



Housing Mission for the Oglala Sioux Tribe

*Programmatic Environmental Assessment
Pine Ridge Indian Reservation / October 2015*



FEMA

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ACRONYMS AND ABBREVIATIONS

AFHB	Approximate Flood Hazard Boundary
BMP	Best Management Practice
BGEPA	Bald and Golden Eagle Protection Act
CEQ	Council on Environmental Quality
CFLHD	Central Federal Lands Highway Division
CFR	Code of Federal Regulations
DHS	Department of Homeland Security
DURT	Disaster Unified Review Team
EA	Environmental Assessment
EO	Executive Order
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
FWCA	Fish and Wildlife Coordination Act
GPD	Grants Program Directorate
HMA	Hazard Mitigation Assistance
HMGP	Hazard Mitigation Grant Program
HUD	U.S. Department of Housing and Urban Development
IA	Individual Assistance
MBTA	Migratory Bird Treaty Act
MHU	Mobile Housing Unit
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1996
NRHP	National Register of Historic Places
OST	Oglala Sioux Tribe
OSHA	Occupational Health and Safety Administration
PA	Public Assistance
PEA	Programmatic Environmental Assessment
PFHD	Provisional Flood Hazard Delineation
PPE	Personal Protective Equipment
ROW	Right of Way
S-PHC	(Semi) Permanent Housing Construction
SEA	Supplemental Environmental Assessment
SRIA	Sandy Recovery Improvement Act
THPO	Tribal Historic Preservation Officer
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USFWS	U.S. Fish and Wildlife Service

SECTION ONE | INTRODUCTION

1.1 OVERVIEW

This Programmatic Environmental Assessment was prepared in accordance with Unified Federal Review as outlined in The Sandy Recovery Improvement Act (SRIA), Section 6: Unified Federal Review mandates the establishment of an “...expedited and unified interagency review process to ensure compliance with environmental and historic requirements under Federal law relating to disaster recovery projects, in order to expedite the recovery process, consistent with applicable law.”^{1, 2, 3}

The Federal Government, through multiple agencies and their programs, proposes to perform a housing assistance mission. These actions will be implemented under Federal Emergency Management Agency (FEMA) funding programs, such as, but not limited to Individual Assistance (IA), Public Assistance (PA), Hazard Mitigation Assistance (HMA) and Grants Program Directorate (GPD) funding. Other Federal Agency (OFA) grant programs may also be applicable.

This Programmatic Environmental Assessment (PEA) has been prepared to analyze the potential environmental consequences associated with the proposed actions while providing a framework for the evaluation of Federal, State, and Tribal laws and regulations. The proposed action and no action alternative in accordance with the National Environmental Policy Act of 1969 (NEPA)⁴, the Council on Environmental Quality (CEQ) implementing regulations⁵ and the Emergency Management and Assistance Code of Federal Regulations (CFR)⁶. This analysis is programmatic in nature and does not address individual site-specific impacts, which will be evaluated for individual projects prior to approval.¹

FEMA derives its authority to perform a housing assistance mission from the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act)⁷ and its implementing regulations at 44 CFR § 206.117. Through its Individual Assistance Program (IAP) FEMA may provide financial or direct assistance to respond to the disaster-related housing needs of individuals and households. Prior to 2006, permanent housing construction was limited to insular areas outside

¹ Library of Congress. H.R.219 – Sandy Recovery Improvement Act of 2013 113th Congress (2013-2014). <https://www.congress.gov/bill/113th-congress/house-bill/219>. Accessed 12/09/2014

² Federal Emergency Management Agency (FEMA). Sandy Recovery Improvement Act of 2013. <https://www.fema.gov/sandy-recovery-improvement-act-2013>. Accessed 12/09/2013

³ Federal Emergency Management Agency (FEMA). Unified Federal Environmental and Historic Preservation Review for Presidentially Declared Disasters. <https://www.fema.gov/unified-federal-environmental-and-historic-preservation-review-presidentially-declared-disasters>. Accessed 12/09/2014

⁴ 42 United States Code [U.S.C.] 55 § 4321 et seq.

⁵ 40 CFR 30 § 1500 et seq.

⁶ 44 CFR Ch. I Part 10, and 23 C.F.R. 771.

⁷ Public Law (P.L). 93-288, as amended, 42 U.S.C. § 5121 et seq.

the continental United States or to other locations where no other alternative housing was available. In the past, FEMA has provided financial or direct assistance to eligible applicants for construction of a limited number of permanent dwellings. However, the Post-Katrina Emergency Management Reform Act (PKEMRA) of 2006 (P.L. 109-295) amended the Stafford Act and expanded FEMA's role for disaster response and preparedness and permanent housing construction is no longer limited to remote "insular" locations.

1.2 BACKGROUND

On August 7th, 2015 FEMA announced that the President authorized Federal disaster aid to be available to the Oglala Sioux Tribe (OST) of the Pine Ridge Indian Reservation and ordered Federal aid to supplement recovery efforts in the area affected by severe storms, straight-line winds, and flooding during the period of May 8-29, 2015. The President's action makes Federal funding available to the affected members of the OST of the Pine Ridge Indian Reservation. This assistance can include grants for semi-permanent housing and home repairs, low-cost loans to cover uninsured property losses, and other programs to help individuals and business owners recover from the effects of the disaster.

This PEA evaluates typical actions undertaken by FEMA and other Federal Agencies (referred to hereafter as 'The Agencies') to provide financial support or technical assistance to these coalitions or to any disaster recovery project covered by the scope of this document on the Pine Ridge Indian Reservation. This includes future major disaster events such as flooding, fires, avalanche and tornados which result in similar impacts to housing and associated infrastructure. This PEA also provides the public and decision-makers with the information required to understand and evaluate the potential environmental consequences of these actions and to consider these impacts in decision making.

The PEA assesses environmental compliance for the following types of housing projects:

- Single Mobile Housing Unit (MHU); and
- Repair to Permanent Housing.

NEPA and its implementing regulations direct The Agencies to take into consideration the environmental consequences of proposed actions during the decision-making process. The Agencies must comply with requirements identified the NEPA process before making Federal funds available. The Agencies have determined through experience that the majority of the typical, recurring actions proposed for funding, and for which an Environmental Assessment (EA) is required under NEPA, can be grouped by type of action or location. These groups can be evaluated in a PEA for compliance with NEPA without the need to develop project specific EAs. The purpose of this PEA is to streamline the Federal environmental review process.

The OST adopted Ordinance No. 98-09 in 1998, establishing a "policy for the protection and preservation of the environment and the health and safety of the Oglala Sioux People of the Pine

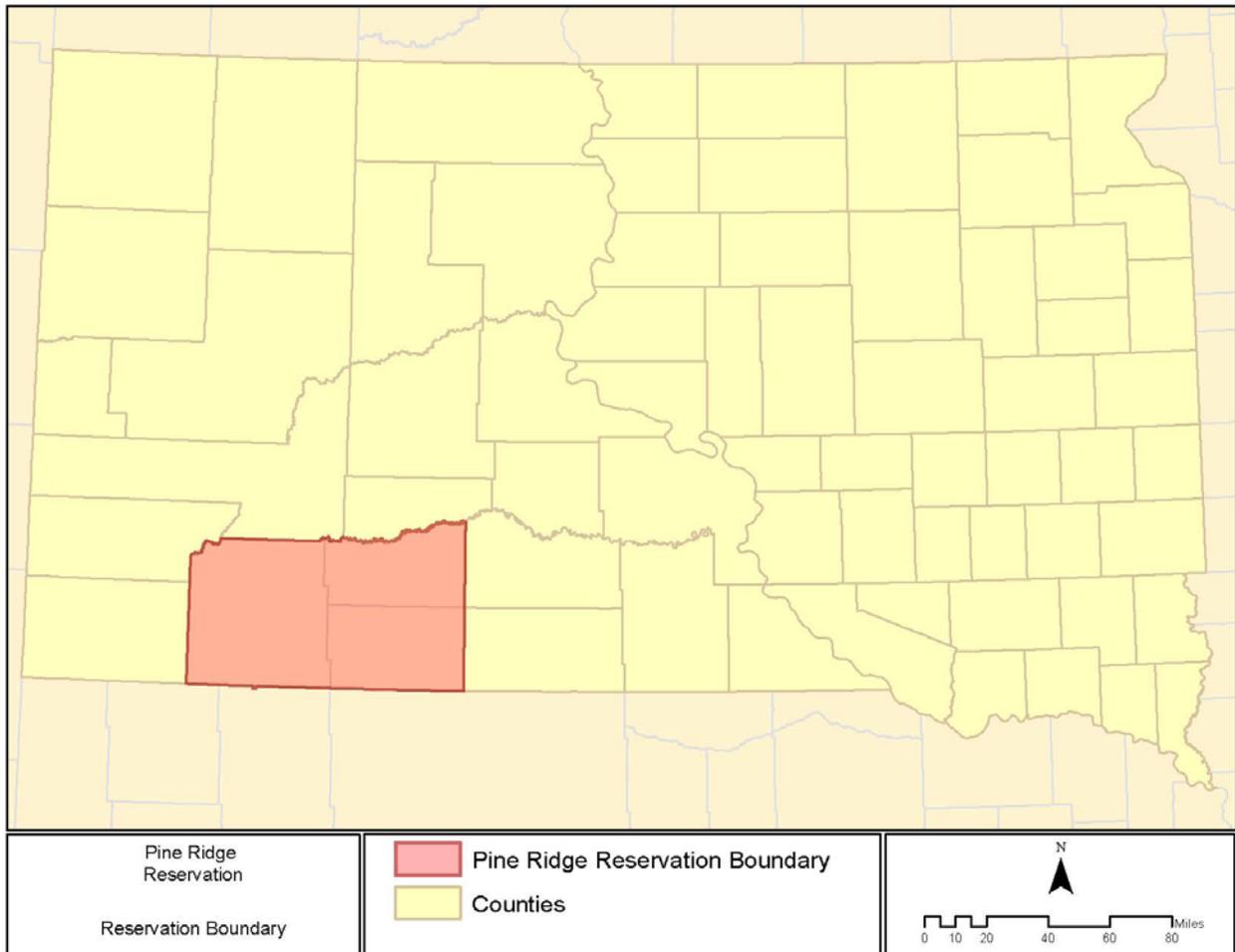
Ridge Indian Reservation.” In doing so, it adopted the OST Environmental Review Code, which established the environmental regulations governing the Pine Ridge Indian Reservation.⁸

The project area of this PEA encompasses the Pine Ridge Reservation location (Figure 1), Pine Ridge Reservation Districts (Figure 2).

Location

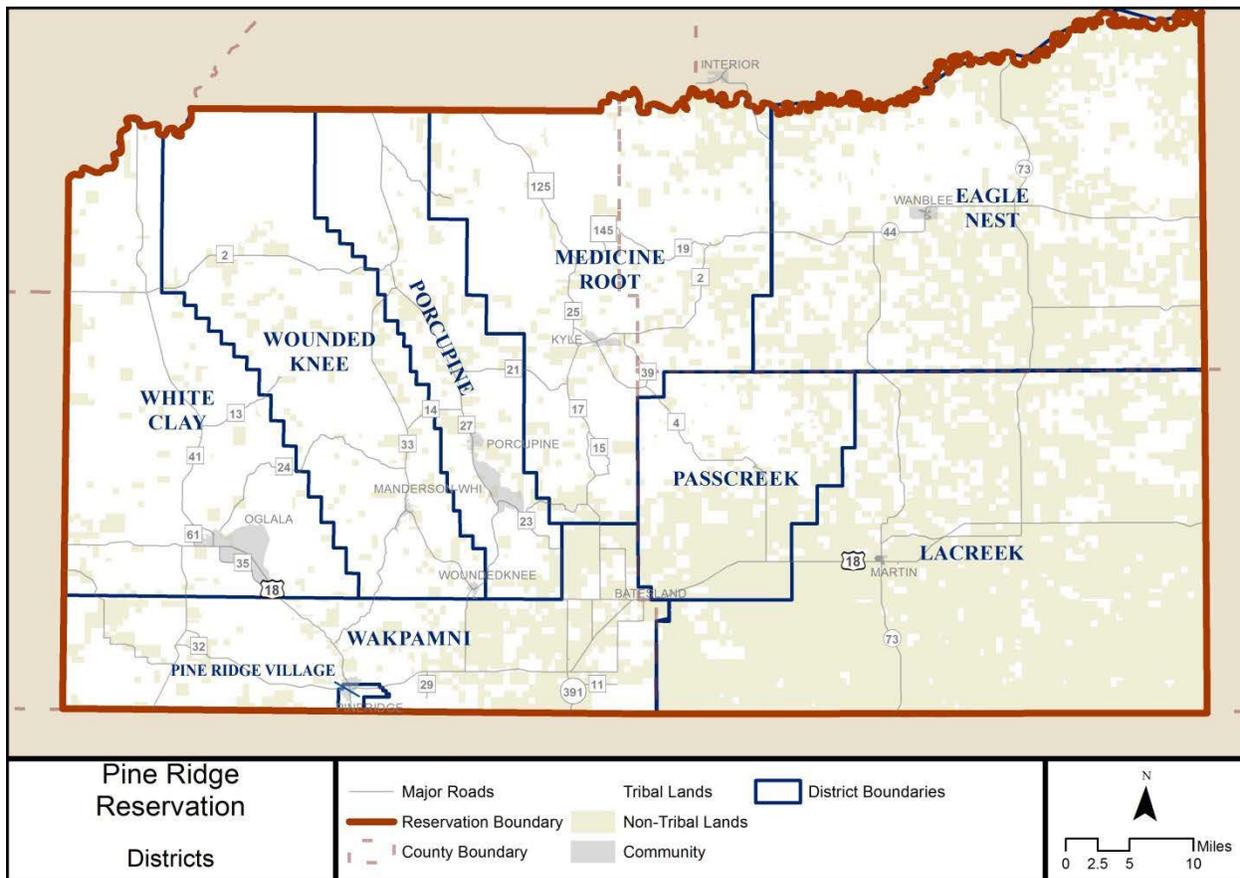
The Pine Ridge Indian Reservation is home to the Oglala Sioux Tribe. The people and the lands of the Oglala Lakota Nation are located in southwestern South Dakota. The Pine Ridge Reservation occupies the entirety of Oglala County, the southern half of Jackson County and Bennett County in southwestern South Dakota. The total land area of the Reservation is 2.1 million acres with 1.7 million acres of U.S. land in trust to Tribal or individuals.⁹

