



Environmental Engineering Existing Conditions Report

West of Missoula - NW

STPS 263-1(28)6

UPN 6141000

Missoula County, Montana

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Prepared for:



Prepared by:





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1 Introduction

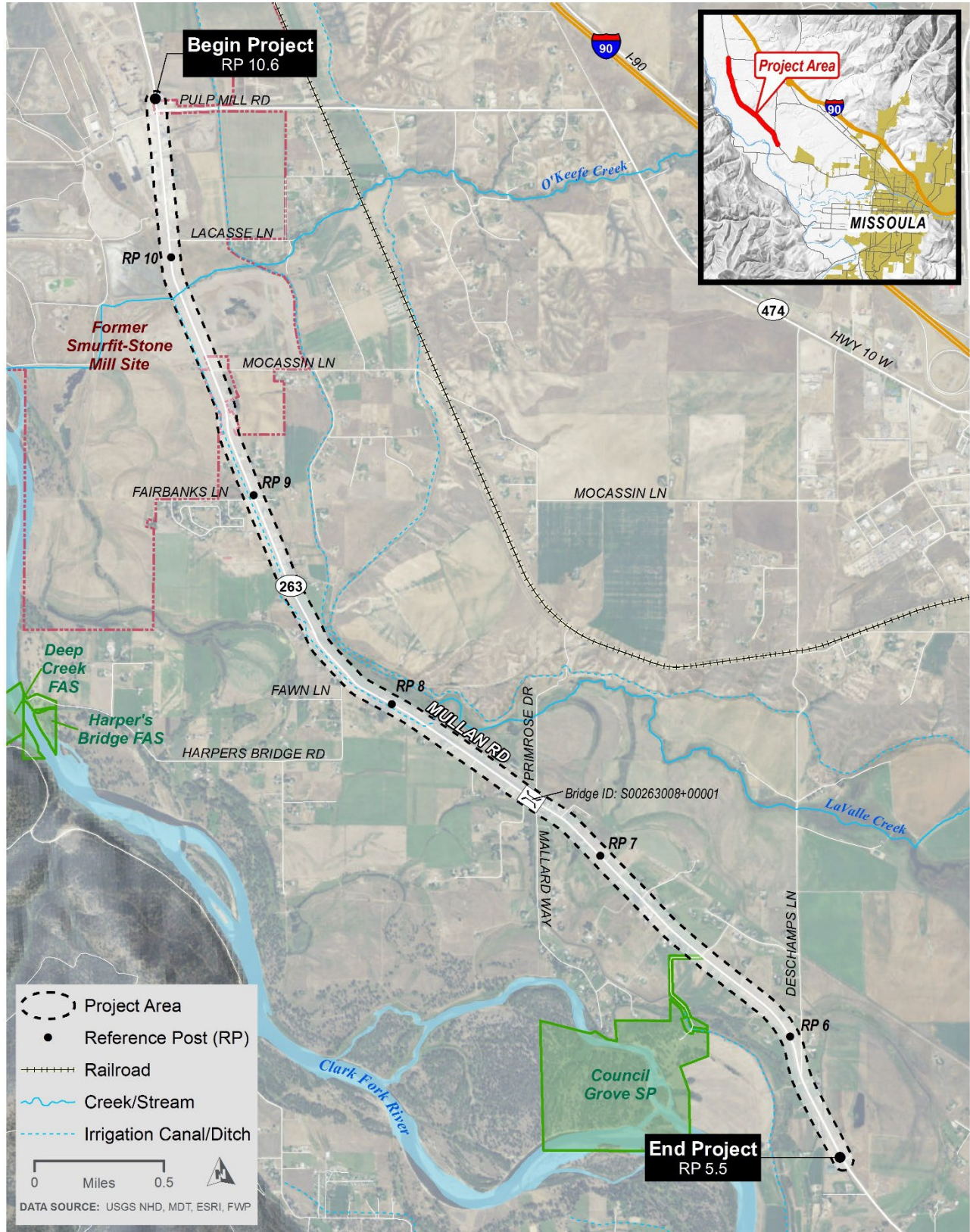
The following Environmental Engineering Existing Conditions Report provides an overview of the social and natural resources present within the West of Missoula – NW project area and assesses the proposed project’s potential impact on those resources. The analyses include identification of regulatory requirements that may affect implementation of the proposed project as well as identification of necessary avoidance, minimization, and mitigation measures. The purpose of this report is to identify early in project development which resource areas need to be investigated and which environmental analyses may be triggered by the proposed project. In general, the level of documentation and analysis included under each section of the report is commensurate with the proposed project’s scope, resources present, and the potential for impacts to that resource.

1.1 Project Description and Location

The Montana Department of Transportation (MDT), in partnership with the Federal Highway Administration (FHWA), is proposing to reconstruct Mullan Road, also known as Secondary Route 263 (S-263), beginning at reference post (RP) 5.5, approximately 0.5-mile southwest of the intersection with Deschamps Lane, and extending north to RP 10.6, just north of the intersection with Pulp Mill Road, to improve the roadway surface and overall safety of the roadway. The reconstruction would consist of widening the roadway shoulders, flattening the side slopes, improving the horizontal and vertical alignments, and upgrading the clear zone. In addition, the project would include guardrail replacement, upgraded pavement markings, signing, fencing, and the inclusion of a 10-foot-wide shared-use path for bicycle/pedestrian accommodations. The project includes replacing one existing structure spanning an irrigation canal at approximately RP 7.3. The bridge is a 23-foot-long by 28-foot-wide steel span bridge built in 1970 that would be replaced due to the condition, age, and difficulty of widening the existing structure.

A draft Environmental Engineering Existing Conditions Report was submitted to MDT on February 27, 2018; however, the report was never finalized, and project activities were subsequently placed on hold. In March 2021, MDT and Missoula County executed an agreement to add the shared-use path to the project, which will run on the north side of Mullan Road for the length of the project. The shared-use path will have a typical section of 10-foot paved surface with 2-foot shoulders utilizing 4:1 side slopes with no ditch section. Per the agreement, two bid packages will be prepared for the project including the shared-use path surfacing and pedestrian rail items as an alternate bid package. MDT has agreed to perform the grading, right-of-way acquisition, utility relocation, and culvert installation/extension as required to accommodate the shared-use path. Missoula County will be responsible to fund the surfacing and pedestrian rail components.

The project is located in Missoula County and outside the urban limits of Missoula. The project is located in Sections 4, 5, and 9 of Township 13 North, Range 20 West; Sections 30, 31, and 32 of Township 14 North, Range 20 West; and Sections 13, 24, and 25 of Township 14 North, Range 21 West, Montana Principal Meridian. The project area is approximately 251.3 acres encompassing a 200-foot buffer extending beyond both sides of the roadway centerline and is shown in Figure 1-1.



1.1.1 Project Purpose

The purpose of the proposed project is to improve the roadway surface and overall safety of the roadway by reconstructing Mullan Road to meet current MDT design standards. Within the project area, Mullan Road has substandard roadway width, side slopes, and, at certain locations, horizontal or vertical alignments. The road has a growing traffic demand and, although the average annual daily traffic (AADT) has declined since 2009, traffic volumes are expected to double in the next 20 years. The reduction in traffic volumes is partially due to the closing of the paper mill in 2010 that was located on the north end of the project limits. Traffic studies suggest that the recommended improvements will greatly decrease crashes and improve the overall safety of the road. In March 2021, the scope of the project was expanded to include a 10-foot-wide shared-use path for the length of the project.

1.1.2 Crash Analysis

A safety analysis was completed by MDT on a portion of S-263 from RP 5.5 to 10.6 for the 10-year period of January 1, 2003 to December 31, 2012. Out of the 121 crashes analyzed there were three fatal crashes and 36 injury crashes. Ninety-seven of the 121 crashes were non-intersection related. The 24 intersection crashes occurring within the study period were evenly distributed within the project limits with no specific concentrations observed. Ten of the 24 crashes were related to left-turning conflicts at both private and public approaches within the study area.

In general, the entire portion of S-263 is performing at a Level of Service of Safety (LOSS)¹ IV. This LOSS boundary indicates a high potential for crash reduction; however, the project contains two distinct segments when performing Safety Performance Function (SPF) calculations. Segment 1 is from RP 5.5 to 8.05 and Segment 2 is from RP 8.05 to 10.6. Segment 1 is performing at a LOSS III for severe crashes (fatal and injury), but it is performing at a LOSS IV for roadway departure crashes, as well as severe road departure crashes. Segment 2 is performing at a LOSS IV for severe crashes, roadway departure crashes and severe departure crashes.

2 Land Use

2.1 Existing Land Use

The project area is located west and outside of the Missoula city limits. Land uses within the project area are predominantly rural residential and agricultural uses with industrial development at the north end of the project area. There are a few commercial businesses located intermittently along the project corridor. Figure 2-1 shows the mix of property types for the 99 parcels immediately adjacent the proposed project. The property types are based on tax assessment records for Missoula County. The residential rural category accounts for approximately 57 percent of the total parcels. Farmstead rural and agricultural rural combined account for 21 percent and vacant rural accounts for approximately 10 percent of the total project area land uses.

¹ Level of Service of Safety (LOSS) – This method compares the observed crash frequency and/or severity to the mean value predicted for the reference population using a safety performance function. The difference between the two values yields a performance measure that ranges between LOSS I and LOSS IV, with LOSS I indicating a low potential for crash reduction and LOSS IV indicating a high potential for crash reduction. (FHWA 2011)

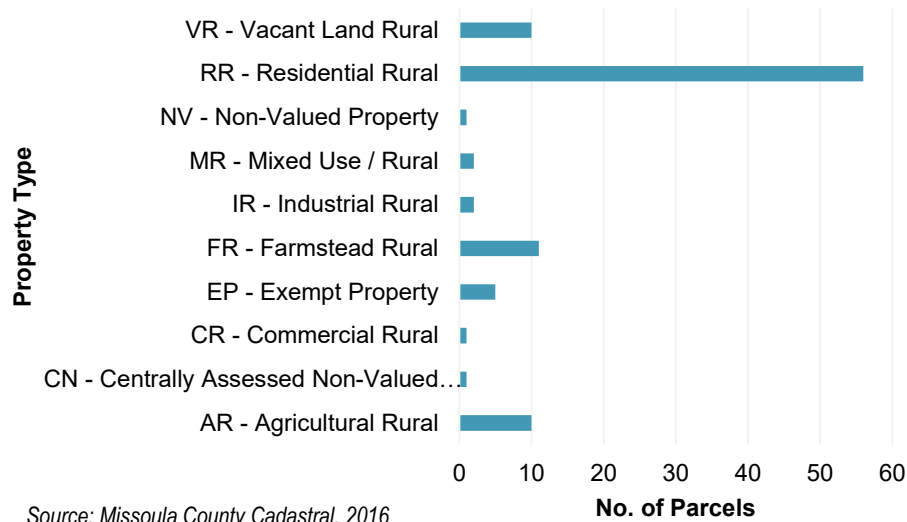


Figure 2-1. Land Uses within the Project Area

Other notable properties within the project area include Council Grove State Park owned by the Montana Fish, Wildlife, and Parks (FWP) as well as conglomerate of land parcels representing the former Smurfit-Stone Mill Site currently owned by M2Green Redevelopment LLC. Council Grove State Park is 187 acres of open space available for day use only. Only a small portion of the park parcel (0.3 acres) is located within the project area at the park’s entrance (approximately RP 6.5).

