

**Draft
Rosebud Sioux Tribe
Conservation Reserve Enhancement Program
Programmatic Environmental Assessment**

August 2022



Prepared for U.S. Department of Agriculture Farm Service Agency



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COVER PAGE

Proposed Action: The United States Department of Agriculture (USDA), Commodity Credit Corporation (CCC) and the Rosebud Sioux Tribe propose to implement the Rosebud Sioux Tribe Conservation Reserve Enhancement Program (CREP), a component of the Conservation Reserve Program (CRP). USDA is provided the statutory authority by the provisions of the Food Security Act of 1985, as amended (16 United States Code [USC] 3830 et seq.), and the Regulations at 7 Code of Federal Regulations (CFR) 1410. In accordance with the 1985 Act and the Agricultural Improvement Act of 2018 (Public Law [PL] 115-334; the 2018 Farm Bill), USDA/CCC is authorized to enroll lands. The Farm Service Agency (FSA) would administer the CREP on behalf of the CCC. CREP is a voluntary land conservation program for agricultural producers.

Type of Document: Programmatic Environmental Assessment (PEA)

Lead Agency: USDA, Farm Service Agency (on behalf of CCC)

Sponsoring Agency: Rosebud Sioux Tribe

Further Information: For further information, please contact:

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Comments: This Draft PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) (PL 91-190); implementing regulations adopted by the Council on Environmental Quality (CEQ) (40 CFR Part 1500-1508); and FSA's implementing regulations, Environmental Quality and Related Environmental Concerns – Compliance with NEPA (7 CFR Part 799). A hard copy of this Draft PEA can be reviewed at the FSA SD State Office (address below) and the Todd County FSA office.

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LIST OF ACRONYMS AND ABBREVIATIONS

APE	Area of Potential Effects
BEA	Bureau of Economic Analysis
BLS	Bureau of Labor Statistics
BMP	best management practice(s)
CCC	Commodity Credit Corporation
CEC	Commission for Environmental Cooperation
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CH ₄	methane
CO	carbon monoxide
CO ₂	carbon dioxide
COC	Community of Comparison
CP	Conservation Practice
CRP	Conservation Reserve Program
CREP	Conservation Reserve Enhancement Program
CWA	Clean Water Act
EA	Environmental Assessment
EE	Environmental Evaluation
EIS	Environmental Impact Statement
EO	Executive Order
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
FOTG	Field Office Technical Guide
FSA	Farm Service Agency
GHG	Greenhouse gas(es)
GIS	Geographic Information Systems
NAAQS	National Ambient Air Quality Standards
NASS	National Agricultural Statistic Service
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
N ₂ O	nitrous oxide
NO ₂	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O ₃	ozone
Pb	lead
PEA	Programmatic Environmental Assessment
PM _{2.5}	respirable particulate matter (including particulates equal to or less than 2.5 microns in diameter)
PM ₁₀	respirable particulate matter (including particulates equal to or less than 10 microns in diameter)
PNS	primary nesting season
SD	South Dakota
SDDANR	South Dakota Department of Agriculture and Natural Resources
SDGFP	South Dakota Game, Fish, and Parks
SDWA	Safe Drinking Water Act
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO ₂	sulfur dioxide
TCP	Traditional Cultural Property
TMDL	Total Maximum Daily Load
TSP	Technical Service Provider
TSS	total suspended solids

U.S.C.	United States Code
US	United States
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service

1.0 INTRODUCTION

The United States Department of Agriculture (USDA) Commodity Credit Corporation (CCC) in cooperation with the Rosebud Sioux Tribe propose to implement the Rosebud Sioux Tribe Conservation Reserve Enhancement Program (CREP) Agreement. This Programmatic Environmental Assessment (PEA) describes the potential environmental consequences resulting from the implementation of the proposed CREP Agreement. The environmental analysis process is designed to ensure the public is involved in the process and informed about the potential environmental effects of the federal action and to help decision makers take environmental and socioeconomic factors into consideration when making decisions related to the Proposed Action.

1.1 BACKGROUND

On behalf of the CCC, the USDA Farm Service Agency (FSA) administers the Conservation Reserve Program (CRP), the federal government's largest private-lands conservation program. CRP is a voluntary program that supports the implementation of long-term conservation measures designed to improve the quality of ground and surface waters, control soil erosion, and enhance wildlife habitat on environmentally sensitive agricultural land.

CREP is a program authorized under provisions of the Food Security Act of 1985, as amended (1985 Act) (16 United States Code [U.S.C.] § 3831 et. seq.), and the regulations at 7 Code of Federal Regulations (CFR) Part 1410. It was established in 1997 under the authority of the CRP to address agriculture related environmental issues by establishing conservation practices (CPs) on agricultural lands using funding from federal, state, and Tribal governments as well as non-government sources. CREP addresses state designated high priority conservation issues in defined geographic areas such as watersheds. Agricultural producers who enroll their eligible lands in CREP receive financial and technical assistance for establishing CPs on their land. In addition, producers receive annual rental payments based upon the enrolled acreage. Once eligible lands are identified, site-specific environmental reviews and consultation with and permitting from other federal agencies are completed as appropriate in accordance with FSA's Handbook 2-CRP (Rev. 6): Agricultural Resource Conservation Program and FSA Handbook Environmental Quality 1-EQ (Rev. 3). Participation is voluntary, and the contract period is typically 10 to 15 years.

The Rosebud Sioux Tribe CREP project area is the Rosebud Indian Reservation, which encompasses approximately 890,240 acres of land. The reservation includes all of Todd County in southern South Dakota. The CREP would enroll a maximum of 600,000 acres of Tribal trust land and allotted trust land within the exterior boundaries of the reservation to implement grassland practice CP88, Permanent Grasses and Legumes. The purpose of the CP88 practice is to maintain existing vegetative cover of either introduced or native grasses and legumes on eligible grassland. To be eligible to be enrolled or re-enrolled, 100 percent of the land per CRP contract must be physically located within the CREP project area. See **Figure 1-1** for the boundaries of the reservation.

The purpose of the CREP Agreement is to allow, where deemed desirable and appropriate by the CCC and Rosebud Sioux Tribe, certain acreage physically located within the project area to be enrolled or re-enrolled, as applicable, in CRP through the CREP. The Rosebud Sioux Tribe CREP would reduce agricultural environmental impacts within the project area. The FSA, on behalf of CCC, would administer the CREP within South Dakota. CREP is just one option under CRP that farmers and ranchers may select to enhance their land. Eligible producers not participating in CREP may still enroll land in CRP through general, grassland, or continuous CRP signup.

1.2 REGULATORY COMPLIANCE

The PEA has been prepared to satisfy the requirements of the National Environmental Policy Act (NEPA) (Public Law 91-190, 42 United States Code 4321 et seq.); Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 CFR §§ 1500–1508); 7 CFR Part 799, FSA NEPA Implementing Regulations; the FSA's handbook 1-EQ (Rev. 3) Environmental Quality Programs, and FSA's handbook for the Conservation Reserve Program, 2-CRP (Rev. 6), Agricultural Resource Conservation Program.

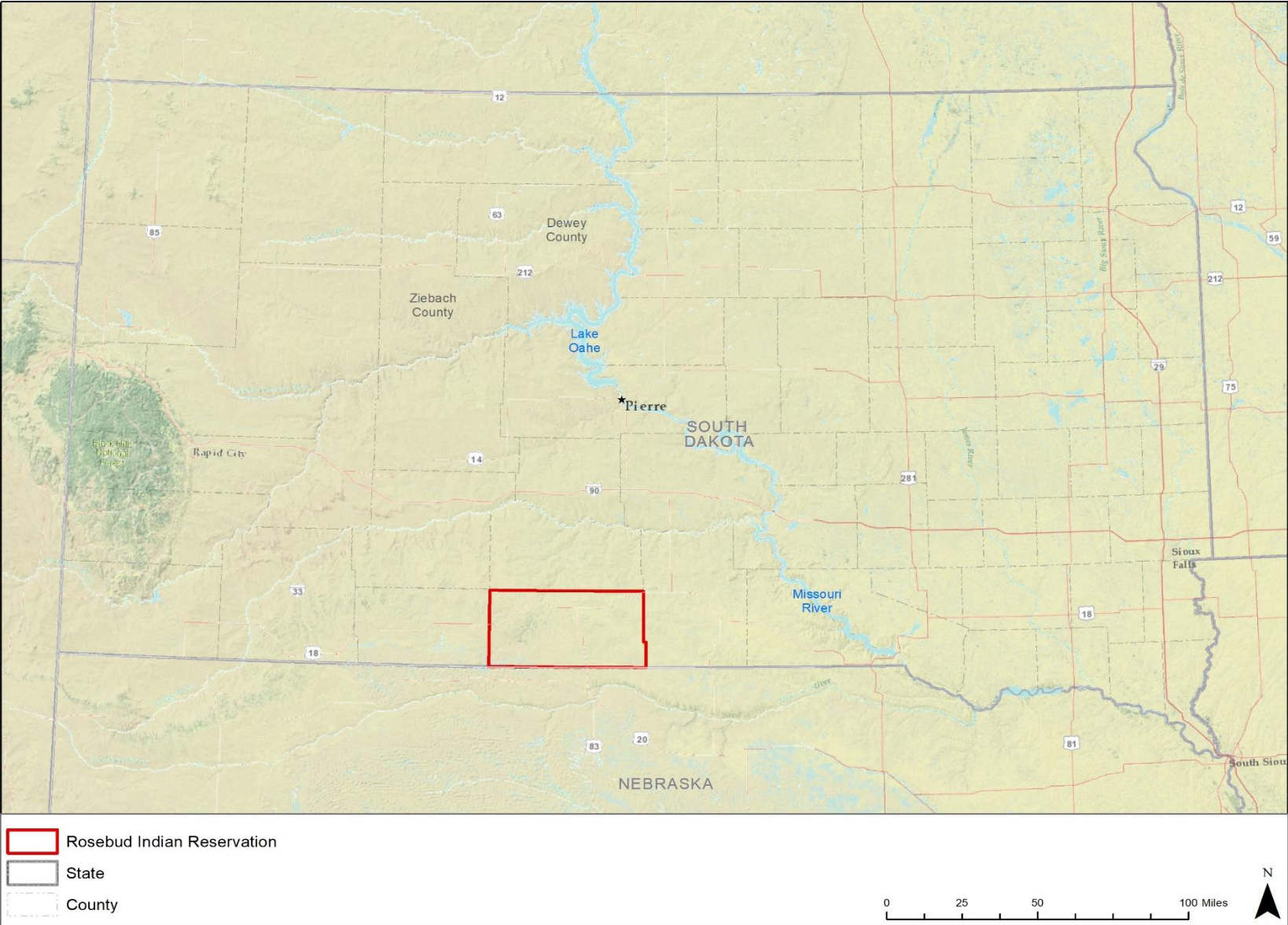


Figure 1-1. Location of the Rosebud Indian Reservation within South Dakota

NEPA is a law that requires federal agencies to consider the potential environmental consequences of Proposed Actions and alternatives to Proposed Actions. The law's intent is to protect, restore, or enhance the environment through well-informed federal decisions. The CEQ was established under NEPA for the purpose of implementing and overseeing federal policies as they relate to this process. In 1978, the CEQ issued Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR Parts 1500 through 1508 [CEQ 1978]). On September 14, 2020, CEQ updated the NEPA regulations (85 Federal Register 43357 through 43376), which are being followed for this PEA. CEQ regulations specify that an Environmental Assessment (EA) be prepared to:

- briefly provide sufficient analysis and evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI);
- aid in an agency's compliance with NEPA when no EIS is necessary; and
- facilitate preparation of an EIS when one is necessary.

A variety of other laws, regulations, and Executive Orders (EO) apply to actions undertaken by federal agencies. These form the basis of the analyses and are summarized in the PEA where applicable. These include but are not limited to:

- Endangered Species Act (ESA)
- National Historic Preservation Act (NHPA)
- Clean Water Act (CWA)
- EO 11988, Floodplain Management
- EO 11990, Protection of Wetlands
- EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

1.3 PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of the Proposed Action is to implement the Rosebud Sioux Tribe CREP Agreement. The need for the Proposed Action is to reduce agricultural environmental impacts on the reservation through maintenance or improvement of grassland productivity and reduction in soil erosion within the project area.

The objectives of the Rosebud Sioux Tribe CREP are to:

1. Enroll of up to 600,000 acres to maintain, improve, and protect grassland productivity through rotational grazing and water development;
2. Increase the average carrying capacity, animal units per acre, on land enrolled in the CRP through the CREP; and
3. Reduce erosion in riparian areas along water bodies through rotational grazing and cover enhancements.

Under the CREP, agricultural producers would voluntarily enter into contracts with the federal government for 10 to 15 years, agreeing to maintain an existing vegetative cover of CP88, Permanent Grasses and Legumes while retaining the right to conduct common grazing practices and operations related to the production of forage and seeding.

1.4 ORGANIZATION OF THE PEA

This PEA assesses the potential impacts of the Proposed Action and alternatives on potentially affected environmental and socioeconomic resources. This chapter, **Chapter 1**, provides background information relevant to the Proposed Action and discusses its purpose and need. **Chapter 2** describes the Proposed Action and alternatives. **Chapter 3** describes the baseline conditions for each of the potentially affected resources and describes potential environmental consequences on these resources, including cumulative impacts. **Chapter 4** contains a listing of the references cited in this PEA. Various appendices are also included to support the analysis in the PEA.

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2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION

On behalf of the CCC, the FSA proposes to implement the Rosebud Sioux Tribe CREP Agreement by allowing enrollment of up to 600,000 acres of Tribal land within the Rosebud Indian Reservation. The reservation encompasses approximately 890,240 acres in southern South Dakota, west of the Missouri River (see **Figures 1-1 and 2-1**). Because program participation is voluntary, the locations and sizes of specific parcels that would be enrolled are not known. Participating producers would receive support for the costs of installing permanent fencing and livestock watering facilities needed to facilitate livestock grazing, as well as annual rental payments for those specific lands enrolled in the program. **Table 2-1** summarizes the components of the CREP.

The proposed CREP requires the use of CP88, Permanent Grasses and Legumes, whose purpose is to maintain existing vegetative cover of either introduced or native grasses and legumes on eligible CRP grassland. The purpose of CRP grasslands is to provide assistance to landowners and operators to protect grazing uses and related conservation values on eligible private pasture and rangelands. CRP grasslands emphasize support of grazing operations, maintaining and improving plant and animal biodiversity, and protecting grasslands and shrublands from the threat of conversion to uses other than grazing.

Table 2-1. Components of the Rosebud Sioux Tribe Conservation Reserve Enhancement Program Agreement

Acreage	Up to 600,000 acres
CREP Duration	15 years
Funding	Federal would be used for rental payments. Participants would be provided annual rental payments comprised of a per acre grassland rental rate equal to \$15 per acre for all eligible grassland acreage offered.
Geographic Area	Rosebud Indian Reservation
Counties	1
Conservation Practices	CP88, Permanent Grasses and Legumes
Contract Duration	10 to 15 years
Cost Share	USDA would provide cost-share payments to eligible participants for up to 50 percent of the eligible reimbursable costs incurred for establishing permanent fencing and livestock watering facilities needed to facilitate livestock grazing. The total of all cost-share payments from all sources shall not exceed 100 percent of the cost of the practice.

CREP = Conservation Reserve Enhancement Program

2.1.1 Eligible Lands

The Rosebud Indian Reservation covers all of Todd County in South Dakota. To be eligible to be enrolled or re-enrolled, 100 percent of the Tribal land per CRP contract must be physically located within the reservation and South Dakota. To be enrolled as practice CP88, the land must have an existing grass cover at the time it is offered for enrollment and meet all the eligibility criteria to be enrolled in CRP as grassland.

