory requirements and requirements of EO 11990.

Wetlands within Segment 3 are limited and tend to occur along the larger creeks and drainages that cross or parallel US 2. The exception is near the beginning of the study segment, where NWI mapping indicates a large emergent wet meadow on both sides of the highway from RP 277.5 to RP 278. Small emergent wetlands associated with unnamed drainages, West Fork Willow Creek, and Clift Coulee cross the study segment at RP 286.2, RP 292.9, RP 293.5, RP 294.8, RP 297.3, RP 299.8, RP 304.8, and RP 310.5.

Groundwater

The MBMG GWIC was reviewed for Segment 3 to identify groundwater wells and general groundwater information. A summary is presented below. Additional information is provided in Exhibit 3.4 in Attachment 1 and Attachment 5. Impacts to existing wells will need to be considered during the screening of safety rest area siting options. Wells can be a costly item to mitigate if they are not avoided. Mitigation of a well usually involves drilling a new well for the owner in a new location that will not be impacted by the potential project. Well costs are based

on per foot price; the deeper and higher volume needed results in a higher cost. In addition, groundwater levels will need to be considered for safety rest area constructability.

The GWIC database shows 25 recorded wells within or directly adjacent to Segment 3. All but two are located around the city of Shelby at the western end of the segment. Wells near Shelby range in depth from 12 feet to 25 feet. Recorded static water levels within these wells range from one to eight feet. The remaining two wells are located at the very eastern end of the segment. Recorded well depths are 165 feet and 190 feet. Static water levels at these two wells are 12 and 15 feet.

Shallow groundwater can be expected throughout the study segment, particularly where the highway is in close proximity to the West Fork of Willow Creek (296.3 to RP 300), Willow Creek (RP 303), Galata Ravine (RP 306.2), and Eagle Creek (RP 313). Localized groundwater conditions may also be affected by tributary drainages, seasonal variation, and irrigation.

4.2 Biological Resources

Vegetation

Land cover along the US 2 corridor is significantly different on the west and east sides of the Continental Divide. Forest and woodland system land covers dominate the corridor west of the divide, while grassland system land covers dominate the corridor east of the divide. The following provides a description of the dominant land covers within and adjacent to (based on a three-mile buffer) Segment 3 based on the MTNHP Land Cover Reports (refer to Exhibit 3.5 in Attachment 1 and Attachment 6). Safety rest area siting considerations should look at options that minimize adverse impacts to more suitable wildlife habitat and areas where mature tree and shrub removal will be limited to the extent practicable.

Agriculture is the dominant land cover found within and adjacent to Segment 3. However, pockets of lowland/prairie grassland, areas of introduced vegetation, and depressional wetland occur from RP 277.3 to RP 283 and RP 298 to RP 304. The developed area of Shelby is also located within Segment 3. Primary land cover types (four percent or more) within and adjacent to the study segment are presented in Table 11.

Table 11: Segment 3 Primary Land Cover Types

% of Cover	Land Cover Type
73%	Cultivated Crops
13%	Great Plains Mixedgrass Prairie
4%	Introduced Upland Vegetation - Annual and Biennial Forbland

Source: MTNHP Land Cover Reports, 2017.

General Wildlife Species

Segment 3 has been moderately developed through the conversion of land to agricultural practices. Small wooded draws and portions of the floodplain along the Milk River still possess specimens of native vegetation that was likely present within this segment prior to conversion to agriculture. These areas provide important movement corridors for wildlife. Wildlife species inhabiting or traversing the study segment are typical of those that occur in moderately developed areas of north central and eastern Montana. Since many species occurring within Segment 3 are habituated to somewhat disturbed areas, species present are predominately, though not exclusively, generalists.

Mammal species likely to occur within Segment 3 include, but are not limited to, mule deer, white-tailed deer, coyote, raccoon, striped skunk, antelope, beaver, porcupine, prairie dog, and northern river otter. Bird species likely found within the study segment would be those typically found within northern Montana's prairie grasslands, agricultural fields, and wooded draws. Bird species likely to occur include, but are not limited to, American crow, American robin, brown-headed cowbird, American white pelican, Canada goose, field sparrow, mallard, western meadowlark, eastern kingbird, red-winged blackbird, great horned owl, prairie falcon, and northern harrier. Amphibians and reptiles likely to occur within Segment 3 include, but are not limited to, prairie rattlesnake, plains gartersnake, northern leopard frog, and American bullfrog.

Threatened and Endangered Species

The federal list of T&E species is maintained by the USFWS. Species on this list receive protection under the ESA. An "endangered" species is in danger of extinction throughout all or a significant portion of its range. A "threatened" species is likely to become endangered in the foreseeable future. The USFWS also maintains a list of species that are candidates or proposed for possible addition to the federal list.

To determine which federally listed species may occur in the vicinity of Segment 3, the USFWS list for Toole and Liberty Counties and the MTNHP database for threatened or endangered species were reviewed for occurrences within and adjacent to the study segment. A three-mile buffer on each side of US 2 was used. According to the USFWS database, two threatened and one candidate species are listed as potentially occurring along the US 2 corridor within Segment 3 (See Table 12 and Attachment 7).

Table 12: T&E Species with the Potential to Occur in Segment 3

Species	Status
Mammals	
Grizzly bear *Ursus arctos horribilis*	Threatened
Birds	
Red knot *Calidris canutus rufa*	Threatened
Plants	
Whitebark pine *Pinus albicaulis*	Candidate

Source: USFWS, 2017.

The MTNHP August 14, 2017, database search on T&E species is summarized below for Segment 3. Exhibit 3.6 in Attachment 1 displays recorded T&E occurrences. Potential effects to T&E species and their habitat will need to be considered during the safety rest area siting process.

No T&E species occurrences have been documented within the three-mile buffer for Segment 3; however, grizzly bear, black-footed ferret, and piping plover have the potential to occur in the segment vicinity due to potential suitable habitat in the area or the area being within the species known/historic range.

Species of Concern and Special Status Species

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

Special Status Species are species that have some legal protections in place, but are otherwise not Montana SOC. Bald eagles are considered special status species.

Bald eagles (special status species) and golden eagles (SOC) are also protected under the Bald and Golden Eagle Protection Act of 1940. The act prohibits anyone without a permit issued by the Secretary of the Interior, from taking bald or golden eagles, including their parts, nests, or eggs. The Act defines take as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb."

A search of the MTNHP SOC database on August 14, 2017, was conducted to determine SOC and special status species likely to occur within and adjacent to Segment 3. A three-mile buffer on each side of US 2 was used (see Exhibit 3.6 in Attachment 1 and Attachment 8). The following is a brief summary of the SOC and special status species with potential to occur / have recorded observations within or adjacent to Segment 3. The screening process for potential safety rest area siting options will need to consider the presence and extent of these species.

There are 15 wildlife SOC with recorded observations within and adjacent to Segment 3. These primarily include bird species, mammal species, and one reptile. There are no recorded observations of bald eagle; however, observations of golden eagle and a golden eagle nest have been recorded within the vicinity of Segment 3. Potential safety rest area siting options will need to consider proximity to known eagle nests as construction timing restrictions are required for work near active nests.

Sage Grouse Habitat Conservation Program

In Montana, the state has management authority over sage grouse as outlined under the 2015 Greater Sage Grouse Stewardship Act and Montana Governor's EOs 10-2014, 12-2015, and 21-2015. The Sage Grouse Habitat Conservation Program was created to facilitate implementation of the EOs across state government, by federal land management agencies, and private entities seeking to develop projects in key sage grouse habitats. The screening process for potential safety rest area siting options will need to consider sage grouse habitats designated as core area, general habitat, or connectivity. Sites within these areas must be reviewed under the Sage Grouse Habitat Conservation program to avoid and minimize impacts to sage grouse.

A review of the Montana Sage Grouse Habitat Conservation Map shows Segment 3 is not located within sage grouse habitats designated as core area, general habitat, or connectivity.

4.3 Social and Cultural Resources

Economy

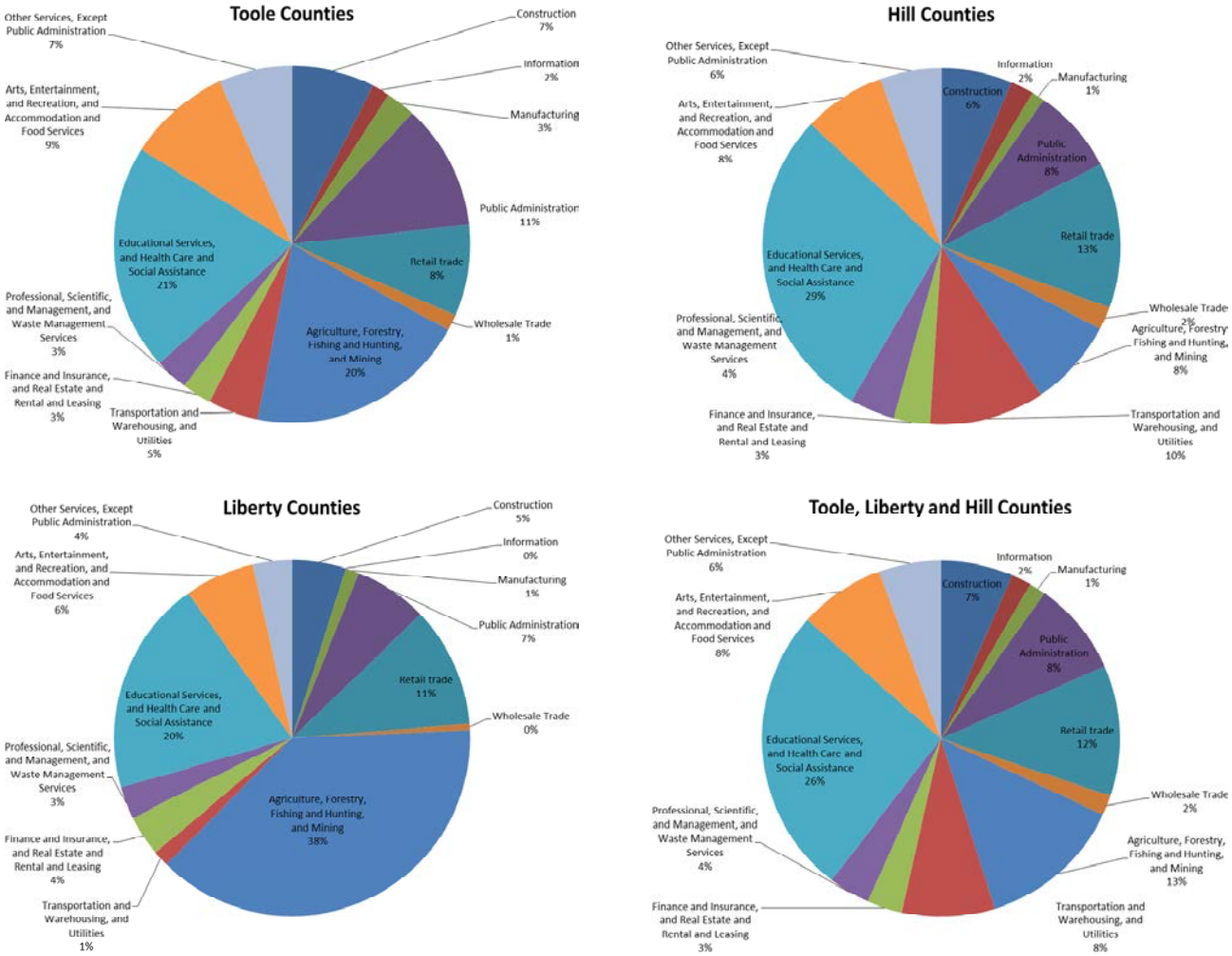
Northwestern and northeastern Montana have significant economic differences. Northwestern Montana is primarily a tourism based economy due to the presence of natural amenities such as Glacier National Park. Northcentral Montana and northeastern Montana have economies tied

more closely to agriculture and resource extraction. Unemployment is expected to hold relatively constant across northern Montana over the coming years. Unemployment tends to be higher than state averages in the northwestern Montana, and on par or lower than statewide averages in central and northeastern Montana. Overall, the socio-economic traits of northern Montana can be expected to change very little over the coming years. The following summarizes the economic conditions within and near Segment 3.

Segment 3 is located in Toole and Liberty Counties and close to Hill County. Hill County contains parts of Rocky Boy's Indian Reservation and parts of Turtle Mountain Indian Reservation. The Turtle Mountain Indian Reservation is spread over a large geographic area and is primarily located in North Dakota; however, some Turtle Mountain land is in Hill County.

The economies of Liberty, Hill, and Toole Counties are more aligned with the general economic trends of central and eastern Montana than western Montana. Figure 13 shows the individual and combined mix of industry in these counties. Agriculture is the majority industry in Liberty County, accounting for 38% of the employment in the county. Agriculture is not the majority industry in Toole or Hill Counties, but it does represent a substantial component in both counties, respectively accounting for 20% and 8% of the employment. Educational, health care and social services is another important source of jobs in these counties, respectively accounting for 21%, 20%, and 29% of employment in Toole, Liberty, and Hill Counties. This mixture of business represents an economy that is largely stagnant. Most of the business is in sectors that are required for the maintenance of a population, not areas that are likely to produce economic growth.

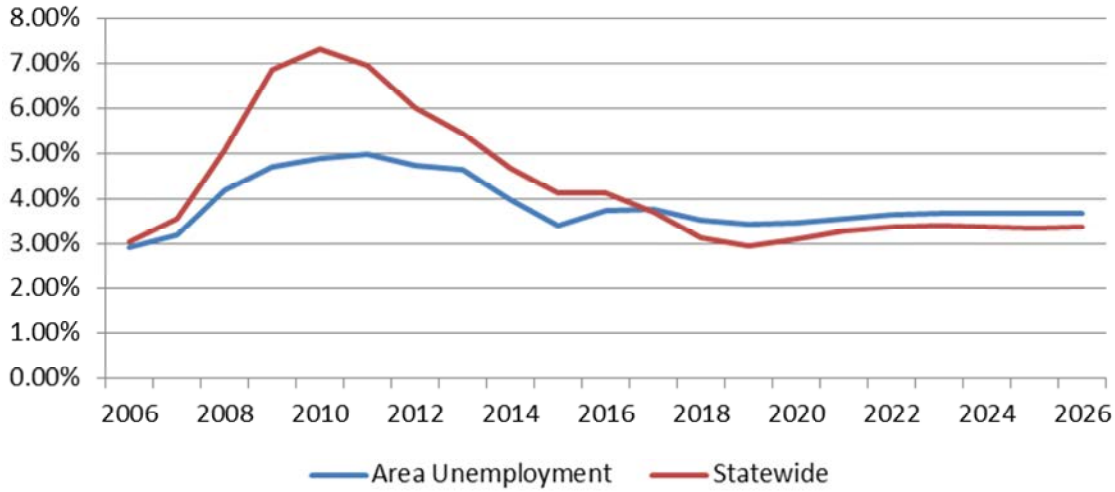
Figure 13: Toole, Hill, and Liberty County Industries



Source: United States Census, 2010-2014 American Community Survey 5-Year Estimates.

Figure 14 displays the past and predicted unemployment rate statewide and the average of the three counties near this study segment. Although unemployment in these three counties has been lower than the statewide average in recent years, the unemployment rate is forecasted to be greater than the statewide unemployment rate starting in 2017. The state and the area are then predicted to follow a similar pattern of unemployment. The minimum unemployment rate displayed is 2.93% observed in 2006, and the maximum displayed unemployment rate is 4.96% observed in 2011.

Figure 14: Liberty, Toole, and Hill County Unemployment



Source: United States Census, 2010-2014 American Community Survey 5-Year Estimates.

Table 13 displays some measures of wealth in the three counties, and compares these measures to statewide figures. By these measures, these counties appear to be as well off or better off than the state. Liberty and Hill Counties' median family income measures are just below the statewide value; the median family income in Toole County is slightly greater than the statewide value. Per capita income in these three counties is less than the statewide per capita income, but not by a large amount. Retail sales per capita in Hill and Toole Counties are greater than the statewide values. The retail sales per capita in Liberty County are much lower than the other counties in the area. Given the other measures of wealth in this county, this is not likely a sign of lack of wealth in the county. This could be explained by a lack of retail trade establishments rather than lower wealth.

Table 13: Liberty, Toole, and Hill County Wealth Measures

Area	Montana	Liberty County	Toole County	Hill County
Median Family Income (2014 $)	$46,766	$46,250	$46,917	$44,368
Per capita income (2014 $)	$25,977	$24,908	$22,837	$21,119
Retail Sales per capita (2012 $)	$15,544	$5,357	$15,993	$17,503

Source: United States Economic Census.

Population and Demographics

Northern Montana has a small population, and only minimal growth is expected. The socio-economic characteristics of this area can be expected to remain constant in the future. The following summarizes population and demographic conditions within and near Segment 3.

Table 14 displays the populations of communities around the study segment. Table 15 displays demographic characteristics of the counties around the study segment and compares these characteristics to Montana.

Table 14: Segment 3 Area Populations

City/Town	Cut Bank	Shelby	Chester
Population	3,002	3,216	884

Source: United States Census 2013 Estimates.

Table 15: Liberty, Toole, and Hill County Population Demographics

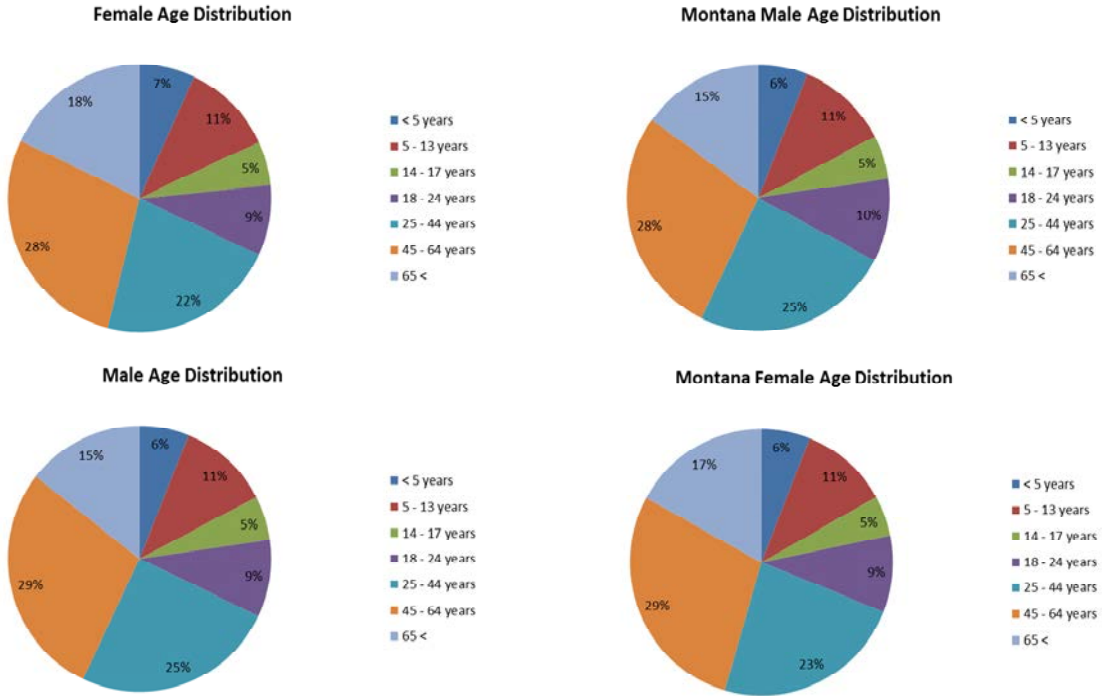
Area	Montana	Liberty County	Toole County	Hill County
Population	1,032,949	2,408	5,087	16,572
White Alone	77.1%	97.6%	90.7%	72.6%
American Indian	6.6%	0.7%	5.5%	22.7%
Hispanic or Latino	17.6%	1.1%	3.2%	3.4%
Housing Units	134,789,944	1,030	2,341	7,202
Owner Occupied Housing Rate	64.4%	65.7%	60.6%	67.7%

Source: United States Census 2013 Estimates.

Hill County has the largest population of the three counties. Hill County also has the most ethnically diverse population with only 72.6% of the population identified as White Alone. Most of the other residents of Hill County, 22.7%, identify as American Indian. This is due to the Rocky Boy's Indian Reservation that is partially in Hill County. Toole County is predominantly populated with people who identify as White Alone, but 5.5% of its population identifies as American Indian and 3.2% identify as Hispanic or Latino. Liberty County is almost entirely composed of people identified as White Alone at 97.6%. Less than 2% of residents of Liberty County identify as American Indian or Hispanic or Latino. The rate of owner occupied housing is highest in Hill County. The other counties are on par with the statewide rate of owner occupied housing.

Figure 15 shows the age distribution by sex in the three counties and the distribution of age by sex for the larger state. The largest age group amongst both men and women is 45-64 years. This is in line with the age distribution by sex of the state. The distribution of age by sex in the three counties is similar to the statewide distribution.

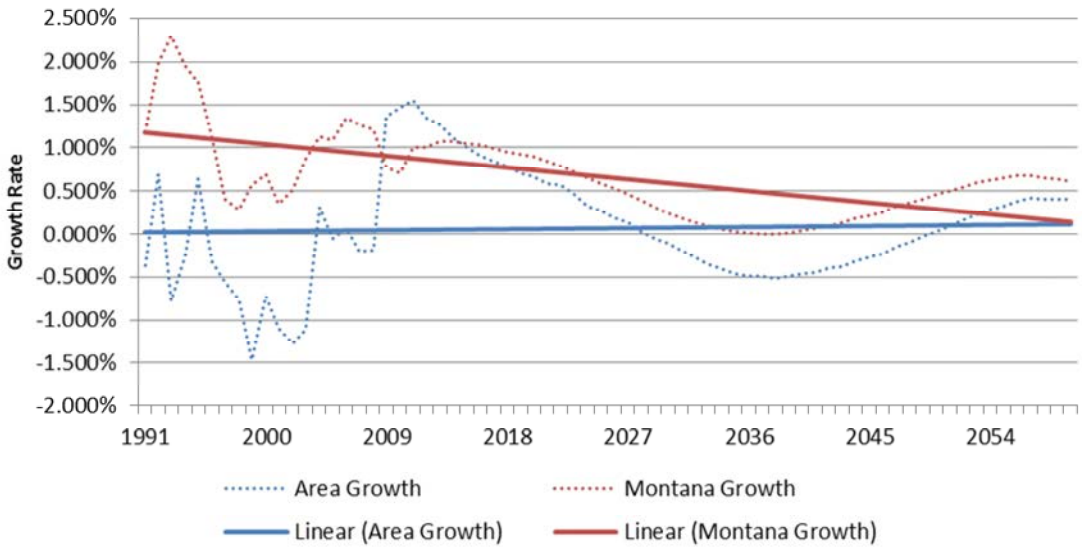
Figure 15: Lincoln, Toole, and Liberty County Age Distribution by Sex



Source: United States Census American Community Survey.

Figure 16 shows the historical and forecast yearly population growth rate in the three counties and around the state. The counties are expected to experience a 10-year growth rate of 0.549%. This rate is lower than the projected statewide growth rate of 0.0793%. While the overall growth rate of Montana is expected to decrease over the next 45 years, the growth rate in these counties is expected to remain close to constant.

Figure 16: Lincoln, Toole, and Liberty County Population Growth



Source: Department of Commerce 2013 Population Projections.

Environmental Justice

Title VI of the United States Civil Rights Act of 1964, as amended (USC 2000(d)) and EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, require that no minority, or, by extension, 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. If a project is forwarded from this study, environmental justice will need to be further evaluated during the project development process.