The former Smurfit-Stone Mill Site is located at the northern end of the project area and includes parcels on both sides of Mullan Road. The old mill site encompasses approximately 3,200 acres and was formerly used as a pulp mill that operated from 1957 until its closure in 2010. According to the Environmental Protection Agency (EPA), former site activities and waste disposal practices may have resulted in a release of hazardous substances into the environment. On December 12, 2013, the Smurfit-Stone Mill Site was proposed to be added to the National Priorities List (NPL). A comprehensive investigation of soils, river sediments, and ground and surface water is ongoing to determine the nature and extent of contamination at the site. More information for this site is provided in the Initial Site Assessment (ISA) form and attachments in the project file.

2.2 Induced Growth

The proposed project was assessed for its potential for project-influenced growth (e.g., increased population and/or traffic, changes in land use, etc.). Potential indirect land use effects resulting from the proposed project were evaluated consistent with the MDT publication *Assessing the Extent and Determinants of Induced Growth* (Tidd et. al. 2013) and particularly the Indirect Effects Desk Reference in Appendix 1 of the report. The guidance provides a screening process to assess a project’s potential to result in indirect changes in land use.

2.2.1 Potential Impact, Avoidance, Minimization, and Proposed Mitigation

The proposed project is a highway rehabilitation project with the overarching goal of improving safety and does not have an economic development purpose, does not increase vehicle or transit capacity, and does not involve changes in access that could affect land use. No additional travel lanes or

auxiliary lanes are being proposed. As such, the proposed project does not have potential for induced growth effects. No avoidance, minimization, or proposed mitigation is necessary with regard to induced growth.

3 Farmland

The U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) has issued regulations in 7 CFR 658 that implement the provisions of the Farmland Protection Policy Act (FPPA) requiring federal agencies to take into account the effect their programs have on the preservation of farmland. The FPPA's stated purpose is:

...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 subject to the requirements of the FPPA includes only prime or unique farmland or farmland of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forestland, pastureland, cropland or other land, but not water or urban developed land.

The proposed project is located in the fertile valley between Missoula and Frenchtown known as Grass Valley. Grass Valley has a long agricultural history and was once considered the "bread basket" of Missoula County, providing grain and livestock to the surrounding communities of Frenchtown, Huson, Lolo, and Missoula (FVLT 2017). Accordingly, soils meeting the criteria of Important Farmland are abundant in the vicinity of the project area and are shown in Figure 3-1. Table 3-1 lists the various soils types located within the project area and includes their farmland classification.

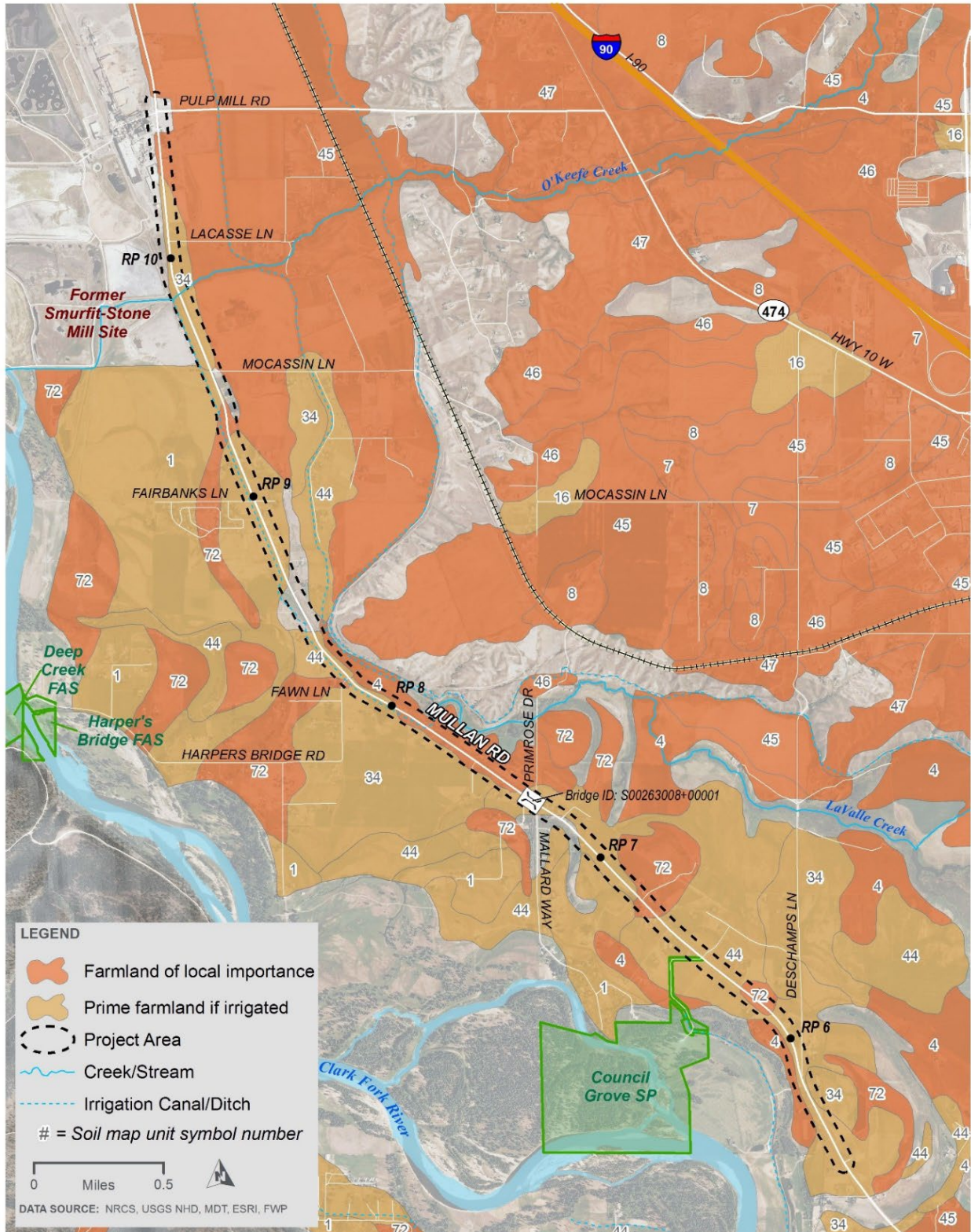


Figure 3-1. Important Farmland in the Project Area



Table 3-1. Project Area Soils and Farmland Classification

Map Unit Symbol (musym)	Map Unit Name	Farmland Classification	Acres in Project Area	Percent of Project Area (%)
1	Alberton very fine sandy loam, 0 to 2 percent slopes	Prime farmland if irrigated	34.3	13.7
4	Aquic Haploxerolls, 0 to 2 percent slopes	Farmland of local importance	32.9	13.1
6	Aquolls and Aquepts, 0 to 2 percent slopes	Not prime farmland	15.2	6.0
34	Desmet loam, 0 to 2 percent slopes	Prime farmland if irrigated	43.4	17.3
44	Grantsdale loam, 0 to 2 percent slopes	Farmland of local importance	80.8	32.2
45	Grassvalley silty clay loam, 0 to 4 percent slopes	Farmland of local importance	8.0	3.2
72	Moiese gravelly loam, 0 to 2 percent slopes	Farmland of local importance	17.3	7.1
73	Orthents, 0 to 4 percent slopes	Not prime farmland	15.3	6.1
88	Pits, gravel	Not prime farmland	3.5	1.4
TOTALS			251.3	100
TOTAL IMPORTANT FARMLAND			217.3	86.5

Source: Natural Resources Conservation Service, 2016

3.1.1 Potential Impact, Avoidance, Minimization, and Proposed Mitigation

Additional right-of-way will be needed to complete the reconstruction of the roadway. Existing right-of-way is 60 feet wide and estimated future right-of-way is anticipated to be between 150 feet to 180 feet wide, with an estimated overall right-of-way need of approximately 60 acres. New right-of-way is necessary to accommodate a future 36-foot finished top width typical section with flattened surfacing inslopes as well as to accommodate the shared-use path. Due to the anticipated right-of-way acquisition throughout the project corridor, the proposed project will result in the direct conversion of soils meeting Important Farmland classification to non-agricultural uses.

Projects resulting in the irreversible conversion of farmland, either directly or indirectly, are subject to FPPA requirements. In accordance with the FPPA, a Farmland Conversion Impact Rating for Corridor Type Projects Form (NRCS-CPA-106) was completed utilizing guidance found in the MDT Environmental Manual. Part VII of the form resulted in a total point score greater than 160 and consultation with the NRCS will occur to obtain agency input to complete the form and document the selection of the proposed design. No specific mitigation measures are anticipated as a result of NRCS consultation. The completed form and agency correspondence will be appended to the environmental document and included in the project file.

4 Socioeconomic Environment

This section presents information on the socioeconomic setting of the project area and provides a review of potential social and economic effects resulting from the proposed project. Information reported within this section is summarized from the U.S. Census Bureau (USCB) American Community Survey (ACS) 2014-2019 5-Year Estimates (USCB 2021a). The project area is located

in the southeast corner of USCB Census Tract 16. General demographic statistics for Census Tract 16 are presented in Table 4-1 and the Tract 16 geography relative to the project area is shown in Figure 4-1. Census Tract 16 encompasses a large area that includes the towns of Frenchtown, Huson, and Evaro. For discussion purposes statistics for Census Tract 16 are assumed to be reflective of the general conditions of the project area; however, information reported in this section may not be entirely representative of the conditions within the immediate project area.