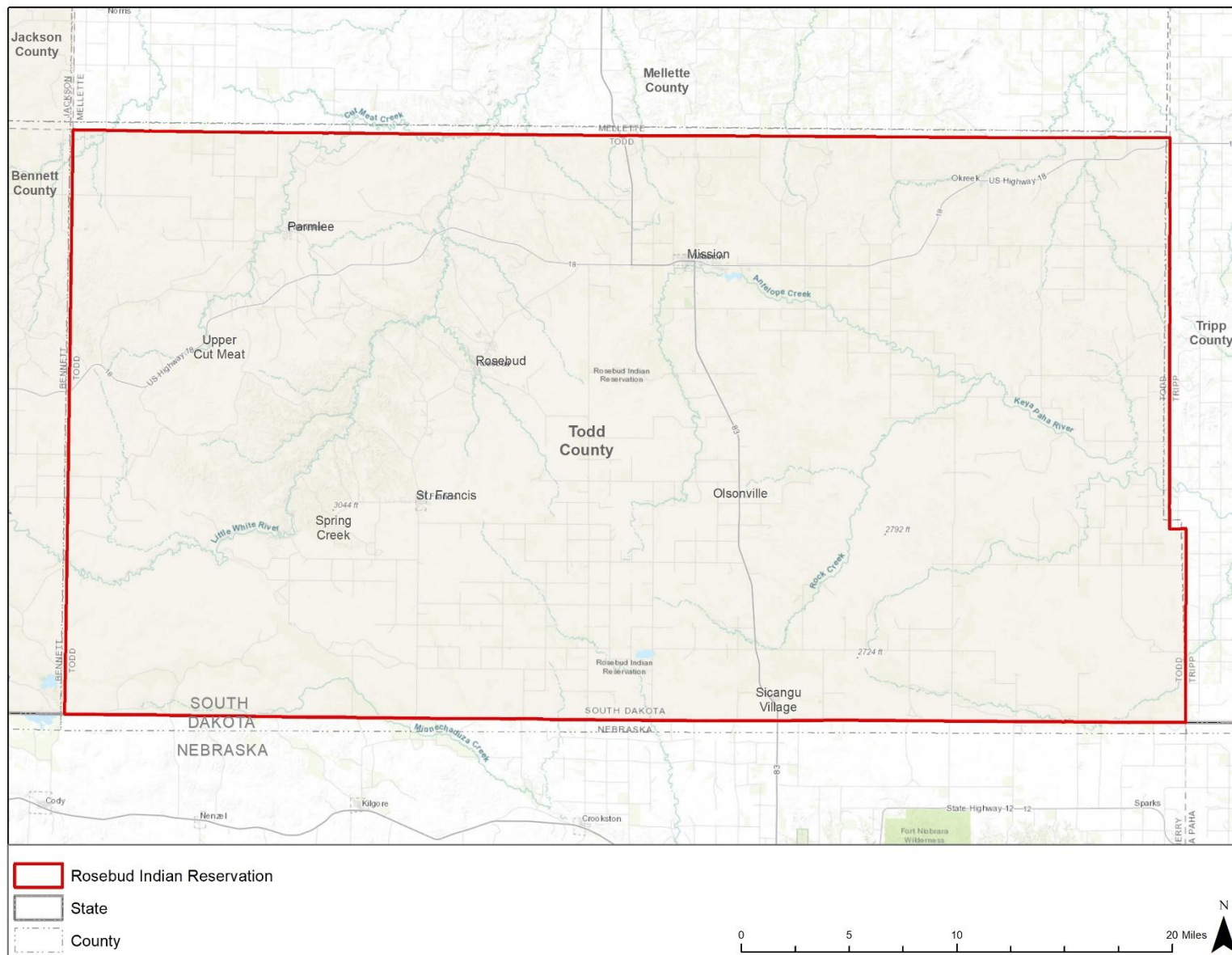


Figure 2-1. Rosebud Indian Reservation and Surrounding Areas

According to FSA's handbook for CRP, land eligible for enrollment in CRP grasslands is land on a tract, or a portion of a tract, that:

- Contains forbs or shrubland (including improved rangeland and improved pastureland) for which grazing is the predominant use with less than 5 percent tree canopy interspersed throughout the offered acreage
- Is located in an area historically dominated by grasslands
- Provides habitat for animal and plant populations of significant ecological value if the land is retained in its current use or restored to a natural condition
- Is expiring CRP lands without tree practices

Once eligible lands are identified, a site-specific environmental review (Environmental Evaluation [EE]) would be completed prior to executing a contract and a Conservation Plan would be developed that details the installation and maintenance of CP88 to ensure that no adverse impacts are anticipated and that the goals of CREP are met throughout the life of the contract. The conservation plan would contain provisions for common grazing or forage management practices and related activities consistent with achieving CRP purposes and maintaining the health and viability of grassland resources.

The EE is completed by the Natural Resources Conservation Service (NRCS) or an approved Technical Service Provider (TSP) during the conservation planning process. NRCS or a TSP is responsible for the site-specific EE, technical leadership, and technical concurrence on Conservation Plans and any revisions. Similarly, they are responsible for collecting the data needed for FSA to ensure compliance with NEPA, NHPA, ESA, and other related laws, regulations, and EOs. The site-specific EE process is consistent with FSA's Environmental Quality and Related Environmental Concerns – Compliance with NEPA (7 CFR Part 799) and FSA's Handbook on Environmental Quality Programs (1-EQ [Rev. 3]). FSA reviews and completes sections of the site-specific EE to document that FSA has completed any required consultation with regulatory agencies. The site-specific EE, previous programmatic NEPA documentation, and this PEA together would complete regulatory compliance for each contract enrolled under this CREP agreement.

2.1.2 Install and Maintain Conservation Practices

The practice proposed under the Rosebud Sioux Tribe CREP Agreement is specific to conditions known to exist within the project area. The purpose of practice CP88, Permanent Grasses and Legumes, is to maintain existing vegetative cover of either introduced or native grasses and legumes on eligible CRP grassland. More information on CP88 can be found in **Appendix A**. CRP grasslands allow for livestock grazing operations.

Installation and maintenance for CP88 may include:

- Installation of interior fencing needed to facilitate a livestock grazing system;
- Installation of access control devices, such as gates, for the purpose of controlling access to an area to maintain the quantity and quality of natural resources, or seasonal or permanent livestock exclusion;
- Development of ponds, wells, spring developments, pipelines, and water facilities to provide a water source for livestock;
- Construction of fuel breaks to control and reduce the risk of the spread of fire by treating, removing, or modifying vegetation, debris, and detritus;
- Development of trails and walkways to provide or improve access to forage, water, working/handling facilities, and/or shelter, to improve grazing efficiency and distribution, and to protect ecologically sensitive, erosive, and/or potentially erosive sites;
- Prescribed burning to improve plant production quantity and/or quality by managing fuel loads to achieve desired conditions. Prescribed fires would be performed under an approved burn plan and outside the primary nesting season (PNS) of May 1 through August 1;

- Common grazing practices, including maintenance and necessary cultural practices in a manner that is consistent with maintaining the viability of grassland, forb, and shrub species appropriate to the locality;
- Haying, mowing, or harvesting for seed production that is subject to appropriate restrictions for species identified by NRCS State Technical Committee focus areas; and
- Control of noxious weeds and other undesirable plants, insects, and pests as necessary to avoid an adverse impact on surrounding land. Chemicals used in performing the practice must be federally, state, and locally registered and applied according to authorized registered uses, directions on the label, and other federal or state policies and requirements.

An approved Conservation Plan is required prior to CRP contract approval and implementation. A Conservation Plan identifies conservation objectives and assesses the natural resource issues that are site-specific to the project area and the proposed CP. Conservation Plans are required to meet the NRCS Field Office Technical Guide (FOTG) planning criteria for each natural resource and must address economic and social considerations. The plan describes the schedule of operations and activities required to solve identified natural resource concerns. The approved plan is developed by the local NRCS representative or authorized TSP in cooperation with the participant. The approved Conservation Plan must:

- Contain all the practices necessary to successfully maintain the vegetative cover and install eligible components to facilitate a livestock grazing system.
- Be technically adequate to meet the objectives of CRP.
- Incorporate all federal, state, and local permit requirements for use of agricultural chemicals such as fertilizer and herbicides.
- Be reviewed and approved by the conservation district.
- Ensure the conservation cover is not disturbed (i.e., haying and/or grazing) during PNS dates.
- Incorporate and adhere to county specific guidance from the NRCS CP Standards, identified in the FOTG, and in state or county specific technical notes.

2.1.3 Provide Financial Support

Agricultural producers enrolled in the CREP would enter into federal contracts for a minimum of 10 and a maximum of 15 years that require the implementation of CP88 to receive financial and technical assistance. Producers would be eligible for annual rental payments for the duration of the contract and USDA would provide cost-share payments to eligible participants for up to 50 percent of the eligible reimbursable costs incurred for installing permanent fencing and livestock watering facilities needed to facilitate livestock grazing.

The annual rental payments provided would be comprised of a per acre grassland rental rate equal to \$15 per acre for all eligible grassland acreage offered. The rental rate is potentially subject to change with future amendments to the CREP agreement. The yearly project cost from rental rates would be \$9 million if 600,000 acres were enrolled at \$15 per acre. The cost of the program would be shared between the federal government and the Rosebud Sioux Tribe. The Rosebud Sioux Tribe would contribute a certain percentage of the overall annual program costs of the CREP through direct payments or in-kind contributions to eligible participants. This percentage has not yet been determined. The Rosebud Sioux Tribe would also pay all costs associated with monitoring activities under the CREP and could, at its discretion, pay to enhance the cover on land enrolled in CRP through the CREP.

2.2 SCOPING

Scoping is an early and open process for developing the breadth of issues to be addressed in an EA and for identifying significant concerns related to an action. Per the requirements of EO 12372, *Intergovernmental Review of Federal Programs*, as amended by EO 12416, federal, state, and local agencies with jurisdiction that could potentially be affected by the Proposed Action or alternatives were notified during the development of this PEA. Pursuant to Section 106 of the NHPA and its implementing regulations in 36 CFR Part 800 "Protection of Historic Properties", potentially affected Tribal governments

were also contacted to help in identifying historic properties, cultural resources, and sites of religious or cultural significance that might be affected by the Proposed Action. The list of agencies contacted, copies of notification letters sent, and responses received are included in **Appendix B**.

The Rosebud Sioux Tribe would implement a broad, continuous outreach and promotion campaign of education regarding the CREP. Producers may be advised through meetings, direct mail, or other methods. Several organizations have been, and continue to be, involved in developing the CREP. These include:

- Rosebud Sioux Tribe
- USDA Farm Service Agency (FSA)
- Bureau of Indian Affairs (BIA)
- U.S. Fish and Wildlife Service (USFWS)

2.3 ALTERNATIVES SELECTED FOR ANALYSIS

2.3.1 *Proposed Action Alternative (Preferred Alternative)*

Under the Proposed Action Alternative, the Rosebud Sioux Tribe CREP Agreement would be fully implemented as described above. This would allow up to 600,000 acres of eligible lands to be managed as permanent grasslands to support grazing operations, maintain and improve plant and animal biodiversity, and protect grasslands and shrublands from the threat of conversion to other uses. CP88 would be maintained on eligible lands and producers would receive one-time cost share payments for installing permanent interior fencing and livestock watering facilities needed to facilitate livestock grazing, as well as annual rental payments. The total yearly cost of the program from rental payments would be up to \$9 million at a \$15 per acre rental rate.

2.3.2 *No Action Alternative*

Under the No Action Alternative, the CREP Agreement would not be implemented. No land would be enrolled in CREP and the goals of CREP would not be met. Though eligible lands could be enrolled in CRP or other conservation programs, the benefits of the proposed CREP would not be realized. This alternative does not satisfy the purpose and need but is carried forward in the analysis to serve as a baseline against which the impacts of the Preferred Alternative can be assessed.

2.4 COMPARISON OF POTENTIAL ENVIRONMENTAL CONSEQUENCES

The potential impacts associated with the Proposed Action Alternative and No Action Alternative are summarized in **Table 2-2**. The summary is based on information discussed in detail in **Chapter 3** and includes a concise definition of the issues addressed and the potential environmental impacts associated with each alternative.

Table 2-2. Comparison of Potential Environmental Consequences of the Alternatives by Resource

Resource	Proposed Action Alternative	No Action Alternative
Biological Resources	There would be long-term beneficial impacts to vegetation, wildlife, and threatened and endangered species. Approved ongoing management practices such as access control, water facilities, fuel breaks, prescribed burning, and trails are not expected to adversely affect any threatened or endangered species with the implementation of Conditions for Implementing Conservation practices (CICPs).	Under the No Action Alternative, the proposed CREP Agreement would not be implemented and lands that would have been eligible for enrollment would remain unprotected. The potential conversion of grassland to another type of agricultural production or development would reduce vegetative diversity, increasing susceptibility to invasion by exotic species. The benefits of protection and improvement of grassland productivity, reduction in soil erosion, and enhancement of wildlife habitat would not be realized. Conversion to another use would adversely affect threatened, endangered, and sensitive species currently inhabiting these grasslands by reducing or degrading available habitat.
Cultural Resources	Actions in this PEA may have potential direct, indirect, and cumulative effects on cultural resources. Actions that would disturb previously undisturbed areas may result in impacts to known or unknown historic properties and Traditional Cultural Properties. Evaluation of cultural resources impacts for specific lands to be enrolled in CREP, including the identification of previously undisturbed land, is performed through site-specific EEs. Once these specific areas of concern have been identified, per Section 106 of the NHPA, these details would be reviewed in consultation with the South Dakota State Historic Preservation Office, Tribes, and participating state and federal agencies during the planning and implementation phases.	Under the No Action Alternative, the proposed CREP would not be implemented and there would be no protection from conversion of the existing grasslands on the reservation. Under the No Action Alternative, there would be no adverse effect to historic properties as any significant cultural resources would retain their current condition.
Water Resources	Implementation of the proposed CREP Agreement would have long-term beneficial impacts on surface water, wetlands, floodplains, and groundwater. Some installation and maintenance activities may require small-scale construction and land disturbance and the use of agricultural chemicals. The use of Best Management Practices (BMPs) would reduce impacts from land disturbance and would contain sediment	Under the No Action Alternative, the CREP would not be implemented, and current agricultural practices would continue. There would be no impacts to water resources from implementation of the No Action Alternative. The beneficial impacts to surface water, wetlands, floodplains, and groundwater from installing CP88 would not be realized.

Resource	Proposed Action Alternative	No Action Alternative
	within the site. These potential impacts would be short-term, localized, and temporary. Additionally, application of agricultural chemicals in accordance with label requirements would minimize pollutants in runoff.	
Air Quality	Implementation of the proposed CREP Agreement may have a long-term beneficial effect on air quality due to the potential for carbon sequestration. Some installation and maintenance activities may produce dust and exhaust emissions that could have a negligible to minor temporary adverse effect on air quality in localized areas.	Implementation of No Action Alternative would not change existing air quality conditions. The CREP Agreement would not be implemented, and existing grassland practices would continue and air quality conditions would not change. Also, under the No Action Alternative, existing grasslands and shrublands could be converted to uses other than grazing. This could result in increases in GHG emissions and criteria pollutants.
Soils and Topography	Long-term beneficial impacts are expected to occur from stabilization of soils and topography. Short-term disturbances to soils could result from the installation of various structures to implement rotational grazing. These ground disturbing activities may result in temporary minor increases in soil erosion; however, they would be reduced by implementing erosion control BMPs.	Under the No Action Alternative, the proposed CREP would not be implemented. Eligible lands would not be enrolled in the proposed CREP and potential benefits to soils and topography would not occur. The beneficial impacts associated with the expected reduction in erosion would not occur and soil degradation would continue.
Socioeconomics	Implementation of the Proposed Action Alternative would result in long-term beneficial impacts to socioeconomics for agricultural producers. Individual producers would benefit financially from rental rates but would also benefit financially from increased grassland productivity and carrying capacity. Additionally, implementation of the Proposed Action Alternative would result in long-term beneficial impacts to regional socioeconomics. The CREP would result in enhanced wildlife habitat, which would contribute positively to recreational expenditures related to wildlife viewing, hunting, and fishing. The Proposed Action is unlikely to produce significant changes in general population characteristics.	Under the No Action Alternative, the CREP would not be implemented, and current agricultural practices would continue. This alternative would not produce any measurable changes to the general population characteristics of the region as there would be no changes to the sales or spending patterns of the agricultural producers. However, there would be the lost benefits associated with implementing CP88 that include improvements in water quality, soil retention, grassland productivity, carrying capacity, and wildlife habitat. Any regional economic benefits from increased hunting, fishing, and wildlife-watching expenditures would not be realized.

Resource	Proposed Action Alternative	No Action Alternative
Environmental Justice	The majority of the environmental impacts would be beneficial to the region and the producers enrolling land into the CREP. There would be no impact to environmental justice issues from implementation of the Proposed Action Alternative. The Proposed Action Alternative would not substantially affect populations covered by EO 12898 by excluding persons, denying persons benefits, or subjecting persons to discrimination or disproportionate environmental or human health risks.	Under the No Action Alternative, there would be no changes to the existing agricultural lands in the Rosebud Indian Reservation, therefore, implementation of this alternative would not result in disproportionate adverse environmental or health effects on low-income or minority populations. The No Action Alternative would not substantially affect populations covered by EO 12898 by excluding persons, denying persons benefits, or subjecting persons to discrimination or disproportionate environmental or human health risks.

CREP = Conservation Reserve Enhancement Program; PEA = Programmatic Environmental Assessment; NHPA = National Historic Preservation Act; EE = Environmental Evaluation; GHG = Greenhouse gases.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter analyzes the potential impacts on existing environmental conditions associated with the Proposed Action on the Rosebud Indian Reservation. The analysis considers the current, baseline conditions of the affected environment and compares those to the conditions that might occur should FSA implement the Proposed Action Alternative or the No Action Alternative.

A justification for those resources eliminated from analysis is provided in this section. Then, each resource included in the analysis is defined and its evaluation criteria are outlined. Lastly, a description of the existing conditions and a discussion of potential direct, indirect, and cumulative impacts is provided.

3.1 RESOURCE AREAS ELIMINATED FROM ANALYSIS

Several resources were considered relative to the Proposed Action but were not carried forward for detailed analysis. They include resources whose baseline conditions lacked a relationship to, and any potential to be altered by, implementation of the Proposed Action.

3.1.1 *Prime and Unique Farmland*

The Farmland Protection Policy Act was passed by Congress as part of the Agriculture and Food Act of 1981. The Act is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. Grassland CRP is a working lands program that helps farmers enhance the sustainability of their operations while keeping land in agricultural production. CP88 continues to allow agricultural use through haying and grazing provisions and livestock operations. For these reasons, the Proposed Action Alternative is not expected to have adverse effects on Prime and Unique Farmland.

3.1.2 *Noise*

Implementing the Proposed Action Alternative would not permanently increase ambient noise levels at or adjacent to the project area. Noise from heavy equipment is common on agricultural lands and farmlands that could be enrolled in the CREP. The potential for increased noise levels associated with implementing CP88 would be minor, temporary, localized, and would cease once implementation of CP88 is complete.

3.1.3 *Coastal Zone Management and Coastal Barriers*

The proposed CREP for the Rosebud Indian Reservation located in the southern South Dakota is not within or near a designated Coastal Zone Management Area, therefore, the Coastal Zone Management Act of 1972 does not apply. Similarly, the proposed CREP does not include development on coastal barriers, so the Coastal Barrier Resources Act of 1982 does not apply.

3.1.4 *Sole Source Aquifers*

Sole source aquifers are protected under the Safe Drinking Water Act. Special care must be taken to protect aquifers which the U.S. Environmental Protection Agency (USEPA) has designated as sole source aquifers, which are aquifers that supply at least 50 percent of the drinking water consumed in the area overlying the aquifer. There are no designated sole source aquifers in South Dakota (USEPA, 2022).

3.1.5 *Other Protected Resources*

Other protected resources are lands preserved and managed by state or federal governments for the purpose of conservation, recreation, or research. This includes, but is not limited to, National Historic Landmarks, Wetland Management Districts, National Wildlife Refuges, Wild and Scenic Rivers, National Parks, and National Forests. No protected lands were found on Rosebud Indian Reservation, so this resource was dismissed from the analysis.