Land Ownership and Use

The following provides a description of the dominant land ownership and land uses within and adjacent to Segment 3 based on Montana Cadastral (refer to Exhibit 3.7 in Attachment 1). Because privately owned lands and developed lands may be more costly to acquire, safety rest area siting considerations should attempt to minimize impacts to privately owned lands and developed lands to the extent practicable.

Land ownership in Segment 3 is predominantly private with some state, county, and city owners. Shelby is adjacent to US 2 from RP 278 to RP 281 and county-owned lands occur near RP 282. The BNSF Railway runs parallel to US 2 nearly throughout Segment 3 except from RP 281 to RP 284, RP 297 to RP 299, and from RP 299 to RP 304. Additionally, State Trust lands are located near RP 297 to RP 330, RP 303, and RP 312.

The majority of land use in Segment 3 is crop/pasture with mixed urban near Shelby.

Recreational Resources

Recreational resource information within Segment 3 was gathered during the July 2017 field review and through review of aerials and USFS and FWP resource lists. Recreational areas may be protected under Section 4(f) of the U.S. Department of Transportation Act of 1966, which was enacted to protect publicly owned parks, recreation areas, wildlife and waterfowl refuges, and public and private historic sites of local, state, and national significance. Federally funded transportation projects cannot impact these properties unless there are no feasible and prudent avoidance alternatives and all possible planning to minimize harm has occurred. 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 the 4(f) resource. “Use” can occur 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.”

In addition, the FWP National LWCFA, or Section 6(f), list of sites by county was reviewed to determine the presence of Section 6(f) sites within the study segment. LWCFA was enacted to preserve, develop, and assure the quality and quantity of outdoor recreation resources. Section 6(f) protection applies to all projects that impact recreational lands purchased or improved with LWCFA funds. The Secretary of the Interior must approve any conversion of LWCFA property to a use other than public, outdoor recreation.

The following is a summary of the recreational resources found within Segment 3. Potential Section 4(f) resources and LWCFA resources are mapped in relation to the study segment in Exhibit 3.7 (in Attachment 1). The screening process for potential safety rest area siting options will need to consider effects on recreational use in accordance with Section 4(f) and Section 6.

For sites carried forward, a future reevaluation of Section 6(f) resources should take place to determine if any new Section 6(f) resources are present. As general guidance, converting these resources to a non-recreational purpose can be a difficult and time-consuming task and should be avoided if practicable.

Lands within Segment 3 are primarily privately owned, and there are very few recreational opportunities available. Recreation is limited to fishing, hunting, and recreation (e.g., parks, fairgrounds, and recreational fields) within the city of Shelby.

According to the FWP database, there are no designated fish access sites within the study segment. However, fishing likely occurs on West Fork Willow Creek, Willow Creek, and other perennial creeks in the area. Fishing within the creeks is accessed primarily via foot or at undesignated sites at US 2 bridge crossings. State lands surrounding Willow Creek south of US 2 at RP 303, providing easy access to the creek.

Directly south of the study segment from RP 281 to RP 283, are lands under the jurisdiction of the BLM. Access to the site is very limited with some access occurring off of US 2 near RP 281 down a dirt road. Recreation in the area may include hunting, hiking, and all-terrain vehicle use.

Three potential Section 4(f) resources are located directly north of the study segment, within the city of Shelby, near RP 279. These include the recreational fields for Shelby High School, the Shelby Sports Complex, and Aronow City Park. These resources are not located within the study segment. One potential Section 4(f) resource is located within the study segment near RP 280.6. This is the Marias Fairgrounds found just south of US 2.

The FWP LWCFA site list by county shows funds allotted for the facilities at Aronow Park and the Shelby Sports Complex, both of which are outside the study segment.

Cultural Resources

The 666-mile US 2 corridor across Montana from the Idaho to North Dakota border is rich in historic properties. The complex history of the region is well represented in the large number of historic buildings, structures, and sites located along the highway. These include commercial buildings, service stations, motels, restaurants, and other operations that were and are dependent on the highway. The BNSF Railway (formerly the Great Northern Railway) was constructed across the Hi-Line in 1887 and extended to the west coast in 1892. The railroad deposited towns and stations in its wake, with most of the communities located along its length tracing their origins to the late nineteenth century.

US 2 is the primary east-west travel corridor in northern and northwestern Montana. The route passes through three Indian reservations (Fort Peck, Fort Belknap, and Blackfeet), around the southern tip of Glacier National Park, and two national forests (Flathead and Kootenai). Historic properties have been recorded along its length from the Idaho to the North Dakota borders. The sites include archaeological sites, commercial buildings, service stations, motels, hotels, drive-in theaters, and residences. Most represent the change of focus in those communities from the railroad to the automobile in the twentieth century. In addition to the historic properties located in the communities through which the highway passes, irrigation ditches associated with the Bureau of Reclamation's Milk River Project, an active railroad grade (the BNSF Railway), farms, ranches, and highway-related structures (i.e., bridges and overpasses) also occur. Also represented in the corridor are churches, schools, and government buildings. Structures include sand houses, maintenance section shops, and the former Glasgow Rest Area (determined ineligible for the National Register in 2016).

Historic development of the corridor began relatively late east of the continental divide. The Lame Bull Treaty of 1855 established the area from the continental divide to the mouth of the Milk River and from the Missouri River north to the Canadian line. The extermination of the great buffalo herds in the early 1880s coupled with the construction of the St. Paul, Minneapolis & Manitoba Railroad (later Great Northern Railway and the BNSF Railway) in 1887 began the process of breaking up the reservation. The railroad, moreover, deposited towns, stations, and watering stops along its length in Montana Territory. In 1892, James J. Hill extended the newly renamed Great Northern Railway from Havre westward to Seattle. The railroad allowed the agricultural development of eastern Montana and brought thousands of new people into the formerly remote area. The Newlands Reclamation Act of 1902, the Enlarged Homestead Act of 1909, and the creation of Glacier National Park in 1910 also caused the development of the area called the Hi-Line. In western Montana, development was also based on the railroad after 1892 with an emphasis on mining, logging, and agriculture.

The dawn of the automobile age caused a profound change in northern and northwestern Montana. In 1919, local and regional promoters established the Theodore Roosevelt International Highway. The 4,060-mile automobile route initially connected Portland, Maine, with Portland, Oregon, (the western terminus was later changed to Seattle). The route paralleled the Great Northern Railway from Minnesota, through North Dakota, Montana, and Idaho to the west coast. With the rising popularity of the automobile, the concentration of business districts on the railroad along the Hi-Line and northwestern Montana changed to the highway. New businesses (motels, tourist camps, drive-in restaurants and theaters, and services stations and garages) arose to serve the new mode of travel. All of those businesses are represented in the US 2 corridor. The American Association of State Highway Officials, Bureau of Public Roads, and Montana State Highway Commission re-designated the Roosevelt Highway as US 2 in 1926. The first highway commission projects to improve it began in 1919.

A large number of archaeological and historic properties likely occur along the US 2 corridor in Montana. Archaeological sites in the corridor include buried campsites, stone circle sites, bison kills, human burials, and rock art sites under federal, state, local, and private ownership.

The NHPA of 1966, as amended, defines historic properties as sites, buildings, structures, districts (including landscapes), and objects included on, or eligible for inclusion on, the NRHP, as well as artifacts, records, and remains related to such properties.

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

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

Potential safety rest area siting options will need to consider recorded historic sites determined to be NRHP-eligible as identified through a SHPO file search. In addition, cultural resource surveys will be necessary for siting options forwarded from this study.

Noise

Analysis of traffic noise is necessary for Type I projects, including "the addition of a new or substantial alternative of a weigh station, rest stop, ride-share lot or toll plaza" (23 CFR 772.5). Type I projects require a detailed noise analysis, consistent with FHWA requirements and MDT policy, which involves measuring ambient noise levels at selected receptors and modeling design year noise levels using projected traffic volumes. If noise levels approach or substantially exceed noise abatement criteria, noise abatement measures may be necessary.

Federal regulations define traffic noise receptors as discrete or representative locations of noise sensitive area(s) for various land uses, including residential developments, businesses, and public use areas. The study corridor traverses a variety of land uses. In some portions of the corridor, noise-sensitive receptors are located in proximity to US 2 right-of-way. In Segment 3, isolated residential development is found throughout the segment, with more concentrated development at Shelby (±RP 278-281), Dunkirk Reservoir (±RP 289), Devon (±RP 297), Galata (±RP 302-303), and Lothair (±RP 309).

The screening process for potential safety rest area siting options will need to consider proximity to potential noise receptors. Options forwarded from this study may require a Type I noise analysis.

Visual Resources

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

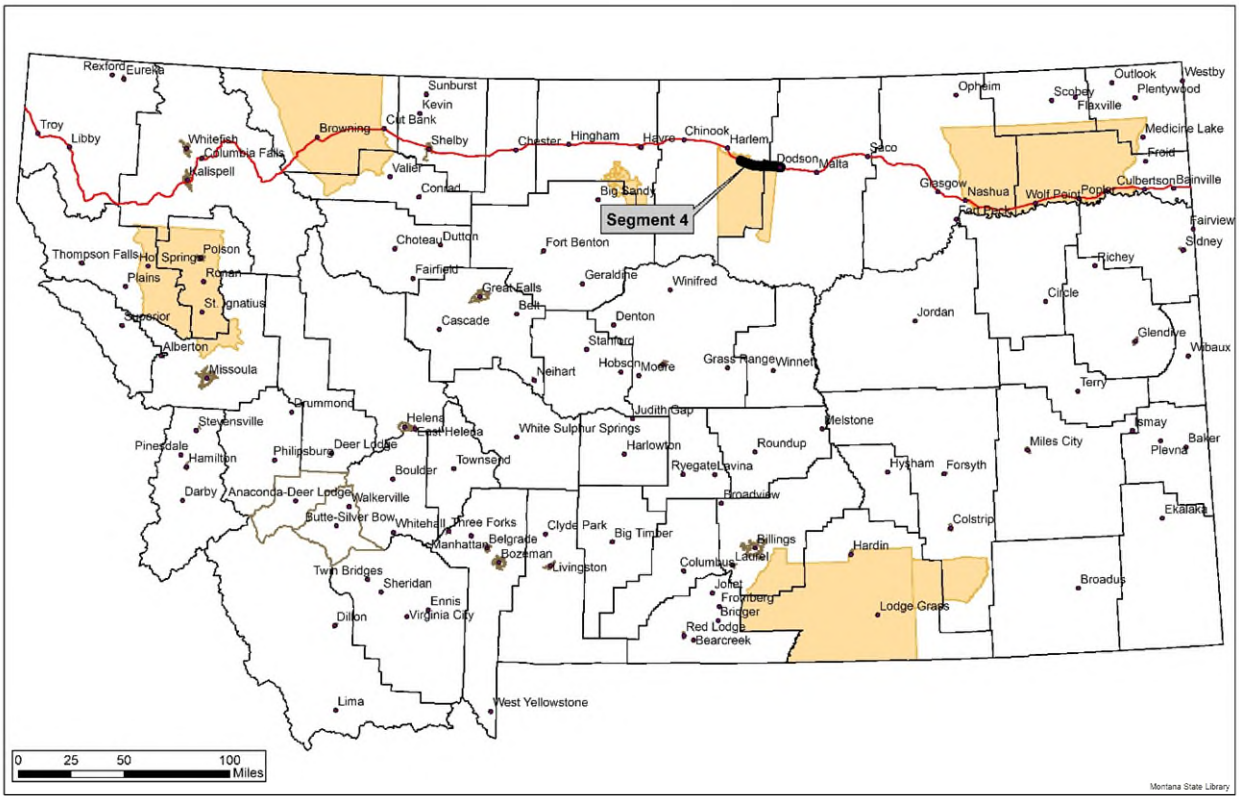
Views along the US 2 corridor are significantly different on the west and east sides of the Continental Divide. A mountainous, forested landscape, bisected by steep mountain creeks and rivers dominates the corridor west of the divide. Rolling grasslands and agricultural fields bisected by the large floodplains of the Marias, Milk, and Missouri Rivers dominate the corridor east of the divide.

Vast, open views of rolling grasslands, large agricultural fields, wooded draws, and meandering floodplains, interspersed with small communities, make up Segment 3.

Evaluation of the potential effects on visual resources and viewshed opportunities will need to be conducted as part of the screening process for potential safety rest area siting options.

5.0 Segment 4 (RP 434.9 to RP 454.3)

Figure 17. Segment 4 Location



5.1 Physical Environment

Soil Resources and Prime Farmland

Soils information was reviewed to better understand the general soil characteristics within Segment 4 and to determine the presence of prime and unique farmland in the study segment to demonstrate compliance with the FPPA.

The FPPA is intended "to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to assure that federal programs are administered in a manner that, to the extent practicable, will be compatible with state, unit of local government, and private programs and policies to protect farmland." The term "farmland" refers to prime farmland; some prime if irrigated farmland; unique farmland; and farmland, other than prime or unique farmland, that is of statewide importance. Prime farmland soils are those that have the best combination of physical and chemical characteristics for producing food, feed, and forage; the area must also be available for these uses. Prime farmland can be either non-irrigated or lands that would be considered prime if irrigated. Farmland of statewide importance is land, in addition to prime and unique farmlands, that is of statewide importance for the production of food, feed, forage, and oilseed crops. Developed land previously designated as prime farmland is no longer subject to the FPPA.

Soil surveys of Segment 4 are available from the USDA NRCS. A summary of the general soil characteristics and farmland designations for Segment 4 are presented below (Exhibit 4.1 in Attachment 1 and Attachment 2). The screening process for potential future safety rest areas

will need to consider soil characteristics for constructability (e.g., clay soils). In addition, any siting options forwarded from this study that are within identified farmlands and are supported with federal funds will require a CPA-106 Farmland Conversion Impact Rating Form completed by MDT and coordinated with NRCS. The NRCS uses information from the impact rating form to keep inventory of the prime and important farmlands within the state.

The majority of surficial soil in Segment 4 is mapped as alluvium, fine-loamy till, and alluvium/glacial lake (glaciolacustrine) deposits. From RP 434.9 to RP 442.8, the segment is primarily comprised of fine-loamy till, interspersed with till and some alluvial deposits. Alluvial deposits make up the majority of the segment from RP 442.8 to the end of the segment at RP 454.3, this includes a section of alluvium/glacial lake deposits from RP 443.5 to RP 448.

NRCS soil surveys indicate the presence of farmland of statewide importance, prime farmland if irrigated, and prime farmland if irrigated (when the product of I [soil erodibility] x C [climate factor] does not exceed 60) within the study segment. These designations occur throughout the majority of the corridor, with a large break of non-designated land occurring from RP 443 to RP 448. The percentage of the study segment comprised of farmland of statewide importance or prime farmland if irrigated is moderately high.

Geologic Resources

Information on the geology and seismicity in Segment 4 was obtained from published sources, including MBMG ArcGIS Map Service Layers and the USGS National Geologic Map Database Geolex Search website. Geologic mapping was reviewed for geological formations, rock types, and fault lines. Seismicity and potential seismic hazards were also reviewed.

The following provides a brief summary of the geologic and seismic conditions present in Segment 4 (refer to Exhibit 4.2 in Attachment 1). Geologic and seismicity information can help determine potential safety rest area design and construction issues and will need to be considered as safety rest area siting options are screened. Site-specific geotechnical evaluations will be required once potential sites are selected.

The Judith River Formation (Cretaceous) underlies most of Segment 4 and consists of mainly sandstone interbedded with lesser amounts of siltstone, shale/claystone, and thin lignite beds. RP 439.3 to RP 440.3 is underlain by the Claggett Formation (Cretaceous), which consists of mostly shale with some interbedded sandstone (near the top) and bentonite beds (near the base). Bentonite beds and soils derived from bentonite may have expansive characteristics.

Segment 4 is located along the Milk River. The surficial deposits along the Milk River valley consist mainly of alluvium. The glacial material mapped on the surface of the upland areas is a Quaternary ground moraine. These soils may have a moderate to high frost susceptibility and drainage/moisture issues. Based on the published data reviewed, it does not appear that landslides have been mapped along Segment 4.

A northwest trending fault is mapped at approximately RP 434.2 (just west of the study segment) and a northeast trending fault is mapped at approximately RP 440.3. However, based on MBMG and USGS mapping, the closest Quaternary faults (which may be considered active) are located more than 100 miles away from Segment 4. The study segment is located in an area where historic seismicity is low. The MBMG peak horizontal acceleration (in percent of the acceleration of gravity) for Segment 4 is less than 1%. No significant historic earthquake epicenters are mapped within 100 miles of Segment 4.

Hazardous Substances

Reviews of the Montana DEQ database, MBMG database, USEPA database, MBOG, and the National Pipeline Mapping System were conducted to obtain available information on UST sites, LUST sites, petroleum release fund claims, remediation response sites, superfund sites, hazardous waste sites, mining districts, abandoned mine sites, open cut mines, oil and gas pipelines, and oil/gas wells.

A brief summary of the primary sites within Segment 4 are discussed below. Locations of hazardous substances are represented in Exhibit 4.2 in Attachment 1 and Attachment 3. Safety rest area sites carried forward from this study will need to consider contaminated soils and may require additional investigation/coordination in areas where pipelines, wells, or mines are located.

There are no UST sites, remediation response sites, USEPA designated superfund sites, hazardous waste sites, mining districts, abandoned mine sites, open cut mines, in-service oil and gas pipelines, or oil/gas wells or well directionals located within Segment 4.

Five petroleum release fund sites and three LUST sites are located within the eastern limits of the study segment in or near the town of Dodson (RP 452.3 to RP 454.2). Of the three LUST sites, only one has been resolved (1994).

Air Quality

USEPA has established NAAQS for six criteria pollutants, including carbon monoxide, nitrogen dioxide, ozone, PM10 and PM2.5, sulfur dioxide, and lead. The USEPA designates communities that do not meet NAAQS as “non-attainment areas.” States are required to develop a plan to control source emissions and ensure future attainment of NAAQS. A review of the DEQ website indicates no non-attainment areas for any of the criteria pollutants are located within or near Segment 4.

According to Table 2, 40 CFR 93.126, safety rest areas are typically exempt from the requirements that a conformity determination be made. As a result, special design considerations are not anticipated to accommodate NAAQS in any future safety rest area project development process.

Surface Waters

USGS topographic maps, aerial photographs, and GIS data were reviewed for Segment 4 to identify the locations of surface waterbodies including rivers, streams, lakes, and reservoirs.

The following provides a summary of the watersheds and surface waters located within Segment 4 (refer to Exhibit 4.3 in Attachment 1). The screening process for safety rest area siting options should consider potential impacts to surface waters and the costs that may be associated with permitting and potential mitigation. Coordination with federal, state, tribal, and local agencies may be necessary, as work within these surface waters may be regulated by the USACE, Montana FWP, the DEQ, and tribal laws and regulations. In addition, forwarded siting options may trigger the need to obtain coverage under NPDES or MPDES for Storm Water Discharges Associated with Construction Activity and comply with the requirements outlined in MDT’s Storm Water Management Plans.

Segment 4 is primarily within the Middle Milk River Watershed (HUC 10050004). However, a small portion of the segment from RP 446.8 to RP 448.4 is located within the Peoples Watershed (HUC 10050009).

Threemile Reservoir, Threemile Creek, White Bear Creek, Milk River, and Dodson Creek are the named surface waters within Segment 4. Threemile Reservoir is located directly south of US 2 in the vicinity of RP 435. Threemile Creek crosses the study segment near RP 436.7. It then parallels the study segment to the north for six miles before flowing into White Bear Creek, which crosses the study segment at RP 442.8. The primary drainage within the Middle Milk River Watershed portion of Segment 4 is the Milk River. It parallels the study segment several miles to the north before turning southeast, crossing the study segment at RP 451.7. Both White Bear Creek and Dodson Creek, which crosses the study segment at RP 454, flow into the Milk River. In addition to the named drainages, there are several irrigation ditches/canals (discussed later in the Irrigation section) and a number of unnamed ephemeral and intermittent drainages within this watershed that cross or parallel the study segment.

The small portion of the Peoples Watershed located within the study segment includes one primary drainage named Peoples Creek. The creek flows north through the study segment at RP 447.3. It flows northeast into the Milk River.

Total Maximum Daily Loads

Section 303 subsection “d” of the Clean Water Act requires the state of Montana to develop a list, subject to USEPA approval, of waterbodies that do not meet water quality standards. When water quality fails to meet state water quality standards, DEQ determines the causes and sources of pollutants in a sub-basin assessment and sets maximum pollutant levels, called TMDLs. TMDLs set by DEQ become the basis for implementation plans to restore water quality to a level that supports state-designated beneficial water uses. The implementation plans identify and describe pollutant controls and management measures to be undertaken (such as best management practices), the mechanisms by which the selected measures would be put into action, and the individuals and entities responsible for implementation projects. Federally recognized Indian tribes within Montana are also eligible to develop 303d lists for tribal lands.

Waterbodies on Indian Reservations (Blackfeet, Fort Belknap, and Fort Peck) are not included in the DEQ 303d list, as tribal lands are not under state jurisdiction. Segment 4 is located within the Fort Belknap TPA and the Middle Milk and Tributaries TPA. Waterbodies within the Fort Belknap TPA are not listed in the DEQ 303d Water Quality Report. In the Middle Milk and Tributaries TPA, the Milk River where it crosses the study segment is listed as not fully supporting drinking water due to mercury from agricultural, dam or impoundments, and natural sources. The screening process for safety rest area siting options will need to consider downstream TMDL standards and potential impacts to water quality within receiving waterbodies.

Wild and Scenic Rivers

The Wild and Scenic Rivers Act, created by Congress in 1968, provides for the protection of certain rivers, and their immediate environments, that possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, or cultural resources, or other similar values. Based on a review of the United States National Park Service website, there are no wild or scenic rivers within or near Segment 4.

Irrigation

Applicable Montana County WRS Books were reviewed for information on irrigation infrastructure, districts, and practices within Segment 4. Larger ditches and canals are represented in Exhibit 4.3 in Attachment 1. Pages from WRS are provided in Attachment 4. Safety rest Area siting should avoid impacts to irrigation facilities to the greatest extent

practicable, particularly where large ditches/canals and pivots are located as these are costly to mitigate. Any work within these irrigation ditches/canals may also be regulated by the USACE.

Segment 4 is primarily located within the Fort Belknap Reservation, where irrigation water is supplied through the Fort Belknap Irrigation Project, which is owned and operated by the BIA. Once out of the reservation, the study segment crosses lands irrigated through the Milk River Project – Dodson and Malta Irrigation Districts.

WRS maps for Blaine and Phillips County show a great deal of irrigation activity/infrastructure within Segment 4. Starting at RP 434.9, the Lateral 27 A ditch parallels US 2 to the north, within the study segment. It turns to the northeast at RP 435.7. The Lateral 2B3, Lateral 4B, and Three Mile Unit Main Canal (B Canal) all cross US 2 from RP 436.2 to RP 436.7, and two large pivots are located just north of US 2 from RP 437 to RP 438.3.

At RP 442, Fort Belknap Main Canal (Canal A) flows down into the study segment and parallels US 2 to the north before crossing the highway at 442.5. The canal then flows into White Bear Creek. Lateral C canals pulls water out of White Bear Creek near RP 442.9 and parallels US 2 to the south before crossing the highway near RP 444.4. Lateral 4C crosses US 2 at RP 443.6, while Lateral 9C and Lateral 11 C4 cross US 2 near RP 444.8 and RP 445.6. Near RP 447, WRS maps show a series of small ditches crossing US 2.

Once outside the reservation, the Dodson South Canal, which is part of the Milk River Project, crosses US 2 at RP 451.3. At RP 453.5 the Dodson North Canal enters the study segment and parallels US 2 to the north. It crosses US 2 at RP 454.

