

Draft Programmatic Environmental Assessment

Repair, Rehabilitation, Removal and Replacement of Dams in the State of Montana

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Federal Emergency Management Agency Region 8

Department of Homeland Security Denver Federal Center, Building 710

P.O. Box 25267

Denver, CO 80225-0267

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## ACRONYMS AND ABBREVIATIONS

ARM Administrative Rules of Montana BGEPA Bald and Golden Eagle Protection Act BIA Bureau of Indian Affairs

BLM Bureau of Land Management

BMP Best Management Practice

BRIC Building Resilient Infrastructure and Communities CAA Clean Air Act

CATEX Categorical Exclusion

CECRA Comprehensive Environmental Cleanup and Responsibility Act CEQ Council on Environmental Quality

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act CFR Code of Federal Regulations

CRS Congressional Research Service

DHS Department of Homeland Security

DNRC Department of Natural Resource and Conservation EA Environmental Assessment

EIS Environmental Impact Statement

EO Executive Order

EPA Environmental Protection Agency EQPF Environmental Quality Protection Fund ESA Endangered Species Act

EWP Emergency Watershed Protection

FAA Federal Aviation Administration

FEMA Federal Emergency Management Agency FHWA Federal Highway Administration

FIP Federal Implementation Plan

FMA Flood Mitigation Assistance Program FONSI Finding of No Significant Impact FPPA Farmland Protection Policy Act

FRA Federal Railroad Administration FWCA Fish and Wildlife Coordination Act

GPD Grants Program Directorate HHDP High Hazard Dam Program HMA Hazard Mitigation Assistance HMGP Hazard Mitigation Grant Program

IPaC Information, Planning and Consultation System MBTA Migratory Bird Treaty Act

MT DEQ Montana Department of Environment Quality MT DOT Montana Department of Transportation NDSP National Dam Safety Program

NEPA National Environmental Policy Act NFIA National Flood Insurance Act NFIP National Flood Insurance Program NHL National Historic Landmarks

NHPA National Historic Preservation Act of 1996 NID National Inventory of Dams

NPS National Park Service

NRCS Natural Resources Conservation Service NRHP National Register of Historic Places

OSHA Occupational Health and Safety Administration PA Public Assistance

PCBs Polychlorinated Biphenyls

PEA Programmatic Environmental Assessment PPE Personal Protective Equipment

REC Record of Environmental Consideration SEA Supplemental Environmental Assessment SFHA Special Flood Hazard Area

SHPO State Historic Preservation Officer SIP State Implementation Plan

SRIA Sandy Recovery Improvement Act TAR Tribal Authority Rule

TAS Treatment in a Similar Manner as a State THPO Tribal Historic Preservation Office

TIP Tribal Implementation Plan

UFR Unified Federal Review USACE U.S. Army Corps of Engineers USBR Bureau of Reclamation

USC U.S. Code

USCB U.S. Census Bureau

USDA U.S. Department of Agriculture USFS U.S. Forest Service

USFWS U.S. Fish and Wildlife Service

# SECTION ONE | INTRODUCTION

*The mission of the Federal Emergency Management Agency’s (FEMA) is to help people before, during, and after disasters (FEMA 2018). 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 and protect our nation’s institutions through comprehensive, risk- based emergency management programs of mitigation, preparedness, response, and recovery.*

FEMA is preparing this Programmatic Environmental Assessment (PEA) to evaluate the environmental impacts of dam safety projects receiving assistance through the Rehabilitation of High Hazard Potential Dams (HHPD) grant program as authorized by 33 United States Code (USC) 467f-2, Rehabilitation of High Hazard Potential Dams.

This PEA has been prepared consistent with the National Environmental Policy Act (NEPA) (*42 USC Section [§] 4321 et seq.*), the U.S. Department of Homeland Security Instruction Manual 023-01- 001-01 and FEMA Instruction 108-01-1, and FEMA’s NEPA implementation procedures (*FEMA Directive 108-1*). This guidance requires that prior to implementing any major federal action with potentially significant impacts, a federal agency must evaluate the proposal’s potential environmental effect.

### Overview

The 2016 *Water Infrastructure Improvements for the Nation Act* (WIIN Act *[P.L. 114-322]*), Title IV, added a new grant program under FEMA’s National Dam Safety Program (*33 USC 467f*). Section 5006 of the WIIN Act, *Rehabilitation of High Hazard Potential Dams*, provides technical, planning, design, and construction assistance in the form of grants for rehabilitation of eligible high hazard potential dams.[1](#_bookmark6)

The proposed investments provided by FEMA through the National Dam Safety Program and non-disaster and disaster programs are intended to help protect communities from flooding, high disaster costs, and strengthen resilience. These grant programs provide funding for dam repair, rehabilitation, removal, and replacement activities for facilities that do not meet dam safety

1 [Rehabilitation Of High Hazard Potential Dam (HHPD) Grant Program | FEMA.gov](https://www.fema.gov/emergency-managers/risk-management/dam-safety/rehabilitation-high-hazard-potential-dams)

requirements or otherwise pose an unacceptable risk to the public health, safety and to the built or natural environment.

In this PEA, FEMA analyzes the potential adverse and beneficial environmental impacts of dam infrastructure projects eligible for the HHPD grant program and other disaster/ non-disaster assistance programs in the State of Montana, as well as any tribal lands within the state boundaries. The PEA presents statewide information on existing conditions and discusses potential impacts and mitigation measures that might typically occur during construction and operation of broad project types. This PEA provides mechanisms to evaluate site-specific conditions and impacts for individual projects and to determine if projects impacts may fall within the scope of this PEA.

### Background

Dams play a vital role in the nation’s infrastructure. They contribute to economic development and the social welfare of the American public. Dams hold various functions including water supply, flood control, recreation, navigation, renewable energy, and community use. Dams can be affected by natural hazards, man-made threats, as well as an imbalance between maintenance investments. Dams can also impede natural processes, thus degrading natural functions and resources. It is necessary to maintain, rehabilitate or improve dams to minimize future catastrophic events that affect communities and the natural environment.[2](#_bookmark8)

There are 3,259 dams in the state of Montana and a majority of the dams were built between the 1940s and 1960s. There are 33 major dams, which includes largest earthen dam with the fifth largest man-made reservoir in the U.S., Fort Peck Reservoir. There are approximately 64,000 reservoirs in Montana that serve multiple purposes and provide benefits to the residents and wildlife. Some of the primary purposes include irrigation, flood control, water supply, hydropower, recreation, and fish & wildlife. Approximately 76% of dams in Montana are privately owned by water companies, mining companies, corporations, water user associations, ranches/farms, and individuals. Approximately 24% of dams are owned by the federal, state, and local government, public utilities, and tribal governments in Montana. The Department of Natural Resources and Conservation (DNRC) provides regulatory oversight for more than half of the dams through the Montana Dam Safety Act which is administered by the DNRC Dam Safety Program. There are currently 197 High-Hazard dams in the state of Montana. [3](#_bookmark9)

2 [Dams 101 | Association of State Dam Safety](https://damsafety.org/dams101)

3 https://dnrc.mt.gov/\_docs/water/Dam\_Safety/PUBLICATIONS/Dams-in-Montana-12-28-2018.pdf

### Use of the Programmatic Environmental Assessment

The proposed actions evaluated in this PEA will be undertaken by federal agencies, or any entity responsible for federal level environmental compliance that provides financial support or technical assistance to dam safety projects covered in this document. The proposed actions and no action alternative are being analyzed in accordance with U.S. Department of Homeland Security Instruction Manual 023-01-001-01 and FEMA Instruction 108-01-1, CEQ implementing guidance, and the Emergency Management and Assistance Code of Federal Regulations, the Sandy Recovery Improvement Act (SRIA) of 2013, Section 1106 and FEMA Directive 108-1.

NEPA mandates federal agencies evaluate the environmental impacts of their actions and decisions. DHS has developed guidance to meet these NEPA requirements. FEMA's procedures, found in FEMA Directive 108-1 and Instruction 108-1-1, contain Categorical Exclusions (CATEX) and extraordinary circumstances. A CATEX is a list of actions that typically do not individually or cumulatively have significant impacts on the human environment. Actions that are not covered by a CATEX, or actions typically covered by a CATEX but has unresolved extraordinary circumstances, may require the preparation of an EA under NEPA to determine the extent of impacts of the action and whether the action may have significant impacts on the quality of the human environment.

An Environmental Impact Statement (EIS) is required when an action may have a significant impact on the quality of the human environment. If FEMA determines that the appropriate level of NEPA analysis for an action is an EIS, the action would not be covered by this—or any— PEA.

This PEA will facilitate FEMA’s compliance with environmental and historic preservation requirements, including Section 106 of the National Historic Preservation Act (NHPA), Section 7 of the Endangered Species Act (ESA), Executive Orders (EO) 11988 (Floodplain Management), 11990 (Protection of Wetlands) and other laws by providing a framework to address the impacts of FEMA’s actions. This analysis is programmatic in nature and does not address individual site- specific impacts. Individual projects will be evaluated prior to approval. If the project meets the criteria of actions covered in this PEA, then only a record of environmental considerations (REC) would be required. If the scope is covered but the action triggers the need for additional analysis based on the thresholds established in the PEA, FEMA will engage in the appropriate analysis or consultation requirement. A tiered site-specific Supplemental EA (SEA) under this PEA with the additional information may be prepared and provide a 15-day comment period for public participation. Otherwise, if the scope is not covered in this PEA, a separate stand-alone EA may be required. FEMA will then determine whether a Finding of No Significant Impact (FONSI) can be issued or whether an EIS is required.

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.

# SECTION TWO | PURPOSE AND NEED

The purpose of the proposed actions being evaluated under this PEA is to repair, rehabilitate, remove, or replace dams to mitigate future losses, impacts to communities and the natural environment; thereby meeting the goals of the programs noted above.

These proposed investments are needed to help protect communities from the consequences of dam failure, such as catastrophic flooding and increased cost of disaster recovery, and to strengthen resilience with minimal impacts to natural and historic resources.

# SECTION THREE | ALTERNATIVES

NEPA guidance requires that federal agencies explore and objectively evaluate alternatives for the proposed action and requires evaluation of a No Action Alternative as a benchmark to evaluate other actions. These alternatives represent the actions that may be implemented individually or in combination with one another. Depending upon the actions determined necessary by the state of Montana to restore and improve their dams, and the individual characteristics of the specific sites, some options may not be viable.

### No Action

A “No Action” alternative is required to be included in this EA in accordance with FEMA guidance for implementing NEPA. The “No Action Alternative” is defined as maintaining the status quo with no Agency involvement. This alternative is used to evaluate the effects of not repairing, replacing, rehabilitating, and removing dams while providing a baseline against which other alternatives may be evaluated. This action would put the financial and environmental responsibility on state governments, local governments and dam owners to repair, rehabilitate, replace and remove their dams that have significant damages because of inadequate maintenance practices, overtopping and structural defects that could lead to dam failure.

### Action Alternatives & Common Scopes of Work

**Alternative 1: Repair (repair defective or non-functioning elements of the dam to their original state)**

This alternative applies to dams being repaired to their original condition through existing non- disaster and disaster grant programs. Under this alternative, dams will be repaired using in-kind materials and methods of repair. The footprint of the dam and channel configuration will not change and there will be minimal to no ground disturbance. Storage and discharge capacity will remain the same. Disturbed areas, including new stream banks and floodplain, would be revegetated with appropriate native plant species, including trees, shrubs, and herbaceous vegetation.

### Alternative *2:* Rehabilitation (restore / reconfigure using modern features and systems.)

This alternative applies to dams being rehabilitated to improve overall dam stability and function by incorporating upgrades to a variety of components, such as foundations and crests, spillways, gate systems, outlet and channel configurations, cut-off walls, slope stabilization and embankment protection (bioengineered and structural), piping, seals, filter systems, etc. The footprint of the dam may change, and additional ground disturbance may occur. Storage and discharge capacity will remain the same. Reconstruction of the channel and floodplain may be required to restore design function. Disturbed areas including new stream banks and floodplain would be revegetated with appropriate native plant species, including trees, shrubs, and herbaceous vegetation.

### Alternative 3*:* Removal (completely remove a dam and restore the natural environment)

This alternative applies to dams being removed from their location and the natural environment being restored. This alternative may require environmental restoration actions that improve or promote aquatic habitats and fish passage once the dam is removed to combat the decline fish populations in the streams. The footprint may change, and additional ground disturbance may occur. There will be no storage or discharge capacity in this situation. Reconstruction of the channel and floodplain may be required to restore natural function. Disturbed areas including new stream banks and floodplain would be revegetated with appropriate native plant species, including trees, shrubs, and herbaceous vegetation.

### Alternative 4*:* Replacement (remove and replace dam to current standards at existing location*)*

This alternative applies to dams being removed and replaced, including upgrades to dam stability and function of the structure. The footprint may expand and there may be additional ground disturbance to support the upgrades or additions to the structure. Reconstruction of the channel and floodplain may be required for improved design function. Disturbed areas, including new stream banks and floodplain would be revegetated with appropriate native plant species, including trees, shrubs, and herbaceous vegetation.