3.2 ANALYZED RESOURCES AND EVALUATION CRITERIA

The following is provided in this section: a description of general evaluation criteria and impact levels, the list of analyzed resources, and a description of the area of potential effects (APE) of potential consequences for the resources analyzed.

The APE for the resources analyzed in this PEA is the land within the Rosebud Indian Reservation. The specific criteria for evaluating impacts and assumptions for the analyses are presented under each resource area. Evaluation criteria for most potential impacts were obtained from standard criteria; federal, state, or local agency guidelines and requirements; and legislative criteria.

Impacts are defined in general terms and are qualified as adverse or beneficial, and as short- or long-term. For the purposes of this PEA, short-term impacts are generally considered those impacts that would have temporary effects. Long-term impacts are generally considered those impacts that would result in permanent effects. Adverse impacts are defined as:

- negligible, the impact is localized and not measurable or at the lowest level of detection;
- minor, the impact is localized and slight but detectable;
- moderate, the impact is readily apparent and appreciable; or
- major, the impact is severely adverse or highly noticeable and considered to be significant.

Major impacts are considered significant and receive the greatest attention in the decision-making process. The significance of an impact is assessed based on the relationship between context and intensity. Major impacts require application of a mitigation measure to achieve a less than significant impact. Moderate impacts may not meet the criteria to be classified as significant, but the degree of change is noticeable and has the potential to become significant if not effectively mitigated. Minor impacts have little to no effect on the environment and are not easily detected; impacts defined as negligible are the lowest level of detection and generally not measurable. Beneficial impacts provide desirable situations or outcomes.

Impacts and their significance are discussed for each resource, including any best management practices (BMPs) as applicable for reducing potential adverse environmental impacts. Resource areas that are evaluated include: biological resources, cultural resources, water resources, air quality, soils and topography, other protected resources, socioeconomics, and environmental justice. Reasonably foreseeable future actions that could result in increased impacts to these environmental resources in conjunction with the Proposed Action are discussed in **Appendix C**.

3.3 BIOLOGICAL RESOURCES

3.3.1 *Definition of Resource*

Biological resources include all plant and animal species and the habitats in which they occur. For this analysis, biological resources are divided into the following categories: vegetation, wildlife, and threatened or endangered species and critical habitat. Vegetation and wildlife refer to the plant and animal species, both native and introduced, which characterize an area. For this analysis, noxious weeds are not discussed since CREP contracts require conservation plans that include control of such species. Threatened or endangered species are those federally listed and protected by the ESA. The USFWS designates critical habitat as essential for the recovery of species specifically listed as threatened or endangered, and, like those species, critical habitat is protected under the ESA.

Ecoregions are areas of relatively homogenous soils, vegetation, climate, and geology, each with associated wildlife adapted to that region. South Dakota consists of two Commission for Environmental Cooperation (CEC) Level I ecoregions, namely the Great Plains and Northwestern Forested Mountains. The Rosebud Indian Reservation is within the Great Plains ecoregion and consists of mixed-grass prairie lands. Further subdivisions of ecoregions (Level IV) within the Rosebud Sioux CREP area include the Subhumid Pierre Shale Plains, Keya Paha Tablelands, and the Sand Hills. **Table 3-1** presents a brief description of the major characteristics of these regions.

3.3.2 Affected Environment

3.3.2.1 Vegetation

The Rosebud Indian Reservation is located on the southern border of South Dakota on semi-arid rolling hills cut by gullies and drainages which flow to the northeast. The majority of land cover is grassland/herbaceous or cultivated crops. Big bluestem (*Andropogon gerardii*), sand bluestem (*Andropogon hallii*), little bluestem, (*Schizachyrium scoparium*), prairie sandreed (*Calamovilfa longifolia*), and needle-and-thread grass (*Hesperostipa comata*) are dominant components of these grassland prairies (Johnson and Larson, 1999).

Table 3-1. Level IV Ecoregions within the Rosebud Indian Reservation

Ecoregion	% Area	Description
Keya Paha Tablelands	89	The Keya Paha Tablelands form a perimeter of sandy, level to rolling plains that surround the steeper dune topography of the Nebraska Sand Hills. Ponderosa pines grow in the drainages in the hilly land east of the Pine Ridge escarpment. Millet and corn grow on the level land, but the sandy soil limits non-irrigated agriculture.
Sand Hills	8.5	The profile of wavelike dunes on the horizon and a broad expanse of sky characterizes this northern outpost of the Nebraska Sand Hills. Cattle ranching is the predominant land use in the region. The prairie grass associations are specific to the sandy environment, but the fragile vegetative cover is susceptible to blowouts, prompting ranchers to employ rotational grazing strategies to maintain it.
Subhumid Pierre Shale Plains	2.4	A continuous vegetative cover is essential to keep the Subhumid Pierre Shale Plains intact. Tilling the rolling hillsides risks wind and water erosion. Stream channels are deeply incised in its soft, black shale soils and slumping is common along exposed banks.

Sources: USGS, 2006; Bryce et al. 1996.

3.3.2.2 Wildlife

The Rosebud Indian Reservation is inhabited by numerous wildlife species. Many of these species are relatively common throughout South Dakota and include bird species such as the red-tailed hawk (*Buteo jamaicensis*), mallard (*Anas platyrhynchos*), blue-winged teal (*Spatula discors*), canvasback (*Aythya valisineria*), ring-necked pheasant (*Phasianus colchicus*), downy woodpecker (*Picoides pubescens*), least flycatcher (*Empidonax minimus*), cliff swallow (*Petrochelidon pyrrhonota*), white breasted nuthatch (*Sitta carolinensis*), eastern bluebird (*Sialia sialis*), warbling vireo (*Vireo gilvus*), and bobolink (*Dolichonyx oryzivorus*) (SDGFP, 2014).

Common mammals throughout South Dakota include the white-tailed deer (*Odocoileus virginianus*), mule deer (*Odocoileus hemionus*), coyote (*Canis latrans*), red fox (*Vulpes vulpes*), eastern cottontail (*Sylvilagus floridanus*), white-tailed jackrabbit (*Lepus townsendii*), thirteen-lined ground squirrel (*Ictidomys tridecemlineatus*), western harvest mouse (*Reithrodontomys megalotis*), white-footed mouse (*Peromyscus leucopus*), and the meadow vole (*Microtus pennsylvanicus*). Wildlife with habitat requirements more specific to the Rosebud Indian Reservation include the bison (*Bison bison*), antelope (*Antilocapra americana*), wild turkey (*Meleagris gallopavo*), badger (*Taxidea taxus*), and wild turkey (*Meleagris gallopavo*) (SDGFP, 2014).

In early 2020 REDCO, the economic arm of the reservation, secured a lease for nearly 28,000 acres of native grassland for the Wolakota Buffalo Range, and in October 2020 released the first 100 buffalo (Wolakota, 2021). In the spring of 2022, the herd was expected to surpass 1,000 animals, and is now the largest Native-managed bison herd in North America (Wolakota, 2022).

Fish species found on the reservation include channel catfish (*Ictalurus punctatus*), largemouth bass (*Micropterus salmoides*), smallmouth bass (*Micropterus dolomieu*), northern pike (*Esox lucius*), yellow

perch (*Perca flavescens*), sunfish (*Lepomis macrochirus*), black crappie (*Pomoxis nigromaculatus*), bullhead (*Ameiurus nebulosus*), muskellunge (*Esox masquinongy*), saugeye (*Sander canadensis x vitreus*), and walleye (*Sander vitreus*) (Rosebud Sioux Game, Fish & Parks, 2022).

3.3.2.3 Threatened and Endangered Species and Critical Habitat

There are six species of federally threatened, endangered or candidate species known to occur in the vicinity of the Rosebud Indian Reservation (USFWS, 2022). **Table 3-2** lists the species that could occur in the project area and the federal listing status. The listed and candidate species include one mammal, two birds, two insects, and one plant.

Table 3-2. List of Threatened or Endangered Species and Critical Habitat on the Rosebud Indian Reservation

Species	Federal Status	Critical Habitat on the reservation?
Northern Long-eared Bat (<i>Myotis septentrionalis</i>)	Threatened	No
Red Knot (<i>Calidris canutus rufa</i>)	Threatened	No
Whooping Crane (<i>Grus americana</i>)	Endangered	No
American Burying Beetle (<i>Nicrophorus americanus</i>)	Threatened	No
Monarch Butterfly (<i>Danaus plexippus</i>)	Candidate	No
Western Prairie Fringed Orchid (<i>Platanthera praeclara</i>)	Threatened	No

Source: USFWS, 2022.

State-listed species known to occur in the region include: bald eagle (*Haliaeetus leucocephalus*), osprey (*Pandion haliaetus*), peregrine falcon (*Falco peregrinus*), banded killifish (*Fundulus diaphanous*), blacknose shiner (*Notropis heterolepis*), finescale dace (*Chrosomus neogaeus*), longnose sucker (*Casostomus catostomus*), northern pearl dace (*Margariscus nachtriebi*), northern redbelly dace (*Chosomus eos*), sicklefin chub (*Macrhybopsis meeki*), southern redbelly dace (*Chrosomus eruthogaster*), and sturgeon chub (*Macrhybopsis gelida*) (SDGFP, 2014).

State species of greatest conservation need known to occur in the region include: American white pelican (*Pelecanus erythrorhynchos*), black tern (*Chlidonias niger*), chestnut-collared longspur (*Calcarius ornatus*), ferruginous hawk (*Buteo regalis*), greater prairie-chicken (*Tempanuchus cupido*), burrowing owl (*Athene cunicularia*), Baird's sparrow (*Ammodramus bairdii*), lark bunting (*Calamospiza melanocorys*), long-billed curlew (*Numenius americanus*), marbled godwit (*Limosa fedoa*), northern goshawk (*Accipter gentilis*), Sprague's pipit (*Anthus spragueii*), trumpeter swan (*Cygnus buccinator*), willet (*Tringa semipalmata*), Wilson's phalarope (*Phalaropus tricolor*), northern river otter (*Lontra canadensis*), silver-haired bat (*Lasioncteris noctivagans*), lesser earless lizard (*Holbrookia maculata*), many-lined skink (*Plestiodon mutivirgatus*), western box turtle (*Terrapene ornata*), Iowa skipper (*Atrytone arogos iowa*), regal fritillary (*Speyeria idalia*), blackside darter (*Percina maculata*), hornyhead chub (*Nocomis biguttatus*), lake chub (*Couesius plumbeus*), logperch (*Percina caprodes*), mountain sucker (*Catostomus platyrhynchus*), carmine shiner (*Notropis percbromus*), and central mudminnow (*Umbra limi*) (SDGFP, 2014).

3.3.3 Environmental Consequences Evaluation Criteria

Impacts to biological resources would be considered significant if implementation of the Proposed Action resulted in reducing wildlife populations to a level of concern, removing land with unique vegetation characteristics, or an incidental or otherwise take of a protected species or critical habitat. "Take" is defined as, "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

3.3.4 Environmental Consequences – Proposed Action Alternative

The assessment of impacts in the following sections is general in nature because the location, size, and number of tracts that would be enrolled in CREP is currently unknown. This information would be determined by individual contracts. Once eligible lands are identified, a site-specific EE would be completed prior to executing a contract. The EE is completed by NRCS or an approved TSP during the conservation planning process and approved by FSA. The site-specific evaluation process includes collecting and documenting the data, consultation, and permitting needed for FSA to ensure compliance with the ESA and other related laws, regulations, and EOs. It includes identifying the presence of migratory birds, invasive species, and endangered or threatened species. FSA reviews the EE for compliance with a myriad of environmental laws and mandates and completes any required consultations needed for site specific actions. Upon completion of consultations, FSA will sign the EE as complete.

3.3.4.1 Vegetation

Implementing the Proposed Action is expected to result in beneficial long-term impacts to vegetation. Implementation of Conservation Practice CP88, Permanent Grasses and Legumes, would maintain existing vegetative cover of either introduced or native grasses and legumes for 10 to 15 years. Components of CP88 may include interior fencing, access control, water facilities, fuel breaks, trails, and prescribed burning. These practices would result in a reduction in soil erosion and enhancement of vegetation quality and quantity on the enrolled lands.

3.3.4.2 Wildlife

Impacts of the Proposed Action on wildlife would be beneficial and long-term. Although, enhanced wildlife habitat is not a goal of the CREP Agreement, wildlife would generally benefit from improved grassland productivity and reduced erosion. Grasslands enrolled in federal long-term set-aside programs, such as the CRP in the United States, provide important nesting habitat for grassland birds (Allen and Vandever, 2012; Shaffer and DeLong, 2019). Although CRP grasslands are floristically less diverse than native prairie, several declining grassland bird species occur in CRP fields during the breeding season, such as dickcissel (*Spiza americana*), lark bunting (*Calamospiza melanocorys*), Baird's sparrow, grasshopper sparrow (*Ammodramus savannarum*), clay colored sparrow (*Spizella pallida*), and bobolink (Johnson and Schwartz, 1993; Johnson and Igl, 1995; Herkert, 1998). Ryan et al. (1998) reviewed literature on bird use of CRP fields and determined that more than 90 species have been reported using CRP fields during the breeding season and at least 42 species have nested in these habitats. Approved ongoing management practices such as installation of fencing or livestock water facilities, and prescribed burning would be performed outside PNS dates to minimize impacts to birds that use CRP lands.

Studies clearly show that the CRP has provided benefits for duck production in the Prairie Pothole Region (Reynolds et al., 2007). Since 1992, net increases of about two million additional ducks per year were produced in the Prairie Pothole Region of North Dakota, South Dakota, and northeastern Montana. This represents an estimated 30 percent increase in duck population compared to the same area without CRP cover on the landscape. Increased duck nest success was documented in all major habitats throughout the Prairie Pothole Region between 1992 and 2004.

Nielson (et.al. 2006) estimated a 22 percent increase in ring-necked pheasant counts along a Breeding Bird Survey route associated with every increase of 788 acres of CRP herbaceous vegetation within a 1,000-meter buffer around the survey route. Nielson also reported that other grassland species would be expected to have increases in breeding populations due to the presence of CRP fields in their breeding range, including sharp-tailed grouse (*Tympanuchus phasianellus*), sedge wren (*Cistothorus platensis*), and common yellowthroat (*Geothlypis trichas*).

Like many wildlife species across South Dakota, deer populations responded significantly to the presence of large undisturbed habitat blocks created across much of the landscape (SDGFP, 2017). Studies pre-dating CRP emphasized the importance of woodlands, wetlands, and riparian areas as key fawning areas of white-tailed deer in east-central South Dakota, and agricultural fields as key late-summer foraging and security areas (Sparrowe and Springer, 1970). CRP lands also provide important bedding habitat to fawning does (Grovenburg et al., 2012). In the Prairie Pothole Region of eastern South Dakota, Robling (2011)

documented that white-tailed deer use CRP grass cover in significantly higher proportions than other available cover types.

The objectives of the Rosebud Sioux Tribe CREP Agreement to maintain, improve, and protect grassland productivity and reduce erosion in riparian areas, would benefit all wildlife, including some state-listed species that rely on grasslands and clean water, such as the bald eagle, osprey, peregrine falcon, and several fish species. Species of Greatest Conservation Need that prefer grazed grasslands include the burrowing owl, chestnut-collared longspur, Baird's sparrow, and Sprague's pipit.

3.3.4.3 Threatened and Endangered Species and Critical Habitat

Impacts to threatened or endangered species would be beneficial and long-term. Prior to enrollment in the program, site-specific EEs would identify the potential for protected species to be present and any required conditions for implementing CP88 to ensure that the Proposed Action would be covered under the USDA's Programmatic Biological Assessment (see **Appendix C** for the BA). For the American burying beetle, a survey would be required to determine if the species is present; if found, then an informal site-specific consultation would need to be completed.

Similar to vegetation and wildlife, some threatened and endangered species (both federal and state listed) are expected to experience long-term benefits from the maintenance of grassland productivity and reduction in soil erosion. It is unlikely that there would be any long-term adverse effects on threatened and endangered species from the Proposed Action since none of these species benefits from the conversion of grassland habitat to other agricultural uses, such as cropland, or development uses.

Approved ongoing management practices such as access control, water facilities, fuel breaks, prescribed burning, and trails are not expected to adversely affect any threatened or endangered species with the implementation of Conditions for Implementing Conservation Practices (CICPs). These conditions would be implemented to minimize impacts to the northern long-eared bat, western prairie fringed orchid, and the American burying beetle. If necessary, due to presence of individuals or appropriate habitat, CICPs would also be implemented for red knot and whooping crane (USDA, 2016).

3.3.5 *Environmental Consequences – No Action Alternative*

3.3.5.1 Vegetation

Under the No Action Alternative, the proposed CREP Agreement would not be implemented. Lands that would have been eligible for enrollment would remain unprotected. The potential conversion of grassland to another type of agricultural production or development would reduce vegetative diversity, increasing susceptibility to invasion by exotic species.

3.3.5.2 Wildlife

Under the No Action Alternative, the CREP Agreement would not be implemented. Eligible lands would not be enrolled in the CREP. The benefits of protection and improvement of grassland productivity, reduction in soil erosion, and enhancement of wildlife habitat would not be realized.

3.3.5.3 Threatened and Endangered Species and Critical Habitat

Under the No Action Alternative, the proposed Rosebud Sioux CREP Agreement would not be implemented. Lands that would have been eligible for enrollment would remain vulnerable to conversion to other uses. Conversion to another use would adversely affect threatened, endangered, and sensitive species currently inhabiting these grasslands by reducing or degrading available habitat.

3.4 CULTURAL RESOURCES

3.4.1 *Definition of Resource*

Cultural resources are any prehistoric or historic district, site, building, structure, or object considered important to a culture or community for scientific, traditional, religious, or other purposes. These resources are protected and identified under several federal laws and EOs.

Cultural Resources include the following subcategories:

- Archaeological (i.e., prehistoric or historic sites where human activity has left physical evidence of that activity, but no structures remain standing);
- Architectural (i.e., buildings or other structures or groups of structures, or designed landscapes that are of historic or aesthetic significance); and
- Traditional Cultural Properties (resources of traditional, religious, or cultural significance to Native American Tribes and other communities).

