RECLAMATION

Managing Water in the West

DK-5000-16-02

Draft Environmental Assessment

Issuance of a Water Service Contract to Garrison Diversion Conservancy District for the Central North Dakota Water Supply Project, North Dakota

Dakotas Area Office
Bismarck, North Dakota

April 2018

U.S. Department of the Interior
Bureau of Reclamation

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

APPENDICES

List of Acronyms and Definitions

Action Area – Based on Reclamation's assessment of the potential direct and indirect effects of the Proposed Action to federally listed species (50 CFR 402.02)

Canal – McClusky Canal

CNDWSP – Central North Dakota Water Supply Project

CEQ – Council of Environmental Quality

CFR – Code of Federal Regulations

CFS – cubic feet per second

Critical Habitat – It is a specific geographic area(s) that is essential for the conservation of a threatened or endangered species and that may require special management and protection.

Connected Actions – Connected actions are those actions that are "closely related" to the proposal and alternatives. Connected actions automatically trigger other actions, they cannot or will not proceed unless other actions have been taken previously or simultaneously, or they are interdependent parts of a larger action and depend on the larger action for their justification (40 CFR Part 1508.25)

DKAO – Dakotas Area Office

Environmental Mitigation Commitments – These are commitments included as an inseparable component of this Proposed Action. They are designed to offset potential for significant environmental effects resulting from the Proposed Action. These commitments will be implemented to (1) prevent, minimize, or offset the occurrence of potential for adverse environmental effects and (2) ensure compliance with applicable Federal and State regulations designed to protect fish and wildlife resources, important habitats and sensitive areas, cultural and paleontological resources, human health and safety, and the public interest.

EA – Environmental Assessment

EIS – Environmental Impact Statement

ESA – Endangered Species Act of 1973

FONSI – Finding of No Significant Impact, the decision document that concludes an EA

Garrison Diversion – Garrison Diversion Conservancy District

GDU – Garrison Diversion Unit

IPaC – Information, Planning, and Conservation System

ITA – Indian Trust Assets

MM – Mile Marker

MR&I – Municipal, Rural and Industrial (water supply)

NDSHPO – North Dakota State Historic Preservation Officer

NEPA – National Environmental Policy Act of 1969 as amended

NHPA – National Historic Preservation Act of 1966 as amended

NRCS – Natural Resources Conservation Service

NRHP – National Register of Historic Places

O&M – Operations and Maintenance

Project Area – The Central North Dakota Water Supply Project facility location, including the pump station, six miles of pipeline, and ten miles of electrical facilities.

Proposed Project – The subject of this EA, the proposal to issue water service contract to Garrison Diversion Conservancy District for the Central North Dakota Water Supply Project

Program - Pick-Sloan Missouri Basin Program

Reclamation – U.S. Department of the Interior, Bureau of Reclamation

ROW – Right-of-Way

SUP – Special Use Permit

USACE – U.S. Army Corps of Engineers

USDA – U.S. Department of Agriculture

USFWS – U.S. Fish and Wildlife Service

Chapter 1 Introduction and Regulatory Background

Introduction

The Bureau of Reclamation (Reclamation) is proposing to issue a water service contract, special use permit (SUP), and approve authorization of a preference power contract to Garrison Diversion Conservancy District (Garrison Diversion) for the Central North Dakota Water Supply Project (CNDWSP) (Proposed Action). Garrison Diversion has requested a water service contract and preference power to withdraw up to 20 cubic feet per second (cfs) of water from the McClusky Canal (Canal) to serve areas of Burleigh, Sheridan, Wells, Foster, Kidder, McLean and Stutsman Counties within the Missouri River Basin, North Dakota. CNDWSP would utilize the state-sponsored Red River Valley Water Supply Project (RRVWSP) main transmission line to serve Central North Dakota. Additionally, Garrison Diversion has requested a SUP from Reclamation to construct an intake in the Canal and a pump station building and an approximate 0.10 mile of pipeline on Reclamation's right-of-way on the Canal.

Reclamation has prepared this Revised Draft Environmental Assessment (EA) in response to substantive comments on environmental issues in the Draft EA release for public comment in August 2017 (Appendix A). Comments were received from state and federal agencies and other organizations interested in the Proposed Action. Some changes were incorporated into the Revised Draft EA in response to the comments received, but these revisions do not fundamentally change the impact analysis or the results presented in the EA. The primary changes from the Draft EA include:

- Purpose and Need Discussion – provided additional information to clarify the need for the Proposed Action
- Connected Action Discussion – provided additional information for clarification
- Geographic Scope and related Cumulative Impact Analysis – provided additional information for clarification
- Compliance with the 1909 Boundary Waters Treaty – included a discussion of the infrastructure/controls included to keep Missouri River water for the Proposed Action within the Missouri River Basin
- In response to comments regarding impacts from Missouri River depletions, Reclamation expanded the discussion of the Missouri River Mainstem System to describe its extent, to explain how the U.S. Army Corps of Engineers (USACE) operates this integrated system of dams and reservoirs and discloses the analysis of potential effect which utilized the results of the most recently completed comprehensive analysis of Missouri River depletions.

Garrison Diversion was made a cooperating agency in the revised draft EA process due to their expertise on the CNDWSP information and data necessary to complete revisions.

Purpose and Need for the Proposed Action

Garrison Diversion has requested Reclamation water from the Canal and Pick-Sloan Missouri Basin Program preference power for the CNDWSP.

Garrison Diversion's request for a water service contract and preference power are in response to continued growth and industrial development in the region and the need for a reliable water source. Reclamation evaluated the Central North Dakota User Nomination Process Report completed for Garrison Diversion (AE2S and Black & Veatch 2017) highlighting current water uses, State Water Commission permit allocations and projected water use into 2075 for communities that have interest in use of the Proposed Project. Based on those water projections into 2075, water permit allocations would cover domestic demands but not the industrial nominations requested by the communities (Table 1).

Plant genetics as well as changes in climate have allowed farmers to grow traditional row crows (e.g. corn, soybeans) in areas where they could not before in North Dakota. Changing crop patterns suggest that future ag-processing activities would likely trend toward row crops. Row crop processing is generally more water intensive than processing of small grains (Bangsund and Leistritz 2004). As a result, water demand from ag-processing has the potential to grow in the future. Additionally, in 2015, CHS, Inc., a farmer-owned cooperative, did not move forward with a $3 billion fertilizer plant in Jamestown, North Dakota, in part due to lack of a needed water supply (Norman 2015). Water quantity reliability (the amount of water available on a consistent basis) is a controlling factor in the planning of water-intensive industrial supply projects.

