Utility Restoration, Replacement, and Relocation in the State of Montana

Programmatic Environmental Assessment Montana

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FEMA

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FIGURES

List of Tables

ACRONYMS AND ABBREVIATIONS

ARM	Administrative Rules of Montana
BGEPA	Bald and Golden Eagle Protection Act
BIA	Bureau of Indian Affairs
BMP	Best Management Practice
CAA	Clean Air Act
CDBG-DR	Community Development Block Grant – Disaster Recovery
CEQ	Council on Environmental Quality
CFLHD	Central Federal Lands Highway Division
CFR	Code of Federal Regulations
CRS	Congressional Research Service
DHS	Department of Homeland Security
EA	Environmental Assessment
EDA	Economic Development Administration
EO	Executive Order
ESA	Endangered Species Act
EWP	Emergency Watershed Protection
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
FRA	Federal Railroad Administration
FWCA	Fish and Wildlife Coordination Act
GPD	Grants Program Directorate
HMA	Hazard Mitigation Assistance
HMGP	Hazard Mitigation Grant Program
HUD	U.S. Department of Housing and Urban Development
IPaC	Information, Planning and Consultation System
MBTA	Migratory Bird Treaty Act
MTDEQ	Montana Department of Environmental Quality
MTDNRC	Montana Department of Natural Resources & Conservation
MTDOT	Montana Department of Transportation
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1996
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OSHA	Occupational Health and Safety Administration
PA	Public Assistance

PDM	Pre-Disaster Mitigation Program
PEA	Programmatic Environmental Assessment
PFHD	Provisional Flood Hazard Delineation
PPE	Personal Protective Equipment
REC	Record of Environmental Consideration
ROW	Right of Way
SEA	Supplemental Environmental Assessment
SFHA	Special Flood Hazard Area
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SRIA	Sandy Recovery Improvement Act
THPO	Tribal Historic Preservation Office
UFR	Unified Federal Review
USACE	U.S. Army Corps of Engineers
USCB	U.S. Census Bureau
USDA	U.S. Department of Agriculture
USC	U.S. Code
USFWS	U.S. Fish and Wildlife Service

SECTION ONE | INTRODUCTION

1.1 OVERVIEW

The mission of the Federal Emergency Management Agency (FEMA) is to support citizens and first responders in building, sustaining, and improving our capability to prepare for, protect against, respond to, recover from, and mitigate all hazards. An important component of FEMA's mission is hazard mitigation, which includes activities that help communities reduce the future impacts of natural disasters to life and property. This Programmatic Environmental Assessment was prepared in accordance with Unified Federal Review (UFR) as outlined in The Sandy Recovery Improvement Act, Section 6. The UFR mandates the establishment of an "…expedited and unified interagency review process to ensure compliance with environmental and historic requirements under Federal law relating to disaster recovery projects, in order to expedite the recovery process, consistent with applicable law" (FEMA 2016).

The Federal Government, through multiple agencies and their programs, proposes to restore, replace, upgrade, expand, redesign, and relocate public utilities, in the State of Montana. A utility is defined as infrastructure supplying a community with electricity, gas, transportation, water or wastewater and other essential services. Utilities may be built, upgraded, repaired or relocated under funding programs from various federal Agencies.

The Federal Emergency Management Agency (FEMA) has prepared this Programmatic Environmental Assessment (PEA) to analyze the potential environmental consequences associated with the proposed actions while providing a framework for the evaluation of Federal and State laws and regulations. The proposed action and no action alternative(s) are being analyzed in accordance with the National Environmental Policy Act of 1969 (NEPA)[1], the Council on Environmental Quality (CEQ) implementing regulations[2] and the Emergency Management and Assistance Code of Federal Regulations (CFR)[3]. This analysis is programmatic in nature and does not address individual site-specific impacts, which will be evaluated for individual projects prior to approval.

1.2 BACKGROUND

Geography, climate, and demographic trends have necessitated development of a complex infrastructure of utility systems across Montana. Aging infrastructure, the need for increased capacity, and damage due to manmade and natural disasters all have the potential to limit the ability of these utility systems to function as designed. Failure of these systems and associated facilities can cause injury and loss of life; residents, government entities and businesses may lose capital and access to property and critical infrastructure: and significant environmental impacts may occur. Local

[1] 42 United States Code [USC] 55 parts 4321 et seq., 2000
[2] 40 Code of Federal Regulations [CFR] 30 parts 1500 et seq., 2004
[3] 44 Code of Federal Regulations [CFR] 1 part 10, and 23 CFR 771., 2013

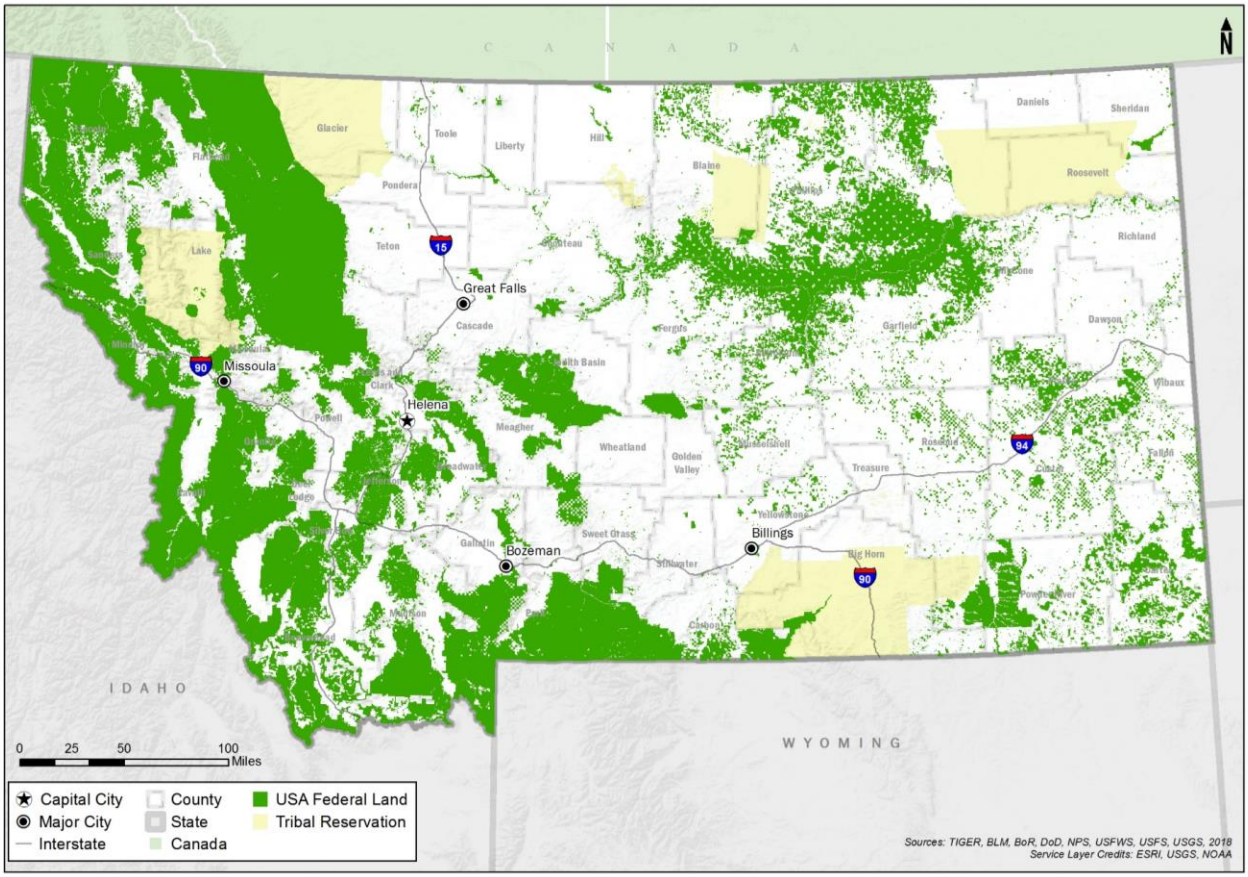
governments may be unable to provide critical services including fire suppression, emergency communication, power generation and transmission, lighting, stormwater management, potable water and wastewater treatment. Sheltering and protection from the elements may be unavailable creating a potential threat to life, public health and safety. In an effort to restore these services and/or mitigate these impacts, federal agencies may provide funds restoration, replacement, upgrade, expansion, redesign, or relocation of utility systems and associated facilities.

NEPA and its implementing regulations direct federal agencies to take into consideration the consequences of proposed actions on the human and natural environment during the decision-making process. All federal agencies must comply with NEPA before making Federal funds available. FEMA has taken the lead in determining that the projects under consideration for funding have reached the level where an Environmental Assessment is required and can be grouped by type of action or location. FEMA proposes that the groups of actions related to the restoration, replacement, upgrade, expansion, redesign, or relocation of utility systems can be evaluated in a PEA for compliance with NEPA and its implementing regulations without the need to develop an individual agency Environmental Assessment (EA) for every action.

In accordance with Unified Federal Review as outlined in SRIA, FEMA coordinated with other federal agencies in order to facilitate a comprehensive strategy to address recovery and mitigation efforts.

The interagency environmental analysis found that the project types identified in this PEA will not have a significant impact on the quality of the environment. Compliance with all other federal, tribal, state and local laws, regulations, Executive Orders, etc. is required and will be evaluated on a project-specific basis. If the description of the site-specific project work and the levels of analysis are fully and accurately described in this PEA, then Agencies will take no further action other than what is necessary to support and document that conclusion in a Record of Environmental Consideration (REC). All projects reviewed using this PEA must use the Utility Checklist (Appendix A) to document the project specific information and that the project is consistent with this PEA. If a specific project is expected to (1) create impacts not described in this PEA; (2) create impacts greater in magnitude, extent, or duration than those described in this PEA; or (3) require mitigation measures to keep impacts below significant levels that are not described in this PEA; then a Supplemental Environmental Assessment (SEA) is to be prepared by the grantee to address the specific action. The SEA would be tiered from this PEA, in accordance with 40 CFR Part 1508.28. Actions determined during the preparation of the SEA to require a more detailed or broader environmental review than covered in this document will be subject to a project specific EA.

Figure 1: Montana State Map[4]



[4] Ezilon Maps. Political Map of Montana. This is a link to the map of Montana source. Accessed 12/09/2014

SECTION TWO | PURPOSE AND NEED

This PEA addresses numerous individual projects where the restoration, replacement, upgrade, expansion, redesign, or relocation of utilities will be undertaken by Agencies to provide permanent restoration of function. It also addresses hazard mitigation activities that reduce disaster losses to existing utilities from future disaster damages and protect life and property. These actions are applicable to all proposed alternatives described in this document. This PEA also provides the public and decision-makers with the information required to understand and evaluate the potential environmental consequences of these actions and to consider these impacts in decision making. The purpose of this action is to help Agencies fulfill and expedite the environmental review process required by NEPA.

Agencies will use this PEA to determine the level of environmental analysis and documentation required under NEPA for permanent utility repairs or modifications for any of the proposed alternatives. Utility projects will be funded with a variety of federal sources including but not limited to, grants provided by FEMA, US Economic Development Administration (EDA), Federal Highway Administration (FHWA), US Department of Housing and Urban Development (HUD)[5] and the US Army Corps of Engineers (USACE), and US Department of Agriculture (USDA).[6][7] These agencies all have programs that share a similar goal of helping state, local, or tribal governments recover from disasters and mitigate future losses.

The purpose of proposed projects to restore, replace, upgrade, expand, redesign, or relocate utilities is to meet these programs' goals. These projects will satisfy the need to:

- Restore utilities to a safe, sustainable, and permanent function and capacity;
- Minimize and mitigate future losses and impacts on the essential utilities; and
- Develop and construct resilient facilities with minimal impacts to natural and historic resources.

All actions must comply with all applicable Federal, tribal, state and local laws, regulations, ordinances and requirements. Other Federal agencies may use this document to demonstrate compliance with NEPA at their discretion and under their own authorities.

[5] U.S. Department of Housing and Urban Development [HUD] Community Development Block Grant – Disaster Recovery Program. This is a link to HUD's website on Community Development Block Grants.
[6] U.S. Department of Agriculture [USDA]. Natural Resources Conservation Service [NRCS], Emergency Watershed Protection (EWP) Program. This is a link to USDA's Emergency Watershed Protection Program
[7] U.S. Department of Agriculture [USDA]. Natural Resources Conservation Service [NRCS], EWP Floodplain Easement-Program This is a link to USDA's EWP Floodplain Easement Program

SECTION THREE | ALTERNATIVES

3.1 INTRODUCTION

The following Alternatives are being considered for further evaluation in this PEA. These alternatives represent classes of actions that may be implemented individually or in combination with one another. Depending upon the response or mitigation action The Agencies determines is necessary to maintain utilities, and the individual characteristics of the specific site, there may be only one viable option to be implemented. The following list of alternatives may not be available in all project locations. Therefore, each project may have a different preferred alternative. The selected alternative (or combination of alternatives) will be documented in the Utilities Checklist (Appendix A).

3.2 ALTERNATIVES CONSIDERED

Alternative 1: No Action

A No Action Alternative is required to be included in the environmental analysis and documentation in accordance with the Council on Environmental Quality regulations implementing NEPA. The No Action Alternative is defined as maintaining the status quo with no Agency involvement for any alternative. The No Action Alternative is used to evaluate the effects of not implementing the building, utility replacement, repair, relocation, or upgrade action on a programmatic level; thus, this alternative provides a benchmark against which other alternatives may be evaluated.

"No action" means the proposed activity would not take place using federal funds and the utility would remain in its existing condition. Access may remain restricted due to the loss of service. For the purpose of the environmental analysis, under the No Action Alternative local governments would have to rely on savings, insurance, loans, or other forms of assistance to restore and retain access to utilities.