Significant cultural resources are called historic properties and are listed on the National Register of Historic Places (NRHP) or have been determined to be eligible for listing. To be eligible for the NRHP, historic properties must be 50 years old and have national, state, or local significance in American history, architecture, archaeology, engineering, or culture. They must possess sufficient integrity of location, design, setting, materials, workmanship, feeling, and association to convey their historical significance and meet at least one of four criteria (National Park Service [NPS], 1997):

- Associated with events that have made a significant contribution to the broad patterns of our history (Criterion A);
- Associated with the lives of persons significant in our past (Criterion B);
- Embody distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction (Criterion C); and/or
- Have yielded or be likely to yield information important in prehistory or history (Criterion D).

Properties that are less than 50 years old can be considered eligible for the NRHP under Criterion Consideration G if they possess exceptional historical importance. Those properties must also retain historic integrity and meet at least one of the four NRHP Criteria for Evaluation (Criterion A, B, C, or D). The term “Historic Property” refers to National Historic Landmarks, NRHP-listed, and NRHP-eligible cultural resources. If cultural resources have not been evaluated and determined eligible, it is assumed they are eligible (until proven otherwise) and treated as such.

Federal laws protecting cultural resources include the Archaeological and Historic Preservation Act of 1960 as amended, the American Indian Religious Freedom Act of 1978, the Archaeological Resources Protection Act of 1979, the Native American Graves Protection and Repatriation Act of 1990, and the NHPA, as amended through 2016, and associated regulations (36 CFR Part 800). The NHPA requires federal agencies to consider effects of federal undertakings on historic properties prior to making a decision or taking an action and integrate historic preservation values into their decision-making process. Federal agencies fulfill this requirement by completing the Section 106 consultation process, as set forth in 36 CFR Part 800. Section 106 of the NHPA also requires agencies to consult with federally recognized American Indian Tribes with a vested interest in the area where the project is occurring.

Section 106 of the NHPA requires all federal agencies to seek to avoid, minimize, or mitigate adverse effects on historic properties (36 CFR § 800.1[a]). For cultural resource analysis, APE is defined as the “geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist,” (36 CFR § 800.16[d]) and thereby diminish their historic integrity. The APE defined to analyze direct and indirect effects for this PEA covers the entirety of the Rosebud Indian Reservation, encompassing approximately 890,240 acres covering the entirety of Todd County in south-central South Dakota (see **Figure 1-2**).

3.4.2 *Affected Environment*

South Dakota exhibits extreme physiographic diversity, encompassing such landscapes as the Black Hills and Badlands in the west; the Missouri River Trench center-state, the Prairie Pothole Region in the northeast; and the James and Big Sioux River valleys in the east. As such, prehistoric human groups developed special patterns of adaptation to survive in each of these unique environments. South Dakota was home to diverse lifeways covering a time span of some 14,000 years. The state has been divided into 24 archaeological regions to help capture these localized differences in environment and lifeway adaptations. The APE for the CREP analyzed in this PEA includes portions of the White River Badlands, Lower White, and Sand Hills archaeological regions (Sundstrom, 2018).

There are approximately 19,000 archaeological sites recorded in South Dakota. They represent a wide range of purpose and function including hunting and animal processing, temporary residence, tool-stone gathering and working, mounds, earth lodge villages, homesteading, stock-raising, eagle trapping, and religious activities. Pre-European contact sites are typically categorized as artifact scatters, hearths, villages, fortifications, burials, bison or antelope kill sites, eagle-trapping pits, tool-stone procurement and tool manufacture, rock cairns, rock shelters, stone alignments, rock art, stone circles, vision quest locales, and timber lodges. Contact-era and recent sites are most commonly categorized as farmsteads, roads, railroads, foundations, depressions, alignments, burials, cairns, cabins, trading posts, school foundations, town sites, dams, dumps, earthworks, fence-lines, forts, mines, quarries, industrial sites, monuments, and wells or cisterns (Sundstrom, 2018).

The distribution of archaeological sites is geographically patterned. For example, stone circles (also known as tipi rings) and artifact scatters that represent campsites and food processing areas occur in valleys, on toe slopes, and on mesa tops. Bone beds from game drives occur in deep soils of draws, alluvial fans, and toe slopes. Vision quest markers, cairns, and eagle-trapping pits occur on the rimrocks, while rock art is common in the overhangs below the rim and on other more resistant sandstone outcroppings. Localities with deeper soils, including alluvial fans, valley floodplains, mesa tops, and rock overhangs often contain buried, deeply stratified sites that have the greatest scientific potential for both archaeological studies and research on past environmental conditions.

The APE is part of the Great Sioux Reservation, established by a treaty signed at Fort Laramie in 1868. This reservation was composed of several different communities including the current Rosebud Indian Reservation. It generally encompassed the western half of present-day South Dakota, including the Black Hills, land sacred to the Sioux Nation. Once gold was found in the Black Hills; however, the treaty proved inconvenient. The US government confiscated the Black Hills in 1877 and Euro-American prospectors and settlers flooded into western South Dakota. After the gold rush, most of the area outside the Black Hills remained open range through the end of the nineteenth century (Clark, n.d.; Sundstrom, 2018).

Of significance to this area is the Wounded Knee Massacre. In 1890, some among the Sioux Tribes began following the Ghost Dance Religion, a complex blend of tradition beliefs with influences from evangelical Christianity. The followers, including members of Tribes from across the American Southwest, West, and Midwest, reacting to treatment and policies of the US government, believed that by performing rituals, they could affect the removal of white settlers, reunite with their deceased relatives, return to their former ways, and generally regain some agency over their lives (NPS, 1992; Sundstrom, 2018; Utley 1993; Warren, 2021). The Ghost Dance ended in tragedy for the Sioux at Wounded Knee (Sundstrom, 2018).

The US government became militant in their need to break up these dances seen as “disruptive” and “threatening” to US interests across huge portions of the country. In November 1890, President Harrison sent the US Army to the Sioux reservation lands as a show of military strength and to support local officials and settlers. This action was part of a larger “Ghost Dance War” the largest military campaign undertaken since the Civil War. In reality, the army was descending upon some of the most remote and impoverished communities in the country (Warren, 2021).

On December 28th, a small band of Ghost Dancers surrendered to Colonel James Forsyth's Seventh Cavalry at Wounded Knee Creek. The next morning soldiers descended upon the nearby Sioux community to disarm them. At the accidental discharge of a firearm, fighting broke out. By the time it stopped, nearly 300 Sioux Indians were killed, many of them women and children. From the perspective of US military, the

Sioux Campaign was perceived as the last Indian War with Wounded Knee representing the last major confrontation. Wounded Knee was effectively the end of armed resistance to Euro-American expansion (NPS, 1992; Sundstrom, 2018; Warren, 2021).

There are 1,379 historic properties listed on the NRHP in South Dakota, including the Wounded Knee National Historic Landmark. Though thousands of archaeological sites have been recorded in the state, and some portion of this number certainly retain integrity sufficient to convey significance for NRHP eligibility, most of the properties formally listed on the register are architectural resources. There are four historic properties listed on the NRHP within Todd County: one archaeological site (Spotted Tail Gravesite), one historic district (St. Francis Mission), and two architectural resources (He Dog Consolidated School and Rosebud Hotel). This number is misleadingly low and skewed towards architectural resources, but as noted at the state level, known distribution patterns suggest there is a high potential for archaeological sites to occur within the APE (NPS, n.d.; Sundstrom, 2018).

In addition to archaeological sites and architectural resources, many places sacred to Native Americans exist in South Dakota. Some of these sites lack any obvious signs of human use and may include hills, springs, caves, large glacial erratics, and other natural landscape features that Native American groups currently hold or previously held sacred to their cultural traditions, as well as some culturally modified places, such as those with petroglyphs and pictographs. Some of these sites would also be considered traditional cultural properties (TCPs) for purposes of formal evaluation of sites for inclusion in the NRHP under federal law (NHPA of 1966 [Public Law 89-665]). At present, TCPs are not recorded as archaeological sites in South Dakota unless they contain artifacts or features (Sundstrom, 2018).

Ten federally recognized Tribes were consulted in development of this CREP PEA including the Apache Tribe of Oklahoma, Cheyenne and Arapaho Tribes, Oklahoma, Cheyenne River Sioux Tribe of the Cheyenne River Reservation, South Dakota, Crow Creek Sioux Tribe of the Crow Creek Reservation, South Dakota, Fort Belknap Indian Community of the Fort Belknap Reservation of Montana, Lower Brule Sioux Tribe of the Lower Brule Reservation, South Dakota, Oglala Sioux Tribe, Rosebud Sioux Tribe of the Rosebud Indian Reservation, South Dakota, Santee Sioux Nation, Nebraska, and the Standing Rock Sioux Tribe of North and South Dakota. No information on TCPs or sites of traditional, cultural, or religious significance have been identified to date as a result of this consultation.

3.4.3 Environmental Consequences Evaluation Criteria

Adverse effects on cultural resources might include physically altering, damaging, or destroying all or part of a resource or altering characteristics of the resource that make it eligible for listing in the NRHP. Those effects can include introducing visual or audible elements that are out of character with the property or its setting; neglecting the resource to the extent that it deteriorates or is destroyed; or the sale, transfer, or lease of the property out of agency ownership (or control) without adequate enforceable restrictions or conditions to ensure preservation of the property's historic significance. For this PEA, an effect is considered adverse if it alters the integrity of a NRHP-listed or eligible resource or if it has the potential to adversely affect TCPs and the practices associated with the property.

3.4.4 Environmental Consequences – Proposed Action Alternative

The intent of this PEA is to analyze the potential environmental impacts from implementing the Rosebud Sioux Tribe CREP within a geographical area 890,240 acres (though only 600,000 acres can be enrolled at one time). Given the purpose, need, scope and scale of the Proposed Action, a meaningful inventory of historic properties and determination of effects cannot be provided. There is a high potential, however, for recorded and unidentified significant archaeological sites to exist within the CREP lands, especially those near water sources (rivers and streams, springs, marshes), areas of known habitation or other cultural activities, certain topographic or geologic features, and prehistoric and historic trails. There is also the potential for significant architectural resources and TCPs.

Should the Proposed Action Alternative be implemented, up to 600,000 acres of eligible land would be enrolled in CP88 to protect existing grasslands from conversion to other uses. The Proposed Action would mainly include maintenance of grassland and rotational grazing. However, some infrequent actions like digging to bury water pipelines, could disturb previously undisturbed areas and may result in impacts to

known or unknown historic properties and TCPs. Evaluation of cultural resources impacts for specific lands to be enrolled in the CREP, including the identification of previously undisturbed land, is performed through site-specific agreements. Once specific areas of concern have been identified, per Section 106 of the NHPA, FSA will review these details in consultation with the South Dakota State Historic Preservation Office (SHPO), Tribal Historic Preservation Officer (THPO), Tribes, and participating state and federal agencies during the planning and implementation phases. This includes definition of specific APEs, development of historic properties inventories, determination of effects to historic properties, and plans for mitigation of adverse effects (as appropriate). This work would also require a Class I literature search to determine if previous cultural resource inventories have been conducted on these properties and if any further investigations are warranted.

To summarize, the cultural resources analysis in this PEA concludes that the Proposed Action Alternative may have direct, indirect, and cumulative effects on cultural resources. Site-specific agreements would evaluate the potential for an individual CRP contract to impact cultural resources. The following would apply to individual CRP contracts:

- All future work initiated under the CREP and associated contracts would meet required federal and state historic preservation statutes, regulations, and guidelines. Any permitting or ground-disturbing actions would be preceded by consultation with South Dakota SHPO, THPOs, and Tribal representatives and followed by archival and field investigations as warranted.
- Potential indirect, direct, and cumulative adverse effects on significant cultural resources would be determined and mitigation plans developed for the protection of historic properties, the treatment of TCPs, and unanticipated discoveries.
- Some locations would carry a higher potential for cultural and paleontological resources. Installation of CP88 may require participation by, and consultation with, multiple public and private agencies.

3.4.5 Environmental Consequences – No Action Alternative

Under the No Action Alternative, the proposed CREP would not be implemented and there would be no protection from conversion of the existing grasslands on the reservation. Under the No Action Alternative, there would be no adverse effect to historic properties as any significant cultural resources would retain their current condition.

3.5 WATER RESOURCES

3.5.1 Definition of Resource

Water resources are natural and man-made sources of water that are available for use by, and for the benefit of, humans and the environment. Water resources relevant to the Proposed Action include surface water, wetlands, floodplains, and groundwater. Evaluation of water resources examines the quantity and quality of the resource and its demand for various purposes and ensures compliance with the CWA of 1972 (33 [US] Code [U.S.C.] § 1251 et seq.). Each sub-section below first defines the resource and then describe the existing conditions and potential environmental consequences for that resource.

3.5.2 Affected Environment

3.5.2.1 Surface Water and Wetlands

Surface water includes natural, modified, and man-made water confinement and conveyance features above groundwater that may or may not have a defined channel and discernable water flow. These features are generally classified as streams, springs, wetlands, natural and artificial impoundments (e.g., ponds, lakes), and constructed drainage canals and ditches.

The CWA regulates discharges of pollutants into surface waters of the United States. Jurisdictional waters, including surface water resources as defined in 33 Code of Federal Regulations § 328.3, are regulated under § 401 and § 404 of the CWA and § 10 of the Rivers and Harbors Act. Man-made features not directly

associated with a natural drainage, such as upland stock ponds and irrigation canals constructed in uplands, are generally not considered jurisdictional waters. The CWA establishes federal limits, through the National Pollutant Discharge Elimination System (NPDES) permit process, for regulating point (end of pipe) and nonpoint (e.g., stormwater) discharges of pollutants into the waters of the United States and quality standards for surface waters. The term “waters of the United States” has a broad meaning under the CWA and incorporates deep water aquatic habitats and special aquatic habitats (including wetlands).

There are portions of three major watersheds on the Rosebud Indian Reservation - the Little White River watershed, the Keya Paha River watershed, and the Middle Niobrara watershed. About 51 percent of Todd County is drained by the White River and its tributaries and about 49 percent of Todd County is drained by tributaries of the Niobrara River, which includes the Keya Paha River (Carter, 1998). Other significant water features on the reservation include White Lake, Antelope Lake, Antelope Creek, and Cut Meat Creek. The surface water features on the reservation are displayed in **Figure 3-1**. The mean annual discharge for waterways with USGS gages on the reservation are the following: 65 cubic feet per second (cfs) for the Little White River near Vetala, 127 cfs for the Little White River near Rosebud, and 48 cfs for the Keya Paha River near Keyapaha, which is located just outside the reservation (USGS, 2022a; USGS, 2022b; USGS, 2022c).

According to the 2022 *South Dakota Integrated Report for Surface Water Quality Assessment*, several segments of the Little White River and several tributaries to the Little White River are impaired for *E. coli* bacteria. The Keya Paha River is not supporting its designated uses due to total suspended solids (TSS) and *E. coli*. Land use along the Keya Paha River is primarily agriculture. Livestock grazing in the riparian or shoreline areas has been identified as the primary source of bacteria. There are no point source discharges to the Keya Paha River. A Total Maximum Daily Load (TMDL) has been approved for the Keya Paha River to address the contaminants (SDDANR, 2022).

Wetlands are an important natural system and habitat because of the diverse biologic and hydrologic functions they perform. These functions include water quality improvement, groundwater recharge and discharge, pollution mitigation, nutrient cycling, wildlife habitat detention, and erosion protection. Wetlands are protected as a subset of the “the waters of the United States” under Section 404 of the CWA. Section 404(b)(1) of the CWA directs the USEPA to develop guidelines for the placement of dredged or fill material (33 U.S.C. § 1341[b]). These guidelines developed by USEPA are known as the “404(b)(1) Guidelines” and are located at 40 CFR Part 230. The stated purpose of the Guidelines is to “restore and maintain the chemical, physical, and biological integrity of waters of the United States through the control of discharges of dredged or fill material” (40 CFR § 230.1[a]). Federal protection of wetlands is also promulgated under EO 11990, Protection of Wetlands, the purpose of which is to reduce adverse impacts associated with the destruction or modification of wetlands. This order directs federal agencies to provide leadership in minimizing the destruction, loss, or degradation of wetlands. The United States Army Corp of Engineers (USACE) administers Section 404 of the CWA and in South Dakota has primary jurisdictional authority to regulate wetlands and waters of the United States.

In 2009, South Dakota had an estimated 1,870,790 acres of shallow water wetlands (Dahl, 2014). The total number of wetlands in South Dakota declined by 2.8 percent from 1997 to 2009 (Dahl, 2014). Small temporary wetlands comprised the primary type of emergent wetland loss. South Dakota did exhibit gains in all other emergent wetland classes, especially larger seasonal and semipermanent classes between 1997 and 2009. The wetland acreage estimates provided by Dahl (2014) represent the most recent documentation of wetland extent available for South Dakota. Geographic Information Systems (GIS) data from the USFWS’ National Wetland Inventory indicates that there are 18,616 acres of wetlands within the reservation.