### Alternatives considered and dismissed*.*

As described in Section 1.3, NEPA provides for each agency to develop a list of categories of actions known as a CATEX that are determined through agency experience that have no significant environmental impact, and thus may generally be excluded from detailed documentation. Projects that meet the criteria of a CATEX will be evaluated accordingly on a project specific basis. No further review of these types of projects will be considered in this PEA. If the project does not

meet the criteria for actions covered in this PEA, e.g., relocation of a dam, project review may require an individual EA and will be evaluated on a project specific basis. No further review of relocation projects will be considered in this PEA.

# SECTION FOUR| AFFECTED ENVIRONMENT

This section discusses the conditions and environmental impacts of the various alternatives. Due to the state-wide programmatic approach of this analysis, FEMA is providing a regulatory framework for any laws that may apply to the affected environment, impacts, special considerations, and description of the current conditions of the state’s environmental resources.

## Physical Resources

Montana’s diverse geology ranges from the western mountains, shaped by tectonics and sculpted by glaciers, to the eastern plains. The geology of Montana includes thick sequences of Paleozoic, Mesozoic and Cenozoic sedimentary rocks overlying ancient Archean and Proterozoic crystalline basement rock. Montana is the fourth largest state leading to a variety of topography and underlying geology including 28 soil taxonomic suborder[4](#_bookmark18)

Montana has a total area of 147,047 square miles and a mean elevation of approximately 3,400 feet. The Rocky Mountains cover two-fifths of the state. The Great Plains occupy central and eastern Montana.[5](#_bookmark19) Montana is divided into four ecosystems: montane forests, plains grasslands, intermountain grasslands, and shrub grasslands. The montane forest ecosystem represents 26% of Montana’s landscape where most of this ecosystem is publicly owned through the U.S. Forest Service (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, scattered hills, and wide river valleys. Plants adapt to dry conditions and extreme temperatures in the plains grassland and forest area. Grasses dominate the landscape because they are well adapted for an environment where drought and fire are common.

The intermountain grassland ecosystem represents14.3% of the state. This particular area is a mosaic of private and public land that extends from the glaciated Flathead River Valley to the Centennial Valley, and east to the Little Belt foothills. The intermountain grasslands are the transition zone between prairie grasslands and montane forests. These large, open valleys that

4 [Web Soil Survey - Home](https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm)

5 [Topography - Montana](https://www.city-data.com/states/Montana-Topography.html)

support plant communities dominated by grasses and surrounded by large rivers that flow through the larger valleys.

The shrub grassland ecosystem represents 7.7% of the state and occurs in separated segments across the eastern half of the state in high-elevation valleys and non-forested slopes. They are interspersed with low cover grasslands and offer a unique transitional area habitat that supports many of Montana’s species. Over half of this limited ecosystem is privately owned. Land cover 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.

#### Montana Land Use, Land Cover and Planning

Land use is the way in which, and the purpose for which, people utilize the land and its resources. Land use planning varies depending on land ownership and jurisdictional boundaries. Government controls land use by comprehensive plans, zoning regulations, and subdivision regulations. Zoning ordinances and regulations vary throughout the U.S. and are primarily set at the regional, city, county, local, or Tribal level.

Montana is the 4th largest state by land and has an area of 147,040 square miles[6](#_bookmark21). Residential development covers less than 1% of Montana lands. Shrub and Herb Vegetation, in combination with Forest & Woodland, total 50,681,642 acres and make up more than half of Montana’s land cover.

|  |  |  |
| --- | --- | --- |
| **Land Cover Class** | **Acres** | **Percent of Land** |
| **Agricultural & Developed Vegetation** | 15,700,187 | 16.68% |
| **Desert & Semi-Desert** | 18,776,603 | 19.95% |
| **Developed & Other Human Use** | 1,413,087 | 1.50% |
| **Forest & Woodland** | 23,491,815 | 24.69% |
| **Introduced & Semi Natural Vegetation** | 1,690,885 | 1.80% |
| **Nonvascular & Sparse Vascular Rock Vegetation** | 13,078 | 0.01% |
| **Open Rock Vegetation** | 2,404,196 | 2.55% |
| **Open Water** | 885,317 | 0.94% |
| **Polar & High Montane Scrub, Grassland & Barrens** | 764,453 | 0.81% |

6 lbid.5

|  |  |  |
| --- | --- | --- |
| **Recently Disturbed or Modified** | 1,776,037 | 1.89% |
| **Shrub & Herb Vegetation** | 27,189,827 | 28.89% |
| **State Total** | 94,105,485 | 100% |

*Table 4.1 Land Cover Class in Montana (USGS)*

Property in Montana is divided into private, federal, state, and tribal. The Montana State government has passed zoning, regulations, and development of land use plans down 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.

|  |  |
| --- | --- |
| **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%** |

|  |  |
| --- | --- |
| **Landowner** | **Percentage and****Acres** |
| **Tribal and BIA Land** | **4,997,717** |
| **Percent Private Land** | **58.7%** |
| **Private Land** | **55,015,683** |
| **Private Conservation****Land** | **227,154** |
| **Percent Water** | **0.8%** |
| **Water** | **779,337** |

*Table 4.2 Landownership in Montana*

#### Prime Farmland

Prime and unique farmlands, farmlands of state, and local importance are protected under the Farmland Protection Policy Act (FPPA) of 1981 (7 U.S.C. § 4201 et seq.). The FPPA requires federal agencies to examine the potentially adverse effects to these resources before approving any action that would irreversibly convert farmland to non-agricultural uses. This examination is done in consultation with the U.S. Department of Agriculture’s (USDA) Natural Resources Conservation Service (NRCS), which uses a land evaluation and site assessment system to complete a Farmland Conversion Impact Rating Form (Form AD-1006).

Prime farmland is characterized as land with the best physical and chemical characteristics to produce food, feed, forage, fiber, and oilseed crops. Unique farmland is defined as land that is used to produce certain high-value crops, such as citrus, tree nuts, olives, and fruits. According to the

U.S. Department of Agriculture 2023 State Agriculture Overview, there were 57,600,000 acres in Montana classified as farmland operations and 24,300 farms. Prime farmland may be cultivated land, pasture, woodland, or other land, but it is not urban, built-up land or water areas. Prime farmland produces the highest yields with minimal inputs of energy and economic resources.

#### Environmental Consequences

### No Action Alternative

Under the No Action Alternative, FEMA would not provide funding for dam safety repair, rehabilitation, replacement, reconstruction, and/or removal activities. The No Action Alternative is expected to have no immediate impact on land use, prime and unique farmland but overtime may contribute to adverse effects in the future as the dam continues to degrade or breach.

### Alternative 1: Repair

The proposed action is expected to have minimal to no effect on land- use and prime or unique farmland. This method would have little potential to impact the topography and soils in the area. Standard erosion control methods would be implemented to minimize surface runoff or erosion.

### Alternative 2: Rehabilitation

The proposed action may have minimal to no effect on land- use and prime or unique farmland because land is already disturbed. There may be some ground disturbance to accommodate the improvements made to the dam. Standard erosion control methods would be implemented to minimize surface runoff or erosion.

### Alternative 3: Removal

The proposed action is expected to have minimal to no effects on land- use and prime or unique farmland because land is already disturbed. This action will require environmental restoration. Native plant species, including trees, shrubs, and herbaceous vegetation will be re-planted. Additional ground disturbance is expected. This alternative will benefit the land resources and not have a negative impact on the residential, commercial, agricultural, or recreational land use.

### Alternative 4: Replacement

The proposed action may have minimal to no effect on land- use and prime or unique farmland because land is already disturbed within the existing footprint. The replacement of the dam or parts of the dam will cause additional ground disturbance to accommodate the improvements. Standard erosion control methods would be implemented to minimize surface runoff or erosion.

## Air Quality

Air quality is regulated by the Environmental Protection Agency under the jurisdiction of the Clean Air Act (CAA) of 1970 and its amendments. The EPA has established primary and secondary National Ambient Air Quality Standards (NAAQS) under the provisions of the Clean Air Act (CAA) of 1970 (42 U.S.C. § 7401 et seq.). The CAA not only established the NAAQS, but also sets emission limits for certain air pollutants from specific sources, sets new source performance standards based on best demonstrated technologies and establishes national emissions standards for hazardous air pollutants. [7](#_bookmark27) Non-attainment areas are areas that don’t meet the national primary

7 [Summary of the Clean Air Act | US EPA](https://www.epa.gov/laws-regulations/summary-clean-air-act)

or secondary ambient air quality standard for a NAAQS and attainment areas are any area that meets the national primary or secondary ambient air quality standard for a NAAQS.[8](#_bookmark29)

Federal NAAQSs are currently established for the following six pollutants (known as “criteria pollutants”): carbon monoxide (CO), nitrogen dioxide (NO2), ozone (O3), sulfur dioxide (SO2), lead (Pb), particulate matter equal to or less than 10 micrometers in aerodynamic diameter (PM10), and particulate matter equal to or less than 2.5 micrometers in aerodynamic diameter (PM2.5).[9](#_bookmark30)

The EPA classifies the air quality within an Air Quality Control Region (AQCR) to whether or not the region meets or exceeds federal primary and secondary NAAQS. Primary standards define levels of air quality necessary to protect public health with an adequate margin of safety. Secondary standards define levels of air quality necessary to protect public welfare (i.e., soils, vegetation, and wildlife) from any known or anticipated adverse impacts of a pollutant.

### Montana’s Air Quality

On July 1, 1999, the Environmental Protection Agency (EPA) developed the Federal Implementation Plan (FIP), Regional Haze Rule (RHR), to establish a comprehensive visibility protection program to minimizes air pollution in national parks and wilderness areas. The Regional Haze Rule calls for state and federal governments to collaborate and develop a plan to improve visibility in 156 national parks and wilderness areas.[10](#_bookmark31)

Regional haze is the cumulative impact of emissions from varied activities, often located over a broad geographic area. Haze-causing particles can be transported in the air, sometimes hundreds or thousands of miles. National parks and wilderness areas are classified by the EPA as Class 1 areas that require improvement in air quality.[11](#_bookmark32)

Haze is caused by the presence of tiny particles in the air that block, absorb, and scatter sunlight. Haze obscures the color, texture, and form of objects that we can see at a distance. In Montana, smoke and wildfire smoke contribute to the increasing amount of haze in the state. Emissions from activities such as electric power generation, industrial and manufacturing processes, motor vehicle

8 <https://www.epa.gov/green-book/ozone-designation-and-classification-information>

9 [Reviewing National Ambient Air Quality Standards (NAAQS): Scientific and Technical](https://www.epa.gov/naaqs) [Information | US EPA](https://www.epa.gov/naaqs)

10 [deq.mt.gov/files/Air/AirQuality/Documents/RegionalHaze/State of Montana Regional Haze](https://deq.mt.gov/files/Air/AirQuality/Documents/RegionalHaze/State%20of%20Montana%20Regional%20Haze%20SIP.pdf) [SIP.pdf](https://deq.mt.gov/files/Air/AirQuality/Documents/RegionalHaze/State%20of%20Montana%20Regional%20Haze%20SIP.pdf)

11 Ibid.7

emissions, burning related to forestry and agriculture, and construction activities cause haze as well. [12](#_bookmark34)

The Regional Haze Rule requires states to develop a State Implementation Plans (SIP) that provide strategies to control emissions and reach natural visibility conditions. Visibility is measured by an air-monitoring network called IMPROVE (Interagency Monitoring of Protected Visual Environments). The network is comprised of 110 monitoring sites across the nation, ten of which are in Montana. Montana relies on the IMPROVE monitoring network to assess visibility at Class I Areas across the state.[13](#_bookmark35)

Montana continues to engage in the Regional Haze Rule and is working toward transitioning the RHR requirements into their own SIP. Not only does the EPA require SIPs be prepared and implemented to minimize haze but also the proper way to handle non- attainment areas in the state of Montana. [14](#_bookmark36)

### Montana’s Air Quality Control Region

An Air Quality Control Region or portion of an AQCR may be classified as attainment, non- attainment, or unclassified for each of the seven criteria pollutants. Attainment describes a condition in which one or more of the seven NAAQS are being met in an area. Non-attainment describes a condition in which one or more of the seven NAAQS are not being met in an area. Unclassified indicates that air quality in the area has not been classified and therefore treated as attainment. Areas that have been recently re-designated from non-attainment to attainment are called maintenance areas. Montana currently has non-attainment areas in Particulate Matter (PM10) and Sulfur dioxide, under the National Ambient Air Quality Standards (NAAQS) for 2024. There are two counties listed as non-attainment with moderate levels of PM10 that include Lake County and Rosebud County. Laurel Area (Yellowstone County) is listed as non-attainment area for Sulfur Dioxide. This list is updated every year.

Air emission regulations are more stringent in non-attainment areas and vary not only from AQCR to AQCR, but also within an AQCR. States with air quality conditions that don’t achieve the NAAQS standards are required to develop and maintain SIPs. Tribes may develop their own Tribal Implementation Plans (TIP). Currently, EPA has approved regulations

12 Lbid.7

13 Lbid.7

14 lbid.7

for Montana’s SIP. Montana Department of Environmental Quality is the state agency responsible for regulating air quality and developing SIPs for Montana. Under the Tribal Authority Rule (TAR), provisions of section 301(d) of the CAA also authorizes eligible Tribes to implement their own Tribal air programs; under TAR, areas covered by a TIP might be excluded from the SIP.

The Administrative Rules of Montana Title 17, chapter 8, covers air quality requirements for the state. The Montana Department of Environmental Quality (MT DEQ) and the EPA have 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. Enforcement of tribal environmental laws are subject to the particulars of the TIP.