The purpose of the Proposed Action is to consider the eligibility of Garrison Diversion to receive Pick-Sloan Missouri Basin Program (Program) preference power and a water service contract for 20 cfs from the Canal as an alternative source for the portion of the Proposed Project that would utilize water within the Missouri River Basin. A reliable MR&I water supply is requested by Stutsman Rural Water District, Jamestown, Carrington, Central Plains Water District, Tuttle, and South Central Regional Water District Water District, in accordance with the authorities listed above, for industrial water that would remain within the Missouri River Basin, North Dakota.

The Proposed Action is needed to fulfill the purposes of the Garrison Diversion Unit Act of August 5, 1965 (79 Stat. 433) to provide municipal and industrial water, among other purposes, and the Garrison Diversion Unit Reformulation Act of 1986 (100 Stat. 418), as amended by the Dakota Water Resources Act of December 21, 2000 (114 Stat. 2763) to meet the water needs of the State of North Dakota, including municipal, rural and industrial water needs. Garrison Diversion is designing and constructing the state-sponsored RRVWSP, which will use an intake directly on the Missouri River as a water source, but has requested 20 cfs from the Canal, the Proposed Action, as a lower cost option for a portion of the water that would be supplied for industrial purposes for Stutsman Rural Water District, Jamestown, Carrington, Central Plains Water District, Tuttle and South Central Regional Water District. These communities determined their projected industrial growth water needs will exceed the existing State Water Commission groundwater permits. Therefore, available industrial water allocations have the potential to limit future industrial development within the region.

Federal Decisions to Be Made

This EA provides analysis to inform four primary federal decisions:

- Approve, approve with conditions, or deny all or in part Garrison Diversion's request for a Water Service Contract providing up to 20 cfs of federal water from the Canal for use in the Missouri River Basin as part of the CNDWSP.
- Approve, approve with conditions, or deny all or in part Garrison Diversion's request for eligibility to receive P-SMBP preference power for the CNDWSP.
- Approve, approve with conditions, or deny all or in part Garrison Diversion's request for a use authorization to construct and maintain facilities on Reclamation land and provide for regular and emergency maintenance access.
- Approve, approve with conditions, or deny all or in part a use authorization to the utility company for installation of powerlines on Reclamation land for providing power to Garrison Diversion's pump station.

Table 1. Central North Dakota Water Supply Nomination Information (AE2S and Black & Veatch 2017, North Dakota State Water Commission 2015).

Prospective Users	Current Water Source	Permit Number	Permit Allocation	2016 Water Use	2075 Water Demand Projections (cfs)	Potential Industrial Activities [cfs]	Industrial Nomination (cfs)
Jamestown	Groundwater	1120	10.56	5.25	8.35	Nitrogen fertilizer production [12.22]; Beef processing [2.91]; Biodiesel production (soybean) [1.17]; Soybean crushing/cracking [1.16]; Ethanol, fuel grade-corn (expansion) [1.12]	15.0
	Surface water	6085*	2.92	0.00			
	Groundwater	6597*	0.96	0.26			
Stutsman Rural Water District	Groundwater	3774	0.45	0.28	0.57		
	Groundwater	5690	0.45	0.28			
	Groundwater	6454*	2.23	0.79			
	Groundwater	6609*	2.11	0.00			
Carrington	Groundwater	1113	0.85	0.34	0.73**	Biodiesel production (soybean) [1.17]; Soybean crushing/cracking [1.16]; Ethanol, barley [1.41]; Beef processing [0.73]; Oilseeds [0.30]	2.5
Central Plains Water District	Groundwater	3811	0.28	0.00	0.90	Potato [0.50]; Ethanol [0.48]; Oilseeds [0.24]	0.6
	Groundwater	4091	0.41	0.29			
	Groundwater	5222	0.21	0.22			
South Central Regional Water District	Groundwater	4679	0.44	0.33	3.0 – 4.0	Potato [0.50]; Ethanol [0.48]; Oilseeds [0.24]	0.5
	Groundwater	5792	2.21	1.76			
	Groundwater	6019	1.93	0.78			
Tuttle	Groundwater	2142	0.07	0.01	0.03	Sunflower [0.009]; Chicken processing [0.04]; Potato [0.08]	0.02

*industrial permit **maximum projected 2075 domestic demand and current water sales

Project Area

The Canal is located in McLean, Burleigh, and Sheridan Counties, North Dakota, originating at Audubon Lake in Section 11, Township 147 North, Range 82 West, McLean County and extends 73.6 miles east terminating in Section 25, Township 149 North, Range 76 West, Sheridan County. Water is pumped from Lake Sakakawea into Audubon Lake and flows by gravity through the Canal. The Canal was designed to convey 1,950 cfs of water for municipal and rural water systems and irrigation. The design features include 2:1 slopes with a 25-foot bottom width, 17-foot water depth, and 94-foot water surface width. The Canal also provides recreation opportunities and wildlife habitat.

The Project Area is located approximately 12 miles southwest of McClusky, North Dakota near mile marker (MM) 42.5 of the Canal (Figure 1). A pipeline with a diameter of up to 36-inch diameter would extend approximately 6 miles south from a proposed pump station and tie into the state-sponsored RRVWSP main transmission line, which travels west to east and will be utilized to serve water to both the Red River Valley and the Central North Dakota Area (Figure 2).

The proposed pump station building and pipeline would occur within a 150-foot right-of-way. The Project Area would be located primarily in an agricultural area, located in:

Township (T) 145 North (N), Range (R) 77 West (W), Section 32
T144N, R78W, Section 1, 11, 12, 14, 23, 24, 25, 26, 35

The Project Area is located in the Great Plains (level I ecoregion), West-Central Semi-Arid Prairies (level II ecoregion), Northwestern Glaciated Plains (level III ecoregion), and Missouri Coteau Slope (level IV ecoregion). The Northwestern Glaciated Plains marks the western extent of continental glaciation and contains significant surface irregularity. The ecoregion contains a high concentration of wetlands and land uses that consist mainly of farming and cattle ranching. Precipitation averages 17.7 inches annually. The average annual low temperature is in January, 18.3 ºF, while July has the highest average temperature, 83.5 ºF (NOAA 2002).

Geographic Scope

For the cumulative impact analysis, in addition to the Project Area, Reclamation is evaluating a geographic scope that includes a portion of the state-sponsored RRVWSP and tie-in that would occur in the proposed 150-foot ROW of the CNDWSP (Figure 3).

Authority

Reclamation is authorized to issue a water service contract and to determine project eligibility to receive Pick-Sloan preference power under the Act of June 17, 1902 (32 Stat. 388) and acts amendatory of or supplementary to that Act, particularly the Reclamation Project Act of 1939 (53 Stat. 1187), as amended, the Flood Control Act of 1944 (Pub. L. 78-534; 57 Stat. 887), and the Garrison Diversion Unit Act of August 5, 1965 (79 Stat. 433), as amended and supplemented by: Title II of the Energy and Water Development Appropriation Act of July 16, 1984 (98 Stat. 403); the Garrison Diversion Unit Reformulation Act of May 12, 1986 (100 Stat. 418); and the Dakota Water Resources Act of December 21, 2000 (114 Stat. 2763). Section 9 of the Flood

Control Act of 1944, as amended, authorizes the Program for eight purposes: flood control, navigation, irrigation, power, water supply, recreation, fish and wildlife, and water quality.