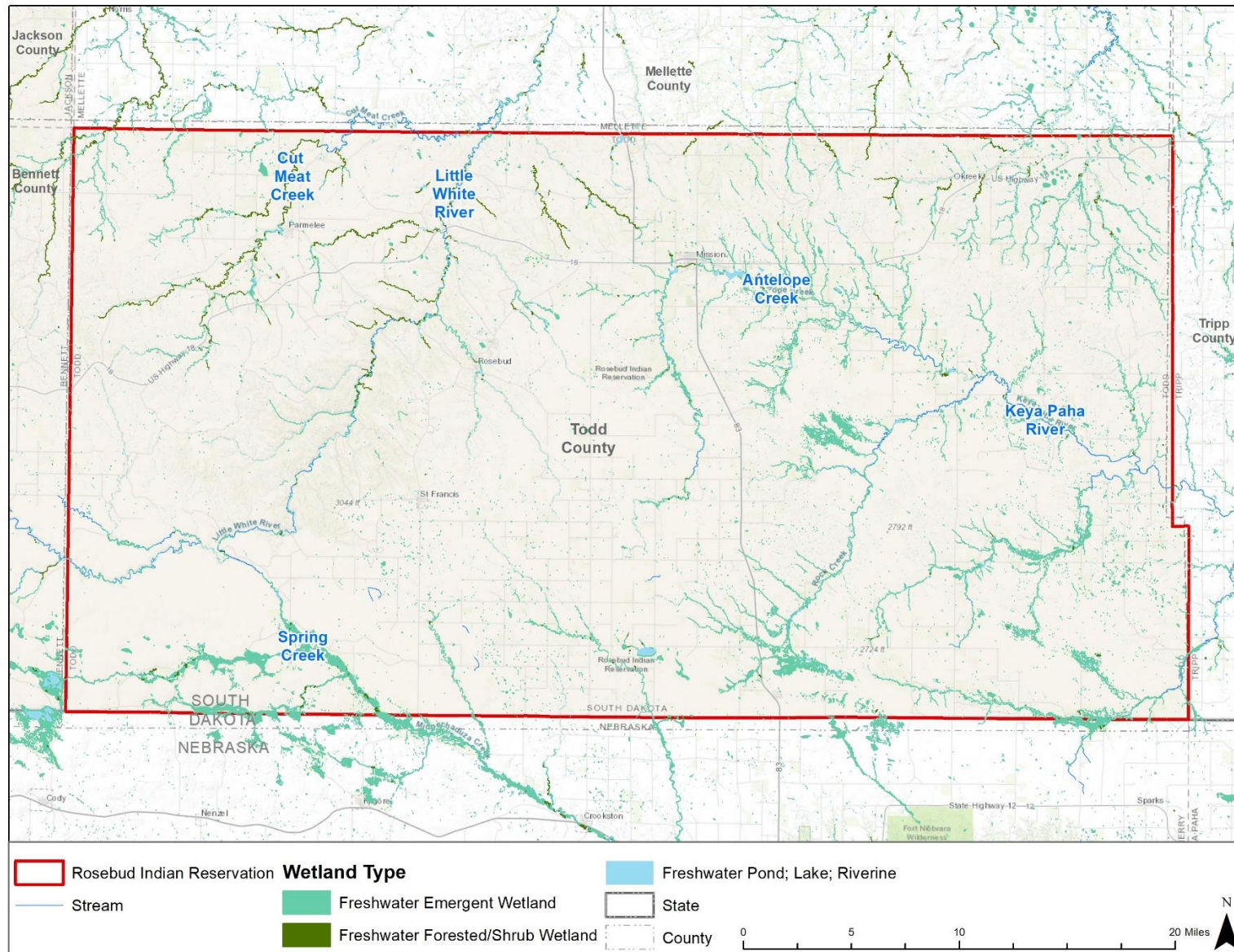


Figure 3-1. Surface Water on the Rosebud Indian Reservation

3.5.2.2 Floodplains

Floodplains are areas of low, level ground present along rivers, stream channels, or coastal waters that are subject to periodic or infrequent inundation due to rain or melting snow. Floodplain ecosystem functions include natural moderation of floods, flood storage and conveyance, groundwater recharge, nutrient cycling, water quality maintenance, and provision of habitat for a diversity of plants and animals. Flood potential is evaluated by the Federal Emergency Management Agency, which defines the 100-year floodplain as an area within which there is a 1 percent chance of inundation by a flood event in a given year, or a flood event in the area once every 100 years. The risk of flooding is influenced by local topography, the frequency of precipitation events, the size of the watershed above the floodplain, and upstream development. EO 11988, *Floodplain Management* (42 FR 26951, 1979), requires that federal agencies: "...take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains..."

Federal agencies are required to avoid, to the extent possible, adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development. Additionally, all earthmoving, grading, and construction in a Special Flood Hazard Area (as defined by the Federal Emergency Management Agency) would require a Floodplain Development Permit to ensure compliance with the National Flood Insurance Program regulations.

A search of the National Oceanic and Atmospheric Administration's Storm Events Database indicates that there have been 15 floods/flash flood events in Todd County since 1996 (NOAA, 2022).

3.5.2.3 Groundwater

Groundwater exists in the saturated zone below the ground surface that collects and flows through permeable zones in aquifers. Groundwater is an essential resource that discharges to surface water supplying baseflow and is used for drinking, irrigation, and industrial purposes. Groundwater typically can be described in terms of depth from the surface, aquifer or well capacity, water quality, recharge rate, and surrounding geologic formations.

Groundwater quality and quantity are regulated under several federal and state programs. Groundwater resources are regulated on the federal level by the USEPA under the Safe Drinking Water Act (SDWA), 42 U.S.C. § 300f et seq. The federal Underground Injection Control regulations, authorized under the SDWA, require a permit for the discharge or disposal of fluids into a well. The South Dakota Department of Agriculture and Natural Resources (SDDANR) Drinking Water Program reviews projects for the potential to impact public drinking water sources (groundwater wells and surface water intakes) and sets standards for groundwater to protect human health.

In South Dakota, approximately 52 percent of the public drinking water systems rely solely on groundwater and approximately 74 percent of South Dakota's citizens use groundwater as their source of drinking water (Iles, 2008). South Dakota does not suffer from a lack of groundwater as there are many aquifers, or subsurface water-bearing units, in the state. However, the water-producing units may be deep (very expensive drilling and well installation), may have undesirable water quality, or may not yield the desired quantity of water where it is needed (Iles, 2008).

The shallow aquifers on the reservation are the alluvial Ogallala, Arikaree, and White River aquifers. In Todd County, ground water generally can be obtained from shallow wells (less than 300 feet) completed either in alluvial deposits or in deposits of Tertiary age (Carter, 1998). The water quality of the alluvial aquifers is dependent on the underlying deposit. Generally, the water has low concentrations of dissolved solids, is fresh, and is soft to moderately hard where underlain by the Ogallala and Arikaree Formations. The water has moderate concentrations of dissolved solids, is slightly saline, and is hard where underlain by the White River Group (Carter, 1998). On the Rosebud Indian Reservation, nitrate contamination in the

Ogallala aquifer and arsenic contamination in the Arikaree aquifer have both been documented (Carter, 1998).

3.5.3 *Environmental Consequences Evaluation Criteria*

Evaluation criteria for potential impacts on water resources are based on water availability, quality, and use; existence of floodplains; and associated regulations. Adverse impacts to water resources would occur if the proposed or alternative actions:

- Reduce water availability or supply to existing users;
- Overdraft groundwater basins;
- Adversely affect groundwater recharge;
- Exceed safe annual yield of water supply sources;
- Adversely affect water quality;
- Threaten or damage unique hydrologic characteristics;
- Endanger public health by creating or worsening health hazard conditions; or
- Violate established laws or regulations adopted to protect water resources.

3.5.4 *Environmental Consequences – Proposed Action Alternative*

Implementation of the proposed CREP Agreement would have long-term beneficial impacts on surface water and wetlands. Waterways would be improved from decreased soil erosion in general from rotational grazing practices. Cover enhancement along riparian areas would stabilize streambanks, reduce erosion, and intercept pollutants carried by runoff. Both cover enhancement along riparian areas and designated water facilities can help keep animal wastes from contaminating waterways and wetlands and improve *E. Coli* contamination problems documented in **Section 3.5.2.1**.

Installation and maintenance of CP88 may involve the clearing of vegetation for fire breaks, prescribed burning, and some soil disturbance from activities such as fence installation or installation of pipelines or other infrastructure for water conveyance. These activities may result in increased levels of sediment runoff, resulting in short-term negligible adverse impacts to surface water quality and wetlands. The use of filter fencing or similar BMPs to control erosion and invasive plant species would reduce impacts and contain sediment within the site. These potential impacts would be short-term and localized and would cease with conclusion of land preparation activities.

Herbicides could be used for the control of noxious weeds or other undesirable plants. All herbicides used would be registered with the USEPA and applied according to label requirements. CP88 implementation requiring the use of herbicides, fertilizers, lime, or any other such applications, as well as the timing of implementation, must be pre-approved through a Conservation Plan developed with the NRCS. There would be short-term negligible adverse impacts to surface water from potential runoff of these chemicals. Application in accordance with label requirements would minimize pollutants in runoff.

Impacts to floodplains are expected to be long-term and beneficial as cover enhancement along riparian areas can help stabilize the floodplain. Additionally, rotational grazing results in reduced soil compaction and increased infiltration rates which ultimately reduce stormwater runoff. Similarly, impacts to groundwater would be long-term and beneficial because rotational grazing can lead to deeper forage roots that can absorb nutrients from greater depths (Undersander et al., 2002). This decreases the quantity of contaminants entering groundwater in an area where nitrate contamination of the groundwater has been documented.

3.5.5 *Environmental Consequences – No Action Alternative*

Under the No Action Alternative, the CREP would not be implemented, and current agricultural practices would continue. There would be no impacts to water resources from implementation of the No Action

Alternative. The beneficial impacts to surface water, wetlands, floodplains, and groundwater from installing CP88 would not be realized.

3.6 AIR QUALITY

3.6.1 *Definition of Resource*

Air quality is affected by air pollutants emitted by numerous sources, including natural and man-made sources. Weather conditions and topography of the area further influence the amounts and types of pollutants that are present in the ambient air.

To manage pollutant emission levels in ambient air, the USEPA was mandated under the federal Clean Air Act to set standards for select pollutants that are known to affect human health and the environment. These standards, known as National Ambient Air Quality Standards (NAAQS), are currently established for six criteria air pollutants: ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable particulate matter (including particulates equal to or less than 10 microns in diameter (PM₁₀) and particulates equal to or less than 2.5 microns in diameter (PM_{2.5}), and lead (Pb).

To evaluate compliance with NAAQS, USEPA has divided the country into geographical regions with regulatory areas that are designated as an attainment area or nonattainment area for each of the criteria pollutants depending on whether it meets or exceeds the NAAQS. Attainment areas that were reclassified from a previous nonattainment status to attainment are called maintenance areas. For areas designated as nonattainment or maintenance for one or more criteria pollutants, the state must prepare a State Implementation Plan (SIP) or a Maintenance Plan to show how the area will meet or maintain the NAAQS within a specified timeframe.

Federal actions in NAAQS nonattainment and maintenance areas are also required to comply with USEPA's General Conformity Rule (40 CFR 93). Federal actions are evaluated to determine if project emissions are below *de minimis* levels for each of the pollutants as specified in 40 CFR § 93.153. If project emissions are below *de minimis* levels (or are minimal), no further evaluation is required. If project emissions are exceeded for any of the pollutants, detailed analysis is necessary.

Some areas of the state have been designated as Class I Federal wilderness areas to address the problem of visibility (40 CFR 81.410, 81.425, and 81.434). A Class I area includes national parks larger than 6,000 acres, national wilderness areas and national memorial parks larger than 5,000 acres, and international parks. To maintain good air quality in these pristine areas in the country, the SIPs must also address visibility as an air quality issue.

Greenhouse gases (GHGs) are gases, occurring from natural processes and human activities, that trap heat in the atmosphere. The accumulation of GHGs in the atmosphere helps regulate the earth's temperature and are believed to contribute to global climate change. The USEPA regulates GHG emissions via permitting and reporting requirements that are applicable mainly to large stationary sources of emissions. Agricultural activities contribute directly to emissions of GHGs including carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). These emissions result through a variety of activities such as the use of diesel-fueled farm equipment, enteric fermentation, agricultural soil and manure management, crop and field burning.

The air quality analysis for this PEA covers the Rosebud Sioux Tribe CREP project area, the Rosebud Indian Reservation, which includes all of Todd County in southern South Dakota. The long-term air quality impacts from CP88 implementation are considered in this section. Also considered are effects of short-term activities, such as site preparation and construction, which would lead to increases in emissions. The following discussion provides a general picture of air quality in the CREP project area where the proposed project would be located.

3.6.2 *Affected Environment*

South Dakota lies in the Northern Great Plains, and due to its location in the center of the North American continent, the state experiences large temperature extremes. In the town of Rosebud, the summers are warm and mostly clear, and the winters are freezing, snowy, windy, and partly cloudy. Over the course of

the year, the temperature typically varies from 13 °F to 88 °F and is rarely below -6 °F or above 99 °F. The hot season is typically from June to September, with an average daily high temperature above 77°F. The hottest month of the year is July in Rosebud, with an average high of 88°F and low of 62°F. The cold season is generally from November to March, with an average daily high temperature below 44°F. The coldest month of the year in Rosebud is January, with an average low of 14°F and high of 35°F. The chance of wet days varies significantly throughout the year. The wetter season lasts approximately 4 months, from April to August. The month with the most wet days in Rosebud is June, with an average of 10.5 days with at least 0.04 inches of precipitation. The average hourly wind speed experiences significant seasonal variation over the course of the year. The windiest month is March, with an average hourly wind speed of 12.5 miles per hour. (Weatherspark, 2022). Site-specific meteorological data indicate that the predominate wind directions are from the northwest and the east in the Badlands site area (SDDENR, 2020).

SDDANR is the agency responsible for meeting and maintaining the federal NAAQS in the state. SDDANR has implemented a network of ambient air monitoring sites across the state to monitor ambient air pollutant levels of criteria pollutants. The ambient air monitor closest to the reservation is the Badlands site, located a short distance south of the Ben Reifel Visitor Center/Park Headquarters at the Badlands National Park. The site's monitoring data show that the NAAQS were being met for the calendar years 2018 to 2020 (SDDANR, 2021b). The air is generally considered to be clean in the areas under consideration for this analysis and these areas are in attainment of primary and secondary regulatory standards for ambient air quality. Also, the state's two Class I areas of Badlands and Wind Cave National Parks are not in close proximity to the Rosebud Indian Reservation, and thus, issues related to visibility and regional haze are not a concern for this PEA.

Within the reservation, the sources of criteria pollutants from agriculture (not including fuel combustion sources) include crops and livestock dust, fertilizer application, livestock waste, and agricultural field burning. Agriculture contributes to the overall air quality concerns of the state in a significant way. Emissions from PM₁₀ and from PM_{2.5} from the agriculture sector in South Dakota make up approximately 50% of the total emissions (USEPA, 2017).

In 2020, the agriculture sector was responsible for emissions of 594.7 million metric tons (MMT) of CO₂-equivalent, or approximately 10.0 percent of total greenhouse gas emissions in the country, with the majority of N₂O emissions being generated from agricultural soils. Emissions of N₂O through activities such as fertilizer application and other agricultural practices accounted for 74 percent of total GHG emissions (USEPA, 2020).

3.6.3 Environmental Consequences Evaluation Criteria

The entire state, including the whole county within which the CREP project area is located, meet the federal standards for emissions of criteria pollutants and are in attainment of the NAAQS for all specified pollutants (40 CFR 17 Part 81.342). In general, air quality impacts in these attainment areas would be considered significant if air emissions associated with the Proposed Action could potentially violate the NAAQS. Impacts would also be considered significant if pollutant emission concentrations associated with the Proposed Action have a potential to impact sensitive receptors (e.g., schools, hospitals, etc.) or have the potential to violate any SIP provisions, including visibility.

For this analysis, the potential impact to air quality is evaluated generally in a qualitative manner, because the location and sizes of specific parcels that would be enrolled are not known.

3.6.4 Environmental Consequences – Proposed Action Alternative

Installation of practice CP88, Permanent Grasses and Legumes, would maintain existing vegetative cover of either introduced or native grasses and legumes on eligible CRP grassland through rotational grazing. This action would generally yield GHG mitigation benefits and would result in a long-term beneficial air quality impacts.

Management of grazing land can influence emissions of CO₂, CH₄ and N₂O and can also influence soil organic carbon (SOC) storage by modifying carbon inputs to the soil, including net primary production, root turnover, and carbon allocation between root and shoots (Conant et al., 2001). The same study also found that, on average, across climates and regions, the introduction of legumes and improved grass species led

to increases in net soil carbon storage. Additionally, Conant et al. (2001,2017) and other similar studies have found that, in general, planting nitrogen-fixing legumes can promote carbon sequestration in grassland soils and may provide an alternative to nitrogen fertilization with a lower overall GHG footprint. Note, the recovery of soil carbon is a slow process and could take several decades. However, air quality is likely to benefit in the long-term from implementation of the proposed CREP Agreement due to increased storage of organic carbon. The potential for carbon sequestration and reduction in pollutant emissions would likely have an overall positive effect on air quality resulting in a mitigating effect on GHG emissions.

Installation and maintenance for CP88 may include installation of fencing and gates, water sources for livestock, and construction of fuel breaks. Activities such as digging and debris removal can produce dust or release particulate matter into the air. These emissions would be primarily fugitive in nature and temporary. Watering exposed soil during, and after, such ground-disturbing activities would reduce dust emissions. Use of diesel vehicles and heavy-duty equipment would emit air pollutants into the air as exhaust emissions from combustion of fuel. Routine and proper maintenance of equipment and vehicles would keep these pollutant emissions in check. These emissions are not likely to impact air quality significantly as they would be localized and temporary.

Debris removal activities may take place in combination with prescribed burning of vegetative material. The exact location and extent of burning that would take place for this Proposed Action is not known at this time. Burning could release PM₁₀, PM_{2.5}, CO and NO₂ into the air. The type and quantity of these pollutants would be determined by the type of vegetation being burned and the weather conditions. Depending on where the burn takes place, there could be restrictions to burning in the area. Consultation with Tribal, state, and local permitting agencies, as applicable, is recommended to determine the open burning regulations for the affected county given that these regulations can change each season. For example: South Dakota's Wildland Fire Division requires that a person obtain an open burning permit for burns in the Black Hills Forest Protection District. Also, in some cases, a permit from the local fire department may also be required. If open burning is planned, there are specific guidelines to follow provided by SDDANR (SDDANR, 2021a). It is not anticipated that prescribed burning would have a significant negative impact on the local air quality as adequate precautions would be followed.