Alternative 2: Replacement

This alternative applies to repair or replacement of existing utilities and associated facilities within the existing location. In some situations, repairing utilities in their existing locations may be the safest or most cost-effective option that also meets the needs of a community. This alternative includes activities such as ground stabilization, grade control, etc. to mitigate the hazard in that segment without relocating the utility.

Changes to materials and dimensions are also included in this alternative. This may include upgrades to meet existing codes and standards as well as upgrades warranted to address conditions that have changed since the original construction. Any significant impacts will be addressed on a project-specific basis.

Alternative 3: Relocation

In some cases, the current location or alignment of a utility poses too great a threat to public safety and infrastructure. Utilities in these locations may need to be relocated to protect life and reduce the threat to property during future events.

Alternative 3 would entail relocation of utilities and associated facilities, including but not limited to electrical systems, water and wastewater treatment facilities, etc. Relocation of facilities could require purchase of private property. Changes to land use may occur as a result of this alternative. All actions must comply with local zoning and land use requirements. The Agencies will consult with appropriate regulatory agencies on any project which has the potential to affect land use, including Fish and Wildlife Service easements, prime farmland, or farmland of state/local significance. If acquisitions occur the Agencies will comply fully with federal and state requirements including the Uniform Relocation Assistance and Real Property Acquisition Policies act of 1970, as amended (Uniform Act). If the footprint extends into other state or federal lands, additional coordination and permitting will be required from the owner agency. Relocation projects may include upgrades to meet existing codes and standards as well as upgrades warranted to address conditions that have changed since the original construction. Any significant impacts will be addressed on a project-specific basis.

Alternative 4: Combination

Alternative 4 includes some combination of No Action, Replacement, and Relocation. Individual utility segments may be left in their existing location and condition if it is determined that No Action is the safest, most cost-effective alternative. Adjacent utilities within the same reach may be replaced or relocated to mitigate risk and restore infrastructure. Any significant impacts will be addressed on a project-specific basis.

3.3 ALTERNATIVES NOT CONSIDERED

Applicants for federal grant funding may repair utilities to pre-disaster condition or with minor mitigation upgrades under programs like FEMA's Public Assistance Program or Hazard Mitigation Assistance (HMA) programs. These types of projects may fall into a Statutory Exclusion or a Categorical Exclusion under the NEPA DHS Directive effective as of 08/22/2016 and will be evaluated accordingly. No further review of these types of projects will be considered in this PEA if they fall within the allowance of CATEX N7 or another applicable CATEX:

> Federal Assistance for Structure and Facility Upgrades. Federal assistance for the reconstruction, elevation, retrofitting, upgrading to current codes and standards, and improvements of pre-existing facilities in existing developed areas with substantially completed infrastructure, when the immediate project area has already been disturbed, and when those actions do not alter basic functions, do not exceed capacity of other system components, or modify intended land use. This category does not include actions within or affecting streams or stream banks or actions seaward of the limit of moderate wave action (or V zone when the limit of moderate wave action has not been identified).

In addition, some proposed projects may involve significant upgrades, expansion, and redesign that may be too extensive to be considered under this PEA. These projects will be fully evaluated on a project-specific basis to determine the appropriate level of NEPA review.

SECTION FOUR | AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

4.1 PHYSICAL RESOURCES

4.1.1 Affected Environment

Montana has total area of 147,047 square miles. Its geology is diverse, ranging from the western mountains lifted and folded by tectonics and sculpted by glaciers to the eastern plains partly overlain by glacial till and dissected by wind and water. The 2007 state geological map included 324 distinct geological units – a rock formation that is recognizable from everything else around it and extends over a distance.

The mean elevation in Montana is approximately 3,400 feet. The Rocky Mountains cover the western two-fifths of the state, with the Bitterroot Range along the Idaho border; the high, gently rolling Great Plains occupy most of central and eastern Montana. The highest point in the state with an elevation of 12,799 feet is Granite Peak, located in south-central Montana near the Wyoming border. The lowest point at 1,800 feet is in the northwest, where the Kootenai River leaves the state at the Idaho border. The Continental Divide passes in a jagged pattern through the western part of the state, from the Lewis to the Bitterroot ranges.

Montana is divided into four ecosystems: montane forests, plains grasslands, intermountain grasslands, and shrub grasslands.

The montane forest ecosystem represents 26% of Montana and includes the mountains of Montana that have been formed by tectonic uplift and glacial erosion. Along the western third of the state these high elevation areas encompass mountains from their base to their summit with elevations increasing from the north where the Kootenai River flows into Idaho (1,800 feet) southward to the snow-capped peaks in the Beartooth Range (12,800 feet) adjacent to Yellowstone National Park. Montana forests are grouped into forest types, using dominant tree species as the determining characteristic. Much of this ecosystem is in public ownership through the USFS.

Montana's eastern high plains represent 43.2% of the state and are a part of America's Great Plains region. This ecosystem type is generally found on high, rolling land and on some scattered hills and in wide river valleys. Plants of the plains grassland and forest are adapted to dry conditions and extreme temperatures. A variety of shrubs is found here, but not enough to be classified as the dominant plant species. Grasses dominate the landscape, as they are well adapted for an environment where drought and fire are common.

The intermountain/foothill grassland ecosystem (14.3% of the state) is a mosaic of private and public land that extends from the glaciated Flathead River Valley in the north, south to the Centennial Valley, and east to the Little Belt foothills. The intermountain grasslands are the

transition zone between prairie grasslands and montane forests, sometimes referred to as foothill grasslands. These large, open valleys support plant communities dominated by grasses. Large rivers surrounded by lush riparian plant communities flow through the larger valleys.

The shrub grassland ecosystem (7.7%) occurs in widely separated segments across most of the eastern half of the state in high-elevation valleys and along non-forested slopes. Juniper and sagebrush characterize these generally dry slopes. They are interspersed with low cover grasslands and offer a unique transitional area habitat that supports many of Montana's species of greatest conservation need. Over half of this limited ecosystem is privately owned.

Surface waters in Montana are divided into four basins: Columbia, Lower Missouri, Upper Missouri, and Yellowstone. Montana has approximately 58,200 miles of perennial (year-round continuous flow) rivers and streams. The majority of perennial river miles are within the Upper Missouri basin (26 percent), Columbia basin (25 percent), and Lower Missouri basin (16 percent). Major rivers in Montana include the Yellowstone, Missouri, Clark Fork, Flathead, and Kootenai Rivers (DEQ 2018). Additionally, Montana has approximately 307,000 miles of intermittent or ephemeral streams that flow for part of the year[8].

Montana has 1,417 named lakes, reservoirs, and ponds that are 5 acres or greater. In total, these water bodies cover approximately 730,000 acres. The majority of lake acres (44 percent) are in the Lower Missouri and Columbia basins (23 percent). Montana’s lacustrine water bodies vary in nature from alpine lakes to hydropower reservoirs. There are 33 major dams in Montana, including the largest earthen dam in the U.S., which creates Fort Peck Reservoir, the fifth largest man-made reservoir in the U.S.

Land use in Montana consists primarily of grassland/herbaceous areas (44.7%), Evergreen Forest (21.6%), and Small Grains (10.6%) according to the National Land Cover Statistics Database (USGS 2010) (Table 1). Residential development covers less than 1% of Montana lands.

Table 1: Land Cover of Montana

Land Cover Classes	State Totals Units in Square Miles
Water	1,548
Perennial Ice/Snow	71
Low Intensity Residential	118

[8] Montana Department of Environmental Quality [MT DEQ] Final Water Quality Integrated Report.,2018 This is a link to a PDF about MT DEQ's 2018 Final Water Quality Integrated Report

Land Cover Classes	State Totals Units in Square Miles
High Intensity Residential	4
Commercial/Industrial/Transportation	191
Bare Rock	1,025
Quarries/Mines	41
Transitional	650
Deciduous Forest	1428
Evergreen Forest	31,725
Mixed Forest	94
Shrubland	12,877
Grasslands/Herbaceous	65,750
Pasture/Hay	3,410
Row Crops	397
Small Grains	15,645
Fallow	11,291
Urban/Recreational Grasses	33
Woody Wetlands	511
Emergent/Herbaceous Wetlands	231
State Total	147,039

According to the U.S. Department of Agriculture 2019 State Agriculture Overview[9], there were 58,000,000 acres in Montana classified as farmland and 26,800 farms. Prime farmland is found

[9] U.S. Department of Agriculture [USDA] Montana Agricultural Overview., 2019. This is a link to USDA's 2019 Montana Agricultural Overview

throughout the state. Prime farmland, as defined by the U.S. Department of Agriculture, is the land that is best suited to food, feed, forage, fiber, and oilseed crops. It may be cultivated land, pasture, woodland, or other land, but it is not urban and built-up land or water areas. It either is used for food or fiber crops or is available for those crops. The soil qualities, growing season, and moisture supply are those needed for a well- managed soil economically to produce a sustained high yield of crops. Prime farmland produces the highest yields with minimal inputs of energy and economic resources, and farming it results in the least damage to the environment.

Montana is the 4th largest state by land and has an area of 94,104,586 acres. square miles. Property is divided into private, federal, state, tribal and Bureau of Indian Affairs (BIA), and water. Table 2 displays ownership by agency.

Table 2: Land by Ownership in Montana (in acres unless otherwise noted)

Landowner	**Percentage and acres**
Percent Federal Land	**29.0%**
U.S. Bureau of Land Management	8,022,852
U.S. Bureau of Reclamation	125,044
U.S. Fish and Wildlife Service	653,097
National Park Service	1,214,193
U.S. Forest Service	17,186,331
U.S. – Other Federal Land	82,075
Percent State Land	**6.0%**
Montana State Trust Land	5,182,439
Montana Fish, Wildlife, and Parks	405,817
Montana University system	35,727
Montana Dept of Corrections	35,426
Montana -- Other State Land	28,227
Local Government	23,749
Percent Indian Trust and BIA Land	**5.3%**
Tribal and BIA Land	4,997,717

Landowner	Percentage and acres
Percent Private Land	**58.7%**
Private Land	55,015,683
Private Conservation Land	227,154
Percent Water	**0.8%**
Water	779,337

Source CRS 2020[10]

4.1.2 Regulatory Setting

Government controls land use through the use of comprehensive plans, zoning regulations, and subdivision regulations. In general, the Montana State government has passed these powers to the local governments. However, the State does have some control over certain types of land uses, including confined animal feeding operations, solid waste management, mining, and energy facility siting.

The Farmland Protection Policy Act (FPPA) require federal agencies to evaluate the effects (direct and indirect) of their activities before taking any action that could result in converting designated prime or unique farmland for nonagricultural purposes. If an action would adversely affect farmland preservation, alternative actions that could avoid or lessen adverse effects must be considered. Determination of the level of impact to prime and unique farmland or farmland of statewide and local importance is done by the lead federal agency, which inventories farmlands affected by the proposed action and scores part of an AD 1006 Form, Farmland Conversion Impact Rating, for each alternative. In consultation with the lead federal agency the Natural Resource Conservation Service (NRCS) completes the AD 1006 Form and determines the level of consideration for protection of farmlands that needs to occur under the Act.

The National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee) -- This Act, derived from sections 4 and 5 of Public Law 89-669 (October 15, 1966; 80 Stat. 927), constitutes an "organic act" for the National Wildlife Refuge System. It was recently amended by

P.L. 105-57, "The National Wildlife Refuge System Improvement Act of 1997." Public Law 105-57, approved October 9, 1997, (111 Stat. 1253) gives guidance to the Secretary of the Interior for the overall management of the Refuge System. The Act's main components include: a strong and singular wildlife conservation mission for the Refuge System; a requirement that the Secretary of the Interior maintain the biological integrity, diversity and environmental health of the Refuge

[10] Congressional Research Service [CRS] Federal Land Ownership: Overview and Data., 2020. This is a link to a PDF explaining Federal Landownership in the U.S.

System; a new process for determining compatible uses of refuges; a recognition that wildlife-dependent recreational uses involving hunting, fishing, wildlife observation and photography, and environmental education and interpretation, when determined to be compatible, are legitimate and appropriate public uses of the Refuge System; that these compatible wildlife-dependent recreational uses are the priority general public uses of the Refuge System; and a requirement for preparing comprehensive conservation plans.

Under the Montana Stream Access Law, the public may use rivers and streams for recreational purposes up to the ordinary high-water mark. Although the law gives recreationists the right to use rivers and streams for water-related recreation, it does not allow them to enter posted lands bordering those streams or to cross private lands to gain access to streams. House Bill 190, passed during the 2009 Legislative Session, confirmed that the public has access to surface waters by public bridge or county road right-of-way. The Department, in cooperation with the affected landowner and county, is responsible for providing public passage around or through a fence preventing such access. A typical access feature would be a stile, gate, roller, walkover, or wooden rail fence. Access may be restricted by a county commission for public safety or where the county road ROW did not allow access.

4.1.3 Environmental Consequences

Alternative 1: No Action

Under the No Action alternative there is no federal action. Alternative 1 has potential to permanently disrupt utility service to communities. Loss in residential, commercial, agricultural, or recreational land use may occur. This could lead to vegetation reclaiming right-of-way's (ROW), public, private properties in the State of Montana.

Alternative 2: Replacement

Under this alternative, the existing utilities would be retained. Existing utilities would be expanded to accommodate best construction practices as well as the changes in topography. However, the utility footprint is expected to remain substantively the same, therefore, no significant changes in land use are anticipated.

In some cases, small portions of new ROW may be required due to the additional width of infrastructural elements or topographical changes. There may be changes to land use, but these impacts are not expected to be significant. Vegetation along utility corridors may be lost in the short term. However, impacts will be mitigated through the use of standard Best Management Practices (BMP) and revegetation with native plant species.