Figure 1: Pine Ridge Indian Reservation



⁸ OST Ordinance 98-08

⁹ BIA Pine Ridge Agency

Figure 2: Pine Ridge Indian Reservation Districts

Politically, the Reservation is divided into nine Districts. They include:

- Eagle Nest
- La Creek
- Medicine Root
- Pass Creek
- Pine Ridge
- Porcupine
- Wakpamni
- White Clay
- Wounded Knee

1.3 PROCESS FOR USE OF PEA

A PEA is utilized to cover a group of projects that are similar in scope, scale, magnitude, and the nature of impact. This PEA is regional in scope, covers numerous ecosystems and political boundaries, and focuses on a range of housing recovery actions. The use of a PEA can reduce redundant analyses and highlight cumulative impacts realized by these actions. In contrast an EA emphasizes impacts on one site and the immediate surroundings.

For a project to qualify under this PEA the scope of the project and the nature of impacts must be evaluated within this document. Additional analysis and project specific mitigation may be required by this document as context and intensity of proposed project-level impacts become apparent. All projects using this PEA must undergo standard Federal environmental compliance procedures to verify the project is consistent with scope of this PEA. The Agencies will use this PEA to determine the level of environmental analysis and documentation required under NEPA for the housing recovery projects being evaluated. If the description of the site-specific nature of the project and the levels of analysis are fully and accurately described in this PEA, the Agencies will take no further action other than what is necessary to support and document that conclusion.

If a specific action is expected to (1) create impacts not described in this PEA; (2) create impacts greater in magnitude, extent, or duration than those described in this PEA; or (3) require mitigation measures to keep impacts below significant levels that are not described in this PEA; then a Supplemental Environmental Assessment (SEA) would be prepared to address the specific action. The SEA would be tiered from this PEA in accordance with the CEQ NEPA implementing regulations¹⁰. Actions that are determined during the preparation of the SEA to require a more detailed or broader environmental review will be subject to the stand-alone EA or other applicable process.

¹⁰ 40 C.F.R. 30 parts 1508.28

SECTION TWO | PURPOSE AND NEED

In the aftermath of the severe storms and flooding on the Pine Ridge Reservation of the OST in south-western South Dakota many survivors were left without suitable housing and other essential services. Through Major Disaster Declaration FEMA-DR-4237- OST, Federal aid is available for a variety of programs including housing assistance. A large portion of the homes that were damaged or destroyed were located in low-lying, flood-prone areas along river basins and in flood-plains. Many of these homes were occupied by multiple family units due to a chronic lack of housing on the Reservation.

The purpose of FEMA's IA Program is to provide safe and sanitary housing to disaster survivors. Because of the acute need to replace dwellings lost during the severe storms and flooding, FEMA, in conjunction with the OST Government and other state, tribal and Federal agencies, is proposing to implement a (Semi) Permanent Housing Construction (SPHC) Program on the Pine Ridge Reservation. The SPHC Program would replace all substantially damaged or destroyed homes in a manner that would minimize the potential for future flood damage. In some cases, additional housing units would be provided for use by other family members occupying over-crowded homes damaged or destroyed by the declared event who are unable to find their own temporary living arrangements. In most cases, these additional units would be placed proximate to the survivor's original pre-disaster residence.

FEMA will utilize the services of a contractor to construct, haul, and install Manufactured Housing Units (MHU) to sites identified through the site inspection process detailed in the draft MHU Field SOP. The MHU will meet all FEMA standards and conform to local building codes and ordinances. MHUs placed in areas prone to future flooding will comply with 44 C.F.R. § 9.13. In addition, utilities may need to be extended to some of the approved building sites. FEMA would also supply and install septic tanks as necessary.

SECTION THREE | ALTERNATIVES

3.1 INTRODUCTION

The following Alternatives are being considered for further evaluation in this PEA. These alternatives represent classes of actions that may be implemented individually or in combination with one another. Depending upon the action determined necessary by the Agencies to restore housing and associated infrastructure, some options may not be viable.

3.2 ALTERNATIVES CONSIDERED

3.2.1 Alternative 1: No Action

A No Action Alternative is required to be included in this environmental assessment in accordance with the CEQ regulations implementing NEPA. The No Action Alternative is defined as maintaining the status quo with no Agency involvement for any alternative. This alternative is used to evaluate the effects of not performing a housing mission. In this alternative there is likelihood that recovery projects would still be completed by tribal or private landowners and may be done in an uncoordinated manner that may or may not take the environment into account.

For the purpose of the environmental analysis, under the No Action Alternative the OST would have to rely on savings, insurance, loans, or other forms of assistance to restore housing.

3.2.2 Alternative 2: Installation of single MHU

This alternative applies to individual housing on a one-to-one replacement and will be the most cost-effective. This alternative differs from No Action in that it includes projects such as private property repair, infrastructure repair, and installation of a single MHU. Changes to the footprint are included in this alternative. This includes upgrades to meet local or national codes and standards as well as upgrades warranted to address conditions that have changed since the original construction.

Debris use or disposal involves a number of choices, and the advantages and disadvantages of each option are affected by feasibility and cost. The method selected depends on the circumstances at the disposal site and an evaluation of how disposal may affect the environment. Debris can be used for a number of purposes either on-site or off-site.

Construction and demolition debris or any debris containing hazardous materials requires special consideration. Disposal should follow all applicable OST regulations regarding handling and

disposal. Regulations can be found through the OST Department of Public Health and Hazardous Materials and Waste Management Division.¹¹

3.2.4 Alternative 3: Repair of Permanent Housing

This alternative proposes to repair damage permanent housing. No new construction will be considered as part of this alternative. The extent of repairs to permanent housing will be identified on a case-by-case basis.

3.3 ALTERNATIVES NOT CONSIDERED

New construction alternatives are not being considered under the document.

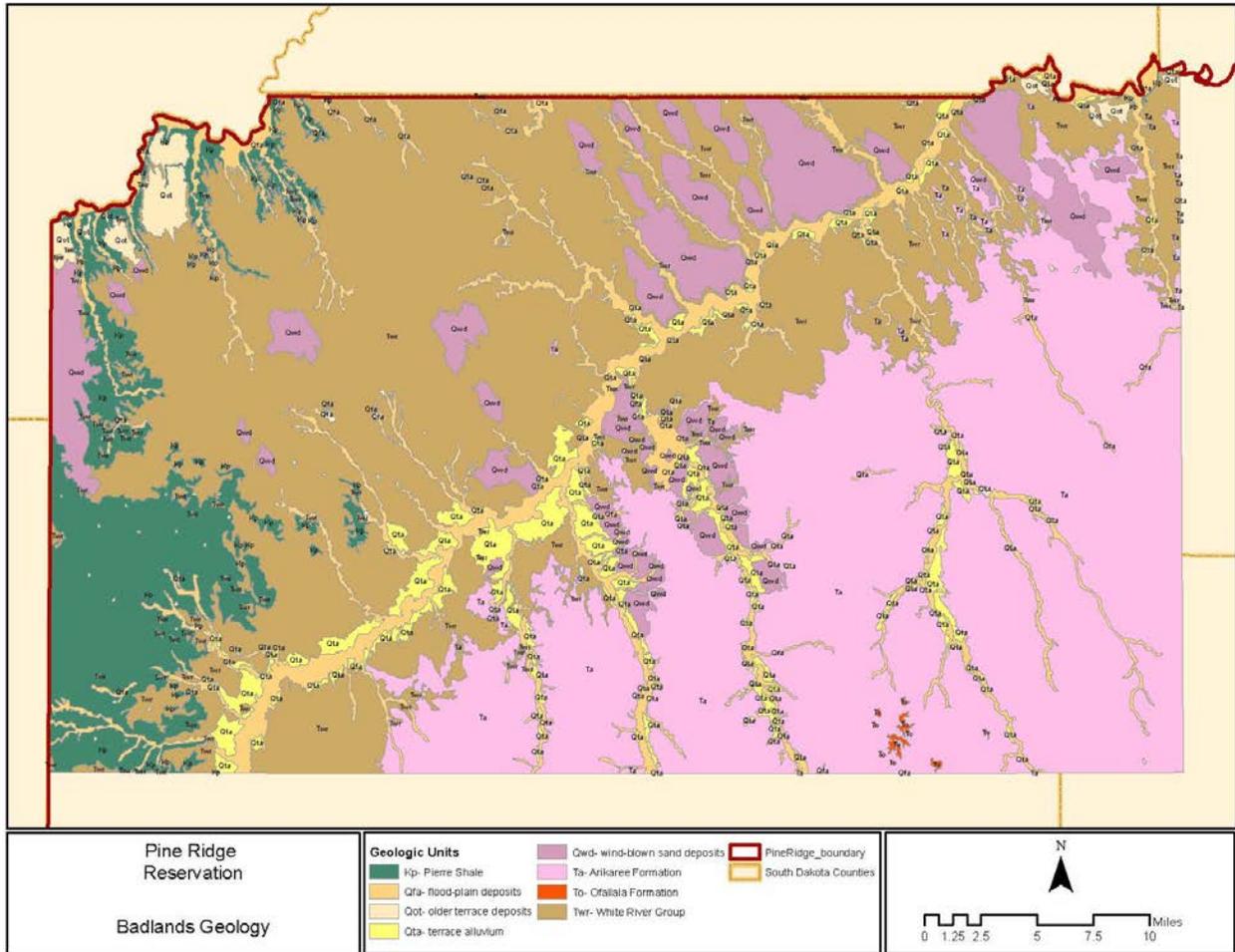
Upgrading of utilities and infrastructures may fall into a Statutory or Categorical Exclusion under NEPA, codified in 44 C.F.R. Part 10, will be evaluated accordingly. No further review of these types of projects will be considered in this PEA.

SECTION FOUR | AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

4.1 PHYSICAL RESOURCES

4.1.1 Affected Environment

Figure 3: Pine Ridge Indian Reservation Geology



Geology and Soils

Three diverse geographic regions exist within the Reservation. Wide-open grasslands are characteristic of the southern and eastern areas of the planning area. To the north are approximately 133,000 acres of Badlands. The Badlands landscape has a combination of mixed grass prairie, eroded ridges, peaks, mesas, and canyons. In the west central section, the open grassland merges with the eastern edge of the Black Hills. The resulting landscape is an area of rolling pine-covered hills and ridges giving name to Pine Ridge.

Elevations increase from northeast to southwest with rock outcroppings. Three diverse geologic units are exposed in the surrounding area, the Niobrara Formation (calcareous shale interbedded with beds of chalk and limestone), the Arikaree Formation (fine-grained sandstone with local beds of volcanic ash, silty sand, and sandy clay) and the Ogallala Formation (medium-grained sandstone with poorly sorted sand, gravel, silt, and clay).¹² The Soil Survey identifies typical surface soils in this area about seven inches thick, grayish-brown silt loam that is soft when drying and very friable when moist.¹³ Subsoil is about 32 inches thick. The soils are characterized as well-drained, fertile, and easy to work. The area is better suited to grazing than crops due to limited precipitation.

Surface runoff is slow to medium, permeability is moderate, and water-holding capacity is high. Two major rivers, the Cheyenne River and White River, are located within or at the Reservation boundaries and flow northeast to their confluence with the Missouri River.¹⁴ The distance between Pine Ridge and Kyle is 45 miles; Pine Ridge to Martin is 50 miles; Rapid City to Pine Ridge is 100 miles.

