



Appendix C

Environmental Scan Report



Environmental Scan

for

MT 16 / MT 200

Glendive to Fairview Corridor Planning Study

July 2012

Table of Contents

Contents

1.0	Introduction.....	5
1.1.	Background	5
1.2.	Organization of Report.....	5
2.	Geographic Setting.....	5
3.	Physical Resources.....	7
3.1.	Land Ownership.....	7
3.1.1.	Dawson County/Richland County	7
3.2.	Prime Farmland.....	7
3.3.	Geologic Resources.....	8
3.4.	Water Resources.....	8
3.4.1.	Surface Water.....	8
3.4.2.	Groundwater and Sourcewater Points.....	9
3.4.3.	Irrigation	10
3.5.	Wetlands (EO 11988).....	10
3.6.	Wild and Scenic Rivers.....	10
3.7.	Floodplains (EO 11988) and Floodways.....	11
3.8.	Hazardous Substances	11
3.9.	Air Quality.....	11
3.10.	Noise.....	11
4.	Visual Resources.....	12
5.	Biological Resources	12
5.1.	Fish and Wildlife.....	12
5.1.1.	Threatened and Endangered Species	12
5.1.2.	Species of Concern	13
5.1.3.	Wildlife and Traffic Concerns	16
5.2.	Vegetation	16
5.2.1.	Threatened and Endangered Plant Species	16
5.2.2.	Species of Concern	16
5.2.3.	Noxious Weeds	17
6.	Cultural and Archaeological Resources.....	17
6.1.	4(f) Resources	18
6.2.	6(f) Resources	19
7.	Social.....	20
7.1.	Environmental Justice	20

List of Tables

Table 1.	303(d) listed water bodies in the project area
Table 2.	Montana Animal Species of Concern in Dawson County
Table 3.	Montana Animal Species of Concern in Richland County
Table 4.	Montana Plant Species of Concern in Dawson and Richland County
Table 5.	4(f) Resources within the project area
Table 6.	6(f) Resources within the project area
Table 7.	Demographic information
Table 8.	Population data

List of Appendices

Appendix A	Land Ownership / Management
Appendix B	Farmlands
Appendix C	Geology
Appendix D	Public Water Supply Locations
Appendix E	Wetlands
Appendix F	Water Bodies and Flood Zones
Appendix G	Hazardous Materials

Abbreviations and Acronyms

BMPs	Best Management Practices
CAA	Clean Air Act
CECRA	Comprehensive Environmental Cleanup and Responsibility Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CWA	Clean Water Act
DEQ	Montana Department of Environmental Quality
DNRC	Department of Natural Resources and Conservation
EA	Environmental Assessment
EIS	Environmental Impact Statement
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 Fish, Wildlife, and Parks
GIS	Geographic Information System
LUST	Leaking Underground Storage Tank
LWCF	Land and Water Conservation Funds
LWQD	Local Water Quality District
MCA	Montana Code Annotated
MDT	Montana Department of Transportation
MEPA	Montana Environmental Policy Act
MNHP	Montana Natural Heritage Program
MP	Milepost
MPDES	Montana Pollutant Discharge Elimination System
MSAT	Mobile Source Air Toxics
NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHP	Natural Heritage Program
NHPA	National Historic Preservation Act
NPL	National Priority List
NPS	National Park Service
NRC	National Response Center
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NRIS	Natural Resource Information System
NWI	National Wetlands Inventory
NWR	National Wildlife Refuge
RCRA	Resource Conservation and Recovery Act
SWPPP	Stormwater Pollution Prevention Plan

TMDL	Total Maximum Daily Load
TRI	Toxics Release Inventory
USDA	U.S. Department of Agriculture
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank
Section 4(f)	Section 4(f) of the 1966 Department of Transportation Act
Section 6(f)	Section 6(f) of the National Land and Water Conservation Funds Act

1.0 Introduction

1.1. Background

The primary objective of this Environmental Scan Report is to determine the potential impacts, constraints, and opportunities within the MT 16 / MT 200 Corridor Study. The study area begins at approximate Reference Post (RP) 0.6 just north of the I-94 Interchange in Glendive and extends northeasterly to the intersection of County Road 123 (RP 50.4) south of Sidney. The study resumes at Sidney's northern city limit boundary (RP 52.6) north of the MT 200 intersection with Holly Street, and extends northeast on MT 200 to the Fairview city limits (RP 62.5). The study excludes areas within the city limits of Glendive, Sidney, and Fairview and extends one-half mile on each side of the highway centerline throughout the corridor. MT 16 / MT 200 is currently classified as a principal arterial. This route is the major north-south route for eastern Montana and serves as an integral part of the regional transportation network.

As a planning level scan, the information is obtained from various reports, websites and documentation. This scan is not a detailed environmental investigation.

If any improvement option(s) are moved forward from the study into project development using federal or state funds, a NEPA/MEPA analysis will be completed as part of the normal project development process. The information obtained from the study may be forwarded into the NEPA/MEPA analysis and does not need to be repeated.