Development of a water service/repayment contract would be initiated after the completion of the National Environmental Policy Act (NEPA) documentation. The timeframe for the water service contract would be 40 years and the timeframe for the SUP would be 25 years.

Reclamation is charged with the responsibility to administer and regulate water and power services, rates, and charges for the use of Reclamation facilities through federal contracts. The CNDWSP would be constructed with funds in whole or in part by the local users and the State of North Dakota.

National Environmental Policy Act Process

Reclamation is the lead federal agency for the Proposed Action. Therefore, Reclamation is ultimately responsible for compliance with NEPA of 1969 (as amended). To comply with NEPA and related environmental laws and regulations, federal agencies must consider the potential environmental effects of their decisions regarding approval of projects proposed on federally-owned and administered land or projects under federal control. Reclamation must evaluate connected actions as required in the Council of Environmental Quality (CEQ) 40 Code of Federal Regulations (CFR) 1508.25. This evaluation may include assessing cumulative impacts on non-federally managed lands.

There are no connected actions requiring additional analysis in this EA. As defined in 40 CFR 1508.25, actions are connected if they: 1. Automatically trigger other actions which may require environmental impacts statements; 2. Cannot or will not proceed unless other actions are taken previously or simultaneously; or 3. Are interdependent parts of a larger action and depend on the larger action for their justification. 40 C.F.R. § 1508.25(a)(1). NEPA procedural protections apply to "major Federal actions significantly affecting the quality of the human environment...." 42 U.S.C. § 4332(c). The focus of 40 C.F.R. § 1508.25(a)(1) is to ensure that a federal project is not improperly segmented to avoid compliance with NEPA. The state-sponsored RRVWSP will proceed independent of the proposed CNDWSP and does not need approvals from Reclamation. Garrison Diversion would utilize the state-sponsored RRVWSP to deliver the proposed 20 cfs of federal water. The state agreed to limit distribution of the 20 cfs to the identified in-basin communities in need.

This EA documents the proposed federal action, alternative actions considered, expected impacts of those actions, and compliance with environmental laws and regulations. The 516 DM 14.4 and 516 DM 14.4B recognizes that Reclamation may choose to not initially prepare an EIS and in those instances requires that an EA be prepared and handled in accordance with 40 CFR 1501.4(e)(2). The 516 DM also provides a categorical exclusion D(4) for water service contract actions that are for minor amounts of long-term water use or temporary or interim water uses where the action does not lead to long-term changes and where the impacts are expected to be localized. Reclamation determined the NEPA analysis will commence with an EA.

This EA may lead to a Finding of No Significant Impact (FONSI) if the responsible official decides the impacts of the action are not significant. If significant environmental impacts are identified, Reclamation would stop the EA process and may proceed with the preparation of an

EIS. Reclamation defines significance in accordance with 40 CFR 1508.27 in reference to context and intensity.

If there are substantial changes in the Proposed Action; new circumstances or information relevant to environmental concerns and bearing on the Proposed Action or its impacts; or delays in implementing the action, it may be necessary for Reclamation to conduct additional environmental review.

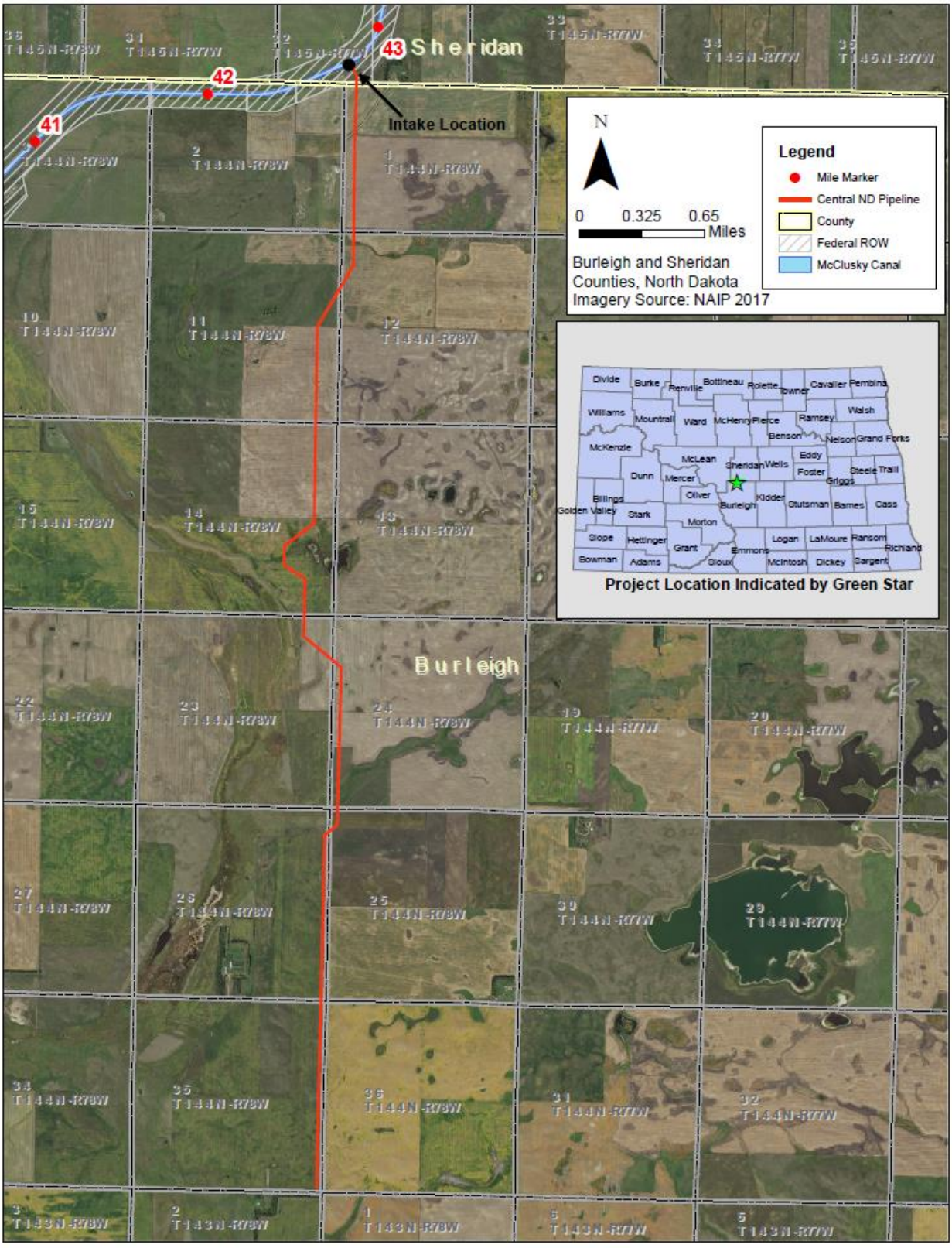


Figure 1. Overview of the Project Area for the Proposed Central North Dakota Water Supply Project.