Climate

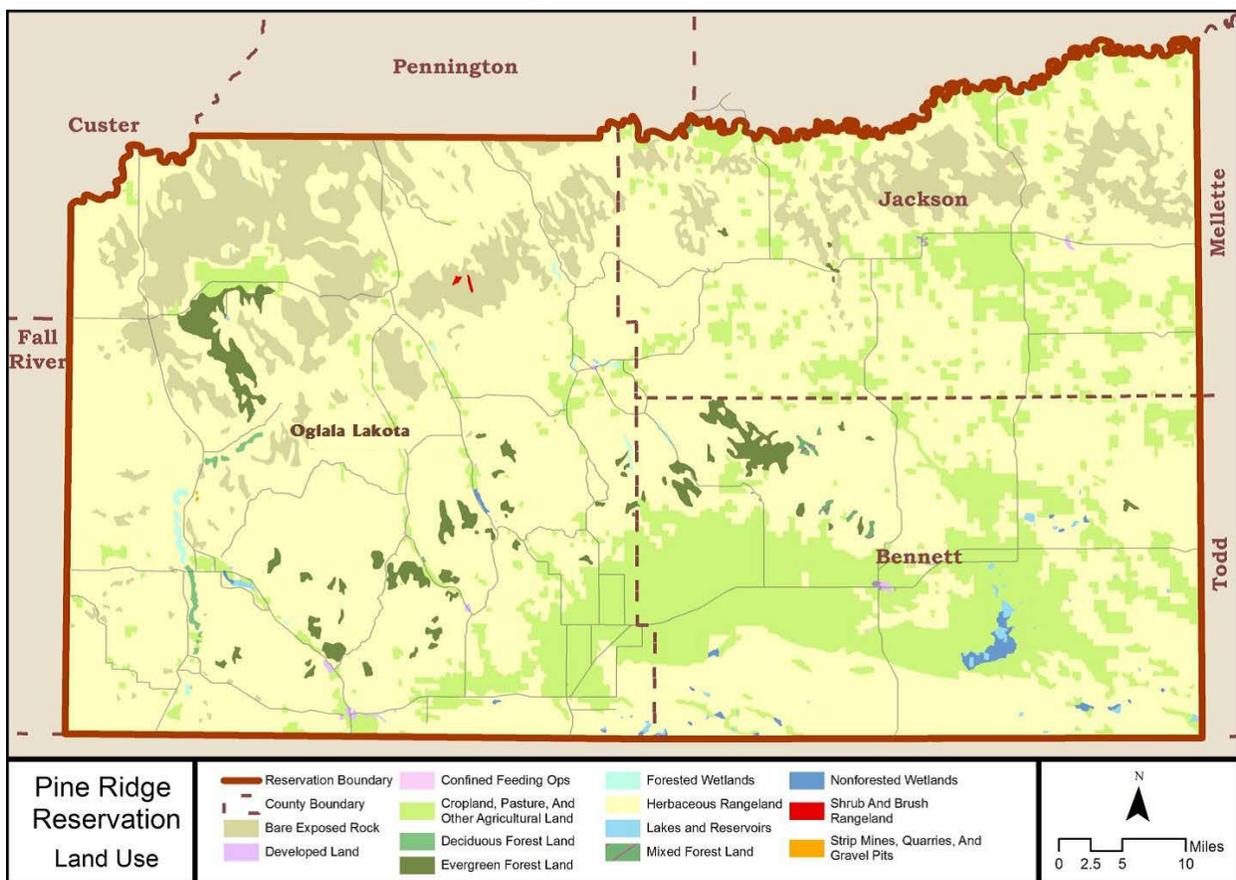
The planning area's average annual temperature is 47.2 degrees Fahrenheit. The average precipitation is 17.4 inches per year. The average amount of snowfall is 34.24 inches. The area experiences severe weather extremes during the summer and winter months.

¹² USGS, 1991

¹³ USDA, 1971

¹⁴ Shannon County Hazard Mitigation Plan, 2013

Figure 4: Pine Ridge Indian Reservation Land Use



Land Use

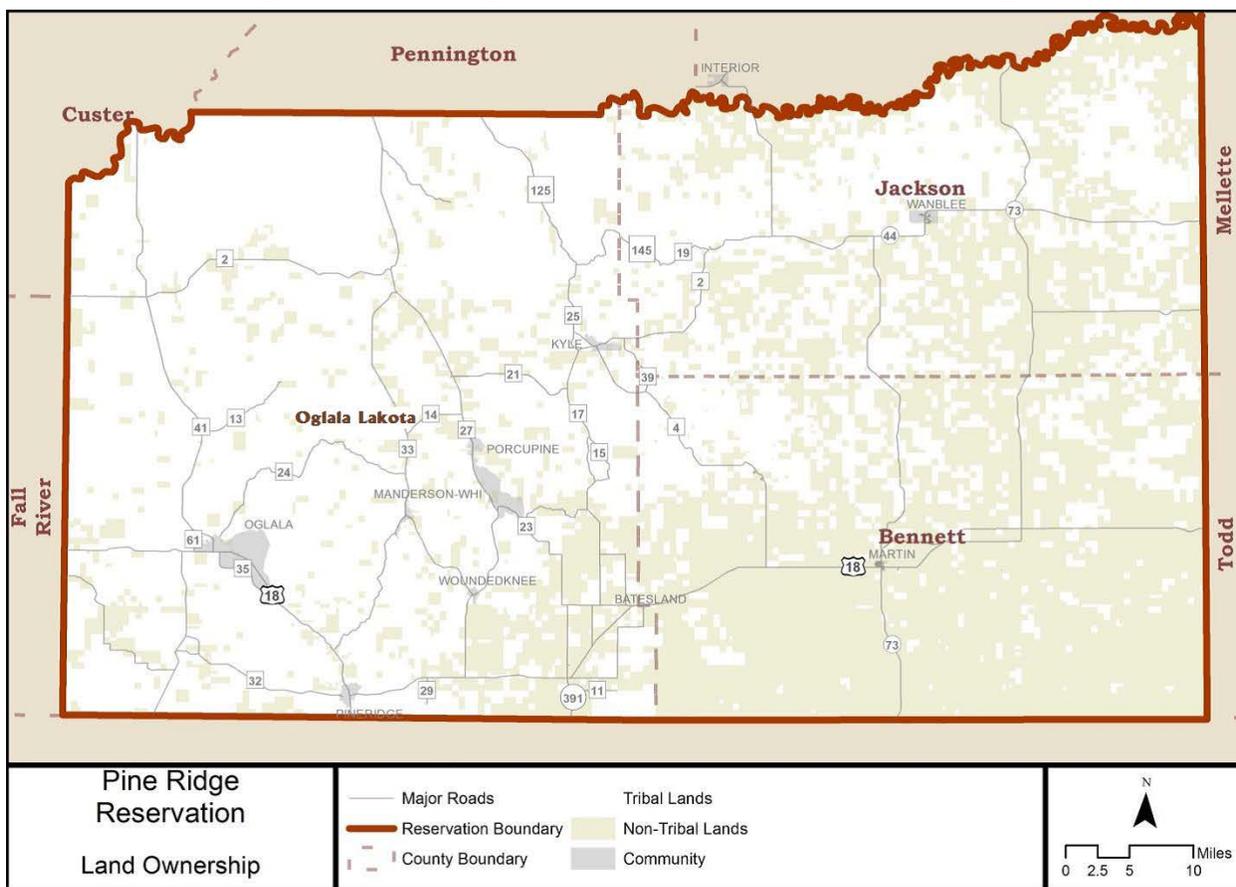
The OST have had traditional unwritten laws and practices that provided for the responsible use and protection of the resources and welfare of the Reservation and its people.

This means that people need to have information vital to making informed decisions about the present and future uses of reservation lands, water, air and other natural, cultural and historical resources. The impacts of proposed and existing development activities on the air, land, water, and human resources of the Reservation must be identified.

As a result the Tribal government created by Tribal Resolution 97-74 the Environmental Health Technical Team (EHTT or Tech Team). The Tech Team is made up of representatives from tribal departments involved with management of programs affecting the health of the Oglala Sioux people and the reservation environment.¹⁵

¹⁵ OST Tribal Resolution 97-74

Figure 5: Pine Ridge Indian Reservation Land Ownership



Land Ownership

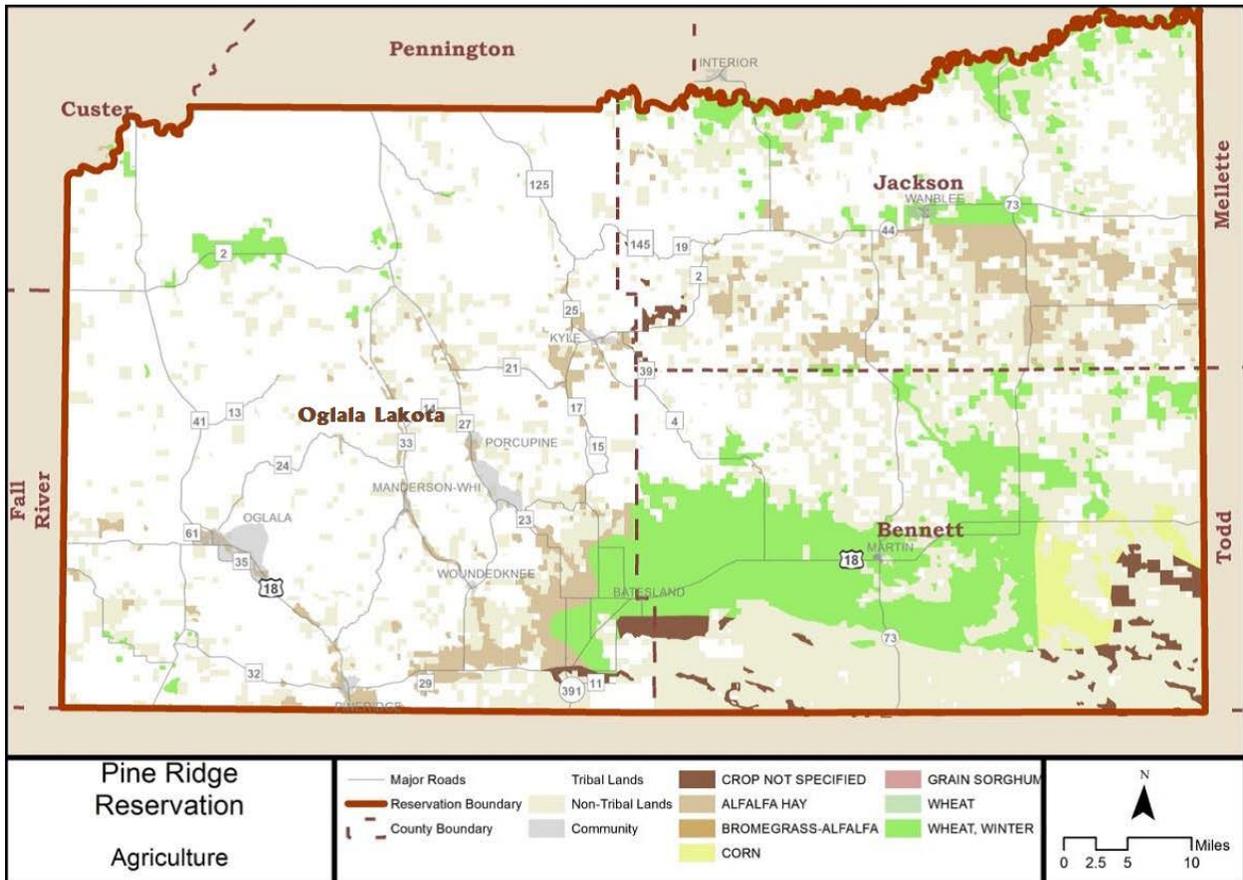
Allotted lands on the Reservation including heirship lands may be inherited by the heirs of the owner, regardless whether they are members of the OST. Upon application of the owner the Secretary of the Interior may remove restrictions upon the land, whereupon the land will become subject to State taxes and may be mortgaged or sold.

The unallotted lands of the Reservation and all lands which may be acquired by the OST or by the United States in trust for the OST, shall be held as tribal lands, and no part of such land shall be mortgaged or sold. Tribal lands shall not be allotted to individual Indians but may be assigned to members of the OST, or leased, or otherwise used by the tribe, as hereinafter provided.

Tribal lands may be leased by the tribal council, with the approval of the Secretary of the Interior, for such periods of time as are permitted by law.¹⁶

¹⁶ OST Law and Order Code, Chapter 7, Section 55

Figure 6: Pine Ridge Indian Reservation Agriculture



Agricultural

The Reservation is located in the Great Plains region, which encompasses the nation’s largest grassland ecosystem. The northern portion of the Reservation and Badlands National Park contain one of the largest expanses of mixed grass prairie in the United States. Agricultural products produced include alfalfa hay, brome grass-alfalfa, corn, grain sorghum, wheat, and winter wheat.¹⁷

4.1.2 Environmental Consequences

Alternative 1: No Action

This alternative does not include any Federal action. Alternative 1 has potential to pose safety threats, permanently displace residents, further economic strains on the OST.

¹⁷ Shannon County Hazard Mitigation Plan, 2013

Alternative 2: Installation of single MHU

This alternative applies to the one-to-one replacement of residential unit with single MHU. The damaged structure will then be removed and disposed in accordance with tribal guidelines and accepted practices.

Alternative 3: Repair of Permanent Housing

This alternative will have no impact to existing land use regulations or ordinances.