Table 4-1. Population Statistics for the Project Area, County and State, 2019

	Tract 16	Missoula County	State of Montana
Population	7,555	117,309	1,050,649
Race			
One Race	7,251	113,228	1,018,488
White	6,950	107,417	930,204
Black or African American	61	751	5,303
American Indian or Alaska Native	78	2,355	66,839
Asian	141	2,174	8,259
Native Hawaiian or Pacific Islander	0	79	807
Some other race	21	452	7,076
Total Housing Units	3,113	53,955	510,180
Occupied Units	2,943	49,313	427,871
Vacant Units	170	4,642	82,309

Source: U.S. Census Bureau, 2019 Census

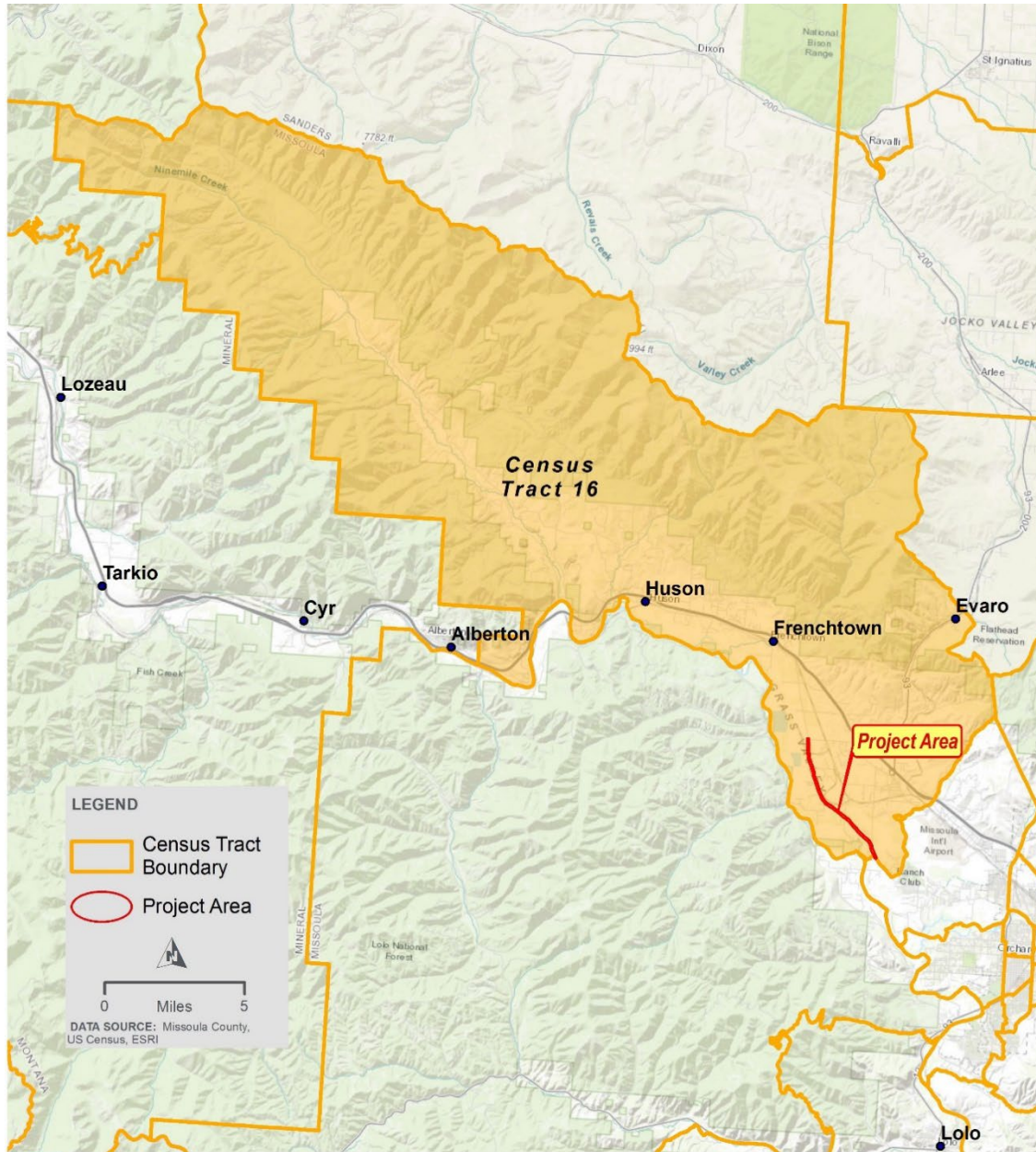


Figure 4-1. Project Area and Census Tract 16

4.1 Environmental Justice

Title VI of the United States Civil Rights Act of 1964, as amended (USC 2000(d)) and Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, require that no minority or low-income population shall be disproportionately adversely impacted by any federally funded project. As it relates to transportation projects, this means that no particular minority or low-income population may be disproportionately isolated, displaced, or otherwise subjected to adverse effects.

Information obtained from the ACS 2014-2019 5-Year Estimates on poverty levels and race and ethnicity for Census Tract 16 were compared to similar statistics for the City of Missoula, Missoula County, and the State of Montana and is presented in Table 4-2.

According to the ACS, Census Tract 16 contains a lower percentage of low-income populations (6.5 percent) living at or below the poverty line as compared to the City of Missoula (17.5 percent), Missoula County (14.3 percent), and the State of Montana (13.1 percent). Similarly, Census Tract 16 has a lower percentage of minority populations (8.0 percent) as compared to the City of Missoula (15.6 percent), Missoula County (8.4 percent), and the State of Montana (11.5 percent).

**Table 4-2. Low-Income and Minority Percentages
 For the Project Area, City, County and State, 2014-2019**

Geography	Percentage (%) of People Whose Income in the Past 12 Months is Below the Poverty Level	Percentage (%) of Minority Population (Non-White)
Census Tract 16	6.5	8.0
City of Missoula CCD ¹	17.5	15.6
Missoula County	14.3	8.4
State of Montana	13.1	11.5

Source: U.S. Census Bureau, American Community Survey (ACS) 2014-2019 5-Yr Estimate, 2021
¹ CCD = A Census County Division is a subdivision of a county used by the US Census Bureau for the purpose of presenting statistical data.

4.1.1 Potential Impact, Avoidance, Minimization, and Proposed Mitigation

Based on a review of available information, Census Tract 16 and the project area contain lower percentages of low-income and minority populations than the City of Missoula, Missoula County, and statewide. Because of this fact and due to the nature of the proposed project, no impact on any low-income or minority population is anticipated. New right-of-way is anticipated for the project and currently a single residential relocation is anticipated. Although the project does not directly impact the residential structure, the proposed right-of-way would encroach on the structure and relocation has been identified as the best solution. Despite this single relocation, the proposed project is not anticipated to result in disproportionately high or adverse human health and environmental effects on low-income or minority populations. No avoidance or minimization measures or proposed mitigation are proposed. See Section 4.3.1 for more information on the anticipated relocation.

4.2 Economic

The City of Missoula, the county seat and largest city in Missoula County, has a diverse economy that is widely influenced by the University of Montana as well as the regional medical centers of St. Patrick Hospital and Community Medical Center. In recent years, and prior to the Covid-19 pandemic, the economy has strengthened, and unemployment in Missoula County decreased from 3.9 percent in 2016 to 3.3 percent in 2019, however, it increased to 6.3 percent in 2020 (DLI 2021).

Table 4-3 provides information on employment by sector for the project area vicinity (Census Tract 16) and the city, county and state. The following are observations from a review of the ACS data:

- Census Tract 16 has a higher percentage of employment in the fields of construction; manufacturing; wholesale trade; transportation, warehousing, and utilities; and finance and insurance, and real estate/rental/leasing than all other geographies.

- Census Tract 16 has a lower percentage of retail trade; information; educational services, and health care and social assistance; arts, entertainment, and recreation, and accommodation and food services; and public administration than all other geographies.

Table 4-3. Percent of Population Employed by Industry (%) For the Project Area, City, County and State, 2014-2019

Industry	Percent of Population Employed by Industry (%)			
	Census Tract 16	City of Missoula CCD	Missoula County	State of Montana
Agriculture, forestry, fishing and hunting, and mining	6.5	2.4	3.0	7.5
Construction	11.5	5.5	6.6	8.6
Manufacturing	9.9	3.3	4.9	5.7
Wholesale Trade	4.6	2.9	3.3	2.8
Retail Trade	6.1	13.4	11.4	11.0
Transportation and warehousing, and utilities	12.0	5.9	7.3	5.9
Information	1.0	2.9	2.6	1.7
Finance and insurance, and real estate/rental/leasing	7.4	6.5	6.3	6.5
Professional, scientific, and management, and administrative and waste management services	8.5	12.2	10.9	8.4
Educational services, and health care and social assistance	18.7	26.8	25.1	22.3
Arts, entertainment, and recreation, and accommodation and food services	3.6	11.0	9.3	7.5
Other services, except public administration	7.2	2.9	4.1	4.2
Public administration	3.0	4.4	5.0	7.8
TOTAL EMPLOYMENT	3,254	24,158	38,846	340,414

Source: U.S. Census Bureau, American Community Survey (ACS) 2014-2019 5-Yr Estimate, 2021

The proposed project is located west of Missoula city limits and within Missoula County in a predominantly rural residential and agricultural setting. In general, outside of agricultural uses and hay production, there is minimal commercial activity along the project area corridor. A windshield survey of project area businesses in 2018 identified an auto body shop, nursery, and sign company.

The former Smurfit-Stone Mill Site is located at the northern limits of the project area and south of Frenchtown. Covering approximately 3,200 acres, this site was formerly a pulp mill employing approximately 400 workers before closing in 2010. The site currently sits vacant. Previous

investigations have evaluated the site for the presence of dioxins/furans, heavy metals, and polychlorinated biphenyls (PCBs) in surface and subsurface soils, groundwater, surface water, and waste material. Based on the results of the previous investigations, the site is currently proposed for listing on the EPA's NPL as a Superfund site.

Table 4-4 presents information on the median household incomes reported by ACS for the project area vicinity and the city, county, and state. As shown, the median household income for Census Tract 16 is well above the median household incomes for the city, county and state.

**Table 4-4. Median Household Income (\$)
For the Project Area, City, County and State, 2011-2015**

Geography	Median Household Income (\$)
Census Tract 16	69,681
City of Missoula CCD	47,426
Missoula County	54,062
State of Montana	54,970

Source: U.S. Census Bureau, American Community Survey (ACS) 2014-2019 5-Yr Estimate, 2021

4.2.1 Potential Impact, Avoidance, Minimization, and Proposed Mitigation

No long-term adverse economic effects are anticipated due to implementation of the proposed project. Minor disruption of local traffic patterns is likely during construction. Single lane closures as well as temporary detours for structure and hydraulic upgrades are anticipated during construction while maintaining access to adjacent properties. Traffic control is not anticipated to result in adverse economic effects. No relocations of businesses or farming operations is anticipated due to the proposed project.

The proposed project is likely to have minor, short-term beneficial impact on the local economy and income. Reconstruction of the highway may result in direct and indirect temporary employment opportunities for local and regional workers and short-term increased spending benefiting the local economy. Economic benefits could also occur through the purchase of construction materials, some of which, such as concrete and paving materials, would be locally available in Missoula County.

4.3 Social

The population of the City of Missoula was estimated to have grown at a faster rate than Missoula County and state over the past 10 years. The U.S. Census Bureau estimates the 2019 population of the City of Missoula at 75,516. This represents a 12.1 percent change from 2010 when the population was estimated at 67,358 (USCB 2021b). By comparison, over the same period of 2010 to 2019, Missoula County and the state grew 9.4 percent and 8.0 percent, respectively.