If the footprint extends outside of the ROW into other state or federal lands, additional coordination and permitting will be required from the owner agency. For all ROW acquisitions, the Agencies will comply fully with federal and state requirements including the Uniform Relocation Assistance and Real Property Acquisition Policies act of 1970, as amended (Uniform Act).

Alternative 3: Relocation

Alternative 3 would entail relocation of utilities and associated facilities, including but not limited to electrical systems, water and wastewater treatment facilities, etc. Relocation of facilities could require purchase of private property. Some changes in land use may occur. Small parcels of ROW may be repurposed into private property, and vice versa, to accommodate the relocation. Local governments may purchase some parcels of private land. If the footprint extends into other state or federal lands, additional coordination and permitting will be required from the owner agency. For all property acquisitions, the Agencies will comply fully with federal and state requirements including the Uniform Act.

Vegetation at new facility locations and along utility corridors may be removed resulting in long- and short-term impacts. However, short-term impacts would be mitigated through the use of standard Best Management Practices (BMP) and revegetation with native plant species, by means of bioengineering. Long-term impacts would be addressed through remediation in accordance with federal, state and local regulations.

The floodplain designation of certain parcels may change following relocation utilities and will be evaluated on a site-specific basis.

Alternative 4: Combination

The environmental consequences of Alternative 4 would be similar to the consequences identified in Alternatives 2 and 3.

4.2 TRANSPORTATION FACILITIES

4.2.1 Affected Environment

Montana has 74,792 miles of highways, roads and streets and 4,126 bridges as of 2010. There were 923,819 registered motor vehicles in the state as of 2010 and 704,509 licensed drivers in the state as of 2003. Mobility in regional areas is critical for social and economic activities.
Commuting is a part of daily life and truck transportation plays a vital role in Montana's economy. Any impediment to freight movement hinders economic performance and growth.

In addition, millions of dollars in costs have been incurred by businesses and the general public due to the extra travel distance and time because of detours from permanent and temporary road closures. Some detours can add up to 50 miles of one-way travel for school buses, emergency vehicles, employees and customers of businesses.

4.2.2 Environmental Consequences

Alternative 1: No Action

Under the No Action alternative, no federal funding would be provided to repair utilities. Utilities would remain in disrepair and communities may be isolated or abandoned unless the State or local agencies took actions to maintain or improve utilities. This alternative may result in significant adverse impacts due to lack of access to community-sustaining utilities.

Alternative 2: Replacement

This alternative would retain the utility infrastructure. Short term impacts would be expected during construction as temporary outages may be required. No significant adverse long-term impacts are expected to the utility infrastructure form and function. Utility facilities would be more resilient and less likely to experience substantial damage from future events.

Alternative 3: Relocation

This alternative would generally maintain the existing utility network. Short term impacts would occur during construction from possible outages. No significant long-term impacts are expected to the utility infrastructure. Relocating utilities farther from waterways may make the facilities more resilient and much less likely to experience substantial damage from future events.

Alternative 4: Combination

Generally, the impacts to utilities from this alternative would be similar to those described for Alternatives 2 and 3.

4.3 SAFETY AND OCCUPATIONAL HEALTH

4.3.1 Affected Environment

Safety and occupational health issues include exposure to natural hazards; one-time and long-term exposure to asbestos, lead, radiation, chemicals, and other hazardous materials; and injuries or deaths resulting from a one-time accident. Safety and occupational health concerns could impact personnel working on the project and in the surrounding area, as well as travelers using the project sites. Utilities are damaged or isolated creating public safety issues due to disaster events. Structures may be present in the project area that were constructed prior to 1978 and have the potential to contain lead-based paint or asbestos.

Lead exposure can result from paint chips or dust, or inhalation of lead vapors from torch-cutting operations. Lead exposure can adversely affect the human nervous system. Due to the size of children, exposure to lead based paint is especially dangerous to small children. Occupational Health and Safety Administration (OSHA) considers all painted surfaces in which lead is detectable to have a potential for occupational health exposure.

Asbestos exposure can result from the inhalation of dust from a plethora construction materials or household products. In 1988 the EPA issued regulations requiring certain companies to report the asbestos used in their products. However, to this day these products can easily be found anywhere in the United States. Asbestos fibers cannot be seen with the naked eye and when inhaled can cause asbestosis that often progresses to disability and death.

Residents of Montana are vulnerable to natural hazards, the most significant of which include flood, debris flows, wildfire; drought, and windstorm. Other hazards that could impact Montana include hailstorm, lightning, and severe winter storms.

4.3.2 Environmental Consequences

Alternative 1: No Action

In the no action alternative utilities would not be repaired, leaving communities without service. Damaged utilities are a safety concern as they remain vulnerable to future events. Utility infrastructure may be abandoned. A No Action Alternative results in restricted power, sanitary, or communications access for emergency, police and fire services causing the potential for significant delay. The No Action Alternative provides a significant adverse safety affect to localities in Montana.

Alternative 2: Replacement

Alternative 2 would have no significant impact to public safety or occupational health. Utilities would be built to current codes and standards. Removal or repair of materials with painted surfaces or containing asbestos may be required and construction workers are required to follow OSHA regulations to provide appropriate asbestos abatement and avoid release of lead from paint. Construction workers and equipment operators are required to wear appropriate personal protective equipment (PPE) and be properly trained for the work being performed. All solid or hazardous wastes that might be generated by the activities of entities replacing utilities must be removed and disposed of at a permitted facility or designated collection point (e.g., for solid waste, a utility or construction company's own dumpster). Standard construction traffic control measures will be used to protect workers, residents and the travelling public.

Alternative 3: Relocation

Alternative 3 would have no significant impacts to public safety or occupational health. The new relocated utility would be designed to handle the capacity of pre-event function. Removal of materials with painted surfaces or containing asbestos may be required and construction workers are required to follow OSHA regulations to provide appropriate asbestos abatement and avoid release of lead from paint. Construction workers and equipment operators are required to wear appropriate personal protective equipment (PPE) and be properly trained for the work being performed. All solid or hazardous wastes that might be generated by the activities of entities replacing utilities must be removed and disposed of at a permitted facility or designated collection

point (e.g., for solid waste, a utility or construction company's own dumpster). Standard construction traffic control measures will be used to protect workers, residents and the travelling public.

Alternative 4: Combination

Generally, the impacts to public safety or occupational health from this alternative would be similar to those described for Alternatives 2 and 3.

4.4 SOCIOECONOMICS AND ENVIRONMENAL JUSTICE

4.4.1 Affected Environment

The current statewide overview of potential losses to guide implementation of mitigation measures, to prioritize jurisdictions most at risk from natural disasters, and to integrate data provided in local risk assessments.

The Vulnerability Summary of this report summarizes the findings of the risk assessment with risk factor rankings and a statewide overview of potential losses and most vulnerable jurisdictions by hazard.

Population Projections and Development Trends

Montana had an estimated population of 1,068,778 persons in 2019[11]. According to the 2010 U.S. Census, the population of Montana in 2010 was 989,415. In 2017 there was an approximately 18.46% increase from the 2000 population (902,195). The five largest cities in Montana at the time of the 2010 Census were: Billings with 104,170; Missoula with 66,789; Great Falls with 58,505; Bozeman with 37,280; and Butte with 34,525. The rankings were the same for 2000. All of the cities showed population growth from 1990 to 2000, except Butte, which registered a 1.2% decrease in population. Of those showing an increase in population from 2000 to 2010, Bozeman registered the largest increase (35.5%) and Great Falls registered the smallest increase (3.5%). All of these cities, except Billing, are located in the western half of the state.

At the time of the 2010 Census, the population was 49.8% female (492,748) and 50.2% male (496,667). The median age of the residents of Montana in 2010 was 39.8 years. The percentage of the population 18 years and older in 2000 was 77.4%. Of those 18 years or older, 49.3% were female and 50.7% were male. Average household size was 2.35 in 2010 while the average family size was 2.91.

According to the 2013-2017 American Community Survey[12], the majority of the Census respondents (97.5%) identified themselves as being of one race. Of those who identified

[11] U.S. Census Bureau [USCB] 2013-2017 American Community Survey 5-Year Estimates: State of Montana., 2017 This is a link to USCB's website page about 2018 American Community Survey 5-Year Estimates Montana Overview
[12] U.S. Census Bureau [USCB] 2013-2017 American Community Survey 5-Year Estimates: State of Montana., 2017 This is a link to USCB's website page about 2018 American Community Survey 5-Year Estimates Montana Overview

themselves as being of one race, 89.0% identified themselves as being White and 6.5% identified themselves as an American Indian or Alaska Native. The remaining respondents identified themselves as Black or African American (0.4%), Asian (0.7%), Native Hawaiian or Other Pacific Islander (0.1%) or some other race (0.5%). An estimated 3.6 percent of the people in Montana were Hispanic, people of Hispanic origin may be of any race.

Among people at least five years old living in Montana in 2013-2017, 3.9 percent spoke a language other than English at home. Spanish was spoken by 1.4 percent of people at least five years old; 0.8 percent reported that they did not speak English "very well".

Of the population 25 years and older, 29.3% identified their highest educational attainment as a high school graduate (or equivalency). Another 24.2% identified themselves as having some college education, but not a degree. 31.2% identified themselves as having a bachelor's degree or higher. 7.1% of the population reported themselves as having less than a high school diploma.[13]

In 2017, 60.1% of the population 16 and over were employed in the labor force. The employed civilian population 16 years and older is primarily engaged in management, professional, and related occupations (36.8%) and sales and office occupations (21.1%). Another 19.0% are engaged in service occupations, 12.4% in natural resource, construction, and maintenance occupations and 9.2 % in production, transportation, and material moving[14].

The majority of workers (73.3%) are private wage and salary workers. Government workers account for another (17.5%), while self-employed workers in their own unincorporated businesses account for (8.8)% of the working class. The median household income for 2018 was reported as $52,559 and the median family income was $68,139. The median income for female, full-time year-workers was $35,665, while the median income for male, full-time year-round workers was $47,287. In 2018, 87.4% of households in Montana had a computer, and 78.1 percent had a broadband internet subscription.

Poverty levels in Montana were 14.4 % for all people and 20.1% for children under age 18 in 2013-2018. By race respondents reported poverty levels for White at 13.4%, American Indian or Alaska Native residents reported 30.5%, Asian 15% and other at 21.6%. While American Indian or Alaska Native only account for 6.5% of the population of Montana, they account for 30.5% of poverty in the state.

According to the U.S. Department of Agriculture 2019 State Agriculture Overview, [15] there were 26,800 farms in Montana. This is up down from 2007 (29,524 farms). Acres operated in farms in

[13] U.S. Census Bureau [USCB] Montana QuickFacts from the U.S. Census Bureau 2010 Census., 2019 This is a link to the USCB's website overview about Montana
[14] U.S. Census Bureau [USCB] 2018 American Community Survey 5-Year Estimates: Economic Characteristics., 2018 This is a link to USCB's website page about 2018 American Community Survey 5-Year Economy Estimates
[15] U.S. Department of Agriculture [USDA] Montana Agricultural Overview., 2019. This is a link to USDA's 2019 Montana Agricultural Overview

operations for 2019 were 58,000,000 acres, with the average farm size of 2,079 acres. The highest value of production of crops statewide are: Wheat ($1,022,114,000), Hay ($907,755,000), Hay & Alfalfa ($654,675,000),

10.4 million visitors traveled to Montana in 2010. Visitor spending in 2010 totaled $2.4 billion. Visitor spending generated $229 million in state and local tax revenue in 2010. An estimated 34,210 jobs were traceable to the visitor industry.

There are eight federally recognized American Indian tribes in Montana[16]: Assiniboine & Sioux Tribes (Fort Peck Indian Reservation), Blackfeet Tribe (Blackfeet Indian Reservation), Chippewa-Cree Indians (Rocky Boy's Reservation), Confederated Salish & Kootenai Tribes (Flathead Reservation), Crow Tribe of Montana, Ft. Belknap Indian Community: Assiniboine (Nakoda) and Gros Ventre (Aaniiih) (Fort Belknap Reservation), Northern Cheyenne Tribe (Northern Cheyenne Reservation), and the Little Shell Tribe. [17]The Little Shell Chippewa Tribe obtained federal recognition on December 20, 2019. Table 3 outlines the population and incomes for the reservations in Montana.

Table 3: Reservation and Off-Reservation Trust Land Statistics[18]

Reservation	Population	Medium Household Income	Unemployment Rate
Blackfeet Reservation and Off-Reservation Trust Land	10,772	$26,264	10%
Crow Reservation and Off-Reservation Trust Land	7,184	$47,454	15.3%
Flathead Reservation	29,717	$42,154	6.4%
Fort Belknap Reservation and Off-Reservation Trust Land	3,187	$30,875	31.1%

[16] Montana Governor's Office of Indian Affairs [MT OIA] Tribal nations in Montana., 2019. This is a link to MT Governor's Office of Indian Affairs website, specifically listing tribes in MT

[17] National Conference of State Legislature. 2020. Federally Recognized Tribes. This is a link to the National Conference of State Legislature's website detailing federal and state recognized tribes in Montana

[18] U.S. Census Bureau [USCB] American Community Survey 5-Year Estimates, My Tribal Area., 2018. This is a link to USCB's website detailing tribes in Montana

Reservation	Population	Medium Household Income	Unemployment Rate
Fort Peck Reservation and Off-Reservation Trust Land	10,319	$36,786	14.2%
Northern Cheyenne Reservation and Off-Reservation Trust Land	4,931	$46,300	22.4%
Rocky Boy's Reservation and Off-Reservation Trust Land (MT part)	3,634	$28,897	10.7%
Little Shell Tribe 2020 will be the tribe's first participation in the U.S. Census Bureau as a federal recognized tribe	5,300	N/A	N/A
Turtle Mountain Reservation and Off-Reservation Trust Land, MT--ND--SD (MT part)	24	$30,625	$31,875

Source: 2014-2018 American Community Survey 5-Year Estimates, USCB

4.4.2 Regulatory Setting

Executive Order (EO) 12898 (Federal Actions to Address Environmental Justice in Minority and Low-Income Populations) requires federal lead agencies to ensure rights established under Title IV of the Civil Rights Act of 1964 when analyzing environmental effects. FEMA and most federal lead agencies determine impacts to low-income and minority communities as part of the NEPA compliance process. Agencies are required to identify and correct programs, policies, and activities that have disproportionately high and adverse human health or environmental effects on minority or low- income populations. The Council on Environmental Quality (CEQ)[19] defines the term "minority" as persons from any of the following groups: Black, Asian or Pacific Islander, American

[19] Council on Environmental Quality [CEQ] Environmental Justice Guidance Under the National Environmental Policy Act., 1997 This is a link to a PDF explaining Environmental Justice under NEPA

Indian or Alaskan Native, and Hispanic. Low-income or poverty areas are defined using the statistical poverty threshold from the U.S. Census Bureau (USCB), which is based on income and family size. CEQ considers a census tract to be minority or low-income when at least 50 percent or more of its residents are minority or low-income or when the population in the census tract has a "meaningfully greater" number of minority and low-income persons when compared to larger geographic areas such as a county or state. The 2017 poverty threshold for a family of four with two children under the age of 18 was $24,858[20]. EO 12898 also tasks federal agencies with ensuring that public notifications regarding environmental issues are concise, understandable, and readily accessible.