4.2 TRANSPORTATION FACILITIES

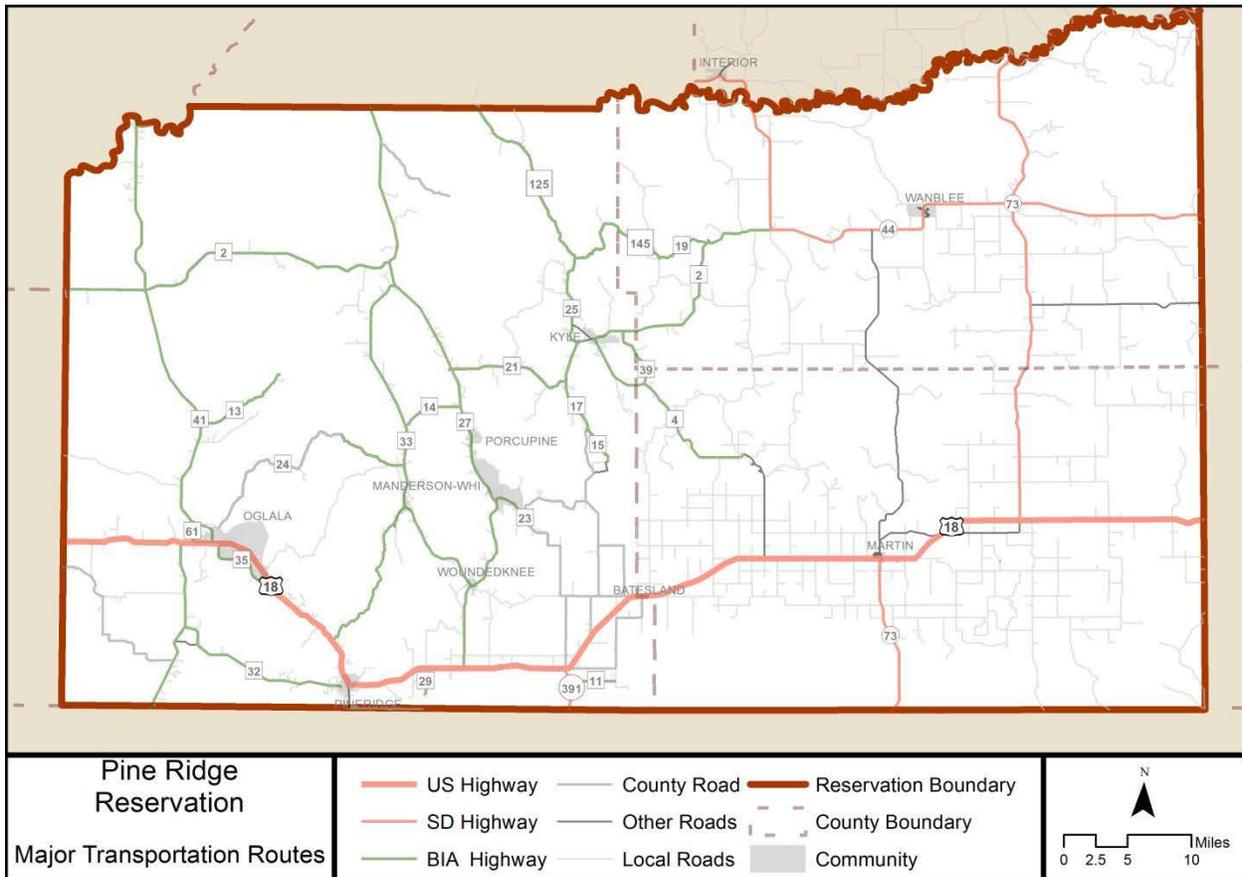
4.2.1 Affected Environment

South Dakota Highway 18 spans the Reservation from east to northwest and is the major artery. Other paved major all-weather roads include SD 87, 29, and 75, BIA 2, 27, 28, 40, and 41. Isolated homes and communities are served by gravel and dirt roads. Many homes on the Reservation are inaccessible during periods of blizzards or heavy rain.

There are a total of 197.85 miles of South Dakota highways on the Reservation, including 59.33 in Oglala County, 72.05 in Bennett, and 66.27 in Jackson. A total of 462.3 miles of BIA roads and 352 miles of county roads run through all three above-mentioned counties. The mileage totals do not include secondary and bus route dirt roads, for which there is no estimate.¹⁸

¹⁸ Shannon County, Hazard Mitigation Plan 2013

Figure 7: Pine Ridge Indian Reservation Transportation Routes



4.2.2 Environmental Consequences

Alternative 1: No Action

This alternative may result in significant adverse impacts due to increased travel times and traffic volumes as damages housing facilities would require continued displacement of residents.

Alternative 2: Installation of single MHU

This alternative applies to restoration or replacement of existing housing. No significant adverse long term impacts are expected to the transportation volume, capacity, and time of transit.

Alternative 3: Repair of Permanent Housing

This alternative applies to restoration or replacement of existing housing. No significant adverse long term impacts are expected to the transportation volume, capacity, and time of transit.

4.3 SAFETY AND OCCUPATIONAL HEALTH

4.3.1 Affected Environment

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

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

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

4.3.2 Environmental Consequences

Alternative 1: No Action

This alternative does not include any Federal action. Residents, communities, and properties would be left susceptible to significant future damages. The No Action Alternative provides a significant adverse safety affect to residents of the OST.

Alternative 2: Installation of single MHU

This alterative would have no significant impact to public safety or occupational health if BMPS are applied. OST members are expected to benefit from the proposed action. Removal or redistribution of materials with painted surfaces or containing Asbestos may be required and workers to follow OSHA regulations to provide appropriate Asbestos abatement and avoid release of lead from paint. Workers and equipment operators are required to wear appropriate personal protective equipment (PPE) and be properly trained for the work being performed. All solid or hazardous wastes that might be generated during the replacement must be removed and disposed of at a permitted facility or designated collection point (e.g., for solid waste, a utility or construction company's own dumpster).

Alternative 3: Repair of Permanent Housing

This alternative would have no significant impact to public safety or occupational health if BMPS are applied. OST members are expected to benefit from the proposed action. Removal or redistribution of materials with painted surfaces or containing Asbestos may be required and workers to follow OSHA regulations to provide appropriate Asbestos abatement and avoid release of lead from paint. Workers and equipment operators are required to wear appropriate personal protective equipment (PPE) and be properly trained for the work being performed. All solid or hazardous wastes that might be generated during the replacement must be removed and disposed of at a permitted facility or designated collection point (e.g., for solid waste, a utility or construction company's own dumpster).

4.4 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

4.4.1 Affected Environment

Per Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, measures must be taken to avoid disproportionately high adverse impacts on minority or low-income communities.

For purposes of EO 12898, a low-income population is defined as a group of individuals living in geographic proximity to one another, or a geographically dispersed or transient (migrant) group of individuals that have household incomes at or below poverty level.

Individuals who are members of the following population groups are considered minorities: American Indian or Alaskan Native, Asian or Pacific Islander, Black (not of Hispanic origin), or Hispanic.

A low income or minority population can be identified where either:

- Low income or minority individuals constitute more than 50% of the population of the project area; or
- The percentage of low income or minority individuals in an affected area is twice that as the county or state as a whole (for example: 30% of the project area is low income but only 15% of the county is low income)

Several methods can be used to determine if there are low income or minority populations present in the project area. The most common and defensible method is to review data provided by the U.S. Census Bureau.

The U.S. Census Bureau maintains a variety of data sets on populations, and makes available hundreds of queries describing different population attributes. From the perspective of environmental justice, four data sets are the most important:

- Total Population
- Race

- Median Household Income
- Poverty Status

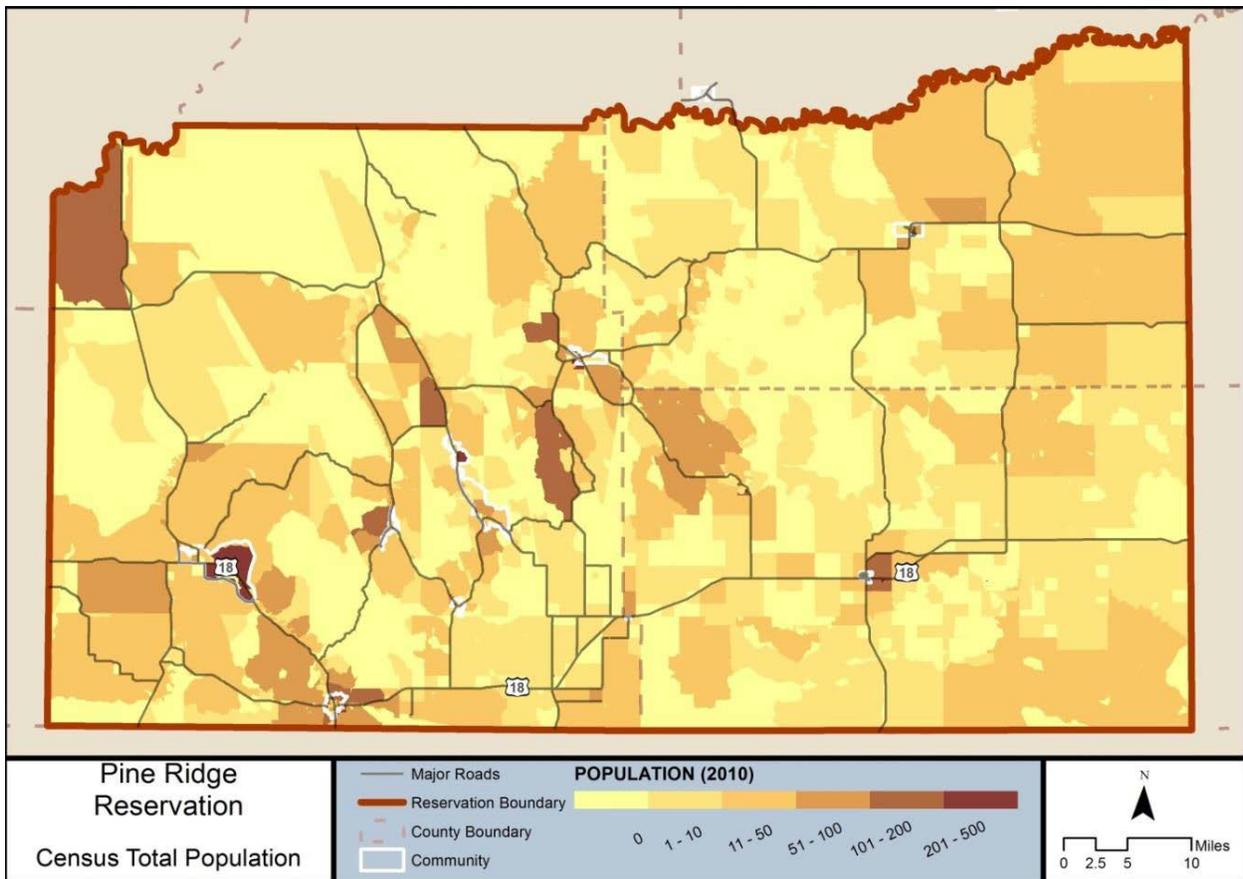
In determining a low income or minority population the four data sets are compared with the census tract for the project area to the data for the county and state where the project is located.

Another way to determine the presence of low income or minority populations is to conduct interviews with representatives from local schools, health and human services, places of worship, local businesses, and community representatives and leaders.

Population

The estimated population living on Pine Ridge Indian Reservation is 35,000.¹⁹ OST population counts are estimated to be higher than the 2010 Census because the Census has not proved to be an effective means of determining tribal populations.

Figure 8: Pine Ridge Indian Reservation Census 2010



¹⁹ 2010 Census

Race

The US Department of Indian Affairs had identified 46,855 enrolled tribal members in 2013²⁰. The OST is a federally recognized tribe and is accorded minority status. One third of tribal members speak Lakota as their first language.

Income

Conditions at the Reservation have been likened to third world conditions, with an unemployment rate of 89%, approximately 39% of the population at the poverty level, and a median household income of \$20,688.²¹ Two-thirds of residences inspected are manufactured housing units and many predate the 1976 establishment of Housing and Urban Development (HUD) establishment of standards for such housing.

Housing

The median home value on the Reservation is \$25,900.²² There are no alternate housing resources available within 75 miles and the Reservation had a housing shortage prior to the disaster event. The existing housing stock is aged, dilapidated, and overcrowded.²³ Selected characteristics of the 2,829 housing units include 404 units (or 14%) that lack complete plumbing facilities, and 349 units or (12%) that lack complete kitchen facilities.²⁴ Nine percent of these households do not have telephone service.²⁵

The Pine Ridge Promise Zone Plan established in April of 2015 builds on the regional planning effort initially undertaken through a Federal planning grant from HUD. To address systemic poverty, violence, and economic distress and revitalize the region, this plan focuses on creating worker-owned businesses, developing innovative solutions to infrastructure challenges, and expanding good quality, affordable housing. The Promise Zone designation will catalyze efforts among the OST in South Dakota to meet the six goals that have been identified as instrumental to increasing the quality of life and accelerating efforts to create comprehensive community revitalization:

- Create Jobs Improve Educational Opportunities
- Increase Economic Activity
- Improve Public Safety
- Increase Access to Affordable, Energy-Efficient
- Develop Infrastructure

²⁰ US Department of the Interior Indian Affairs. Retrieved 25 Feb 2013.