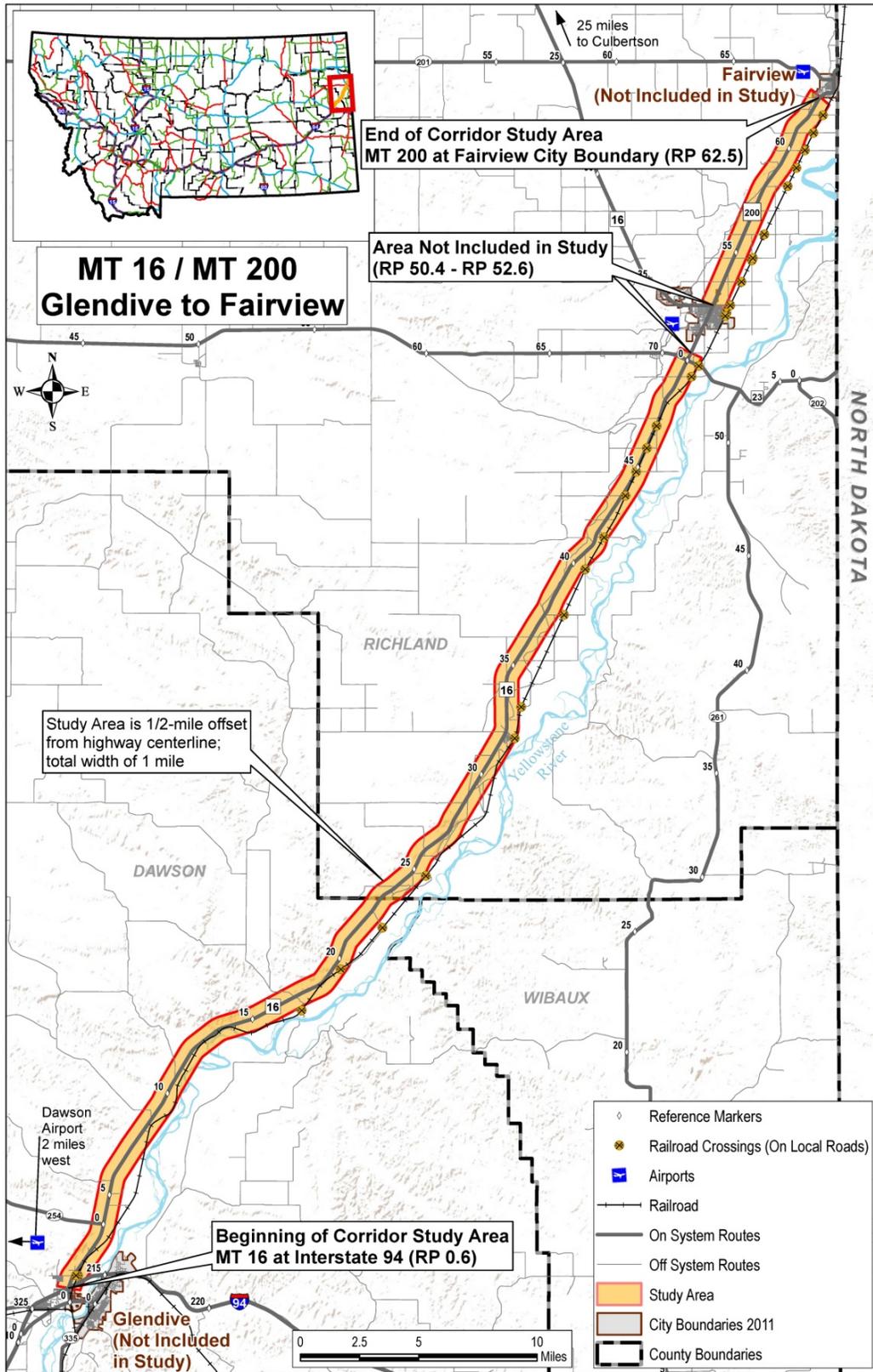
1.2. Organization of Report

This report describes the geographic/environmental setting of the existing study corridor. The document continues with descriptions of environmental scan methodologies and results for the geographic area for physical resources (Section 2) and water resources (Section 3), visual resources (Section 4), biological resources (Section 5), cultural and archaeological resources (Section 6), and social (Section 7). A list of tables and appendices is on page 3. A list of abbreviations and acronyms is defined on page 4 and page 5. The following sections will describe the study corridor for the purpose of environmental discussions in this document. They are not necessarily indicative of proposed improvement option(s), but rather a collection of geographic areas by which environmental discussions can be grouped.

2. Geographic Setting

The study corridor is located in central eastern Montana. The land use within the corridor is predominantly for agricultural and ranch purposes. The majority of the land within the corridor is undeveloped. The project proceeds through rolling terrain that is used primarily for dry land farming with some grazing and irrigated farming. Please refer to Figure 1 below for the corridor location.

Figure 1 – Corridor Location



3. Physical Resources

3.1. Land Ownership

Geographic Information System (GIS)-based information was reviewed to assess the amount of area in the study corridor that is public versus privately owned.

3.1.1. Dawson County/Richland County

The land within the study corridor in Dawson County and Richland County is predominantly agricultural and ranch land. The majority of the land within the study corridor is undeveloped. Public land ownership maps for the study corridor are contained in Appendix A.

3.2. Prime Farmland

Information regarding areas of prime farmland in the corridor area was compiled from the US Department of Agriculture, Natural Resource Conservation Service (NRCS).

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

Farmland is defined by the act in Section 4201 as including prime farmland, unique farmland, and farmland, other than prime or unique farmland, that is of statewide or local importance.

Prime farmland soils are those that have the best combination of physical and chemical characteristics for producing food, feed, and forage; 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, fiber, forage, and oilseed crops.

The CPA-106 Farmland Conversion Impact Rating Form for Linear Projects is a way for the NRCS to keep inventory of the Prime and Important farmlands within the state. Soil map units found within the project area have been classified as prime and important farmlands. Project activities associated with the construction of the MT 16 / MT 200 corridor will likely create impacts to the soil map units with prime and important farmland status, thus it is likely required that a CPA-106 Farmland Conversion Impact Rating Form for Linear Projects be completed. The process for completing this form requires mapping of the prime and important farmlands to be converted to non-farmable land, coordination with the NRCS, and final completion of the conversion form.

Appendix B illustrates farmland classification types found in the study corridor.

3.3. Geologic Resources

Information was obtained on geology in the corridor study areas. This geologic information may help determine any potential design and construction issues related to embankments and road design. The following paragraph describes geology present along the study area.

The highway alignment generally follows a highland terrace of the Yellowstone River, occasionally traversing lowland floodplain areas. The highland terrace geology is mapped as Fort Union Formation (Tfu) consisting of sandstone and shale with interbeds of coal. The floodplain is mapped as Alluvium (Qal). Alluvium typically consists of unconsolidated deposits of gravel, sand, silt, and clay.

Appendix C illustrates geologic resources found in the study corridor.

3.4. Water Resources

3.4.1. Surface Water

Maps and GIS data were reviewed to identify the location of surface water bodies within the study area, including rivers, streams, lakes, or reservoirs. Appendix E illustrates named waterways found in the study corridor.

The study corridor travels through the Lower Yellowstone Watershed District. Information on the Yellowstone River and its tributaries within the study area was obtained from DEQ's website. Section 303, subsection "d" of the Clean Water Act requires the State of Montana to develop a list, subject to USEPA approval, of water bodies 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 total maximum daily loads (TMDL).

A TMDL sets maximum pollutant levels in a watershed. The TMDLs become the basis for implementation plans to restore the water quality to a level that supports its designated beneficial 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.

The Middle Missouri watershed is listed in the 2008 Integrated 303(d)/305(b) Water Quality Report for Montana by DEQ. The water bodies within the Middle Missouri Watershed that are located in the study area are Category 5 and Category 4C. Category 5 water bodies are waters where one or more applicable beneficial use has been assessed as being impaired or threatened, and a TMDL is required to address the factors causing the impairment or threat. Category 4C water bodies are waters where TMDLs are not required as no pollutant-related use impairment is identified. TMDLs have not yet been written for water bodies in this watershed. When TMDLs are prepared and implementation plans are in place, any construction practices would have to comply with the requirements set forth in the plan.

303(d) listed water bodies that are located in the study area are summarized in Table 1.