### Environmental Consequences No Action Alternative

Under the No Action Alternative, FEMA would not provide funding for dam safety repair, rehabilitation, replacement, reconstruction, and/or removal activities. The No Action Alternative is expected to have no immediate or long-term effects on current air quality conditions.

### Alternative 1: Repair

The proposed action is expected to release minimal number of emissions during the construction phase of the dam repair project. There will be a temporary increase of emissions within the project area, but this alternative will not adversely affect state air quality conditions or exceed NAAQS standards.

### Alternative 2: Rehabilitation

The proposed action is expected to release minimal number of emissions during the construction phase of the dam rehabilitation project. There will be a temporary increase of emissions within the project area, but this alternative will not adversely affect state air quality conditions or exceed NAAQS standards.

### Alternative 3: Removal

The proposed action is expected to release minimal number of emissions during the removal of the dam. Removing the dam and restoring the natural environment will provide beneficial impacts to air quality conditions through regeneration of plant and tree species. There will be a temporary

increase of emissions within the project area, but this alternative will not adversely affect state air quality conditions or exceed NAAQS standards.

### Alternative 4: Replacement

The proposed action is expected to release minimal number of emissions during the construction phase of the dam replacement project. There will be a temporary increase of emissions within the project area, but this alternative will not adversely affect state air quality conditions or trigger NAAQS standards.

## Floodplains

Floodplains are flat, low-lying areas adjacent to water bodies susceptible to flooding. Floodplains perform a variety of essential functions including floodwater conveyance and storage, groundwater recharge, wave attenuation, streambank erosion, reduction in sedimentation rates, water quality maintenance, and support of highly productive ecosystems.

FEMA’s regulations in 44 CFR Part 9 implement floodplain management for the agency. These regulations require FEMA to engage in an 8-step decision-making process before undertaking an action within the floodplain or that would be affected by the floodplain. These steps involve: (1) determination that the action is in the floodplain, would affect the 100-year floodplain, or would indirectly support development in the floodplain; (2) early public notice; (3) identification and evaluation of alternatives to locating in the floodplain; (4) identification of the impacts of the proposed action; (5) selection of minimization, restoration and preservation measures; (6) reevaluation of alternatives; (7) publication of findings and public explanation; and (8) implementation of the action. For critical actions at facilities such as emergency operation centers, communication towers, hazardous waste facilities, hospitals, or utility plants, FEMA must identify practicable alternatives outside the 500-year floodplain.

If no practicable alternatives exist to constructing a facility and supporting features, outside the floodplain, FEMA is required to minimize the impacts to the floodplain. Minimization measures apply to the location of structures, equipment, and building contents in floodplain areas. This includes elevating facilities above the base flood elevation or flood-proofing structures. All FEMA funded programs will require a compliance review of the floodplains to make sure that there will be no adverse effect on floodplains. Some of the FEMA funded programs will require recipients to provide a comprehensive floodplain management plan that will display measures that will reduce impacts of future flood events for dam safety projects.

### Environmental Consequences No Action Alternative

Under the No Action Alternative, FEMA would not provide funding for dam safety repair, rehabilitation, replacement, reconstruction, and/or removal activities. The No Action Alternative is expected to have no immediate effect on the floodplain’s existing condition but may have adverse effect on the floodplain from sudden inundation downstream and loss of water level upstream if there is a breach.

### Alternative 1: Repair

The proposed action has the potential to have minimal to no effects to the floodplain. The applicant, sub-applicant, and/or contractor contact may be required to contact the floodplain administrator, obtain the necessary permits, and complete any applicable assessments before construction starts within the floodplain.

### Alternative 2: Rehabilitation

The proposed action has the potential to have minimal to moderate impacts to the floodplain. Best management practices for work in floodplains are encouraged to be included into the design plan that minimize the changes in the hydrologic patterns. The applicant, sub-applicant, and/or contractor may be required to contact the floodplain administrator, obtain the necessary permits, and complete any applicable assessments before construction starts within the floodplain.

### Alternative 3: Removal

This alternative will be beneficial to the floodplain. Removing the dam will restore the body of water to its natural flow which decreases flood risk long-term. A floodplain review and a hydrologic and hydraulic assessment will be required to ensure no adverse effects.

### Alternative 4: Replacement

The proposed action has the potential to have minimal to moderate impacts to the floodplain. Best management practices for work in floodplains are encouraged to be included into the design plan that minimize the changes in the hydrologic patterns. The applicant, sub-applicant, and/or contractor may be required contact the floodplain administrator, obtain the necessary permits, and complete any applicable assessments before construction starts within the floodplain.

## Water Quality, Resources, and Pollution

Water quality and resources refer to the occurrence, availability, physical, chemical, and biological characteristics of surface water and groundwater. Water quality encompasses the level of pollutants that affect the suitability of the water. Water quality and resources are protected and regulated by many federal statutes and executive orders, as well as state, local, and Tribal regulations, and directives. Surface, ground, and coastal waters are protected from pollution originating from point sources such as sewage treatment plant discharge and industrial discharges, and from non-point sources such as runoff from urban paved areas, mines, and livestock operations. Statutes, laws, and executive orders governing water resources are listed below:

### Federal Water Pollution Control Act of 1972 (better known as Clean Water Act)

**([CWA]) (33 U.S.C. § 1251 *et seq*.):** This Act regulates water quality of all discharges into “waters of the United States.” The CWA also establishes the National Pollutant Discharge Elimination System (NPDES) under Section 402, permits for dredged or fill material under Section 404, and state water quality certification requirements under Section 401. The NPDES Permit Program regulates wastewater discharges from point sources. An NPDES Stormwater General Construction Permit is required before construction modification activities commence at a site where more than 1 acre of land will be disturbed. Grantees and sub-grantees are responsible for obtaining any applicable NPDES permits and meeting permit conditions, which may include developing a Stormwater Pollution Prevention Plan (SWPPP) for the construction activity. The SWPPP would include practices to control soil erosion, sedimentation, and water pollution.

### Section 404 of the CWA: The U.S. Army Corps of Engineers (USACE)

USACE is responsible for regulating the disposal of dredged and fill materials under Section 404 of the CWA. Certain waters of the United States are considered “special aquatic sites” under the CWA because they are generally recognized as having ecological value. Such sites include sanctuaries and refuges, mudflats, wetlands, vegetated shallow, eelgrass beds, coral reefs, and riffle and pool complexes. Special aquatic sites are defined in the CWA and may be afforded additional consideration in the USACE permit process for a project. Section 401 of the CWA specifies that states, and Tribes where applicable, must certify that any activity subject to a permit issued by a federal agency, such as a CWA Section 404 permit, meets all state water quality standards. Section 401 gives states and Tribes the authority to grant, deny, or waive certification of proposed federal licenses or permits for projects that result in discharges into waters of the United States under 33 U.S.C. § 1341.

### Safe Drinking Water Act (SDWA) of 1974 (42 U.S.C. § 300f et seq.):

The EPA regulates primary drinking water supplies under the SDWA. These regulations were established to protect public health and prescribe requirements for state programs to implement the public water supply supervisor program and underground injection control program under the authority of SDWA.

### Sole Source Aquifers (42 U.S.C. § 300h-3I):

The SDWA authorizes EPA to designate aquifers that are the sole or principal source of drinking water for an area. To meet the criteria for designation, a sole-source aquifer must supply at least 50 percent of the drinking water to persons living over the aquifer and no feasible alternate source of drinking water is available. Once an aquifer is designated, EPA can review proposed projects that are to receive federal funds and that have the potential to contaminate the aquifer. Federal agencies cannot provide financial assistance to a project for which the EPA finds that it would create a significant hazard to public health by contaminating a designated soul source aquifer.

### Section 10 of the Rivers and Harbors Act (RHA) of 1899 (33 U.S.C. § 401 et seq.):

This Act requires authorization from the USACE for construction activities in or near any navigable water of the United States.

### Wild and Scenic Rivers Act (WSRA) of 1968 (16 U.S.C. § 1271 et seq.):

This Act preserves selected rivers in a free-flowing condition and protects their local environments.

### Surface Waters

Surface waters in Montana are divided into four basins (that also contain 16 sub-major basins): Columbia, Lower Missouri, Upper Missouri, and Yellowstone. Montana has an estimate of 59,400 miles of perennial rivers & streams and 730,000 miles of total acres of lakes & reservoirs. Majority of perennial rivers are within the Upper Missouri, Columbia, and Lower Missouri basin.14 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 are in the Lower Missouri and Columbia basins. Montana’s rivers and streams are not classified for aquatic life beneficial use, but are classified as drinking water, agriculture, and recreational beneficial use. Approximately 242 public water systems in Montana rely on surface water as a primary or secondary source, and

the largest public water systems in Montana uses surface water and collectively serve 449,303 people daily.[15](#_bookmark43)

### Ground Water Resources

In western Montana, groundwater is typically contained within alluvial and basin-fill aquifers, which are shallow (less than 50 feet) and consist of loose sand and gravel deposits. Alluvial and basin-fill aquifers are replenished by streams and precipitation. They provide a high level of water storage. Because they are shallow, they are prone to contamination from fuel spills, landfills, saltwater, and industrial discharges. In Missoula County, Montana, there is one EPA-designated sole source aquifer, the Missoula Valley aquifer. In contrast, eastern Montana has many bedrock aquifers, which are hard rock that lies below gravel and soil near the ground surface. Bedrock aquifers typically contain less water and produce poor-quality water. To obtain a higher quality of water, wells are drilled deeper in the state. Bedrock aquifers in Montana are found in formations as old as 540 million years (Paleozoic). [16](#_bookmark44)



15 [MT\_2020\_IR\_Final.pdf](https://deq.mt.gov/files/Water/WQPB/CWAIC/Reports/IRs/2020/MT_2020_IR_Final.pdf)

16 Ibid.13

*Figure 1: Aquifers in Montana (*[MT\_2020\_IR\_Final.pdf](https://deq.mt.gov/files/Water/WQPB/CWAIC/Reports/IRs/2020/MT_2020_IR_Final.pdf))

Ground water is a primary or secondary source for drinking water for 1956 public water systems (598,047 people).[17](#_bookmark47) Approximately 61 percent of the state get their drinking water from ground water and 32 percent of Montanans obtain their drinking water from private wells.[18](#_bookmark48) Ground water usage is highest in western Montana, where the predominant uses are domestic, and irrigation supported by high-yield aquifers. Use for livestock is common throughout Montana but is most prevalent in eastern counties, where ranching is an important industry. Since 1975, Montanans have constructed more than 119,720 domestic wells, 14,864 livestock well and about 6,956 irrigation wells according to Montana’s 2020 Water Quality Integrated Report.

### Water Pollution

Montana has several programs that target water pollution to meet water quality standards federally and locally. Pollution is any substance that has been introduced into a waterbody (naturally or human activity) that harms the water quality. A non-pollutant is a change in the environment caused by humans that affects the waterbody or the biological community.[19](#_bookmark49) That could be a man-made physical change like building a diversion dam or removing riparian vegetation. Approximately 33 percent of Montana’s assessed rivers and streams and 28 percent of assessed lakes and reservoirs are impaired from pollution. The current reporting period states that Montana’s rivers and streams have 61 identified causes of impairment; the most common are sediment-related (pollutant) and alterations of streamside vegetative cover.

Montana uses an assessment unit or Total Maximum Daily Load (TMDL) to evaluate their waterbodies. States can either develop their own criteria or implement federal criteria standards for assessing water quality. These criteria standards must accurately reflect the latest scientific knowledge. The Board of Environmental Review (BER) adopts water quality standards into the Administrative Rules of Montana (ARM). Tribal governments and/or EPA are responsible for managing quality of water located within reservations of federally recognized tribes. [20](#_bookmark50)

TMDL is the maximum amount of pollutant a waterbody can receive from all sources combined and still meet water quality standards. MT DEQ has developed TMDLs for impaired and threatened waterbodies which is a plan to restore and protect a waterbody’s beneficial uses and set water quality targets for watersheds. Montana DEQ has developed more than 600

17 Ibid.13

18 Ibid.13

19 [FINAL 2018 Water Quality Integrated Report](https://deq.mt.gov/files/Water/WQPB/CWAIC/Reports/IRs/2018/2018_IR_Final.pdf)

20 Ibid.17

 TMDLs and identified more than 1,400 impaired waterbodies. Developing a TMDL can take 2 to 3 years for each project area depending on the complexity of the system, available data, and resources. DEQ works with watershed stakeholders during TMDL development so that local watershed groups and/or other interested parties can use completed TMDLs as tools to help guide local activities for improving water quality and initiatives that help conserve water resources, minimize pollution, maintain safe drinking water in the state of Montana. [21](#_bookmark52)

### Environmental Consequences No Action Alternative

Under the No Action Alternative, FEMA would not provide funding for dam safety repair, rehabilitation, replacement, reconstruction, and/or removal activities. The No Action Alternative is expected to have no immediate effects on water quality conditions and resources but may contribute to adverse effects in the future as the dam continues to degrade or breaches.

### Alternative 1: Repair

The proposed action may have minimal to no effect on water quality and resources. FEMA recommends the appropriate measures put in place before construction starts to ensure those resources are protected and water quality standards set by state are upheld. It is the applicant, sub-applicant, or contractor responsibility to obtain the necessary permits before any work can begin.