Floodplains and Floodways

EO 11988, Floodplain Management, requires federal agencies to avoid to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains, and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities" for the following actions:

- acquiring, managing, and disposing of federal lands and facilities;
- providing federally undertaken, financed, or assisted construction and improvements; and
- conducting federal activities and programs affecting land use, including but not limited to, water and related land resources planning, regulation, and licensing activities.

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

FEMA-issued FIRMs for Fort Belknap Reservation and Phillips County (30005C1600E, 30005C1625E, 30005C1650E, 30005C1675E, and 3001620525B), as well as FEMA's digital National Flood Hazard Layer, were reviewed for Segment 4.

The following provides a summary of the designated floodplains located within Segment 4. Exhibit 4.3 in Attachment 1 displays the FEMA digitized data where digital data was available. Digital data is not available for Phillips County. Designated floodplains for Phillips County are represented on FEMA FIRM number 3001620525B. Safety rest area siting options should avoid areas designated within a 100-year floodplain.

Segment 4 is primarily located on the Fort Belknap Reservation, with a small portion of the segment located outside the reservation in Phillips County. The study segment is comprised of four flood zones.

- Zone A: SFHA - 100-Year Flood, No Base Flood Elevations Determined
- Zone AE: SFHA - 100-Year Flood, Base Flood Elevations Are Determined
- Zone C: Areas Outside the 500-Year Flood
- Zone X (unshaded): Areas Outside the 500-Year Flood

From RP 434.9 to RP 442.5 the study segment is primarily located within a Zone X designation, while Zone AE, which is the 100-year floodplain designation for the Milk River, is located directly to the north. From RP 442.5 to RP 451.8, a large portion of the study segment is within the Milk River and Peoples Creek 100-year floodplains (Zone AE). At RP 451.8 the study segment leaves to reservation. From this RP to the end of the study segment at RP 454.3, the area south of US 2 is within the 100-year floodplain for the Milk River, but it is designated as Zone A. The area north of US 2 is primarily designated as Zone C, with a small portion (RP 453.2 to RP 453.6) within the 100-year floodplain for Dodson Creek (Zone A). The town of Dodson is not included in FEMA mapping.

Wetlands

The USACE defines wetlands as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

USFWS NWI mapping data is available for Segment 4 from the NWI website and MTNHP. NWI maps are based on the USFWS definition of wetlands, which does not follow the USACE definition that MDT uses in wetland determination and delineation. NWI maps are typically generated based on aerial and satellite imagery, and are not sufficiently accurate or detailed for MDT project wetland determination and/or delineation. At the study level, however, some useful information can be ascertained from NWI mapping on potential wetland locations.

The following provides a summary of the NWI wetlands located within Segment 4 (Exhibit 4.4 in Attachment 1). Safety rest area siting options should avoid and minimize adverse impacts to wetlands to the maximum extent practicable, and consider the costs that may be associated with permitting and potential mitigation. For federally funded projects, EO 11990 requires agencies to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. Section 404(b)(1) of the Clean Water Act requires the USACE to only permit discharges of dredge or fill materials into USACE jurisdictional wetlands that represent the least environmentally damaging practicable alternative, so long as the alternative does not have other significant adverse environmental consequences. Future wetland delineations would be required if safety rest area siting options are forwarded from the

study that could potentially impact wetlands. Work within USACE jurisdictional wetlands would require a Clean Water Act 404 permit. Unavoidable impacts to wetlands must be compensated through mitigation in accordance with USACE regulatory requirements and requirements of EO 11990.

NWI mapping within Segment 4 shows wetlands primarily along the Milk River, the larger creeks and drainages, and within depressional areas. Wetland fringe is also likely along the numerous irrigation ditches and canals located within the study segment. From RP 434.9 to RP 436, emergent wetland associated with the Lateral 27 A ditch and Threemile Reservoir are located on both sides of US 2. Emergent wetlands associated with Threemile Creek, White Bear Creek, Peoples Creek, Dodson South Canal, Dodson Creek, and several irrigation ditches and unnamed drainages cross or parallel US 2 within the study segment at RP 436.3, RP 436.7, RP 439.8, from RP 442 to RP 444, from RP 444.5 to RP 446, RP 442.8, RP 447.3, RP 451.3, and from RP 452 to RP 454. Emergent, shrub/scrub, and forested wetlands occur along the various active and inactive channels of the Milk River from RP 451.3 to RP 451.8. In addition, NWI mapping shows several emergent depressional wetlands within the study segment near RP 441, RP 442.2, RP 443.5, RP 447.5, and RP 449.

Groundwater

The MBMG GWIC was reviewed for Segment 4 to identify groundwater wells and general groundwater information. A summary is presented below. Additional information is provided in Exhibit 4.4 in Attachment 1 and Attachment 5. Impacts to existing wells will need to be considered during the screening of safety rest area siting options. Wells can be a costly item to mitigate if they are not avoided. Mitigation of a well usually involves drilling a new well for the owner in a new location that will not be impacted by the potential project. Well costs are based on per foot price; the deeper and higher volume needed results in a higher cost. In addition, groundwater levels will need to be considered for safety rest area constructability.

There are approximately 50 GWIC wells on record within or directly adjacent to Segment 4. Wells throughout the segment show recorded depths that range from 13 feet to 162 feet. Very few wells have static water level recorded. Wells with static water levels recorded range from four feet near RP 454.5 to 100 feet near RP 448.

Shallow groundwater can be expected throughout the study segment, as US 2 primarily traverses the valley floor of the Milk River (particularly from RP 444 to RP 454.3) and is crisscrossed and paralleled by several irrigation canals and major drainages, including Threemile Creek (RP 436.7 to 442.8), White Bear Creek (RP442.8), and Dodson Creek (RP 454). Localized groundwater conditions may be affected by perched aquifers and smaller tributary drainages. Seasonal variation and irrigation may also have a significant impact on groundwater conditions.

5.2 Biological Resources

Vegetation

Land cover along the US 2 corridor is significantly different on the west and east sides of the Continental Divide. Forest and woodland system land covers dominate the corridor west of the divide, while grassland system land covers dominate the corridor east of the divide. The following provides a description of the dominant land covers within and adjacent to (based on a three-mile buffer) Segment 4 based on the MTNHP Land Cover Reports (refer to Exhibit 4.5 in Attachment 1 and Attachment 6). Safety rest area siting considerations should look at options

that minimize adverse impacts to more suitable wildlife habitat and areas where mature tree and shrub removal will be limited to the extent practicable.

Land cover within and adjacent to Segment 4 is dominated by a combination of lowland/prairie grassland, agriculture, sagebrush steppe, and floodplain/riparian. Due to the need for irrigation in the area, agriculture primarily occurs surrounding the floodplain of the Milk River. From RP 434.9 to RP 446 agricultural land is mainly north of US 2, as the Milk River parallels the study segment several miles to the north. At RP 446, agricultural lands migrate to the south of US 2 as the Milk River crosses the highway near RP 451.7. Where agricultural lands and floodplain dominate one side of the US 2, lowland/prairie grassland and sagebrush steppe dominate the other side. Table 16 presents the primary land cover types (four percent or more) within and adjacent to the study segment.

Table 16: Segment 4 Primary Land Cover Types

% of Cover	Land Cover Type
37%	Great Plains Mixedgrass Prairie
26%	Cultivated Crops
13%	Big Sagebrush Steppe
10%	Great Plains Floodplain
4%	Introduced Upland Vegetation - Annual and Biennial Forbland

Source: MTNHP Land Cover Reports, 2017.

General Wildlife Species

The majority of Segment 4 has been moderately developed through the conversion of land to agricultural practices. Small wooded draws and portions of the floodplain along the Milk River still possess specimens of native vegetation that was likely present within this segment prior to conversion to agriculture. These areas provide important movement corridors for wildlife. Wildlife species inhabiting or traversing Segment 4 are typical of those that occur in moderately developed areas of north central and eastern Montana. Since many species occurring within the study segment are habituated to somewhat disturbed areas, species present are predominately, though not exclusively, generalists.

Mammal species likely to occur within Segment 4 include, but are not limited to, mule deer, white-tailed deer, coyote, raccoon, striped skunk, antelope, beaver, porcupine, prairie dog, and northern river otter. Bird species likely found within the study segment would be those typically found within northern Montana's prairie grasslands, agricultural fields, and wooded draws. Bird species likely to occur include, but are not limited to, American crow, American robin, brown-headed cowbird, American white pelican, Canada goose, field sparrow, mallard, western meadowlark, eastern kingbird, red-winged blackbird, great horned owl, prairie falcon, and northern harrier. Amphibians and reptiles likely to occur within Segment 4 include, but are not limited to, prairie rattlesnake, plains gartersnake, northern leopard frog, and American bullfrog.

Threatened and Endangered Species

The federal list of T&E species is maintained by the USFWS. Species on this list receive protection under the ESA. An "endangered" species is in danger of extinction throughout all or a significant portion of its range. A "threatened" species is likely to become endangered in the foreseeable future. The USFWS also maintains a list of species that are candidates or proposed for possible addition to the federal list.

To determine which federally listed species may occur in the vicinity of Segment 4, the USFWS list for Blaine and Phillips Counties and the MTNHP database for threatened or endangered species were reviewed for occurrences within and adjacent to the study segment. A three-mile buffer on each side of US 2 was used. According to the USFWS database, two threatened, three endangered, and one experimental species are listed as potentially occurring along the US 2 corridor within Segment 4 (See Table 17 and Attachment 7).

Table 17: T&E Species with the Potential to Occur in Segment 4

Species	Status
Mammals	
Black-footed ferret *Mustela nigripes*	Experimental
Birds	
Interior least tern *Sterna antillarum athalassos*	Endangered
Piping plover *Charadrius melodus*	Threatened
Red knot *Calidris canutus rufa*	Threatened
Whooping crane *Grus americana*	Endangered
Fish	
Pallid sturgeon *Scaphirhynchus albus*	Endangered

Source: USFWS, 2017.

The MTNHP August 14, 2017, database search on T&E species is summarized below for Segment 4. Exhibit 4.6 in Attachment 1 displays recorded T&E occurrences. Potential effects to T&E species and their habitat will need to be considered during the safety rest area siting process.

Documented occurrences of black-footed ferret and piping plover occur within the three-mile buffer for Segment 4.

Species of Concern and Special Status Species

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

Special Status Species are species that have some legal protections in place, but are otherwise not Montana SOC. Bald eagles are considered special status species.

Bald eagles (special status species) and golden eagles (SOC) are also protected under the Bald and Golden Eagle Protection Act of 1940. The act prohibits anyone without a permit issued by the Secretary of the Interior, from taking bald or golden eagles, including their parts, nests, or eggs. The Act defines take as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb."

A search of the MTNHP SOC database on August 14, 2017, was conducted to determine SOC and special status species likely to occur within and adjacent to Segment 4. A three-mile buffer on each side of US 2 was used (see Exhibit 4.6 in Attachment 1 and Attachment 8). The following is a brief summary of the SOC and special status species with potential to occur / have recorded observations within or adjacent to Segment 4. The screening process for potential safety rest area siting options will need to consider the presence and extent of these species.

There are 20 wildlife SOC with recorded observations within and adjacent to Segment 4. These include fish, mammal, bird, and reptile species. Both bald eagles (a special status species) and golden eagles have been observed within the vicinity of Segment 4. While no known nests have been identified, potential safety rest area siting options will need to consider proximity to any identified active nests as construction timing restrictions are required for work near these nests.

Sage Grouse Habitat Conservation Program

In Montana, the state has management authority over sage grouse as outlined under the 2015 Greater Sage Grouse Stewardship Act and Montana Governor's EOs 10-2014, 12-2015, and 21-2015. The Sage Grouse Habitat Conservation Program was created to facilitate implementation of the EOs across state government, by federal land management agencies, and private entities seeking to develop projects in key sage grouse habitats. The screening process for potential safety rest area siting options will need to consider sage grouse habitats designated as core area, general habitat, or connectivity. Sites within these areas must be reviewed under the Sage Grouse Habitat Conservation program to avoid and minimize impacts to sage grouse.

A review of the Montana Sage Grouse Habitat Conservation Map shows Segment 4 is located within sage grouse general habitat. The MTNHP database also shows recorded observations for greater sage grouse within the study segment.

5.3 Social and Cultural Resources

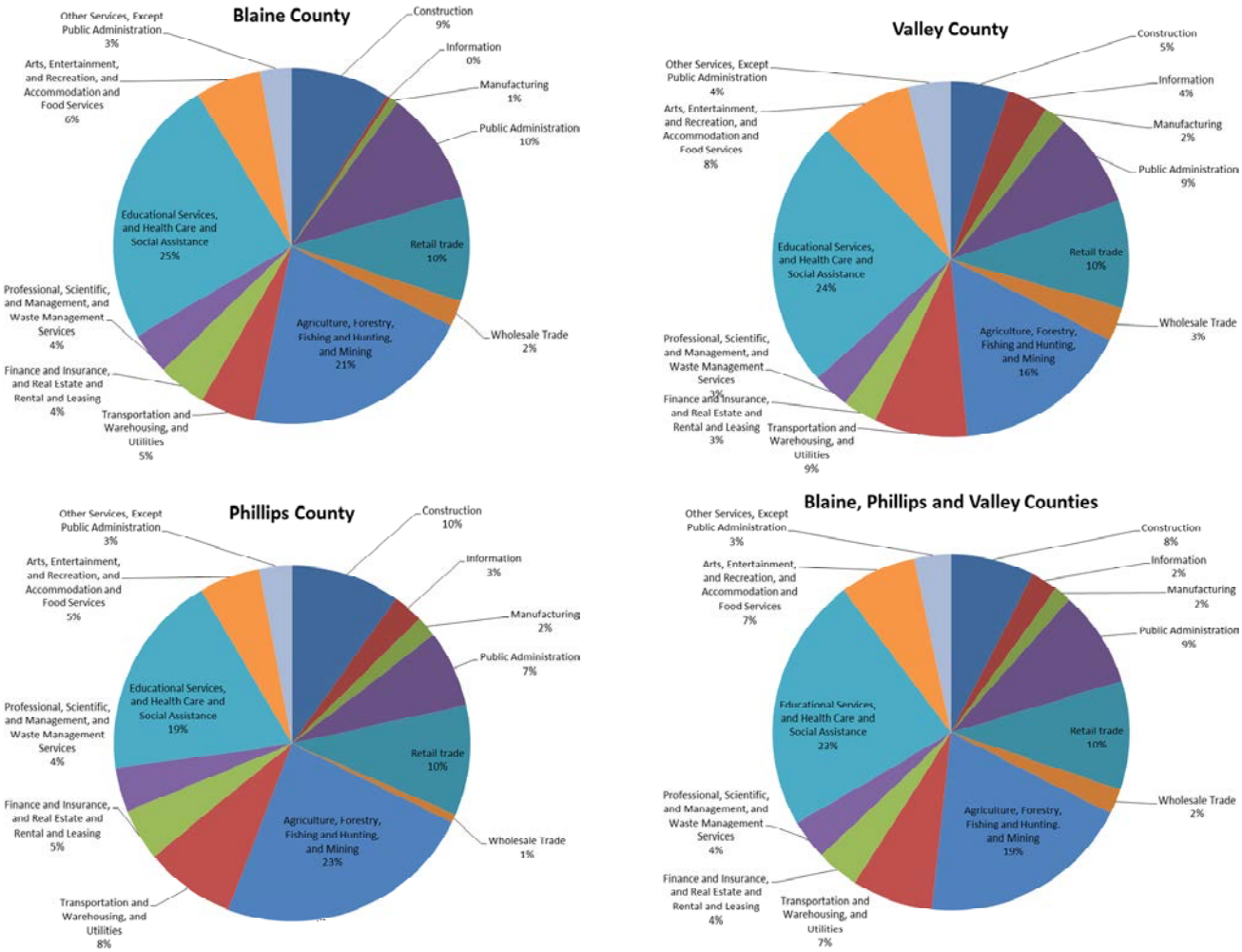
Economy

Northwestern and northeastern Montana have significant economic differences. Northwestern Montana is primarily a tourism based economy due to the presence of natural amenities such as Glacier National Park. Northcentral Montana and northeastern Montana have economies tied more closely to agriculture and resource extraction. Unemployment is expected to hold relatively constant across northern Montana over the coming years. Unemployment tends to be higher than state averages in the northwestern Montana, and on par or lower than statewide averages in central and northeastern Montana. Overall, the socio-economic traits of northern Montana can be expected to change very little over the coming years. The following summarizes the economic conditions within and near Segment 4.

Segment 4 includes Blaine County, Phillips County, and is near Valley County. The area also includes Fort Belknap Indian Reservation lands and parts of the Turtle Mountain Indian Reservation.

Figure 18 shows the mix of industries in the three counties in the study area individually and combined. The mix of employment in the three counties is similar. The largest employment sector in Phillips County is agricultural and the largest employment sectors in Blaine and Valley Counties is educational, health care and social services. Public administration is a relatively large part of the three economies. This could be due to the presence of Fort Belknap Indian Reservation.

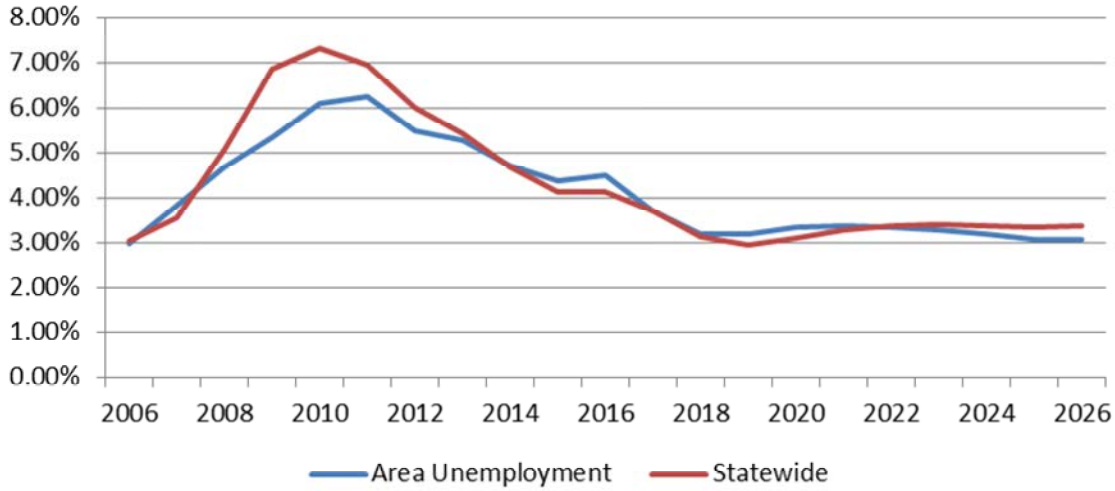
Figure 18: Blaine, Phillips, and Valley County Industries



Source: United States Census, 2010-2014 American Community Survey 5-Year Estimates.

Figure 19 displays the average unemployment rate for the three counties and the state of Montana. The area's observed and forecasted level of unemployment is very like that of the state as a whole. Like the state, the area's unemployment is expected to continue at the current the rates barring an unforeseen economic development. The highest observed unemployment rate in the year is 6.24% observed in 2011. The lowest observed unemployment rate in the area is 2.98% observed in 2006.

Figure 19: Blaine, Phillips, and Valley County Unemployment



Source: United States Census, 2010-2014 American Community Survey 5-Year Estimates.

Table 18 displays selected measures of wealth and income in the three counties compared to the statewide measures.

Table 18: Blaine, Phillips, and Valley County Wealth Measures

Area	Montana	Blaine County	Phillips County	Valley County
Median Family Income (2014 $)	$46,766	$37,065	$38,426	$49,198
Per capita income (2014 $)	$25,977	$17,529	$22,450	$26,331
Retail Sales per capita (2012 $)	$15,544	$7,017	$9,495	$21,141

Source: United States Economic Census.

Blaine and Phillips Counties both have median family incomes that are well below the Montana median family income. Valley County's measure of median family income is above the Montana median family income. Valley County also has higher measures of per capita income and retail sales per capita. Blaine County has the lowest values for per capita income and retail sales per capita. These values are also well below statewide measures. Phillips County has a per capita income that is below the Montana statewide measure, but by only a small amount. The retail sales per capita in Phillips County are below the statewide value.

Population and Demographics

Northern Montana has a small population, and only minimal growth is expected. The socio-economic characteristics of this area can be expected to remain constant in the future. The following summarizes population and demographic conditions within and near Segment 4.

Table 19 presents the populations of communities near Segment 4. As the table shows, these communities are relatively small. Table 20 displays selected information about each county's population. These statistics are compared to Montana's overall average values.

Table 19: Segment 4 Area Populations

City/Town	Dodson	Malta	Harlem	Chinook
Population	121	1,967	828	1,227

Source: United States Census 2015 Estimates.

Table 20: Blaine, Phillips, and Valley County Population Demographics

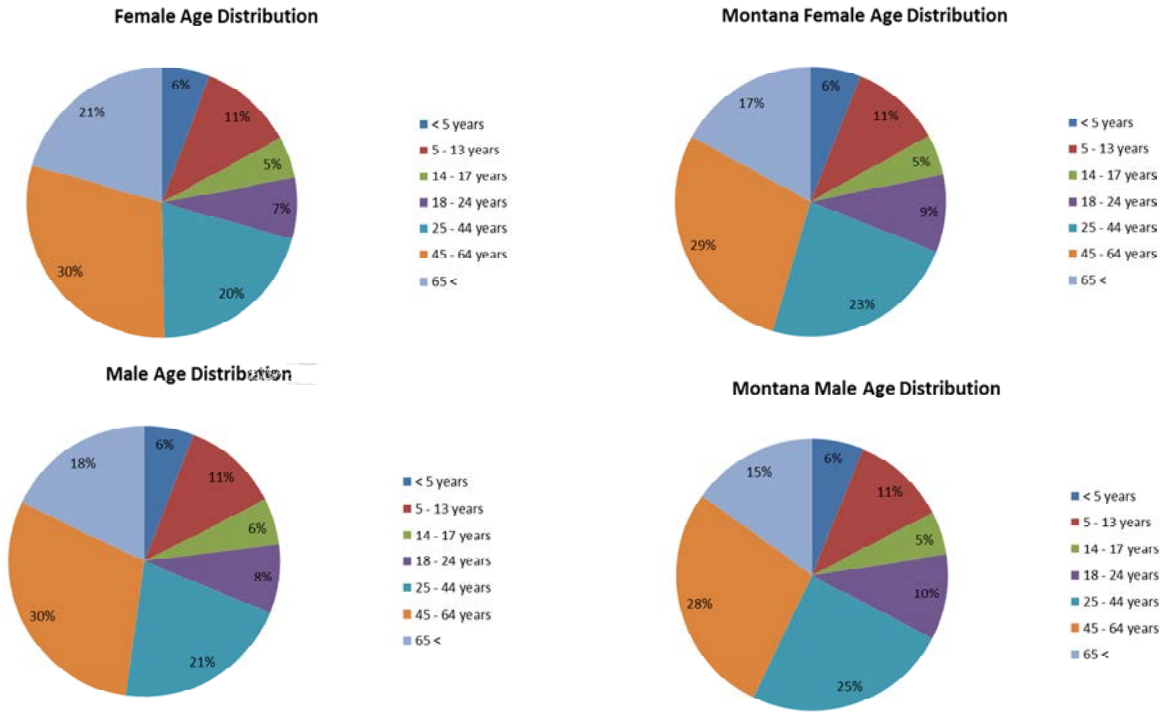
Area	Montana	Blaine County	Phillips County	Valley County
Population	1,032,949	6,577	4,169	7,659
White Alone	77.1%	48.0%	86.6%	86.6%
American Indian	6.6%	48.9%	8.3%	9.8%
Hispanic or Latino	17.6%	2.6%	2.1%	2.3%
Housing Units	134,789,944	2,808	2,314	4,834
Owner Occupied Housing Rate	64.4%	63.7%	75.0%	70.5%

Source: United States Census 2015 Estimates.