Table 1. 303(d) Listed Water Bodies in Study Area

Water Body	Beneficial Use	Probable Cause of Impairment	Probable Source of Impairment
Yellowstone River (Powder River to Lower Yellowstone Diversion Dam)	Agriculture, Aquatic Life	Fish - passage barrier	Dam Construction (Other than upstream flood control Projects)
Yellowstone River (Lower Yellowstone Diversion Dam to North Dakota Border)	Agriculture, Aquatic Life, Drinking Water, Primary Contact Recreation	Alteration in stream-side or littoral vegetative covers	Irrigated Crop Production Rangeland Grazing Streambank Modifications/destabilization
		Chromium (total)	Source Unknown
		Copper	Natural Sources Source Unknown
		Fish-Passage Barrier	Impacts from Hydrostructure Flow Regulation/modification
		Lead	Irrigated Crop Production Rangeland Grazing Streambank Modifications/destabilization
		Nitrogen (Total)	Natural Sources Source Unknown
		pH Phosphorus (Total)	Irrigated Crop Production Rangeland Grazing Source Unknown Streambank Modifications/destabilization
Sedimentation/Siltation	Impacts from Hydrostructure Flow Regulation/modification Irrigated Crop Production Rangeland Grazing Source Unknown Streambank Modifications/destabilization		
Total Dissolved Solids	Natural Sources Source Unknown		

3.4.2. Groundwater and Sourcewater Points

Public water supply locations are illustrated in Appendix D.

Dawson County and Richland County have not developed Local Water Quality District's (LWQD). LWQD's are established to protect, preserve, and improve the quality of surface water and groundwater within the district. Currently there are four in Montana.

LWQD's are formed pursuant to 701304501 et. Seq., MCA by county governments. DEQ provides support to LWQD programs, but does not have an active management role in their activities. LWQD serve as local government districts with a governing board of directors, and funding obtained from fees collected annually with county taxes. A significant component of selected district programs is the ability to participate in the enforcement of the Montana Water Quality Act and related rules.

If a LWQD is developed for Dawson County or Richland County, water quality protection measures may have to be addressed at the local level, in addition to the federal level and state level.

3.4.3. Irrigation

Irrigated farmland exists in Dawson County and Richland County adjacent to the study corridor. Impacts to irrigation facilities should be avoided to the greatest extent practicable. However, depending on the improvement option(s) proposed during the corridor study, there is a potential to impact lateral and longitudinal irrigation facilities. Operators of irrigation facilities would need to be contacted for flow requirements during project development to minimize impacts to farming operations.

Any potential impacts to irrigation facilities will need to be examined to determine if the irrigation facilities are considered waters of the U.S. and subject to jurisdiction by the U.S. Army Corps of Engineers (USACE) and if other permits or authorizations are necessary such as SPA or 318.

3.5. Wetlands (EO 11988)

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.

The study area encompasses portions of the Yellowstone River, and associated drainages, which have wetland areas associated with them. This is not intended to be a complete determination and/or delineation of wetlands in the project area. Formal wetland delineations will need to be conducted according to standard USACE defined procedures if a project is forwarded from the study during the project development process. Wetland jurisdictional determinations will also need to be done during the project development process. Wetlands and drainages maps for the corridor are provided in Appendices E and F.

Wetland impacts should be avoided to the greatest extent practicable. All unavoidable wetland impacts will be mitigated as required by the USACE and in accordance with policies.

3.6. Wild and Scenic Rivers

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

values. The U.S. National Park Service (NPS) website was accessed for information on river segments that may be located within the study area with wild and scenic designation. The Yellowstone River is not designated as a Wild and Scenic River.

3.7. Floodplains (EO 11988) and Floodways

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

3.8. Hazardous Substances

The Montana Natural Resource Information System (NRIS) database was searched for underground storage tank (UST) sites, leaking underground storage tank (LUST) sites, abandoned mine sites, remediation response sites, landfills, National Priority List (NPL) sites, hazardous waste, crude oil pipelines, and toxic release inventory sites in the vicinity of the study corridor. Please see Appendix G for locations.

If a project is forwarded from this study further evaluation may be needed at specific sites to determine if contamination will be encountered during construction. This may include reviewing DEQ files and conducting subsurface investigation activities to determine the extent of soil and groundwater contamination. If contaminated soils or groundwater is encountered during construction, handling and disposing of the contaminated material will be conducted in accordance with State, Federal, and local laws and rules.

3.9. Air Quality

The study corridor is not in or adjacent to a non-attainment area and is exempt from a Mobile Source Air Toxics Analysis under the Conformity exemption for planning studies.

3.10. Noise

Noise studies will need to be conducted for any projects that results from this corridor study that meet the definition of Type 1 in 23 CFR 772. If project is not a Type I, then it meets the criteria for a Type III project, as established in 23 CFR 772. If the criteria for a Type III project is met, the project requires no analysis for highway traffic noise impacts. Type III projects do not involve added capacity, construction of new through lanes or auxiliary lanes, changes in the horizontal or vertical alignment of the roadway or exposure of noise sensitive land uses to a new or existing highway noise source. MDT acknowledges that a noise

analysis is required if changes to the proposed project result in reclassification to a Type I Project.

4. Visual Resources

Visual resources refer to the landscape character (what is seen), visual sensitivity (human preferences and values regarding what is seen), scenic integrity (degree of intactness and wholeness in landscape character), and landscape visibility (relative distance of seen areas) of a geographically defined view shed. The landscape throughout the study corridor contains an array of biological, scientific, historic, wildlife, ecological, and cultural resources mixed with a remote location.

There are no properties or corridors within the study area listed on the Department of Interior's National Landscape Monument System.

5. Biological Resources

Biological resources in the study corridor were identified using maps, aerial photographs, the endangered, threatened, proposed, and candidate species list for Montana counties (May 2009) from the USFWS, Montana Natural Heritage Program data, and windshield surveys of the project site. This limited survey is in no way intended to be a complete and accurate biological survey of the study area. If a project is forwarded from the improvement option(s), a complete biological survey of the study area will be completed in accordance with accepted MDT practices during the project development process.

5.1. Fish and Wildlife

General fish and wildlife resources in the study area will need to be surveyed during the project development process. Montana Fish, Wildlife & Parks (FWP) should be contacted during the project development process for local expertise of the study area. Riparian and river, stream or creek habitats should be avoided to the greatest extent practicable, including but not limited to, the Yellowstone River riparian and river habitat. Fish and wildlife species use waterway corridors during all life stages. If a project is forwarded from the improvement option(s), encroachment into the wetted width and waterway and the associated riparian habitat should be limited to the absolute minimum necessary. It is recommended that a riparian corridor remain on both sides of waterways to facilitate wildlife movement along the river corridor.

5.1.1. Threatened and Endangered Species

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

The endangered, threatened, proposed, and candidate species list for Montana counties (November 2011) was downloaded from the USFWS website on February 13, 2011.

This list generally identifies the counties where one would reasonably expect the species to occur, not necessarily every county where the species is listed.

There are six endangered, threatened, proposed, or candidate animal species listed for Dawson and Richland Counties; the Pallid Sturgeon (*Scaphirhynchus albus*) (LE), the Piping Plover (*Charadrius melodus*) (LT, CH), the Interior Least Tern (*Sterna antillarum athalassos*) (LE), the Whooping Crane (*Grus Americana*) (LE), the Greater Sage Grouse (*Centrocercus urophasianus*) (C), and the Sprague's Pipit (*Anthus spragueii*) (C). These species are present within the Yellowstone River ecosystem which lies within the study area.