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EO 13045 (Protection of Children from Environmental Health Risks and Safety Risks) required federal agencies to identify and assess health risks and safety risks that may disproportionately affect children. As with EO 12898, FEMA and most federal lead agencies determine impacts to children as part of the NEPA compliance process. Agencies must ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.

4.4.3 Environmental Consequences

Alternative 1: No Action

Under the No-Action alternative, impacted utilities would not receive federal assistance. There is no requirement for compliance with Executive Orders (EO) 12898 (Environmental Justice) and 13045 (Protection of Children from Environmental Health Risks and Safety Risks) since there are

[20] U.S. Census Bureau [USCB] 2013-2017 American Community Survey 5-Year Estimates: State of Montana., 2017 This is a link to USCB's website page about 2018 American Community Survey 5-Year Estimates Montana Overview

no federal actions. Alternative 1 has potential to result in significant adverse impact to socioeconomics of a community if buildings and critical infrastructural elements such as utilities are not restored.

Alternative 2: Replacement

During the construction period this alternative may provide some short-term benefits by providing construction jobs and a multiple effect of increased expenditures in the local economy. There may be major effects to populations during construction periods due to service interruption, road detours, and building construction.

Efforts would be made during any construction to minimize short-term disruption to the local utility system. Low income and minority populations may actually benefit during the construction process through the provision of construction jobs and multiplier effects of expenditures in the local economy. Any adverse impacts to low income or minority populations are expected to be short-term and not significant.

Alternative 3: Relocation

Generally, the impacts to socioeconomics and environmental justice from this alternative would be similar to those described for Alternative 2 although there is the potential for original utility infrastructure to be abandoned.

During the construction period this alternative may provide some short-term benefits by providing construction jobs and a multiple effect of increased expenditures in the local economy.

In addition, this alternative would potentially impact agricultural production at some locations. The agricultural effects anticipated to result from where construction of new utilities requires acquiring farmland and converting it into a permanent ROW. Agricultural land conversions may adversely impact low income and minority population, if done at a significant scale. It is not anticipated that the amount of land required for utility relocations would be significant.

Alternative 4: Combination

Generally, the impacts to socioeconomics and environmental justice from this alternative would be similar to those described for Alternatives 2 and 3.

4.5 AIR QUALITY

Air quality is regulated by the U.S. Environmental Protection Agency (EPA) under the jurisdiction of the Clean Air Act (CAA) of 1970 and its amendments. The EPA establishes primary and secondary National Ambient Air Quality Standards (NAAQS) for air pollutants that are considered harmful to the public and environment. Primary NAAQS are established at levels necessary, with an adequate margin of safety, to protect the public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Similarly, secondary NAAQS specify the levels of air quality determined appropriate to protect the public welfare

from any known or anticipated adverse effects associated with air contaminants. The pollutants for which EPA has established ambient concentration standards are called criteria pollutants and include ozone (O_3), respirable particulates that have aerodynamic diameters of 10 micrometers or less (PM_{10}), fine particles with aerodynamic diameters less than 2.5 micrometers, (PM2.5), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead (Pb).

4.5.1 Affected Environment

The CAA requires that state implementation plans (SIPs) be prepared and implemented by the applicable state or local regulatory agency for each criteria pollutant in nonattainment in an air basin. Montana Department of Environmental Quality (DEQ) is the state agency responsible for regulating air quality and developing SIPs for Montana. There are currently no approved federal implementation plans or tribal implementation plans for air quality in the state. [21] EPA also assigns a designation to each area of the United States regarding compliance with the NAAQS. The EPA categorizes the level of compliance or non-compliance as follows: attainment (area currently meets the NAAQS), maintenance (area currently meets the NAAQS but has previously been out of compliance), and nonattainment (area currently does not meet the NAAQS).

Montana currently has nonattainment areas in Particulate Matter (PM_{10}) and Lead, and maintenance areas for Carbon Monoxide (CO) under the National Ambient Air Quality Standards (NAAQS).[22] PM $_{10}$ - There are ten regions listed as nonattainment with moderate levels of PM_{10}. These include Butte, Silver Bow County; Columbia Falls & Kalispell, Flathead County; Flathead County- Whitefish and vicinity; Lame Deer, Rosebud County; Libby, Lincoln County; Missoula, Missoula County; Polson & Ronan, Lake County; and Sanders County (part)- Thompson Falls and vicinity.

Lead – The East Helena Area, Lewis and Clark County is listed as a nonattainment area for lead.

CO - There are three areas considered maintenance areas for CO – Billings, MT, Missoula, MT and Great Falls, MT.

The Administrative Rules of Montana Title 17, chapter 8, covers air quality requirements for the state. The Montana Department of Environmental Quality (MT DEQ) has programs to deal with issues that affect the comfort, health, safety, and wellbeing of Montana citizens and their environment. Enforcement of state and federal environmental laws is accomplished through permitting, inspection, sampling, analytical services, and monitoring activities of the department. Programs that may become applicable to the alternatives include:

- Air Quality Program: The air quality program is responsible for protecting and fostering the state's air quality resources. The program promotes clean-air activities and initiates enforcement action to correct existing air pollution problems.

[21] U.S. Environmental Protection Agency (EPA) Approved Air Quality Implementation Plans in Montana., 2018. This is a link to EPA's website regarding Air Quality Implementation Plans in Montana

[22] U.S. Environmental Protection Agency (EPA) Nonattainment Areas for All Criteria Pollutants (Green Book) This is a link to EPA's website about the Green Book

Open burning must comply with state air quality burning according to Administrative Rules of Montana [23]01)[24]. Some counties and municipalities in the state have established and administer local air pollution control programs under state law (MCA 75-2-301)[OBJ]. Cascade, Flathead, Lincoln, Missoula, and Yellowstone Counties and all of Montana's Native American reservations issue open burning permits for minor activities through their local health department or fire authority. MT DEQ controls open burning in all other counties in the state and issues permits for major open burning activities.

In general, the state allows open burning activities from March through November when there is better air dispersion. This eliminates complications from wintertime inversions, which hold smoke close to the ground, increasing the chances that pollution will have adverse health effects on local communities. In fall months (September through November), burners must adhere to air quality restrictions published by the MT DEQ. In winter, especially in western Montana, burners must determine favorable air quality conditions for burning and notify the MT DEQ before ignition [25].

4.11.1 Environmental Consequences

Alternative 1: No Action

Under the No Action alternative, there would be no federal action. Alternative 1 has potential to permanently disrupt utility service to communities. Loss in residential, commercial, agricultural, or recreational land use may occur. Areas without utility access may experience a reduction in localized vehicle emissions; while other areas may experience an increase compared to pre-disaster conditions due to construction efforts related to the relocation of disaster affected communities.

Alternative 2: Replacement

Construction of utilities may include pre-cast concrete, and some poured in place concrete. During construction there may be temporary increases in equipment exhaust emissions and fugitive dust. However, the temporary increase in equipment exhaust is expected to be negligible as long as the equipment is well maintained, and idling is minimized. All necessary measures must be taken to minimize fugitive dust emissions created during construction activities. Any complaints that may arise are to be dealt with in an efficient and effective manner.

If fugitive dust were to become a problem it can be mitigated by periodic watering of active construction areas, particularly areas close to any nearby sensitive receptors (e.g., hospitals, senior citizen homes, schools). Impacts from fugitive dust are anticipated to be short-term and negligible.

[23] Administrative Rules of the State of Montana [ARM] Title 17, chapter 8, subchapter 6: Air Quality, Open burning This is a link to Montana's state codes concerning open burning

[24] Montana Code Annotated [MCA] Title 75, chapter 2, part 3: Local air pollution control., 2019 This is a link to Montana's state codes about local air pollution control

[25] Montana Department of Environment Quality [MT DEQ] Open Burning Permits. This is a link to MT DEQ's website about Open Burning Permits

Where removal of utility infrastructure is required there would be some short-term increase in fugitive dust and vehicular emissions. Mitigation of fugitive dust, if necessary, can be accomplished by periodically watering the demolition site.

Alternative 3: Relocation

Generally, the impacts to air quality from this alternative would be similar to those described for Alternative 2.

Alternative 4: Combination

Generally, the impacts to air quality from this alternative would be similar to those described for Alternatives 2 and 3 with temporary air quality impacts affecting both the replacement and relocation project sites.

4.6 NOISE

4.6.1 Affected Environment

Sounds that disrupt normal activities or otherwise diminish the quality of the environment are considered noise. Noise events that occur during the night (10 p.m. to 7 a.m.) are more disruptive than those that occur during regular waking hours (7 a.m. to 10 p.m.). Assessment of noise impacts includes consideration of the proximity of the noise sources to sensitive receptors. A sensitive receptor is defined as an area of frequent human use that would benefit from a lowered noise level. Typical sensitive receptors in developed areas include residences, schools, churches, hospitals, and libraries. In more sparsely developed areas, noise-sensitive receptors would include recreational development such as parks, campgrounds, water access sites, and trails. Recreational areas are areas, such as parks, campsites, water access sites, and trails, that rely on quiet settings as an essential part of their character. Typical noise sources in residential or recreational areas are associated with climatic conditions (wind, rain), transportation (traffic on roads, airplanes), and "life sounds" (people talking, children playing, yard maintenance). Sources of noise can include construction equipment, including motorized tools, equipment, and vehicles.

Urban environments are likely to have high noise levels from vehicular traffic and construction. Typical highways produce noise levels that range from 80 to 100 A-weighted decibels (dBA), and construction produces noise levels between 93 and 108 dBA[26]. Major urban areas in Montana include Billings, Missoula, Great Falls, Bozeman, and Helena.

Airports generate high levels of noise from aircraft activities that increase ambient noise levels in nearby communities. Commercial aircraft generally emit between 70 to 100 dBA[27]. Jet airplanes can

[26] U.S. Department of Interior [DOI] Navajo Reservoir RMP/FEA Appendix E Noise., 2008. This is a link to a PDF comparing common sound levels

[27] Federal Aviation Administration [FAA] Advisory Circular on Noise Levels AC 36-3H., 2012. This is a link to the FAA's website page about Advisory Circulars (ACs), specifically Estimated Airplane Noise Levels in A-Weighted Decibels

produce sounds up to 120 dBA. In Montana, there are 13 commercial airports and 124 public use airports.

Highways produce noise levels ranging from 80 to 100 dBA even outside of urban areas. Major highways in Montana include I-15, I-90, and I-94.

Railways can produce higher noise levels that range from 70 to 115 dBA[28]. Montana contains approximately 3,375 miles of rail lines.

National and State Parks generally have lower average noise levels due to their location in wilderness areas away from human infrastructure. Typical noise levels for national and state parks are as low as 10 dBA. [29]

Table 4: Decibel Levels Encountered in the Environment and Industry

Sound Level (dba)	Maximum Exposure Limits	Source of Noise	Subjective Impression
10			Threshold of hearing
20		Still recording studio, rustling leaves	
30		Quiet bedroom	
35		Soft whisper at 5ft; Typical library	
40		Quiet urban setting (nighttime); normal level in home	Threshold of quiet
45		Large transformer at 200 feet	
50		Private business office; light traffic at 100 feet; Quiet urban setting daytime	
55		Window air conditioner; men's clothing department in store	Desirable limit for outdoor residential use area (EPA)
60		Conversation speech; Data processing center	
65		Busy restaurant; automobile at 100 feet	Acceptable level for residential land use
70		Vacuum cleaner in home; freight train at 100 feet	Threshold of moderately loud
75		Freeway at 10 feet	
80		Ringing alarm clock at 2 feet; Kitchen garbage disposal; loud orchestral music in large room	Most residents annoyed
85		Printing press; boiler room; heavy truck at 50 feet	Threshold of hearing damage for prolonged exposure
90	8 hours	Heavy city traffic	
95	4 hours	Freight train at 50 feet; Home lawn mower	
100	2 hours	Pile driver at 50 feet; Heavy diesel equipment at 25 feet	Threshold of very loud

[28] Federal Railroad Administration [FRA] Federal Railroad Administration Horn Noise FAQ., 2020. This is a link to FRA's website page about Horn Noise FAQ

[29] National Park Service [NPS] The Science of Sound., 2015 This is a link to a PDF by NPS about the Science of Sound

105	1 hour	Banging on steel plate; Air hammer	
110	0.5 hour	Rock music concert; Turbine condenser	
15	0.25 hour	Jet plane overhead at 500 feet	
120	<0.25 hour	Jet plane taking off at 200 feet	Threshold of pain
135	<0.25 hour	Civil defense siren at 100 feet	Threshold of extremely loud

The approximate sound levels of construction equipment that would be used in proposed projects are described in Table 5.