²¹ 2010 Census

²² 2010 Census

²³ FEMA, OST Permanent Housing Recommendation, Memorandum, September 18, 2015

²⁴ Id.

²⁵ Id.

The OST population are identified as both a *Minority Population* and *Low-Income Population*, and measures must be taken to avoid disproportionately high adverse impacts on this community.

Image 1 Pine Ridge Indian Reservation Housing on display in Washington DC 2013



4.4.2 Environmental Consequences

Alternative 1: No Action

This alternative does not include any Federal action. There is no requirement for compliance with EOs 12898 (Environmental Justice) and 13045 (Protection of Children from Environmental Health Risks and Safety Risks) because there are no Federal actions. Alternative 1 has potential to result in significant adverse impact to socioeconomics of a community. Residents may be isolated from their homes and businesses due to relocation in temporary housing. The No Action alternative may exacerbate damages to social economic standards as a result of the declared event.

Alternative 2: Installation of single MHU

This alternative during the construction period will provide a safer and more stable environment for residence and may provide some short term benefits by providing employment and a multiple effect of increased expenditures in the local economy.

Efforts would be made during installation to minimize short-term disruption to the local economy. Low income and minority populations may benefit during the construction process through the provision of construction jobs and multiplier effects of expenditures in the local economy.

Alternative 3: Repair of Permanent Housing

This alternative during the construction period will provide a safer and more stable environment for residence and may provide some short term benefits by providing employment and a multiple effect of increased expenditures in the local economy.

Efforts would be made during installation to minimize short-term disruption to the local economy. Low income and minority populations may benefit during the construction process through the provision of construction jobs and multiplier effects of expenditures in the local economy.

4.5 AIR QUALITY

4.5.1 Affected Environment

The Clean Air Act requires that states and tribes adopt ambient air quality standards. The standards have been established in order to protect the public from potentially harmful amounts of pollutants. The EPA has established National Ambient Air Quality Standards (NAAQS) for six air pollutants. These pollutants include sulfur dioxide (SO₂), particulate matter with a diameter less than or equal to ten micrometers (PM₁₀), carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), and lead. The EPA has designated specific areas as NAAQS attainment or non-attainment areas. Non-attainment areas are any areas that do not meet (or that contribute to ambient air quality in a nearby area that does not meet) the quality standard for a pollutant.

4.5.2 Environmental Consequences

Alternative 1: No Action

This alternative does not include any Federal action. Vehicle emissions would remain unchanged.

Alternative 2: Installation of single MHU

This alternative would have no change to vehicle emission.

Alternative 3: Repair of Permanent Housing

This alternative would have no change to vehicle emission.

4.6 NOISE

4.6.1 Affected Environment

Sounds that disrupt normal activities or otherwise diminish the quality of the environment are designated as noise. Noise events that occur during the night (9 p.m. to 7 a.m.) are generally considered more annoying than those that occur during normal waking hours (7 a.m. to 9 p.m.). Noise events in the project vicinity are associated with climatic conditions (e.g., wind, thunder), transportation noise (e.g., traffic on roads, airplanes) and “life sounds” (e.g., people talking, children playing).

4.6.2 Environmental Consequences

Alternative 1: No Action

This alternative does not include any Federal action. There is the potential that overall noise levels in the immediate area may increase due to locally funded temporary construction. However, noise impacts are not expected to be significant.

Alternative 2: Installation of single MHU

This alternative may have short term adverse effects on persons who live near the construction area. Noise levels can be minimized by ensuring that construction equipment is equipped with a recommended muffler in good working order. Noise impacts on residences can also be minimized by ensuring that construction activities are not conducted during early morning or late evening hours. Noise levels of construction equipment (70 to 72 dBA) at the distance in which affected parties would likely be located (>200 feet/60 meters) will not be of a duration to be significant.

Alternative 3: Repair of Permanent Housing

This alternative may have short term adverse effects on persons who live near the construction area. Noise levels can be minimized by ensuring that construction equipment is equipped with a recommended muffler in good working order. Noise impacts on residences can also be minimized by ensuring that construction activities are not conducted during early morning or late evening hours. Noise levels of construction equipment (70 to 72 dBA) at the distance in which affected parties would likely be located (>200 feet/60 meters) will not be of a duration to be significant.

4.7 PUBLIC SERVICES, UTILITIES, AND CRITICAL FACILITIES

4.7.1 Affected Environment

Public Services

Public services include:

- Fire protection
- Law Enforcement
- Emergency Medical Services/clinics
- Schools
- Housing
- Land Use/Planning
- Roadways

Any one applying for and receiving water from the water works system belonging to Pine Ridge Sanitation Maintenance Service shall receive such water on the express condition that such water is taken subject to all rules, regulations, and penalties provided by said association for any infraction of said rules and regulations.²⁶

Sewer Permits are required. No person shall make any connection with any public sewer, either directly or indirectly, without first having obtained the proper permit and paid the required fee.²⁷

Application for Permit. An application for a permit to connect to any sewer, inside the corporate limits of the Reservation, must be made in writing by the owner, who must state the location of the property to be served, the lot and block numbers, also for what purposes the premises to be served will be used. After application has been approved by the Sanitation Maintenance Service, a permit will be issued upon payment for each connection to be made either directly or indirectly with the Sanitation Maintenance Service Sewer System.²⁸

Utilities

OST Water and Sewer provide and maintain the following in each district:

- Stormwater drainage
- Electric utilities
- Natural gas Sanitation
- Solid waste disposal
- Telephone/Telecommunications

Utility lines often cross or run along roads, either overhead or underground. *The electrical supply system is provided by three electrical companies that service; LaCreek Electric Co., Nebraska Power and Black Hills Electric.

Critical Facilities

²⁶ OST Law and Order Code, Chapter 32 and 33

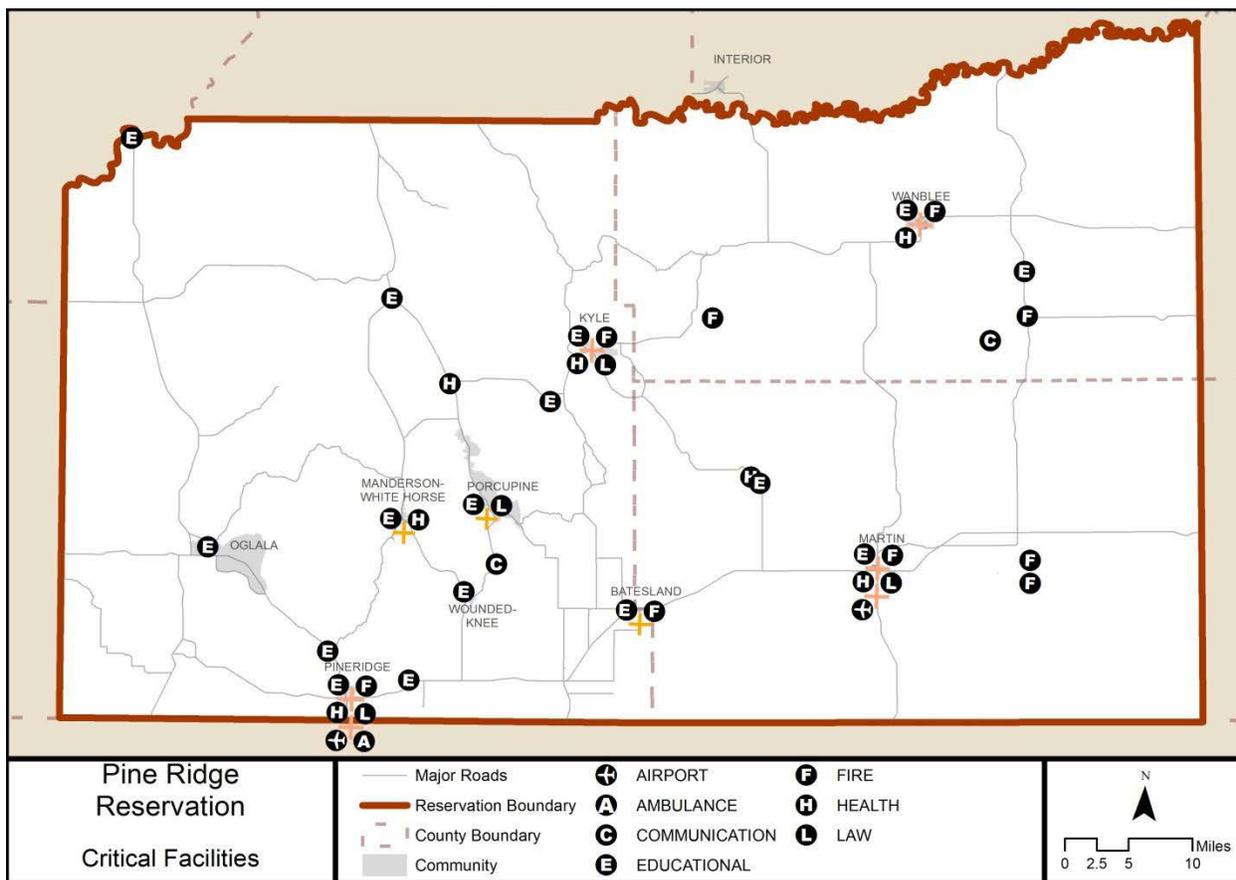
²⁷ Id.

²⁸ Id.

The Department of Homeland Security (DHS) defines critical infrastructure as “assets, systems, and networks, whether physical or virtual, so vital to the United States that their incapacitation or destruction would have a debilitating effect on security, national economic security, national public health or safety, or any combination thereof”.²⁹

According to FEMA, “A critical facility is a structure that, if flooded (or damaged), would present an immediate threat to life, public health, and safety.”³⁰ Examples of critical facilities include hospitals, emergency operations centers, schools, wells, and sanitary sewer lift stations, etc.

Figure 9: Pine Ridge Indian Reservation Critical Facilities



4.7.2 Environmental Consequences

Alternative 1: No Action

This alternative does not include any Federal action. This alternative does have the potential to affect public services and utilities.

²⁹ DHS, <http://www.dhs.gov/what-critical-infrastructure>

³⁰ FEMA 322, Public Assistance Guide, July 14, 2014

Alternative 2: Installation of Single MHU

This alternative has the potential to require approval by the OST environmental committee for site development. The potential installation of new waterlines, new power lines, and wastewater system will require coordination with the OST guidelines and regulations.

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

Alternative 3: Repair of Permanent Housing

This alternative has the potential to require approval by the OST environmental committee for site development. The potential installation/upgrading of new waterlines, new power lines, and wastewater system will require coordination with the OST guidelines and regulations.

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

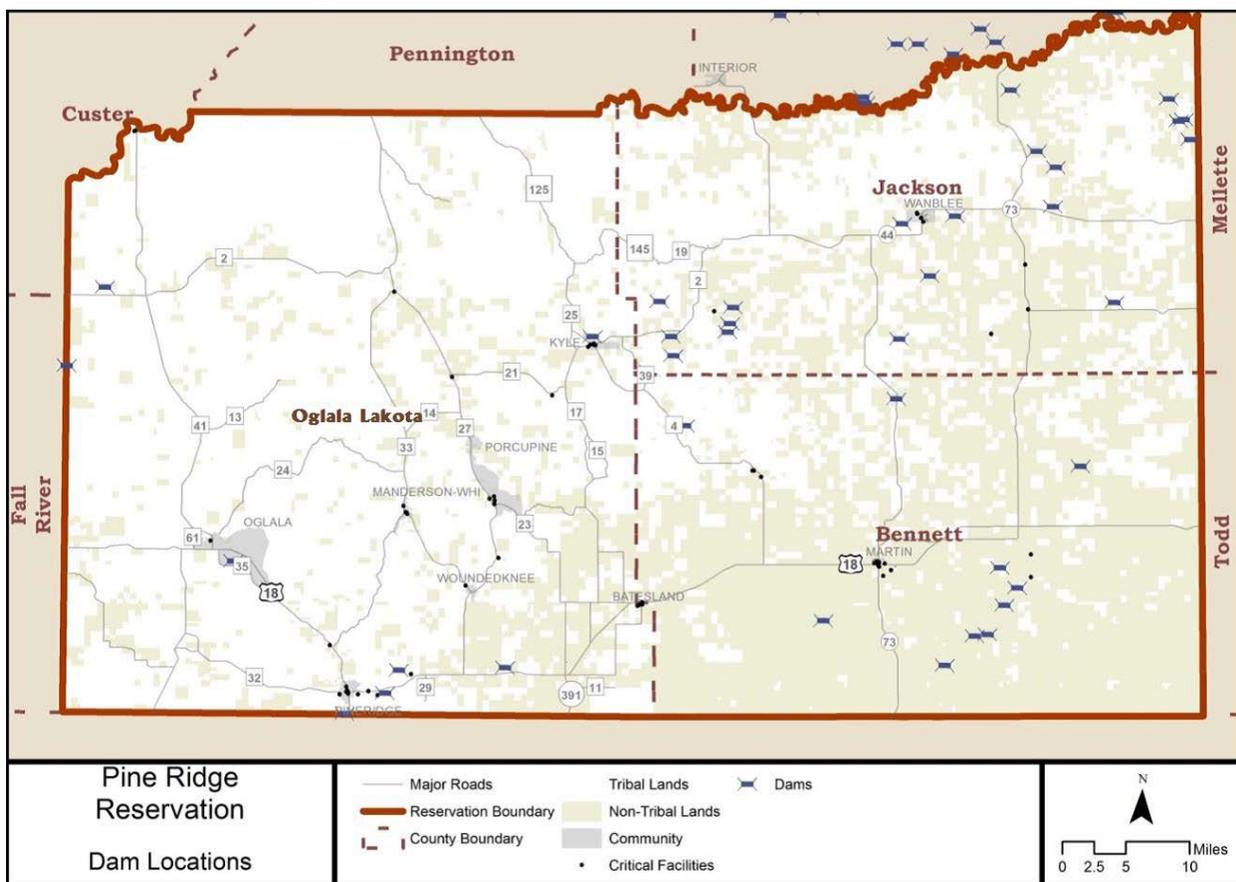
4.8 WATER RESOURCES

4.8.1 Affected Environment

The areas adjacent to rivers and stream banks that carry excess floodwater during rapid runoff are called floodplains. A floodplain is defined as the lowland and relatively flat area adjoining a river or stream. The terms —base flood / 100-year flood / 1% annual chance — refer to the area in the floodplain that is subject to a one percent or greater chance of flooding in any given year. Watershed are a larger entity called a basin, which is defined as all the land drained by a river and its branches. The OST lands contributes to five identified Watersheds;