If a project is forwarded from the improvement option(s), an evaluation of potential impacts to all endangered, threatened, proposed, or candidate species will need to be completed during the project development process.

5.1.2. Species of Concern

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

Tables 2 and 3 list the animal species of concern that the Montana Heritage Program has records of in Dawson and Richland Counties. The results of a data search by the Montana Natural Heritage Program reflect the current status of their data collection efforts. These results are not intended as a final statement on sensitive species within a given area, or as a substitute for on-site surveys. If a project is forwarded from the improvement option(s), on-site surveys will need to be completed during the project development process.

Table 2. Montana Animal Species of Concern Noted in Dawson County

	Scientific Name	Common Name	State Rank	County
Birds	<i>Anthus spragueii</i>	Sprague's Pipit	S3B	Dawson
	<i>Athene cucularia</i>	Burrowing Owl	S3B	Dawson
	<i>Buteo regalis</i>	Ferruginous Hawk	S3B	Dawson
	<i>Centrocercus urophasianus</i>	Greater Sage-Grouse	S2	Dawson
	<i>Coccyzus erythrophthalmus</i>	Black-billed Cuckoo	S3B	Dawson
	<i>Dolichonyx oryzivorus</i>	Bobolink	S3B	Dawson
Fish	<i>Cycleptus elongates</i>	Blue Sucker	S2S3	Dawson
	<i>Etheostoma exile</i>	Iowa Darter	S3	Dawson
	<i>Lepisosteus platostomus</i>	Shortnose Gar	S1	Dawson
	<i>Macrhybopsis gelida</i>	Sturgeon Chub	S2S3	Dawson
	<i>Macrhybopsis meeki</i>	Sicklefin Chub	S1	Dawson
	<i>Oncorhynchus clarkii bouvieri</i>	Yellowstone Cutthroat Trout	S2	Dawson
	<i>Phoxinus eos</i>	Northern Redbelly Dace	S3	Dawson
	<i>Polyodon spathula</i>	Paddlefish	S1S2	Dawson
	<i>Sander canadensis</i>	Sauger	S2	Dawson
<i>Scaphirhynchus albus</i>	Pallid Sturgeon	S1	Dawson	
Invertebrates	<i>Polytonia progne</i>	Gray Comma	S2	Dawson
	<i>Lachlania saskatchewanensis</i>	A Sand-dwelling Mayfly	S1	Dawson
Mammals	<i>Lasiurus cinereus</i>	Hoary Bat	S3	Dawson
	<i>Sorex nanus</i>	Dwarf Shrew	S2S3	Dawson
	<i>Sorex preblei</i>	Preble's Shrew	S3	Dawson
	<i>Zapus hudsonius</i>	Meadow Jumping Mouse	S2	Dawson
Reptiles	<i>Apalone spinifera</i>	Spiny Softshell	S3	Dawson
	<i>Chelydra serpentina</i>	Snapping Turtle	S3	Dawson
	<i>Heterodon nasicus</i>	Western Hog-nosed Snake	S2	Dawson
	<i>Lampropeltis triangulum</i>	Milksnake	S2	Dawson
	<i>Phrynosoma hernandesi</i>	Greater Short-horned Lizard	S3	Dawson
	<i>Sceloporus graciosus</i>	Common Sagebrush Lizard	S3	Dawson

Table 3. Montana Animal Species of Concern Noted in Richland County

	Scientific Name	Common Name	State Rank	County
Birds	<i>Anthus spragueii</i>	Sprague's Pipit	S3B	Richland
	<i>Catharus fuscescens</i>	Veery	S3B	Richland
	<i>Charadrius melodus</i>	Piping Plover	S2B	Richland
	<i>Coccyzus erythrophthalmus</i>	Black-billed Cuckoo	S3B	Richland
	<i>Dolichonyx oryzivorus</i>	Bobolink	S3B	Richland
	<i>Grus americana</i>	Whooping Crane	S1M	Richland
	<i>Melanerpes erythrocephalus</i>	Red-headed Woodpecker	S3B	Richland
Fish	<i>Cycleptus elongatus</i>	Blue Sucker	S2S3	Richland
	<i>Etheostoma exile</i>	Iowa Darter	S3	Richland
	<i>Lepisosteus platostomus</i>	Shortnose Gar	S1	Richland
	<i>Macrhybopsis gelida</i>	Sturgeon Chub	S2S3	Richland
	<i>Macrhybopsis meeki</i>	Sicklefin Chub	S1	Richland
	<i>Margariscus margarita</i>	Pearl Dace	S2	Richland
	<i>Oncorhynchus clarkii bouvieri</i>	Yellowstone Cutthroat Trout	S2	Richland
	<i>Phoxinus eos</i>	Northern Redbelly Dace	S3	Richland
	<i>Polyodon spathula</i>	Paddlefish	S1S2	Richland
	<i>Sander canadensis</i>	Sauger	S2	Richland
	<i>Scaphirhynchus albus</i>	Pallid Sturgeon	S1	Richland
Invertebrates	<i>Homoeoneuria alleni</i>	A Sand-dwelling Mayfly	S2	Richland
	<i>Lachlania saskatchewanensis</i>	A Sand-dwelling Mayfly	S1	Richland
	<i>Macdunnoa nipawinia</i>	A Sand-dwelling Mayfly	S2	Richland
	<i>Polygonia progne</i>	Gray Comma	S2	Richland
	<i>Stylurus intricatus</i>	Brimstone Clubtail	S1	Richland
Mammals	<i>Corynorhinus townsendii</i>	Townsend's Big-eared Bat	S2	Richland
	<i>Cynomys ludovicianus</i>	Black-tailed Prairie Dog	S3	Richland
	<i>Lasiurus borealis</i>	Eastern Red Bat	S2S3	Richland
	<i>Lasiurus cinereus</i>	Hoary Bat	S3	Richland
	<i>Zapus hudsonius</i>	Meadow Jumping Mouse	S2	Richland
Reptiles	<i>Apalone spinifera</i>	Spiny Softshell	S3	Richland
	<i>Heterodon nasicus</i>	Western Hog-nosed Snake	S2	Richland
	<i>Phrynosoma hernandesi</i>	Greater Short-horned Lizard	S3	Richland

5.1.3. Wildlife and Traffic Concerns

If a project is forwarded from this study, during the project development process, wildlife crossings and/or wildlife accident cluster areas along the corridor would be assessed and potential mitigation measures would be evaluated and implemented, where appropriate.

5.2. Vegetation

Native vegetation in the study area generally consists of wetland and riparian areas along the Yellowstone River and sagebrush/grasslands in the upland areas. The remaining vegetation consists of cultivated crop land.

5.2.1. Threatened and Endangered Plant Species

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

Information regarding endangered, threatened, proposed, and candidate species list for Montana counties (February 2011) was obtained from the USFWS website. This list identifies the counties where one would reasonably expect the species to occur, not necessarily every county where the species is listed.