### Alternative 2: Rehabilitation

The proposed action may have minimal to moderate effect on water quality and resources in the project area. If the proposed action has the potential to impact water quality and resources, FEMA recommends a water quality risk or sediment management plan be developed if necessary and the appropriate measures put in place before construction starts to ensure those resources are protected and water quality standards set by state are upheld. It is the applicant, sub-applicant, or contractor responsibility to obtain the necessary permits before any work can begin.

21 Ibid.17

### Alternative 3: Removal

The proposed action is expected to be beneficial to water quality and resources in the project area. This alternative may require an environmental restoration that improves or promotes aquatic habitats and fish passages that combat the decline in fish populations within the project area. Native plant species will need be re-planted and sediment management measures will need to be implemented to minimize impacts on water quality up and down stream. Applicants and sub- applicants or contractors are responsible to obtain the necessary permits before any work can begin.

### Alternative 4: Replacement

The proposed action may have minimal to moderate effect on water quality and resources in the project area. If the proposed action has the potential to impact water quality and resources, FEMA recommends a water quality risk and sediment management plan be developed if necessary and the appropriate measures put in place before construction starts to ensure those resources are protected and water quality standards set by state are upheld. It is the applicant, sub-applicant, or contractor responsibility to obtain the necessary permits before any work can begin.

## Wetlands

Federal agencies are required to minimize the destruction, loss, or degradation of wetlands and to preserve the natural and beneficial values. Wetlands are areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions[22](#_bookmark54).To meet these objectives, this requires federal agencies, in planning their actions, to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. Federal agencies use the 8-Step decision-making process to evaluate potential impacts on and mitigate effects to wetlands in compliance with 44 CFR Part 9.

Wetlands provide flood control, recharge groundwater, stabilize stream flows, improve water quality, and provide habitat for wildlife. Wetlands in Montana are being impacted by the growth of communities, transportation actions and landowner preference. The predominate wetland in Montana are fresh water emergent, freshwater ponds and freshwater scrub/shrub wetlands.

22 <https://www.epa.gov/cwa-404/how-wetlands-are-defined-and-identified-under-cwa-section-404>

2,530,053 acres of wetlands and 670,221 acres of riparian areas have been mapped in Montana since 2019. [23](#_bookmark57)

|  |  |  |  |
| --- | --- | --- | --- |
| **Wetland Type** | **Number of Mapped****Wetlands** | **Average Size (Acres)** | **Total Acres****(Statewide)** |
| **Freshwater****Emergent Wetland** | 573,798 | 1.9 | 1,078,639 |
| **Freshwater Pond** | 193,822 | 0.8 | 161,627 |
| **Freshwater Scrub-****Shrub Wetland** | 109,198 | 1.9 | 207,268 |
| **Freshwater Forested****Wetland** | 16,647 | 2.8 | 47,444 |
| **Lacustrine Fringe** | 3,711 | 25.7 | 95,239 |

*Table 4.3: Wetlands in Montana (MT 2020 Water Quality Report)*

Montana’s DEQ Water Quality Planning Bureau is responsible for coordinating and providing leadership to wetland conservation activities statewide. Tribes have the authority to do the same for Tribal lands if they have a regulatory program that includes wetland management. In 2011, DEQ developed Montana’s Wetland Program which provides state leadership guidance to restore and conserve wetlands for the benefits they provide. The Wetland program is dedicated to developing a network of statewide reference standards for wetlands, tracking wetland losses and gains in both quantity and quality, and evaluating the effectiveness of ongoing restoration and management.[24](#_bookmark58)

### Environmental Consequences No Action Alternative

Under the No Action Alternative, FEMA would not provide funding for dam safety repair, rehabilitation, replacement, reconstruction, and/or removal activities. The No Action Alternative is expected to have no immediate effect on existing conditions of wetlands but may contribute to adverse effects in the future as the dam continues to degrade over time or breaches.

23 [MT\_2020\_IR\_Final.pdf](https://deq.mt.gov/files/Water/WQPB/CWAIC/Reports/IRs/2020/MT_2020_IR_Final.pdf)

24 [FINAL 2018 Water Quality Integrated Report](https://deq.mt.gov/files/Water/WQPB/CWAIC/Reports/IRs/2018/2018_IR_Final.pdf)

### Alternative 1: Repair

This proposed action has the potential to have minimal to no impacts on wetlands. The applicant, sub-applicant or contractor are responsible for following the federal and local requirements for working in or near wetlands and completing the necessary assessments to ensure no adverse effects to the wetlands from repairing the dam.

### Alternative 2: Rehabilitation

This proposed action has the potential to have minimal to moderate impacts on wetlands. BMPs will need to be incorporated, and the appropriate permits will need to be obtained before construction starts if wetlands are present in the project area. The applicant, sub-applicant or contractor are responsible for following the federal and local requirements for working in or near wetlands and completing the necessary assessments to ensure no adverse effects to the wetlands.

### Alternative 3: Removal

This proposed action will be beneficial in restoring wetlands and the biological environment. This alternative may require a wetland restoration plan that repairs the degradation of the wetlands and ecosystem within the project area. Native plant species will need be re-planted and sediment management measures will need to be implemented to minimize impacts on water quality up and down stream. Applicants, sub-applicants and contractors are responsible to obtain the necessary permits before any work can begin.

### Alternative 4: Replacement

This proposed action has the potential to have minimal to moderate impacts on wetlands. BMPs will need to be incorporated, and the appropriate permits will need to be obtained before construction starts if wetlands are present in the project area. The applicant, sub-applicant or contractor are responsible for following the federal and local requirements for working in or near wetlands and completing the necessary assessments to ensure no adverse effects to the wetlands from replacing the dam or parts of the dam.

## Biological Resources

FEMA is responsible for evaluating biological resources in the area in which all federal actions are implemented. Biological resources include animals, native or naturalized plants, and their habitats. 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). USFWS is responsible for implementing protection and recovery actions for species listed under the Endangered Species Act. Actions authorized, funded, or carried out by other federal agencies require consultation with the Service to determine impacts to listed species and their habitats. Biological resources help and support wildlife populations across the nation. These are the examples of laws and EOs governing biological resources like terrestrial wildlife, critical habitats, and aquatic species:

* Endangered Species Act (ESA) of 1973 (16 U.S.C. § 1531 et seq.): This Act prohibits any actions that may harm or jeopardize the continued existence of any threatened or endangered species, or critical habitat. This is discussed in greater detail below.
* Bald and Golden Eagle Protection Act (BGEPA) of 1940 (16 U.S.C. § 668 et seq.): This Act prohibits the taking or possession of and commerce in bald eagle and golden eagles with limited exceptions.
* Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. § 703 et seq.): The Migratory Bird Treaty Act makes it unlawful for any individual to take, possess, buy, sell, purchase, or barter any migratory bird, including feathers or other parts, nests, eggs, or products, except as allowed by implementation regulations. It has been extended to include almost all birds that have the ability to seasonally relocate within various part of the U.S. A list of migratory birds can be found in 50 CFR Part 10.13 and at <http://www.fws.gov/migratorybirds/RegulationsPolicies/mbta/mbtandx.html>.
* Executive Order 12186 – Responsibilities of Federal Agencies to Protect Migratory Birds: EO 13186 directs federal agencies whose activities have or are likely to have a measurable, negative effect on migratory bird populations to develop and implement a Memorandum of Understanding (MOU) with USFWS that will promote the conservation of migratory birds. Activities subject to the EO 12186 may include implementation of agency programs.
* EO 13112 – Invasive Species: EO 13112 was created to prevent the introduction of invasive species and to provide for their control. Under this EO federal agencies can not authorize, fund, or carry out actions that are likely to cause or promote the introduction or spread of invasive species in the U.S.

Projects on Tribal land and/or Tribal projects are also subject to compliance with Section 7 of the ESA. The Branch of Fisheries, Wildlife, and Recreation (BFWR) Endangered Species Program encompasses both endangered/threatened species identified in Endangered Species Act and Tribally significant species identified in Tribal documents, management plans, or Tribal Resolutions.

### Terrestrial Wildlife

Terrestrial wildlife species distribution and abundance are heavily influenced by available habitat. Available habitat and vegetative communities vary significantly across the U.S. and through-out the state of Montana. Site-specific information is needed to determine project specific impacts on wildlife and plant species. Therefore, the focus of the baseline discussion is on compliance with existing laws and EOs regarding terrestrial wildlife. Project activities that have the potential to affect terrestrial species often consist of ground disturbing activities such as grading, vegetation removal (including trees), and heavy equipment operation and staging.

### Terrestrial Species of Concern:

Northern Long-eared Bat

Suitable summer habitat for NLEB consists of a wide variety of forested/wooded habitats where they roost, forage, and travel. This includes forests and woodlots containing potential roosts, as well as linear features such as fencerows, riparian forests, and other wooded and adjacent non- wooded corridors (Service, 2022 p. 17). Habitat degradation and destruction, including urbanization, recreation, and vegetative removal, have largely contributed to the decline of NLEB populations. This species has an active season from April 1 – October 31.[25](#_bookmark61)

Ute Ladies’ Tresses

ULT can be found within a number of vegetation and hydrology types including seasonally flooded river terraces, irrigation canals, berms, levees, irrigated meadows, lakeshores and reservoirs, and other human-modified wetlands. Over one-third of all known Ute ladies’-tresses populations are found on alluvial banks, point bars, floodplains, or oxbows associated with perennial streams (Service, 2023a p.34). Direct mortality of ULT has been connected to water management practices, drought, recreation, and construction (Service, 2023b p.7-8). [26](#_bookmark62)[27](#_bookmark63)

### Aquatic Species of Concern:

There are numerous aquatic species located in the state of Montana. Aquatic animals are classified as vertebrate or invertebrate that live most of their lives in water. USFWS states that plants and

25 [Species Status Assessment for Northern Long-eared Bat (Myotis septentrionalis) | U.S. Fish & Wildlife Service](https://www.fws.gov/node/5021236)

26 [Ute ladies’-tresses (Spiranthes diluvialis) species status assessment (SSA) report | U.S. Fish & Wildlife Service](https://www.fws.gov/node/5099511)

27 [Ute ladies'-tresses 5-year status review | U.S. Fish & Wildlife Service](https://www.fws.gov/node/5099506)

animals that depend on water for a least one stage of their lives makes them aquatic. Down below are the species with concern:

Bull Trout

Bull Trout is believed to occur within 12 counties in Montana, specifically throughout the Flathead, Kootenai, Clark Fork, Bitterroot, Blackfoot, St. Regis, and Saint Mary’s River drainages, and their tributaries (Service, 2015 p.1-4). This species requires cold water, so they are seldom found in waters where temperatures exceed 59 to 64 degrees (F). They also require stable stream or river channels, clean spawning and rearing gravel, complex and diverse cover, and unblocked migratory corridors. Project activities that have the potential to affect Bull Trout may include, but are not limited to, sediment-generating activities, stream, and river channel modifications (impoundment, dam construction, diversions), and modification of migratory corridors (Service, 2015 p.5-6).[28](#_bookmark65)

Pallid Sturgeon

The Pallid Sturgeon is believed to occur in 17 counties in Montana and prefers fast flowing, turbid rivers. Pallid sturgeons are most commonly found in the Missouri River upstream of Morony Dam, and in the Yellowstone River upstream of Forsyth with intermittent occupancy of the Marias, Milk, Poplar Rivers (Service, 2021 p.1-2). Project activities that have the potential to affect Pallid Sturgeon include, but are not limited to, human modification of river systems (construction of large dams and reservoirs, and/or channelization) that change the velocity, volume, and timing of flows.[29](#_bookmark66)

### Listed Species, Critical Habitat, and Special-Status Species

Both federal and state regulatory programs have been enacted in an attempt to prevent extinction of threatened and endangered species. Threatened and endangered species are broadly distributed throughout the U.S. and its territories.

The Endangered Species Act of 1973 requires federal agencies to conserve those plants and animal species that have been listed as endangered and threatened species by the USFWS or NMFS and critical habitats designated by these agencies. It defines an endangered species as any species in danger of extinction throughout all or a significant area of its range and a threatened species as any species likely to become endangered in the near future. It also defines critical habitat as those

28 St. Mary Recovery Unit Implementation Plan for Bull Trout (Salvelinus confluentus) | U.S. Fish & Wildlife Service

29 5-Year Status Review for Pallid sturgeon (Scaphirhynchus albus) | U.S. Fish & Wildlife Service

geographical areas that contain physical or biological features that are essential to the conservation of the species. Under Section 7 of the ESA, federal agencies, in coordination with USFWS or NMFS, must ensure their actions are not likely to jeopardize the continued existence of any endangered or threatened species (i.e., a listed species) or result in the destruction or adverse modification of critical habitat.

This protection under ESA includes a prohibition against direct take (e.g., killing, harassing) and indirect take (e.g., destruction of habitat, adverse modification). 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 adversely modify designated critical habitats. There are 18 species listed as Endangered (E), Threatened (T), Proposed (P), or Candidate (C) species by the USFWS under ESA that historically occurred, occur, or may potentially occur within Montana (Table 4-4: Federally Listed Threatened, Endangered and Candidate Species in 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 72 resources managed or regulated by the U.S. Fish and Wildlife Service: 18 threatened or endangered species, 3 critical habitats, 47 migratory birds, 22

U.S. Fish and Wildlife Service facilities.