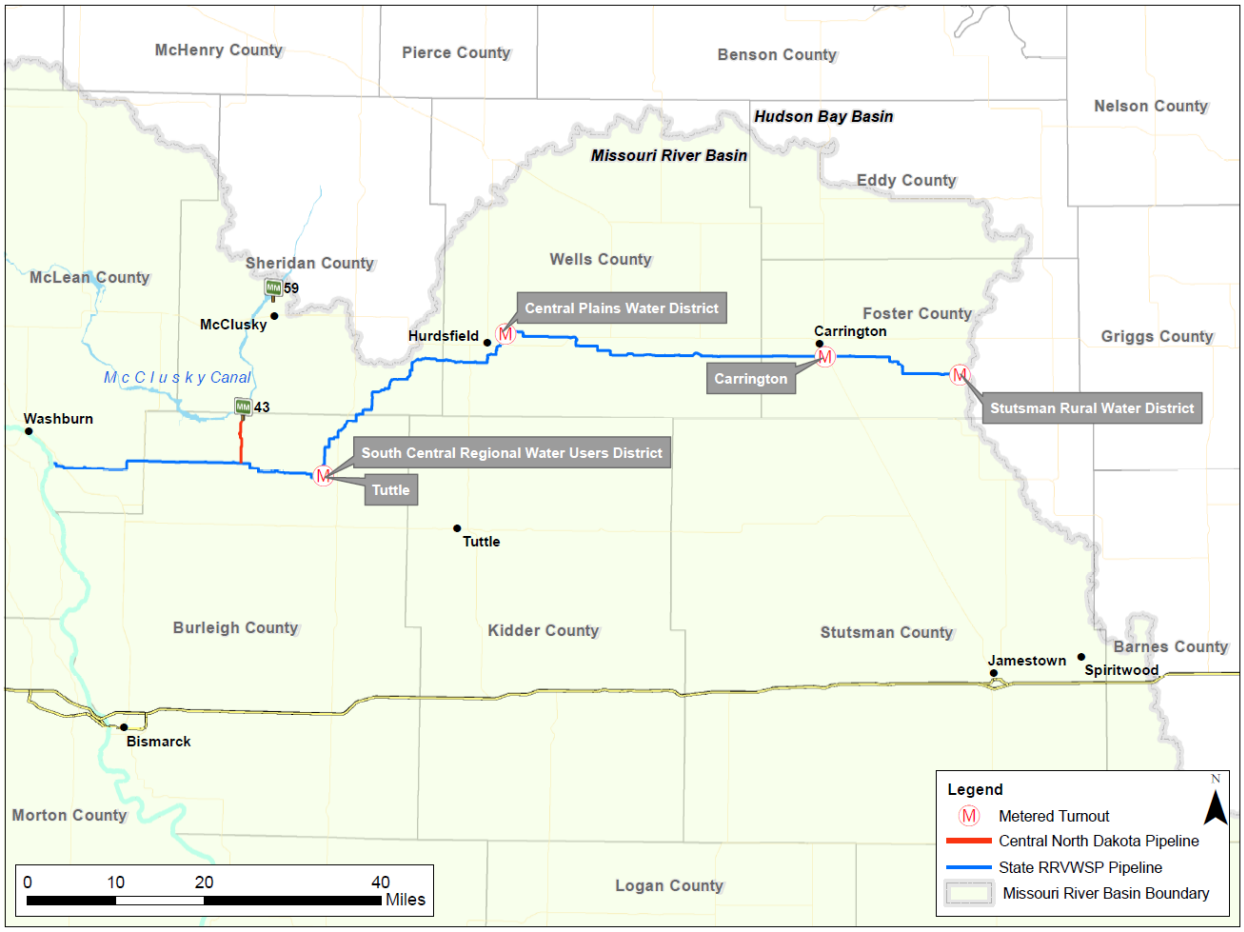


Figure 2. Overview of the Proposed Central North Dakota Pipeline Project and the State-sponsored Red River Valley Water Supply Project.