This list identified no endangered, threatened, proposed, or candidate plant species listed for Dawson or Richland Counties, and none are currently expected to occur in the study area. If a project is forwarded from the improvement option(s), an evaluation of all endangered, threatened, proposed, or candidate species will need be done during the project development process.

5.2.2. Species of Concern

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

Table 4 lists the plant species of concern that the Montana Heritage Program has records of in Dawson and Richland Counties. The results of a data search by the Montana Natural Heritage Program reflect the current status of their data collection efforts. These results are not intended as a final statement on sensitive species within a given area, or as

a substitute for on-site surveys. If a project is forwarded from the improvement option(s), on-site surveys will need to be completed during the project development process.

Dawson County lists one plant species of concern. Richland County lists zero plant species of concern.

Table 4. Plant State Species of Concern Noted in Dawson and Richland Counties

Scientific Name	Common Name	State Rank	County
Phlox andicola	Plains Phlox	S3	Dawson

5.2.3. Noxious Weeds

Noxious weeds degrade habitat, choke streams, crowd native plants, create fire hazards, poison and injure livestock and humans, and foul recreation sites. Areas with a history of disturbance are at particular risk of weed encroachment. There are 32 noxious weeds in Montana, as designated by the Montana Statewide Noxious Weed List (effective April 15, 2008). If a project is forwarded from the improvement option(s), the study area will need be surveyed for noxious weeds during the project development process.

If a project is forwarded from the improvement option(s), construction activities in the study Area should also abide by the MDT standard specifications. County Weed Control Supervisors should be contacted prior to any construction activities regarding specific measures for weed control.

6. Cultural and Archaeological Resources

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

The Yellowstone River Valley has been home to Montanans for at least the last 12 thousand years. Evidence of human presence is everywhere in the valley from the cottonwood bottoms along the Yellowstone River to the eroded breaks that form the valley walls. In the historic period the valley has witnessed the presence of William Clark, the Great Sioux War, early railroads and cattle ranchers and the construction of great canals by the Bureau of Reclamation in the early 20th century.

A search of existing (known) cultural resources, both archaeological sites and historic properties, was conducted for the full, one mile wide study area. The study area is approximately 39,000 acres in size and within that area 135 separate cultural resources are known to exist. These resources include historic irrigation canals, bridges, residences, mining operations and trash deposits, as well as stratified archaeological sites, lithic scatters, tipi rings, and two Native American burials. Based on a review of prior cultural resource inventories within the study area

we know that approximately 10% of the study area has had some past cultural resource survey. Some of these surveys date back to the 1970s when methods and expectations were not what they are today. Also, the vast majority of the previous cultural survey work has been carried out on public land. Nonetheless, since we know that 135 sites were found by surveying roughly 10% of the area, we can extrapolate that there reasonably could be 1350 sites (or more) in the study area.

Compliance with applicable laws such as Section 106 of the National Historic Preservation Act, the Native American Graves Protection and Repatriation Act, the Montana State Burial Law, etc. will be required as MDT brings individual projects forward. Applicable laws will vary depending upon the funding of the proposed project.

Reviews were also conducted to determine the presence of Section 4(f) and Section 6(f) properties along the corridor. Section 4(f) refers to the original section within the Department of Transportation Act of 1966 (49 U.S.C. 303), which set the requirement for consideration of park and recreational lands, wildlife and waterfowl refuges, and historic sites in transportation project development. Prior to approving a project that “uses” a Section 4(f) resource, FHWA must find that there is no prudent or feasible alternative that completely avoids 4(f) resources. “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 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 4(f) are “substantially impacted”. Section 4(f) resource information was gathered by field observation and review of the National Register of Historic Places (NRHP) list for Dawson County and Richland County.

6.1. 4(f) Resources

A file search through the Montana State Historic Preservation Office revealed the presence of many historic sites within the project corridor. Most are located within the Glendive and Sidney city limits and would not be impacted by any projects that are programmed as a result of this corridor study. Known sites located within the corridor include the Northern Pacific Railway Main Line (now BNSF Railway Company), portions of the Bureau of Reclamation’s Lower Yellowstone Irrigation Project, and potentially several steel pony truss bridges in the vicinity of Savage that were built in the second decade of the twentieth century and are associated with the irrigation project. The old wagon road between Fort Keogh (outside Miles City) and Fort Buford in North Dakota is also likely located within the corridor as are sections of the Red Trail auto trail from the late 1910s and 1920s. Both roads would be covered under the MDT’s Historic Roads and Bridges Programmatic Agreement. There are undoubtedly additional historic sites located within the corridor. They will be identified as project development moves forward within the corridor and treated under Section 106 of the National Historic Preservation Act and Section 4(f).

Known 4(f) resources within the study corridor are summarized below in Table 5.

Table 5. 4(f) Resources within the Project Area

Name	Type of 4(f) Resource	Location Relative to Corridor
Northern Pacific Railway (BNSF)	Historic Railway	Length of Corridor
Lower Yellowstone Irrigation Project	Historic Canal	Various spot locations length of corridor
Fort Keogh to Fort Buford Wagon Trail	Historic Roadway	Various spot locations length of corridor
Red Trail auto trail from the late 1910s and 1920s	Historic Roadway	Various spot locations length of corridor
Intake Dam Fishing Access Site	Fishing Access	On MT 16, approximately 17.0 Miles North of Glendive

6.2. 6(f) Resources

Known 6(f) resources within the study corridor are summarized in Table 6 and Appendix A.

Table 6. 6(f) Resources within the Project Area

Name	Type of 6(f) Resource	Location Relative to Corridor
Dawson County Hollecker Lake	Recreational Lake Area	On MT 16, approximately 0.2 Miles North of the MT 16 / I-94 Junction
Gartside Reservoir	Fishing Access	Approximately 0.5 miles west of Crane, MT
Seven Sisters Island	Fishing Access	Approximately 0.5 miles east of Crane, MT
Intake Dam Fishing Access Site	Fishing Access	On MT 16, approximately 17.0 Miles North of Glendive
Elk Island Wildlife Management Area / Fishing Access Site	Wildlife Management Area / Fishing Access Site	On MT 16, approximately 1.5 Miles North of Savage, MT

7. Social

To provide a context in which to evaluate social impacts, characteristics of the existing population are presented in Table 7 and Table 8.

Table 7: Demographic Information

Area	Population (2011 Estimate)	Population (2000 Estimate)	Median Household Income (2010)	Persons Below Poverty (2010)	Persons per Square Mile (2009)
Dawson County	8,936	9059	\$44,548	12.4%	3.6
Richland County	9,759	9666	\$49,444	11.4%	4.5
State of Montana	998,199	902,200	\$42,303	15.2%	6.7
USA	311,591,917	308,745,538	\$50,046	15.3%	86.9

As shown in the table, generally the project area population has stayed the same with a minor decline since 2000. Residents in the project area tend to be higher in age and higher in median household income compared to Montana as a whole. These differences may be generally attributed to the rural nature of the area.