**Federally Listed Species in Montana**

|  |  |
| --- | --- |
| **Status** | **Species/Listing Name** |
|  | **Mammals** |
| **E** | Black-footed ferret (Mustela nigripes) |
| **EXPN** | Black-footed ferret (Mustela nigripes) |
| **T (CH)** | Canada Lynx (Lynx canadensis) |
| **T** | Grizzly bear (Ursus arctos horribilis) |
| **T** | North American Wolverine (Gulo luscus) |
| **E** | Northern Long-Eared Bat (Myotis septentrionalis) |
|  | **Birds** |
| **T (CH)** | Piping Plover (Charadrius melodus) |
| **T** | Red Knot (Calidris canutus rufa) |
| **E** | Whooping crane (Grus americana) |
| **T** | Yellow-billed Cuckoo (Coccyzus americanus) |
|  | **Fishes** |

|  |  |
| --- | --- |
| **Status** | **Species/Listing Name** |
| **T (CH)** | Bull Trout (Salvelinus confluentus) |
| **E** | Pallid sturgeon (Scaphirhynchus albus) |
| **E** | White Sturgeon (Acipensertransmontanus) |
|  | **Insects** |
| **T** | Meltwater Lednian Stonefly (Ledniatumana) |
| **C** | Monarch butterfly (Danaus plexippus) |
| **T** | Western glacier stonefly (Zapada glacier) |
|  | **Flowering Plants** |
| **T** | Spalding’s catchfly (Silene spaldingii) |
| **T** | Ute ladies’-tresses (Spiranthes diluvialis) |
|  | **Conifers and Cycads** |
| **T** | Whitebark Pine (Pinus albicaulis) |

*Table 4.4: Listed Species*

### Critical Habitats listed in Montana:

According to USFWS, Critical habitats are defined when species are proposed for listing as endangered or threatened under the Endangered Species Act (ESA) and specific areas are identified that are essential to conservation for that specific species. Dams have the potential to be located within or near critical habitats in the state of Montana. Down below are species with designated critical habitat in Montana:

Canada Lynx

In Montana, subalpine/coniferous forests inhabited by Canada Lynx often occur at higher elevations between 5413ft and 7874ft (1,650 to 2,400 meters) and are composed mostly of subalpine fir. Projects occurring within known Canada Lynx critical habitat with the potential to adversely affect (i.e. vegetative removal or tree removal) may require consultation.[30](#_bookmark68)

30 U.S. Fish and Wildlife Service. 2023. Species Status Assessment Addendum for the Canada lynx (Lynx canadensis) Contiguous United States Distinct Population Segment. December 2023. Denver, Colorado. 122 pp.

Bull Trout

There are approximately 3,225 river miles and 223,740 acres of lakes and reservoirs designated as bull trout critical habitat in Montana. Any work in water or potential ground disturbing (sediment- generating) activities within or adjacent to Bull Trout critical habitat streams, will require consultation and may be subject to seasonal restrictions.[31](#_bookmark70)

Piping Plover

In eastern Montana, Piping Plover utilize alkali lakes and riverine and reservoir shorelines, and sandbars along the Yellowstone and Missouri Rivers as breeding sites. They begin arriving on the breeding grounds in late April and early May (Service, 2020 p.12-13). Open, wet sandy areas provide feeding habitat for Plovers on river systems and throughout most of the birds nesting range. Populations have declined substantially due to recreation, commercial development, dam construction, and other human disturbance (Service, 2020 p.17-21). Reservoirs, river channelization, and modified river flows have eliminated sandbar nesting habitat as diversion of peak flows have resulted in vegetation encroachment. Activities within or adjacent to Plover critical habitat, will require consultation and may be subject to seasonal restrictions.[32](#_bookmark71)

### Consultation Process

The regulatory environment is an important consideration in reviewing the potential adverse impacts of activities proposed. The applicability of these requirements changes based on site specific circumstances; project scope; federal, state, and local government programs; level of federal involvement; proximity of the biological resource(s) to a proposed project area; and land ownership. Developing an accurate portrayal of the regulatory environment affecting each proposed action is therefore essential in evaluating requirements for biological resource protection. Site-specific evaluation and a full understanding of the federal, state, and local requirements are necessary.

After review of the proposed project, federal agencies are required to determine if the project actions have the potential to affect listed species or critical habitats. If it’s determined that the project will have “no effect” on listed species or critical habitat, the review is complete, and no

31. [St. Mary Recovery Unit Implementation Plan for Bull Trout (Salvelinus confluentus) | U.S. Fish & Wildlife Service](https://www.fws.gov/node/68769)

[SLOPES\_USFWS\_BiOp\_05.17.2013.pdf](https://www.nww.usace.army.mil/Portals/28/docs/regulatory/ESA%20Programmatics/SLOPES_USFWS_BiOp_05.17.2013.pdf)

32 [Piping Plover (Charadrius melodus) 5-year Review 2020 | U.S. Fish & Wildlife Service](https://www.fws.gov/node/263238)

consultation is needed. However, if it’s found that the proposed actions may affect listed species or critical habitat, a consultation will be initiated with the Service.

### Consultation Levels: Informal Consultation

The Service reviews the biological evaluation prepared and submitted by the action agency and concurs with the determination that the project may affect but is not likely to adversely affect (NLAA). This ends the informal consultation process.

### Formal Consultation

The action agency prepared and submitted a Biological Assessment (BA) after determining the project is likely to adversely affect (LAA) listed species or critical habitat. Any applicable reasonable and prudent alternatives (RPAs) (i.e. project conditions) are developed through coordination with the Service. Upon conclusion of a formal consultation, the Service will issue a biological opinion (BO) with their scientific analysis of effects.

### Environmental Consequences No Action Alternative

Under the No Action Alternative, FEMA would not provide funding for dam safety repair, rehabilitation, replacement, reconstruction, and/or removal activities. The No Action Alternative is expected to have no significant short-term effects on endangered species and designated critical habitats. However, the no action alternative may contribute to adverse effects in the future as the dam continues to degrade overtime or breaches.

### Alternative 1: Repair

This proposed action has the potential to effect critical habitats, aquatic and terrestrial species. A review must be conducted based on available information of the potential concerns for species and critical habitat occurrence in the area. If there are critical habitats or any species of concern within the area, a consultation with USFWS will be completed and conditions may be applied to the project to minimize any impacts or adverse effects. Minimization measures will need be incorporated into the design before construction starts.

### Alternative 2: Rehabilitation

All actions outlined in this proposed alternative have the potential to effect listed species and critical habitats within or adjacent to the action area. All project activities will require

environmental review to determine the level of effect and are subject to consultation with the Service in order to comply with Section 7 of the Endangered Species Act. The Service may provide project specific conditions and management practices required to minimize project impacts. Best management practices will need to be incorporated into the design to minimize the potential disruptions critical habitats, aquatic, terrestrial species before construction starts.

### Alternative 3: Removal

This proposed action is expected to be beneficial to listed species and critical habitats in the project area. If there are critical habitats or species of concern within the project area, a consultation may be required with the Service. An ecological restoration plan will need to be incorporated into the design to improve aquatic habitats and fish passage, combat the decline in fish populations in the streams and restore ecosystems back to pre-disturbance conditions before construction starts.

### Alternative 4: Replacement

All activities outlined in this proposed action have the potential to affect listed species and critical habitats occurring within or adjacent to the action area. All project activities will require environmental review to determine the level of effect and are subject to consultation with the Service in order to comply with Section 7 of the Endangered Species Act. The Service may provide project specific conditions and management practices required to minimize project impacts. Best management practices will need to be incorporated into the design to minimize the potential disruptions critical habitats, aquatic, terrestrial species before construction starts.

## Cultural Resources

### Historic Properties

Historic properties are prehistoric or historic districts, sites, buildings, structures, or objects listed in or eligible for listing in the National Register of Historic Places (NRHP), maintained by the Department of the Interior, National Park Service (NPS). More than 80,000 properties are listed in the NRHP, including National Historic Landmarks (NHLs). Almost every county and territory in the U.S. has at least one place listed in the NRHP.[33](#_bookmark75)

Properties may be eligible for listing in the NRHP if they possess significance at the national, tribal, state or territory, or local level in American history, architecture, archaeology, engineering, or culture. In order for a property to be considered historic, it must meet basic criteria and retain

33 National Park Service2019 <https://www.nps.gov/subjects/nationalregister/database-research.htm> .

the historic integrity of those features necessary to convey their significance. To convey integrity, historic properties will always possess several, and usually most, of the following seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. The passage of time may require re-evaluation of historic properties to reaffirm the original National Register status.[34](#_bookmark76)

There are multiple Federal regulations that require consideration of effects to historic properties, including Section 106 of the National Historic Preservation Act (NHPA) of 1966 (16 U.S.C § 470 *et seq*., 54 U.S.C. §300101 *et seq*,), the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 (25 U.S.C. § 3001 *et seq*.), the American Indian Religious Freedom Act (AIRFA) of 1978 (42 U.S.C. § 1992 *et seq*.), and the Archaeological Resources Protection Act (ARPA) of 1979 (16 U.S.C. § 470aa *et seq*.).

Section 106 of the NHPA, and its implementing regulations, 36 CFR 800, require the Federal Government to consider the effects of their undertakings on historic properties through a four-step decision making and compliance process. The law does not mandate preservation of historic properties, rather, it mandates Federal agencies follow the decision-making process[35](#_bookmark77)[36](#_bookmark78). The four steps of the Section 106 compliance process are:

* + - 1. **Initiate the Section 106 Process.** FEMA determines whether an undertaking exists, engages the appropriate State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO), identifies potential consulting parties, and develops an appropriate plan for public involvement in consultation with the SHPO/THPO.[37](#_bookmark79)
			2. **Identify historic properties.** FEMA, in consultation with the SHPO/THPO, determines the Area of Potential Effects (APE) for the undertaking and reviews existing information on historic properties within the APE. The APE is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. The APE is determined by the scope of the project, the characteristics of the project area (e.g., topography, building density, land use), and the type of historic property being considered, and may be different for different kinds of effects caused by the undertaking. Also, the APE for historic properties may be different from the area studied for other resource types under NEPA. Once the APE is established, FEMA gathers information from the SHPO/THPO, Native American tribes, consulting parties, and other individuals or organizations likely to have knowledge of historic properties in the area and identifies issues relating to the undertaking’s potential effects on

34 lbid.28

35 [Section 106 Review Fact Sheet | Advisory Council on Historic Preservation](https://www.achp.gov/digital-library-section-106-landing/section-106-review-fact-sheet)

36 [Integrating NEPA and Section 106 | Advisory Council on Historic Preservation](https://www.achp.gov/integrating_nepa_106)

37 <https://www.achp.gov/protecting-historic-properties/section-106-process/initiating-section-106>

historic properties. This step also involves FEMA making a determination of whether a property is eligible for listing on the NRHP in consultation with the SHPO/THPO.[38](#_bookmark80)

* + - 1. **Assess adverse effects of undertaking on historic properties.** If FEMA determines that no historic properties are affected by the undertaking or that there will be no adverse effect to historic properties, FEMA will first determine if the undertaking conforms to the allowances listed in the Programmatic Agreement Among FEMA, the Montana SHPO, and the Montana Disaster & Emergency Services Division (MT S106 PA). For undertakings that do not wholly meet these allowances, FEMA must seek the concurrence of the SHPO/THPO and notify other consulting parties. If FEMA and the SHPO/THPO concur, the compliance process ends at this step. However, if FEMA determines that the undertaking may adversely affect historic properties, the agency must notify the SHPO/THPO, the Advisory Council on Historic Preservation (ACHP), and any other consulting parties through a letter and supporting documentation. Federal agencies must consider possible direct, indirect, and cumulative effects on historic properties. Direct effects include physical impacts, while indirect effects may include visual, atmospheric, and audible impacts on historic properties.[39](#_bookmark81)
			2. **Resolve adverse effects to historic properties.** FEMA must resolve adverse effects by seeking ways to avoid, minimize, or mitigate the undertaking’s adverse effect through consultation with the SHPO/THPO, other identified consulting parties, including the grantee and subgrantee, and ACHP, if participating. If avoiding or minimizing the adverse effect through re-design or other alternative means is not possible, FEMA, the SHPO/THPO, the grantee and subgrantee, and other consulting parties may enter into a Memorandum of Agreement that outlines appropriate measures to avoid, minimize, or mitigate the adverse effect(s) to historic properties. In cases where FEMA and the other consulting parties fail to agree on appropriate measures to treat the adverse effect(s), FEMA or the other consulting parties may decide to terminate consultation, in which case the ACHP issues comments. FEMA must take these comments into consideration before notifying ACHP of its final decision, after which the project may proceed.[40](#_bookmark82)

Because of the broad scope and locations covered by this PEA, the presence of historic properties within the APE of some of the proposed projects is highly likely. Once an APE is established for a particular undertaking, background research with the SHPO/THPO, Tribal Nations, local libraries, government offices, historical societies, and others as necessary, can provide information on previously identified historic properties. Research may also provide an understanding of the historic context for a project area, which will further assist in identifying resources and evaluating

38 <https://www.achp.gov/protecting-historic-properties/section-106-process/identifying-historic-properties>

39 <https://www.achp.gov/protecting-historic-properties/section-106-process/assessing-effects>

40 <https://www.achp.gov/protecting-historic-properties/section-106-process/achieving-resolution>

whether they may meet one or more of the NRHP criteria. Fieldwork may also be required to identify historic properties.[41](#_bookmark85)