Valley County is the most populous of the three counties. Phillips and Valley Counties have populations that predominantly identify as White Alone. Both counties have a relatively high percentage of their populations that identify as American Indian. The three counties have similar values for the percentage of the population identifying as Hispanic or Latino. The value of about 2% is below the statewide average. Blaine County is predominantly populated by people identified as American Indian with 48.9% identifying as American Indian. 48.0% of Blaine County's population identifies as White Alone. The rate of owner occupied housing is greater than the statewide value in all the counties. Phillips County has the highest rate of owner occupied housing of the three, and Blaine County has the lowest. Valley County has roughly double the housing units of Blaine and Phillips Counties.

Figure 20 shows the age distribution by sex of the three counties compared to the age distribution by sex of Montana. The counties have similar distribution of by sex relative to the rest of Montana. The population of the three counties does seem to be slightly older than what is average for Montana, however, the overall age distributions are very similar.

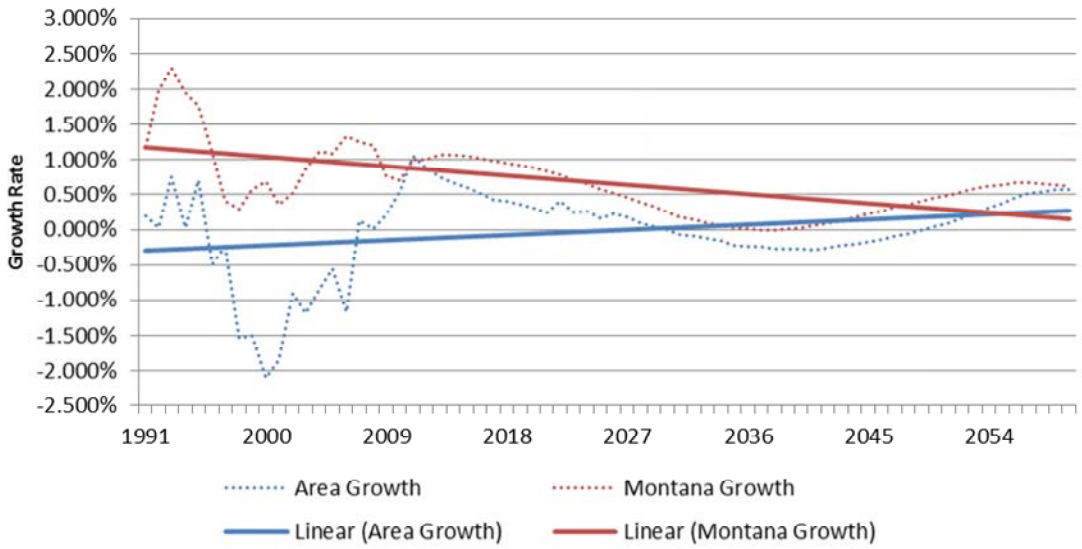
Figure 20: Blaine, Phillips, and Valley County Age Distribution by Sex



Source: United States Census American Community Survey.

Figure 21 shows the past and forecasted growth rate of the three counties compared to the state. In recent years the counties have had a negative yearly growth rate; however, there is an upward trend in the growth rate of these three counties which began growing in population in 2007. The 10-year growth rate for these counties is forecast to be 0.303%. This is lower than the forecasted statewide rate of 0.793%.

Figure 21: Blaine, Phillips, and Valley County Population Growth



Source: Department of Commerce 2013.

Environmental Justice

Title VI of the United States Civil Rights Act of 1964, as amended (USC 2000(d)) and EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, require that no minority, or, by extension, 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. If a project is forwarded from this study, environmental justice will need to be further evaluated during the project development process.

Land Ownership and Use

The following provides a description of the dominant land ownership and land uses within and adjacent to Segment 4 based on Montana Cadastral (refer to Exhibit 4.7 in Attachment 1). Because privately owned lands and developed lands may be more costly to acquire, safety rest area siting considerations should attempt to minimize impacts to privately owned lands and developed lands to the extent practicable.

Segment 4 is almost entirely located on the Fort Belknap Reservation from RP 434.9 to RP 451.5. State Trust land occurs near RP 452 and private land is located from RP 452.5 to the town of Dodson at the end of the study segment.

The majority of land use in Segment 4 is crop/pasture with mixed urban development near Dodson.

Recreational Resources

Recreational resource information within Segment 4 was gathered during the July 2017 field review and through review of aerials and USFS and FWP resource lists. Recreational areas may be protected under Section 4(f) of the U.S. Department of Transportation Act of 1966, which was enacted to protect publicly owned parks, recreation areas, wildlife and waterfowl refuges, and public and private historic sites of local, state, and national significance. Federally funded transportation projects cannot impact these properties unless there are no feasible and prudent avoidance alternatives and all possible planning to minimize harm has occurred. 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 the 4(f) resource. "Use" can occur 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."

In addition, the FWP National LWCFA, or Section 6(f), list of sites by county was reviewed to determine the presence of Section 6(f) sites within the study segment. LWCFA was enacted to preserve, develop, and assure the quality and quantity of outdoor recreation resources. Section 6(f) protection applies to all projects that impact recreational lands purchased or improved with LWCFA funds. The Secretary of the Interior must approve any conversion of LWCFA property to a use other than public, outdoor recreation.

The following is a summary of the recreational resources found within Segment 4. Potential Section 4(f) resources and LWCFA resources are mapped in relation to the study segment in Exhibit 4.7 (in Attachment 1). The screening process for potential safety rest area siting options will need to consider effects on recreational use in accordance with Section 4(f) and Section 6. For sites carried forward, a future reevaluation of Section 6(f) resources should take place to

determine if any new Section 6(f) resources are present. As general guidance, converting these resources to a non-recreational purpose can be a difficult and time-consuming task and should be avoided if practicable.

Segment 4 is primarily located on the Fort Belknap Reservation, and recreation within the segment is limited. Recreation may include fishing, hunting, and recreation (e.g., parks and recreational fields) within the town of Dodson.

There are no designated fish access sites within the study segment. However, fishing likely occurs on White Bear Creek, Peoples Creek, Milk River, Dodson Creek, and the many other perennial creeks in the area. A fishing permit is required for all non-tribal members that fish on the reservation. Fishing within the rivers and creeks is accessed primarily via foot or at undesignated sites at US 2 bridge crossings.

Lands owned by federally recognized Indian Tribes are not considered to be “publicly owned” within the meaning of Section 4(f), nor open to the general public. Therefore, Section 4(f) does not automatically apply. Significant parks, recreation areas, or wildlife and waterfowl refuges owned by the tribe could be considered a Section 4(f) resource; however, no such resources are located within or adjacent to the study segment.

The town of Dodson is located just outside of the reservation at the eastern end of the study segment. Two potential Section 4(f) resources are located in the town. The Dodson Fairgrounds are located directly north of the study segment near RP 454.3. The Dodson Public Schools recreational fields are located just south of US 2 near RP 453.9.

No LWCFA sites are listed within this study segment.

Cultural Resources

The 666-mile US 2 corridor across Montana from the Idaho to North Dakota border is rich in historic properties. The complex history of the region is well represented in the large number of historic buildings, structures, and sites located along the highway. These include commercial buildings, service stations, motels, restaurants, and other operations that were and are dependent on the highway. The BNSF Railway (formerly the Great Northern Railway) was constructed across the Hi-Line in 1887 and extended to the west coast in 1892. The railroad deposited towns and stations in its wake, with most of the communities located along its length tracing their origins to the late nineteenth century.

US 2 is the primary east-west travel corridor in northern and northwestern Montana. The route passes through three Indian reservations (Fort Peck, Fort Belknap, and Blackfeet), around the southern tip of Glacier National Park, and two national forests (Flathead and Kootenai). Historic properties have been recorded along its length from the Idaho to the North Dakota borders. The sites include archaeological sites, commercial buildings, service stations, motels, hotels, drive-in theaters, and residences. Most represent the change of focus in those communities from the railroad to the automobile in the twentieth century. In addition to the historic properties located in the communities through which the highway passes, irrigation ditches associated with the Bureau of Reclamation’s Milk River Project, an active railroad grade (BNSF Railway), farms, ranches, and highway-related structures (i.e., bridges and overpasses) also occur. Also represented in the corridor are churches, schools, and government buildings. Structures include sand houses, maintenance section shops, and the former Glasgow Rest Area (determined ineligible for the National Register in 2016).

Historic development of the corridor began relatively late east of the continental divide. The Lame Bull Treaty of 1855 established the area from the continental divide to the mouth of the Milk River and from the Missouri River north to the Canadian line. The extermination of the great buffalo herds in the early 1880s coupled with the construction of the St. Paul, Minneapolis & Manitoba Railroad (later Great Northern Railway and the BNSF Railway) in 1887 began the process of breaking up the reservation. The railroad, moreover, deposited towns, stations, and watering stops along its length in Montana Territory. In 1892, James J. Hill extended the newly renamed Great Northern Railway from Havre westward to Seattle. The railroad allowed the agricultural development of eastern Montana and brought thousands of new people into the formerly remote area. The Newlands Reclamation Act of 1902, the Enlarged Homestead Act of 1909, and the creation of Glacier National Park in 1910 also caused the development of the area called the Hi-Line. In western Montana, development was also based on the railroad after 1892 with an emphasis on mining, logging, and agriculture.

The dawn of the automobile age caused a profound change in northern and northwestern Montana. In 1919, local and regional promoters established the Theodore Roosevelt International Highway. The 4,060-mile automobile route initially connected Portland, Maine, with Portland, Oregon, (the western terminus was later changed to Seattle). The route paralleled the Great Northern Railway from Minnesota, through North Dakota, Montana, and Idaho to the west coast. With the rising popularity of the automobile, the concentration of business districts on the railroad along the Hi-Line and northwestern Montana changed to the highway. New businesses (motels, tourist camps, drive-in restaurants and theaters, and services stations and garages) arose to serve the new mode of travel. All of those businesses are represented in the US 2 corridor. The American Association of State Highway Officials, Bureau of Public Roads, and Montana State Highway Commission re-designated the Roosevelt Highway as US 2 in 1926. The first highway commission projects to improve it began in 1919.

A large number of archaeological and historic properties likely occur along the US 2 corridor in Montana. Archaeological sites in the corridor include buried campsites, stone circle sites, bison kills, human burials, and rock art sites under federal, state, local, and private ownership.

The NHPA of 1966, as amended, defines historic properties as sites, buildings, structures, districts (including landscapes), and objects included on, or eligible for inclusion on, the NRHP, as well as artifacts, records, and remains related to such properties.

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

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

Potential safety rest area siting options will need to consider recorded historic sites determined to be NRHP-eligible as identified through a SHPO and/or THPO file search. In addition, cultural resource surveys will be necessary for siting options forwarded from this study.

Noise

Analysis of traffic noise is necessary for Type I projects, including "the addition of a new or substantial alternative of a weigh station, rest stop, ride-share lot or toll plaza" (23 CFR 772.5). Type I projects require a detailed noise analysis, consistent with FHWA requirements and MDT policy, which involves measuring ambient noise levels at selected receptors and modeling design year noise levels using projected traffic volumes. If noise levels approach or substantially exceed noise abatement criteria, noise abatement measures may be necessary.

Federal regulations define traffic noise receptors as discrete or representative locations of noise sensitive area(s) for various land uses, including residential developments, businesses, and public use areas. The study corridor traverses a variety of land uses. In some portions of the corridor, noise-sensitive receptors are located in proximity to US 2 right-of-way. In Segment 4, isolated residential development is found throughout segment, with more concentrated development at Dodson (±RP 454).

The screening process for potential safety rest area siting options will need to consider proximity to potential noise receptors. Options forwarded from this study may require a Type I noise analysis.

Visual Resources

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

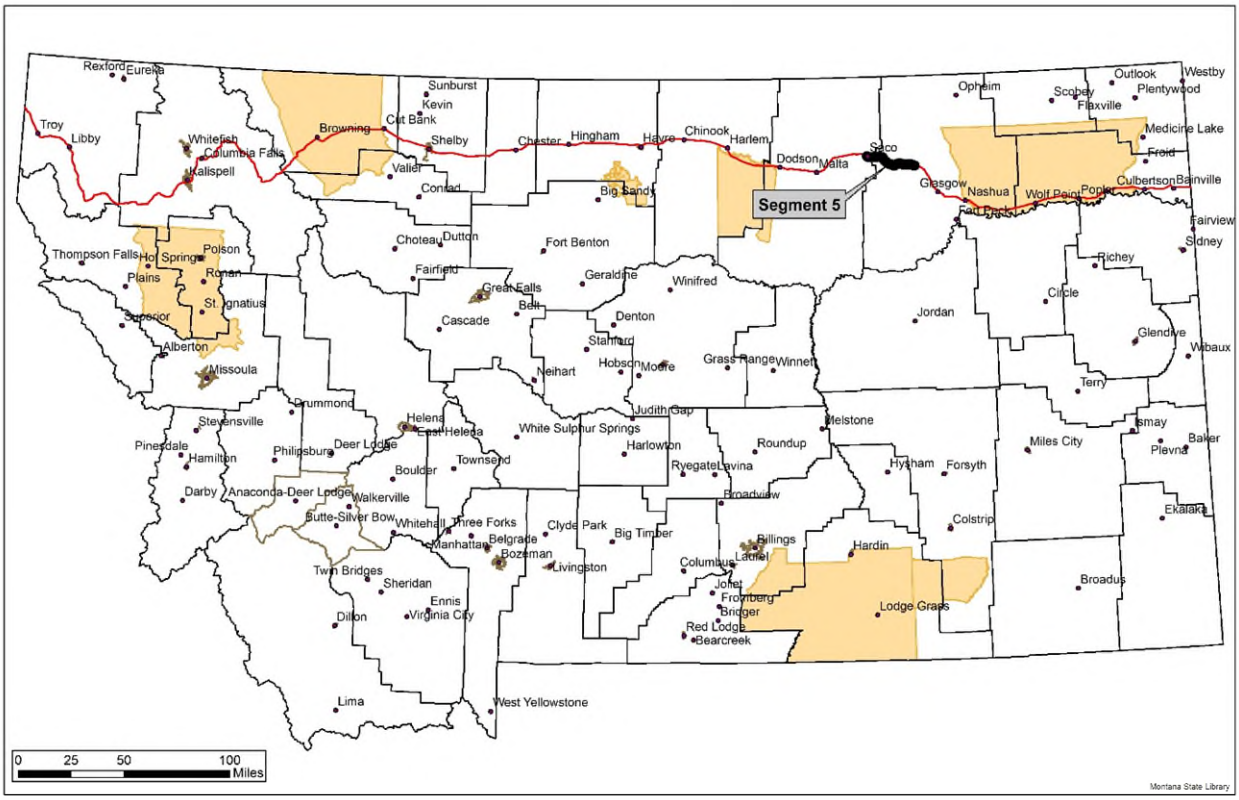
Views along the US 2 corridor are significantly different on the west and east sides of the Continental Divide. A mountainous, forested landscape, bisected by steep mountain creeks and rivers dominates the corridor west of the divide. Rolling grasslands and agricultural fields bisected by the large floodplains of the Marias, Milk, and Missouri Rivers dominate the corridor east of the divide.

Vast, open views of rolling grasslands, large agricultural fields, and meandering floodplains, interspersed with small communities, make up Segment 4. Views of the large Milk River floodplain can also be seen from Segment 4.

Evaluation of the potential effects on visual resources and viewshed opportunities will need to be conducted as part of the screening process for potential safety rest area siting options

6.0 Segment 5 (RP 499.1 to RP 523.7)

Figure 22. Segment 5 Location



6.1 Physical Environment

Soil Resources and Prime Farmland

Soils information was reviewed to better understand the general soil characteristics within Segment 5 and to determine the presence of prime and unique farmland in the study area to demonstrate compliance with the FPPA.

The FPPA is intended "to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to assure that federal programs are administered in a manner that, to the extent practicable, will be compatible with State, unit of local government, and private programs and policies to protect farmland." The term "farmland" refers to prime farmland; some prime if irrigated farmland; unique farmland; and farmland, other than prime or unique farmland, that is of statewide importance. Prime farmland soils are those that have the best combination of physical and chemical characteristics for producing food, feed, and forage; the area must also be available for these uses. Prime farmland can be either non-irrigated or lands that would be considered prime if irrigated. Farmland of statewide importance is land, in addition to prime and unique farmlands, that is of statewide importance for the production of food, feed, forage, and oilseed crops. Developed land previously designated as prime farmland is no longer subject to the FPPA.

Soil surveys of Segment 5 are available from the USDA NRCS. A summary of the general soil characteristics and farmland designations for Segment 5 are presented below (Exhibit 5.1 in Attachment 1 and Attachment 2). The screening process for potential future safety rest areas

will need to consider soil characteristics for constructability (e.g., clay soils). In addition, any siting options forwarded from this study that are within identified farmlands and are supported with federal funds will require a CPA-106 Farmland Conversion Impact Rating Form completed by MDT and coordinated with NRCS. The NRCS uses information from the impact rating form to keep inventory of the prime and important farmlands within the state.

From RP 499.1 to RP 501.5, glacial lake deposits (glaciolacustrine) make up the surficial soils within the study segment. From this RP to the end of the segment, clay becomes predominant in the surficial soil, with soils primarily mapped as clayey alluvium, clayey till, or clayey glacial lake deposits.

Farmland of statewide importance and prime farmland if irrigated are scattered throughout the study segment; however, the majority of lands along the highway are not designated as prime, unique, or important farmlands. Designated farmlands occur near RP 499, RP 501.5, RP 509, RP 511.5 to RP 515.3, and RP 522.5. The percentage of the study segment comprised of farmland of statewide importance or prime farmland if irrigated is low.

Geologic Resources

Information on the geology and seismicity in Segment 5 was obtained from published sources, including MBMG ArcGIS Map Service Layers and the USGS National Geologic Map Database Geolex Search website. Geologic mapping was reviewed for geological formations, rock types, and fault lines. Seismicity and potential seismic hazards were also reviewed.

The following provides a brief summary of the geologic and seismic conditions present in Segment 5 (refer to Exhibit 5.2 in Attachment 1). Geologic and seismicity information can help determine potential safety rest area design and construction issues and will need to be considered as safety rest area siting options are screened. Site-specific geotechnical evaluations will be required once potential sites are selected.

The Claggett Formation (Cretaceous) which consists of mostly shale with some interbedded sandstone (near the top) and bentonite beds (near the base) underlies most of Segment 5 (from RP 499.1 to RP 520.5). The Judith River Formation (Cretaceous) underlies the study segment from RP 520.5 to RP 523.7 and consists of mainly sandstone interbedded with lesser amounts of siltstone, shale/claystone, and thin lignite beds. Bentonite beds and soils derived from bentonite may have expansive characteristics.
Most of Segment 5 is located along Beaver Creek and the Milk River. The surficial deposits along the Beaver Creek and the Milk River valley consist mainly of alluvial gravel, sand, silt, and clay of variable thickness. Quaternary glacial deposits are mapped along the valley sides and in the upland areas. Quaternary landslide deposits may be encountered near RP 510 to RP 513.

A trace of a northeast trending fault is mapped at approximately RP 518.2. Based on MBMG and USGS mapping, the closest Quaternary fault (which may be considered active) is located about 80 miles east of Segment 5. The study segment is located in an area where historic seismicity is low. The MBMG peak horizontal acceleration (in percent of the acceleration of gravity) for Segment 5 is about 1%. The closest historic earthquake epicenter is mapped about 70 miles northeast of the study segment.

Hazardous Substances

Reviews of the Montana DEQ database, MBMG database, USEPA database, MBOG, and the National Pipeline Mapping System were conducted to obtain available information on UST sites, LUST sites, petroleum release fund claims, remediation response sites, superfund sites,

hazardous waste sites, mining districts, abandoned mine sites, open cut mines, oil and gas pipelines, and oil/gas wells.

A brief summary of the primary sites within Segment 5 are discussed below. Locations of hazardous substances are represented in Exhibit 5.2 in Attachment 1 and Attachment 3. Safety rest area sites carried forward from this study will need to consider contaminated soils and may require additional investigation/coordination in areas where pipelines, wells, or mines are located.

From RP 499.1 to RP 500, Segment 5 crosses through the town of Saco. The DEQ database lists four LUST sites and three petroleum release fund sites within this area. Of the four LUST sites, two have been resolved (1994 and 1996). At the town of Hinsdale (RP 512.7 to RP 513.2) five LUST sites and two petroleum release fund sites are recorded. Of the five LUST sites, three were resolved in 1989 and 1993.

Segment 5 is not located within a mining district, nor are there any abandoned mines within the study segment. Two open cut mines are located within the study segment. One is located on the south side of US 2 at RP 506.4. The other is located on the north side of US 2 at RP 520.5.

WBI Energy Transmission INC has a natural gas pipeline that parallels US 2 within, and directly adjacent to, the study segment on the south side from RP 510 to RP 513.5. Numerous oil/gas wells are located within and directly adjacent to the study segment from RP 499.1 to RP 512.5. These wells are primarily gas wells.

There are no USEPA designated superfund sites within Segment 5.

Air Quality

USEPA has established NAAQS for six criteria pollutants, including carbon monoxide, nitrogen dioxide, ozone, PM10 and PM2.5, sulfur dioxide, and lead. The USEPA designates communities that do not meet NAAQS as “non-attainment areas.” States are required to develop a plan to control source emissions and ensure future attainment of NAAQS. A review of the DEQ website indicates no non-attainment areas for any of the criteria pollutants are located within or near Segment 5.

According to Table 2, 40 CFR 93.126, safety rest areas are typically exempt from the requirements that a conformity determination be made. As a result, special design considerations are not anticipated to accommodate NAAQS in any future safety rest area project development process.

Surface Waters

USGS topographic maps, aerial photographs, and GIS data were reviewed for Segment 5 to identify the locations of surface waterbodies including rivers, streams, lakes, and reservoirs.

The following provides a summary of the watersheds and surface waters located within Segment 5 (refer to Exhibit 5.3 in Attachment 1). The screening process for safety rest area siting options should consider potential impacts to surface waters and the costs that may be associated with permitting and potential mitigation. Coordination with federal, state, and local agencies may be necessary, as work within these surface waters may be regulated by the USACE, Montana FWP, and the DEQ. In addition, forwarded siting options may trigger the need to obtain coverage under MPDES for Storm Water Discharges Associated with Construction Activity and comply with the requirements outlined in MDT’s Storm Water Management Plans.

Segment 5 includes three watersheds: the Beaver Watershed (HUC 10050014) from RP 499.1 to RP 503.5 and RP 508 to RP 512.7, the Middle Milk Watershed (HUC 10050004) from RP 503.5 to RP 508, and the Lower Milk Watershed (HUC 10050012) from RP 512.7 to RP 523.7.

Beaver Creek is the primary drainage within the Beaver Watershed portion of Segment 5. It flows south through the study segment at RP 499.2; turns southeast and east, paralleling the study segment several miles to the south; crosses the study segment again at RP 509; and flows into the Milk River north of the study segment. Several irrigation ditches/canals (discussed later in the Irrigation section); Limekiln Coulee (near RP 512); and small ephemeral and intermittent drainages, which all flow into Beaver Creek, also make up this area of the watershed.