Table 8: Population Data

	Dawson County	Richland County	State of MT	USA
Total Population ^a	8,936	9,759	998,199	311,591,917
White ^b (%)	95.7	95.0	89.4	72.4
African American ^b (%)	0.3	0.1	0.4	12.6
American Indian/Alaska Native ^b (%)	1.7	1.7	6.3	0.9
Asian ^b (%)	0.3	0.2	0.6	4.8
Native Hawaiian/Pacific Islander ^b (%)	0.0	0.0	0.1	0.2
Hispanic/Latino ^b (%)	2.0	3.0	2.5	16.3
2 or more races ^b (%)	1.6	2.1	1.7	2.9

Source: US Census Bureau

a. 2011 Estimate

b. 2010 Data in Percent (%)

In general the ethnic makeup of the project area is primarily white, which is consistent with the state as a whole.

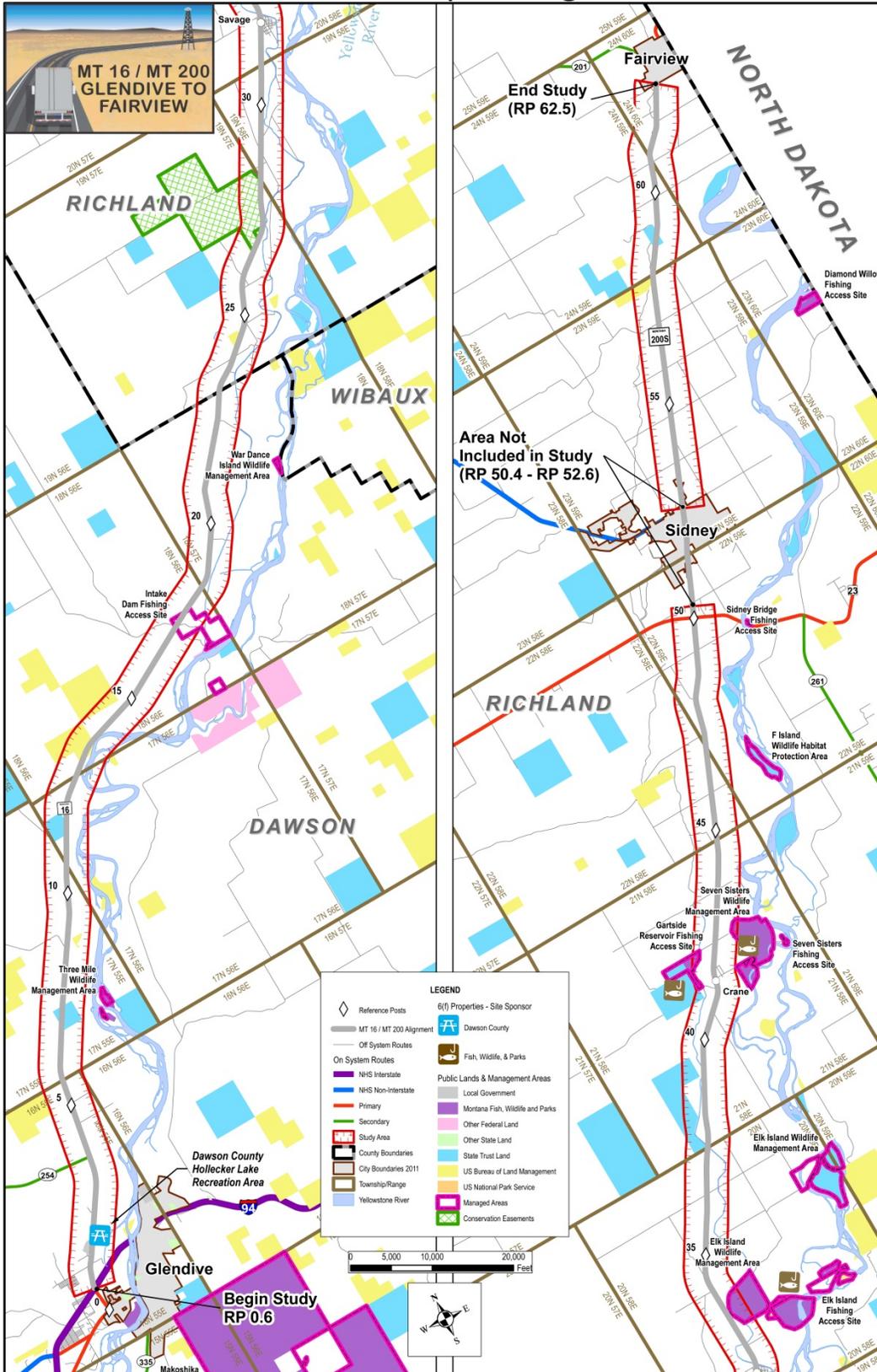
7.1. Environmental Justice

Title VI of the US Civil Rights Act of 1964, as amended (USC 2000(d)) and Executive Order (EO) 12898 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.

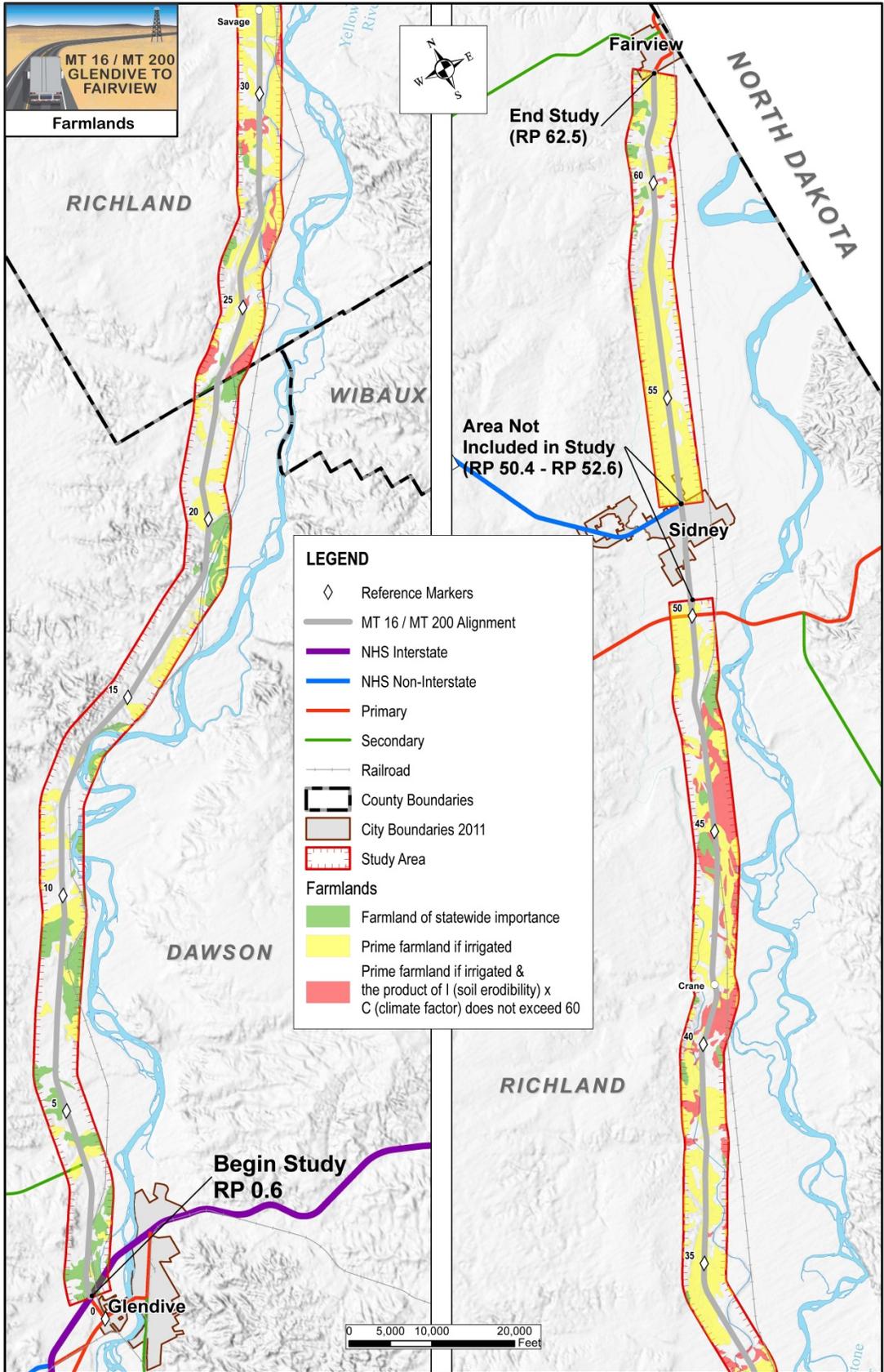
If a project is forwarded from the improvement option(s), Environmental Justice will need to be further evaluated during the project development process.