A higher standard is applicable to Federal agencies when their actions may affect historic properties that are designated as National Historic Landmarks (NHLs). In accordance with Section 110 of NHPA, Federal agencies must, to the maximum extent possible, minimize harm to NHLs directly and adversely affected by their undertakings prior to their approval. 16 U.S.C. § 470h-

2(f). In addition, Federal agencies must notify and formally invite the Secretary of Interior to the consultation process and invite the ACHP to participate in the consultation process to resolve adverse effects. [42](#_bookmark86)

In this PEA, FEMA divides historic properties into two broad categories: archaeology and other historic properties. FEMA will always conduct the Section 106 review process described above to properly identify all historic properties, determine the effect of undertakings on identified historic properties, and resolve adverse effects of its undertakings to historic properties. It is FEMA’s practice to complete this process before completing the NEPA determination to ensure that impacts to historic properties have been taken into account in the NEPA process.[43](#_bookmark87)

### Affected Environment

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 (Montana State Historic Preservation Office 2019). Of these sites, more than 1,000 historic properties and more than 50 archaeological sites are listed on the NRHP. Fewer than 30 NHLs located in Montana, some of which extend across state lines to Idaho or North Dakota. [44](#_bookmark88)[45](#_bookmark89)[46](#_bookmark90)[47](#_bookmark91)

### Archeological Sites

Prehistoric/precontact Native American culture history in Montana extends from the period of early Holocene Paleoindian exploration no later than circa 12,000 years before present, to the 1805 Lewis and Clark Expedition. 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. These tribal nations include but are not limited to

41 <https://www.achp.gov/protecting-historic-properties/section-106-process/identifying-historic-properties>

42[https://www.achp.gov/digital-library-section-106-landing/section-106-consultation-involving-national-historic-](https://www.achp.gov/digital-library-section-106-landing/section-106-consultation-involving-national-historic-landmarks)

[landmarks](https://www.achp.gov/digital-library-section-106-landing/section-106-consultation-involving-national-historic-landmarks)

43[https://www.federalregister.gov/documents/2016/08/22/2016-19534/fema-directive-108-1-and-fema-instruction-](https://www.federalregister.gov/documents/2016/08/22/2016-19534/fema-directive-108-1-and-fema-instruction-108-1-1)

[108-1-1](https://www.federalregister.gov/documents/2016/08/22/2016-19534/fema-directive-108-1-and-fema-instruction-108-1-1)

44 <https://www.nps.gov/subjects/nationalregister/database-research.htm>

45 [https://www.nps.gov/state/mt/index.htm.](https://www.nps.gov/state/mt/index.htm)

46 <https://www.nps.gov/history/tribes/Tribal_Historic_Preservation_Officers_Program.htm>

47 <http://svc.mt.gov/adsams>

the Arapaho, Arikara, Bannock, Blackfeet, Cheyenne, Crow, Gros Ventre, Kiowa, Nez Perce, Sheep Eater, Sioux, and Shoshone tribes.[48](#_bookmark92)

The protohistoric/pericontact period is the century preceding the expedition, and generally spans the eighteenth century when horses and guns were adopted by Montana indigenous groups. A review of publications and online information provided by the University of Montana, Montana Historical Society, and Montana State Historic Preservation Office illuminates the function, age, and characteristics of prehistoric sites across the state.[49](#_bookmark93)[50](#_bookmark94)

Prehistoric/precontact and protohistoric/pericontact 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, petroglyphs) 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.[51](#_bookmark95)

The 1805 Lewis and Clark Expedition is generally recognized as the beginning of the historic/post- contact period in Montana and includes the development and expansion of the colonial fur trade and establishment of major trading posts in Native American territory during the early part of the century. Colonial settlement was intermittent during the first half of the nineteenth century, but the 1860s discovery of gold in Grasshopper Creek in the Castle Mountains of central Montana resulted in a massive influx of white settlers. This was also a period of significant battles between various Native American tribes and the U.S. government, and ultimately the establishment of reservation lands. [52](#_bookmark96)

Historic/post-contact 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.[53](#_bookmark97)

48 lbid.42

49 lbid.42

50 [https://mhs.mt.gov](https://mhs.mt.gov/)

51 <http://svc.mt.gov/adsams>

52 lbid.46

53 lbid.46

### Historic Architectural Sites

NRHP-listed historic/post-contact properties in Montana are predominantly buildings and structures concentrated in the principal demographic centers of the state. Nearly half are located in six counties: Flathead, Gallatin, Missoula, Ravalli, Lewis and Clark, and Carbon.[54](#_bookmark100)

The Montana Historical Society notes the significance of architects John G. Link (1869–1954) and Charles S. Haire (1857–1925) in shaping Montana’s built landscape (Montana Historical Society 2019). In 1906, the two joined to form *Link and Haire, Architects*, which quickly grew into one of Montana’s most prominent architectural firms. In addition to providing plans for a third of the state’s county courthouses and contributing to the capitol’s 1912 expansion, Link and Haire designed schools, churches, hospitals, office buildings, libraries, and private homes. Their buildings, many of which are listed in the NRHP, embrace the period’s eclectic and classical tastes.[55](#_bookmark101)

There is currently one NRHP-listed dam in Montana, the Fort Peck Dam completed in 1940 as a project in the Public Works Administration. There are also numerous potentially eligible dams within the state. [56](#_bookmark102)

### Environmental Consequences No Action Alternative

Under the No Action Alternative, FEMA would not provide funding for dam safety repair, rehabilitation, replacement, reconstruction, and/or removal activities. The No Action Alternative is expected to have no effect on historic properties and archaeological sites but may contribute to adverse effects in the future as the dam continues to degrade overtime or breaches.

### Alternative 1: Repair

This proposed action will have minimal to no effect on archaeological or historical properties due to ground disturbance being restricted to the original footprint of the dam and the area immediately adjacent to the footprint. Any visual impacts to surrounding NRHP-eligible or listed structures would be temporary. The exception to this would be if the dam itself is NRHP-list or eligible. If the dam is NRHP-listed or eligible, the work would need to be completed in consultation with Montana SHPO and FEMA EHP.

54 [https://mhs.mt.gov](https://mhs.mt.gov/)

55 <http://svc.mt.gov/adsams>

56 [Integrating NEPA and Section 106 | Advisory Council on Historic Preservation](https://www.achp.gov/integrating_nepa_106)

### Alternative 2: Rehabilitation

The proposed action has the potential to affect historic properties. A historic property evaluation will need to occur to determine impacts to existing and potential historic properties (page 40-41). Any impacts to historic properties will require the involvement of Montana SHPO and representatives of interested Tribal Nations. If the dam is determined NRHP-listed or -eligible, the work must be completed in consultation with Montana SHPO and FEMA EHP.

### Alternative 3: Removal

The initial removal of the dam would create significant ground disturbance, requiring both a cultural resource survey and consultation with Montana SHPO. An adverse effect assessment(s) would be necessary for any impacts to NRHP-listed or eligible sites or structures including NRHP-list or -eligible dams. If the assessment results in an adverse effect determination, FEMA must move to resolve adverse effects to historic properties, in consultation with SHPO, THPO and other identified consulting parties**.**

### Alternative 4: Replacement

The proposed action has the potential to have moderate to significant effect on archaeological or historic resources. A cultural resource evaluation would need to occur to determine any impacts. Any impacts to historical or archaeological resources would require the involvement of Montana SHPO and interested THPOs. In addition, if the dam is NRHP-listed or -eligible, the work on the dam would require consultation and coordination with the Montana SHPO and FEMA EHP.

## Socioeconomic

Montana had an estimated population of 1,084,225 persons in 2020 According to the U.S. Census Bureau. 67,612 identified themselves as an American Indian or Alaska Native, 5,484 identified as being Black or African American, 8,300 identified as being Asian, 941 identified Native Hawaiian or Other Pacific Islander or 14,089 some “other” race and estimated 45,199 of the people in Montana were Hispanic, people of Hispanic origin may be of any race and 916,524 identified as being White.[57](#_bookmark104)Also, there are currently eight federally recognized American Indian tribes in Montana: Assiniboine and Sioux Tribes of the Fort Peck Reservation (Fort Peck Tribes); the Blackfeet Tribe; the Chippewa Cree Indians of the Rocky Boy’s Reservation (Chippewa Cree); the Confederated Salish and Kootenai Tribes of the Flathead Reservation (CSKT); the Crow Tribe; the Fort Belknap Indian Community; and the Northern Cheyenne Tribe and the Little Shell Tribe. The Little Shell Chippewa Tribe obtained federal recognition on December 20, 2019.[58](#_bookmark105)

57 [Montana - Census Bureau Profile](https://data.census.gov/profile/Montana?g=040XX00US30&populations-and-people)

58 [tribal-nations-handbook.pdf](https://archive.legmt.gov/content/For-Legislators/Orientation/2020/tribal-nations-handbook.pdf)

Communities potentially adversely affected by the proposed action will need to be identified on a project- or site-specific basis during EHP compliance review. If potential impacts and/or factors (e.g. natural/physical environment, social, economic, cultural, chemical, noise, air quality, land use, ecological and traffic/congestion) are identified during the review process that will adversely affect communities, FEMA will need to develop a strategy to minimizes those impacts and ensure effective public involvement that focuses on mitigation, monitoring measures, alternatives, and community preferences. If impacts are determined to be significant per criteria defined in NEPA, a more complex review may be needed to understand the full range of effects and additional public involvement to tackle the potential long-term adverse impacts that will affect communities. [59](#_bookmark107)

### Environmental Consequences No Action Alternative

Under the No Action Alternative, FEMA would not provide funding for dam safety repair, rehabilitation, replacement, reconstruction, and/or removal activities. The No Action Alternative is expected to have no immediate effect on communities located within or near the project area. However, the degradation of the dam overtime will put communities within or near the project area at risk in the future if structure breaches.

### Alternative 1: Repair

The proposed action will have minimal to no effect on communities located near or within the project area. Short-term impacts are expected during construction which includes noise levels, increase in emissions, paused recreation activities, temporary staging areas and/or displacement during construction. If the proposed action creates concerns for communities within or near the project area, a risk management plan is encouraged to be developed before construction starts. The proposed action does create several benefits that minimize breaches, financial stress, property damage, displacement, relocation, and other health and environmental repercussions.

### Alternative 2: Rehabilitation

The proposed action will have minimal to no effect on communities located near or within the project area. Short-term impacts are expected during construction which includes noise levels, increase in emissions, paused recreation activities, temporary staging areas and/or displacement during construction. If the proposed action creates concerns for communities within or near the project area, a risk management plan is encouraged to be developed before construction starts. The proposed action does create several benefits that minimize breaches, financial stress, property damage, displacement, relocation, and other health and environmental repercussions.

### Alternative 3: Removal

The proposed action may have minimal to moderate effect on all communities near or within the project area. Short-term impacts are expected during the removal process that includes increase in noise levels, increase in emissions, paused recreation activities, temporary staging areas and/or displacement. Dam removals are expected to have a positive effect on the community like restoration of biological and water resources, restoring cultural significance of the land, reconnecting communities to the rivers and protecting cultural values. Removal of a dam increases safety, resilience and minimize long-term impacts of a dam failure.

### Alternative 4: Replacement

The proposed action will have minimal to no effect on communities located near or within the project area. Short-term impacts are expected during construction which includes increase in noise levels, increase in emissions, paused recreation activities, temporary staging areas and/or displacement during construction. If the proposed action creates concerns for the communities within or near the project area, a risk management plan is encouraged in being developed before construction starts. The proposed action does create several benefits that minimize breaches, financial stress, property damage, displacement, relocation, and other health and environmental repercussions.

## Public Health & Safety

Safety issues considered in this PEA include the health and safety of the public-at-large, including the protection of personnel involved in activities related to the dam safety. In addition, hazardous materials are considered in this section.

Hazardous substances are defined as any solid, liquid, contained gaseous or semisolid waste, or any combination of wastes that pose a substantial present or potential hazard to human health and the environment. Improper management and disposal of hazardous substances can lead to pollution of groundwater or other drinking water supplies, air quality, and the contamination of surface water and soil. Federal laws and subsequent regulations governing the assessment, transportation, release and disposal of hazardous materials and wastes include the Resource Conservation and Recovery

Act (RCRA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); and the Toxic Substances Control Act (TSCA).

RCRA establishes national goals to protect human health and the environment from the potential hazards of waste disposal, reduce the amount of waste generated, and to ensure that wastes are managed in an environmentally sound manner. RCRA outlines duties and responsibilities for hazardous waste generators, transporters, storers, treaters, and disposers of hazardous waste.

Waste management regulations by the EPA are codified at 40 CFR Parts 239–282; regulations for management of hazardous waste begin at 40 CFR Part 260. Nearly all developed areas in the continental U.S. have solid waste management services or programs, with municipal solid waste generally regulated and managed at the state and community level. States have enacted laws and promulgated regulations that are at least as stringent as the federal regulations. In addition, states have the authority to carry out many of the functions of RCRA through their own hazardous waste programs (and state laws), if such programs have been approved (authorized) by EPA.

CERCLA, also known as Superfund, focuses on the cleanup of inactive hazardous waste sites and the response to releases or threatened releases of hazardous substances into the environment on the federal level.[60](#_bookmark109) Montana has their own state superfund unit that utilizes the Comprehensive Environmental Cleanup and Responsibility Act (CECRA) and Environmental Quality Protection Fund (EQPF).[61](#_bookmark110) The State Superfund Unit uses the CECRA and EQPF to investigate and clean up hazardous waste at sites not addressed by federal Superfund. The state of Montana currently has 19 Superfund sites and 175 CECRA priority sites according to the EPA and Montana DEQ.