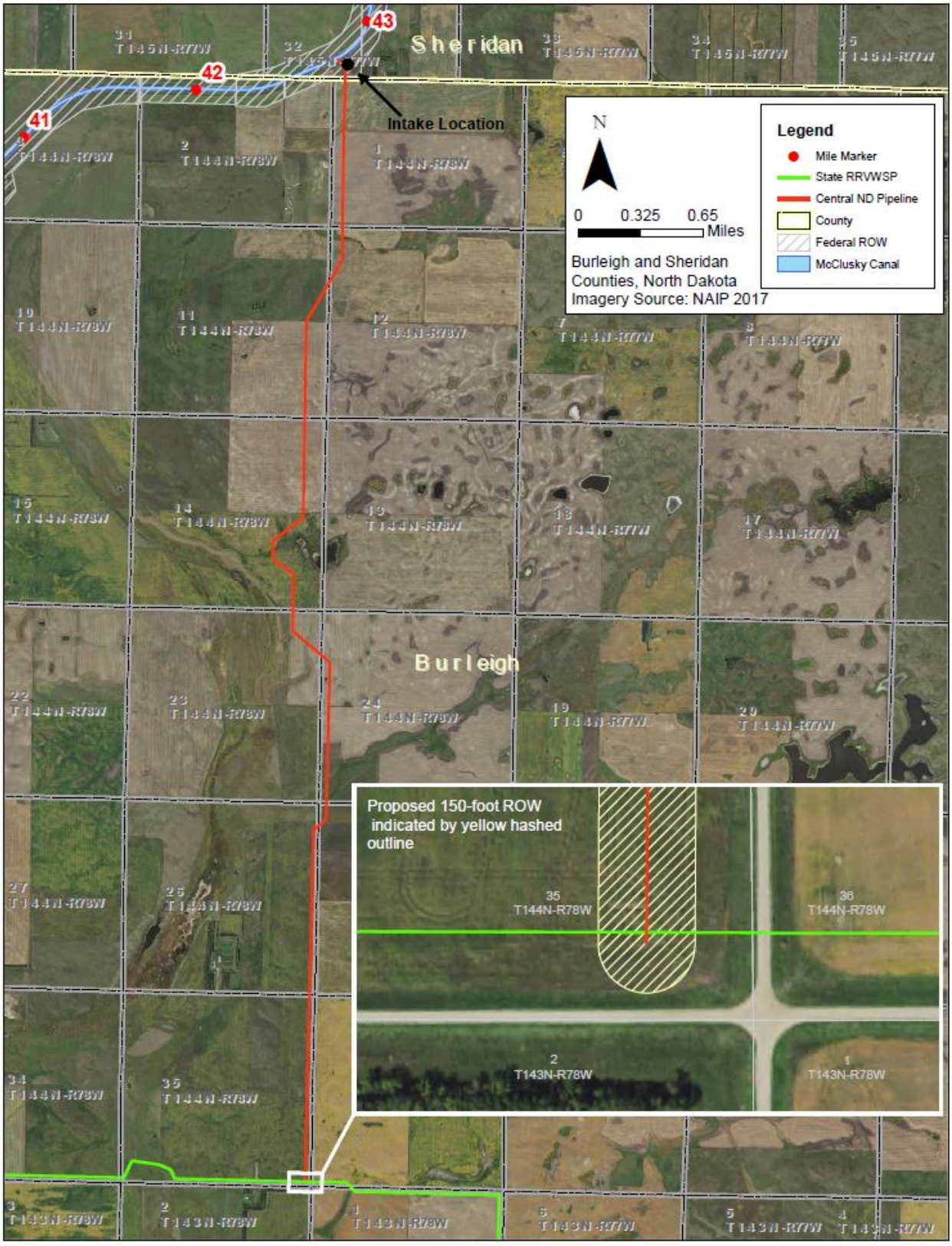


Figure 3. Geographic Scope of the Proposed Central North Dakota Pipeline Project.

Chapter 2 Proposed Action and Alternatives Considered

No Action Alternative

The No Action Alternative consists of the future without the proposed federal action – Reclamation would not issue a water service contract or SUP to Garrison Diversion for the CNDWSP. The CNDWSP would not be eligible to receive Pick-Sloan Missouri Basin Program preference power. Garrison Diversion would utilize the state-sponsored RRVWSP as a means to convey MR&I water to Burleigh, Sheridan, Wells, Foster, Kidder, McLean and Stutsman Counties, North Dakota. Under this alternative the state-sponsored RRVWSP would withdraw 165 cfs of water from the Missouri River, to obtain the full water supply, including 20 cfs for the CNDSWP and 145 for the state-sponsored RRVWSP. The No Action Alternative would not require a water service contract or SUP from Reclamation.

Proposed Action - Central North Dakota Water Supply Project

The Proposed Action, Reclamation's preferred alternative, is to issue a water service contract and SUP to Garrison Diversion, and approve authorization of a preference power contract, to make available GDU project water, preference power, and certain Reclamation lands to the CNDWSP. CNDWSP is being planned to deliver a MR&I water supply to Burleigh, Sheridan, Wells, Foster, Kidder, McLean and Stutsman Counties for use within the Missouri River Basin of North Dakota. The Proposed Action includes:

1. Reclamation would issue a long-term (40 years) water service contract to Garrison Diversion, making up to 20 cfs (approximately 14,489 acre feet per year) of federal water available from the Canal for the CNDWSP.
    a. The proposed water service contract would utilize approximately 1.2% of the water appropriated to Reclamation from the North Dakota State Water Commission, under Permit No. 1416 for 1,212,348 acre-feet from the Missouri River for MR&I and other authorized purposes. The priority date of this water permit is February 9, 1967. The maximum amount of water allocated under this permit is based on beneficial use as defined by the state of North Dakota water law.

2. Reclamation would determine project eligibility for P-SMBP preference power to Garrison Diversion for the CNDWSP.

3. Reclamation would issue a SUP (25 years) to Garrison Diversion to construct and maintain the facilities required on Reclamation land (as described below) and provide for regular and emergency maintenance access. Facilities include an intake in the Canal, wet well, pump station, and approximately 0.10 miles of the 6 mile of pipeline.

4. Reclamation would issue a SUP to the utility company for installation of power lines on or across Reclamation land to power the pump station.

5. The Proposed Action also includes 6 miles of the pipeline for delivery of up to 20 cfs from the Canal to the state-sponsored RRVWSP. This component of the Proposed Action does not require Reclamation approval, however it is dependent upon Reclamation's approval of a water service contract and SUP as described above thus is analyzed in this EA as part of the Proposed Action.

Issuing Water Service Contracts and Determining Project Eligibility for Pick-Sloan Missouri Basin Program Preference Power

Subsection 9(c)(2) of the 1939 Act allows the Secretary of the Interior to enter into water service contracts for the recovery of reimbursable costs allocated to M&I or other miscellaneous purposes. Contracts executed pursuant to subsection 9(c)(2) of the 1939 Act are limited to a maximum of 40 years.

The water service contracting process is as follows:

- Identify contract action (i.e. is water is available, which contract instruments are available, etc.)
- Determine Reclamation's authority to execute contract;
- Execute Memorandum of Understanding for reimbursement of environmental compliance and contractual documents.
- Seek delegation of authority, if necessary, through the Basis of Negotiation and approval process;
- Draft Contract;
- Obtain legal sufficiency;
- Technical and/or negotiation discussions, if necessary;
- Public review and participation;
- Environmental compliance;
- Contract review, execution, distribution, and court confirmation, if necessary

Through specific contract articles, Reclamation will ensure Garrison Diversion's responsibilities for the operation, maintenance, and replacement of the distribution and management of water deliveries and implementation and monitoring of environmental commitments are satisfied.

If a water service contract is issued for the project, conditions of the contract would include maintaining use of the proposed 20 cfs in the Missouri River Basin (controls and metering are discussed further in Operations under Proposed Action).

The authorization of a preference power contract process is as follows:

- Determine if the project is eligible for project use power;
- Coordinate power contract development and administration with Western Area Power Administration

Major Components of the Proposed Action Alternative

McClusky Canal Intake

The CNDWSP intake would include screens, wet well, and a pump station to lift water from the Canal to the CNDWSP pipeline near MM 42.5. Figure 4 depicts an overview of the proposed facilities. To construct the intake structure, two temporary earthen dikes would be placed in the

canal approximately 100 feet upstream and downstream of the intake structure location. The section between the two earthen dikes would be dewatered throughout the construction process, allowing for the installation of the intake and wet well.