- Middle Cheyenne-Spring
- Upper White
- Middle White
- Little White
- Upper Niobara

Figure 10: Pine Ridge Reservation Dam Locations



Wild and Scenic Rivers

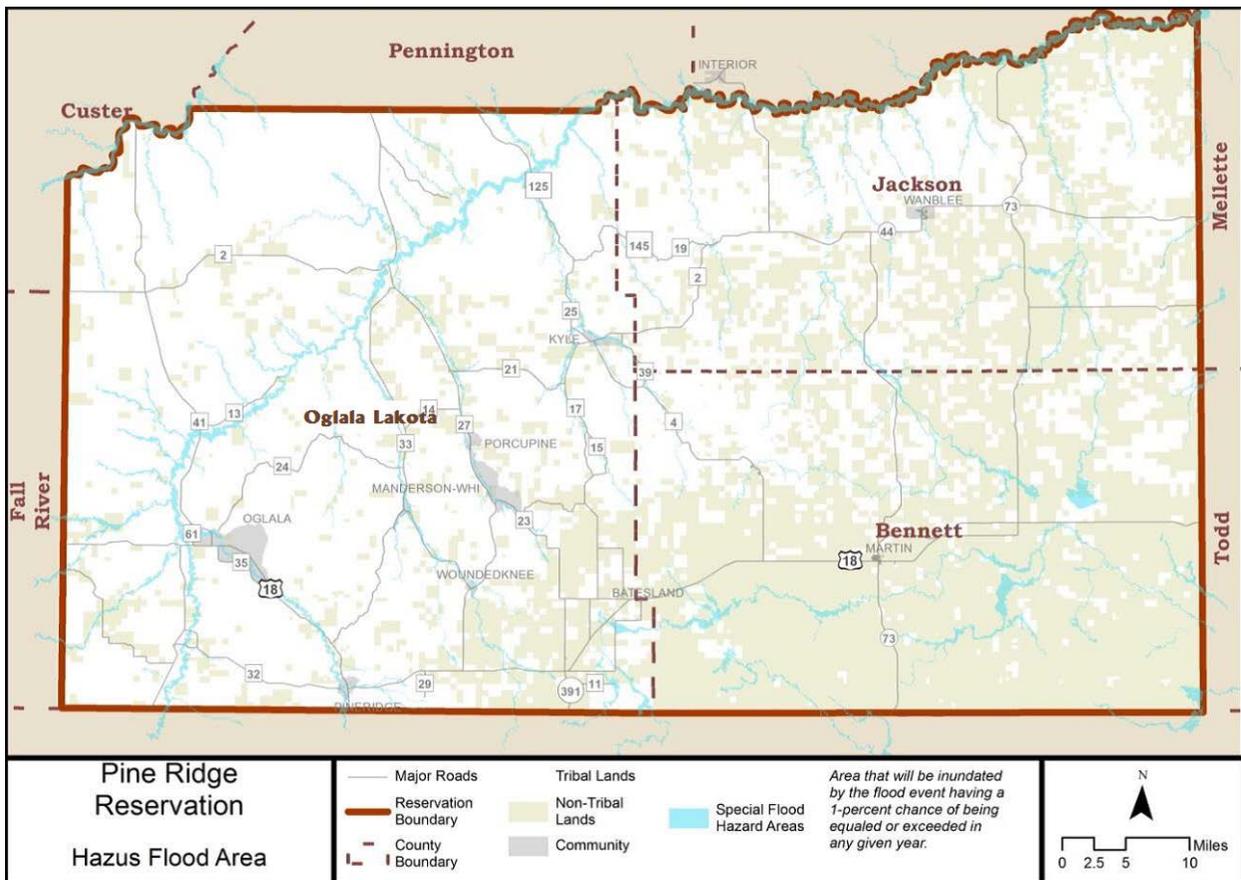
OST has no rivers classified a wild and scenic river under the National Wild and Scenic River System (16 U.S.C. 1271 et seq.) designation.

Floodplains

EO 11988 requires Federal agencies to consider the effect of their actions on the floodplain, to evaluate alternatives to taking action in the floodplain and to provide opportunity for public comment if there is no practicable alternative. A Federal action related to Development is defined as “any man-made change to improved and unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials” it includes both permanent and temporary actions such as installation of stream crossings and conveyance structures (public and private), sediment removal, channel restoration or relocation, etc. Floodplain review may include reviewing plans drawn to scale showing the location, dimensions, and elevation of proposed landscape alterations, existing and proposed structures, including the placement of manufactured homes, and the location of existing structures in relation to the floodplain.

The Water Quality Coordinator from OST Environmental Protection Program is responsible for surface water monitoring in the rivers and six reservoirs at Pine Ridge. There are 44 monitoring sites in the creeks and rivers on the Reservation. The six reservoirs are Kyle, Denby, Yellow Bear, Wamblee, Poor Bear, Charging Crow, Oglala and White Clay. Concerns with surface water quality include metal content that is naturally occurring in the creeks and rivers of the Badlands. The floodplains at Pine Ridge are not monitored. There are structures located in the floodplains, and each structure will be evaluated on a case-by-case basis.

Figure 11: Pine Ridge Reservation Approximate Flood Hazard Boundary



FEMA used Hazus-MH MR2 to model the 1% annual chance (100-yr) flood and to estimate associated building and social losses in the Pine Ridge Reservation, SD. Hazus is a GIS-based natural hazard loss estimation software that uses digital elevation models to generate a flood hazard. While not as accurate as official flood maps, these floodplain boundaries and flood depths are available for use in GIS and could be valuable to communities that have not been mapped by the National Flood Insurance Program. Hazus uses national baseline inventories (buildings and population) combined with modeled flood depth to calculate building losses per census blocks.

FEMA will also use additional indicators to identify floodplain values. These indicators include data collected by site inspections, high-water marks, and damages to extant structures.

Flooding sources on the Pine Ridge Indian Reservation include the White River, White Clay Creek, and the Little White River. The Approximate Flood Hazard Boundary (AFHB) depicts a flood that has a 1% chance of being equaled or exceeded in any given year. The flood risk is highest in the western and northern sections of Pine Ridge. The highest estimated building losses on the reservation overall are along the White River in northeast Oglala County and farther upstream near Oglala.

Wetlands

EO 11990 requires federal agencies minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands. To meet these objectives, the order requires federal agencies, in planning their actions, to consider project alternatives to sites with wetlands and limit potential damage if an activity affecting a wetland cannot be avoided. Wetlands provide flood control, recharge groundwater, stabilize stream flows, improve water quality, and provide habitat for wildlife. The Federal Clean Water Act (CWA) requires that impacts to wetlands be avoided, then minimized, and finally mitigated if no practicable alternative exists. For some wetland filling projects, wetlands are cumulatively impacted and lost as roads are expanded as land is developed due to numerous activities such as draining, changes in land management and landowner preference for open water ponds.

4.8.2 Environmental Consequences

Alternative 1: No Action

In the no action alternative, no work would occur in water, thus there would be no direct impact to water resources due to the proposed action. Residents located in AFHB would remain at risk.

Alternative 2: Installation of single MHU

This alternative could result in structures and some materials or fill being placed in a wetland or AFHB. Wetland boundaries would be determined in accordance with the latest regulatory guidance from the EPA and the U.S. Fish and Wildlife Service (FWS). AFHB determination will use best available data to make informed decision on the delineation of floodplain. In these situations Agency projects would implement the Eight-Step Process to evaluate effects and identify potential alternatives to avoid impacting floodplain values.

Alternative 3: Repair of Permanent Housing

This Alternative will residential structured during this event. Substantially damaged structures located the AFHB will need to be relocated outside of the AFHB.

4.9 BIOLOGICAL RESOURCES

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

4.9.1 Affected Environment

Wildlife

Wildlife on the Reservation include Rocky Mountain Bighorn sheep, mule deer, whitetail deer, Mariam turkey, coyote, prairie dog, black-footed ferret, mountain lions, bobcats, badgers, elk and many varieties of songbirds and raptors.

Plants

The range land on Pine Ridge Indian Reservation is dominated by western wheatgrass, little and big bluestem, Kentucky bluegrass, and grama grasses. Cedars and ponderosa pine dominate the draws and ravines. Cottonwoods, ash and willows are seen along the rivers and lowlands. Commonly known medicinal and spiritual plants such as Echinacea and sage are located in the Reservation.

Protected Species

There are seven species listed as Endangered (E), Threatened (T), Candidate (C), or Proposed (P) (see Table 4) by the USFWS under ESA that historically occurred, occur or may potentially occur within OST boundaries.³¹

Table 1: Threatened, Endangered and Candidate Species identified in OST.

Common Name	Scientific Name	Federal Status	Habitat Requirements/Notes
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³¹ For U.S. Fish and Wildlife Service Endangered Species Information, Planning and Consultation System : <http://ecos.fws.gov/ipac/> or <http://www.fws.gov/ipac/>

Common Name	Scientific Name	Federal Status	Habitat Requirements/Notes
Whooping Crane	<i>Grus americana</i>	E	Found in coastal marshes and estuaries, inland marshes, lakes, ponds, wet meadows, rivers, and agricultural fields.
Red Knot	<i>Calidris canutus</i>	T	Often found on sparsely vegetated, dry, sunny, slightly elevated tundra locations. Often on windswept ridges or slopes with low cover of stunted willow.
Sprague's Pipit	<i>Anthus spragueii</i>	C	Breeds in open grassland with good drainage and no shrubs or trees.
Western Prairie Fringed	<i>Platanthera leucophaea</i>	T	Tall grass prairie and is found most often on unplowed, calcareous prairies and sedge meadows. Dependent on mycorrhizal fungi.
American Burying Beetle	<i>Nicrophorus americanus</i>	E	Unsure. Lives in many habitats, with a slight preference for grasslands and an open understory oak hickory forests. Carrion availability may be the greatest factor in finding a habitat.
Black-Footed Ferret	<i>Mustela nigripes</i>	E	Found near prairie dog populations, in short or middle grass prairies. Often houses in abandoned prairie dog burrows.
Northern Long-Eared Bat	<i>Myotis septentrionalis</i>	T	Hibernates in caves and mines. Swarms in surrounding wooded areas in autumn. Roosts and forages in upland forests and woods during late spring and summer.

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

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

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

CANDIDATE (C) - Those taxa for which the Service has sufficient information on biological status and threats to propose to list them as threatened or endangered. We encourage their

consideration in environmental planning and partnerships, however, none of the substantive or procedural provisions of the Act apply to candidate species.

4.9.2 Environmental Consequences

Alternative 1: No Action

Under the No Action Alternative, no localized or regional effects to threatened or endangered species are expected. This alternative does not include any action. Therefore, the applicants would not be required to consult with USFWS to comply with the ESA, Migratory Bird Treaty Act (MBTA), Fish and Wildlife Coordination Act (FWCA), or state laws.

Alternative 2: Installation of single MHU

This alternative may have the potential to affect sensitive biological resources, wetlands or natural waterways due to construction activities; a review of available information on the potential for species and critical habitat occurrence in the area will be conducted.

Alternative 3: Repair of Permanent Housing

This alternative may have the potential to affect sensitive biological resources, wetlands or natural waterways due to construction activities; a review of available information on the potential for species and critical habitat occurrence in the area will be conducted.