TSCA gives EPA the authority to require reporting, record keeping and testing equipment, and restrictions relating to chemical substance and/or mixtures.[62](#_bookmark111) TSCA addresses the production, importation, use, and disposal of specific chemicals like PCBs, asbestos, radon and lead-based paint. EPA may ban the manufacture and import of those chemicals that pose an unreasonable risk and control these chemicals as necessary to protect human health and the environment.

The EPA published a list of hazardous air pollutants and promulgated the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations. Because lead and asbestos present a substantial risk to human health as a result of air emissions from one or more source categories, they are considered hazardous air pollutants and, thus, hazardous materials. The Asbestos NESHAP (40 CFR 61, Subpart M) addresses milling, manufacturing, and fabricating operations, demolition and renovation activities, waste disposal issues, active and inactive waste disposal sites,

60[https://www.epa.gov/enforcement/comprehensive-environmental-response-compensation-and-liability-act-cercla-and-](https://www.epa.gov/enforcement/comprehensive-environmental-response-compensation-and-liability-act-cercla-and-federal#Basics%20of%20CERCLA)

[federal#Basics%20of%20CERCLA](https://www.epa.gov/enforcement/comprehensive-environmental-response-compensation-and-liability-act-cercla-and-federal#Basics%20of%20CERCLA)

61 <https://deq.mt.gov/cleanupandrec/Programs/superfundstate>

62 <https://www.epa.gov/laws-regulations/summary-toxic-substances-control-act>

and asbestos conversion processes. Evaluations of hazardous substances and wastes must consider whether any hazardous material will be generated by the proposed activity and whether a hazardous material already exists at the site or in the general vicinity of the site.

### Environmental Consequences No Action Alternative

Under the No Action Alternative, FEMA would not provide funding for dam safety repair, rehabilitation, replacement, reconstruction, and/or removal activities. The No Action Alternative is expected to have no immediate effect on the existing conditions of public health & safety but may contribute to adverse effects in the future as the structure continues to degrade overtime.

### Alternative 1: Repair

The proposed action is expected to have minimal to no effect on public health and safety. If the project is located near a superfund or CECRA site, the applicant or sub-recipient is responsible for contacting the EPA and state environmental department to follow the requirements to clean up and prevent human and ecological receptors from any exposure to hazardous substances. All solid and hazardous waste that may be generated during construction must be identified, removed and disposed of at a permitted facility or designated collection point. Construction workers must wear appropriate personal protective equipment (PPE) and be properly trained to work near a superfund or CECRA site. FEMA recommends that dam repair plans incorporate plans to prevent any future release of deleterious substances.

### Alternative 2: Rehabilitation

The proposed action is expected to have minimal to no effect on public health and safety. If the project is located near a superfund or CECRA site, the applicant or sub-recipient is responsible for contacting the EPA and state environmental department to follow the requirements to clean up or prevent human and ecological receptors from any exposure to hazardous substances. All solid and hazardous waste that may be generated during construction must be identified, removed and disposed of at a permitted facility or designated collection point. Construction workers must wear appropriate PPE and be properly trained to work near a superfund or CECRA site. FEMA recommends that dam rehabilitation plans incorporate plans to prevent any future release of deleterious substances.

### Alternative 3: Removal

The proposed action is expected to have minimal to no effect on public health and safety. If the project is located near a superfund or CECRA site, the applicant or sub-recipient is responsible for contacting the EPA or state environmental department to follow the requirements to clean up or prevent human and ecological receptors from any exposure to hazardous substances. All solid and hazardous waste that may be generated during construction must be identified, removed and

disposed of at a permitted facility or designated collection point. Construction workers must wear appropriate PPE and be properly trained to work near a superfund or CECRA site. FEMA recommends that dam removal plans incorporate plans to prevent any future release of deleterious substances.

### Alternative 4: Replacement

The proposed action is expected to have minimal to no effect on public health and safety. If the project is located near a superfund or CECRA site, the applicant or sub-recipient is responsible for contacting the EPA or state environmental department to follow the requirements to clean up or prevent human and ecological receptors from any exposure to hazardous substances. All solid and hazardous waste that may be generated during construction must be identified, removed and disposed of at a permitted facility or designated collection point. Construction workers must wear appropriate PPE and be properly trained to work near a superfund or CECRA site. FEMA recommends that dam replacement plans incorporate plans to prevent any future release of deleterious substances.

## Noise

Noise is defined as unwanted sound that interferes with normal human activities, wildlife behavior and may otherwise diminish environmental quality. Sound is characterized by its intensity, frequency, and duration. 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. [63](#_bookmark114)

The effects of noise on humans are varied and are dependent on the noise’s intensity, its frequency, and its duration; the sensitivity and expectations of the person affected; and the environment in

63 [appdx-E.pdf](https://www.usbr.gov/uc/envdocs/ea/navajo/appdx-E.pdf) Navajo Reservoir RMP/FEA \* \* \* \* June 2008

which the noise is perceived. The same noise that would be highly intrusive to someone in a quiet park might be barely perceptible in the middle of the freeway at rush hour. Excessive noise exists in our homes, our workplaces, and in our recreational pursuits and can affect the human condition in many ways. Sudden, short-term and infrequent high-pitched and/or high-intensity sounds can be startling and stressful, even fearful, particularly when not expected. [64](#_bookmark115)

Like humans, the effect of noise on wildlife is highly varied and is dependent on the noise’s intensity, its frequency, and its duration; the sensitivity of the species or individual affected; and the environment in which the noise is perceived. Unusual, loud, and/or intermittent noise will generally startle and stress most species of wildlife. Increased stress and/or movement during a critical period such as nesting or birthing, or winter, will generally cause greater adverse effects to wildlife than the same stress outside of such critical times. Long-term excessive noise may also result in hearing loss which may put wildlife at greater risk of death because of a reduced ability to detect and avoid danger. If a noise is somewhat regular in its intensity and pitch, even though it has a long duration, some species and/or individuals may become accustomed to it, stay in the area, and not show signs of adverse effect.[65](#_bookmark116)

Studies have shown that some of the most pervasive sources of noise in our environment today are associated with transportation. Traffic noise tends to be a dominant noise source in urban and rural environment. In response to the problems associated with traffic noise, the United States has implemented 23 CFR Part 772, “Procedures for Abatement of Highway Traffic Noise and Construction Noise,” establishing standards for mitigating highway traffic noise.

For this PEA, FEMA encourages the adoption of the U.S. Department of Transportation’s Federal Highway Administration standards for noise abatement found in 23 CFR Part 772 – Table 1 and MDT Traffic Noise Analysis and Abatement Policy that comply with 23 CFR Part 772 when developing projects. These establish the need to consider noise abatement measures for actions that produce sound levels that 10 percent of the time exceed 70 dB in areas with sensitive receptors (e.g. as playgrounds, parks, schools, libraries, residences, and hospitals) and exceed 75 dB in developed lands.

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### Environmental Consequences No Action Alternative

Under the No Action Alternative, FEMA would not provide funding for dam safety repair, rehabilitation, replacement, reconstruction, and/or removal activities. The No Action Alternative is expected to have no impact on noise levels or sensitive receptors near or within the project area.

### Alternative 1: Repair

The proposed action is expected to have minimal to no effect on noise levels long-term. The proposed action is expected to have short-term increases in noise levels during construction work hours. FEMA will require applicants, sub-applicants or contractors to follow operational procedures for noise ordinances and regulations. Applicants, sub-applicants, and contractors will need to comply with any state, territory, tribal, or local noise control requirements if there are sensitive noise receptors within or near the project area.

### Alternative 2: Rehabilitation

The proposed action is expected to have minimal to no effect on noise levels long-term. The proposed action is expected to have short-term increases in noise levels during construction work hours. FEMA will require applicants, sub-applicants or contractors to follow operational procedures for noise ordinances and regulations. Applicants, sub-applicants, and contractors will need to comply with any state, territory, tribal, or local noise control requirements if there are sensitive noise receptors within or near the project area.

### Alternative 3: Removal

The proposed action is expected to have minimal to no effect on noise levels long-term. The proposed action is expected to have short-term increases in noise levels during construction work hours. FEMA will require applicants, sub-applicants or contractors to follow operational procedures for noise ordinances and regulations. Applicants, sub-applicants, and contractors will need to comply with any state, territory, tribal, or local noise control requirements if there are sensitive noise receptors within or near the project area.

### Alternative 4: Replacement

The proposed action is expected to have minimal to no effect on noise levels long-term. The proposed action is expected to have short-term increases in noise levels during construction work

hours. FEMA will require applicants, sub-applicants, or contractors to follow operational procedures for noise ordinances and regulations. Applicants, sub-applicants, and contractors will need to comply with any state, territory, tribal, or local noise control requirements if there are sensitive noise receptors within or near the project area.

## Public Services and Utilities

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

### Environmental Consequences No Action Alternative

Under the No Action Alternative, FEMA would not provide funding for dam safety repair, rehabilitation, replacement, reconstruction, and/or removal activities. The No Action Alternative is expected to have no immediate effect on public services and utilities but may contribute to an adverse effect if the dam breaches.

### Alternative 1: Repair

In the short term, public services and utilities may be temporarily delayed but the proposed action is expected to have no effect long-term. If public services and utilities are going to be impacted by the proposed action, the applicant and sub-applicant are responsible for coordinating with the right

entities to develop a plan that minimizes and addresses the concerns before construction activities begin.

### Alternative 2: Rehabilitation

In the short term, public services and utilities may be temporarily delayed but the proposed action is expected to have no effect long-term. If public services and utilities are going to be impacted by the proposed action, the applicant and sub-applicant are responsible for coordinating with the right entities to develop a plan that minimizes and addresses the concerns before construction activities begin.

### Alternative 3: Removal

In the short term, public services and utilities may be temporarily delayed but the proposed action is expected to have no effect long-term. If public services and utilities are going to be impacted by the proposed action, the applicant and sub-applicant are responsible for coordinating with the right entities to develop a plan that minimizes and addresses the concerns before construction activities begin.

### Alternative 4: Replacement

In the short term, public services and utilities may be temporarily delayed but the proposed action is expected to have no effect long-term. If public services and utilities are going to be impacted by the proposed action, the applicant or sub-applicant is responsible for coordinating with the right entities to develop a plan that minimizes and addresses the concerns before construction activities begin.

## 4.13 Cumulative Impacts

Cumulative effects represent 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 nonfederal) or person undertakes such other actions. “Reasonably foreseeable” means sufficiently likely to occur such that a person of ordinary prudence would take it into account in reaching a decision. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time. This PEA reviews the potential for other construction projects to create cumulative effects in and near the project area. Other statutes also require federal agencies to consider cumulative effects. These include the CWA Section 404(b)(1) guidelines, the regulations implementing the conformity

provisions of the CAA, the regulations implementing Section 106 of the NHPA, and the regulations implementing Section 7 of the ESA.

The specific projects and location of those projects are unknown at the time of this assessment, which limits the evaluation of cumulative impacts. Therefore, on a project-specific basis, other potential projects in the vicinity that could contribute cumulative effects would need to be evaluated. If there would be moderate to major cumulative effects, an SEA may need to be prepared.

Projects covered under this PEA may have additional activities included within their respective scopes that would normally be covered under FEMA CATEXs (FEMA Instruction 108-01-1) individually (Section 3.3.3). However, there may be cases where these separate actions would not function without one of the action alternatives and, therefore, must be evaluated as a complete project.

FEMA anticipates any CATEX action connected to the proposed action would not have cumulatively significant adverse impacts on environmental or historic resources. If any projects covered under the PEA, in conjunction with the aforementioned CATEXs, would have major impacts or impacts that cannot be mitigated, a separate SEA would be required.

# SECTION FIVE| COMPLIANCE AND MITIGATION

**MEASURES**

The subrecipient is responsible for obtaining all applicable federal, state, and local permits and other authorizations and adhering to permit conditions for project implementation prior to construction activities. Subrecipients are responsible for providing copies of permits to the recipients and FEMA prior to project closeout and should do so upon obtaining them. Any substantive change to the approved SOW will require reevaluation by FEMA for compliance with NEPA, other laws, and EOs.