Appendix A – Land Ownership / Management

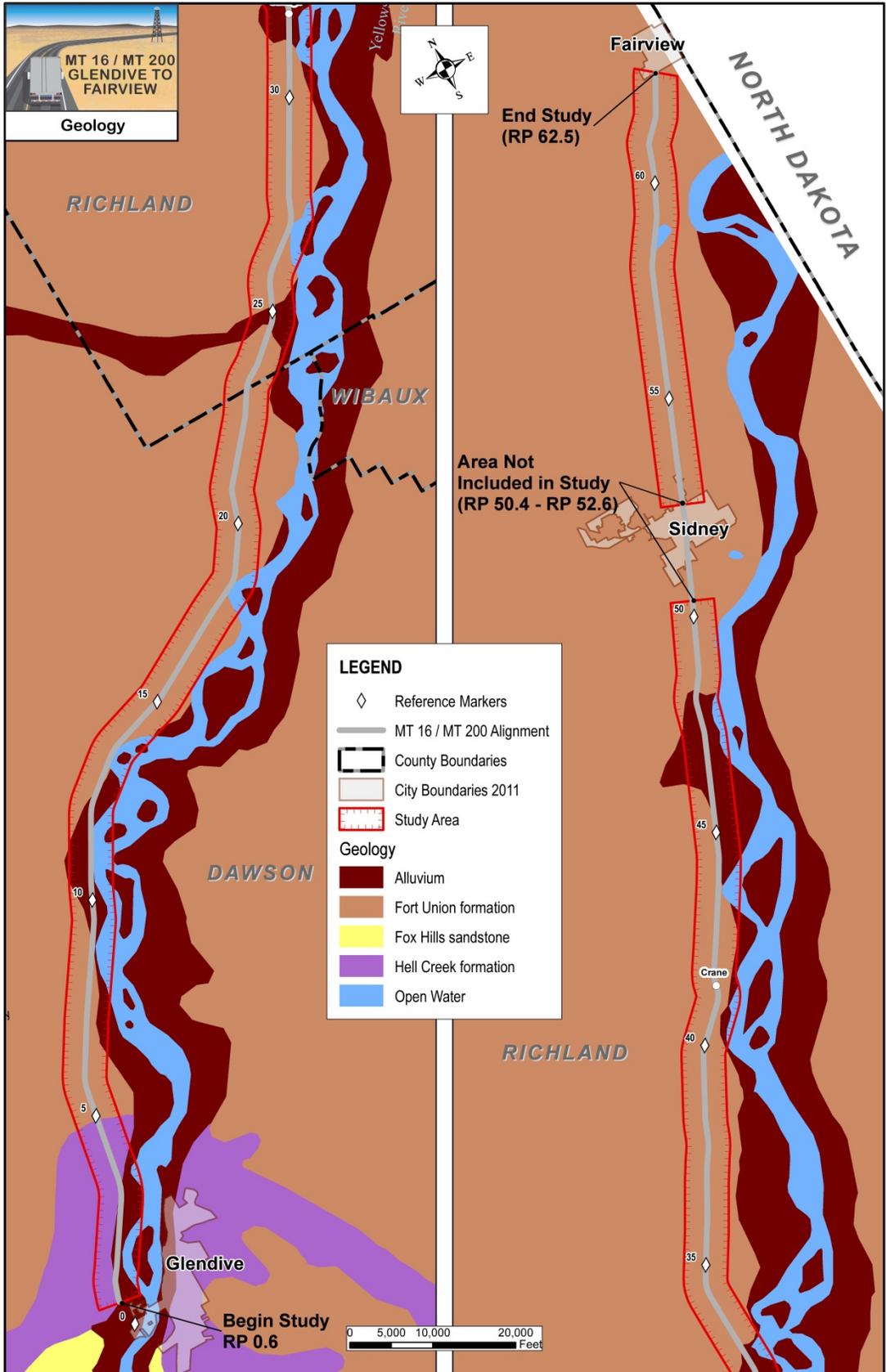
Land Ownership/Management



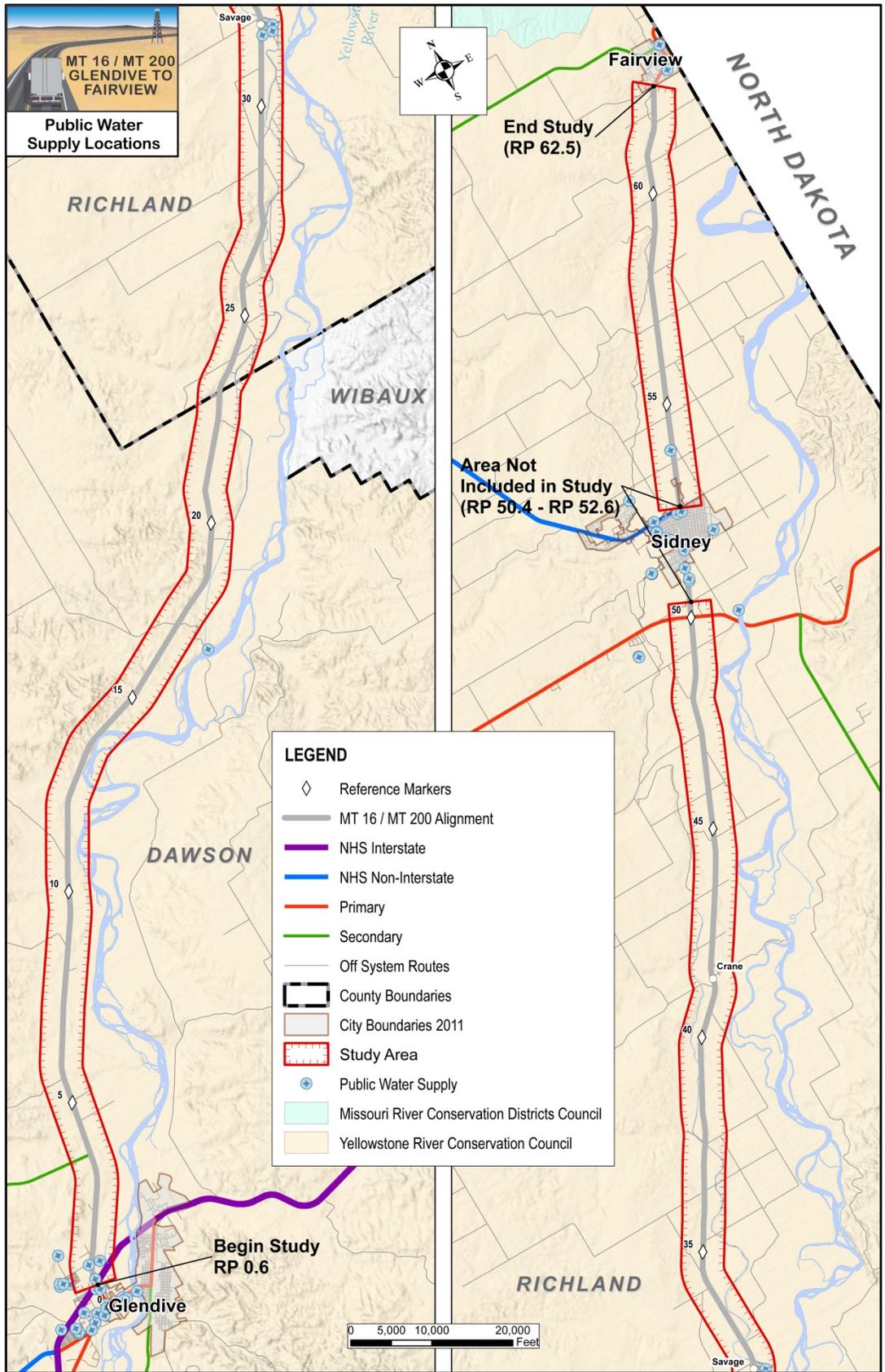
Appendix B – Farmlands