Construction of structures, such as firebreaks, hydrological barriers, and other access control devices could be performed with various types of equipment, such as backhoes, front-end loaders, tractors and skid-steer loaders. Diesel vehicles and heavy-duty diesel equipment used for such operations would emit pollutants such as CO, VOCs, NO_x and PM, but these emissions would be localized, temporary and minor. Routine and proper maintenance of equipment and vehicles and use of BMPs for construction activities would reduce pollutant emissions. Fugitive emissions from construction activities would be mitigated using dust suppression practices, as needed.

Haying, mowing and harvesting for seed production would all likely reduce short-term carbon sequestration and may even release GHGs but can positively impact the land's ability to sequester future carbon by increasing soil organic matter.

None of the CP88 installation and maintenance activities are anticipated to result in visual impairment of any Class I areas, cause or contribute to a violation of any NAAQS, or expose sensitive receptors to substantially increased pollutant concentrations. Overall, there is potential for air quality to benefit in the long-term due to the potential for carbon sequestration. Implementation of the Proposed Action could potentially improve air quality in the region.

3.6.5 Environmental Consequences – No Action Alternative

Implementation of No Action Alternative would not change existing air quality conditions. CP88, described in **Section 2.1.2**, would not be implemented. As part of the No Action Alternative, existing grassland practices would continue, and air quality conditions would not change. Also, under the No Action Alternative, existing grasslands and shrublands could be converted to uses other than grazing. This could result in increases in GHG emissions and criteria pollutants.

3.7 SOILS AND TOPOGRAPHY

3.7.1 Definition of Resource

Soils are the unconsolidated materials overlying bedrock or other parent material. Soils typically are described in terms of their complex type, slope, and physical characteristics. Differences among soil types in terms of structure, elasticity, strength, shrink-swell potential, and erosion potential affect the ability of a given area to support certain applications or uses. In certain cases, soil properties must be assessed for their compatibility with particular construction activities or types of land use. Topography and physiography pertain to the general shape and arrangement of the land surface, including the height and position of natural and man-made features.

3.7.2 Affected Environment

The Rosebud Indian Reservation topography primarily consists of tablelands that rise to steep buttes and canyons. Surface relief ranges from nearly level on tablelands in the central part of Todd County to steep and rough on the sides of buttes and canyons. Elevation ranges from roughly 2,150 feet above mean sea level in the northeast to roughly 3,150 feet above mean sea level in the southeast (Springer, 1974).

According to Malo et. al. (2010), the Rosebud Indian Reservation falls within the “Warm Dry Plain” soil region that is characterized by the following soil taxonomic groups: Mesic, Typic Ustolls, and Ustorthents. There are ten soil associations in Todd County, which are described in **Table 3-3** below.

Table 3-3. Soil Associations on the Rosebud Indian Reservation

Soil Association	Description
Millboro-Boyd	Deep and moderately deep, nearly level to steep, well drained clayey soils; on uplands
Kadoka-Tuthill-Huggins	Moderately deep and deep, nearly level to sloping, well drained silty and loamy soils; on uplands
Epping-Keota-Kadoka	Shallow and moderately deep, sloping to steep, well-drained to somewhat excessively drained silty soils; on uplands
Holt-Anselmo-Vetal	Moderately deep and deep, nearly level to undulating, well-drained loamy soils; on uplands
Anselmo-Ronson-Vetal	Deep and moderately deep, nearly level to rolling, well drained loamy soils; on uplands
Anselmo-Tassel-Dunday	Deep and shallow, gently undulating to steep, well drained and somewhat excessively drained loamy and sandy soils; on uplands
Rough broken land-Doger	Deep, nearly level to very steep, well-drained and somewhat excessively drained mixed sandy soils; on uplands
Valentine-Dunday	Deep, gently undulating to steep, excessively drained and somewhat excessively drained sandy soils; on uplands
Elsmere-Wann	Deep, nearly level, somewhat poorly drained sandy and loamy soils; on bottom lands and low terraces
Elsmere-Loup	Deep, nearly level, somewhat poorly drained to very poorly drained sandy soils; on bottom lands

Source: Springer, 1974

3.7.3 Environmental Consequences Evaluation Criteria

Minimization of soil erosion, and the siting of facilities in relation to potential geologic hazards are considered when evaluating potential impacts of the Proposed Action on soils and topography. Generally,

impacts can be avoided or minimized if proper construction techniques and erosion control measures are incorporated into project development.

Effects on soils and topography would be adverse if they would alter the lithology, stratigraphy, or geological structures that control groundwater quality or availability. Impacts would also be considered adverse if implementation changes the soil composition, structure, or function of soil within the environment or if implementation permanently increases the potential for erosion.

3.7.4 Environmental Consequences – Proposed Action Alternative

Under the Proposed Action Alternative, long-term beneficial impacts are expected to occur from stabilization of soils and topography. Enhanced vegetative cover would hold the soil in place and lead to lower soil erosion rates. Soil compaction would decrease from rotational grazing, protecting the soil structure of the grasslands. As described in **Section 3.6.4**, planting nitrogen-fixing legumes can promote carbon sequestration in the soil. Increased soil carbon can lead to improved nutrient and water holding capacity and can improve soil structure.

Short-term disturbances to soils could result from the installation of various structures to implement rotational grazing such as fences and water features. These ground disturbing activities may result in temporary minor increases in soil erosion; however, they would be reduced by implementing erosion control BMPs such as establishing stable grades, applying water to limit airborne dust in windy environments, and installing silt fencing. Under the Proposed Action Alternative, erosion and soil compaction would be properly controlled during CP88 installation resulting in minor impacts to soils.

3.7.5 Environmental Consequences – No Action Alternative

Under the No Action Alternative, the proposed CREP would not be implemented. Eligible lands would not be enrolled in the proposed CREP and potential benefits to soils and topography would not occur. The beneficial impacts associated with the expected reduction in erosion would not occur and soil degradation would continue.

3.8 SOCIOECONOMICS

3.8.1 Definition of Resource

Socioeconomic analyses generally include detailed investigations of the prevailing population, income, employment, and housing conditions of a community or region. The socioeconomic conditions of a region could be affected by changes in the rate of population growth, changes in the demographic characteristics of a region, or changes in employment caused by the implementation of a Proposed Action.

The sections below identify the information essential to describe the broad-scale demographic and economic components of the Rosebud Indian Reservation, which covers all of Todd County, South Dakota.

3.8.2 Affected Environment

3.8.2.1 General Population Characteristics

Population

The state of South Dakota experienced population growth of about 9 percent between 2010 and 2020, from 814,180 persons to 886,667 persons (U.S. Census Bureau, 2022a). The Rosebud Indian Reservation experienced a population decrease of 3.1 percent between 2010 and 2020, from 9,612 persons to 9,319 persons (U.S. Census Bureau, 2022b). While South Dakota experienced growth in population, the reservation experienced a slight decline in population.

Personal Income and Earnings

The median household income for South Dakota is \$58,275 in 2019 dollars and the per capita income is \$30,733 (U.S. Census Bureau, 2022a). In Todd County, the median household income is \$24,102 and the per capita income is \$10,289 in 2020 dollars (U.S. Census Bureau, 2022b).

Table 3-4 illustrates data from the Bureau of Economic Analysis (BEA) for earnings by place of work between 2015 to 2020 for Todd County. The BEA defines earnings as the sum of three components of personal income: wage and salary disbursements, supplements to wages and salaries, and proprietors' income. Personal income across South Dakota increased approximately 24.9 percent between 2015 to 2020 at an average annual rate of approximately of 4.8 percent (BEA, 2022a). Personal income across the reservation increased 20.8 percent between 2015 and 2020. Farm proprietors' income and nonfarm proprietor's income in Todd County fluctuated widely during the period from 2015 to 2020. Likewise, farm earnings have also fluctuated in Todd County, whereas nonfarm earnings grew at an annual average rate of 4 percent. Nonfarm earnings increased 21.8 percent from 2015 to 2020. The large increase in farm proprietor's income and farm earnings from 2019 to 2020, can be attributed to various federal government payments for coronavirus relief. The BEA estimates that in 2020, South Dakota farm proprietors received \$900 million from the Coronavirus Food Assistance Program and \$66.4 million from the Paycheck Protection Program (BEA, 2020)

Table 3-4. Earning Measures for the Rosebud Indian Reservation in Thousand Dollars

Earnings Measure	2015	2016	2017	2018	2019	2020	Percent Change from 2015 to 2020
Personal Income	242,863	237,659	245,585	258,081	264,198	293,299	20.8%
Farm Proprietor's Income	10,647	-608	2,290	5,742	3,229	8,837	-17.0%
Nonfarm Proprietor's Income	4,651	4,170	5,099	5,996	6,934	5,872	26.3%
Farm Earnings ¹	12,063	944	4,245	7,490	5,413	10,983	-9.0%
Average Farm Earnings Per County	139,904	143,046	150,140	156,852	161,034	170,370	21.8%
Nonfarm Earnings	242,863	237,659	245,585	258,081	264,198	293,299	20.8%

Source: BEA, 2022a.

Notes:

¹ Farm Earnings are comprised of the net income of sole proprietors, partners, and hired laborers arising directly from the current production of agricultural commodities, either livestock or crops. It includes net farm proprietors' income and the wages and salaries, pay-in-kind, and supplements to wages and salaries of hired farm laborers; but specifically excludes the income of non-family farm corporations.

Employment

The Bureau of Labor Statistics (BLS) compiles current and historic data on the labor force, the number of persons employed, the number of persons unemployed, and the unemployment rate. South Dakota, between 2015 to 2020, increased the total labor force by approximately 2.2 percent to 463,257 persons (BLS, 2022a). The annual average unemployment rate increased 1.6 percentage points from 2016 to 4.6 percent in 2020, though South Dakota has the second lowest annual average unemployment rate in the country (BLS, 2022b). For the Rosebud Indian Reservation, between 2015 to 2020, the labor force increased by 14 persons to 2,858 persons (BLS, 2020). The 2020 annual average unemployment rate was 6.1 percent in Todd County, which is up from 7.2 percent in 2015 (BLS, 2020).

The BEA also tracks employment characteristics at the farm and nonfarm levels. **Table 3-5** illustrates the employment levels between 2015 to 2020 for the state of South Dakota and the Rosebud Indian Reservation. The data for both South Dakota and the reservation show overall increases in total

employment and farm employment from 2015 to 2020, with considerable annual variation. Total employment numbers dropped significantly in South Dakota from 2019 to 2020, which can generally be attributed to the coronavirus pandemic. Employment in Todd County decreased slightly from 2019 to 2020. Farm employment in the reservation is a slightly higher proportion of all jobs when compared to the state.

Table 3-5. Employment in the State and Rosebud Indian Reservation 2015-2020

Type of Employment	2015	2016	2017	2018	2019	2020
State of South Dakota						
Total Employment	592,591	597,324	601,286	610,122	610,822	594,556
Farm Employment	31,705	30,910	31,475	31,264	31,974	32,529
Percentage Farm Employment	5.4%	5.2%	5.2%	5.1%	5.2%	5.5%
Nonfarm Employment	560,886	566,414	569,811	578,858	578,848	562,027
Rosebud Indian Reservation/Todd County						
Total Employment	3,465	3,580	3,693	3,655	3,677	3,560
Farm Employment	220	214	220	219	226	230
Percentage Farm Employment	6.3%	6.0%	6.0%	6.0%	6.1%	6.5%
Nonfarm Employment	3,245	3,366	3,473	3,436	3,451	3,330

Source: BEA, 2022b.

3.8.2.2 General Agricultural Characteristics

The National Agricultural Statistic Service (NASS) estimated that there were approximately 29,968 farms with approximately 43.2 million acres of land in farms in South Dakota in 2017 (NASS, 2017). The FSA detailed in their December 2021 CRP monthly report that there were 13,500 South Dakota farms with CRP contracts with 1.7 million acres in CRP practices (FSA, 2021).

For the Rosebud Indian Reservation, the best available data at the county level was compiled in the 2017 Agricultural Census and can be found in **Table 3-6**. In 2017, Todd County accounted for approximately 890,240 acres in South Dakota (1.8 percent of the land area of the state) with approximately 880,043 acres in farms (NASS, 2017). Cropland accounted for approximately 13 percent of the total land in Todd County and harvested cropland accounted for approximately 11 percent of the total land in Todd County (NASS, 2017). The land use of Todd County is estimated at about 85 percent pasture and rangeland.

Table 3-6. 2017 Agricultural Land Use in Todd County and South Dakota

Land Use	Todd County	Percent of Reservation County Area	South Dakota	Percent of South Dakota Total
Approximate Land Area	890,240	100%	48,566,168	100%
Land in Farms	880,043	99%	43,243,742	89%
Total Cropland	113,678	13%	19,813,517	41%
Harvested Cropland	96,762	11%	16,371,543	34%
Woodland	25,986	3%	284,905	1%
Pasture and Rangeland	756,196	85%	21,997,620	45%
Land in Houses, Roads, Ponds, etc.	10,451	1%	1,147,700	2%

Source: NASS 2017 Census of Agriculture

3.8.2.3 Regional Production Expenses, Agricultural Sales, and Other Farm Related Income

Farm production expenses in 2017 for Todd County were estimated to exceed \$49 million and total agricultural sales exceeded \$53 million (NASS, 2017). Other farm related income (i.e., recreation, custom

farming, cooperative patronage rebates, cash rents, etc.) contributed an additional \$7 million to farm balance sheets in 2017 (NASS, 2017). In 2017, the average production expenses per farm was \$222,185, the average agricultural sales per farm was \$240,621, and the average farm related income per farm was \$57,273. Additional detailed data by county within the reservation can be found in **Appendix D**.

Data from the 2017 Agricultural Census indicates that the average farm production expenses per acre (using the total acres in farms minus land in houses, roads, ponds, etc. within the region) in Todd County was \$56.98 per acre (NASS, 2017). Farm income from agricultural sales was estimated to have been \$61.71 per acre with income from farm related sources adding \$8.50 per acre (NASS, 2017).

3.8.3 Environmental Consequences Evaluation Criteria

A significant impact to socioeconomic conditions can be defined as a change that is outside the normal or anticipated range of those conditions that would flow through the remainder of the economy and community creating substantial adverse effects. For small percentage changes in individual attributes, it would be unlikely that the changes would result in significant impacts at the total level of analysis (i.e., statewide). Changes to the statewide economy of greater than agriculture's normal contribution could be considered significant, as this could affect the general economic climate of other industries on a much greater scale.

Additional changes in demographic trends (i.e., population movements) would be considered significant if a substantial percentage of the population were to enter or leave a particular area based on the changing economic conditions associated with the alternatives, rather than projected changes or changes generated by economic activities as a whole.

3.8.4 Environmental Consequences – Proposed Action Alternative

Implementation of the Proposed Action would generate \$9 million in annual rental payments if 600,000 acres were enrolled. This would amount to \$135 million over fifteen years. The net discounted value of this amount is \$94 million, with an average discounted value per year of \$6 million. This is a fully implemented scenario that was developed by assuming full enrollment of 600,000 acres for 15 years in year one. A more likely scenario is a gradual conversion up to a certain point of less than full enrollment.

Federal funding would be used to pay the rental rates and additional funding would also be provided for cost sharing to install CP88. Enrollment in the CREP would not preclude producers from haying and grazing, therefore, producers would still be able to generate income from agricultural sales. It is also anticipated that a large portion of the lands that would be enrolled already have some off the necessary facilities, such as water facilities and fencing, so the cost to install CP88 is not expected to be exceedingly high, and the producer would be responsible for only 50% of these installation costs.

For land enrolled under CP88, the conservation plan would contain provisions for common grazing or forage management practices and related activities consistent with achieving CRP purposes and maintaining the health and viability of grassland resources. The grassland CRP is a working lands program. Working lands conservation programs help farmers to enhance the sustainability of their operations while keeping land in production. Enhancing the sustainability of the grasslands increases the economic value of grassland through increases in grassland productivity and increases in the carrying capacity of the land enrolled.

The economic impact of implementing the Rosebud Sioux Tribe CREP Agreement would be beneficial for producers. The program is voluntary, so if a producer believes that enrolling in the program would not be profitable, they could choose not to enroll. Wu and Weber (2012) reviewed the existing studies on the impacts of CRP and concluded that the economic benefits outweigh the costs to taxpayers. Economic benefits of CRP include the reduction of soil erosion, the improvement of recreation conditions, and the increase in land values (Wu and Weber, 2012). Although, enhanced wildlife habitat is not a goal of this CREP, wildlife would benefit from improved grassland productivity and reduced erosion as described in **Section 3.3.4.2**. Improved wildlife habitat would contribute positively to recreational activities and expenditures in the region, such as wildlife viewing activities, hunting, and fishing (improved water quality would increase fish populations).

Additionally, part of the evaluation of all lands offered for enrollment in CRP is a site-specific EE, which includes an evaluation of potential negative impacts on the local social and economic conditions. The site-

specific EE would ensure that enrollment of specific lands into the CREP would not result in significant adverse impacts to the local economy.

Implementation of the Proposed Action Alternative would result in long-term beneficial impacts to producers and would improve the economic conditions in the region.

3.8.4.1 General Population Impacts

Implementing the Proposed Action is unlikely to produce significant changes in the general population characteristics of the region in either the short-term or long-term. Recent research supports this conclusion. A study conducted by the USDA's Economic Research Service showed that declines in agriculture and supporting industries due to enrollment of land in CRP are on average offset by increases in other businesses and industries such as recreation (Sullivan et al. 2004; Brown et. al., 2018). The study also concluded that there was no evidence that CRP contributed to outmigration and population decline in rural counties (Sullivan et al. 2004; Brown et. al., 2018). In the case of the grassland CRP, there could be a small increase in population as the economic benefits of the program may encourage producers to return to previous ranching operations.

3.8.5 *Environmental Consequences – No Action Alternative*

Under the No Action Alternative, the CREP would not be implemented, and current agricultural practices would continue. Unlike the Proposed Action Alternative, no acreage within the reservation would be enrolled in CP88. This alternative would not produce any measurable changes to the general population characteristics of the region as there would be no changes to the sales or spending patterns of the agricultural producers. However, there would be the lost benefits associated with implementing CP88 that include improvements in water quality, soil retention, grassland productivity, carrying capacity, and improved wildlife habitat. Any regional economic benefits from increased hunting, fishing, and wildlife-watching expenditures would not be realized.