Mullan Road, or S-263, is functionally classified as a major collector. Mullan Road from RP 5.5 to 10.6 had an annual average daily traffic (AADT) in 2017 of 1,670. Traffic projections show modest traffic growth up to the design year of 2041 when AADT is estimated to be 2,390. Mullan Road's typical cross section includes two 12-foot lanes (24-foot total width) and no shoulders. As such, there is currently limited bicycle and pedestrian access on the roadway due to the narrow or non-existent

shoulder. Based on the projected traffic volumes and to meet current design standards, it is recommended that 6-foot shoulders are added to increase the roadway total paved width to 36 feet. Substantial new right-of-way will be required to accommodate the proposed roadway widening. Per the Preliminary Field Review Report, an estimated 60 acres of additional right-of-way may be necessary, and, with the more recent addition of the shared-use path, this number has likely increased.

Two churches are located at the southern end of the project area. No public schools are located within the project area limits. One public park, Council Grove State Park, is located at approximately RP 6.5.

4.3.1 Potential Impact, Avoidance, Minimization, and Proposed Mitigation

No long-term adverse social impacts are anticipated due to implementation of the proposed project. Because of the project area's rural setting, the proposed project would not adversely affect neighborhood character or community cohesion. New right-of-way will be required. The proposed project will likely require the removal of some privately owned structures (e.g., barns, sheds) located immediately adjacent the proposed ROW and construction limits. The proposed project is anticipated to require the relocation of one residence and the removal of one abandoned structure. All right-of-way acquisition, and relocations if necessary, would be developed in accordance with both the *Uniform Relocation Assistance and Real Property Acquisition Act of 1970*, and the *Uniform Relocation Act Amendments of 1987*. Additional individual property impacts are anticipated that could include tree removal, impacts to existing landscaping, and modifications of driveways and approaches. The project will involve substantial additional outreach to affected property owners as the project progresses.

The proposed project is anticipated to have beneficial impacts on the social environment due to the safety improvements achieved by building a facility to current design standards. The proposed roadway improvements are intended to reduce the crash rate and crash severity within the project limits. Enhancements of non-motorized safety and mobility would be achieved by providing the 10-foot-wide shared-use path within the project limits.

5 Visual Quality and Aesthetics

The proposed project is located within level terrain with views dominated by rural farmsteads, cultivated and grazing land, and rural residential structures typically set back from the roadway on large lots throughout the project corridor. Views of the Bitterroot Range to the south and west are visible throughout the project corridor. The roadway is generally narrow with minimal to no shoulders and frequent horizontal curves. Overhead utilities parallel the roadway for the length of the corridor. Near the northern limits of the project area, the buildings and infrastructure associated with the former Smurfit-Stone Mill Site change the character of the project area to more of an industrial setting.

5.1.1 Potential Impact, Avoidance, Minimization, and Proposed Mitigation

No adverse visual impacts are anticipated due to the proposed project and reconstruction of the roadway. Roadway widening to include 6-foot shoulders and slope modifications as well as the shared-use path will change the immediate visual character of highway corridor. Some existing vegetation and trees immediately adjacent the roadway will need to be removed to accommodate the reconstructed roadway; however, these instances are infrequent in the corridor and would not negatively impact the overall character or aesthetics of the highway. The proposed project would not impact any aesthetically valuable visual resources such as geologic features, parks or recreation areas, water bodies, or public facilities.

6 Section 4(f)

Section 4(f) of the Department of Transportation Act of 1966 was enacted to protect publicly owned parks, recreation areas, wildlife and waterfowl refuges, and public and private historic sites of local, state, and national significance. Federally funded transportation projects cannot impact Section 4(f)-protected properties unless there are no feasible and prudent avoidance alternatives and all possible planning to minimize harm has occurred. The following sections describe the historic and recreational features and properties located within the project area that are likely protected under Section 4(f).

6.1 Historic Sites

Section 106 of the National Historic Preservation Act 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 and archaeological properties that could be affected by the undertaking; assess the effects of the project; and investigate methods to avoid, minimize, or mitigate adverse effects on historic properties. These historic resources properties, if either listed on or eligible for the National Register of Historic Places (NRHP), are also generally afforded protection under Section 4(f).

A cultural resource report entitled, “Results of a Cultural Resources Inventory of the Montana Department of Transportation’s West of Missoula – Northwest Project Area, Missoula County, Montana” was completed by Hagen Historical Consulting in October 2021. The inventory utilized the previously described 400-foot-wide project area as the Area of Potential Effect, or APE. The October 2021 study updated the inventories of three previously recorded resources: the Beebe-Dussault house at 10300 Mullan Road (24MO0295); the Frenchtown Irrigation District Canal (24MO0789); and the abandoned railroad grade of the Chicago Milwaukee St. Paul & Pacific Railroad (24MO0713). All three of these sites have been determined eligible for listing in the NRHP. In addition, the study recorded and evaluated another eleven properties within the APE that date to the historic period and had never been inventoried. An overview of these sites is depicted on Figure 6-1 and a site summary and NHRP eligibility recommendations resulting from the study are provided in Table 6-1.

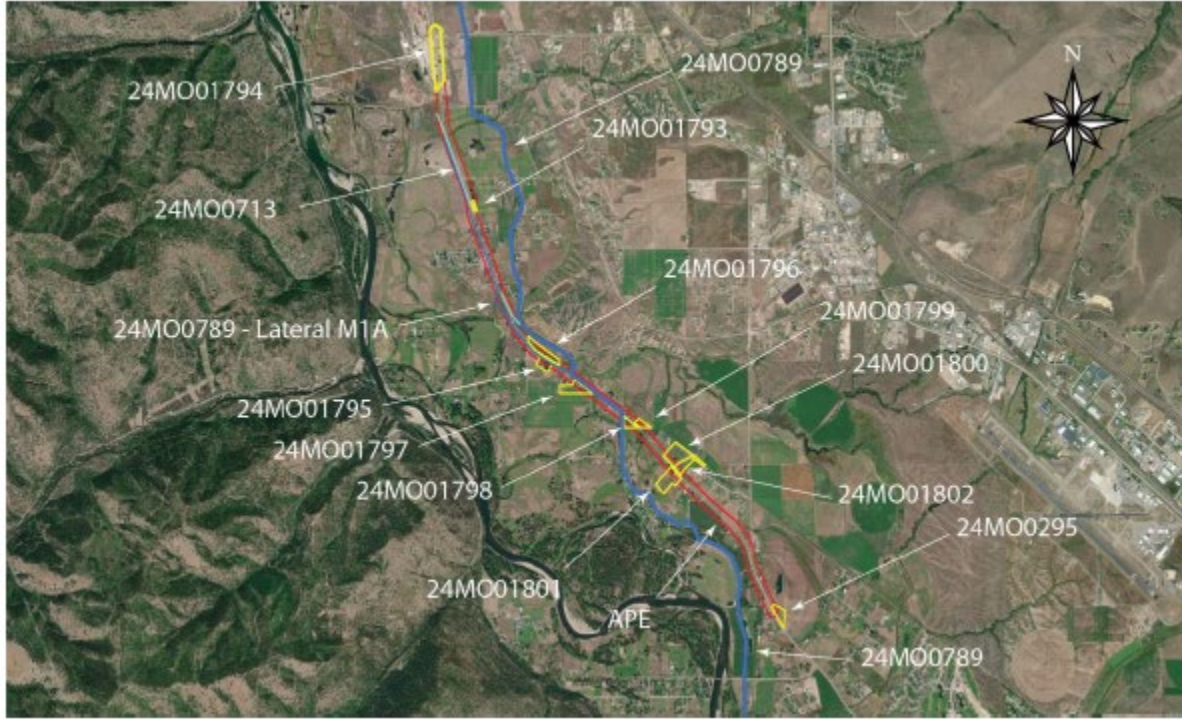


Figure 6-1. Historic Resources Inventoried in the Project Area (Source: Hagen Historical Consulting)

Table 6-1. Cultural Resources Inventory Site Summary and NRHP Eligibility Recommendations

Site Number	Address	NRHP Eligibility Recommendation
24MO0295*	10300 Mullan Road	Eligible, Criteria A & C (poss. B)
24MO0713*	Chicago, Milwaukee & St. Paul Railway grade	Eligible, Criteria A
24MO0789*	Frenchtown Irr. Dist. Canal	Eligible, Criteria A
24MO01802	11450 Mullan Road	Ineligible
24MO01801	11451 Mullan Road	Eligible, Criterion A
24MO01800	11600 Mullan Road	Ineligible
24MO01799	11950 Mullan Road	Ineligible
24MO01798	12025 Mullan Road	Ineligible
24MO01797	12705/12795 Mullan Road	Eligible, Criterion A
24MO01796	13000 Mullan Road	Ineligible
24MO01795	13225 Mullan Road	Eligible, Criterion A
24MO01793	14520 Mullan Road	Ineligible
24MO01794	14337 Pulp Mill Road	Ineligible

* Previously inventoried properties
 Source: Hagen Historical Consulting, Oct. 2021

6.1.1 Potential Impact, Avoidance, Minimization, and Proposed Mitigation

Preliminary results and NRHP eligibility recommendations for the previously unrecorded properties are presented in Table 6-1 above. The cultural resource report was provided to the State Historic Preservation Office (SHPO) on December 6, 2021 and, in a letter dated December 14, 2021, the SHPO concurred with all eligibility recommendations as identified in Table 6-1.

An Effect Determination for the project has not been made by MDT. The proposed project is not anticipated to adversely impact any of the previously identified NRHP-eligible sites. Site 24MO0295 (10300 Mullan Road) is located at the extreme southern limits of the project area and neither the structure nor property are within the anticipated construction limits and therefore no impact would occur. The proposed project intersects Site 24MO0789, the Frenchtown Irrigation District Canal (and laterals), at several locations throughout the project corridor. At the majority of the ditch crossings the existing culvert would be extended or replaced depending on condition. The Frenchtown Irrigation District Canal crosses the project at approximately RP 7.3 under an existing bridge that is planned to be replaced by this project. The existing bridge structure (built in 1970) is recommended for replacement due to the condition, age, and difficulty of widening the existing bridge. For all the ditch crossings, the historic function of the ditch would not be impacted by the proposed project: the existing ditch alignment would be perpetuated, there would be no diminution in the amount of water being conveyed by the ditch, and no change in the areas currently being irrigated by the ditch.

New right-of-way acquisition is anticipated for the properties that include Sites 24MO01795, 24MO01797, and 24MO01801. Based on the alignment and grade plans, an additional width of right-of-way ranging from 13 feet to a maximum of 40 feet will be necessary from these properties. Impacts to the properties would involve modifications to driveways, fence/gates, and landscaping (including tree removal). For Site 24MO01801, a shed closest to the highway would be within new right-of-way and will likely need to be removed.