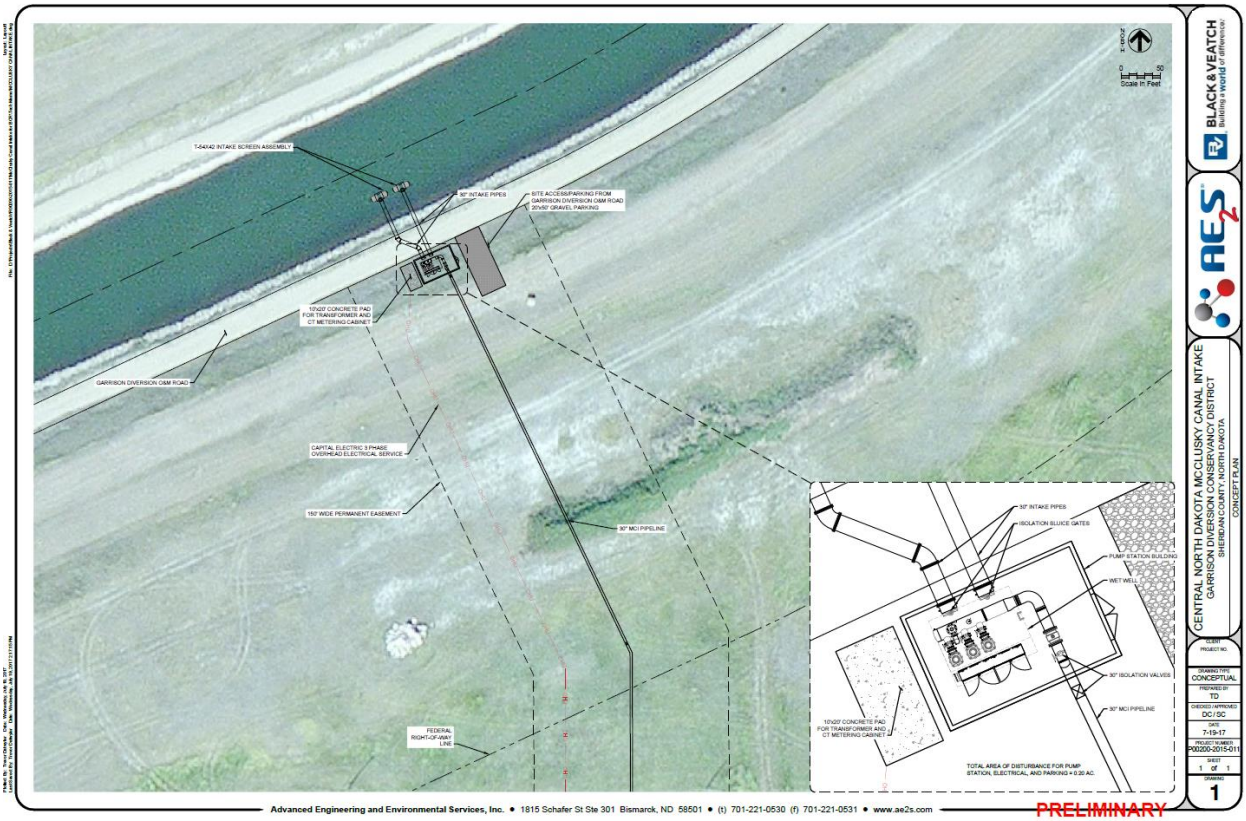


Figure 4. Overview of the Proposed McClusky Canal Intake Facilities.

Figure 5. Dual Johnson 54" x 42" Tee Screens.

Screen: The planned intake screen would be installed in the Canal to withdraw water for the CNDWSP. The project plans to construct something similar to the Dual Johnson 54" x 42" Tee screens as shown in Figure 5. Per the North Dakota Game and Fish guidelines, the intake screens would be manufactured using mesh spaced 0.25" or less. If the intake is placed at least 20 vertical feet below the existing water level, the intake velocities would not exceed 0.5 foot/second. If the 20 vertical feet below water level cannot be achieved, the intake velocity would be limited to 0.25 foot per second, with the intake placed at a maximum practical attainable depth. The installation of the intake screens would require a concrete anchor pad for support, concrete cribbing for protection, and an air pipe connection for screen cleaning. Garrison Diversion plans to utilize a minimum submergence of four feet from the top of the screen to the average water surface elevation.

Wet Well and Anchor Pads: Water would enter through the screens and be delivered to a wet well before it is pumped out into the pipeline. This facility would require the construction of a concrete rectangular wet well and anchor pads. The planned wet well building has interior dimensions of approximately 12' x 16' (example of planned construction shown in Figure 6).

Figure 6. Example of Wet Well and Anchor Pads.

Pump Station: A pump station would be required to house the mechanical equipment. This component of the Proposed Action includes a 20' x 30' building constructed over the wet well.

Due to the sloped terrain at the proposed location, an estimated 5,000 square foot area would be graded. The planned facility includes a graveled area approximately 20' x 50' next to the pump station building for parking vehicles and equipment. The pump station would be constructed of concrete walls and beams supporting a precast roof. Heating and cooling would be provided for the pump station along with extra cooling capabilities, which may be needed due to the heat generated by the large horsepower pumps. The building would also include an electrical/control room.

The pump system housed inside the pump station would have capacity for a design flow of approximately 20 cfs (8,976 gpm). Three 4,500 gpm capacity vertical turbine pumps would be installed, each with a variable frequency drive to allow adjustments in flow. Each pump discharge would be connected to the discharge piping, a check valve, air release mechanism, and isolation valve before connecting to a common discharge manifold. The discharge manifold and piping would exit the structure below grade and connect to a water supply pipeline.

Pipeline

The water supply pipeline includes the construction of a buried pipeline extending approximately 6 miles from the pump station and delivers water to the RRVWSP main transmission pipeline. The CNDWSP pipeline is designed to be up to 36-inch diameter to maintain an estimated velocity of approximately 4 feet/second. The water supply line would be installed using open cut construction methods typical of pipeline construction in North Dakota. An isolation valve would be constructed at the pump station and at the tie-in of the water supply line to the RRVWSP main transmission pipeline to allow for control of water flow at both of those locations. The pipeline design includes gasketed joints with restrained joints being used at all horizontal and vertical deflections for thrust restraint. Vacuum/air release valves would be located at high points along the alignment and blow-off valves would be located at low points for draining of the pipeline.

The pipeline would be constructed within private utility easements obtained by the Garrison Diversion and they would be responsible for completing topographic and boundary survey on each individual parcel. Easement monumentation would be set in accordance with North Dakota Century Code requirements and during construction, easement boundaries and the pipe centerline will be temporarily staked at 100 foot intervals. Within the easement limits, topsoil would be cleared, separated, and stockpiled on one side of the easement. All vegetation would be removed and disposed of offsite.

Trenching would be performed in accordance with applicable OSHA and State of North Dakota regulations. Excavated material would be kept separated from the topsoil. Granular materials would be used for pipe bedding. The pipeline would generally have 7.5 feet of cover over the top of the pipe and follow the general contour of the land being crossed. Native excavated material would be used for backfill where suitable. Backfill would be re-compacted to a minimum of 90% standard proctor per ASTM D698. Excess backfill material would be removed from the project right-of-way. Finally, all stockpiled topsoil would be spread over the easement to bring the ground back to the pre-construction elevations and contours. Native prairie grasses or other suitable vegetation would then be seeded to prevent erosion and weed growth.