Table 5: Approximate Sound Levels (dBa) at Various Distances (ft)

Equipment Type	@ 50 ft	@ 100 feet	@ 200 feet	@ 400 feet	@ 800 feet	@1,600 feet
Front-end Loader	84	78	72	66	60	54
Dump truck	83	77	71	65	59	53
Truck	83	77	71	65	59	53
Tractor	84	78	72	66	58	52

4.5.1 Regulatory Setting

Studies have shown that some of the most pervasive sources of noise in our environment today are those associated with transportation. Traffic noise tends to be a dominant noise source in our urban as well as rural environment. In response to the problems associated with traffic noise, the United States CFR 23 Part 772[30], "Procedures for Abatement of Highway Traffic Noise and Construction Noise," establishes standards for mitigating highway traffic noise.

The level of highway traffic noise depends on three things: (1) the volume of the traffic, (2) the speed of the traffic, and (3) the number of trucks in the flow of the traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and greater numbers of trucks. Vehicle noise is a combination of the noises produced by the engine, exhaust, and tires. The loudness of traffic noise can also be increased by defective mufflers or other faulty equipment on vehicles. Any condition (such as a steep incline) that causes heavy laboring of motor vehicle engines will also increase traffic noise levels. In addition, there are other, more complicated factors that affect the loudness of traffic noise. For example, as a person moves away from a highway, traffic noise levels are reduced by distance, terrain, vegetation, and natural and manmade obstacles. Traffic noise is not usually a serious problem for people who live more than 150 meters (approximately 492 feet) from heavily traveled freeways or more than 30 to 60 meters (approximately 98 to 197 feet) from lightly traveled roads.

[30] Code of Federal Regulations [CFR] 23 Part 772., 2010

Traffic noise impacts occur when the predicted traffic noise levels approach or exceed the noise abatement criteria (Table 6), or when the predicted traffic noise levels substantially exceed the existing noise levels.

Table 6: Noise Abatement Criteria Hourly A-Weighted Sound Level in Decibels (dBA)*

Activity Category	$L_{eq}(h)^1$	$L_{10}(h)^2$	Description of Activity Category
A	57 (Exterior)	60 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	70 (Exterior)	Picnic areas, recreation playgrounds, active sports areas, schools, churches, libraries, and hospitals.
C	72 (Exterior)	75 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above
D	--	--	Undeveloped lands.
E	52 (Interior)	55 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

* Either $L_{eq}(h)$ or $L_{10}(h)$ (but not both) may be used on a project.

NOTE: These sound levels are only to be used to determine impact. These are the absolute levels where abatement must be considered. Noise abatement should be designed to achieve a substantial noise reduction

- not the noise abatement criteria.

4.6.2 Environmental Consequences

Alternative 1: No Action

Under this alternative, utilities would remain damaged due to the event. This would result in a natural shift in occupation density and transportation patterns. Transportation noise along other roadway segments within the County may increase under this alternative due to increasing traffic on alternate roadways. Noise in the immediate area would decrease as communities may be abandoned. Overall noise levels in the immediate area may also decrease due to some migration of residents from the region.

Alternative 2: Replacement

Utility restoration is anticipated to carry a similar noise level to that which it had at pre-disaster damage levels. Noise from construction activities may have short term adverse effects on persons who live nearby. Noise levels can be minimized by ensuring that construction equipment is

equipped with a recommended muffler in good working order. Noise impacts on residences can also be minimized by ensuring that construction activities are not conducted during early morning or late evening hours. Noise levels of construction equipment (70 to 72 dB) at the distance in which affected parties would likely be located (>200 feet/60 meters) will not be of a duration to be significant.

Alternative 3: Relocation

There would be no short-term noise impacts from construction activities under this alternative at the original location. Noise from construction activities may have short term adverse effects on persons who live nearby. Noise levels can be minimized by ensuring that construction equipment is equipped with a recommended muffler in good working order. Noise impacts on residences can also be minimized by ensuring that construction activities are not conducted during early morning or late evening hours. Noise levels of construction equipment (70 to 72 dB) at the distance in which affected parties would likely be located (>200 feet/60 meters) will not be of a duration to be significant.

Alternative 4: Combination

Generally, the noise impacts from this alternative would be similar to those described for Alternatives 2 and 3 with noise impacts affecting both the replacement and relocation project sites.

4.7 PUBLIC SERVICES AND UTILITIES

4.7.1 Affected Environment

Utility lines often cross or run along roads, either overhead or underground. Public utility services and facilities include, but are not limited to:

- Fire protection
- Law Enforcement
- Emergency Medical Services
- Schools
- Water
- Wastewater
- Sanitation
- Solid waste disposal
- Stormwater drainage
- Electric utilities
- Natural gas
- Telephone/Telecommunications

4.7.2 Environmental Consequences

Alternative 1: No Action

This alternative does not include any Agency action. Alternative 1 does have the potential to affect public services and utilities because natural hazards would continue to damage roads, bridges, utilities which would adversely impact the ability to provide service. Fire, emergency, law enforcement, and school services would be delayed as a result of continued inaccessibility of the route due to closed roads, bridges or disrupted utilities. Depending on the length of detour required or utility service unavailable these services could be significantly impacted. In addition, any utility repair crews may not be able to reach damaged utility lines, resulting in lengthy service outages.

Alternative 2: Replacement

During construction utility interruption and delays in fire, emergency, law enforcement, and school services would continue, but these would be short-term impacts. Once completed, public services would be restored to pre-disaster levels. No long-term impacts would occur under this alternative.

Alternative 3: Relocation

Relocations could produce short term disruptions to customers. Fire, emergency, law enforcement, and school services could be temporarily impacted depending on the length of alternate routes. Long term impacts to utilities would be beneficial under this alternative.

Alternative 4: Combination

Utility services, fire, emergency, law enforcement, and school services may be temporarily delayed as a result of construction. Depending on the increase in the length of alternate routes, these services could be temporarily impacted. Impacts to utilities under this alternative would be similar to those described in Alternative 3.

4.8 WATER RESOURCES

4.8.1 Affected Environment

Montana has a total 176,750 stream miles, which include 53,221 miles of perennial stream and 116,608 miles of non-perennial streams. Montana is one of the few geographic areas in the world where rivers form parts of three major watersheds feeding the Pacific Ocean, the Gulf of Mexico and Hudson Bay. Montana has fifteen major river basins, most of which drain into the Missouri River. West of the continental divide the river basins drain into the Clark Fork of the Columbia River. The Missouri River basin is the largest basin in Montana. The Missouri River flows through the central part of the state until crossing into North Dakota.

Montana DEQ has developed more than 600 Total Maximum Daily Loads (TMDL) and identified more than 1,400 impaired waterbody – pollutant combinations that still require TMDL development within Montana. The majority of all impairment causes requiring TMDL

development in Montana fall within one of the following pollutant groups: sediment, nutrients, metals, temperature, pathogens, or salinity.

Groundwater provides 39% of public water supply and 94% of rural domestic water supply in Montana. On a daily basis approximately 90 million gallons of ground water are used for irrigation, 16 million gallons to supply water for livestock, and 20 million gallons per day are used to support industry.

Montana is divided into three ground water regions: Western Mountain Ranges Region – the western third of Montana and the Bighorn Mountains that cross the Montana-Wyoming border south of Billings; The Glaciated Central Region – includes an area in northern Montana that extends east roughly from the Rocky Mountain Front to the North Dakota border; and Non-Glaciated Central Region – the majority of the state.

There are 11 principle aquifers within the state divided into Alluvial aquifers, Lower Cretaceous aquifers, Lower Tertiary aquifers, Northern Rocky Mountains Intermontane Basins aquifer systems, Pacific Northwest volcanic-rock aquifers, Paleozoic aquifers, Sand and gravel aquifers (glaciated regions), and Upper Cretaceous aquifers.

Approximately 33 percent of Montana's assessed rivers and streams and 28 percent of assessed lakes and reservoirs were impaired from pollution. The most common causes of impairment include sediment and modification of vegetation associated with streams. Most assessed rivers and streams in Montana are not classified for aquatic life beneficial use but are classified as drinking water, agriculture, and recreational beneficial uses.

Groundwater sources vary across the state. In western Montana, groundwater is typically contained within surficial aquifers, which are shallow (less than 50 feet) and consist of loose sand and gravel deposits. Surficial aquifers are replenished by streams and therefore vary in volume. Because they are shallow, surficial aquifers are prone to contamination from surface uses, such as fuel spills and industrial discharges. Montana contains one EPA-designated sole source aquifer, the Missoula Valley aquifer, which is located in Missoula County. In contrast, eastern Montana has many bedrock aquifers, which are deeper and contain water within hard, bedrock layers. Bedrock aquifers typically contain less water than the surficial aquifers, and it is harder to obtain[31].

Approximately 1,938 public drinking water systems in Montana rely on groundwater as a primary or secondary source of drinking water. The majority of Montana's population (about 61 percent) relies on groundwater for drinking water and approximately 32 percent of Montanans obtain their drinking water from private wells. Montana Bureau of Mines and Geology tests groundwater for eight general pollutants: total dissolved solids, nitrate, fluorine, sulfate, chloride, arsenic, iron, and manganese. Of the 423 samples that were evaluated between 2015 and 2017, the majority met

[31] Montana Department of Environmental Quality [DEQ] Final Water Quality Integrated Report., 2018 This is a link to a PDF about MT DEQ's 2018 Final Water Quality Integrated Report

contaminant-level standards and DEQ standards for contamination. However, 53 percent of unconsolidated groundwater sources and 33 percent of consolidated groundwater sources exceeded standards for total dissolved solids.

4.8.1.1 Wild and Scenic Rivers

The Wild and Scenic Rivers Act,16 U.S.C. 1271 et seq[32]., was enacted 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. The Act safeguards the unique character of these designated wild and scenic rivers while recognizes the potential for their appropriate use, development, and encourages river management.

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

Montana has approximately 169,829 miles of river, of which 388 miles are designated as wild & scenic—approximately 2/10ths of 1% of the state's river mile. Under the wild and scenic river designation, Montana has two rivers and one creek classified: Flathead River**,** Missouri River**,** East Rosebud Creek [33]. The Flathead River has 97.9 miles of designated as Wild; 40.7 miles as Scenic, and 80.4 miles as Recreational for a total of 219.0 miles. The designation includes the North Fork, Middle Fork and South Fork above Hungry Horse Reservoir and features recreation, scenery, historic sites, unique fisheries, and wildlife such as grizzly bears and wolves. The rugged area includes the landscapes of Glacier National Park and the Bob Marshall and Great Bear Wilderness areas. The Missouri River segment from Fort Benton downstream to Robinson Bridge was designated in 1976 and includes 64.0 miles of Wild, 26.0 miles of Scenic, and 59.0 miles of Recreational for a total of 149.0 miles. East Rosebud Creek from its source in the Absaroka-Beartooth Wilderness downstream to East Rosebud Lake, including the stream reach between Twin Outlets Lake and Fossil Lake, and from immediately below but not including the outlet of East Rosebud Lake downstream to the Custer Gallatin National Forest boundary**.**

[32] Public Law 90-542; 16 U.S. Code. 1271 et seq: Congressional declaration of policy., 1968
[33] National Wild and Scenic Rivers System [WSR] Designated Rivers. 2019. This is a link to National Wild and Scenic Rivers' website overview about Montana

4.8.2 Environmental Consequences

Alternative 1: No Action

In the No Action alternative, utilities are not repaired, leaving communities without services and vulnerable to future flood events. No work would occur in water, thus there would be no impact to water due to project work. Erosion and sedimentation may increase if banks are further damaged from being left unrepaired. Damaged utility infrastructure may cause a flow impediment, potentially causing significant impacts to stream and floodplain hydraulics and function.

Alternative 2: Replacement

Existing utilities may be expanded within the existing footprint or ROW. Fill material may be needed around utility infrastructure thus impacting waters. The discharge of fill material into surface water may provide a temporary alteration of surface water quality including but not limited to temperature, dissolved oxygen, or turbidity.

The design of some utility features may require a hydrologic analysis to determine the magnitude and frequency of flows and a hydraulic analysis to locate and size drainage facilities. During construction, the Agencies would mitigate impacts by requiring projects to apply Best Management Practices (BMPs) to reduce sediment and fill material from entering the water. Projects may be required to prepare a storm water pollution prevention plan (SWPPP). Projects may also be required to obtain a Section 404 or other permit from the U. S. Army Corps of Engineers (USACE), and a Section 401 Water Quality Certification permit from MT DEQ Water Quality Division or US EPA. Discharges of water encountered during excavation or work in wet areas may require a Construction Dewatering Discharge Permit. Project management is responsible for complying with any conditions outlined within these permits.

Because some utilities are location-dependent and potentially located within a floodplain, the scope of work of this alternative may have some impacts to the floodplains. Construction of utilities may result in alteration of the course or magnitude of floodwater. Utility repair and changes within floodplains may also have some impact. If changes to utility infrastructure is anticipated to impact the floodplain/floodway, Agency projects must adhere to EO 11988: Floodplain Management, which requires federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. A hydrology and hydraulics report may be required to evaluate changes to stream hydraulics in detail and compliance with local ordinance will be required.

While this alternative is not expected to impact wetlands because actions are limited to existing ROWs, certain sites could result in some fill being placed in a wetland. This alternative would have little if any impact on increasing impervious surfaces, reduce groundwater recharge, and adversely affect water quality through the transmission of sediment, debris, oils, and hazardous substances into surface waters. During construction, the Agencies would mitigate these impacts

by requiring the applicant to apply BMPs to reduce transport of sediment, debris, oils, concrete waste, and hazardous substances into wetlands or waterways.