An Effect Determination will be made by MDT and results from the forthcoming SHPO consultation will be incorporated into the environmental review process as the information becomes available. Potential impacts on historic sites will continue to be avoided and minimized to the greatest extent practicable as design progresses. Resolution of potential adverse effects would follow MDT's established procedures as detailed in the Environmental Manual and in accordance with Section 106.

Additional coordination between MDT and FHWA is necessary to determine whether the impacts to the NRHP-eligible historic sites result in a "use" of a Section 4(f) property. Presently, it is not anticipated that a full Section 4(f) evaluation will be necessary. A *de minimis* impact determination (made separately for each Section 4(f) resource) may be appropriate and would be based on findings made in the Section 106 consultation process. A *de minimis* impact determination can be made if the following conditions are met:

- FHWA has determined, through Section 106 consultation, that the proposed project will have no adverse effect on the historic site; and
- The SHPO has concurred in writing in FHWA's finding of no adverse effect.

The anticipated impacts to the Frenchtown Irrigation District Canal likely meet the *de minimis* criteria. The applicability of a *de minimis* determination on Sites 24MO01795, 24MO01797, and 24MO01801 will be determined during the Section 106 consultation with SHPO.

6.2 Public Park, Recreation Lands, and Wildlife and Waterfowl Refuges

Section 4(f) applies to publicly owned public parks, recreation areas, and wildlife or waterfowl refuges. There is one publicly owned park and recreational resource within the project area that is subject to protection under the provisions of Section 4(f), as describe below:

- **Council Grove State Park**, owned and operated by the FWP, is 187 acres of open space situated on the Clark Fork River. The state park includes a picnic area, restroom, visitor information exhibit, and interpretive exhibit. FWP designates a single trail, Monument Trail, which is a 0.1-mile in length accessing a river meander of the Clark Fork River (see Figure 6-2 for the FWP trail map). The park is setback from the highway and accessed via Council Grove Park Road, located at approximately RP 6.5. The park entrance is approximately 0.4-mile from Council Grove Park Road's intersection with Mullan Road. Approximately 0.3-acre of the park parcel that includes approximately 250 feet of the park access road is located within the project area. Figure 6-3 shows a west-facing view of the 200-ft-wide project area and the overlapping area of the state park.

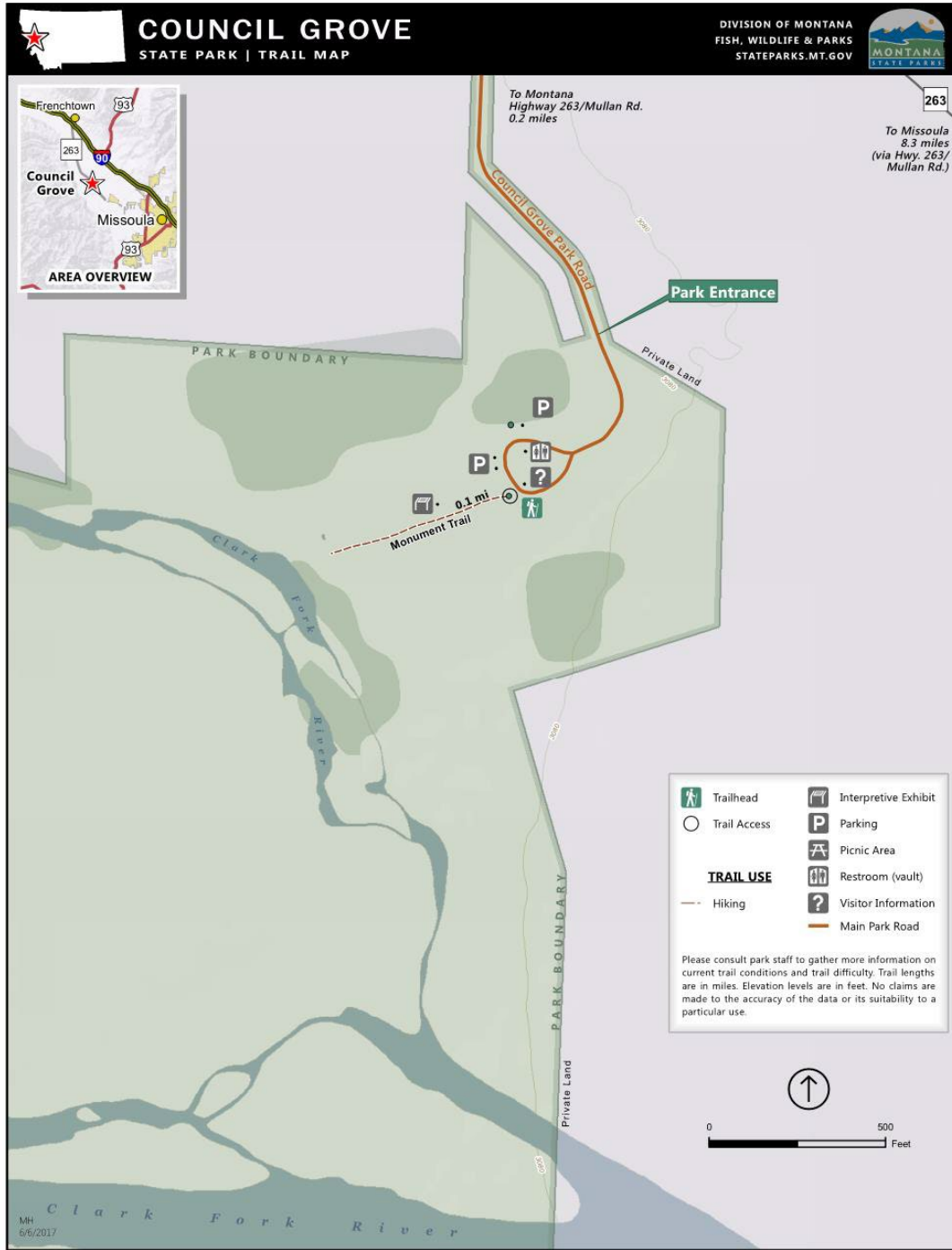


Figure 6-2. FWP Council Grove State Park Trail Map



Figure 6-3. FWP Council Grove State Park Boundary

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 Section 4(f) resource. A “use” can occur when land is permanently incorporated into a transportation facility or when there is a temporary occupancy of the land that adversely effects a Section 4(f) resource. A temporary occupancy of a Section 4(f) property can include right-of-entry, project construction, a temporary easement, or construction permit. To avoid a “use”, temporary occupancy cannot result in a change of ownership of the property, long-term disruptions of use, or permanent adverse physical impacts. 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.”

6.2.1 Potential Impact, Avoidance, Minimization, and Proposed Mitigation

The proposed project is not anticipated to “use” any property from a public park, recreation lands, or wildlife and waterfowl refuges protected under Section 4(f). The proposed project is not anticipated to require permanent right-of-way from Council Grove State Park property owned by FWP.

The project team will avoid a temporary “use” of Council Grove State Park to the greatest extent practicable. In accordance with 23 CFR 774.13(d), if temporary “use” is necessary MDT would assess the action to determine if an exception would apply and temporary occupancy would not result in a “use” of a Section 4(f) site. As the project progresses and limits of temporary easements are identified, the project team will coordinate with FWP (official with jurisdiction) as necessary and in accordance with Section 4(f) regulation.

7 Land and Water Conservation Fund Section 6(f)

The National Land and Water Conservation Fund Act (LWCF) was enacted to preserve, develop, and assure the quality and quantity of outdoor recreation resources. Section 6(f) of the LWCF provides funding through grants to local and state governments for buying or developing public use recreational lands. Section 6(f)(3) of the Act provides that:

“...No property acquired or developed with assistance under this section shall, without prior approval of the Secretary [of the Interior], be converted to other than public outdoor recreation uses. The Secretary shall approve such conversion only if he finds it to be in accord with the then existing comprehensive Statewide outdoor recreation plan and only upon such conditions as he deems necessary to assure the substitution of other recreation properties of at least equal fair market value and of reasonably equivalent usefulness and location.”

Where MDT projects result in conversion of land acquired or developed using LWCF funding, they must comply with the requirements of Section 6(f) that require replacement property of equal or greater value and similar usefulness and location as the converted property in accordance with 36 CFR 59.3.

7.1 Section 6(f) Properties in the Project Area

The FWP LWCF Sites by County (FWP 2021) was reviewed to identify projects receiving LWCF funding located within the project area vicinity. Table 7-1 lists the LWCF sites in and adjacent to the project area.

Table 7-1. LWCF Sites within the Project Area Vicinity

Project Number	Site Name	Sponsor	Sponsor Type	Project Type	Amount
30-00464	Council Grove SP	Missoula County	County	Development	\$53,910.50
30-00524	Council Grove SP	Missoula County	County	Development	\$8,630.81

Source: MT Fish, Wildlife, & Parks, 2021

Council Grove State Park is listed under two separate “development” projects receiving a total of \$62,541.31 of LWCF funds.

7.1.1 Potential Impact, Avoidance, Minimization, and Proposed Mitigation

The project as currently proposed is not anticipated to result in the permanent conversion of any LWCF properties. The proposed project would have no impact on Council Grove State Park. No avoidance or minimization measures or proposed mitigation is currently necessary.

8 Surface Waters and Wetlands

The Clean Water Act (CWA) establishes the framework for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The U.S. Army Corps of Engineers (USACE), Montana Regulatory Offices, administer and enforce Section 404 of the CWA in Montana for the Omaha District. Under CWA Section 404, a permit is required for the discharge of dredged or fill material into waters of the United States including wetlands.

Surface water resources, including wetlands, were investigated through a combination of literature and database review and on-site field investigation. HDR staff conducted field investigations in the project area on September 18, 19, 26 and 28, 2017. Results of the surface water resource investigation are shown in Figure 8-1.

Waterways were delineated in accordance with the USACE *Regulatory Guidance Letter No. 05-05 Ordinary High Water Mark Identification* (USACE 2005). Following USACE guidance, the OHWM was based on observation of physical characteristics on the shore of the river within the project area vicinity to ascertain the lateral limits of USACE jurisdiction. The physical characteristics used in identifying the OHWM included identifiers such as presence of litter and debris, wracking, scour, changes in character of soil, changes in plant community, among others. Where the waterways were accessible through legal rights-of-way and landowner consent, observation points were taken using a sub-meter accuracy GPS and correlated to the topographic survey and high-resolution aerial imagery to identify OHWM within the project area.