4.10 CULTURAL RESOURCES

Table 2: National Register of Historic Places:

County	City	Site Name
Bennett	Martin	Inland Theater
Jackson	Interior	Prairie Homestead
Jackson	Kadoka	Chicago, Milwaukee, and St. Paul Railroad Depot
Jackson	Kadoka	Mt. Moriah Masonic Lodge #155
Jackson	Kadoka	Pearl Hotel
Jackson	Midland	Jones, Tom, Ranch
Jackson	Philip	Triangle Ranch
Jackson	Rapid City	Minuteman Missile National Historic Site
Jackson	Wanblee	Lip's Camp
Oglala Lakota	Batesland	<u>Wounded Knee Battlefield (National Historic Landmark)</u>

4.10.1 Affected Environment

To preserve historical and archaeological sites in the United States of America the National Historic Preservation Act (NHPA) was established in 1966. The Act created the National Register of Historic Places, the list of National Historic Landmarks, the State Historic Preservation Offices (SHPO), and the Tribal Historic Preservation Office (THPO).

The National Register of Historic Places is the Nation's official list of cultural resources worthy of preservation and is part of a national program to coordinate and support public and private

efforts to identify, evaluate, and protect our historic and archeological resources. Properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. To be eligible for listing, a property must meet one of four eligibility criteria and have sufficient integrity. The Pine Ridge Indian Reservation is rich in history and cultural sites. A site older than 50 years may be considered a cultural resource and may require protection. Sites that contain cultural resources such as old buildings, fossils, tipi rings, fire pits, old bones, and flake chips from the making of arrowheads are protected. In order to protect these sites from the illegal removal of artifacts, the location of these sites is not public information. Historical areas such as the Wounded Knee Battlefield and the Stronghold are cultural resources. The OST and the BIA are responsible for cultural resources on Tribal ground. The South Dakota State Historic Preservation Office is responsible for cultural resources on fee patent land.

History

The Lakota/Dakota people maintained their sacred and traditional practices and ceremonies which explains their very existence and survival. They continue a common practice for living off the land by utilizing the wild turnip (*timpsila*), June berries (*wipazuntkan*), choke cherries (*canpa sapa*), raspberries (*takanhecala*), buffalo berries (*mastinca pute*) and plums (*Kanta*). They gathered various plants from which to make tea and for other medicinal uses. They never took more than they could use in their *tiwahe* or *tiospaye*.³²

Plans and medicines were gathered and prepared seasonally. They did their hunting in the fall, to prepare for the long, cold winter months. They also practice their social activities such as *oskate wacipi* -- powwows, rodeos, Ironman horse racing, and district celebrations, mud bogging, memorial and honoring celebrations for education completion and/or military acceptance. Give aways and feasts were part of the celebration of these events.³³

Information and history surrounding the 1890 Massacre and the 1973 American Indian Movement Occupation are available to visitors of the Wounded Knee Visitors Center. The Wounded Knee Massacre site is a National Historic Site and is located east and north of the Pine Ridge Village.

4.10.2 Environmental Consequences

Alternative 1: No Action

No Federal action would occur under this alternative, and thus no new impacts to historic resources would occur.

³² OST, Tribal Website

³³ Id.

Alternative 2: Restoration or Replacement of Housing Functions

This alternative has the potential to affect historic or cultural resources. Destruction or alteration of any site, structure or object of historic, prehistoric or paleontological importance may occur during waterway restoration, property repair or infrastructure repair. Physical change could affect unique cultural values. There could be effects on existing religious or sacred uses of a site or area and archeological resources may be present.

For non-tribal lands any agencies that have entered into Programmatic Agreements with the OST State Historic Preservation Office (SHPO) or a Tribal Historic Preservation Office (THPO) will determine if a project meets any outlined programmatic allowances. If so, The Agencies would consider the project to be in compliance with Section 106 of NHPA and no further review would occur. If a project does not fall within an allowance, or a Programmatic Agreement does not exist, The Agencies will make a determination of effect and consult with the SHPO. Additional archaeological surveys of ground disturbing activities or architectural surveys of projects impacting built environments may be required depending on consultation with Tribal Historic Preservation Office (THPO) and SHPO.

Alternative 3: Repair of Permanent Housing

This alternative has the potential to affect historic or cultural resources. Structures over 50 years of age will be required to be evaluated for significance of listing on the National Register of Historic Places.

4.11 HAZARDOUS MATERIALS

4.11.1 Affected Environment

Hazardous waste, as defined by the Resource Conservation and Recovery Act (RCRA), is defined as “a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may; (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible or incapacitating reversible illness or; (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of or otherwise managed.” Federal regulations governing the assessment and disposal of hazardous wastes include RCRA, the RCRA Hazardous and Solid Waste Amendments, Comprehensive Environmental Response, Compensation and Liability Act, Solid Waste Act, and Toxic Substances Control Act.

The OST Department of Public Health and Environment provides guidance and regulatory relief for the management and disposal of damaged or destroyed structures. Small appliance refrigerant recovery is also regulated by the OST. A Chlorofluorocarbon Hotline is available to leave messages, report violations or to request assistance for either the state or federal chlorofluorocarbon programs.

4.11.2 Environmental Consequences

Alternative 1: No Action

The No Action alternative would not disturb any hazardous materials or create any potential hazard to human health.

Alternative 2: Installation of single MHU

The proposed action has the potential to distribute known hazardous materials or create any potential hazard to human health. If hazardous constituents are encountered during the proposed construction operations, appropriate measures for the proper assessment, remediation, and management of the contamination would be initiated in accordance with applicable Federal, state, and local regulations. The contractor would take appropriate measures to prevent, minimize, and control the spill of hazardous materials.

Alternative 3: Repair of Permanent Housing

The proposed action has the potential to distribute known hazardous materials or create any potential hazard to human health. If hazardous constituents are encountered during the proposed construction operations, appropriate measures for the proper assessment, remediation and management of the contamination would be initiated in accordance with applicable Federal, state, and local regulations. The contractor would take appropriate measures to prevent, minimize, and control the spill of hazardous materials.

4.12 CUMULATIVE IMPACTS

The CEQ regulations³⁴ implementing the procedural provisions of NEPA of 1969³⁵ defines cumulative effects as:

“the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or local) or person undertakes such other action”.³⁶

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

The CEQ regulations also describe cumulative impacts as impacts that “can result from individually minor but collectively significant actions taking place over a period of time.” On a programmatic level and combined with other actions affecting housings alternatives could lead to

³⁴ 40 Code of Federal Regulations [CFR] Section 1500-1508

³⁵ 42 United States Code [USC] Section 4321

³⁶ 40 Code of Federal Regulations [CFR] Section 1508.7

cumulative impacts depending on the scale (number of projects) or geography (localized area) in which the actions are performed.

4.12.1 Summary of Cumulative Impacts

Individual projects proposed under this Programmatic Environmental Assessment are not anticipated to cause significant impacts, even when combined with other actions. Other than the “No Action Alternative,” project impacts that are implemented at an individual or cumulative scale, such as to produce significant impacts generally can be reduced below the level of significance by mitigating for individual impacts using the mitigation measures as addressed in Section 5. A Supplemental Project Specific Environmental Assessment will be completed for any projects that are anticipated to occur at a scale or localized area such that impacts cannot be addressed under Mitigation Measures identified in Section 5.

SECTION FIVE | MITIGATION MEASURES

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 measures including agency consultation will be undertaken by The Agencies to reduce any potentially significant impacts to less than significant levels. The following government publications provide important information on the best practices for MHU installation:

HUD Manufactured Home Construction and Safety Standards (24 C.F.R. § 3280) governs manufacture/construction of HUD homes.

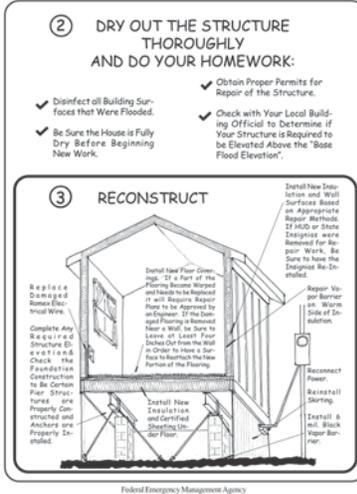
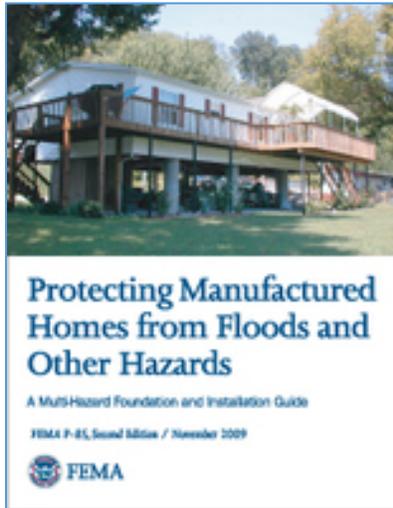
HUD Model Manufactured Home Installation Standards (24 C.F.R. § 3285). The standards include methods for performing installations of HUD manufactured homes. We worked with the HUD years ago to make sure the standard incorporated higher standards for flood and minimum compliance with NFIP

NFPA 225: Model Manufactured Home Installation Standard (2013) presents guidelines for safe, efficient, and effective installation of manufactured homes. We worked on this too so that multihazards (wind, flood, seismic) are considered and are compliant with NFIP

International Residential Code (IRC) Appendix E Manufactured Housing Used As Dwellings. Provides provisions for foundation systems and installation requirements for service equipment. We also worked on this to make sure it considers multihazards and is compliant with NFIP.

FEMA P-85 *Protecting Manufactured Homes from Floods and Other Hazards* (2009) is FEMA's publication on best practices, higher standards and pre-engineered solutions for placing MHU's on disaster-resistant foundations. FEMA P-85 is a referenced publication the HUD Installation Standard.

Figure 12: Hazard Mitigation for MHUs



SECTION SIX | SUMMARY OF IMPACTS

The following table summarizes the potential impacts of each alternative on the resource areas discussed in Section 4. **Table 3** is organized by each resource area for each alternative. Permits and conditions are summarized, but to are not all inclusive.

Table 3: Summary of Impacts

Resource Area	Alternative 1: No Action	Alternative 2: Replacement	Alternative 3: Repair of Permanent Housing	Permits and Conditions Required
Physical Resources	Under the No Action alternative, no federal action would be completed. Alternative 1 has potential to pose safety threats, permanently displace residents, further economic strains on OST	This alternative applies to the one-to-one replacement of residential unit with single MHU. The damaged structure will then be removed and deposited in accordance with tribal guidelines and accepted practices.	This alternative will have no impact to existing land use regulations or ordinances.	Tribal Land Use
Transportation Facilities	This alternative may result in significant adverse impacts due to increased travel times and traffic volumes as damages housing facilities would require continued displacement of residence.	This alternative applies to restoration or replacement of existing. No significant adverse long term impacts are expected to the transportation volume, capacity, and time of transit.	This alternative applies to restoration or replacement of existing. No significant adverse long term impacts are expected to the transportation volume, capacity, and time of transit.	none
Safety and Occupational Health	This alternative does not include any federal action. Residents, communities, and properties would be left susceptible to significant future damages. The No Action Alternative provides a significant adverse safety affect to residents of the OST.	This alternative would have no significant impact to public safety or occupational health if BMPS are applied. OST members are expected to benefit from the proposed action. Removal or redistribution of materials with painted surfaces or containing Asbestos may be required and workers to follow OSHA regulations to provide appropriate Asbestos abatement and avoid release of lead from	This alternative would have no significant impact to public safety or occupational health if BMPS are applied. OST are expected to benefit from the proposed action. Removal or redistribution of materials with painted surfaces or containing Asbestos may be required and workers to follow OSHA regulations to provide appropriate Asbestos abatement and avoid release of lead from paint. Workers and equipment operators are required to wear	Compliance with OST and Federal Permits

Resource Area	Alternative 1: No Action	Alternative 2: Replacement	Alternative 3: Repair of Permanent Housing	Permits and Conditions Required
		<p>paint. Workers and equipment operators are required to wear appropriate personal protective equipment (PPE) and be properly trained for the work being performed. All solid or hazardous wastes that might be generated during the replacement must be removed and disposed of at a permitted facility or designated collection point (e.g., for solid waste, a utility or construction company's own dumpster).</p>	<p>appropriate personal protective equipment (PPE) and be properly trained for the work being performed. All solid or hazardous wastes that might be generated during the replacement must be removed and disposed of at a permitted facility or designated collection point (e.g., for solid waste, a utility or construction company's own dumpster).</p>	
Socioeconomic and Environmental Justice	<p>This alternative does not include any federal action. There is no requirement for compliance with Executive Orders (EO) 12898 (Environmental Justice) and 13045 (Protection of Children from Environmental Health Risks and Safety Risks) since there are no federal actions. Alternative 1 has potential to result in significant adverse impact to socioeconomics of a community. Residents may be isolated from their homes and businesses due to</p>	<p>This alternative during the construction period will provide a safer and more stable environment for residence and may provide some short term benefits by providing employment and a multiple effect of increased expenditures in the local economy.</p> <p>Efforts would be made during installation to minimize short-term disruption to the local economy. Low income and minority populations may benefit during the construction process through the provision of construction jobs and multiplier effects</p>	<p>This alternative during the construction period will provide a safer and more stable environment for residence and may provide some short term benefits by providing employment and a multiple effect of increased expenditures in the local economy.</p> <p>Efforts would be made during installation to minimize short-term disruption to the local economy. Low income and minority populations may benefit during the construction process through the provision of construction jobs and multiplier effects of expenditures in the local economy.</p>	none