The small portion of the Middle Milk Watershed located within Segment 5 is primarily made up of irrigation canals (discussed later in the Irrigation section) and small ephemeral and intermittent drainages, all of which eventually flow into the Milk River located north and northeast of the study segment.

The Milk River is the primary drainage within the Lower Milk River Watershed portion of Segment 5. The river flows southeast through the study segment at RP 514.7 and then parallels the segment several miles to the south. Tank Coulee flows north through the study segment, and into the Milk River, near RP 513. Long Coulee, Lime Creek, Bear Creek, and Unger Coulee (located at the Vandalia Safety Rest Area) all flow south through the study segment at RP 520, RP 522.4, RP 522.5, and RP 527, respectively. These named drainages all flow into the Milk River south of Segment 5. In addition, several irrigation ditches/canals (discussed in the Irrigation section) and small ephemeral and intermittent drainages also make up this area of the watershed.

Total Maximum Daily Loads

Section 303 subsection “d” of the Clean Water Act requires the state of Montana to develop a list, subject to USEPA approval, of waterbodies that do not meet water quality standards. When water quality fails to meet state water quality standards, DEQ determines the causes and sources of pollutants in a sub-basin assessment and sets maximum pollutant levels, called TMDLs. TMDLs set by DEQ become the basis for implementation plans to restore water quality to a level that supports state-designated beneficial water uses. The implementation plans identify and describe pollutant controls and management measures to be undertaken (such as best management practices), the mechanisms by which the selected measures would be put into action, and the individuals and entities responsible for implementation projects. Federally recognized Indian tribes within Montana are also eligible to develop 303d lists for tribal lands.

The following provides a summary of listed 303d waterbodies within Segment 5. The screening process for safety rest area siting options will need to consider downstream TMDL standards and potential impacts to water quality within receiving waterbodies.

Segment 5 is located within the Beaver TPA and the Lower Milk – Rock TPA. Within the study segment, Beaver Creek (MT40M001_020) is listed as not fully supporting aquatic life due to alteration in stream-side or littoral vegetative covers, nitrogen (Total), phosphorus (Total), physical substrate habitat alternations, and uranium. The likely cause is agriculture. The Milk River within the study segment (MT40O001_010) is also listed as not fully supporting drinking water and recreation due to Escherichia coli, lead, and mercury. The likely sources include agriculture, dam/impoundment, and unknown sources.

Wild and Scenic Rivers

The Wild and Scenic Rivers Act, created by Congress in 1968, provides for the protection of certain rivers, and their immediate environments, that possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, or cultural resources, or other similar values. Based on a review of the United States National Park Service website, there are no wild or scenic rivers within or near Segment 5.

Irrigation

Applicable Montana County WRS Books were reviewed for information on irrigation infrastructure, districts, and practices within Segment 5. Larger ditches and canals are represented in Exhibit 5.3 in Attachment 1. Pages from WRS are provided in Attachment 4. Safety rest Area siting should avoid impacts to irrigation facilities to the greatest extent practicable, particularly where large ditches/canals and pivots are located as these are costly to mitigate. Any work within these irrigation ditches/canals may also be regulated by the USACE.

Segment 5 crosses an area that is heavily irrigated, with irrigation water primarily supplied through the Milk River Project – Malta Irrigation District, the Rock Creek Canal Company, and private irrigation.

At the start of Segment 5, near the town of Saco, two unnamed drain ditches cross US 2 at RP 500.6 and RP 501. The drain ditch that crosses at RP 500.6 also parallels US 2 to the south, within the study segment, before turning south at RP 501.5. The Nelson South Canal crosses US 2 near RP 502.1. This same canal crosses US 2 again at RP 506.6.

From RP 507.5 to RP 511.5 a series of ditches and drains cross or parallel US 2 within the study segment. At 507.5, Ditch NS-116 crosses US 2, where it then flows east and then south joining back with US 2 at RP 508.3, where it parallels the highway to RP 508.8 before turning east. At 509.6, Ditch NS-116-2-10 crosses US 2. From here, the ditch parallels the highway to the east, crossing US 2 again at RP 510.4 and RP 511.4. A large pivot is located north of US 2 at RP 512.

The study segment from RP 514 to RP 519 also includes a series of ditches, drains, and canals associated with the Milk River that cross or parallel the highway. The Ophus Ditches occur near RP 514.5. The Black Ditch crosses US 2 at RP 515.7. Hellstern Ditch and Rutter Ditch cross the highway at RP 516.3 and RP 516.8. Rock Creek Canal crosses US 2 at 517.8. It also parallels the highway to the south, with the study segment, from RP 519.9 to RP 520.5. Large pivots are located north of US 2 at RP 517.8, south of the highway at RP 519.5, and south of the highway at RP 521.8.

Floodplains and Floodways

EO 11988, Floodplain Management, requires federal agencies to avoid to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains, and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities" for the following actions:

- acquiring, managing, and disposing of federal lands and facilities;
- providing federally undertaken, financed, or assisted construction and improvements; and
- conducting federal activities and programs affecting land use, including but not limited to, water and related land resources planning, regulation, and licensing activities.

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

FEMA-issued FIRMs for Phillips and Valley counties, as well as FEMA's digital National Flood Hazard Layer, were reviewed for Segment 5.

The following provides a summary of the designated floodplains located within Segment 5. Digital data is not available for either county. Designated floodplains for Phillips County and Valley County are represented on FEMA FIRM numbers 3001620625B, 3001710011A, and 3001710012A. Safety rest area siting options should avoid areas designated within a 100-year floodplain.

Zone A is the only designated flood zone located within Segment 5:

- Zone A: SFHA - 100-Year Flood, No Base Flood Elevations Determined

All areas outside of this flood zone are undetermined and no zone is specified. From RP 499.1 to approximately RP 502, the study segment is primarily within the 100-year floodplain for Beaver Creek (Zone A). From RP 502 to RP 508 the study segment crosses through an area with no flood zone designation. The segment crosses back over the Beaver Creek 100-year floodplain from RP 508 to RP 509.6. From this RP, the segment remains outside of any designated flood zones until RP 513.9, where the study segment crosses the 100-year floodplain of the Milk River (Zone A). The Milk River floodplain ends at approximately RP 515.8. From this RP to the existing Vandalia Safety Rest Area at RP 527.1 the study segment again primarily crosses through an area with no flood zone designation; however, the smaller 100-year floodplain (Zone A) for Long Coulee parallels the study segment to the south from RP 519.9 to RP 520.6, and the small 100-year floodplains (Zone A) for Lime Creek, Bear Creek, and Unger Creek cross the study segment at RP 522.4, RP 522.5, and RP 527, respectively.

Wetlands

The USACE defines wetlands as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

USFWS NWI mapping data is available for Segment 5 from the NWI website and MTNHP. NWI maps are based on the USFWS definition of wetlands, which does not follow the USACE definition that MDT uses in wetland determination and delineation. NWI maps are typically generated based on aerial and satellite imagery, and are not sufficiently accurate or detailed for MDT project wetland determination and/or delineation. At the study level, however, some useful information can be ascertained from NWI mapping on potential wetland locations.

The following provides a summary of the NWI wetlands located within Segment 5 (Exhibit 5.4 in Attachment 1). Safety rest area siting options should avoid and minimize adverse impacts to

wetlands to the maximum extent practicable, and consider the costs that may be associated with permitting and potential mitigation. For federally funded projects, EO 11990 requires agencies to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. Section 404(b)(1) of the Clean Water Act requires the USACE to only permit discharges of dredge or fill materials into USACE jurisdictional wetlands that represent the least environmentally damaging practicable alternative, so long as the alternative does not have other significant adverse environmental consequences. Future wetland delineations would be required if safety rest area siting options are forwarded from the study that could potentially impact wetlands. Work within USACE jurisdictional wetlands would require a Clean Water Act 404 permit. Unavoidable impacts to wetlands must be compensated through mitigation in accordance with USACE regulatory requirements and requirements of EO 11990.

Segment 5 includes emergent, shrub/scrub, and forested wetlands, which are located along the larger creeks and drainages, channels of the Milk River, fringes along irrigation ditches and canals, and within large wet meadows. Emergent wetlands associated with Beaver Creek, Long Coulee, Lime Creek, Bear Creek, Unger Coulee (near the Vandalia Safety Rest Area), and several irrigation ditches and unnamed drainages cross or parallel US 2 within the study segment at RP 499.2, from RP 500.2 to RP 502, RP 508.4, RP 509, from RP 511.6 to RP 512, RP 517.8, RP 520, RP 520.4, RP 522.4, RP 522.5, and RP 527. A large emergent wet meadow is located within the study segment near RP 506.6. Emergent, shrub/scrub, and forested wetlands are found along the various active and inactive channels of the Milk River from RP 514 to RP 515.7.

Groundwater

The MBMG GWIC was reviewed for Segment 5 to identify groundwater wells and general groundwater information. A summary is presented below. Additional information is provided in Exhibit 5.4 in Attachment 1 and Attachment 5. Impacts to existing wells will need to be considered during the screening of safety rest area siting options. Wells can be a costly item to mitigate if they are not avoided. Mitigation of a well usually involves drilling a new well for the owner in a new location that will not be impacted by the potential project. Well costs are based on per foot price; the deeper and higher volume needed results in a higher cost. In addition, groundwater levels will need to be considered for safety rest area constructability.

According to the MBMG GWIC, there are approximately 67 wells on record within or directly adjacent to Segment 5. Wells with recorded depths range from 18 feet at RP 499.6 to 195 feet near 527.2 at the existing Vandalia Safety Rest Area. Wells with static water levels recorded range from six feet near RP 499 to 54 feet near RP 514.5.

Shallow groundwater can be expected throughout the study segment, particularly where the highway is in close proximity to Beaver Creek (RP 499.2 to RP 509), the large wetland complex from RP 506.5 to RP 507, the Milk River (RP 513 to 515.8), Lime Creek and Bear Creek (RP 520 to RP 522.5), and Unger Coulee (RP 527). Localized groundwater conditions may be affected by perched aquifers and smaller tributary drainages. Seasonal variation and irrigation may also have a significant impact to ground water conditions.

6.2 Biological Resources

Vegetation

Land cover along the US 2 corridor is significantly different on the west and east sides of the Continental Divide. Forest and woodland system land covers dominate the corridor west of the

divide, while grassland system land covers dominate the corridor east of the divide. The following provides a description of the dominant land covers within and adjacent to (based on a three-mile buffer) Segment 5 based on the MTNHP Land Cover Reports (refer to Exhibit 5.5 in Attachment 1 and Attachment 6). Safety rest area siting considerations should look at options that minimize adverse impacts to more suitable wildlife habitat and areas where mature tree and shrub removal will be limited to the extent practicable.

Agriculture makes up a large portion of the land cover within and adjacent to Segment 5. However, lowland/prairie grassland also dominates the land cover south of the study segment. Irrigation plays a large role along this segment, and agriculture primarily occurs surrounding the floodplains of the Milk River and Beaver Creek. Within the study segment, agriculture surrounds US 2, with lowland/prairie grassland and the Milk River Floodplain becoming more prevalent from RP 510 to RP 516. Primary land cover types (four percent or more) within and adjacent to the study segment are presented in Table 21.

Table 21: Segment 5 Primary Land Cover Types

% of Cover	Land Cover Type
42%	Cultivated Crops
24%	Great Plains Mixedgrass Prairie
11%	Big Sagebrush Steppe
10%	introduced Upland Vegetation - Annual and Biennial Forbland
4%	Great Plains Floodplain

Source: MTNHP Land Cover Reports, 2017.

General Wildlife Species

The majority of Segment 5 has been moderately developed through the conversion of land to agricultural practices. Small wooded draws and portions of the floodplain along the Milk River still possess specimens of native vegetation that was likely present within this segment prior to conversion to agriculture. These areas provide important movement corridors for wildlife. Wildlife species inhabiting or traversing Segment 5 are typical of those that occur in moderately developed areas of north central and eastern Montana. Since many species occurring within the study segment are habituated to somewhat disturbed areas, species present are predominately, though not exclusively, generalists.

Mammal species likely to occur within Segment 5 include, but are not limited to, mule deer, white-tailed deer, coyote, raccoon, striped skunk, antelope, beaver, porcupine, prairie dog, and northern river otter. Bird species likely found within the study segment would be those typically found within northern Montana's prairie grasslands, agricultural fields, and wooded draws. Bird species likely to occur include, but are not limited to, American crow, American robin, brown-headed cowbird, American white pelican, Canada goose, field sparrow, mallard, western meadowlark, eastern kingbird, red-winged blackbird, great horned owl, prairie falcon, and northern harrier. Amphibians and reptiles likely to occur within Segment 5 include, but are not limited to, prairie rattlesnake, plains gartersnake, northern leopard frog, and American bullfrog.

Threatened and Endangered Species

The federal list of T&E species is maintained by the USFWS. Species on this list receive protection under the ESA. An "endangered" species is in danger of extinction throughout all or a significant portion of its range. A "threatened" species is likely to become endangered in the

foreseeable future. The USFWS also maintains a list of species that are candidates or proposed for possible addition to the federal list.

To determine which federally listed species may occur in the vicinity of Segment 5, the USFWS list for Phillips and Valley Counties and the MTNHP database for threatened or endangered species were reviewed for occurrences within and adjacent to the study segment. A three-mile buffer on each side of US 2 was used. According to the USFWS database, two threatened, three endangered, and one experimental species are listed as potentially occurring along the US 2 corridor within Segment 5 (See Table 22 and Attachment 7).

Table 22: T&E Species with the Potential to Occur in Segment 5

Species	Status
Mammals	
Black-footed ferret *Mustela nigripes*	Experimental
Birds	
Interior least tern *Sterna antillarum*	Endangered
Piping plover *Charadrius melodus*	Threatened
Red knot *Calidris canutus rufa*	Threatened
Whooping crane *Grus americana*	Endangered
Fish	
Pallid sturgeon *Scaphirhynchus albus*	Endangered

Source: USFWS, 2017.

The MTNHP August 14, 2017, database search on T&E species is summarized below for Segment 5. Exhibit 5.6 in Attachment 1 displays recorded T&E occurrences. Potential effects to T&E species and their habitat will need to be considered during the safety rest area siting process.

The pallid sturgeon is the only species with a documented occurrence within the three-mile buffer for Segment 5; however, whooping crane, piping plover, and black-footed ferret have the potential to occur in the segment vicinity due to potential suitable habitat in the area or the area being within the species known/historic range.

Species of Concern and Special Status Species

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

Special Status Species are species that have some legal protections in place, but are otherwise not Montana SOC. Bald eagles are considered special status species.

Bald eagles (special status species) and golden eagles (SOC) are also protected under the Bald and Golden Eagle Protection Act of 1940. The act prohibits anyone without a permit issued by the Secretary of the Interior, from taking bald or golden eagles, including their parts, nests, or eggs. The Act defines take as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb."

A search of the MTNHP SOC database on August 14, 2017, was conducted to determine SOC and special status species likely to occur within and adjacent to Segment 5. A three-mile buffer on each side of US 2 was used (see Exhibit 5.6 in Attachment 1 and Attachment 8). The following is a brief summary of the SOC and special status species with potential to occur / have recorded observations within or adjacent to Segment 5. The screening process for potential safety rest area siting options will need to consider the presence and extent of these species.

There are recorded observations of two plant SOC and 16 wildlife SOC within and directly adjacent to Segment 5. Wildlife species include mammals, birds, and fish species. Both bald eagles (a special status species) and golden eagles have been observed within the vicinity of Segment 5. While no known nests have been identified, potential safety rest area siting options will need to consider proximity to any identified active nests as construction timing restrictions are required for work near these nests.

Sage Grouse Habitat Conservation Program

In Montana, the state has management authority over sage grouse as outlined under the 2015 Greater Sage Grouse Stewardship Act and Montana Governor's EOs 10-2014, 12-2015, and 21-2015. The Sage Grouse Habitat Conservation Program was created to facilitate implementation of the EOs across state government, by federal land management agencies, and private entities seeking to develop projects in key sage grouse habitats. The screening process for potential safety rest area siting options will need to consider sage grouse habitats designated as core area, general habitat, or connectivity. Sites within these areas must be reviewed under the Sage Grouse Habitat Conservation program to avoid and minimize impacts to sage grouse.

A review of the Montana Sage Grouse Habitat Conservation Map shows Segment 5 is located within sage grouse general habitat and sage grouse connectivity habitat. The MTNHP database also shows recorded observations for greater sage grouse within Segment 5.

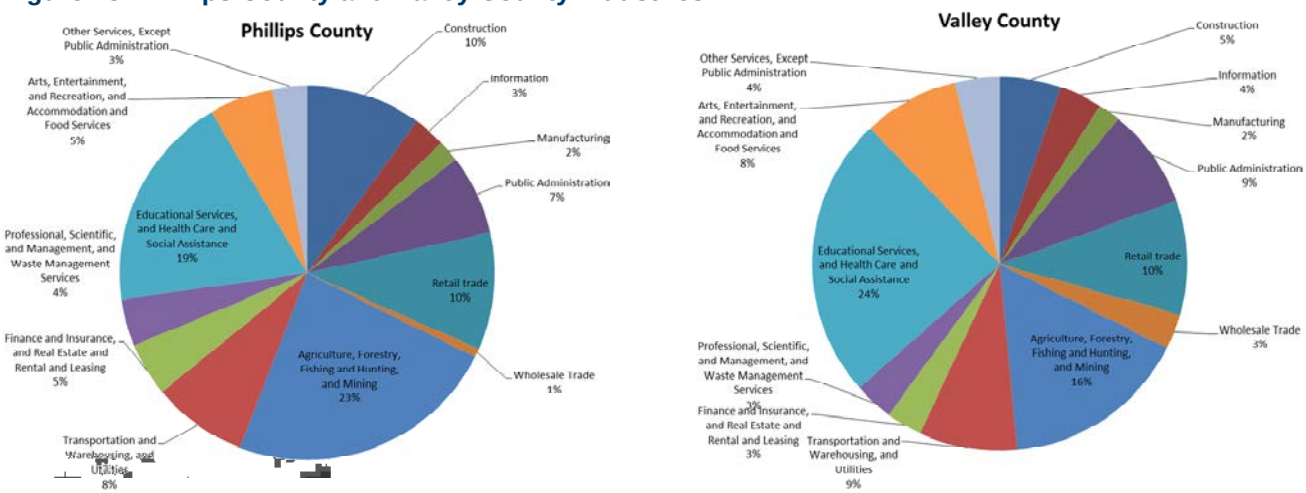
6.3 Social and Cultural Resources

Economy

Northwestern and northeastern Montana have significant economic differences. Northwestern Montana is primarily a tourism based economy due to the presence of natural amenities such as Glacier National Park. Northcentral Montana and northeastern Montana have economies tied more closely to agriculture and resource extraction. Unemployment is expected to hold relatively constant across northern Montana over the coming years. Unemployment tends to be higher than state averages in the northwestern Montana, and on par or lower than statewide averages in central and northeastern Montana. Overall, the socio-economic traits of northern Montana can be expected to change very little over the coming years. The following summarizes the economic conditions within and near Segment 5.

Segment 5 includes Phillips County and Valley County. The area is located between the Fort Belknap and Fort Peck Indian Reservations. Figure 23 shows the distribution of employment across industries for these two counties. The mix of employment in the two counties is similar. The largest employment sector in Phillips County is agricultural and the largest employment sector in Valley County is educational, health care and social services. Public administration is a relatively large part of the two economies.

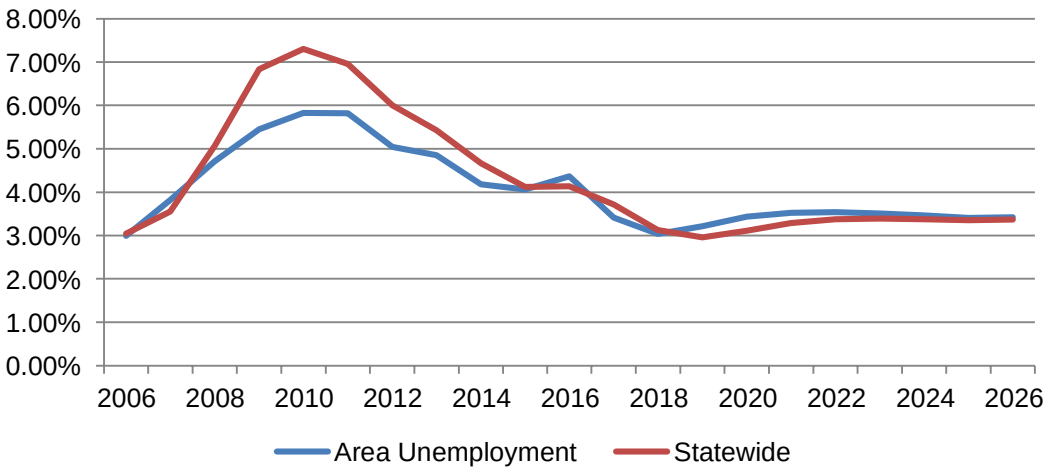
Figure 23: Phillips County and Valley County Industries



Source: United States Census, 2010-2014 American Community Survey 5-Year Estimates.

Figure 24 displays the unemployment averaged across the two counties compared to the wider state. The pattern of unemployment in these counties closely follows the patterns around the state and is expected to continue to do so. The lowest displayed unemployment rate is 2.99% and was observed in 2006. The highest displayed unemployment rate is 5.83% and was observed 2010. The counties have had lower than average unemployment rates and this trend is expected to continue.

Figure 24: Phillips and Valley County Unemployment



Source: United States Census, 2010-2014 American Community Survey 5-Year Estimates.

Table 23 displays selected measures of wealth and income in the two counties compared to the statewide measures.

Table 23: Phillips and Valley County Wealth Measures

Area	Montana	Phillips County	Valley County
Median Family Income (2014 $)	$46,766	$38,426	$49,198
Per capita income (2014 $)	$25,977	$22,450	$26,331
Retail Sales per capita (2012 $)	$15,544	$9,495	$21,141

Source: United States Economic Census.

Phillips County has a median family income that is well below the Montana median family income. Valley County's measure of median family income is above the Montana median family income. Valley County also has higher measures of per capita income and retail sales per capita. Phillips County has a per capita income that is below the Montana statewide measure, but by only a small amount. The retail sales per capita in Phillips County are below the statewide value.

Population and Demographics

Northern Montana has a small population, and only minimal growth is expected. The socio-economic characteristics of this area can be expected to remain constant in the future. The following summarizes population and demographic conditions within and near Segment 5.

Table 24 displays the populations of communities around Segment 5.

Table 24: Segment 5 Area Populations

City/Town	Malta	Glasgow	Saco
Population	1,967	3,374	196

Source: United States Census 2013 Estimates.

Table 25 displays selected information about each county's population. These statistics are compared to Montana's overall average values.