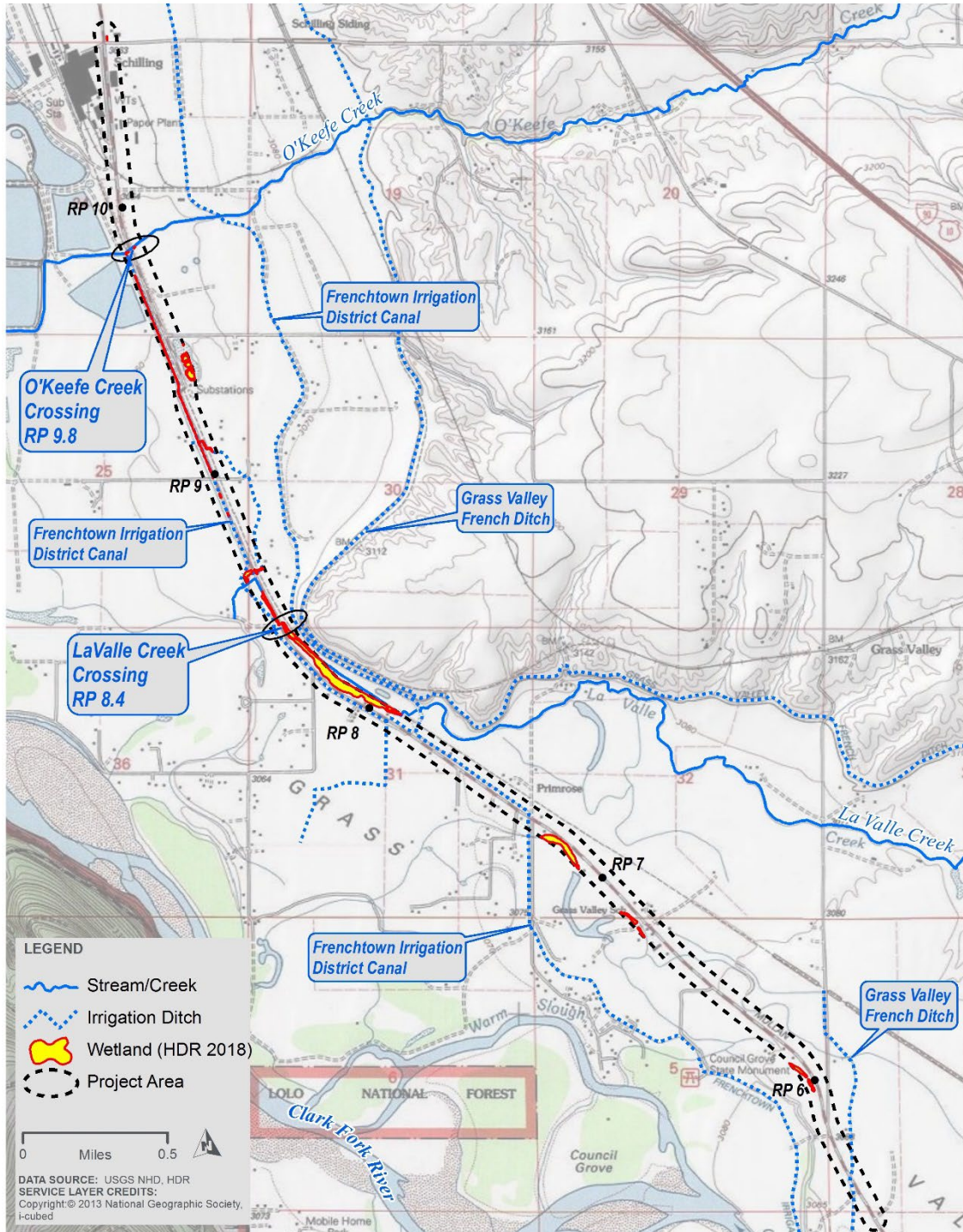


Figure 8-1. Surface Waters and Wetlands

8.1 Surface Waters and Irrigation

Two perennial streams are located in the project area:

- LaValle Creek, crossing the project area at RP 8.4; and
- O'Keefe Creek, crossing the project area at RP 9.8.

LaValle Creek is a perennial stream that is well defined in the upstream reaches above the project area. LaValle Creek crosses beneath Mullan Road through a single 36-inch CMP culvert at approximately RP 8.4. Just upstream of the Mullan Road crossing, LaValle Creek is intercepted by the Frenchtown Irrigation District Canal (also referred to as Primrose Irrigation Canal) and LaValle Creek passes beneath the canal. Downstream of the canal, the stream form has been manipulated to straight and narrow. The LaValle Creek floodplain can be described as a flat agricultural prairie and grassland. LaValle Creek is a right bank tributary to the Clark Fork River with its mouth located just downstream of the Mullan Road crossing. LaValle Creek flows in a southwesterly direction with an approximate slope of 8 ft/mi (0.2%) through the project reach.

O'Keefe Creek is a perennial stream that is well defined in the upstream reaches above the project area. O'Keefe Creek crosses beneath Mullan Road through three 36-inch CMP culverts at approximately RP 9.8. Similar to LaValle Creek, just upstream of the Mullan Road crossing at RP 9.8, O'Keefe Creek passes beneath the Frenchtown Irrigation District Canal. Downstream of the irrigation crossing, O'Keefe Creek has been manually straightened to its confluence with the Clark Fork River. Within the project limits, the O'Keefe Creek floodplain can be described as a flat agricultural prairie and grassland. O'Keefe Creek is a right bank tributary to the Clark Fork with its mouth located just downstream of the Mullan Road crossing. O'Keefe Creek flows in a southwesterly direction with an approximate slope of 34 ft/mi (0.6%) through the project reach.

Both LaValle Creek and O'Keefe Creek are relatively permanent water bodies (RPW) that flow into the Clark Fork River, a traditionally navigable water (TNW). Because of their significant nexus to a TNW, both creeks are therefore considered as waters of the U.S., thus falling under the jurisdiction of the USACE under Section 404 of the CWA. Neither creek has been assessed by DEQ for impairment and neither are identified as impaired per the 303(d) list.

There are two primary irrigation ditches located in the project area vicinity: the Frenchtown Irrigation District Canal and the Grass Valley French Ditch. These main ditches and their laterals cross the project in several locations. The USGS National Hydrography Dataset and the Water Resources Survey for Missoula County (State Engineers Office 1960) were reviewed to identify and map the features, as shown in Figure 8-1.

The Frenchtown Irrigation District was established in 1934. The district's main canal diverts from the right bank of the Clark Fork River in the SE1/4SE1/4 of Section 8, Township 13N, Range 20W. The overall length of the Frenchtown Irrigation District canal is approximately 16 miles with an estimated carrying capacity of 85 cubic feet per second (cfs). The ditch follows a northwesterly direction and supplies irrigation water to approximately 2,970 acres (State Engineers Office 1960).

The Grass Valley French District Company was established in 1901. The company's ditch diverts from the right bank of the Clark Fork River in NE1/4SE1/4 of Section 22, Township 13N, Range 20W. The overall length of the Grass Valley French Ditch is 13.5 miles with an estimated carrying capacity of 100 cfs. The ditch follows a northwesterly direction and supplies irrigation water to approximately 3,055 acres (State Engineers Office 1960).

8.1.1 Potential Impact, Avoidance, Minimization, and Proposed Mitigation

The proposed project will require relocation of irrigation ditches at various locations throughout the project area where ditches conflict with the proposed roadway improvements and shared-use path. Horizontal alignment shifts, slope flattening, shoulder width additions, and the shared-use path are project features that will likely require the extension or full replacement of drainage and irrigation

culverts under Mullan Road. The project includes replacing the existing bridge structure spanning the Frenchtown Irrigation District Canal at RP 7.3 due to the condition, age, and difficulty of widening the existing bridge. Efforts would be made during the design phase to minimize impact on existing irrigation ditches and structures. Work would likely occur outside of the irrigation season to the extent possible to allow for work to occur “in the dry” and to avoid impact on irrigation users.

The proposed project will also replace the existing culverts at O’Keefe Creek (three culverts) and LaValle Creek (single culvert) with appropriately sized drainage structures. The proposed project may require the relocation of a segment of LaValle Creek from approximately RP 8.4 to RP 8.6 where the channelized creek is immediately adjacent the edge of roadway. The project team will continue to evaluate avoidance and minimization measures as design progresses. Strategies to be evaluated include reducing the share-use path width from 10’ to 8’ in areas constrained by adjacent aquatic resources as well as minor alignment shifts. Appropriate stream mitigation, if required, will be determined in accordance with the Montana Stream Mitigation Procedure (MTSMP) (USACE 2013) and through coordination with the USACE and MDT when stream impacts are further quantified during final design of the proposed project. Per the MTSMP projects that result in more than 300 linear feet of new impact on streams or more than 150 linear feet of new culvert will usually require compensatory mitigation.

8.2 Wetlands

Wetlands were investigated using the Routine Method as described in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987), as updated by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (USACE 2010). To be considered a wetland, an area must have hydrophytic vegetation (vegetation adapted to wetland conditions), hydric soils, and wetland hydrology.

The project area was surveyed for wetlands in September 2017, as described above. Table 8-1 below lists the wetlands and water bodies delineated within the project area along with their classification, type and area. A total of 11.7 acres of palustrine wetlands were delineated within the project area and are shown in Figure 8-1. These were predominantly emergent wetlands with the exception of the ponds located at approximately RP 9.4. Included in Table 8-1 are also the delineated riverine system habitats, identified by an “R” preceding their NWI code. These areas represent the open water channels of O’Keefe Creek and LaValle Creek as well as the extensive network of irrigation ditches and canals located within the project area.



Table 8-1. Wetlands and Water Bodies within Project Area

Wetland Classification (NWI ¹ Code)	Wetland and Water Body Types	Notes	Area (acres)
PABFx	Palustrine, aquatic bed, semi permanently flooded, excavated	Excavated ponds located at RP 9.4. PEMA wetlands surround ponds.	0.57
PEMA	Palustrine, emergent, temporarily flooded	Emergent wetlands exist throughout project corridor and adjacent to highway	10.40
PEMCx	Palustrine, emergent, seasonally flooded, excavated	Emergent wetlands within excavated ditch or canal	0.71
R3UBC	Riverine, upper perennial, unconsolidated bottom, seasonally flooded	Open water channels associated with O'Keefe and LaValle creeks	0.36
R3UBCx	Riverine, upper perennial, unconsolidated bottom, seasonally flooded, excavated	Channelized section of LaValle Creek immediately adjacent Mullan Road between RP 8.4 and 8.6	0.28
R4SBCx	Riverine, intermittent, streambed, seasonally flooded, excavated	Includes all excavated irrigation ditches and canals located throughout project corridor	3.19
Total Area of Palustrine Wetlands			11.67
Total Area of Water Bodies			3.83
TOTAL AREA			15.50
¹ NWI = National Wetlands Inventory; Cowardin et al. 1979			

8.2.1 Potential Impact, Avoidance, Minimization, and Proposed Mitigation

The proposed project is anticipated to impact wetlands that are directly abutting the existing roadway and currently conflict with the construction limits of the proposed roadway improvements and new shared-use path. The extent of impact on wetlands and water bodies will be identified as design progresses and will depend on the final construction limits. Preliminary wetland impacts are estimated at 1.24 acres. As design progresses, the project team will continue to avoid and minimize impact on wetlands and water bodies to the greatest extent practicable. As noted above, design modifications to be evaluated include reducing the width of the shared-use path from 10' to 8' in areas constrained by adjacent aquatic resources as well as minor alignment shifts. Final wetland impacts will be quantified and described in greater detail in the Aquatic Resource Findings Report (AFR) and Section 404 permit application during the final design process.