The results of the analyses and consultation discussed above would be documented in a memorandum to this PEA or in a SEA.

Alternative 3: Relocation

This alternative would generate impacts similar to those described for Alternative 2. Other impacts will be addressed on a site-specific basis.

Alternative 4: Combination

This alternative would generate impacts similar to those described for Alternative 2 and 3.

4.9 BIOLOGICAL RESOURCES

Biological resources include native or naturalized plants and animals and the habitats (e.g., wetlands, forests, and grasslands) in which they exist. Protected and sensitive biological resources include federally listed (endangered or threatened), proposed, and candidate species designated by the United States Fish and Wildlife Service (USFWS). Sensitive habitats include those areas designated by the USFWS as critical habitat protected by the Endangered Species Act (ESA) and sensitive ecological areas as designated by state or federal rulings. Sensitive habitats also include wetlands, plant communities that are unusual or of limited distribution, and important seasonal use areas for wildlife (e.g., migration routes, breeding areas, crucial summer and winter habitats).

4.9.1 Affected Environment

Vegetation

Montana is divided into four ecosystems: montane forests, plains grasslands, intermountain grasslands, and shrub grasslands.

Montana's eastern high plains represent 43.2% of the state and are a part of America's Great Plains region. This ecosystem type is generally found on high, rolling land and on some scattered hills and in wide river valleys. Plants of the plains grassland and forest are adapted to dry conditions and extreme temperatures. A variety of shrubs are found here, but not enough to be classified as the dominant plant species. Native grasses dominate the landscape, as they are well adapted for an environment where drought and fire are common. Grasses have specialized root systems that allow them to store nutrients that can be used during times of stress. Forests of ponderosa pines can be found growing on sites that receive more than 14 inches of moisture and along the Missouri and Yellowstone rivers and their tributaries where water loving riparian plant communities grow. Rangeland is common, but spring wheat and alfalfa farming also occur. Agriculture is affected by erratic precipitation and few opportunities for irrigation.

The montane forest ecosystem represents 26% of Montana and includes the mountains of Montana that have been formed by tectonic uplift and glacial erosion. Along the western third of the state these high elevation areas encompass mountains from their base to their summit with elevations increasing from the north where the Kootenai River flows into Idaho (1,800 feet) southward to the snowcapped peaks in the Beartooth Range (12,800 feet) adjacent to Yellowstone National Park. Montana forests are grouped into the following forest types, using dominant tree species as the determining characteristic: Douglas-fir, lodgepole pine, ponderosa pine, spruce-fir, western larch, Engelmann spruce, grand fir, and limber pine. The Douglas-fir, lodgepole pine, and ponderosa pine forest types combined total over two-thirds of the state's forest lands. Much of this ecosystem is in public ownership through the USFS.

The intermountain/foothill grassland ecosystem (14.3% of the state) is a mosaic of private and public land that extends from the glaciated Flathead River Valley in the north, south to the Centennial Valley, and east to the Little Belt foothills. The intermountain grasslands are the transition zone between prairie grasslands and montane forests, sometimes referred to as foothill grasslands. These large, open valleys support plant communities dominated by grasses. Large rivers surrounded by lush riparian plant communities flow through the larger valleys.

The shrub grassland ecosystem (7.7%) occurs in widely separated segments across most of the eastern half of the state in high-elevation valleys and along non-forested slopes. Juniper and sagebrush characterize these generally dry slopes. They are interspersed with low cover grasslands and offer a unique transitional area habitat that supports many of Montana's species of greatest conservation need. Over half of this limited ecosystem is privately owned.

Fish and Wildlife

Fish and wildlife include the species that occupy, breed, forage, rear, rest, hibernate, or migrate through the project areas. Regulations relevant to fish and wildlife include the Bald and Golden Eagle Protection Act (BGEPA), the Migratory Bird Treaty Act (MBTA), and the Endangered Species Act (ESA).

The BGEPA as amended, 16 U.S.C. 5A-II 668 et seq[34]., provides for the protection of bald and golden eagles by prohibiting the take, possession, sale, purchase, barter, transport, export, or import of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit. This Act requires consultation with the USFWS to ensure that proposed federal actions do not adversely affect bald or golden eagles. Bald eagles and golden eagles are found throughout Montana. Breeding and wintering habitats may be different, and activities that would affect nesting areas or winter roosts could result in significant impacts. Bald eagles live near rivers, lakes, and marshes where they can find fish, their staple food. Bald eagles also feed on waterfowl, turtles, rabbits, snakes, and other small animals and carrion. Bald eagles require a good food base, perching areas, and nesting sites. Their habitat includes large lakes, reservoirs, and rivers. In winter, the birds congregate near open water in tall trees for spotting prey and night

[34] 16 U.S. Code [U.S.C] 668 et seq

roosts for sheltering [35]. Golden eagles build nests on cliffs or in the largest trees of forested stands that often afford an unobstructed view of the surrounding habitat. Their nests are usually made of sticks and soft material added to existing nests or new nests that are constructed to create strong, flat or bowl-shaped platforms. Golden eagles avoid nesting near urban habitat and do not generally nest in densely forested habitat. Individuals will occasionally nest near semi-urban areas where housing density is low and in farmland habitat; however, golden eagles have been noted to be sensitive to some forms of human presence.

The MBTA, 16 U.S.C. 701-719c, decrees that all migratory birds and their parts (including eggs, nests, and feathers) are protected. A recent legal memorandum by the U.S. Department of the Interior (DOI) [36] states that the law only prohibits "pursuing, hunting, taking, capturing, killing, or attempting to do the same applies only to direct and affirmative purposeful actions that reduce migratory birds, their eggs, or their nests, by killing or capturing, to human control." Situations where an "incidental take" occurs, defined as "both takings and/or killings that directly and foreseeably result from, but are not the purpose of, an activity," are no longer subject to penalties under the MBTA. All fire-related mitigation activities being evaluated could result in a potential incidental take, and none would involve a purposeful take of migratory birds. For this reason, the recommendations provided in the following sections are considered BMPs.
Nearly all native North American bird species are protected by the MBTA. Under the MBTA, the purposeful taking, killing, or possessing migratory birds is unlawful. Projects that are likely to result in the purposeful taking of birds protected under the MBTA would require the issuance of taking permits from the USFWS. Over 1,000 native bird species, including common species such as American robin (Turdus migratorius) and American crow (Corvus brachyrhynchos) are protected by the MBTA. Montana is located in both the internationally designated Central Flyway, and the Pacific Flyway used to manage migratory birds. USFWS and its partners establish the flyway areas based on the routes different bird species follow as they migrate between nesting and wintering areas in North America. [37]

Invasive species are organism that are brought into the state from another place and compete with or kill native species. There are 9 fish species, 8 plant species, 2 mollusk species, 1 mammal, 2 crustacean species, and 4 pathogen/parasite species considered invasive in Montana.

Endangered Species

The ESA of 1973, 16 U.S.C. 1531–1544, directs federal agencies to protect threatened and endangered species in consultation with the USFWS. This protection includes a prohibition against direct take (e.g., killing, harassing) and indirect take (e.g., destruction of habitat). Section 7 of the ESA requires federal agencies to aid in the conservation of listed species and to ensure the activities of federal agencies will not jeopardize the continued existence of listed species or

[35] U.S. Fish and Wildlife Service [USFWS] Bald & Golden Eagle Information,. 2015 This is a link to USFWS's website detailing Bald & Golden Eagle Information
[36] U.S. Department of Interior [DOI] Office of the Solicitor Memorandum M-37050: The Migratory Bird Treaty Act Does Not Prohibit Incidental Take., 2017 This is a link to a PDF regadubg the 2017 Memorandum about the Migratory Bird Treaty Act
[37] U.S. Fish and Wildlife Service [USFWS] Migratory Bird Flyways., 2019. https://www.fws.gov/birds/management/flyways.php

adversely modify designated critical habitat. There are 19 species listed as Endangered (E), Threatened (T), Proposed (P), or Candidate I species (see Table 7) by the USFWS under ESA that historically, occurred, occur or may potentially occur within Montana. Three of these species, piping plover (*Charadrius melodus*), bull trout (*Salvelinus confluentus*), and Canada lynx (*Lynx canadensis*) have designated critical habitat in Montana. Montana is home to 90 resources managed or regulated by the U.S. Fish and Wildlife Service: 20 threatened or endangered species, 3 critical habitats, 38 migratory birds 29 U.S. Fish and Wildlife Service facilities.

Of the more than 600 fish and wildlife species in Montana, 60 are listed as species in need of conservation and protected by MT FWP. Montana has 446 plants and 214 animals listed as species of concern through MT FWP and the Montana Natural Heritage Program. Species of Concern are native taxa that are at-risk due to declining population trends, threats to their habitats, restricted distribution, and/or other factors. Designation as a Montana Species of Concern or Potential Species of Concern is not a statutory or regulatory classification, but designations to provide information that helps resource managers make proactive decisions regarding species conservation and data collection priorities.

Montana has 76 wildlife management areas managed by MT FWP and 13 wildlife refuges (NWRs) and two wetland management districts (WMD) managed by the USFWS: Benton Lake NWR, Bowdoin NWR, Charles M. Russell NWR, Halfbreed Lake NWR, Lake Mason NWR, Lee Metcalf NWR, Lost Trail NWR, Medicine Lake NWR, National Bison Range NWR, Ninepipe NWR, Red Rock Lakes NWR, UL Bend NWR, War Horse NWR, Benton Lake WMD, and Northwest Montana WMD.

Table 7: Threatened, Endangered and Candidate Species in Montana[38]

Common Name	Scientific Name	Federal Status	Habitat / Range
Black-footed Ferret	Mustela nigripes	EXPN	Section 10(j) of the ESA: Section 7 consultation not required except on lands administered by the U.S. Fish and Wildlife Service or the National Park Service.
Black-footed Ferret	Mustela nigripes	E	Habitat consists of grasslands, steppe, and shrub steppe. Requires prairie dog colonies for prey and shelter and utilizes prairie dog burrows for resting and birthing sites. Range includes eastern Montana.
Canada lynx (contiguous U.S. population)	Lynx canadensis	T (CH)	Requires moist boreal forests and montane regions that have cold, snowy winters and a high-density snowshoe hare prey base. Typical habitat consists of coniferous or mixed forest with thick undergrowth, but also sometimes enters open forest, rocky areas,

[38] U.S. Fish and Wildlife Service [USFWS] Natural Resources of Concern. IPaC – Information, Planning, and Conservation Online System., 2020. This is a link to USFWS's IPaC

Common Name	Scientific Name	Federal Status	Habitat / Range
			and tundra to forage. Range includes western Montana.
Grizzly Bear	Ursus arctos horriblis	T	Alpine tundra and subalpine mountain forests. Once found in a wide variety of habitats including open prairie, brushlands, riparian woodlands, and semidesert scrub. Ranges widely at the landscape level. Most populations require huge areas of suitable habitat. Range includes western Montana.
North American Wolverine	Gulo luscus	PT	High elevation alpine and boreal forests in areas that are cold and receive enough winter precipitation to reliably maintain deep persistent snow late into the warm season
Northern Long-eared Bat	Myotis septentrionalis	T	Hibernates in caves and abandoned mines in winter. During summer, roosts singly or in colonies underneath bark, in cavities, or in crevices of live trees and snags. Typically associated with late-successional forests with a high number of old trees. Range includes eastern Montana. 50 CFR Part 17 Section 4(d) Rule in place.
Least Tern	Sterna antillarum	E	Interior populations nest mainly on large riverine sandbars or salt flats that become exposed during periods of low water. Range includes the Yellowstone and Missouri Rivers.
Piping Plover	Charadrius melodus	T(CH)	Sparsely vegetated shores and islands of shallow lakes, reservoirs, rivers, and wetlands. Requires wide sandy beaches with sparse vegetation cover and/or with extensive gravel. Range includes Missouri and Yellowstone River sandbars and alkali beaches in northeastern Montana; alkali lakes in Sheridan County; and reservoir and riverine shoreline in Garfield, McCone, Phillips, Richland, Roosevelt, and Valley counties.
Red Knot	Calidris canutus rufa	T	During the migration season, may stop at large wetlands; 60 percent of known migratory stopovers in Montana occur at Benton Lake National Wildlife Refuge, Lake Bowdion National Wildlife Refuge, and Freezeout lake.
Whooping Crane	Grus americana	E	Breeds, migrates, winters, and forages in a variety of habitats, including coastal marshes and estuaries, inland marshes, wet meadows and rivers, lakes, ponds, and agricultural fields. Wetland mosaic

Common Name	Scientific Name	Federal Status	Habitat / Range
			habitat is preferred during migration. May occur in eastern Montana during migration.
Yellow-billed cuckoo	Coccyzus americanus	T	Cottonwood-willow riparian woodlands with dense understory along streams and rivers. Range includes western Montana.
Bull trout	Salvelinus confluentus	T(CH)	Clark Fork, Flathead, Kootenai, St. Mary and Belly river basins; cold water rivers & lakes. Portions of rivers, streams, lakes and reservoirs within Deer Lodge, Flathead, Glacier, Granite, Lake, Lewis and Clark, Lincoln, Mineral, Missoula, Powell, Ravalli, Sanders counties
Pallid Sturgeon	Scaphirhynchus albus	E	Large river ecosystems with natural hydrographs that include floodplains, main channel waters, backwaters, chutes, sloughs, islands, and sandbars. Range includes the Missouri, Yellowstone, Marias, Poplar, Powder, and Tongue Rivers.
White Sturgeon	Acipenser transmontanus	E	Bottom dwelling; within Montana, preferred habitat consists of rocky substrates and relatively high-water surface gradient (73 Federal Register [FR] 39506). Range is restricted to the Kootenai River from Kootenai Falls, Montana to British Columbia.
Meltwater Lednian Stonefly	Lednia tumana	T	High elevation meltwater streams; Glacier National Park. Known to occur in northwestern Montana and southwest Alberta in 113 streams: 109 in Glacier National Park (GMP), 2 south of GNP on National Forest land, 1 south of GNP on tribal land, and 1 north of GNP in Waterton Lakes National Park in Alberta. 50 CFR Part 17.47 Section 4(d) Rule in place.
Western Glacier Stonefly	Zapada glacier	T	High elevation meltwater streams; Glacier National Park. Western glacier stoneflies are known to occur in 16 streams: 6 in GNP, 4 in Grand Teton National Park (GTNP), and 6 in the Absaroka/Beartooth Wilderness on the Custer/Gallatin National Forest. 50 CFR Part 17.47 Section 4(d) Rule in place.
Spalding's Campion (or "catchfly")	Silene spaldingii	T	Upper Flathead River and Fisher River drainages; Tobacco Valley – open grasslands with rough fescue or bluebunch wheatgrass
Ute Ladies'-tresses	Spiranthes diluvialis	T	Occurs along riparian edges, gravel bars, old oxbows, high flow channels, and moist to wet

Common Name	Scientific Name	Federal Status	Habitat / Range
			meadows along perennial streams. Species typically occurs in stable wetland and seepy areas associated with old landscape features within historical floodplains of major rivers. It also is found in wetland and seepy areas near freshwater lakes or springs. Range includes Jefferson, Madison, Beaverhead, Gallatin, and Broadwater counties in southwestern Montana.
Water Howellia	Howellia aquatilis	T	Grows in areas that were once associated with glacial potholes and former river oxbows that flood in the spring, but usually dry at least partially by late summer. It is often found in shallow water (4 to 8 feet) and on the edges of deep ponds that are partially surrounded by deciduous trees such as black cottonwood and aspen. Range includes Swan Valley, and Lake and Missoula counties in western Montana.
Whitebark Pine	Pinus albicaulis	C	Forested areas in central and western Montana, in high-elevation upper montane habitat near tree line

ENDANGERED (E) - Any species that is in danger of extinction throughout all or a significant portion of its range.