Table 25: Phillips and Valley County Population Demographics

Area	Montana	Phillips County	Valley County
Population	1,032,949	4,169	7,659
White Alone	77.1%	86.6%	86.6%
American Indian	6.6%	8.3%	9.8%
Hispanic or Latino	17.6%	2.1%	2.3%
Housing Units	134,789,944	2,314	4,834
Owner Occupied Housing Rate	64.4%	75.0%	70.5%

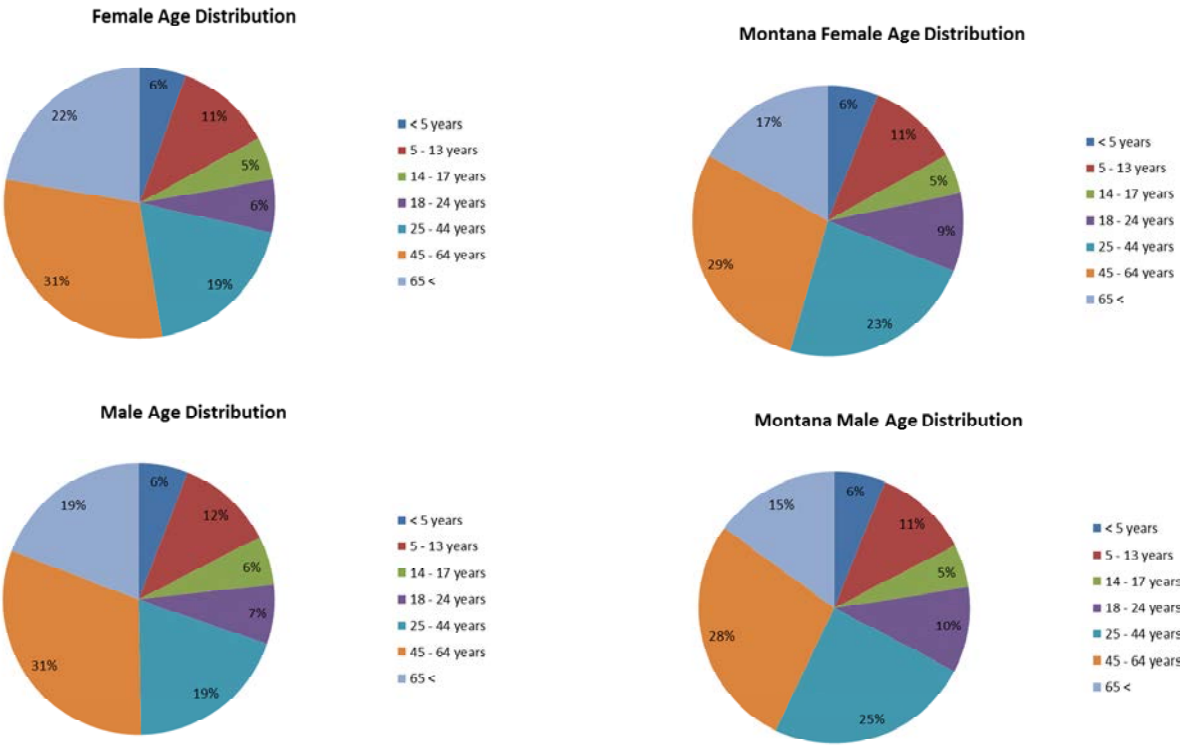
Source: United States Census 2015 Estimates.

These counties are predominantly populated with people who identify ethnically as White Alone. These counties do have relatively large populations of individuals identified as American Indian. The percentage of people identified as American Indians in these counties is larger than the

statewide percentage. This is likely explained by both counties' proximity to the Fort Belknap and Fort Peck Indian Reservations. About 2% of the population of both counties identify as Hispanic or Latino. This is well below the proportion of people identified as Hispanic or Latino in all of Montana. Phillips and Valley counties have a higher than average rate of owner occupied housing with rates of 75.0% and 70.5%, respectively.

Figure 25 displays the age distribution by sex of the two counties and the age distribution by sex for Montana. The two counties have an older population than the state average. More than half of the two counties' populations are in 45 – 64 or older than 65 age categories. The proportion of the population in the age group 25 – 44 is smaller in these two counties than it is in the rest of the state.

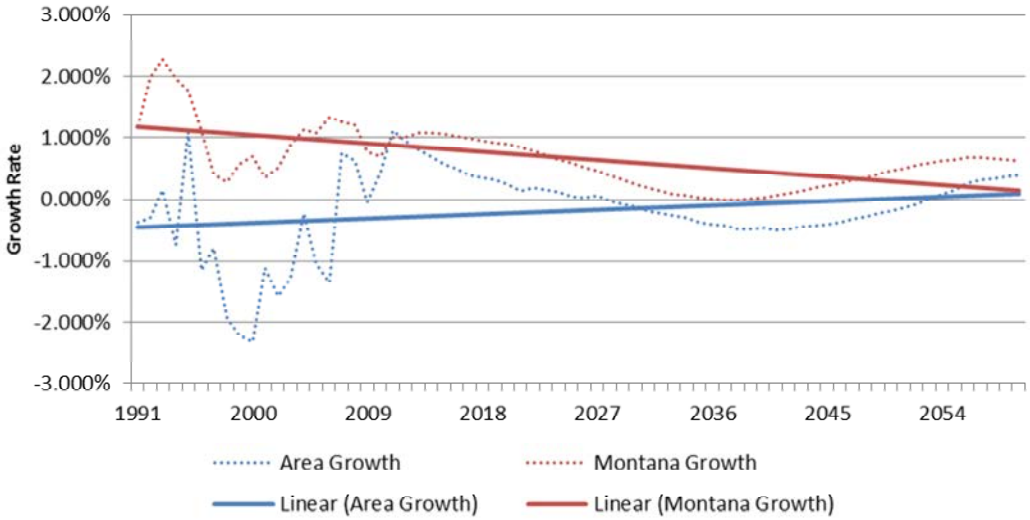
Figure 25: Phillips and Valley Age Distribution by Sex



Source: United States Census American Community Survey.

Figure 26 displays the past and forecasted growth rates for Phillips and Valley Counties. In recent years the two counties have experienced population loss. This changed in 2010 when the counties regained a positive growth rate. The 10-year growth rate of these counties is expected to be 0.190%. This is lower than the statewide expected 10-year growth rate of 0.793%. The trend of the growth rate in these counties is expected to be positive in the future. The growth in these counties could be explained by the increased economic activity in the Bakken shale region. This suggests that positive trend in growth predicted may change if the economic outlook of the Bakken shale changes.

Figure 26: Phillips and Valley County Population Growth



Source: Department of Commerce 2013 Population Projections.

Environmental Justice

Title VI of the United States Civil Rights Act of 1964, as amended (USC 2000(d)) and EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, require that no minority, or, by extension, 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. If a project is forwarded from this study, environmental justice will need to be further evaluated during the project development process.

Land Ownership and Use

The following provides a description of the dominant land ownership and land uses within and adjacent to Segment 5 based on Montana Cadastral (refer to Exhibit 5.7 in Attachment 1). Because privately owned lands and developed lands may be more costly to acquire, safety rest area siting considerations should attempt to minimize impacts to privately owned lands and developed lands to the extent practicable.

Land ownership in Segment 5 is predominantly private with some scattered state, county, and federal owners. Saco is located near the beginning of the study segment from RP 499.2 to RP 500. County-owned land is located near RP 501 and RP 507 and some State Trust land occurs near RP 510 and RP 512. Additionally, spot locations of BLM land are located near RP 506.5 and RP 523.2. The BNSF Railway runs parallel to US 2 near Saco from RP 499.1 to RP 500.2 and from RP 510 to RP 513.2.

The majority of land use in Segment 5 is crop/pasture with mixed urban development near Saco.

Recreational Resources

Recreational resource information within Segment 5 was gathered during the July 2017 field review and through review of aerials and USFS and FWP resource lists. Recreational areas may be protected under Section 4(f) of the U.S. Department of Transportation Act of 1966, which was enacted to protect publicly owned parks, recreation areas, wildlife and waterfowl

refuges, and public and private historic sites of local, state, and national significance. Federally funded transportation projects cannot impact these properties unless there are no feasible and prudent avoidance alternatives and all possible planning to minimize harm has occurred. 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 the 4(f) resource. "Use" can occur 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."

In addition, the FWP National LWCFA, or Section 6(f), list of sites by county was reviewed to determine the presence of Section 6(f) sites within the study segment. LWCFA was enacted to preserve, develop, and assure the quality and quantity of outdoor recreation resources. Section 6(f) protection applies to all projects that impact recreational lands purchased or improved with LWCFA funds. The Secretary of the Interior must approve any conversion of LWCFA property to a use other than public, outdoor recreation.

The following is a summary of the recreational resources found within Segment 5. Potential Section 4(f) resources and LWCFA resources are mapped in relation to the study segment in Exhibit 5.7 (in Attachment 1). The screening process for potential safety rest area siting options will need to consider effects on recreational use in accordance with Section 4(f) and Section 6. For sites carried forward, a future reevaluation of Section 6(f) resources should take place to determine if any new Section 6(f) resources are present. As general guidance, converting these resources to a non-recreational purpose can be a difficult and time-consuming task and should be avoided if practicable.
The vast majority of lands within Segment 5 are privately owned, and very few recreational opportunities are available. Recreation is limited to fishing, hunting, and recreation (e.g., parks and recreational fields) within the towns of Saco and Hinsdale.

According to the FWP database, there are no designated fish access sites within the study segment. However, fishing likely occurs on Beaver Creek, Milk River, Bear Creek, and other perennial creeks in the area. Fishing within the rivers and creeks is accessed primarily via foot or at undesignated sites at US 2 bridge crossings. The Milk River Park in Hinsdale also provides access to the Milk River.

Within the town of Saco, an "athletic field" is noted on USGS maps within the study segment on the north side of US 2 near RP 500. USGS mapping also indicates an "athletic field" and rodeo fairgrounds in Hinsdale, within the study segment, north of US 2, near RP 513.5. These sites may be potential Section 4(f) resources. The Milk River Park is also located within the town of Hinsdale; however, it is 0.1 mile north of the study segment.

No LWCFA sites are listed within this study segment.

Cultural Resources

The 666-mile US 2 corridor across Montana from the Idaho to North Dakota border is rich in historic properties. The complex history of the region is well represented in the large number of historic buildings, structures, and sites located along the highway. These include commercial buildings, service stations, motels, restaurants, and other operations that were and are dependent on the highway. The BNSF Railway (formerly the Great Northern Railway) was constructed across the Hi-Line in 1887 and extended to the west coast in 1892. The railroad

deposited towns and stations in its wake, with most of the communities located along its length tracing their origins to the late nineteenth century.

US 2 is the primary east-west travel corridor in northern and northwestern Montana. The route passes through three Indian reservations (Fort Peck, Fort Belknap, and Blackfeet), around the southern tip of Glacier National Park, and two national forests (Flathead and Kootenai). Historic properties have been recorded along its length from the Idaho to the North Dakota borders. The sites include archaeological sites, commercial buildings, service stations, motels, hotels, drive-in theaters, and residences. Most represent the change of focus in those communities from the railroad to the automobile in the twentieth century. In addition to the historic properties located in the communities through which the highway passes, irrigation ditches associated with the Bureau of Reclamation's Milk River Project, an active railroad grade (BNSF Railway), farms, ranches, and highway-related structures (i.e., bridges and overpasses) also occur. Also represented in the corridor are churches, schools, and government buildings. Structures include sand houses, maintenance section shops, and the former Glasgow Rest Area (determined ineligible for the National Register in 2016).

Historic development of the corridor began relatively late east of the continental divide. The Lame Bull Treaty of 1855 established the area from the continental divide to the mouth of the Milk River and from the Missouri River north to the Canadian line. The extermination of the great buffalo herds in the early 1880s coupled with the construction of the St. Paul, Minneapolis & Manitoba Railroad (later Great Northern Railway and the BNSF Railway) in 1887 began the process of breaking up the reservation. The railroad, moreover, deposited towns, stations, and watering stops along its length in Montana Territory. In 1892, James J. Hill extended the newly renamed Great Northern Railway from Havre westward to Seattle. The railroad allowed the agricultural development of eastern Montana and brought thousands of new people into the formerly remote area. The Newlands Reclamation Act of 1902, the Enlarged Homestead Act of 1909, and the creation of Glacier National Park in 1910 also caused the development of the area called the Hi-Line. In western Montana, development was also based on the railroad after 1892 with an emphasis on mining, logging, and agriculture.

The dawn of the automobile age caused a profound change in northern and northwestern Montana. In 1919, local and regional promoters established the Theodore Roosevelt International Highway. The 4,060-mile automobile route initially connected Portland, Maine, with Portland, Oregon, (the western terminus was later changed to Seattle). The route paralleled the Great Northern Railway from Minnesota, through North Dakota, Montana, and Idaho to the west coast. With the rising popularity of the automobile, the concentration of business districts on the railroad along the Hi-Line and northwestern Montana changed to the highway. New businesses (motels, tourist camps, drive-in restaurants and theaters, and services stations and garages) arose to serve the new mode of travel. All of those businesses are represented in the US 2 corridor. The American Association of State Highway Officials, Bureau of Public Roads, and Montana State Highway Commission re-designated the Roosevelt Highway as US 2 in 1926. The first highway commission projects to improve it began in 1919.

A large number of archaeological and historic properties likely occur along the US 2 corridor in Montana. Archaeological sites in the corridor include buried campsites, stone circle sites, bison kills, human burials, and rock art sites under federal, state, local, and private ownership.

The NHPA of 1966, as amended, defines historic properties as sites, buildings, structures, districts (including landscapes), and objects included on, or eligible for inclusion on, the NRHP, as well as artifacts, records, and remains related to such properties.

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

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

Potential safety rest area siting options will need to consider recorded historic sites determined to be NRHP-eligible as identified through a SHPO file search. In addition, cultural resource surveys will be necessary for siting options forwarded from this study.

Noise

Analysis of traffic noise is necessary for Type I projects, including "the addition of a new or substantial alternative of a weigh station, rest stop, ride-share lot or toll plaza" (23 CFR 772.5). Type I projects require a detailed noise analysis, consistent with FHWA requirements and MDT policy, which involves measuring ambient noise levels at selected receptors and modeling design year noise levels using projected traffic volumes. If noise levels approach or substantially exceed noise abatement criteria, noise abatement measures may be necessary.
Federal regulations define traffic noise receptors as discrete or representative locations of noise sensitive area(s) for various land uses, including residential developments, businesses, and public use areas. The study corridor traverses a variety of land uses. In some portions of the corridor, noise-sensitive receptors are located in proximity to US 2 right-of-way. In Segment 5, isolated residential development is found throughout segment, with more concentrated development at Saco (±RP 499), Hinsdale (±RP 513), and Farrason Road/Happy Flats/Jones Road (±RP 514-515).

The screening process for potential safety rest area siting options will need to consider proximity to potential noise receptors. Options forwarded from this study may require a Type I noise analysis.

Visual Resources

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

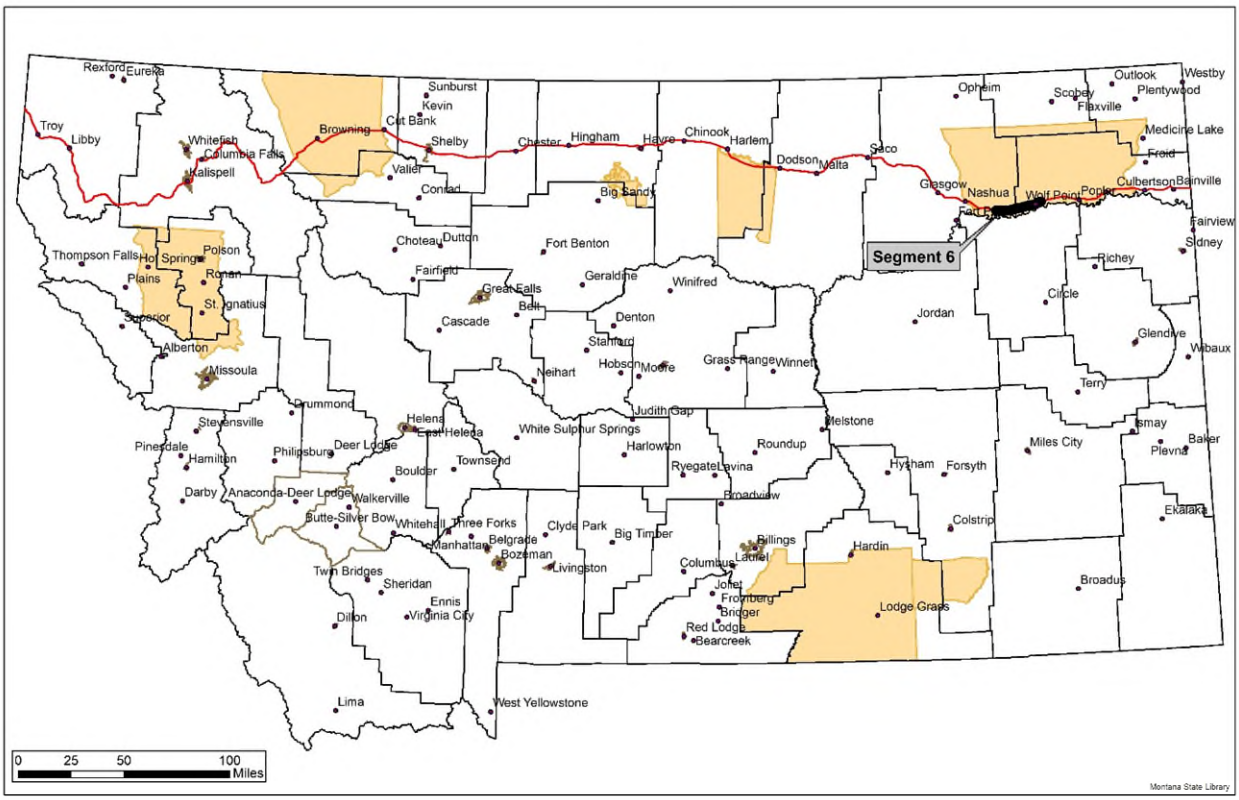
Views along the US 2 corridor are significantly different on the west and east sides of the Continental Divide. A mountainous, forested landscape, bisected by steep mountain creeks and rivers dominates the corridor west of the divide. Rolling grasslands and agricultural fields bisected by the large floodplains of the Marias, Milk, and Missouri Rivers dominate the corridor east of the divide.

Vast, open views of rolling grasslands, large agricultural fields, and meandering floodplains, interspersed with small communities, make up Segment 5. Views of the large Milk River floodplain can also be seen from Segment 5.

Evaluation of the potential effects on visual resources and viewshed opportunities will need to be conducted as part of the screening process for potential safety rest area siting options.

7.0 Segment 6 (RP 571.8 to RP 593.7)

Figure 27. Segment 6 Location



7.1 Physical Environment

Soil Resources and Prime Farmland

Soils information was reviewed to better understand the general soil characteristics within Segment 6 and to determine the presence of prime and unique farmland in the study area to demonstrate compliance with the FPPA.

The FPPA is intended "to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to assure that federal programs are administered in a manner that, to the extent practicable, will be compatible with State, unit of local government, and private programs and policies to protect farmland." The term "farmland" refers to prime farmland; some prime if irrigated farmland; unique farmland; and farmland, other than prime or unique farmland, that is of statewide importance. Prime farmland soils are those that have the best combination of physical and chemical characteristics for producing food, feed, and forage; the area must also be available for these uses. Prime

farmland can be either non-irrigated or lands that would be considered prime if irrigated. Farmland of statewide importance is land, in addition to prime and unique farmlands, that is of statewide importance for the production of food, feed, forage, and oilseed crops. Developed land previously designated as prime farmland is no longer subject to the FPPA.

Soil surveys of Segment 6 are available from the USDA NRCS. A summary of the general soil characteristics and farmland designations for Segment 6 are presented below (Exhibit 6.1 in Attachment 1 and Attachment 2). The screening process for potential future safety rest areas will need to consider soil characteristics for constructability (e.g., clay soils). In addition, any siting options forwarded from this study that are within identified farmlands and are supported with federal funds will require a CPA-106 Farmland Conversion Impact Rating Form completed by MDT and coordinated with NRCS. The NRCS uses information from the impact rating form to keep inventory of the prime and important farmlands within the state.

Clayey till is the primary surficial soil from the beginning of the study segment to RP 578. From this RP to the end of the study segment surficial soils are a mix of predominately clayey alluvium, loamy alluvium, and loamy glacial till.

NRCS soil surveys indicate the presence of farmland of statewide importance, prime farmland if irrigated, and prime farmland if irrigated (when the product of I [soil erodibility] x C [climate factor] does not exceed 60) scattered throughout the study segment. Some prime farmland if irrigated and farmland of statewide importance occurs from RP 571 to RP 572. A large area of farmland of statewide importance occurs from RP 581 to RP 588. Prime farmland if irrigated (when the product of I [soil erodibility] x C [climate factor] does not exceed 60) occurs from RP 589 to RP 589.5 and near RP 592.5. The percentage of the study segment comprised of farmland of statewide importance or prime farmland if irrigated is moderate.

Geologic Resources

Information on the geology and seismicity in Segment 6 was obtained from published sources, including MBMG ArcGIS Map Service Layers and the USGS National Geologic Map Database Geolex Search website. Geologic mapping was reviewed for geological formations, rock types, and fault lines. Seismicity and potential seismic hazards were also reviewed.

The following provides a brief summary of the geologic and seismic conditions present in Segment 6 (refer to Exhibit 6.2 in Attachment 1). Geologic and seismicity information can help determine potential safety rest area design and construction issues and will need to be considered as safety rest area siting options are screened. Site-specific geotechnical evaluations will be required once potential sites are selected.

The Bearpaw Shale (Cretaceous) underlies Segment 6. Some of the Bearpaw Shale contains bentonite beds. Bentonite beds and soils derived from bentonite may have expansive characteristics.

Most of the study segment is located along the north side of the Missouri River valley. The surficial deposits along the Missouri River valley consist mainly of alluvial gravel, sand, silt, and clay of variable thickness. Quaternary glacial deposits are mapped along the valley sides and in the upland areas. Based on the published data reviewed, it does not appear that landslides have been mapped along Segment 6.

No faults are mapped along Segment 6. Based on MBMG and USGS mapping, the closest Quaternary fault (which may be considered active) is located about 25 miles east of the study

segment. Segment 6 is located in an area where historic seismicity is low. The MBMG peak horizontal acceleration (in percent of the acceleration of gravity) for Segment 6 ranges from about 1% to 2%. The closest historic earthquake epicenter is mapped about 50 miles north of the study segment.

Hazardous Substances

Reviews of the Montana DEQ database, MBMG database, USEPA database, MBOG, and the National Pipeline Mapping System were conducted to obtain available information on UST sites, LUST sites, petroleum release fund claims, remediation response sites, superfund sites, hazardous waste sites, mining districts, abandoned mine sites, open cut mines, oil and gas pipelines, and oil/gas wells.

A brief summary of the primary sites within Segment 6 is discussed below. Locations of hazardous substances are represented in Exhibit 6.2 in Attachment 1 and Attachment 3. Safety rest area sites carried forward from this study will need to consider contaminated soils and may require additional investigation/coordination in areas where pipelines, wells, or mines are located.

Segment 6 crosses through the town of Frazer from RP 571.8 to RP 572.5. Within this portion of the study segment, one LUST site, which was resolved in 1997, and one UST site are recorded. Near RP 580.3, at the MDT Oswego right-of-way site, the DEQ database shows one LUST site and one petroleum release fund site. As Segment 6 crosses through Wolf Point (RP 590 to RP 591.3) 17 LUST sites, 19 UST sites, six petroleum release fund sites, and one hazardous waste site are recorded. Of the 17 LUST sites, 14 have been resolved. The hazardous waste site is the Wolf Point High School, labeled as a small quantity generator. One remediation response site, the Montana CCC Grain Bins, is located within the study segment at RP 592.8.

The study segment is not located within a mining district, nor are there any abandoned or open cut mines within the segment.

The WBI Energy Transmission Inc. – Frazer natural gas lateral crosses US 2 directly west of Segment 6 near RP 571.7. The WBI Energy Transmission Inc. – Saco-Morgan Creek natural gas pipeline parallels US 2 within the study segment, on the north side, from RP 584 to RP 584.5, where it then crosses US 2. There are no oil/gas wells or well directionals within the study segment.

There are no USEPA designated superfund sites within Segment 6.