Mitigation requirements are also currently unknown. Wetland mitigation, if required, will be developed in consultation with the MDT District Biologist and/or MDT Aquatic Mitigation Engineer in accordance with the USACE Wetland Compensatory Mitigation Ratios, Montana Regulatory Program (April 2005). All mitigation proposals will be included in the AFR Report at a later phase of the project.

8.3 Water Quality Permitting

The following section identifies the various Federal, State, and local water quality permits applicable to the proposed project. Table 8-2 summarizes the anticipated permits and the responsible agency.

The project area is not located on an Indian reservation and therefore a tribal water quality permit is not applicable.

Table 8-2. Water Quality Permit Requirements for the Project

Required Permits (Responsible Agency)	Is a Permit Necessary?		
	Yes	No	To-Be-Determined
<i>Federal Permits</i>			
Clean Water Act, Section 404 permit (US Army Corps of Engineers)	X		
Clean Water Act, Section 402 NPDES permit ¹ (Environmental Protection Agency)		X	
Clean Water Act, Section 401 Water Quality Certification (Montana Department of Environmental Quality)	X		
<i>State Permits</i>			
Montana Stream Protection Act, SPA 124 Notification (Montana Fish, Wildlife & Parks)	X		
Montana Water Quality Act, 318 Authorization (Montana Department of Environmental Quality)	X		
Montana Water Quality Act, Montana Pollutant Discharge Elimination System (MPDES) permits (Montana Department of Environmental Quality)	X		
<i>Local Permits</i>			
MS4 Permit (City of Missoula)		X	
¹ Section 402 compliance obtained through MPDES permit. Note: The project is not located on an Indian reservation and no tribal permits apply.			

Section 404 of the Clean Water Act (CWA) requires approval prior to discharging dredged or fill material into waters of the United States, including wetlands. Potential impacts on jurisdictional waters of the U.S., including wetlands, are only currently estimated based on preliminary design and will likely change as design progresses. It is anticipated, however, that due to the presence of wetlands, streams, and irrigation ditches adjacent to the roadway, the proposed project will result in unavoidable impacts on waters of the U.S., including wetlands, and would require a CWA Section 404 permit.

The proposed project is anticipated to require relocations of irrigation ditches due to their proximity to the existing roadway. Based on the Ninth Circuit Court of Appeals 2001 *Headwaters, Inc. v. Talent Irrigation District* decision, the USACE considers irrigation ditches as jurisdictional waters of the U.S. under Section 404 if they have a downstream surface connection to other waters of the U.S. and/or jurisdictional wetlands. This only applies to ditches that drain into a water of the United States, and which have an ordinary high water mark and/or a continuum of wetlands along the channel. Preliminary investigations appear to confirm that the irrigation ditches have downstream surface connections with LaValle Creek or O’Keefe Creek and adjacent wetlands and are therefore likely to be considered jurisdictional under Section 404. As such, any fill placement or modifications to the

existing irrigation ditches would likely require Section 404 permit authorization. The USACE is ultimately responsible for all jurisdictional determinations.

Highway reconstruction projects similar to the proposed project are commonly permitted under Nationwide Permit (NWP) No. 14 – Linear Transportation Projects, which pertains to activities required for the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, etc.) in waters of the U.S. Project authorization under NWP 14 can occur only if the impacts to waters of the U.S. are less than 0.5 acre, beyond which an Individual Permit is required. One wetland, Wetland 7A, has a permanently impacted area of 0.61-acre. As such, an Individual Permit is anticipated to be required.

As the project progresses, potential impacts to waters of the U.S., including wetlands, will be quantified to ascertain the appropriate level of permitting requirements under the CWA. The proposed project is likely to trigger requirements for 401 Certification under the authority of DEQ thus requiring the necessary permit application fees. A Section 401 certification review fee is a minimum of \$400, or one percent of the gross value of the proposed project, not to exceed \$20,000. Application fees will be calculated at a later date.

A Montana Stream Protection Act Notification (SPA 124) is anticipated due to the proposed culvert replacements occurring at O’Keefe Creek and LaValle Creek. As design progresses and impacts determined, preliminary design concepts will be shared with the FWP to identify SPA 124 applicability.

The proposed project is located outside of the Missoula Urban Area and is not subject to MS4 requirements. Permitting requirements under the MPDES are discussed in Section 9.1.

9 Drinking Water Sources

The Montana Department of Environmental Quality (DEQ) Public Water Supply Program Montana Drinking Water Watch database (DEQ 2017) was reviewed to identify drinking water sources located within the project area. The database identifies a total of 244 sources within Missoula County, 84 of which are community sources. The database lacks sufficient geographical information to locate individual sources.

9.1 Wells

The Montana Groundwater Information Center (GWIC) well data maintained by the Montana Bureau of Mines and Geology was also reviewed. Well geographic information system (GIS) data was downloaded from the GWIC on January 3, 2022 and overlain on the project area map. GWIC wells within a distance of 1,000 feet from the highway centerline are shown in Figure 9-1, and wells within a distance of 200 feet or less are labeled. In total, 17 wells (at 14 locations; well 234156 has three coincident records and well 176876 has two coincident records) were identified within the project area boundary. Four of the wells are located less than 30 feet from the roadway centerline; however, the detailed utility survey conducted for the project surveyed 30 feet on either side of the existing centerline and did not identify any wells within the survey limits. Therefore, it is assumed that wells identified in Figure 9-1 within 30 feet of the existing centerline (i.e., wells 71272, 151147, 706457,

and 69461) have incorrect geographic coordinates and are located at a distance greater than 30 feet from the roadway centerline.

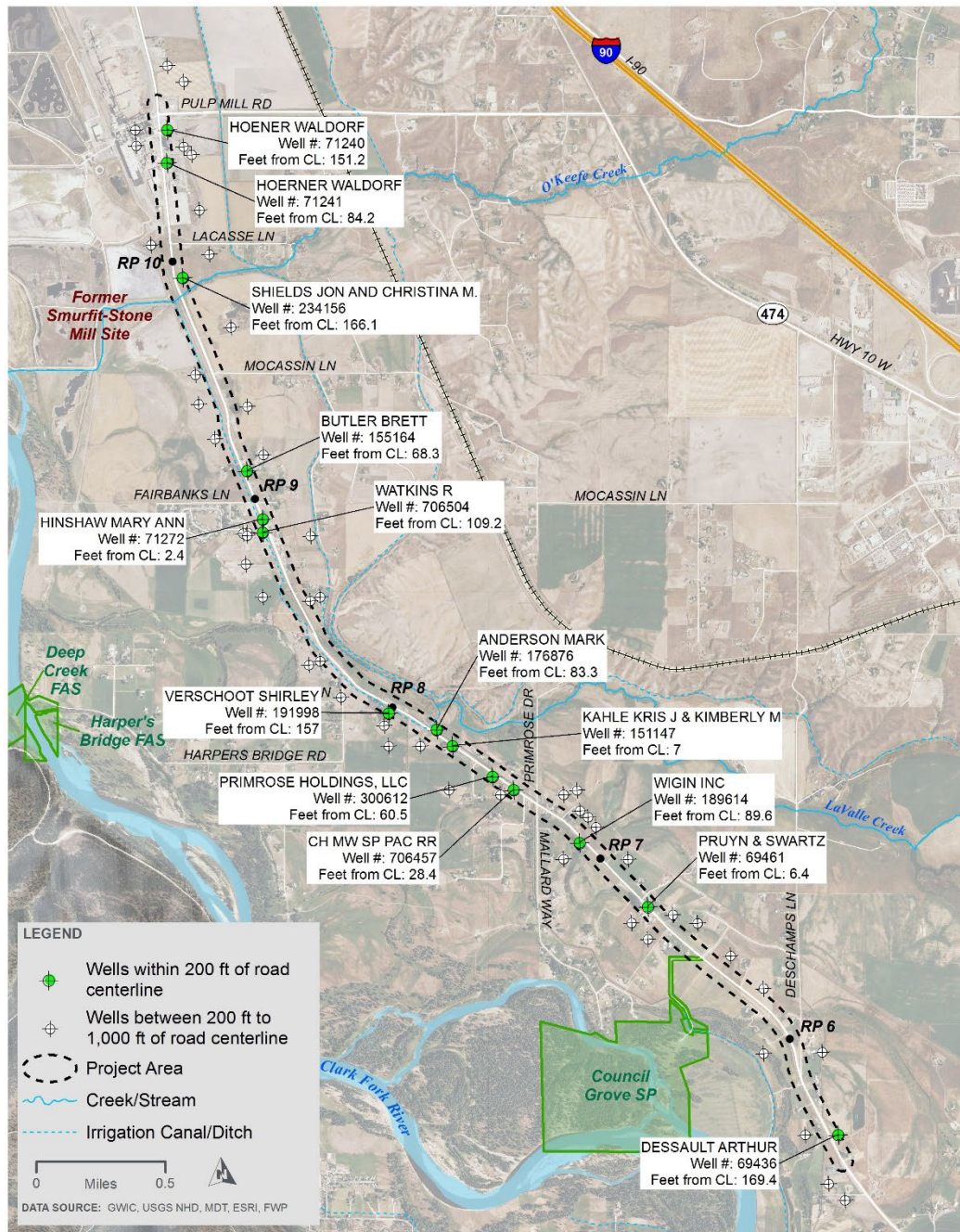


Figure 9-1. GWIC Wells Located in the Project Area Vicinity

The GWIC well database is not all-inclusive and additional wells not shown in Figure 9-1 likely exist in the project area vicinity. Groundwater well locations associated with the Smurfit-Stone Mill site within the Operable Unit 2 (OU2) are shown in Figure 9-2 (EPA 2021), which show several wells adjacent to Mullan Road and the proposed project.