Resource Area	Alternative 1: No Action	Alternative 2: Replacement	Alternative 3: Repair of Permanent Housing	Permits and Conditions Required
	relocation in temporary housing. The No Action alternative may exasperate damages to social economic standards as a result of the declared event.	of expenditures in the local economy.		
Air Quality	This alternative does not include any federal action. Vehicle emissions would remain unchanged.	This alternative would have no change to vehicle emission.	This alternative would have no change to vehicle emission.	none
Noise	This alternative does not include any federal action. There is the potential that overall noise levels in the immediate area may increase due to locally funded temporary construction. However, noise impacts are not expected to be significant.	This alternative may have short term adverse effects on persons who live near the construction area. Noise levels can be minimized by ensuring that construction equipment is equipped with a recommended muffler in good working order. Noise impacts on residences can also be minimized by ensuring that construction activities are not conducted during early morning or late evening hours. Noise levels of construction equipment (70 to 72 dBA) at the distance in which affected parties would likely be located (>200 feet/60 meters) will not be of a duration to be significant.	This alternative may have short term adverse effects on persons who live near the construction area. Noise levels can be minimized by ensuring that construction equipment is equipped with a recommended muffler in good working order. Noise impacts on residences can also be minimized by ensuring that construction activities are not conducted during early morning or late evening hours. Noise levels of construction equipment (70 to 72 dBA) at the distance in which affected parties would likely be located (>200 feet/60 meters) will not be of a duration to be significant.	none

Resource Area	Alternative 1: No Action	Alternative 2: Replacement	Alternative 3: Repair of Permanent Housing	Permits and Conditions Required
Public Services and Utilities	This alternative does not include any federal action. This alternative does have the potential to affect public services and utilities other than prevent damages would not restores power.	<p>This alternative has the potential to require approval by the OST environmental committee for site development. The potential installation of new waterlines, new power lines, and wastewater system will require coordination with the OST guidelines and regulations.</p> <p>During construction, delays in fire, emergency, law enforcement and school services may continue, but these would be short term impacts. Once completed, public services would be restored to pre-disaster levels. No long term impacts would occur under this alternative.</p>	<p>This alternative has the potential to require approval by the OST environmental committee for site development. The potential installation/upgrading of new waterlines, new power lines, and wastewater system will require coordination with the OST guidelines and regulations.</p> <p>During construction, delays in fire, emergency, law enforcement and school services may continue, but these would be short term impacts. Once completed, public services would be restored to pre-disaster levels. No long term impacts would occur under this alternative.</p>	OST
Water Resources	In the no action alternative, No work would occur in water, thus there would be no direct impact to water resources due to the proposed action. Residence located in AFHB would remain at risk.	This alternative could result in structures, and some materials or fill being placed in a wetland or AFHB. Wetland boundaries would be determined in accordance with the latest regulatory guidance from the EPA and the USFWS. AFHB determination will use best available data to make informed decision on the delineation of floodplain. In these	This Alternative will residential structured during this event. Substantially damaged structures located the AFHB will need to be relocated outside of the AFHB.	Comply with all appropriate federal and tribal permits.

Resource Area	Alternative 1: No Action	Alternative 2: Replacement	Alternative 3: Repair of Permanent Housing	Permits and Conditions Required
		situations agency projects would implement the Eight-step Process to evaluate effects and identify potential alternatives to avoid impacting floodplain values.		
Biological Resources	Under the No Action Alternative, no localized or regional effects to threatened or endangered species are expected. This alternative does not include any action. Therefore, the applicants would not be required to consult with USFWS to comply with the ESA, Migratory Bird Treaty Act (MBTA), Fish and Wildlife Coordination Act (FWCA), or state laws.	This alternative may have the potential to affect sensitive biological resources, wetlands or natural waterways due to construction activities; a review of available information on the potential for species and critical habitat occurrence in the area will be conducted.	This alternative may have the potential to affect sensitive biological resources, wetlands or natural waterways due to construction activities; a review of available information on the potential for species and critical habitat occurrence in the area will be conducted.	Consultation with USFWS will be necessary to assess permanent and temporary impacts. Compliance with OST
Cultural Resources	No federal action would occur under this alternative, and thus no new impacts to historic resources would occur.	This alternative has the potential to affect historic or cultural resources. Destruction or alteration of any site, structure or object of historic, prehistoric or paleontological importance may occur during hazard removal. Physical change could affect unique cultural values. There could be effects on existing religious or sacred uses of a site or area and archeological resources	This alternative has the potential to affect historic or cultural resources. Structures over 50-years of age will be required to be evaluated for significance of listing on the National Register of Historic Places.	Consultation and Coordination under the NHPA and associated regulations

Resource Area	Alternative 1: No Action	Alternative 2: Replacement	Alternative 3: Repair of Permanent Housing	Permits and Conditions Required
		<p>may be present. For non-tribal lands any agencies that have entered into Programmatic Agreements with the OST State Historic Preservation Office (SHPO) will determine if a project meets any outlined programmatic allowances. If so, The Agencies would consider the project to be in compliance with Section 106 of NHPA and no further review would occur. If a project does not fall within an allowance, or a Programmatic Agreement does not exist, The Agencies will make a determination of effect and consult with the THPO. Additional archaeological surveys of ground disturbing activities or architectural surveys of projects impacting built environments may be required depending on consultation with Tribal Historic Preservation Office (THPO) and SHPO.</p>		

Resource Area	Alternative 1: No Action	Alternative 2: Replacement	Alternative 3: Repair of Permanent Housing	Permits and Conditions Required
Hazardous Materials	The No Action alternative would not disturb any hazardous materials or create any potential hazard to human health.	The proposed action would not disturb any known hazardous materials or create any potential hazard to human health. If hazardous constituents are encountered during the proposed construction operations, appropriate measures for the proper assessment, remediation and management of the contamination would be initiated in accordance with applicable federal, state, and local regulations. The contractor would take appropriate measures to prevent, minimize, and control the spill of hazardous materials.	The proposed action has the potential to distribute known hazardous materials or create any potential hazard to human health. If hazardous constituents are encountered during the proposed construction operations, appropriate measures for the proper assessment, remediation and management of the contamination would be initiated in accordance with applicable federal, state, and local regulations. The contractor would take appropriate measures to prevent, minimize, and control the spill of hazardous materials.	CDPHE permits

SECTION SEVEN | PUBLIC INVOLVEMENT

7.1 PUBLIC NOTICE OF AVAILABILITY FOR DRAFT COMMENTARY

The following Public Notice of Availability will be published On the OST website.

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

The Federal Emergency Management Agency (FEMA) is providing notice of its intent to prepare a Programmatic Environmental Assessment (PEA) to evaluate the housing mission for the Oglala Sioux Tribe (OST) on the Pine Ridge Indian Reservation. We provide this notice to advise other Federal and State agencies, Native American tribes, non-governmental organizations, and the public of our intention as well as to obtain suggestions and information on the scope of issues to consider during the PEA planning process. These actions are part of our effort to comply with the general provisions of the National Environmental Policy Act (NEPA); NEPA regulations; other Federal laws and regulations, Executive Orders; and policies for compliance with those laws and regulations including 44 Code of Federal Regulations [CFR] Parts 9 and 10.

On August 7th, 2015 U.S. Department of Homeland Security's Federal Emergency Management Agency announced that federal disaster aid has been made available to the Oglala Sioux Tribe of the Pine Ridge Indian Reservation and ordered federal aid to supplement recovery efforts in the area affected by severe storms, straight-line winds, and flooding during the period of May 8-29, 2015. The President's action makes federal funding available to the affected members of the Oglala Sioux Tribe of the Pine Ridge Indian Reservation. Assistance can include grants for semi-permanent housing and home repairs, low-cost loans to cover uninsured property losses, and other programs to help individuals and business owners recover from the effects of the disaster.

All Federally-funded projects will be completed in compliance with applicable Federal, tribal, state and local laws, regulations, Executive Orders, etc. Some specific items of work may include, but not be limited to reviews under the Clean Air Act, Clean Water Act, Endangered Species Act, National Historic Preservation Act, Executive Order 11988 (Floodplain Management), Executive Order 11990 (Protection of Wetlands), and Executive Order 12898 (Environmental Justice).

The PEA assesses environmental compliance for the following types of housing projects:

- Single Mobile Housing Unit (MHU):
- Repair to Permanent Housing:

Copies of the Programmatic Environmental Assessment will be available for public review at the following locations:

Tribal Administration Building (Pine Ridge);

Tribal Housing Authority (Pine Ridge);
Community Action Program (CAP) offices at each of the nine Tribal Reservation Districts
(Pine Ridge, Wakpamni; White Clay; Wounded Knee; Porcupine; Medicine Root; Eagle
Nest; Passcreek and LaCreek).

You can obtain more detailed information about the proposed PEA from Steven Hardegen, FEMA
Region VIII, Regional Environmental Officer, Denver, Colorado (steven.hardegen@fema.gov).
U.S. Department of Homeland Security ~ FEMA, Region VIII Denver Federal Center Building 710,
Box 25267 Denver, Colorado 80225-0267

Comments should be made in writing to the FEMA point of contact listed above and post-marked
within seven (7) days of publication of this notice.

7.3 PUBLIC COMMENTS

This document will be released for a seven (7) day public comment period. Comments will be
recorded here.

SECTION EIGHT | LIST OF PREPARERS

This PEA was prepared by:

FEMA Region VIII, Denver, CO

- Abby Simons - FEMA Environmental Protection Specialist
- Jeffrey Fullmer – FEMA Environmental Protection Specialist
- Steven Hardegen – FEMA Regional Environmental Officer
- Charlie Bello – FEMA Tribal Environmental Specialist

SECTION NINE | REFERENCES

Community Development Block Grant – Disaster Recovery Program, U.S. Department of Housing and Urban Development.

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<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/landscape/ewpp/>. Accessed February, 2014.

Federal Emergency Management Agency (FEMA) Public Assistance (PA) Program.

<http://www.fema.gov/public-assistance-local-state-tribal-and-non-profit>. Accessed February, 2014.

Hazard Mitigation Grant Program (HMGP). <http://www.fema.gov/hazard-mitigation-grant-program>. Accessed February, 2014.

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<http://www.ncsl.org/issues-research/tribal/list-of-federal-and-state-recognized-tribes.aspx>. Accessed March, 2014.

“Poverty.” U.S. Census Bureau Highlights.

<http://www.census.gov/hhes/www/poverty/about/overview/>. Accessed February, 2014.

Shannon County Hazard Mitigation Plan 2013

U.S. Fish and Wildlife Service (USFWS). 2011b. Natural Resources of Concern. IPaC – Information, Planning, and Conservation Online System. Available at

<http://ecos.fws.gov/ipac/>. Accessed January, 2014.

Appendix C

PEA Housing Checklist

POST-DISASTER OST HOUSING MISSION CHECKLIST	Date:	Site ID:
Assessment under the Programmatic Environmental Assessment (PEA) for the Oglala Sioux Tribe Housing Mission and Finding of No Significant Impact (FONSI), October 2015		
Disaster Description and Date:		
Site ID & Location:		
Project Description:		
THPO Determination: Floodplain Assessment:		

I. PEA Alternative Used (Check all that apply)

- Alternative 2 – Installation of a single MHU
 Alternative 3 – Repair of permanent housing

II. Evaluation

ENVIRONMENTAL IMPACT ASSESSMENT: Document impacts to human, socio economic, or natural environment for environmental setting or circumstances.				
Setting/Resource/Circumstance	Are Impacts Consistent with Descriptions in PEA? (Yes/No)	Are There Additional Impacts? (Yes/No)	Date Reviewed	Are Site Specific Study Documents Attached? (Yes/No)
Geology, Soils and Land Use				
Transportation Facilities				
Safety and Occupational Health				
Socioeconomics and Environmental Justice				
Air Quality				
Noise				
Public Services and Utilities				
Water Resources				
Biological Resources				
Cultural Resources				
REGULATORY CHANGES: Document changes to laws, regulations, and/or guidelines since signature of PEA FONSI:				
IMPACTS ASSESSMENT: For items checked as having additional impacts: assess the affected natural and socio-economic environment, impacts				

and new issues/concerns which may now exist:

MITIGATION:

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

III. Public/Agency Involvement (if any)

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

IV. Permits

List required permits and status of permit:

V. Attachments Listed

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

VI. Conclusion and Recommendation

- The project is consistent with the alternatives and impacts as described in the PEA.
- The project generally is consistent with the alternatives and impacts as described in the PEA, but includes some minor impacts not described in the PEA which are documented in this checklist.
- The project requires a Supplemental Environmental Assessment because (1) creates impacts not described in the PEA; (2) creates impacts greater in magnitude, extent, or duration than those described in the PEA; or (3) requires additional mitigation measures that are not described in the PEA to keep impacts below significant levels.

Applicant or Authorized Agent Signature

Date

Federal Emergency Management Agency

Date