Air Quality

USEPA has established NAAQS for six criteria pollutants, including carbon monoxide, nitrogen dioxide, ozone, PM10 and PM2.5, sulfur dioxide, and lead. The USEPA designates communities that do not meet NAAQS as “non-attainment areas.” States are required to develop a plan to control source emissions and ensure future attainment of NAAQS. A review of the DEQ website indicates no non-attainment areas for any of the criteria pollutants are located within or near Segment 6.

According to Table 2, 40 CFR 93.126, safety rest areas are typically exempt from the requirements that a conformity determination be made. As a result, special design considerations are not anticipated to accommodate NAAQS in any future safety rest area project development process.

Surface Waters

USGS topographic maps, aerial photographs, and GIS data were reviewed for Segment 6 to identify the locations of surface waterbodies including rivers, streams, lakes, and reservoirs.

The following provides a summary of the watersheds and surface waters located within Segment 6 (refer to Exhibit 6.3 in Attachment 1). The screening process for safety rest area siting options should consider potential impacts to surface waters and the costs that may be associated with permitting and potential mitigation. Coordination with federal, tribal, and local agencies may be necessary, as work within these surface waters may be regulated by the USACE and tribal laws and regulations (e.g., Blackfeet Tribe Aquatic Lands Protection Ordinance 90-A). In addition, forwarded siting options may trigger the need to obtain coverage under NPDES for Storm Water Discharges Associated with Construction Activity and comply with the requirements outlined in MDT's Storm Water Management Plans.

Segment 6 is comprised of one watershed, the Prairie Elk-Wolf Watershed (HUC 10060001). From west to east, named drainages that cross or parallel the study segment include Little Porcupine Creek (RP 571.7), Oswego Creek (RP 579.5), Flynn Creek (RP 582), Littleman Creek (RP 585.1), Wolf Creek (RP 588.8), Little Wolf Creek (RP 592.6), and Brown Coulee (RP 594.7). All flow south though the study segment and into the Missouri River. In addition to the named drainages, several ephemeral and intermittent drainages also cross the study segment within this watershed.

Total Maximum Daily Loads

Section 303 subsection "d" of the Clean Water Act requires the state of Montana to develop a list, subject to USEPA approval, of waterbodies that do not meet water quality standards. When water quality fails to meet state water quality standards, DEQ determines the causes and sources of pollutants in a sub-basin assessment and sets maximum pollutant levels, called TMDLs. TMDLs set by DEQ become the basis for implementation plans to restore water quality to a level that supports state-designated beneficial water uses. The implementation plans identify and describe pollutant controls and management measures to be undertaken (such as best management practices), the mechanisms by which the selected measures would be put into action, and the individuals and entities responsible for implementation projects. Federally recognized Indian tribes within Montana are also eligible to develop 303d lists for tribal lands.

Waterbodies on Indian Reservations (Blackfeet, Fort Belknap, and Fort Peck) are not included in the DEQ 303d list, as tribal lands are not under state jurisdiction. Segment 6 is located within the Fort Peck TPA. Waterbodies within this segment are not listed in the DEQ 303d Water Quality Report; however, the screening process for safety rest area siting options will still need to consider potential impacts to water quality within receiving waterbodies.

Wild and Scenic Rivers

The Wild and Scenic Rivers Act, created by Congress in 1968, provides for the protection of certain rivers, and their immediate environments, that possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, or cultural resources, or other similar values. Based on a review of the United States National Park Service website, there are no wild or scenic rivers within or near Segment 6.

Irrigation

Applicable Montana County WRS Books were reviewed for information on irrigation infrastructure, districts, and practices within Segment 6. Larger ditches and canals are represented in Exhibit 6.3 in Attachment 1. Pages from WRS are provided in Attachment 4.

Safety rest Area siting should avoid impacts to irrigation facilities to the greatest extent practicable, particularly where large ditches/canals and pivots are located as these are costly to mitigate. Any work within these irrigation ditches/canals may also be regulated by the USACE.

Segment 6 is located within the Fort Peck Reservation, where irrigation water is supplied through the Fort Peck Irrigation Project, which is owned and operated by the BIA, or private irrigation. The only WRS mapping available for the segment is for Valley County. No WRS has been conducted for Roosevelt County.

The only irrigation infrastructure identified within the study segment is Little Porcupine Canal which crosses US 2 at RP 572.7. No other ditches or pivots were noted during the Valley County WRS review and a review of aerials and USGS topographic maps for the remainder of the segment in Roosevelt County.

Floodplains and Floodways

EO 11988, Floodplain Management, requires federal agencies to avoid to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains, and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities" for the following actions:

- acquiring, managing, and disposing of federal lands and facilities;
- providing federally undertaken, financed, or assisted construction and improvements; and
- conducting federal activities and programs affecting land use, including but not limited to, water and related land resources planning, regulation, and licensing activities.

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

FEMA-issued flood insurance rate maps (FIRM) for the Fort Peck Reservation (3001872175A, 3001872200A, 3001872225A, 3001872250A, and 3001872275A), as well as FEMA’s digital National Flood Hazard Layer were reviewed for Segment 6.

The following provides a summary of the designated floodplains located within Segment 6. Exhibit 6.3 in Attachment 1 displays the FEMA digitized data where digital data was available. Safety rest area siting options should avoid areas designated within a 100-year floodplain.

Segment 6 is located on the Fort Peck Reservation. The study area is comprised of two flood zones:

- Zone A: SFHA - 100-Year Flood, No Base Flood Elevations Determined
- Zone X (unshaded): Areas Outside the 500-Year Flood

At the start of the segment RP 571.8 to RP 573, the area north of US 2 is within the 100-year floodplain (Zone A) for Little Porcupine Creek. From RP 573 to the end of the segment at RP 593.7, a large portion of the study segment is designated as Zone X. However, from RP 582 to RP 582.8 the segment crosses the 100-year floodplain (Zone A) for Flynn Creek and an unnamed tributary to Flynn Creek. From RP 584.7 to RP 585.3 the study segment crosses the 100-year floodplain (Zone A) for Littleman Creek and an unnamed tributary to Littleman Creek. At 586.3 the segment crosses the 100-year floodplain for a second unnamed tributary to Littleman Creek. Near RP 588.8 and RP 592.6, the study segment crosses the 100-year floodplains (Zone A) for Wolf Creek and Little Wolf Creek.

Wetlands

The USACE defines wetlands as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

USFWS NWI mapping data is available for Segment 6 from the NWI website and MTNHP. NWI maps are based on the USFWS definition of wetlands, which does not follow the USACE definition that MDT uses in wetland determination and delineation. NWI maps are typically generated based on aerial and satellite imagery, and are not sufficiently accurate or detailed for MDT project wetland determination and/or delineation. At the study level, however, some useful information can be ascertained from NWI mapping on potential wetland locations.

The following provides a summary of the NWI wetlands located within Segment 6 (Exhibit 6.4 in Attachment 1). Safety rest area siting options should avoid and minimize adverse impacts to wetlands to the maximum extent practicable, and consider the costs that may be associated with permitting and potential mitigation. For federally funded projects, EO 11990 requires agencies to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. Section 404(b)(1) of the Clean Water Act requires the USACE to only permit discharges of dredge or fill materials into USACE jurisdictional wetlands that represent the least environmentally damaging practicable alternative, so long as the alternative does not have other significant adverse environmental consequences. Future wetland delineations would be required if safety rest area siting options are forwarded from the study that could potentially impact wetlands. Work within USACE jurisdictional wetlands would require a Clean Water Act 404 permit. Unavoidable impacts to wetlands must be compensated through mitigation in accordance with USACE regulatory requirements and requirements of EO 11990.

NWI wetlands within Segment 6 include fringe wetlands along creeks and drainages, wetlands associated lakes, small depressional wetlands, and wet meadows. Emergent wetlands associated with Little Porcupine Creek, the Little Porcupine Canal, Oswego Creek, Flynn Creek, Littleman Creek, Wolf Creek, Little Wolf Creek, and several unnamed drainages cross the study segment at RP 571.7, RP 572.7, RP 574, RP 575.5, RP 579.5, RP 580.4, RP 582, RP 583.7, RP 585.1, RP 587.7, RP 588.3, RP 588.8, RP 591.6, and RP 592.6. A large emergent wetland associated with the more seasonal Frazer Lake occurs directly south of the study segment near RP 573. Several depressional emergent wetlands and emergent wet meadows are located along the study segment near RP 573, RP 577.4, RP 583.2, RP 589.6, and RP 590. A large emergent wetland associated with an old oxbow channel of the Missouri River is located just south of US 2 near RP 587.2.

Groundwater

The MBMG GWIC was reviewed for Segment 6 to identify groundwater wells and general groundwater information. A summary is presented below. Additional information is provided in Exhibit 6.4 in Attachment 1 and Attachment 5. Impacts to existing wells will need to be considered during the screening of safety rest area siting options. Wells can be a costly item to mitigate if they are not avoided. Mitigation of a well usually involves drilling a new well for the owner in a new location that will not be impacted by the potential project. Well costs are based on per foot price; the deeper and higher volume needed results in a higher cost. In addition, groundwater levels will need to be considered for safety rest area constructability.

The GWIC database shows 172 recorded wells within or directly adjacent to Segment 6. Wells with recorded depths range from five feet near RP 583.1 to 1,090 near RP 572.8. Wells with static water levels recorded range from three feet near RP 572 to 87 feet near RP 571.3.

Shallow groundwater can be expected throughout the study segment, particularly in the vicinity of the larger drainages including Little Porcupine Creek (RP 571.7), Oswego Creek (RP 579.5), Wolf Creek (RP 588.8), and Little Wolf Creek (RP 592.6). Localized groundwater conditions may be affected by perched aquifers and tributary drainages. Seasonal variation and irrigation may also have a significant impact to ground water conditions.

7.2 Biological Resources

Vegetation

Land cover along the US 2 corridor is significantly different on the west and east sides of the Continental Divide. Forest and woodland system land covers dominate the corridor west of the divide, while grassland system land covers dominate the corridor east of the divide. The following provides a description of the dominant land covers within and adjacent to (based on a three-mile buffer) Segment 6 based on the MTNHP Land Cover Reports (refer to Exhibit 6.5 in Attachment 1 and Attachment 6). Safety rest area siting considerations should look at options that minimize adverse impacts to more suitable wildlife habitat and areas where mature tree and shrub removal will be limited to the extent practicable.

Agriculture, lowland/prairie grassland, sagebrush steppe, and floodplain/riparian make up the land cover within and adjacent to Segment 6. While agriculture occurs along both sides of US 2, it is more dominant south of the highway where the Missouri River floodplain parallels the study segment to the south. Lowland/prairie grassland and sagebrush steppe are also located on both sides of US 2, but predominately occur north of the highway in more rolling terrain. Table 26 presents the primary land cover types (four percent or more) within and adjacent to the study segment.

Table 26: Segment 6 Primary Land Cover Types

% of Cover	Land Cover Type
44%	Cultivated Crops
22%	Great Plains Mixedgrass Prairie
11%	Big Sagebrush Steppe
10%	Great Plains Floodplain

Source: MTNHP Land Cover Reports, 2017.

General Wildlife Species

The majority of Segment 6 has been moderately developed through the conversion of land to agricultural practices. Small wooded draws and portions of the floodplain along the Missouri River still possess specimens of native vegetation that was likely present within this segment prior to conversion to agriculture. These areas provide important movement corridors for wildlife. Wildlife species inhabiting or traversing Segment 6 are typical of those that occur in moderately developed areas of north central and eastern Montana. Since many species occurring within the study segment are habituated to somewhat disturbed areas, species present are predominately, though not exclusively, generalists.

Mammal species likely to occur within Segment 6 include, but are not limited to, mule deer, white-tailed deer, coyote, raccoon, striped skunk, antelope, beaver, porcupine, prairie dog, and northern river otter. Bird species likely found within the study segment would be those typically found within northern Montana's prairie grasslands, agricultural fields, and wooded draws. Bird species likely to occur include, but are not limited to, American crow, American robin, brown-headed cowbird, American white pelican, Canada goose, field sparrow, mallard, western meadowlark, eastern kingbird, red-winged blackbird, great horned owl, prairie falcon, and northern harrier. Amphibians and reptiles likely to occur within Segment 6 include, but are not limited to, prairie rattlesnake, plains gartersnake, northern leopard frog, and American bullfrog.

Threatened and Endangered Species

The federal list of T&E species is maintained by the USFWS. Species on this list receive protection under the ESA. An "endangered" species is in danger of extinction throughout all or a significant portion of its range. A "threatened" species is likely to become endangered in the foreseeable future. The USFWS also maintains a list of species that are candidates or proposed for possible addition to the federal list.

To determine which federally listed species may occur in the vicinity of Segment 6, the USFWS list for Valley and Roosevelt Counties and the MTNHP database for threatened or endangered species were reviewed for occurrences within and adjacent to the study segment. A three-mile buffer on each side of US 2 was used. According to the USFWS database, three threatened and three endangered species are listed as potentially occurring along the US 2 corridor within Segment 6 (See Table 27 and Attachment 7). In addition to the species listed below, designated critical habitat for the piping plover is found just south of Segment 6. Segment 6 is also within the western limits of the whooping crane migration corridor.

Table 27: T&E Species with the Potential to Occur in Segment 6

Species	Status
Mammals	
Northern long-eared bat *Myotis septentrionalis*	Threatened
Birds	
Interior least tern *Sterna antillarum*	Endangered
Piping plover *Charadrius melodus*	Threatened
Red knot *Calidris canutus rufa*	Threatened
Whooping crane *Grus americana*	Endangered
Fish	
Pallid sturgeon *Scaphirhynchus albus*	Endangered

Source: USFWS, 2017.

The MTNHP August 14, 2017, database search on T&E species is summarized below for Segment 6. Exhibit 6.6 in Attachment 1 displays recorded T&E occurrences. Potential effects to T&E species and their habitat will need to be considered during the safety rest area siting process

Occurrences of least tern, piping plover, pallid sturgeon, and whooping crane have been documented within the three-mile buffer for Segment 6. The MTNHP database search also notes the potential for black-footed ferret to occur in the segment vicinity due to the presence of potential suitable habitat or the area being within the species known/historic range.

Species of Concern and Special Status Species

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

Special Status Species are species that have some legal protections in place, but are otherwise not Montana SOC. Bald eagles are considered special status species.

Bald eagles (special status species) and golden eagles (SOC) are also protected under the Bald and Golden Eagle Protection Act of 1940. The act prohibits anyone without a permit issued by the Secretary of the Interior, from taking bald or golden eagles, including their parts, nests, or eggs. The Act defines take as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb."

A search of the MTNHP SOC database on August 14, 2017, was conducted to determine SOC and special status species likely to occur within and adjacent to Segment 6. A three-mile buffer on each side of US 2 was used (see Exhibit 6.6 in Attachment 1 and Attachment 8). The following is a brief summary of the SOC and special status species with potential to occur / have recorded observations within or adjacent to Segment 6. The screening process for potential safety rest area siting options will need to consider the presence and extent of these species.

Within and adjacent to Segment 6, there are recorded observations of one plant species and 19 wildlife species, including mammal species, fish species, and bird species. Observations of bald eagle and bald eagle nests (a special status species), and observations of golden eagle have also been recorded within the vicinity of Segment 6. Potential safety rest area siting options will need to consider proximity to known eagle nests as construction timing restrictions are required for work near active nests.

Sage Grouse Habitat Conservation Program

In Montana, the state has management authority over sage grouse as outlined under the 2015 Greater Sage Grouse Stewardship Act and Montana Governor's EOs 10-2014, 12-2015, and 21-2015. The Sage Grouse Habitat Conservation Program was created to facilitate implementation of the EOs across state government, by federal land management agencies, and private entities seeking to develop projects in key sage grouse habitats. The screening process for potential safety rest area siting options will need to consider sage grouse habitats designated as core area, general habitat, or connectivity. Sites within these areas must be reviewed under the Sage Grouse Habitat Conservation program to avoid and minimize impacts to sage grouse.

A review of the Montana Sage Grouse Habitat Conservation Map shows Segment 6 is located within sage grouse general habitat. The MTNHP database also shows recorded observations for greater sage grouse within Segment 6.

7.3 Social and Cultural Resources

Economy

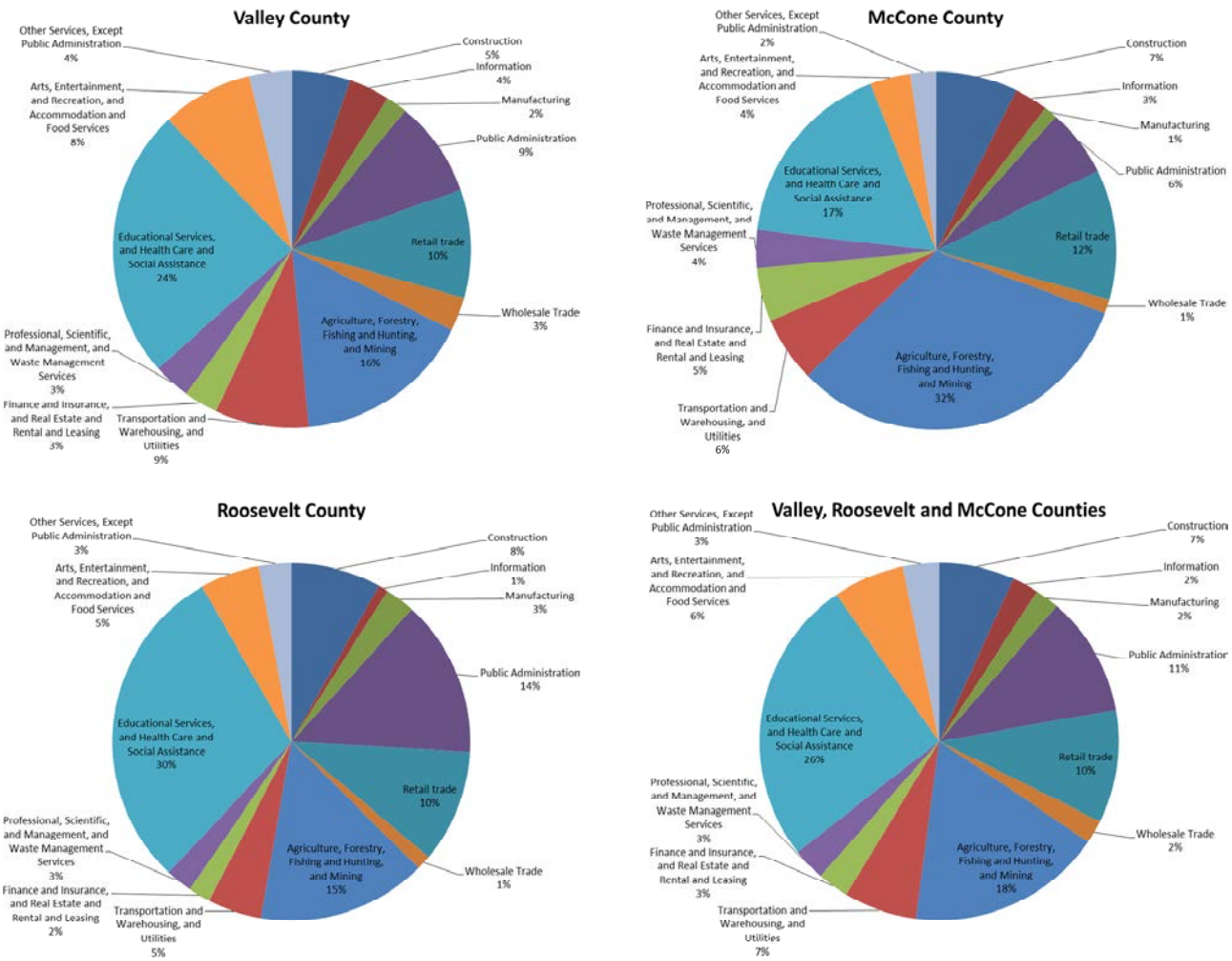
Northwestern and northeastern Montana have significant economic differences. Northwestern Montana is primarily a tourism based economy due to the presence of natural amenities such as Glacier National Park. Northcentral Montana and northeastern Montana have economies tied more closely to agriculture and resource extraction. Unemployment is expected to hold relatively constant across northern Montana over the coming years. Unemployment tends to be higher than state averages in the northwestern Montana, and on par or lower than statewide averages in central and northeastern Montana. Overall, the socio-economic traits of northern Montana can be expected to change very little over the coming years. The following summarizes the economic conditions within and near Segment 6.

Segment 6 is located in Valley and Roosevelt Counties. McCone County is adjacent to the south, and the segment includes or is near the communities of Glasgow, Wolf Point and Poplar. The entire study segment is located on the Fort Peck Indian Reservation. This area is located on the western most edge of the Bakken shale region. There are some producing oil wells in the area.

Figure 28 displays the blend of industry in the three counties individually and together. Valley and Roosevelt Counties have a similar mixture of industry. Both counties have large sectors devoted to educational, health care and social services. Valley and Roosevelt Counties also

have large public administration and agriculture, forestry and mining sectors. McCone County has a larger agriculture, forestry and mining sector than the other two counties in the study area. The mixture of businesses in Valley and Roosevelt Counties is likely greatly influenced by the Indian Reservations in these counties. The increase in proportion of jobs in the public administration and education and health care industries seems to be somewhat expected for counties near Indian Reservations. McCone County has a blend of industry more typical of counties in northeastern Montana that are not in the direct vicinity of Indian Reservations.

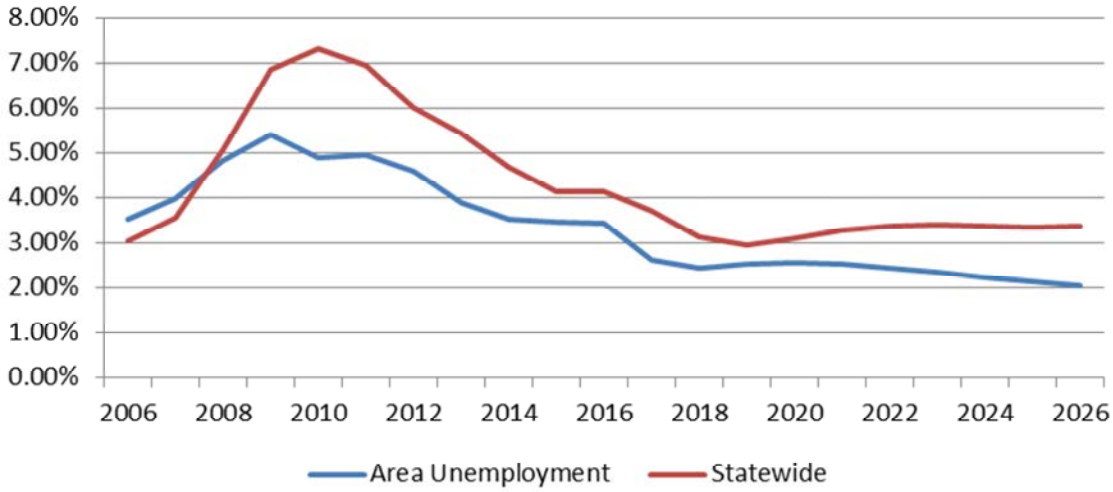
Figure 28: Valley, Roosevelt, and McCone County Unemployment



Source: United States Census, 2010-2014 American Community Survey 5-Year Estimates.

Figure 29 shows the observed and forecasted unemployment rate in the three counties compared to the observed and forecasted statewide average. The three counties have had an unemployment rate below the statewide average since 2006. This trend is expected to continue. The unemployment rate in the counties is expected to decrease in the future. The lowest unemployment for the counties displayed in the graph is 2.06% is expected to be reached in 2026. The highest unemployment rate displayed in the graph is 5.41% and was observed 2009. This area is within the Bakken shale area, and economic conditions are somewhat tied to the future production of the Bakken shale.