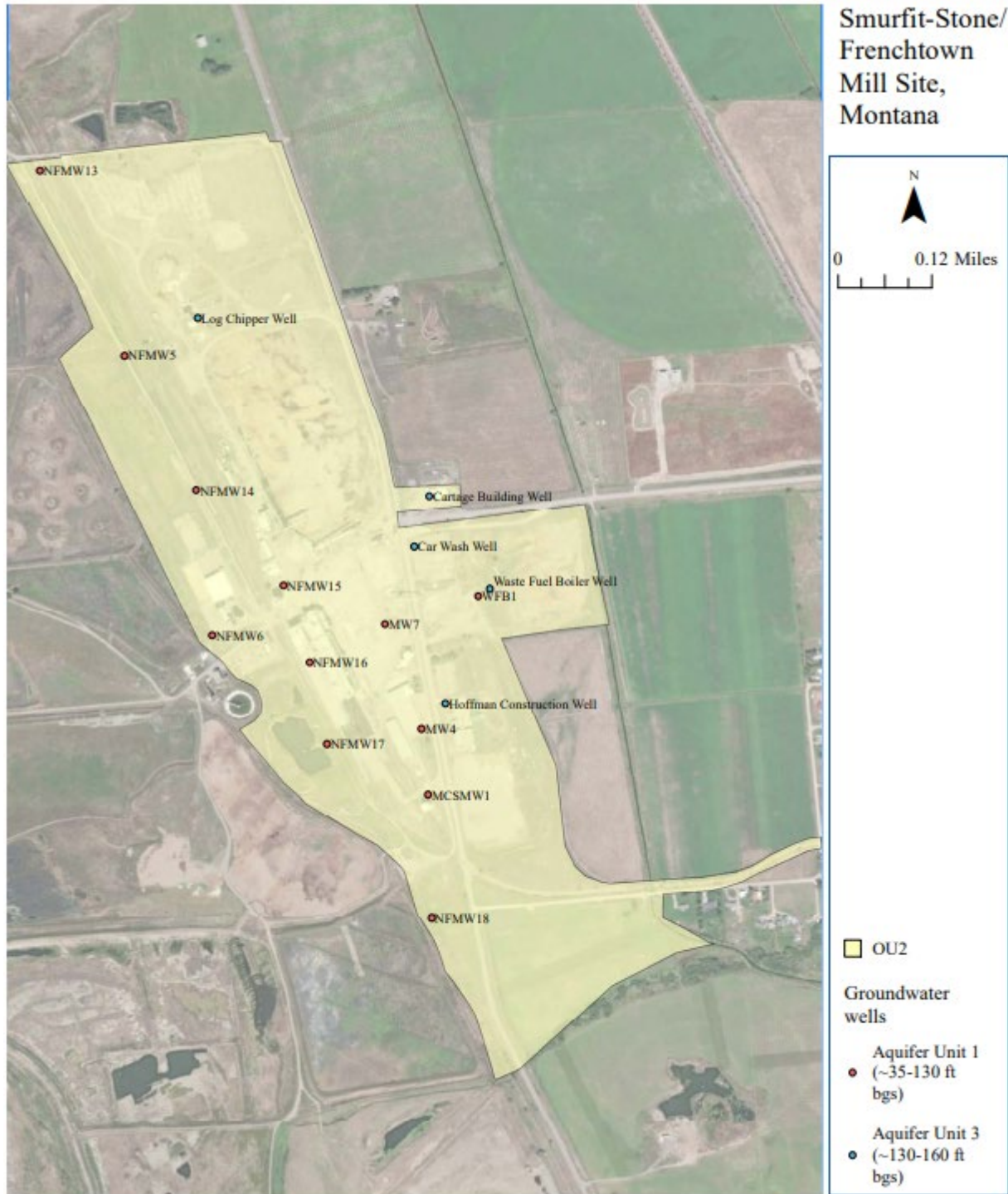


Figure 9-2. EPA Groundwater Wells in OU2 (source: EPA 2021)

9.1.1 Potential Impact, Avoidance, Minimization, and Proposed Mitigation

No impact on domestic wells is anticipated as a result of the proposed project. As described above, no private wells were identified by the utility survey within a distance of 30 feet from the existing roadway centerline. The wells identified in the vicinity of the project area are generally set back far

enough from the roadway and probable construction limits as to be easily avoided by the project. EPA groundwater wells at the Smurfit-Stone Mill Site are similarly sufficiently setback from the proposed construction limits outside of highway right-of-way, and no impact on these wells is anticipated. As design progresses, and specifically if the proposed roadway alignment deviates outside of the utility survey limits, additional spot surveys may be required to locate wells and other utilities to ensure the proposed project avoids and minimizes impact on existing infrastructure.

10 Stormwater Management Considerations

10.1 MPDES Construction Storm Water General Permit

In 1974, the EPA delegated Montana authority to implement many CWA programs within the state under the Montana Water Quality Act. Under agencies and laws, Montana executes federal water quality guidelines including CWA Section 401 that is currently administered by Montana DEQ through the Montana Pollutant Discharge Elimination System (MPDES). The goal of the MPDES program is to control point source discharges of wastewater that includes discharges associated with construction activity such that surface water quality of state waters is protected.

The EPA administers the National Pollutant Discharge Elimination System (NPDES) stormwater permitting program for Indian Country (i.e., Indian reservations) within the state of Montana. The proposed project is not located on an Indian reservation and therefore the NPDES is not applicable.

Under the MPDES General Permit for Storm Water Discharges Associated with Construction Activity, permittees are authorized to discharge stormwater in accordance with requirements identified in the permit. MPDES permit coverage is required for construction activities that include clearing, grading, grubbing, excavation, or other earth disturbing activities that disturb one or more acres and discharge stormwater to state surface waters or to a storm sewer system that discharges to a state surface water. Projects requiring coverage under the MPDES program must develop and submit a Stormwater Pollution Prevention Plan (SWPPP) that identifies pollutant sources and site-specific Best Management Practices (BMPs) to prevent and minimize the potential for pollutants leaving the construction site.

10.1.1 Potential Impact, Avoidance, Minimization, and Proposed Mitigation

The areal extent of ground disturbance associated with the proposed project is currently unknown; however, the scope of the proposed reconstruction would suggest that the area of disturbance will exceed the one-acre threshold requiring an MPDES Construction Storm Water General Permit.

In addition to the stormwater requirements of the MPDES, the construction contractor would be required to follow MDT standard specifications for environmental protection to adhere to applicable water quality rules, regulations, and permit conditions for the project. This includes implementation, maintenance, and monitoring of erosion and sediment control BMPs as well as re-vegetate disturbed areas upon completion of the project to minimize and abate pollution of surface and ground water resources in accordance with MDT's Erosion and Sediment Control Best Management Practices Manual.

10.2 Municipal Separate Storm Sewer System (MS4)

The DEQ is responsible for administering the Small Municipal Separate Storm Sewer System (MS4) program that regulates stormwater discharges associated urban areas. The MPDES General Permit for Storm Water Discharge Associated with Small Municipal Separate Storm Sewer System (MS4) was reissued late 2016 and became effective on January 1, 2017. Under the renewed authorization, permittees are authorized to discharge stormwater resulting only from MS4s in accordance with effluent limitations, monitoring requirements, and other conditions set forth in the permit. Permittees are required under the permit to develop, implement, and enforce a Storm Water Management Program (SWMP) to reduce the discharge of pollutants to the maximum extent practicable, to protect water quality, and to satisfy the appropriate water quality requirements of the Montana Water Quality Act.

Areas included in the permit are Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, and Missoula. Additionally, the urbanized areas of Cascade, Missoula, and Yellowstone counties; Malmstrom Air Force Base, Montana State University, and the University of Montana are other entities required to obtain coverage under the permit. Within the permitted areas, storm sewer systems associated with MDT highways are included in the facilities subject to the MS4 permit requirements.

10.2.1 Potential Impact, Avoidance, Minimization, and Proposed Mitigation

The proposed project is located outside of the Missoula Urbanized Area MS4 Boundary and is therefore not subject to the requirements under the MS4 permit.

10.3 Low Impact Development (LID) Practices

Projects implementing Low Impact Development (LID) practices involve systems and practices that use or mimic natural processes that result in the infiltration, evapotranspiration or use of stormwater in order to protect water quality and associated aquatic habitat. LID practices must be evaluated for development or redevelopment projects that disturb one or more acres of land area or projects disturbing less than one acre of land that are part of a larger common plan of development and that discharge into a regulated Small MS4 area.

Because the proposed project is located outside of the regulated Missoula MS4 Area, there is not a requirement to evaluate the applicability of incorporating LID practices into the design. No additional analysis is required.

10.4 Permanent Erosion and Sediment Control Measures

Incorporation of Permanent Erosion and Sediment Control (PESC) measures should be considered with projects disturbing one acre or more, or projects having the potential to adversely affect water quality. Incorporation of PESC measures will typically be limited to projects with scopes related to rehabilitation or reconstruction and locations in proximity to sensitive resources such as impaired waterways or high quality aquatic habitat and spawning areas. PESC measures can also provide solutions for areas with a history of erosion or sedimentation problems.

As documented in the Preliminary Field Review Report approved on October 27, 2017, no areas of roadside erosion or sediment issues have been identified in the project corridor. As such, PESC

features are not anticipated at this time. This determination is subject to change, however, as design progresses.

11 Wild and Scenic Rivers

The National Wild and Scenic Rivers Act was passed by Congress in 1968 to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. In Montana, rivers designated as Wild and Scenic under the Act include portions of Flathead River and Missouri River and, more recently in 2018, East Rosebud Creek. The proposed project would have no impact on Wild and Scenic Rivers because none exist within the project area.

12 Signatures

The following individuals were responsible for preparing the West of Missoula - NW Project Environmental Engineering Existing Conditions Report.

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Date: January 20, 2022

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APPENDIX A: Site Photographs (taken Sep. 2017)



Photo 1: Pulp Mill Road intersection, ditch wetland, looking south.



Photo 2: Typical roadside ditch in vicinity of former Smurfit-Stone Mill, looking south.



Photo 3: Roadside ditch, RP 10, looking south.



Photo 4: Mullan Road and LaCasse Lane intersection



Photo 5: O'Keefe Creek and adjacent wetlands, RP 9.8, east side of Mullan Road



Photo 6: O'Keefe Creek, RP 9.8, west side of Mullan Road



Photo 7: Wetland and ponds at RP 9.4, looking north.



Photo 8: Irrigation ditch at approximately RP 8.8, near Fairbanks Lane, looking south.



Photo 9: Irrigation ditch at approximately RP 8.8, near Fairbanks Lane, looking north.



Photo 10: Irrigation drainage crossing structure and ditch wetlands at approximately RP 9.1, looking south



Photo 11: LaValle Creek at approximately RP 8.6, looking south.



Photo 12: LaValle Creek culvert crossing at approximately RP 8.4, looking east.



Photo 13: Frenchtown Irrigation District Ditch at approximately RP 7.7, looking south.



Photo 14: Bridge structure located at RP 7.3 spanning the Frenchtown Irrigation District Ditch



Photo 15: Wetlands located at approximately RP 6.1, looking south



Photo 16: Shared-use path (left) and Mullan Road (right) at approximately RP 6.6.