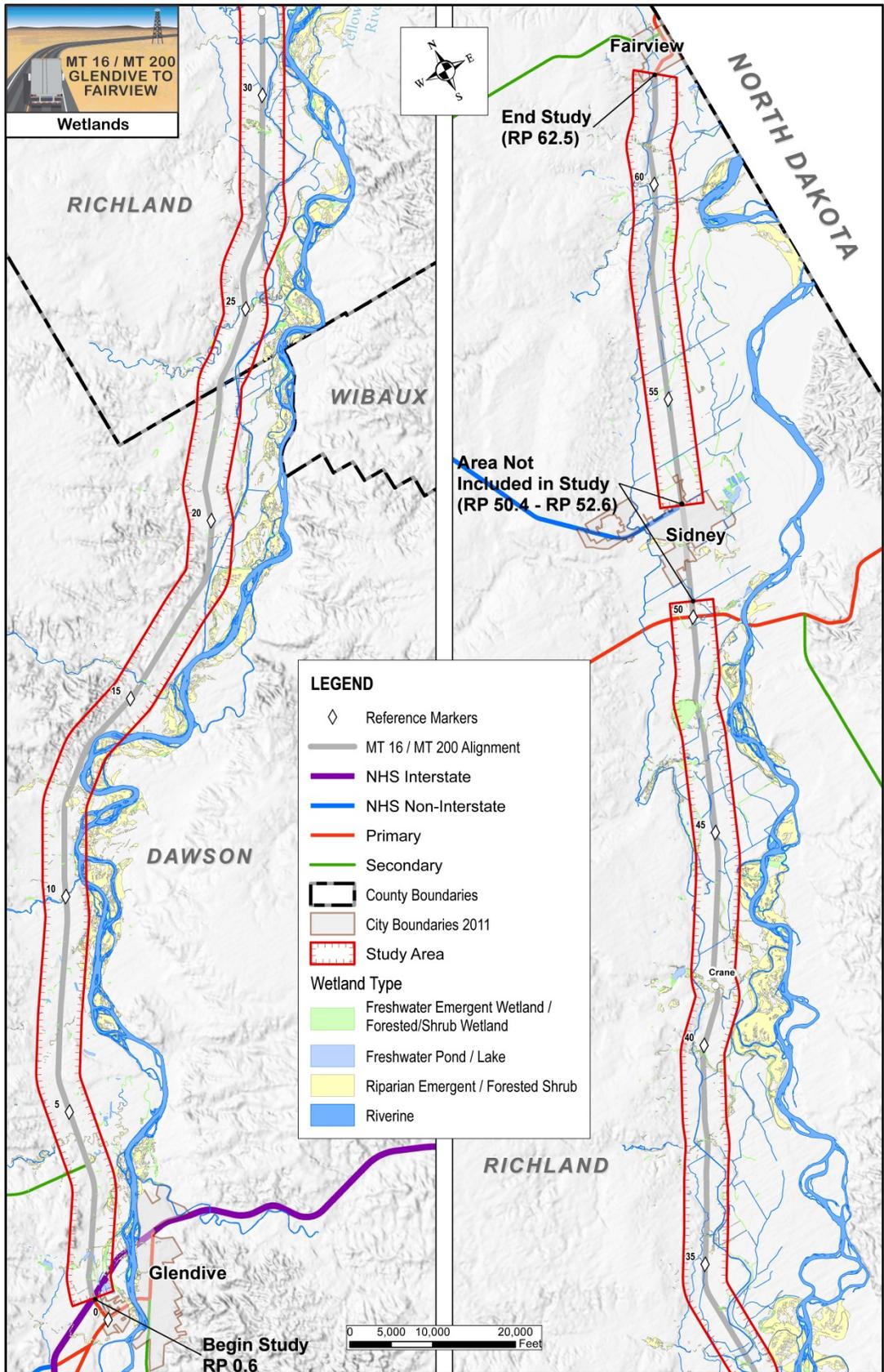
Appendix C – Geology



Appendix D – Public Water Supply Locations



Appendix E – Wetlands



Appendix F – Water Bodies and Flood Zones

Appendix G – Hazardous Materials