Figure 29: Valley, Roosevelt, and McCone County Unemployment



Source: United States Census, 2010-2014 American Community Survey 5-Year Estimates.

Table 28 displays selected measures of wealth for each of the counties and the state of Montana.

Table 28: McCone, Roosevelt, and Valley County Wealth Measures

Area	Montana	McCone County	Roosevelt County	Valley County
Median Family Income (2014 $)	$46,766	$48,194	$36,825	$49,198
Per capita income (2014 $)	$25,977	$29,428	$16,720	$26,331
Retail Sales per capita (2012 $)	$15,544	$14,574	$14,570	$21,141

Source: United States Economic Census.

McCone and Valley Counties have median family incomes that are above the state average. Roosevelt County's measure of median family income is about $10,000 below the statewide value. The per capita income in McCone and Valley Counties is also above that of the wider state. Roosevelt County's per capita income is below that of Montana. Retail sales per capita in McCone and Roosevelt Counties are on par with the statewide averages. Valley County has the highest retail sales per capita. The retail sales per capita in Valley County are much higher than the statewide average. The data in Table 28 suggest that McCone and Valley Counties do not have much if any income deficiencies compared to statewide averages. Roosevelt County does exhibit signs of income deficiencies compared to statewide averages and compared to neighboring counties.

Population and Demographics

Northern Montana has a small population, and only minimal growth is expected. The socio-economic characteristics of this area can be expected to remain constant in the future. The following summarizes population and demographic conditions within and near Segment 6.

Table 29 displays populations of communities around Segment 6.

Table 29: Segment 6 Area Populations

City/Town	Glasgow	Nashua	Wolf Point	Poplar
Population	3,374	297	2,787	859

Source: United States Census 2013 Estimates.

Table 30 displays population and demographic characteristics of each of the counties, and compares them to the same measures from the state. Roosevelt is the most populous of the three counties.

Table 30: McCone, Roosevelt, and Valley County Population Demographics

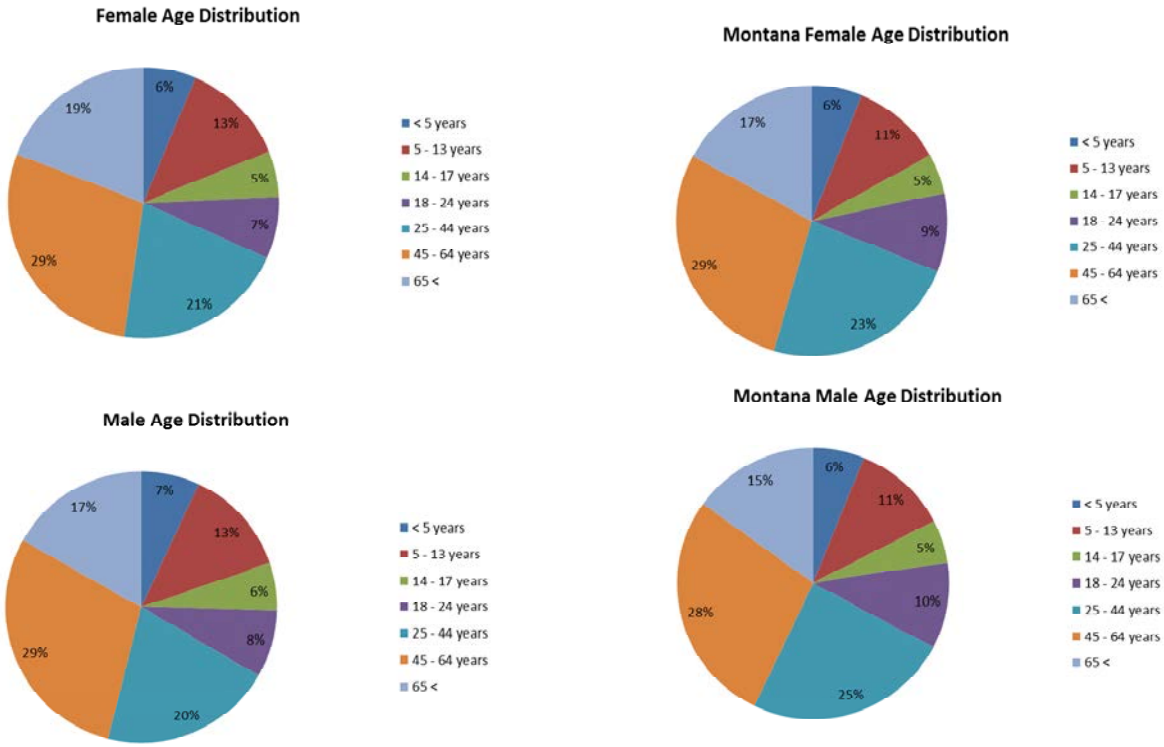
Area	Montana	McCone County	Roosevelt County	Valley County
Population	1,032,949	1,683	11,476	7,659
White Alone	77.1%	96.9%	38.4%	86.6%
American Indian	6.6%	1.1%	57.5%	9.8%
Hispanic or Latino	17.6%	1.5%	2.6%	2.3%
Housing Units	134,789,944	1,004	4,083	4,834
Owner Occupied Housing Rate	64.4%	80.8%	59.7%	70.5%

Source: United States Census 2013 Estimates.

Valley and McCone Counties are both predominantly populated with people who identify as White Alone. Valley County does have a relatively large population of people who identify as American Indian. Roosevelt County's population is primarily composed of individuals who identify as American Indians. This is likely due to the Fort Peck Indian Reservation. All these counties have a low proportion of people who identify as Hispanic or Latino in their populations. The owner-occupied housing rate in McCone County is much higher than the state average.

Valley County's rate of owner occupied housing is also greater than that of the larger state. Roosevelt County has an owner-occupied housing rate that is lower than the state.
Figures 30 displays the age distribution by sex for the counties combined compared to the age distribution by sex of the state. The counties do not display a drastically different age distribution by sex than the large state. There are slightly few people in the 25-44-year age category. Apart from this difference, the distributions of age by sex are similar.

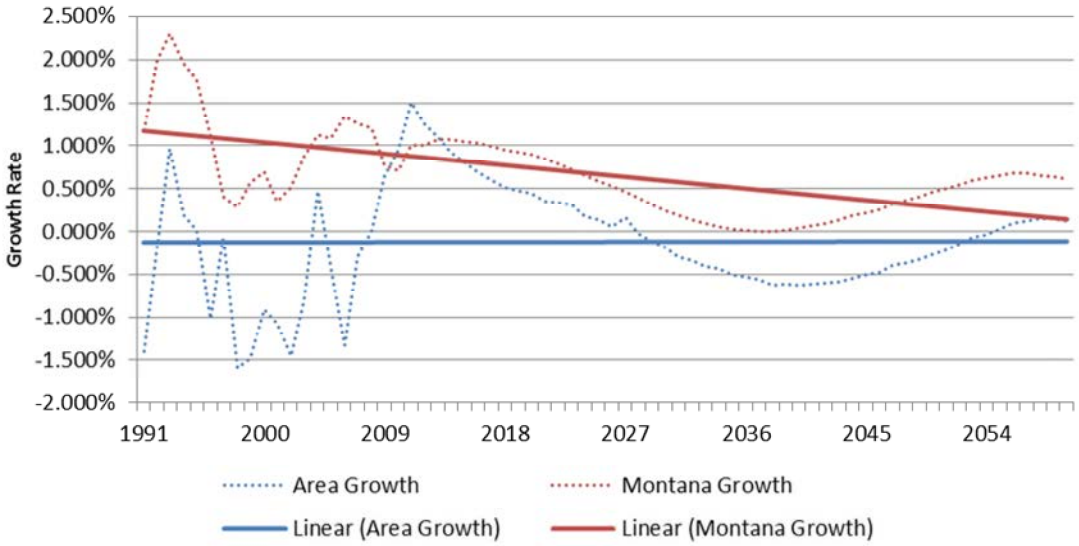
Figure 30: Valley and McCone County Age Distribution by Sex



Source: United States Census American Community Survey.

Figure 31 displays the observed and predicted yearly growth rate of the counties compared to the state. The counties have experienced positive and negative growth rates in recent years. The long-term trend of growth shows almost no change in the average growth rate in the coming years. The 10-year predicted growth rate for the three counties is 0.346%. This is lower than the 10-year predicted growth for the state of Montana, 0.793%. The trend displayed in Figure 31 suggests these counties have been experiencing, and will continue to experience, a relatively stagnant level of growth.

Figure 31: Valley and McCone County Population Growth



Source: Department of Commerce 2013 Population Projections.

Environmental Justice

Title VI of the United States Civil Rights Act of 1964, as amended (USC 2000(d)) and EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, require that no minority, or, by extension, 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. If a project is forwarded from this study, environmental justice will need to be further evaluated during the project development process.

Land Ownership and Use

The following provides a description of the dominant land ownership and land uses within and adjacent to Segment 6 based on Montana Cadastral (refer to Exhibit 6.7 in Attachment 1). Because privately owned lands and developed lands may be more costly to acquire, safety rest area siting considerations should attempt to minimize impacts to privately owned lands and developed lands to the extent practicable.

Segment 6 is entirely located on the Fort Peck Reservation. The BNSF Railway runs adjacent to US 2 from RP 571.8 to RP 573 and near Wolf Point from RP 589.5 to RP 590.5.

The majority of land use in Segment 6 is crop/pasture with mixed urban development near Wolf Point.

Recreational Resources

Recreational resource information within Segment 6 was gathered during the July 2017 field review and through review of aerials and USFS and FWP resource lists. Recreational areas may be protected under Section 4(f) of the U.S. Department of Transportation Act of 1966, which was enacted to protect publicly owned parks, recreation areas, wildlife and waterfowl refuges, and public and private historic sites of local, state, and national significance. Federally funded transportation projects cannot impact these properties unless there are no feasible and prudent avoidance alternatives and all possible planning to minimize harm has occurred. 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 the 4(f) resource. "Use" can occur 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."

In addition, the FWP National LWCFA, or Section 6(f), list of sites by county was reviewed to determine the presence of Section 6(f) sites within the study segment. LWCFA was enacted to preserve, develop, and assure the quality and quantity of outdoor recreation resources. Section 6(f) protection applies to all projects that impact recreational lands purchased or improved with LWCFA funds. The Secretary of the Interior must approve any conversion of LWCFA property to a use other than public, outdoor recreation.

The following is a summary of the recreational resources found within Segment 6. Potential Section 4(f) resources and LWCFA resources are mapped in relation to the study segment in Exhibit 6.7 (in Attachment 1). The screening process for potential safety rest area siting options will need to consider effects on recreational use in accordance with Section 4(f) and Section 6. For sites carried forward, a future reevaluation of Section 6(f) resources should take place to determine if any new Section 6(f) resources are present. As general guidance, converting these resources to a non-recreational purpose can be a difficult and time-consuming task and should be avoided if practicable.

Segment 6 is located on the Fort Peck Reservation. Recreation would be limited primarily to fishing and hunting.

There are no designated fish access sites within the study segment. However, fishing likely occurs on Little Porcupine Creek, Wolf Creek, and the many other perennial creeks in the area. A fishing license is required for all non-tribal members that fish on the Fort Peck Reservation. Fishing within the creeks is accessed primarily via foot or at undesignated sites at US 2 bridge crossings.

As noted above, lands owned by federally recognized Indian Tribes are not considered to be "publicly owned" within the meaning of Section 4(f), nor open to the general public. Therefore, Section 4(f) does not automatically apply. Significant parks, recreation areas, or wildlife and waterfowl refuges owned by the tribe could be considered a Section 4(f) resource; however, no such resources are located within or adjacent to the study segment.

The FWP LWCFA site list by county shows funds allotted for the Frazer-Community Park (outside the study segment limits) in Frazer, MT. LWCFA funds are also shown for several park locations in Wolf Point (Borge Park and Southside Park); however, all parks appear to be outside of the study segment limits.

Cultural Resources

The 666-mile US 2 corridor across Montana from the Idaho to North Dakota border is rich in historic properties. The complex history of the region is well represented in the large number of historic buildings, structures, and sites located along the highway. These include commercial buildings, service stations, motels, restaurants, and other operations that were and are dependent on the highway. The BNSF Railway (formerly the Great Northern Railway) was constructed across the Hi-Line in 1887 and extended to the west coast in 1892. The railroad deposited towns and stations in its wake, with most of the communities located along its length tracing their origins to the late nineteenth century.

US 2 is the primary east-west travel corridor in northern and northwestern Montana. The route passes through three Indian reservations (Fort Peck, Fort Belknap, and Blackfeet), around the southern tip of Glacier National Park, and two national forests (Flathead and Kootenai). Historic properties have been recorded along its length from the Idaho to the North Dakota borders. The sites include archaeological sites, commercial buildings, service stations, motels, hotels, drive-in theaters, and residences. Most represent the change of focus in those communities from the railroad to the automobile in the twentieth century. In addition to the historic properties located in the communities through which the highway passes, irrigation ditches associated with the Bureau of Reclamation's Milk River Project, an active railroad grade (BNSF Railway), farms, ranches, and highway-related structures (i.e., bridges and overpasses) also occur. Also represented in the corridor are churches, schools, and government buildings. Structures include sand houses, maintenance section shops, and the former Glasgow Rest Area (determined ineligible for the National Register in 2016).

Historic development of the corridor began relatively late east of the continental divide. The Lame Bull Treaty of 1855 established the area from the continental divide to the mouth of the Milk River and from the Missouri River north to the Canadian line. The extermination of the great buffalo herds in the early 1880s coupled with the construction of the St. Paul, Minneapolis & Manitoba Railroad (later Great Northern Railway and the BNSF Railway) in 1887 began the process of breaking up the reservation. The railroad, moreover, deposited towns, stations, and watering stops along its length in Montana Territory. In 1892, James J. Hill extended the newly renamed Great Northern Railway from Havre westward to Seattle. The railroad allowed the agricultural development of eastern Montana and brought thousands of new people into the formerly remote area. The Newlands Reclamation Act of 1902, the Enlarged Homestead Act of 1909, and the creation of Glacier National Park in 1910 also caused the development of the area called the Hi-Line. In western Montana, development was also based on the railroad after 1892 with an emphasis on mining, logging, and agriculture.

The dawn of the automobile age caused a profound change in northern and northwestern Montana. In 1919, local and regional promoters established the Theodore Roosevelt International Highway. The 4,060-mile automobile route initially connected Portland, Maine, with Portland, Oregon, (the western terminus was later changed to Seattle). The route paralleled the Great Northern Railway from Minnesota, through North Dakota, Montana, and Idaho to the west coast. With the rising popularity of the automobile, the concentration of business districts on the railroad along the Hi-Line and northwestern Montana changed to the highway. New businesses (motels, tourist camps, drive-in restaurants and theaters, and services stations and garages) arose to serve the new mode of travel. All of those businesses are represented in the US 2 corridor. The American Association of State Highway Officials, Bureau of Public Roads, and Montana State Highway Commission re-designated the Roosevelt Highway as US 2 in 1926. The first highway commission projects to improve it began in 1919.

A large number of archaeological and historic properties likely occur along the US 2 corridor in Montana. Archaeological sites in the corridor include buried campsites, stone circle sites, bison kills, human burials, and rock art sites under federal, state, local, and private ownership.

The NHPA of 1966, as amended, defines historic properties as sites, buildings, structures, districts (including landscapes), and objects included on, or eligible for inclusion on, the NRHP, as well as artifacts, records, and remains related to such properties.

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

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

Potential safety rest area siting options will need to consider recorded historic sites determined to be NRHP-eligible as identified through a SHPO and/or THPO file search. In addition, cultural resource surveys will be necessary for siting options forwarded from this study.

Noise

Analysis of traffic noise is necessary for Type I projects, including "the addition of a new or substantial alternative of a weigh station, rest stop, ride-share lot or toll plaza" (23 CFR 772.5). Type I projects require a detailed noise analysis, consistent with FHWA requirements and MDT policy, which involves measuring ambient noise levels at selected receptors and modeling design year noise levels using projected traffic volumes. If noise levels approach or substantially exceed noise abatement criteria, noise abatement measures may be necessary.

Federal regulations define traffic noise receptors as discrete or representative locations of noise sensitive area(s) for various land uses, including residential developments, businesses, and public use areas. The study corridor traverses a variety of land uses. In some portions of the corridor, noise-sensitive receptors are located in proximity to US 2 right-of-way. In Segment 6, isolated residential development is found throughout the segment, with more concentrated development at Frazer (±RP 572), Oswego (±RP 579), Highway 250 Junction (±RP 589), Wolf Point (±RP 590-592).

The screening process for potential safety rest area siting options will need to consider proximity to potential noise receptors. Options forwarded from this study may require a Type I noise analysis.

Visual Resources

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

Views along the US 2 corridor are significantly different on the west and east sides of the Continental Divide. A mountainous, forested landscape, bisected by steep mountain creeks and rivers dominates the corridor west of the divide. Rolling grasslands and agricultural fields bisected by the large floodplains of the Marias, Milk, and Missouri Rivers dominate the corridor east of the divide.

Vast, open views of rolling grasslands, large agricultural fields, and meandering floodplains, interspersed with small communities, make up Segment 6. Views of the Missouri River floodplain can also be seen from Segment 6.

Evaluation of the potential effects on visual resources and viewshed opportunities will need to be conducted as part of the screening process for potential safety rest area siting options.

8.0 Conclusion

This environmental scan report identifies physical, biological, social, and cultural resources within the each of the study segments that may be affected by safety rest area siting options. Project-level environmental analysis would be required during the project development process for any safety rest area sites forwarded from this study. Information contained in this report may be used to support future NEPA/MEPA environmental documentation.

9.0 References

Alden, W.C., 1932, Physiography and Glacial Geology of Eastern Montana and Adjacent Areas, U.S. Geological Survey Professional Paper 174.

Berg, B. R., 2002a, Geologic Map of the Dodson 30' x 60' Quadrangle, North-Central Montana, Montana Bureau of Mines and Geology, Open File Report MBMG 439.

Berg, B. R., 2002b, Geologic Map of the Cut Bank 30' x 60' Quadrangle, Northwestern Montana, Montana Bureau of Mines and Geology, Open File Report MBMG 454.

Bergantino, R.N., 1999a, Geologic Map of the Glasgow 30' x 60' Quadrangle, Northeastern Montana Bureau of Mines and Geology, Open File Report MBMG 390.

Bergantino, R.N., 1999b, Geologic Map of the Malta 30' x 60' Quadrangle, Northeastern Montana Bureau of Mines and Geology, Open File Report MBMG 389.

Bergantino, R.N., and Wilde, E.M., 1998, Preliminary Geologic Map of the Wolf Point 30' x 60' Quadrangle, Montana Bureau of Mines and Geology, Open File Report MBMG 358.

Cannon, M.R., 1996, Geology and ground-water resources of the Blackfeet Indian Reservation, northwestern Montana, U.S. Geological Survey Hydrologic Investigations Atlas HA-737.

DEQ. (n.d.). Clean Water Act Information Center. Retrieved August 2017 from: http://deq.mt.gov/wqinfo/CWAIC/default.mcpx.

DEQ. (n.d.). Montana Department of Environmental Quality. DEQ Remediation Division – Hazardous Waste Site Cleanup Bureau, Petroleum Release Section, LUST database. Retrieved July 2017 from: http://deq.mt.gov/LUST/LUSTSites.mcpx

DEQ. (n.d.). Montana Department of Environmental Quality. DEQ Remediation Division – Hazardous Waste Site Cleanup Bureau, Petroleum Release Section. DEQ DST Mapping Service containing spatial locations for Hazardous Waste Handlers, Response Sites, Open cut Permits, and Underground Storage Tanks. Accessed in July 2017 from: http://svc.mt.gov/deq/wmadst/

DNRC (Montana Department of Natural Resources and Conservation). 1965. Water Resources Survey for Flathead and Lincoln Counties. Published by State Engineer's Office. http://dnrc.mt.gov/divisions/water/water-rights/docs/survey-books/ lincolnwrs_1965.pdf

DNRC. 1967. Water Resources Survey for Blaine County. Published by Montana State Water Conservation Board. http://dnrc.mt.gov/divisions/water/water-rights/docs/survey-books/ blainewrs_1967.pdf.

DNRC. 1968. Water Resources Survey for Phillips County. Published by Montana Water Resources Board. http://dnrc.mt.gov/divisions/water/water-rights/docs/survey-books/phillipswrs_1968.pdf

DNRC. 1968. Water Resources Survey for Valley County. Published by Montana Water Resources Board. http://dnrc.mt.gov/divisions/water/water-rights/docs/survey-books/valleywrs_1968.pdf

DNRC. 1969. Water Resources Survey for Glacier County. Published by Montana Water Resources Board. http://dnrc.mt.gov/divisions/water/water-rights/docs/survey-books/glacierwrs_1969.pdf

DNRC. 1969. Water Resources Survey for Liberty and Toole Counties. Published by Montana Water Resources Board. http://dnrc.mt.gov/divisions/water/water-rights/docs/survey-books/t oolewrs_1969.pdf.

FEMA. (n.d.). FEMA Digital Flood Insurance Rate Map (DFIRM) for Lincoln, Glacier, Toole, Liberty, Blaine, Phillips, Valley, and Roosevelt Counties. Retrieved July 2017 at: https://msc.fema.gov/portal/search.

FWP. (n.d.). Recreation Data. Retrieved August 2017 from: http://fwp.mt.gov/recreation/ visitFwpSite.html

Harrison, J.E., Cressman, E.R., and Whipple J.W., Kayser H.Z., Derkey P.D., and EROS Data Center, 2000, Geologic and Structure Maps of the Kalispell 1 x 2 degree Quadrangle, Montana, and Alberta, and British Columbia: A Digital Database, U.S. Geological Survey Miscellaneous Investigations Series Map I-2267, Database, version 1.0.

Lopez, D.A., 2002a, Geologic Map of the Conrad 30' x 60' Quadrangle, North-Central Montana Bureau of Mines and Geology, Open File Report MBMG 444.

Lopez, D.A., 2002b, Geologic Map of the Sweet Grass Hills 30' x 60' Quadrangle, North-Central Montana Bureau of Mines and Geology, Open File Report MBMG 443.

Montana Bureau of Mines and Geology ArcGIS web serviced accessed through http://www.mbmg.mtech.edu/gis/gis-server.asp, last accessed August 23, 2017.

MTNHP. (n.d.). Montana Ecological Systems - Landcover Reports. Retrieved August 2017 from: http://mtnhp.org/mapviewer/

MTNHP. 2017. Species Occurrence Data for Animal Species of Concern in Montana. Retrieved in August 2017.

National Geologic Map Database, Geolex – Significant Publications, https://ngmdb.usgs.gov/Geolex/search, last accessed August 23, 2017.

National Pipeline Mapping System (n.d.) Public Pipeline Map Viewer. Accessed August 2017 from: https://www.npms.phmsa.dot.gov/PublicViewer/composite.jsf.

United States Census Bureau. Accessed 2017.

USDA. (n.d.). Natural Resource Inventory System SSURGO Soil Mapping Units. Retrieved July 2017 from: http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/?cid=nrcs142p2_053627.

USDA. (n.d.). Web Soil Survey. Retrieved July 2017 from: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.

USFWS. (n.d.). National Wetlands Inventory. Retrieved July 2017 from: http://www.fws.gov/wetlands/

USFWS. (n.d.). Threatened and Endangered Species County List. Retrieved September 2017 from: https://www.fws.gov/montanafieldoffice/Endangered_Species/Listed_Species/countylist.pdf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