Project impacts that are implemented at an individual or cumulative scale such as to produce significant impacts can generally be reduced below the level of significance through avoidance, minimization, or by mitigating for individual impacts using mitigation measures as described below. If impact avoidance cannot be achieved, specific mitigation and compliance measures including agency consultation will be undertaken by the Agencies to reduce any potentially significant impacts to less than significant levels. Table 5-1 lists the specific mitigation and compliance measures the Agencies will use, if applicable.

|  |
| --- |
| General Compliance/ Mitigation Measures |
| * The dam owner and/or subrecipient (subrecipient) is responsible for obtaining and complying with all required local, state, and federal permits and approvals.
* All proposed actions must be in compliance with state and federal dam safety requirements.
* Changes to the previously provided and approved Scope of Work (SOW) resulting in substantial design changes, the need for additional ground disturbance, additional removal of vegetation, or any other unanticipated changes to the physical environment, the subrecipient must contact FEMA so that the revised project scope can be evaluated for compliance with NEPA and other applicable environmental laws, including but not limited to ESA, NHPA, and Executive Orders 11988 and 11990.
* Disturbed green spaces that will be revegetated shall use species native to their specific geographic area.
 |
| Threatened and Endangered Species (ESA) |
| * All practicable measures must be taken to avoid adverse impacts to aquatic species, including, but not limited to, implementing directional boring methods and stringent sedimentation and erosion control measures.
* Fill material must not come from nor be deposited in threatened and/or endangered species habitat.
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| * All practicable measures must be taken to avoid adverse impacts to threatened and endangered species and designated critical habitats, including conditions identified in FEMA’s ESA compliance review.
* 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.
* Tree and vegetation removal will be avoided during the migratory bird nesting season to the extent practicable. By observing the US Fish and Wildlife Service tree clearing window for endangered bat species, impacts will be minimized to the greatest extent feasible.
* Graded areas will be revegetated with native grasses and forbs, or native seed mixes.
* The Agencies will coordinate with MT DEQ concerning guidelines regarding impacts to State species of interest. Coordination may include measures to avoid or minimize potential impacts as grant conditions.
 |
| National Historic Preservation Act (NHPA) |
| * Unless a project is covered under a programmatic agreement exemption all other ground disturbing projects must consult with the SHPO or THPO 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.
* 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.
* If human remains or intact archaeological features or deposits (e.g., arrowheads, pottery, glass, metal, etc.) are uncovered, work in the vicinity of the discovery will stop immediately and all reasonable measures to avoid or minimize harm to the finds will be taken. The subrecipient will ensure that archaeological discoveries are secured in place, that access to the sensitive area is restricted, and that all reasonable measures are taken to avoid further disturbance of the discoveries. The subrecipient’s contractor will provide immediate notice of such discoveries to the subrecipient. The subrecipient will than adhere to state guidelines and conditions outlined in FEMA’s NHPA compliance review.
* Prior to conducting repairs, the subrecipient must identify the source and location of fill material and provide this information to FEMA. If the borrow pit is privately owned, or is located on previously undisturbed land, or if the fill is obtained by the horizontal expansion of a pre-existing borrow pit, FEMA consultation with the SHPO will be required.
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| * 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.
 |
| Water Resources and Water Quality, Wetlands, and Soils |
| * Project may require Section 401/404 Clean Water Act permit(s) or approval. The dam owner is responsible for coordinating with and obtaining any required Section 404 permits from the United States Army Corps of Engineers, Section 401 permits/approval from the [Montana Department of Environmental Quality (DEQ)], and a National Pollution Discharge Elimination System permit/approval from the [Environmental Protection Agency or Montana Department of Environmental Quality (DEQ) prior to initiating work. The dam owner is responsible for verifying and adhering to all permit/approval requirements including the implementation, monitoring, and maintenance of all applicable Best Management Practices. Copies of permitting or documentation from the permitting official(s) that a permit/approval is not required are to be forwarded to the state and FEMA for inclusion in the administrative record.
* The three Montana Indian nations that are currently approved to administer section 401 water quality certification for projects on their land are CSKT, the Fort Peck Tribes and the Northern Cheyenne Tribes.
* Project may require Section 9/10 permit(s) or approval under the Rivers and Harbors Act from the United States Army Corps of Engineers. The dam owner is responsible for verifying and adhering to all permit/approval requirements including the implementation, monitoring, and maintenance of all applicable Best Management Practices. Copies of permitting or documentation from the permitting official(s) that a permit/approval is not required are to be forwarded to the state and FEMA for inclusion in the administrative record.
* Upon completion of work that involves temporary stream impacts, streambeds are to be restored to pre-project elevations and widths using natural streambed material. Stream banks are to be restored to pre-project grade and contours or beneficial grade and contours if the original bank slope is steep and unstable.
* 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.
* Stockpiles are to be protected with silt fence installed along toe of slope with a minimum offset of five (5) feet from the toe of stockpile.
* Maintain natural buffers on all streams and creeks adjacent to the project site.
* Dewatering Permits are required prior to dewatering activities and the subrecipient must comply with all of the conditions prescribed by the permit.
 |
| Floodplains |

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| * To mitigate for impacts to floodplain, a hydrology and hydraulics study will be completed to ensure the flow of flood waters.
 |
| Air Quality |
| * The subrecipient’s contractor shall monitor and take precautions to control dust and other air pollutants including but not limited to using water or chemicals, limiting vehicles allowed on-site, and minimizing the operation speed of vehicles in accordance with the Stormwater Pollution Prevention Plans.
* 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.
* The subrecipient must comply with local and state Traffic Control Plans and Noise Ordinances. Permits must be obtained if required as regulated by these ordinances.
 |
| Safety and Occupational Health/ Hazardous Materials |
| * 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.
* 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.
* The construction contractor shall be required to develop and implement a Health and Safety Plan to assure worker safety during construction activities.
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*Table 5-1: Compliance and Mitigation Measures*

# SECTION SIX| SUMMARY OF IMPACTS

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Resource Area** | **No Action** | **Alternative 1: Repair** | **Alternative 2: Rehabilitation** | **Alternative 3: Removal** | **Alternative 4: Replacement** |
| **Physical Resources** | The no action alternative will not have an immediate impact on land use, prime and unique farmland but overtime may contribute to adverse effects in the future as dam continues to degrade or breaches. | Minimal to no effects on land- use and prime or unique farmland. This method would also have little potential to impact the topography and soils in the area. | Minimal to no effects on land- use and prime or unique farmland. There may be ground disturbance to accommodate the improvements. | Minimal to no impacts on land- use and prime or unique farmland. | Minimal to moderate effect on land- use and prime or unique farmland. |
| **Air Quality** | The no action alternative will not have an immediate or long-term impact on air quality conditions. | Minimal release of emissions but not enough to exceed state air quality and NAAQS standards. | Minimal release of emissions but not enough to exceed state air quality and NAAQS standards. | Minimal release of emissions but not enough to exceed state air quality and NAAQS standards. | Minimal release of emissions but not enough to have an adverse effect on state air quality and trigger NAAQSstandards. |
| **Floodplains** | The no action alternative will not have an immediate impact on floodplains existing condition, but overtime may contribute to adverse effects in the future as dam continue to degradeor breaches. | Minimal to no effects on the floodplain. | Minimal to moderate effects on the floodplain. | Beneficial to the floodplain and will restore the natural flow of rivers and decrease flood risk. | Minimal to moderate impact on the floodplain. |
| **Water Quality, Resources and Pollution** | The No Action Alternative is expected to have no immediate effects on water quality conditions but may contribute to adverse effects in the future as the dam continues to degrade or breaches. | Minimal to no impacts on water quality and resources. | Minimal to moderate impacts water quality and resources in the project area. | Beneficial and restore the water quality and the biological environment. restoration actions that improve or promote aquatic habitats and fishpassage. | Minimal to moderate water quality and resources. |
| **Wetlands** | The No Action Alternative is expected to have no immediate effect on existing conditions of wetlands but may contribute to adverse effects in the future as the dam continues to degradeover time or breaches. | Minimal to no impacts on wetlands. | Minimal to moderate impacts on the wetlands. BMPs will need to be incorporated, and wetland assessment may be required to ensure no adverse effects to thewetlands. | Beneficial and restore the wetlands and biological environment. | Moderate impacts on wetlands. Dams can disturb the natural benefits of wetlands. BMPs will need to be incorporated and theappropriate. |
| **Biological Resources** | The No Action Alternative is expected to have no significant short-term effects on endangered species and designatedcritical habitats but may | Potential to effect critical habitats, aquatic and terrestrial species depending on where the dam is located. | All actions outlined in this proposed alternative have the potential to effect listed species and critical habitats within oradjacent to the action | Beneficial impacts to listed species and critical habitats within the project area. This alternativewill improve aquatic | All actions outlined in this proposed alternative have the potential to effect listed species andcritical habitats |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Resource Area** | **No Action** | **Alternative 1: Repair** | **Alternative 2: Rehabilitation** | **Alternative 3: Removal** | **Alternative 4: Replacement** |
|  | have long term effects if dam breaches. |  | area. All project activities will require environmental review to determine the level of effect and are subject to consultation with the Service in order to comply with Section 7 of the Endangered Species Act. | habitats and fish passage, combat the decline in fish populations in the streams and restore ecosystems back to pre-disturbance conditions | within or adjacent to the action area. All project activities will require environmental review to determine the level of effect and are subject to consultation with the Service in order to comply with Section 7 of the Endangered SpeciesAct. |
| **Cultural Resources** | The No Action Alternative is expected to have no effect on historic properties and archaeological sites but may if dam breaches. | Minimal to no impacts to archaeological or historical properties due to ground disturbance being restricted to the original footprint of the dam and the area immediately adjacent to the footprint. | Alternative has the potential to affect historic properties. A historic property evaluation would need to occur to determine any impacts to potential cultural resources, both archaeological and historical. | The initial removal of the dam would create significant ground disturbance. An adverse effect assessment(s) would be necessary for any impacts to NRHP- listed or eligible sites or structures including NRHP-list or -eligible dams. | Alternative has the potential to have moderate to significant effect on archaeological or historic resources. A cultural resource evaluation and adverse effect assessment would need to occur to determine anyimpacts. |
| **Socioeconomi**c | The No Action Alternative is expected to have no immediate effect on communities located within or near the project area but may have adverse effect is dam breaches. | Short-term impacts are expected during construction which includes noise levels, increase in emissions, paused recreation activities, temporary staging areas and/or displacement during construction. | Short-term impacts are expected during construction which includes noise levels, increase in emissions, paused recreation activities, temporary staging areas and/or displacement during construction. | Short-term impacts are expected but the long-term impacts are beneficial to restoring biological and water resources, cultural significance of the land and protecting community and cultural values. | Short-term impacts are expected during construction which includes noise levels, increase in emissions, paused recreation activities, temporary staging areas and/or displacement duringconstruction. |
| **Public Health & Safety** | The No Action Alternative is expected to have no immediate effect on the existing conditions of publichealth & safety. | Minimal to no effect on public health and safety. | Minimal to no impact on public health and safety. | Minimal to no impact on public health and safety. | Minimal to no impact on public health and safety. |
| **Noise** | The No Action Alternative is expected to have no impact on noise levels or sensitive receptors near or within the project area. | Temporary, short-term increases in noise levels are anticipated. | Temporary, short-term increases in noise levels are anticipated. | Temporary, short- term increases in noise levels are anticipated. | Temporary, short- term increases in noise levels are anticipated. |
| **Public Services & Utilities** | The No Action Alternative is expected to have no immediate effect on public services and utilities. | Public services and utilities may be delayed and experience short term impacts. | Public services and utilities may be delayed and experience short term impacts. | Public services and utilities may be delayed and experience short termimpacts. | Public services and utilities may be delayed and experience shortterm impacts. |

*Table 6-1. Summary of impacts.*

# SECTION SEVEN| PUBLIC INVOLVEMENT

## Notice of Intent

FEMA published a notice of intent to solicit input on the proposed PEA from other federal and state agencies, tribes, and the public. The notice of intent was published on the Montana’s Disaster and Emergency Services website on September 5th, 2024. The comment period to solicit input about the scope of the analysis was held open for 30 days following the publication date and then closed on October 7, 2024. Agencies, tribes, and interested persons were requested to comment on the purpose and need, alternatives, potential environmental impacts, and measures to reduce those impacts. FEMA did not receive any comments.

## Notice of Availability and Public Comment

In accordance with NEPA, FEMA is releasing this draft PEA to the public, federal and state agencies, and tribes for a 30-day public review and comment period. Comments on this draft PEA will be incorporated into the final PEA, as appropriate. This draft PEA reflects the evaluation and assessment of the federal government, the decision-maker for the federal action; however, FEMA will consider any substantive comments received during the public review period to inform the final decision regarding NEPA reviews for grant projects under the PEA. If no substantive comments are received from the public, federal and state agencies, or tribes, this draft PEA will be finalized and a Finding of No Significant Impact will be issued by FEMA. The Notice of Availability was posted in the Montana’s Disaster and Emergency Services website and the final PEA will be made available on FEMA’s NEPA repository (https://[www.fema.gov/emergency-](http://www.fema.gov/emergency-) managers/practitioners/environmental-historic/nepa-repository).

Comments on the draft PEA may be submitted to the FEMA Region 8 by email at femar8ehp@fema.dhs.gov and include ‘Montana Dam PEA’ in the subject line, or by U.S. Postal Service to Denver Federal Center, Building 710, Box 25267, Denver, Colorado 80225-0267 Attn: Richard Myers.

## Preparation of SEAs

Any SEAs that are tiered off this PEA would go through an appropriate level of public review before FEMA makes a NEPA compliance determination for those specific projects. When a Proposed Action could result in impacts on the environment beyond those described in this PEA and require mitigation in addition to that included in this document, or has the potential for public controversy, FEMA would prepare and circulate a draft SEA for public and agency review and

comment. For these types of activities, FEMA would prepare a separate decision document (i.e., a Finding of No Significant Impact or a notice of intent to prepare an Environmental Impact Statement).

FEMA would comply with the public notification process required for compliance with the 44 CFR Part 9, when applicable for an action. Additionally, a cumulative public notice will be published at the time of the Presidential Declaration of each future disaster under which FEMA- funded projects may be proposed that could be covered by this PEA for NEPA compliance.

# SECTION EIGHT| REFERENCES

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