THREATENED (T) - Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

PROPOSED (P) – Any species of that is proposed in the Federal Register to be listed under section 4 of the Act.

CANDIDATE (C) - Those taxa for which the Service has sufficient information on biological status and threats to propose to list them as threatened or endangered. We encourage their consideration in environmental planning and partnerships, however, none of the substantive or procedural provisions of the Act apply to candidate species.

EXPERIMENTAL POPULATION NON-ESSENTIAL (EXPN) - A population of a listed species reintroduced into a specific area that receives more flexible management under the Act.

CRITICAL HABITAT (CH) - The specific areas (i) within the geographic area occupied by a species, at the time it is listed, on which are found those physical or biological features (I) essential to conserve the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by the species at the time it is listed upon determination that such areas are essential.

4.9.2 Environmental Consequences

Alternative 1: No Action

Under the No Action Alternative, no localized or regional effects to threatened or endangered species are expected. This alternative does not include any Federal action. Therefore, the Agencies would not be required to consult with USFWS to comply with the ESA, MBTA, BGEPA, Fish and Wildlife Coordination Act (FWCA), or state laws. Damaged utilities left in the stream may cause a flow impediment, which could in turn cause significant impacts to stream and floodplain hydraulics and function and negative impacts to fish habitat and passage.

Alternative 2: Replacement

The actions under this alternative may affect sensitive biological resources, wetlands, or natural waterways due to construction activities. A review must be conducted based on available information of the potential for species and critical habitat occurrence in the area. This alternative consists of performing work on utilities in existing alignments. Embankment work and in-water work may occur. Alternative 2 may impact the federally listed endangered, threatened, and proposed or candidate species identified in Table 7. As specific projects are identified, the impacts will be assessed and addressed as appropriate. The Agencies will consult with USFWS as necessary to ensure compliance with the ESA.

Migratory birds' nest on many substrates (e.g., ground, shrubs, trees, utility boxes). Accordingly, should the proposed work occur during the breeding season of birds protected under MBTA (varies per species), the Service recommends utility projects must follow best practices laid out specific to communication towers, electric utility lines, oil & gas, and wind energy to minimize impacts to migratory birds and bats.[39] In accordance with BGEPA, Montana Fish, Wildlife, and Parks (MT FWP) recommends a seasonal restriction from February 1st through August 15th on activities which may disturb bald eagles, however, in cases where bald eagles have later nest initiation dates (e.g. Glacier and Yellowstone National Parks) activity limitations may go beyond August 15th. The Montana Bald Eagle Management Guidelines by MT FWP[40] states the current best practices regarding visual and distance buffers required when an activity takes place near occupied bald eagle nests.

The Agencies will review the project and make a determination of effect. If an Agency determines that a project has the potential to affect sensitive biological resources, it will initiate the review process under the ESA, MBTA, BGEPA or FWCA. The results of this consultation with USFWS would be documented in a memorandum to this PEA or in a SEA.

[39] U.S. Fish and Wildlife Service [USFWS] Best Practices, 2020., This is a link to USFWS's website regarding best practices to reduce impacts to migratory birds

[40] Montana Fish, Wildlife, and Parks [MT FWP] Bald Eagle Management Plan This is a link to MT FWP's website detailing the Bald Eagle Management Plan.

Alternative 3: Relocation

This alternative is expected to have effects similar to those discussed under Alternative 2 and will be treated the same.

Alternative 4: Combination

This alternative consists of performing work on existing utilities and building new utilities.

Alternative 4 is expected to have effects similar to those discussed under Alternative 2 and will be treated the same.

4.10 CULTURAL RESOURCES

Cultural resources include the physical evidence or place of past human activity: site, object, landscape, and structure or a site, structure, landscape, object, or natural feature of significance to a group of people traditionally associated with it.

To preserve historical and archaeological sites in the United States of America, the National Historic Preservation Act (NHPA) passed in 1966. The Act created the National Register of Historic Places, the list of National Historic Landmarks, State Historic Preservation Offices (SHPO) and Tribal Historic Preservation Offices (THPOs) for federally recognized Native American tribes.

The National Register of Historic Places is the Nation's official list of cultural resources worthy of preservation and is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archeological resources. Properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. To be eligible for listing, a property must meet one of four eligibility criteria and have sufficient integrity.

Montana's rich cultural history is directly linked to the diversity of the landscape. The Montana Antiquities Database contains over 60,000 documented historic and archaeological sites across the state[41]. As of February 2019, there are 1,193 historic properties listed on the NRHP in the state. Most of the historic properties are aboveground buildings (852), districts (228), or structures (57) [42]. Only 53 archaeological sites are listed on the NRHP, and there is one unknown historic property. Of the 1,193 historic properties, six districts, five buildings, and two archaeological sites are designated National Historic Landmarks in the state of Montana.

4.10.1 Affected Environment

[41] Montana State Historic Preservation Office [MT SHPO] Montana Antiquities Database., 2019. http://svc.mt.gov/adsams

[42] National Park Service [NPS] National Register Database and Research., 2019. This is a link to the NPS' website National Register Database and Research

Montana has a rich cultural history. The prehistory of Montana is complex due to the size of the state and the nomadic character of many different Native American tribes with expansive territories that included portions of the state at different times. The ancestral Native Americans in Montana were nomadic tribes known as the Plains Indians. They were the Arapaho, Arikara, Bannock, Blackfeet, Cheyenne, Crow, Gros Ventre, Kiowa, Nez Perce, Sheep Eater, Sioux, Shoshone tribes.

Site types are typically classified as lithic scatters, habitations such as circular stone arrangements on the ground surface called tipi rings, stone cairns and alignments, stone quarries used to extract raw materials for tool making, hunting sites including bison kill sites and hunting blinds, rock art (pictographs) and other types of ceremonial sites, caves, stone forts, and ancient trails. Some of these site types are ubiquitous and widespread across the state, some are associated with specific time periods or culture groups, and some are associated with the locations and distribution of specific natural resources, such as lithic material types, major and minor river drainages, springs and lakes, specific forest and plant communities, and prominent landscape features.

Westward expansion, starting with the 1805 Lewis and Clark Expedition, brought European settlers to the area, for the fur trade, mining, ranching, and farming. During this time of westward expansion, there we significant battles between various Native American Tribes and the U.S. government. One such battle, the Battle of the Little Bighorn, was located in south-central Montana and has come to signify the clash of two different cultures: the buffalo/horse culture of the northern plains tribes, and the highly industrial/agricultural based culture of the United States. [43] Historic archaeological site types in Montana include trading posts, battlefields, mining sites, colonial homesteads and agricultural sites, transportation-related and recreational sites, among others. These resource types can include above- and belowground features, artifact deposits, and structural remains.

4.10.2 Environmental Consequences

Alternative 1: No Action

The No Action Alternative does not include construction, and thus no new impacts to historic resources would occur.

Alternative 2: Replacement

This alternative has the potential to affect historic or cultural resources. Destruction or alteration of any site, structure, or object of prehistoric or paleontological importance may occur during construction. Physical change could affect unique cultural values. There could be effects on existing religious or sacred uses of a site or area. Infrastructure may be of cultural significance or

[43] National Park Service [NPS] Context and Story of the Battle- The Battle of Little Bighorn., 2019. This is a link to NPS's overview on The Battle of Little Bighorn

archeological resources may be present. For non-tribal lands, the Agencies will determine if a project meets any outlined programmatic allowances from Programmatic Agreements with the Montana SHPO. If so, the Agencies would consider the project to be in compliance with Section 106 of NHPA and no further review would occur. If a project does not fall within an allowance, the Agencies will make a determination of the effect and consult with the SHPO. Additional archaeological surveys of ground disturbing activities may be required depending on consultation with Tribal Historic Preservation Office (THPO) and SHPO.

Alternative 3: Relocation

Impacts are similar to those listed under Alternative 2 and will be treated the same.

Alternative 4: Combination

Impacts are similar to those listed under Alternative 2 and will be treated the same.

4.11 CUMULATIVE IMPACTS

The CEQ regulations implementing the procedural provisions of NEPA defines "cumulative effects" as:

"the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or local) or person undertakes such other action". 40 CFR 1508.7

Based on these regulations, if the alternative does not have direct or indirect effects, there can beno cumulative effects resulting from the project because there would be no impacts added to past, present, or reasonably foreseeable actions.

CEQ regulations also describe cumulative impacts as impacts that "can result from individually minor but collectively significant actions taking place over a period of time." On a programmatic level and combined with other actions affecting the utilities and resource areas within Montana alternatives could lead to cumulative impacts depending on the scale (number of projects) or geography (localized area) in which the actions are performed.

4.11.1 Summary of Cumulative Impacts

Individual projects proposed under this PEA are not anticipated to cause significant impacts, even when combined with other actions. Other than the "No Action Alternative", project impacts that are implemented at an individual or cumulative scale, such as to produce significant impacts generally can be reduced below the level of significance by mitigating for individual impacts using the mitigation measures as addressed in Section 5. The Utilities Checklist (Appendix A) will be used to define any significant individual or cumulative impacts requiring mitigation on a project specific basis. A Supplemental Project Specific Environmental Assessment (SEA) will be

completed, for any projects that are anticipated to occur at a scale or localized area such that impacts cannot be addressed under Mitigation Measures listed in Section 5.

SECTION FIVE | MITIGATION MEASURES

Project impacts at an individual or cumulative scale such that are significant impacts can generally be reduced through avoidance, minimization, or by mitigating for individual impacts using mitigation measures as described below. The Utilities Checklist (Appendix A) will be used to define any significant individual or cumulative impacts requiring mitigation on a project specific basis. If impact avoidance cannot be achieved, specific mitigation measures including agency consultation will be undertaken by the Agencies to reduce any potentially significant impacts to less than significant levels. Table 8: 8 lists the specific mitigation measures the Agencies will use if necessary.

Table 8: Mitigation Measures by Resource Area

Resource Area	Mitigation Measure
Physical Resources, Water Resources	If projects extend outside of the previously disturbed footprint and wetland areas will be impacted, The Agencies will evaluate individual and cumulative impacts and implement avoidance, minimization and/or mitigation measures as necessary to reduce impacts below level of significance.
Physical Resources, Water Resources	For projects in which soil erosion potential is determined to be significant, a project erosion control plan to minimize soil loss, including the use of Best Management Practices, to isolate the construction site and minimize adverse effects of soil loss and sedimentation on soil and water resources will be implemented.
Physical Resources, Water Resources	To mitigate for impacts to floodplain, a hydrology and hydraulics study will be completed to ensure the flow of flood waters. The project must not serve as a dam or otherwise impede water movement thus aggravating flooding upstream of the roadway.
Physical Resources, Land Use	The Agencies will consult with US Fish and Wildlife Service and/or Natural Resources Conservation Service for any project which extends outside of the road right of way and has the potential to affect land use, including Fish and Wildlife Service easements, prime farmland, or farmland of state/local significance.
Safety and Occupational Health	To minimize any potential to occupation health and safety, construction workers and equipment operators are required to wear appropriate PPE and to be properly trained for the work being performed, including removal and disposal of asbestos and lead-based paint for demolition projects.
Safety and Occupational Health	All waste material associated with the project must be disposed of properly and not placed in identified floodway or wetland areas or in habitat for threatened or endangered species. All hazardous material resulting from demolition activities, including asbestos and lead paint will be disposed of in hazardous waste landfill.
Air Quality	To mitigate for fugitive dust during construction periodic watering of active construction areas, particularly in areas close to sensitive receptors (e.g. hospitals, senior citizen homes, and schools) will be implemented.
Noise	Construction noise levels will be minimized by ensuring that construction equipment is equipped with a recommended muffler in good working order. Impact to noise levels will be minimized by limiting construction activities that occur during early morning or late evening hours.