3.9 ENVIRONMENTAL JUSTICE

3.9.1 *Definition of Resource*

Federal agencies, through EOs, are required to address disproportionate environmental and human health effects in minority and low-income communities. For the purposes of this analysis, minority populations are defined as Alaska Natives and American Indians, Asians, Blacks or African Americans, Native Hawaiians, and Pacific Islanders or persons of Hispanic origin (of any race). Low-income populations include persons living below the poverty threshold as determined by the U.S. Census Bureau.

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, pertains to environmental justice issues and relates to various socioeconomic groups and disproportionate impacts that could be imposed on them. This EO requires that federal agencies' actions substantially affecting human health or the environment do not exclude persons, deny persons benefits, or subject persons to discrimination because of their race, color, or national origin. EO 12898 was enacted to ensure fair treatment, meaningful involvement, and access to benefits for all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of federal environmental laws, regulations, and policies. Consideration of environmental justice concerns includes race, ethnicity, and the poverty status of populations in the vicinity of a Proposed Action.

3.9.2 *Affected Environment*

Per CEQ guidance, minority populations are identified where either the minority population of the affected area exceeds 50 percent, or the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. Following the Office of Management and Budget's Statistical Policy Directive 14, the Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who

is in poverty. If a family's total income is less than the family's threshold, then that family and every individual in it is considered in poverty.

In order to determine if minority or low-income populations exist in the project area, the project area must be compared to a larger regional area that includes the affected area and serves as a Community of Comparison (COC). The state of South Dakota is the COC under this environmental justice analysis.

Because the CREP would be implemented on a reservation, a minority group, American Indians, exists in the project area. On Rosebud Indian Reservation in 2020, 86 percent of the population had a race of Alaska Natives and American Indians, compared to nine percent in the state of South Dakota in 2020 (U.S. Census Bureau, 2022b). No other minority populations were found on the reservation. In 2020, the poverty rate for Todd County was 42.5 percent (U.S. Census Bureau, 2022b). This is much higher than the South Dakota poverty rate of 11.6 percent and the U.S. poverty rate of 11.4 percent (U.S. Census Bureau, 2022a). Compared to the COC, the reservation as whole has a significantly higher proportion of minorities and low-income populations.

In 2017, within the reservation, there were 83 agricultural producers of American Indian or Alaska Native race, representing 22 percent of the agricultural producers in the reservation. **Table 3-7** displays the number of agricultural producers by each race in 2017. This represents about eight percent of the American Indian or Alaska Native race producers (1,034 producers) in the entire state of South Dakota in 2017 (NASS, 2017).

Table 3-7. 2017 Agricultural Producers by Race in Todd County

Race	Todd	Percent
American Indian or Alaska Native	83	22%
Asian	0	0%
Black or African American	0	0%
Native Hawaiian or Other Pacific Islander	0	0%
White	294	76%
More than one race reported	8	2%
Total Producers	385	100%

3.9.3 Environmental Consequences Evaluation Criteria

Environmental justice analysis applies to potential disproportionate effects on minority or low-income populations. Environmental justice issues could occur if an adverse environmental or socioeconomic consequence to the human population fell disproportionately upon minority or low-income populations. Environmental justice impacts could also occur if the benefits of a Proposed Action would be disproportionately low for minority or low-income populations.

3.9.4 Environmental Consequences – Proposed Action Alternative

The majority of the environmental impacts described in this PEA would be beneficial to the region and to producers enrolling land into the CREP. The enrollment of lands into the CREP is voluntary and open to any producer with qualifying land. Some negligible and minor adverse impacts have been identified in this PEA. These adverse impacts would be temporary and would not rise to the level of major (significant). Additionally, part of the evaluation of all lands offered for enrollment in CRP is a site-specific EE, which includes an evaluation of potential environmental justice impacts. The site-specific EE would ensure that

enrollment of specific lands into the CREP would not result in disproportionately adverse human health or environmental effects to minority or low-income communities. The Proposed Action Alternative would not substantially affect populations covered by EO 12898 by excluding persons, denying persons benefits, or subjecting persons to discrimination or disproportionate environmental or human health risks. Therefore, there would be no impact to environmental justice issues from implementation of the Proposed Action Alternative.

3.9.5 Environmental Consequences – No Action Alternative

Under the No Action Alternative, there would be no changes to the existing agricultural lands in the Rosebud Indian Reservation, therefore, implementation of this alternative would not result in disproportionate adverse environmental or health effects on low-income or minority populations. The No Action Alternative would not substantially affect populations covered by EO 12898 by excluding persons, denying persons benefits, or subjecting persons to discrimination or disproportionate environmental or human health risks.

3.10 CUMULATIVE IMPACTS

Cumulative impacts to environmental resources result from the incremental effects of proposed actions when combined with other past, present, and reasonably foreseeable future projects in the project area. Cumulative impacts can result from individually minor, but collectively substantial, actions undertaken over a period of time by various agencies (federal, state, and local) or individuals. Past and present actions are reflected in the Existing Conditions sections for each resource area. A list of reasonably foreseeable actions on the Rosebud Indian Reservation that could result in cumulative impacts with implementation of the Proposed Action are shown in **Table 3-8**. Future actions that have no potential for cumulative impacts to resources analyzed in this PEA are not listed in the table.

There would be no potential for cumulative impacts from the No Action Alternative. The analysis below is for potential cumulative impacts from implementation of the Proposed Action.

3.10.1 Biological Resources

Implementation of the Proposed Action would result in long-term beneficial impacts to biological resources. These would be additive to the beneficial impacts from other similar USDA programs and other state and federal conservation programs that aim to protect and restore habitat on the reservation.

The planned Turtle Creek Regenerative Development described in **Table 3-8** would affect 600 acres of Tribal land near Mission, SD, making conservation of the remaining grasslands even more important.

3.10.2 Cultural Resources

Assuming compliance with Section 106 of the NHPA as outlined in **Section 3.4.4**, when considered in combination with the other reasonably foreseeable future actions, including the large Turtle Creek Regenerative Development, the Proposed Action is not expected to result in significant cumulative impacts to historic properties.

3.10.3 Water Resources

Short-term, adverse impacts to surface water may occur during establishment of CP88, but these impacts would be negligible, well controlled with BMPs, and would not impact water quality at the regional level. Any adverse environmental impacts to water resources from the Proposed Action Alternative would be negligible to minor on their own and, when added to the impacts to water resources from other reasonably foreseeable future actions, would not result in a significant impact.

Table 3-8. Reasonably Foreseeable Future Actions

Scheduled Project	Project Summary	Implementation Date	Relevance to Proposed Action	Interaction with Resources
Turtle Creek Regenerative Development	The plan for the 600-acre site located on tribal land near Mission, SD utilizes a phased approach that includes housing, recreation, and business development. REDCO completed a master plan for the site, with several rounds of community input, needs assessments, and economic analysis and is beginning the implementation of Phase 1. This phase includes 10 single-family homes, retail space, and the Sicangu Innovation Center – which will be a multi-use community hub.	TBD	Potential construction timing overlap with Proposed CREP implementation.	Earth Resources, Socioeconomic, Land Use, Transportation, Infrastructure, Cultural, Safety, Water Resources,
Bridge Replacements	Funds awarded for: Crow Bridge Hollow Horn Bear Bridge Beads Creek Bridge Old Hollow Wood Valandra Bridge	TBD	Potential construction timing overlap with Proposed CREP implementation.	Earth Resources, Transportation, Infrastructure, Safety, Water Resources, Biological Resources, Wetlands.

3.10.4 Air Quality

The Proposed Action Alternative to enroll existing grassland into the CREP program would add to land already participating in CREP or other similar conservation programs in South Dakota. If more land is brought under conservation programs, there would be an additional improvement in air quality in the long-term. Any adverse air quality impacts from the Proposed Action Alternative would be negligible to minor on their own and, when added to the anticipated air quality impacts from the future actions in **Table 3-8**, would not result in a significant impact.

3.10.5 Soils and Topography

Short-term, adverse impacts to soils may occur during installation of CP88, but these impacts would be negligible, well controlled with BMPs, and would not impact erosion rates at the regional level. Any adverse environmental impacts to soils and topography from the Proposed Action Alternative would be negligible to minor on their own and, when added to the impacts from other reasonably foreseeable future actions, would not result in a significant impact.

3.10.6 Socioeconomics

The Proposed Action along with reasonably foreseeable future actions could result in direct or indirect impacts to the economy of the region. The CREP program would be economically beneficial to agricultural producers and would also provide societal benefits such as reduced soil erosion, improved water quality, and improved wildlife habitat. As with other USDA conservation programs, long-term beneficial impacts to recreation would occur. Recreational opportunities indirectly benefit from other federal and state conservation programs that protect and restore habitat, resulting in cumulative beneficial impacts to wildlife-related recreational opportunities. No significant adverse cumulative impacts to socioeconomics are expected from the Proposed Action when added to the other reasonably foreseeable future actions identified in **Table 3-8**.

3.10.7 Environmental Justice

The Proposed Action, as well as reasonably foreseeable future actions displayed in **Table 3-8**, are not expected to have a disproportionate cumulative impact on minority and low-income populations. Cumulative impacts to environmental justice are not likely to occur.

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APPENDICES

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APPENDIX A
CONSERVATION PRACTICE DESCRIPTION

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The below pages are excerpts from FSA's handbook for the Conservation Reserve Program, 2-CRP, Agricultural Resource Conservation Program. Only CP88 would be authorized under the Rosebud Sioux Tribe CREP Agreement.

Exhibit 11

(Par. 31, 34, 66, 171, 181, 211, 237, 262, 366, 426, 428, 429, 490, 511, 512, 832, Ex. 26)

National CRP Practices (Continued)

CP87 Permanent Introduced Grasses and Legumes (CP87 Eligible To Be Offered for SU200 and SU201 Only)

A Program Policy

Apply CP87 to maintain existing permanent introduced grasses and legumes on eligible CRP grassland. Beginning with CRP grassland SU202, CP87 is **no** longer available for new offers.

For offers submitted before SU202, this practice code is used to identify land:

- under CRP-1, if a permanent introduced grasses and legumes eligible for the applicable signup is already established
- not under CRP-1, with a permanent introduced grasses and legumes that was already established for the applicable signup period.

C/S is authorized for offers accepted before SU202:

- water developments as a component of CP87
- fencing as a component of CP87
- access control as a component of CP87.

Technical practice codes 314, 315, 338, 378, 382, 472, 516, 561, 574, 575, 595, and 614 may be used with CP87.

CP88 Permanent Grasses and Legumes

A Purpose

The purpose of this practice is to maintain existing vegetative cover of either introduced or native grasses and legumes on eligible grassland.

B Program Policy

Apply this practice to maintain existing permanent introduced or native grasses and legumes on eligible CRP grassland. NRCS or TSP determines, based on a site visit, that the grassland is suitable to be hayed or grazed according to the conservation plan of operations.

Exhibit 11

(Par. 31, 34, 66, 171, 181, 211, 237, 262, 366, 426, 428, 429, 490, 511, 512, 832, Ex. 26)
National CRP Practices (Continued)

CP88 Permanent Grasses and Legumes (Continued)

C Size Requirements

There are no size requirements for CP88.

D Eligibility

To be eligible for C/S, this practice must:

- promote common grazing related activities
- prevent degradation of environmental benefits from recurring
- be included and required in the approved conservation plan
- be maintained for the life of CRP-1
- prevent breaking of native sod.

E C/S Policy

The following shows C/S policies for this practice.

IF the component is...	AND the justification is...	THEN C/S is...
permanent fence (internal)	internal fencing needed to facilitate a livestock grazing system Important: A single strand electric fence is not a permanent fence for CRP grassland.	authorized using technical practice codes 314, 315, 338, 378, 382, 472, 516, 561, 574, 575, 595, and 614.
access control	needed to control access to an area to maintain the quantity and quality of natural resources, or seasonal or permanent livestock exclusion Example: Gates between rotational grazing paddocks.	authorized.
ponds, wells, spring developments, pipelines, and water facilities	substantiated as needed by COC for the purpose of providing a water source for livestock Note: COC must only approve the minimum number of water sources needed.	

Exhibit 11

(Par. 31, 34, 66, 171, 181, 211, 237, 262, 366, 426, 428, 429, 490, 511, 512, 832, Ex. 26)
National CRP Practices (Continued)

CP88 Permanent Grasses and Legumes (Continued)

E C/S Policy (Continued)

IF the component is...	AND the justification is...	THEN C/S is...
fuel break	to control and reduce the risk of the spread of fire by treating, removing, or modifying vegetation, debris, and detritus	authorized.
trails and walkways	to: • provide or improve access to forage, water, working/handling facilities, and/or shelter • improve grazing efficiency and distribution • protect ecologically sensitive, erosive, and/or potentially erosive sites	
prescribed burning	to improve plant production quantity and/or quality by managing fuel loads to achieve desired conditions	
corrals, feedlots, ornamental fences, holding pens, and cattle guards, boundary fence		not authorized.

E Practice Requirements

The following are requirements for this practice.

- Limit C/S to the minimum level of treatment necessary to support common grazing practices.
- Chemicals used in performing the practice **must** be:
 - Federally, State, and locally registered
 - applied according to authorized registered uses, directions on the label, and other Federal or State policies and requirements.

Exhibit 11

**(Par. 31, 34, 66, 171, 181, 211, 237, 262, 366, 426, 428, 429, 490, 511, 512, 832, Ex. 26)
National CRP Practices (Continued)**

CP88 Permanent Grasses and Legumes (Continued)

F Practice Requirements (Continued)

- Noxious weeds and other undesirable plants, insects, and pests must be controlled, including such maintenance as necessary to avoid an adverse impact on surrounding land.
- Haying, mowing, or harvesting for seed production must be subject to appropriate restrictions for species identified by STC focus areas.

G Practice Management

If the producer destroys the practice during the life of CRP-1 or failure is caused by the producer, if COC terminates, the producer must refund all annual rental payments, C/S payments, interest, and liquidated damages according to paragraph 574.

H Environmental Concerns

Consider wildlife and other environmental concerns, especially federally threatened or endangered species and critical habitat, when establishing protective measures.

I Practice Maintenance

The practice must be maintained without additional C/S for the life of CRP-1. C/S must be refunded according to paragraph 571 if either of the following applies:

- producer destroys the practice during the life of CRP-1
- failure is **not** caused by circumstances beyond the producer's control.

J Management Activity

The practice has no required management activities as required in paragraph 428.

K Program Development

Follow this subparagraph to develop the county program.

- County programs must provide the requirements that are conditions for C/S.
- STC may establish these requirements.

J Technical Responsibility

Technical responsibility for this practice is assigned to NRCS or TSP.

APPENDIX B
AGENCY, TRIBAL, AND PUBLIC COORDINATION

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B.1 INTRODUCTION

Scoping is an early and open process for developing the breadth of issues to be addressed in an Environmental Assessment (EA) and for identifying significant concerns related to an action. Per the requirements of Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, as amended by EO 12416, federal, state, and local agencies with jurisdiction that could potentially be affected by the Proposed Action or alternatives were notified during the development of this PEA.

The Intergovernmental Coordination Act and EO 12372 require federal agencies to cooperate with and consider state and local views in implementing a federal proposal. Through the coordination process, the Farm Service Agency contacted potentially interested and affected government agencies, government representatives, elected officials, and interested parties potentially affected by the Proposed Action. The agency and intergovernmental coordination letters are included in this Appendix.

B.1.1 Government-to-Government Consultation

The National Historic Preservation Act (NHPA) and its regulations in 36 CFR Part 800 direct federal agencies to consult with federally recognized Indian tribes when a proposed or alternative action has the potential to affect tribal lands or properties of religious and cultural significance to a tribe. Consistent with the NHPA, federally recognized tribes that are historically affiliated with lands in the vicinity of the Proposed Action have been invited to consult on all proposed undertakings that have a potential to affect properties of cultural, historical, or religious significance to the tribes. Interested Tribes were sent two letters – the notification letter requested feedback on the Area of Potential Effects (APE) and the consultation letter requested review and comments on the Draft PEA. The Tribal Consultation Mailing List can be found in **Section B.3**. Any responses received from Tribes are summarized in **Section B.7**.

B.1.2 Agency Consultations

Development of the PEA involved coordination with several organizations and agencies. Correspondence sent to the U.S. Fish and Wildlife Service can be found in **Section B.4**. The sample letter for Other Interested Parties can be found in **Section B.5**. The Other Interested Parties mailing list can be found in **Section B.6**.

B.2 PUBLIC REVIEW OF PROGRAMMATIC ENVIRONMENTAL ASSESSMENT

A Notice of Availability of the Draft PEA and was published in the *Native Sun News Today* and the *Todd County Tribune* inviting the public to review and comment on the Draft PEA during a 30-day review period.

The Draft PEA is available for review on the FSA website at <https://www.fsa.usda.gov/state-offices/South-Dakota/resources/index> and in person at the South Dakota State FSA Office at 200 Fourth St. SW, Room 308, Huron, SD 5735.