Electrical Line

A proposed electrical line would connect the pumping station to the Capital Electric Erickson substation approximately 14 miles southwest of the intake. The proposed electrical alignment is approximately 10 miles, approximate location shown in Figure 7. This alignment is subject to change based upon Capital Electric's routing requirements. Three-phase overhead power would be run on standard height utility poles by Capital Electric along existing public rights-of-way (ROW) in an approximate 10 ft ROW and then adjacent to the access drive into the site. A pad mounted, 2,000 KVA transformer and secondary termination cabinet would then be placed adjacent to the proposed pumping station. The concrete pad for the transformer and CT metering cabinet would be approximately 10'x20'.

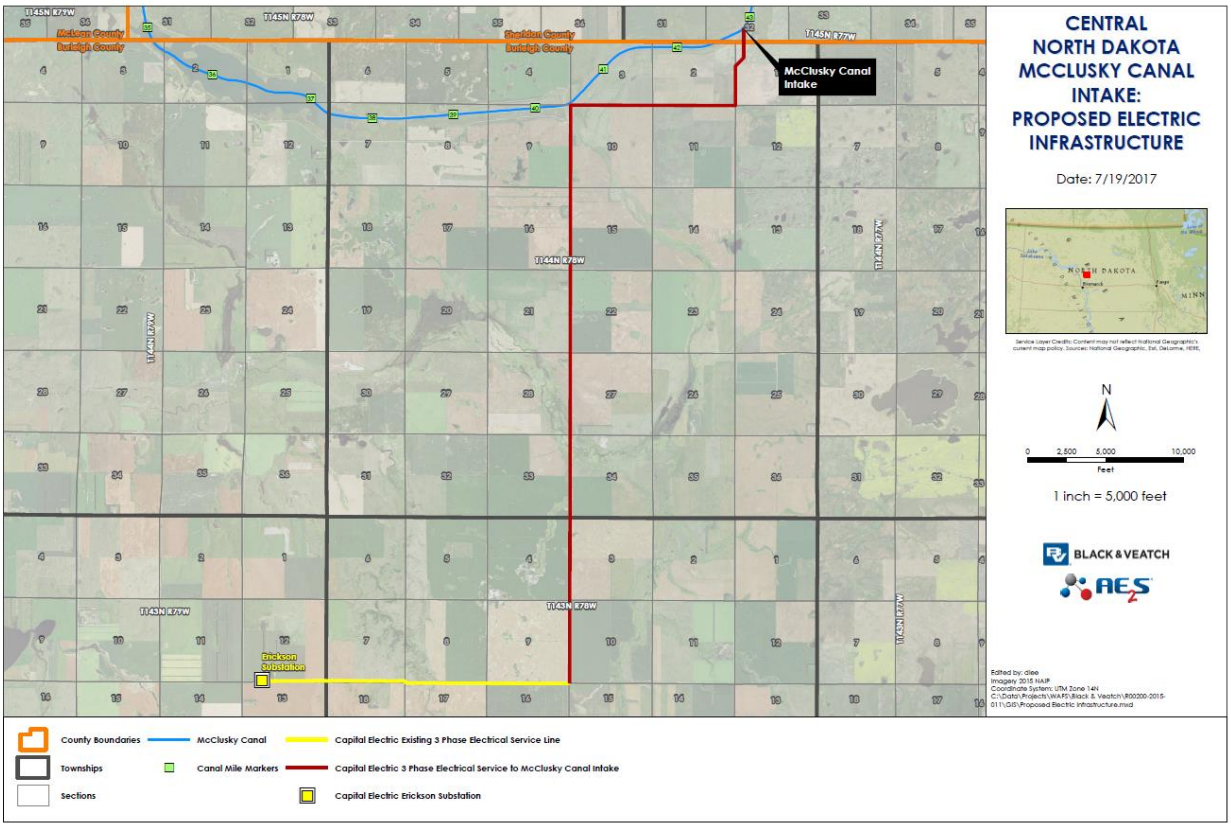


Figure 7. Proposed Electrical Facilities.

Construction Timing

Following standard construction practices of similar type project, earthwork for the construction of the Proposed Action would occur in the spring after spring thaw and continue to freeze up (approximately November). Guidance provided by the North Dakota Game and Fish Department recommends work not take place in the Canal from April 15 to June 1.

Operation

Water would be conveyed in this pipeline south of the intake approximately 6 miles (Figures 1 and 2) where it would tie into the state-sponsored RRVWSP. All of the water withdrawn from the Canal would be metered and the flow would be regulated using a SCADA system. The amount withdrawn and delivered to the state-sponsored RRVWSP for conveyance would not

exceed the combined demands of project users within the Missouri River basin, up to a maximum of 20 cfs.

The Canal intake pump station would include Variable Frequency Drives on each pump to allow the withdrawal rate to be adjusted based on the amount needed for deliveries. At the delivery point for each user, a flow meter and control valve would be utilized to monitor and regulate the flow leaving the main RRVWSP pipeline. Using these features for the project, the Proposed Action would not withdraw any more water from the Canal than what would actually be needed by the CNDWSP users in the Missouri River Basin.

Garrison Diversion would be responsible for the operation and maintenance of the distribution and management of water deliveries and implementation and monitoring of environmental commitments, these requirements would be explained in detail in the water service contract issues for the Proposed Action Alternative.

Other Projects within Geographic Scope

A portion of the state-sponsored RRVWSP occurs within the Geographic Scope of this EA.

State-sponsored RRVWSP

The state of North Dakota plans to use state and local funding to construct, operate and maintain the state-sponsored RRVWSP. This project will provide a supplemental water source for central and eastern counties in North Dakota during times of water scarcity to protect public health, ensure ongoing economic vitality, and provide for environmental benefits in the river systems (http://www.rrvwsp.com/about/). The state-sponsored RRVWSP also provides opportunities for industrial growth in the region, which is currently limited due to available water sources. The state-sponsored RRVWSP is being planned and coordinated by Garrison Diversion. Current plans include the following major components:

- Construction of an intake on the Missouri River to provide up to 165 cfs from the Missouri River for water supply in central and eastern North Dakota.
- Construction of a 72-inch to 78-inch buried Main Transmission pipeline and associated appurtenances, which will provide bulk water service to CNDWSP users in the Missouri River Basin, and transport remaining water across the continental divide into the Hudson Bay Basin for use in the Red River Valley.
- Construction of Pipeline support facilities such as pump stations, break tank &hydraulic structures and associated pipeline.
- Construction of a treatment facility.
- Construction of a discharge structure.

The state-sponsored RRVWSP is an independent project that will be completed solely by the state, without approvals or involvement of Reclamation. The RRVWSP was first initiated as a federal project authorized under the Dakota Water Resources Act of 2000, which mandated the preparation of an EIS. The EIS was completed in 2007 but a Record of Decision was never signed for a federally authorized project and there is no current or foreseeable federal proposal. Since federal authorization for the project was never finalized, the State of North Dakota, communities, and local users are pursuing a separate, but similar state-sponsored RRVWSP

independently. The State of North Dakota authorized up to $30 million for the 2017-2019 biennium to complete design and initiate construction of portion of the state-sponsored RRVWSP. The state-sponsored RRVWSP is being funded by the state, communities, and local water users. No federal authorization or funding is being requested from Reclamation for the state-sponsored RRVWSP.