Invasive Species	Ground disturbance will be minimized, and disturbed areas will be re-vegetated using native plant species.
Biological Resources	The Agencies will consult with USFWS, who is the regulatory authority, on any actions that have the potential to affect biological resources including Threatened and Endangered species and will include measures to avoid or minimize potential impacts. Coordination will include measures to avoid or minimize potential impacts as grant conditions. This includes migratory birds and raptors. Projects may be subject to additional documentation through Montana CEQ Coordination.
Biological Resources	Fill material must not come from nor be deposited in threatened and/or endangered species habitat.
Biological Resources	The Agencies will coordinate with MT DNRC concerning guidelines regarding impacts to State species of interest. Coordination may include measures to avoid or minimize potential impacts as grant conditions. This includes migratory birds and raptors.
Cultural Resources	Unless a project is covered under a programmatic agreement exemption all other ground disturbing projects must consult with the SHPO under Section 106 of the NHPA. The absence of cultural property documentation in the area does not mean they do not exist, but rather may reflect the absence of any previous cultural resource inventory in the area. If during the course of any ground disturbance related to this project, cultural materials are inadvertently discovered, the project would be immediately stopped and the SHPO/THPO and Agency notified.
Cultural Resources	To avoid impacts to cultural resources from material borrow source, borrow material source will be reviewed and approved by SHPO or THPO prior to use.
Cultural Resources	The Agencies will consult with the State/Tribal Historic Preservation Office on project specific activities for any project that has the potential to affect previously undisturbed areas or historic properties.

SECTION SIX | SUMMARY OF IMPACTS

The following table summarizes the potential impacts of each alternative on the resource areas discussed in Section 4. Project specific impacts will be addressed during project-specific review and analysis. Implementation of standard BMP and compliance with all permit conditions will be required.

Table 9: Summary of Impacts

Resource Area	Alternative 1: No Action	Alternative 2: Replacement	Alternative 3: Relocation/Realignment	Alternative 4: Combination
Physical Resources	Alternative 1 has potential to permanently disrupt utility service to communities. Loss in residential, commercial, agricultural, or recreational land use may occur. This could lead to vegetation reclaiming right-of-way's (ROW), public, private properties in the State of Montana.	Existing utilities would be expanded to accommodate best construction practices as well as the changes in topography. However, utility footprint is expected to remain within the previous footprint so no significant changes in land use are anticipated.	Changes to land use may occur as a result of this alternative. All actions must comply with local zoning and land use requirements. The Agencies will consult with appropriate regulatory agencies on any project which has the potential to affect land use, including Fish and Wildlife Service easements, prime farmland, or farmland of state/local significance. If acquisitions occur the Agencies will comply fully with federal and state requirements including the Uniform Relocation Assistance and Real Property Acquisition Policies act of 1970, as amended (Uniform Act).	Similar to alternative 2 and 3.
Transportation Facilities	This alternative may result in significant adverse impacts due to lack of access to community sustaining utilities.	Short term impacts would be expected during construction as temporary outages may be required. No significant adverse long-term impacts are expected to the utility infrastructure form and function. Long-term impacts are anticipated to be beneficial	Short term impacts would occur during construction from possible outages. No significant long-term impacts are expected to the utility infrastructure..	Similar to alternative 2 and 3.
Safety and Occupational Health	A No Action Alternative results in restricted power, sanitary or communications access for emergency, police and fire services causing the potential for significant delay. The No Action Alternative provides a significant adverse safety affect to localities in the state of Montana.	Alternative 2 would have no significant impact to public safety or occupational health. Utilities would be built to current codes and standards. Removal or repair of materials with painted surfaces or containing asbestos may be required and construction workers are required to follow OSHA regulations to provide appropriate asbestos abatement and avoid release of lead from paint. Construction workers and equipment operators are required to wear appropriate personal protective equipment (PPE) and be properly trained for the work being performed. All solid or hazardous wastes that might be generated by the activities of entities replacing utilities must be removed and disposed of at a permitted facility or designated collection point (e.g., for solid waste, a utility or construction company's own dumpster). Standard construction traffic control measures will be used to protect workers, residents and the travelling public.	Alternative 3 is similar to alternative 2 and would have no significant impacts to public safety or occupational health. The new relocated utility would be designed to handle the capacity of pre-event function. Long-term impacts are anticipated to be beneficial.	Similar to alternative 2 and 3.

Socioeconomic and Environmental Justice	Alternative 1 has potential to result in significant adverse impact to socioeconomics of a community if buildings and critical infrastructural elements such as utilities are not restored.	Potential short-term benefits through job creation in construction and increased expenditures in local economy. Small negative impacts from travel delays due to construction. . Long-term impacts are anticipated to be beneficial	Generally, the impacts to socioeconomics and environmental justice from this alternative would be similar to those described for Alternative 2 although there is the potential for original utility infrastructure to be abandoned.	Similar to alternative 2 and 3.
Air Quality	Possible increase in vehicle emissions if detour routes are longer than the routes they replaced.	Temporary increase in vehicle emissions, dust from construction, etc. during construction. No change in air quality after construction is complete.	Similar to alternative 2 and 3.	Similar to alternative 2 and 3.
Noise	Under this alternative, utilities would continue to be damaged due to the event. This would result in a natural shift in occupation density and transportation patterns. Transportation noise along other roadway segments within the County may increase under this alternative due to increasing traffic on alternate roadways. Noise in the immediate area would decrease as communities may be abandoned. The potential exists that overall noise levels in the immediate area may also decrease due to some migration of residents from the region.	Utility restoration is anticipated to carry a similar noise level to that which it had at pre-disaster damage levels. Noise from construction activities may have short term adverse effects on persons who live near the construction area.	No short-term noise impacts would occur from construction activities under this alternative at the original location. Noise from construction activities may have short term adverse effects on persons who live near the new construction area.	Similar to alternative 2 and 3.
Public Services and Utilities	This alternative does not include any Agency action. Alternative 1 does have the potential to affect public services and utilities because natural hazards would continue to damage utilities which would adversely impact the ability to provide service. Fire, emergency, law enforcement, and school services would be delayed as a result of continued inaccessibility of the route due to closed roads, bridges or disrupted utilities. Depending on the length of detour required or utility service unavailable these services could be significantly impacted. In addition, any utility repair crews may not be able to reach damaged utility lines, resulting in lengthy service outages.	During construction utility interruption and delays in fire, emergency, law enforcement and school services would continue, but these would be short-term impacts. Long-term impacts are anticipated to be beneficial	Relocations could produce short term disruptions to customers. Fire, emergency, law enforcement, and school services could be temporarily impacted depending on the length and location of alternate routes.	Similar to alternative 2 and 3.
Water Resources	In the no action alternative, utilities are not repaired, leaving communities without services and vulnerable to future flood events. No work would occur in water, thus there would be no impact to water due to project work. Erosion and sedimentation may increase if banks are further damaged from being left unrepaired. Damaged utility infrastructure may cause a flow	This alternative may result in discharge into surface water may provide a temporary alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity. Construction of utilities may result in alteration of the course or magnitude of floodwater. Utility repair and changes within floodplains may also have some impact. If changes to utility infrastructure is anticipated to	This alternative would generate impacts similar to those described for Alternative 2.	Similar to alternative 2 and 3.

	impediment, potentially causing significant impacts to stream and floodplain hydraulics and function.	impact the floodplain/floodway, Agency projects must adhere to Executive Order 11988: Floodplain Management		
Biological Resources	No impacts to threatened or endangered species expected.	Potential to impact biological resources. The Agencies will review projects and make determinations of effect.	Potential to impact biological resources. The Agencies will review projects and make determinations of effect.	Similar to alternative 2 and 3.
Cultural Resources	No impacts expected.	Potential to impact cultural resources. Archaeological survey may be required depending on consultation with Tribal Historic Preservation Office (THPO) and State Historic Preservation Office (SHPO).	Similar to alternative 2.	Similar to alternative 2 and 3.

SECTION SEVEN | PUBLIC INVOLVEMENT

7.1 INITIAL PUBLIC NOTICE

The following Initial Public Notice was published on the Montana's Disaster and Emergency Services website under Mitigation Resources,[44] on October 6th, 2020.

PUBLIC NOTICE OF INTENT TO PREPARE A PROGRAMMATIC ENVIRONMENTAL ASSESSMENT (PEA)

The Federal Emergency Management Agency (FEMA) is providing notice of its intent to prepare a Programmatic Environmental Assessment (PEA) to evaluate utility projects in the State of Montana. We provide this notice to advise other Federal and State agencies, Native American tribes, non-governmental organizations, and the public of our intention as well as to obtain suggestions and information on the scope of issues to consider during the PEA planning process. These actions are part of our effort to comply with the general provisions of the National Environmental Policy Act (NEPA); NEPA regulations; other Federal laws, regulations, and Executive Orders; and our policies for compliance with those laws and regulations including 44 C.F.R. Parts 9 and FEMA Directive 108-1 & Instruction 108-1-1.

Our PEA will focus on a variety of utilities located in Montana that require repair, replacement, restoration, or relocation as a result of damages sustained during disaster events, or as proposed mitigation projects funded through FEMA Hazard Mitigation Assistance grant programs. Other Federal agencies may adopt the PEA under their own authorities in accordance with the Unified Federal Review (UFR) process.

A "utility" supplies a community with electricity, gas, water, or sewage services. In an effort to restore these utilities or mitigate from future events, FEMA (and other agencies such as the US Economic Development Administration (EDA), Federal Highway Administration (FHWA), US Department of Housing and Urban Development (HUD), the US Army Corps of Engineers (USACE), and US Department of Agriculture (USDA) may provide funds for expansion, enlargement, and other upgrades along with replacement, relocation, or changes in materials. The purpose of the PEA is to provide an assessment of the expected environmental impacts associated with implementing these projects. More specifically, it will address the purpose and need of the proposed projects, project alternatives considered, affected environment, environmental consequences, and impact of mitigation measures. The PEA would not address site-specific impacts, which would be evaluated on a project-specific basis.

All Federally funded projects will be completed in compliance with applicable Federal, tribal, state and local laws, regulations, Executive Orders, etc. Some specific items of work may include, but are limited to:

• Placement of temporary crossings, utilities, staging areas, access, and safety features.

[44] Montana Disaster and Emergency Services [MT DES]. Mitigation Resources., 2020. This is a link to MT DES' Mitigation website

• Repair, replacement, and relocation of production, transmission, and treatment facilities in order to provide communities with utility services.
• Construction, excavation, trenching, and directional boring to allow repair, replacement, and relocation of utilities and ancillary facilities.
• Upsizing, encasing, armoring, and upgrading utilities to improve function and protect from future events.
• Repair and reconstruction of adjacent roadway and other connected infrastructure necessary to restore function.
• Operating equipment within waterways to allow repair, replacement, and relocation of utilities.

The comment period for the proposed PEA will remain open for fifteen days following publication of this notice. After gathering public comments, FEMA will develop a draft PEA that will be available for public review and comment according to FEMA Directive 108-1 & Instruction 108-1-1, FEMA's implementing procedures for NEPA.

You can provide comments or obtain more detailed information about the proposed PEA by contacting Richard Myers, FEMA Region VIII, Deputy Regional Environmental Officer at richard.myers2@fema.gov.

7.2 PUBLIC NOTICE OF AVAILABILITY FOR DRAFT COMMENTARY

SECTION EIGHT | REFERENCES

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SECTION NINE | LIST OF PREPARERS

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SECTION TEN | APPENDICES

Appendix A: Utilities PEA Checklist

POST-DISASTER **Utility Restoration, Replacement, and Relocation in the State of Montana**
Date:
Project Code:
Assessment under the **Utility Restoration, Replacement, and Relocation Programmatic Environmental Assessment (PEA) and Finding of No Significant Impact (FONSI) (FEMA *Insert Date if FONSI Signed*)**
Disaster Description and Date:
Project Name and Location:
Project Description:
Name and Date of Hydraulic Study (attach a copy to this checklist):

I. PEA Alternative Used (Check all that apply)

Alternative 1 – No Alternative

Alternative 2 – Replacement

Alternative 3 – Relocation

Alternative 4 – Combination

II. Evaluation

ENVIRONMENTAL IMPACT ASSESSMENT:
Document impacts to human, socio economic, or natural environment for environmental setting or circumstances.

Setting/Resource/Circumstance	Are Impacts Consistent with Descriptions in PEA? (Yes/No)	Are There Additional Impacts? (Yes/No)	Date Reviewed	Are Site Specific Study Documents Attached? (Yes/No)
Geology, Soils and Land Use				
Transportation Facilities				
Safety and Occupational Health				
Socioeconomics and Environmental Justice				
Air Quality				
Noise				
Public Services and Utilities				
Water Resources				
Biological Resources				
Cultural Resources				

REGULATORY CHANGES:
Document changes to laws, regulations, and/or guidelines since signature of PEA FONSI:

IMPACTS ASSESSMENT:
For items checked as having additional impacts: assess the affected natural and socio-economic environment, impacts and new issues/concerns which may now exist:

MITIGATION:
List specific mitigation measures for each resource impacted (both impacts from PEA or additional impacts):

III. Public/Agency Involvement (if any)

Document any public meetings, notices, & websites, and/or document agency coordination. For each provide dates, and coordination:

IV. Permits

List required permits and status of permit:

V. Attachments Listed

List maps, studies, background data, permits, etc.

VI. Conclusion and Recommendation

The project is consistent with the alternatives and impacts as described in the PEA.

The project generally is consistent with the alternatives and impacts as described in the PEA, but includes some minor impacts not described in the PEA which are documented in this checklist.

The project requires a Supplemental Environmental Assessment because (1) creates impacts not described in the PEA; (2) creates impacts greater in magnitude, extent, or duration than those described in the PEA; or (3) requires additional mitigation measures that are not described in the PEA to keep impacts below significant levels.

_____ _____

Applicant or Utility Agency Signature Date

_____ _____

Funding Agency Date