B.3 TRIBAL CONSULTATION MAILING LIST

Apache Tribe of Oklahoma
Cheyenne and Arapaho Tribes, Oklahoma
Cheyenne River Sioux Tribe
Crow Creek Sioux Tribe
Fort Belknap Indian Community of the Fort Belknap Reservation of Montana
Lower Brule Sioux Tribe
Oglala Sioux Tribe
Rosebud Sioux Tribe
Santee Sioux Nation, Nebraska
Standing Rock Sioux Tribe of North & South Dakota

B.4 U.S. FISH AND WILDLIFE SERVICE CORRESPONDENCE



United States
Department of
Agriculture

Farm
Production
and
Conservation

Farm
Service
Agency

SD State FSA Office
200 4th St SW Fed Bldg, Ste 308
Huron SD 57350
PH: 605/352-1160
Fax: 855-243-6003

July 29, 2022

Ms. Amity Bass, Field Supervisor
North and South Dakota Ecological Services
U.S. Fish and Wildlife Service
420 South Garfield Avenue, Suite 400
Pierre, SD 57501

Re: Rosebud Sioux Tribe Conservation Reserve Enhancement Program (CREP) Project

Dear Ms. Bass:

The United States Department of Agriculture (USDA) Commodity Credit Corporation (CCC), in cooperation with the Rosebud Sioux Tribe, proposes to implement the Rosebud Sioux Tribe CREP in South Dakota. The USDA Farm Service Agency (FSA) administers the CREP program on behalf of the CCC. USDA is preparing a Programmatic Environmental Assessment (PEA) to evaluate implementation of the Rosebud Sioux Tribe CREP agreement. The PEA will be prepared in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations implementing NEPA, and 7 Code of Federal Regulations (CFR) 799, FSA Implementing Regulations for NEPA. The USDA CCC would administer the Rosebud Sioux Tribe CREP within South Dakota.

CREP is a program authorized under provisions of the Food Security Act of 1985, as amended (1985 Act) (16 U.S.C. § 3831 et. seq.), and the regulations at 7 CFR Part 1410. In exchange for removing environmentally sensitive land from production and establishing permanent resource conserving plant species, farmers and ranchers are paid an annual rental rate along with other federal and non-federal incentives as specified in each CREP agreement. Participation is voluntary, and the contract period is typically 10 to 15 years.

The Rosebud Sioux Tribe CREP project area is the Rosebud Indian Reservation, which encompasses approximately 1.3 million acres of land. For land to be enrolled in the CREP, it must have an existing grass cover at the time it is offered for enrollment and meet all eligibility criteria to be enrolled in CRP as grassland cropland. Land eligible for grassland CRP is land on a tract, or a portion of a tract, which contains forbs or shrubland (including improved rangeland and improved pastureland) for which grazing is the predominant use. Grassland with less than 5 percent tree canopy interspersed through the offered acreage is eligible. Any land enrolled in the CREP would install conservation practice CP88, Permanent Native Grasses, Forbs, or and Legumes. One county, Todd County, is eligible to participate as displayed in the map in Attachment 1.

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The Rosebud Sioux Tribe CREP project would include:

1. Enrollment of up to 1,000,000 acres to maintain, improve, and protect grassland productivity through rotational grazing and water development;
2. Increasing the average carrying capacity, animal units per acre, on land enrolled in the Conservation Reserve Program (CRP) through this CREP;
3. Reducing erosion in riparian areas along water bodies through rotational grazing and cover enhancements; and
4. Increasing the average number of native threatened, endangered, or other targeted species through the restoration and establishment of wildlife habitat.

Pursuant to Section 7 of the Endangered Species Act, it is our understanding that the Proposed Action would be covered under the USDA's Programmatic Biological Assessment (USDA 2016), which covers all Natural Resources Conservation Service (NRCS) conservation practices in South Dakota, and states that areas with certain listed species require Conditions for Implementing Conservation Practices (CICP). Prior to enrolling any specific land in the CREP, an NRCS conservation plan must be developed. The conservation plan developed would include the appropriate CICPs. Information on the potential presence of listed, proposed, and candidate species or designated or proposed critical habitat in the Proposed Action areas will be obtained from the U.S. Fish and Wildlife Service Environmental Conservation Online System, Information for Planning and Consultation and included in the PEA.

We request confirmation that this action would be covered under the Programmatic Biological Assessment as well as any additional information or any comments that may be beneficial in the development of the PEA. We appreciate your review of this material and comments on any issues that would be of concern to your office.

We intend to provide you with access to the Draft PEA when the document is ready. Please inform us if someone else with your agency other than you should be notified of the availability of the Draft PEA. The public will be notified of the availability of the Draft PEA through the publication of a Notice of Availability. Please provide your responses and any questions to Steven Littlefield at (605) 352-1183 or by email at steven.littlefield@usda.gov. Thank you in advance for your assistance in this effort.

Sincerely,

Steve Dick
USDA Farm Service Agency
State Executive Director

1 Attachment:

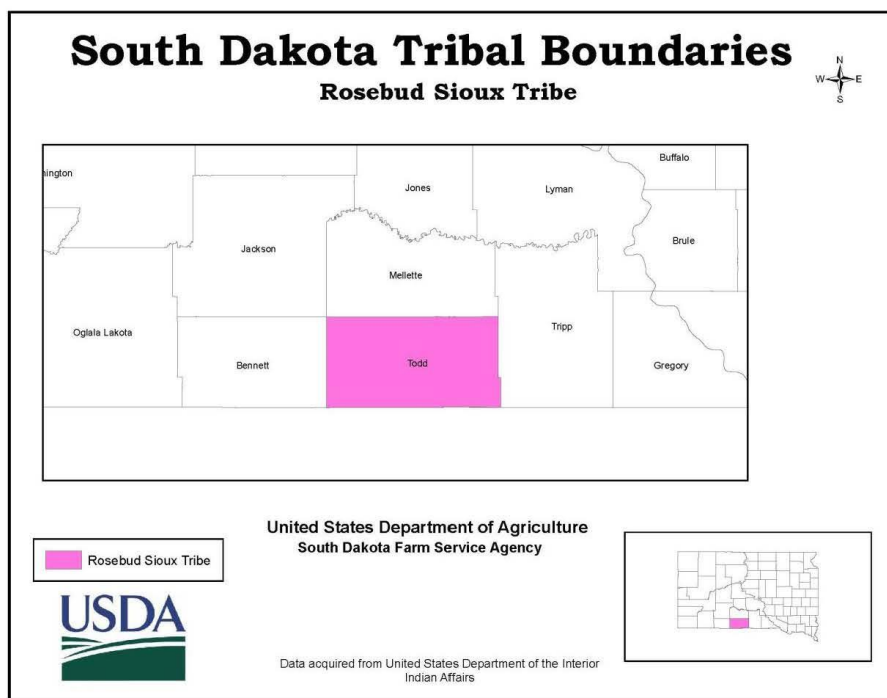
1. Location Map for the Rosebud Sioux Tribe CREP Project Area

References:

USDA. 2016. South Dakota Threatened and Endangered Species Programmatic Consultation (Programmatic Biological Assessment and Procedures) for South Dakota NRCS Conservation Practice Standards and Specification. Signed December 2016.

<https://efotg.sc.egov.usda.gov/references/public/SD/Programmatic_Biological_Assessment.pdf>

Attachment 1. Location Map for the Rosebud Sioux Tribe CREP Project Area



B.5 SAMPLE OTHER INTERESTED PARTIES LETTER



United States
Department of
Agriculture

Farm
Production
and
Conservation

Farm
Service
Agency

SD State FSA Office
200 4th St. SW Fed Bldg., Room 308
Huron, SD 57350
PH: 605-352-1160
Fax: 855-243-6003

August 15, 2022

«First_Name» «Last_Name»

«Title»

«Organization»

«Street_Address»

«City», «State» «ZipCode»

Subject: Proposed Rosebud Sioux Tribe Conservation Reserve Enhancement Program (CREP) Project

Dear «First_Name» «Last_Name»,

The United States Department of Agriculture (USDA) Farm Service Agency (FSA) is developing a Draft Programmatic Environmental Assessment (PEA) for the proposed Rosebud Sioux Tribe CREP. The PEA is being prepared in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations implementing the National Environmental Policy Act, and 7 Code of Federal Regulations (CFR) Part 799, FSA Implementing Regulations for NEPA.

CREP is a program authorized under provisions of the Food Security Act of 1985, as amended (1985 Act) (16 U.S.C. § 3831 et. seq.), and the regulations at 7 CFR Part 1410. Under the proposed CREP agreement, agricultural producers would voluntarily enter into contracts with the federal government for 10 to 15 years, agreeing to maintain an existing vegetative cover of Conservation Practice CP88, Permanent Grasses and Legumes, while retaining the right to conduct common grazing practices and operations related to the production of forage and seeding. The purpose of the CREP is to reduce agricultural environmental impacts on Rosebud Indian Reservation lands primarily through the use of rotational grazing and livestock water source development.

For land to be enrolled in the CREP, it must be located within the reservation (see Attachment 1), have an existing grass cover that is suitable for haying or grazing at the time it is offered for enrollment, and meet all eligibility criteria to be enrolled in the Conservation Reserve Program as grassland. Up to 600,000 acres of land would be enrolled in the Rosebud Sioux Tribe CREP. Eligible land offered for CREP would enroll in CP88; the purpose of the CP88 practice is to maintain existing vegetative cover of either introduced or native grasses and legumes. Agricultural producers would be eligible for annual rental payments for the duration of the contract, and USDA would provide cost-share payments to eligible participants for up to 50 percent of the eligible reimbursable costs incurred for installing permanent fencing and livestock watering facilities needed to facilitate livestock grazing.

The proposed project would include:

1. Enrollment of up to 600,000 acres to maintain, improve, and protect grassland productivity through rotational grazing and water development;

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August 15, 2022

2. Increasing the average carrying capacity, animal units per acre, on land enrolled in the Conservation Reserve Program (CRP) through this CREP; and
3. Reducing erosion in riparian areas along water bodies through rotational grazing and cover enhancements.

We appreciate your review of this material and any comments on issues that would be of concern to your office. The Draft PEA is available at <https://www.fsa.usda.gov/state-offices/South-Dakota/resources/index>. The public will be notified of the availability of the Draft PEA through the publication of a Notice of Availability in two local news publications. Please provide your comments within 30 days of receiving this letter to myself at (605) 352-1183 or by email at steven.littlefield@usda.gov.

Sincerely,

Steven Littlefield
USDA Farm Service Agency
State Environmental Coordinator

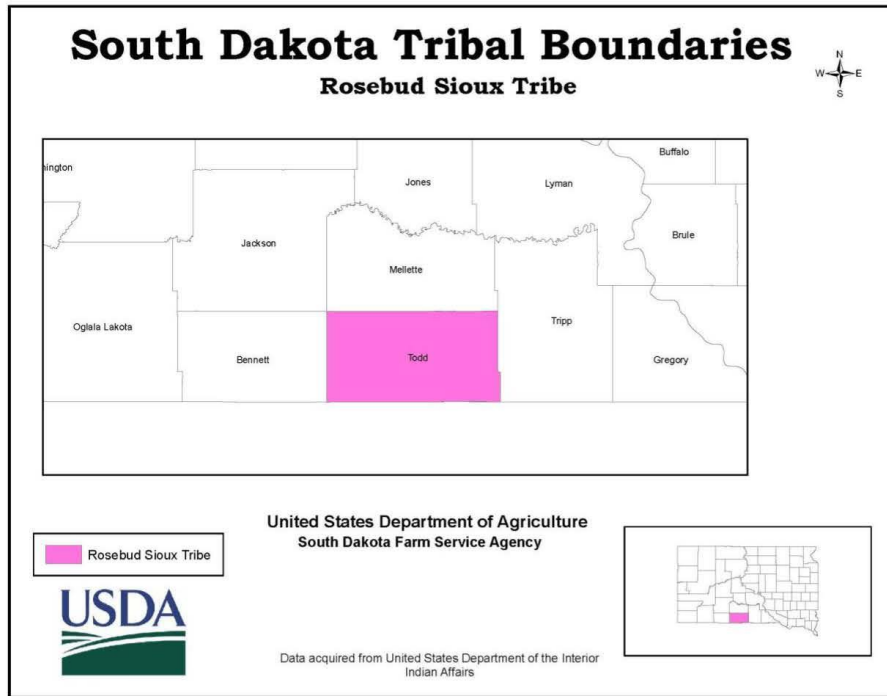
Attachment:

1. Project Area for the Rosebud Sioux Tribe CREP Agreement

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August 15, 2022

Attachment 1: Area of Potential Effects for the Rosebud Sioux Tribe CREP Agreement



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B.6 OTHER INTERESTED PARTIES MAILING LIST

Kurt Forman, Project Leader SD Partners for Fish & Wildlife Program, U.S. Fish and Wildlife Service
Timothy LaPointe, Regional Director, Bureau of Indian Affairs Great Plains Regional Office
Bill Smith, Director, South Dakota Department of Agriculture and Natural Resources
Tony Sunseri, State Conservationist, South Dakota Natural Resources Conservation Service

B.7 SUMMARY OF RESPONSES RECEIVED

Table B-1. Summary of Responses Received

Date	Commenter Name	Commenter Organization/Title	Summary of Comments
8/3/2022	Linda Ozane	Oklahoma Deputy State Historic Preservation Officer	The Oklahoma SHPO has no interest in this South Dakota project and has requested to be removed from the mailing list.
8/9/2022	Merle Marks	Crow Creek Sioux Tribe Tribal Historic Preservation Officer	The Crow Creek Sioux Tribe defers the reviews and comments to the project tribes THPO's and cultural resource specialists.

APPENDIX C
PROGRAMMATIC BIOLOGICAL ASSESSMENT FOR THE SOUTH DAKOTA NRCS CONSERVATION
PRACTICE STANDARDS AND SPECIFICATIONS

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C.1 INTRODUCTION

In 2016, the US Fish and Wildlife Service concurred with the determinations of “No Effect” and “May Affect but Not Likely to Adversely Affect” in a Programmatic Biological Assessment (BA) for implementing Natural Resources Conservation Service (NRCS) Conservation Practices throughout South Dakota prepared by the US Department of Agriculture. The Programmatic BA can be accessed at the following link: https://efotg.sc.egov.usda.gov/references/public/SD/Programmatic_Biological_Assessment.pdf.

The next section below includes an excerpt of the Programmatic BA that applies to federally listed and candidate species compliance for NRCS actions associated with the Conservation Reserve Program (CRP).

C.2 CONSERVATION RESERVE PROGRAM STEPS EXCERPT

CONSERVATION RESERVE PROGRAM (CRP) STEPS:

The Farm Service Agency (FSA) issued SD Amendment 1 (dated November 19, 2010), to the CRP Manual (2-CRP Revision 5). Specifically, Part 11 Paragraph 367 F provides the guidance the FSA will use when implementing conservation plans and NEPA documentation provided by the NRCS. Future versions of the 2-CRP Manual and future amendments are anticipated to follow this guidance.

“FSA will not implement a practice that deviates from existing NRCS Conditions for Implementing Conservation Practices (CICPs) which have been previously coordinated with USFWS. The conservation plan developed by NRCS to implement the conservation practice [or action] will include the appropriate CICPs.”

Based on the language agreed to above by both agencies, the SD NRCS will FOLLOW THE PREVIOUS STEPS (1-6) OF THESE INSTRUCTIONS WITH THE FOLLOWING **EXCEPTIONS STATED IN BOLD TYPE:**

STEPS 1 & 2:

Identify your planning area, your area of potential effect, and your county.
***NO EXCEPTIONS TO THE STANDARD PROCEDURES ARE ALLOWED.**
Identify all candidate and federally listed species in your county.

STEP 3:

***USE OF THE NRCS-CPA-52 ENDANGERED AND THREATENED SPECIES HELP SHEET IS REQUIRED.**

***WHOOPIING CRANE and RUFA RED KNOT NOTE:** The following language will be placed in the Federal Species Notes block on the Endangered and Threatened Help Sheet –

“For ALL conservation practices or actions, occasional and/or transient endangered species may visit the project site or site vicinity. If any endangered species visits the site or vicinity of the site then the client (program participant) or anyone conducting work for the client (program participant) must stop work immediately and contact the local NRCS office. The local NRCS office will determine when the work may continue based on the species present, the species location, and coordination with an NRCS biologist as appropriate.”

STEP 4:

Utilize the “Procedures” matrices to identify the likely affect **FOR ALL APPLICABLE SPECIES.**

1. **Record the effect determinations in Help Sheet.**
2. **Check the “Needs further Action” box in the Endangered and Threatened Species portion of Section J of the NRCS-CPA-52.**

STEP 5:

Record the Conditions for Implementing the Conservation Practice/Action (CICP).

1. **Record the CICP effect determination on the Help Sheet. Print the applicable CICPs, review them with client, and if the client agrees to the CICPs, then provide a copy to the client and the FSA. Instruct the client to work with the FSA to complete a landowner/client agreement to the CICPs prior to conservation planning being completed.**

2. **If the landowner does not wish to comply with the listed CICPs OR if the landowner refuses to select a different alternative then cease planning.**

STEP 6:

Finalize Section J of the NRCS-CPA-52.

Due to the Whooping Crane and Rufa Red Knot potentially occurring in all counties, the NRCS will, in all cases, check the “Needs Further Action” box. Provide a photocopy of the NRCS-CPA-52 to the FSA. Follow-up with the FSA once resolution is achieved. Properly document the resolution on the NRCS-CPA-52 in the case file.

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APPENDIX D
DETAILED REGIONAL PRODUCTION EXPENSES, AGRICULTURAL SALES, AND OTHER FARM
RELATED INCOME

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Table D-1. 2017 Detailed Regional Production Expenses, Agricultural Sales, and Other Farm Related Income

County	Production Acres	Farm Production Expenses				Total Agricultural Sales				Farm Related Income			
		Number of Farms	Average Production Expenses Per Farm	Total Expenses	Expenses /Acre	Number of Farms	Average Agricultural Sales Per Farm	Total Sales	Sales/ Acre	Number of Farms	Average Farm Related Income Per Farm	Total Farm Related Income	Farm Related Income/ Acre
Todd	869,592	223	222,185	49,547,000	56.98	223	240,621	53,659,000	61.71	129	57,273	7,388,000	8.50
Total/Average	869,592	223	222,185	49,547,000	56.98	223	240,621	53,659,000	61.71	129	57,273	7,388,000	8.50

Source: National Agricultural Statistics Service (NASS). 2017. *2017 Census of Agriculture. South Dakota State and County Data.*

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APPENDIX E
LIST OF PREPARERS AND CONTRIBUTORS

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USDA = United States Department of Agriculture Farm Service Agency; FSA = Farm Service Agency; SD= South Dakota; CREP = Conservation Reserve Enhancement Program