For the cumulative impact analysis, Reclamation will analyze the tie-in and portion of the RRVWSP that would occur within the proposed 150-foot ROW of the CNDWSP (Figure 3).

Other Projects

There are other existing and planned projects in general close proximity to the proposed CNDSWP (Figure 8).

McClusky Canal Slide Repairs

NEPA analysis was completed and a FONSI signed by Reclamation on May 9, 2017 for the Canal slide repair project. The slide repairs will occur upstream of the proposed CND Project to repair portions of the canal which have slumped in. The project is planned to extend from Mile Marker 20 to Mile Marker 22. Repair work is planned to occur over the course of five to six years.

Local Irrigation Projects

Garrison Diversion currently has a water service contract and power service contract with Reclamation for the Turtle Lake and McClusky Canal irrigation projects near the Project Area. The plan for the 2018 season includes the following projects:

- MM 42 Right – irrigate 75 acres at a maximum of 325 gallons per minute (0.72 cfs);
- MM 42 Left – irrigate 1,395 acres at a maximum of 8,100 gpm (18 cfs) (Reclamation 2011; Reclamation 2018).

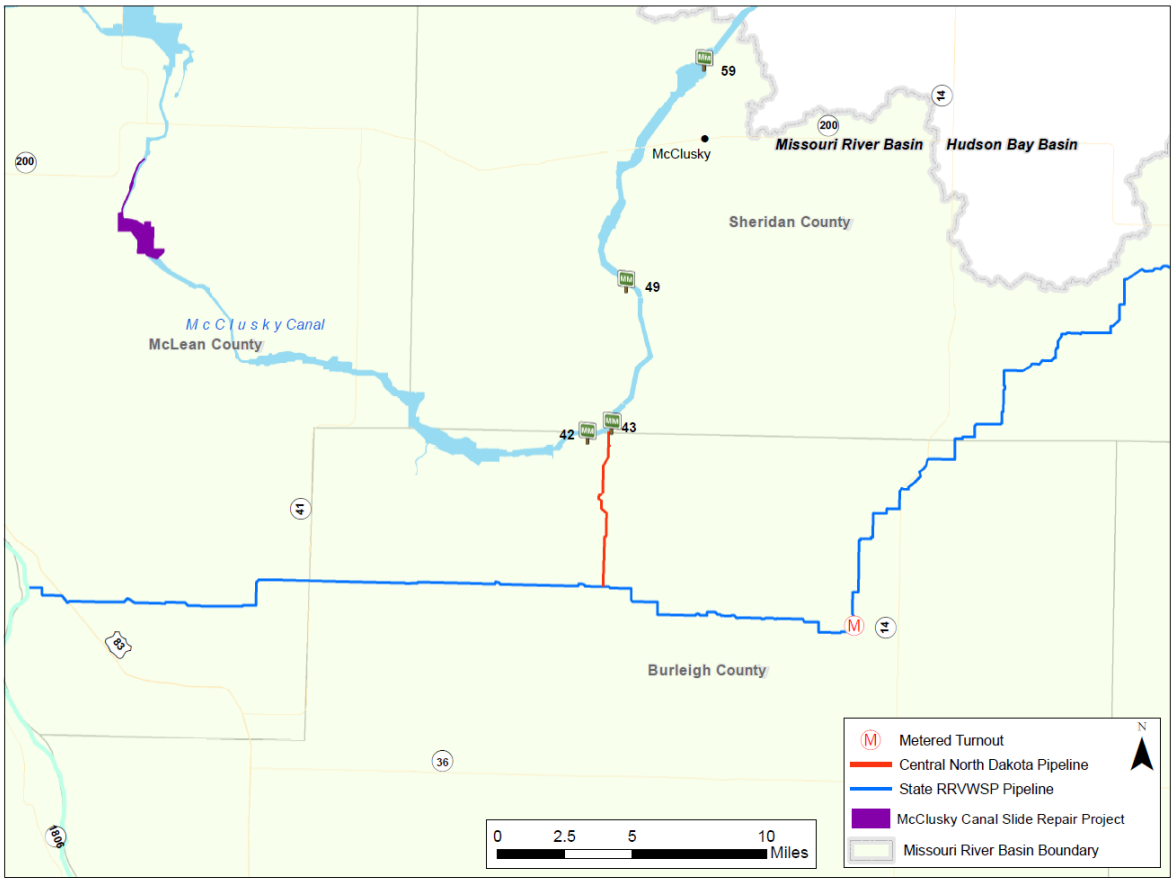


Figure 8. Other Projects in Proximity to the Proposed Central North Dakota Water Supply Project.

Environmental Commitments

The Proposed Action includes the following environmental commitments (Table 2). These commitments have been developed in consultation with Federal and State agencies, the Tribes, and the public in response to construction activities and scoping over the last decade of rural water system development in North Dakota by Reclamation. These environmental commitments would be implemented to:

1. Prevent, minimize, or offset the occurrence of or potential for adverse environmental effect
2. Ensure compliance with applicable Federal and State regulations designed to protect fish and wildlife resources, important habitats and sensitive areas, cultural and paleontological resources, human health and safety, and the public interest.

Under the Proposed Action, Garrison Diversion would ensure the environmental commitments are implemented prior to and/or during construction of the Proposed Project. Appropriate environmental commitments would be incorporated into the designs, construction contracts, and specifications of the project. Reclamation may assemble an Interagency Environmental Review

Team, with appropriate agency representation, to review environmental compliance in the field, if deemed appropriate.

Table 2. Environmental Commitments regarding the Central North Dakota Water Supply Project.

General Best Management Practices
Comply with all appropriate Federal, State, and Local laws.
Follow recommended practices for construction, restoration, and maintenance.
Dump grounds, trash piles, and potential hazardous waste sites will be avoided.
Standard construction industry measures will be taken to minimize fugitive dust emissions during construction activities. Any complaints that may arise will be dealt with in a timely and effective manner.
Equipment will be washed prior to entering the construction site to prevent the spread of noxious and invasive species.
Surface Water and Wetlands
When pipeline construction through a wetland basin is unavoidable, existing basin contours will be restored and trenches will be sufficiently compacted to prevent any drainage along the trench or through bottom seepage.
Garrison Diversion will be responsible to comply with the Clean Water Act and avoid permanent impacts to isolated wetlands to the extent practicable either through coverage under a Section 404 permit or through an applicable Nationwide Permit.
Coverage under a 404 permit or a Nationwide Permit will be applied for by Garrison Diversion, as applicable, for construction of the intake pump on McClusky Canal.
Woody species including those bordering wetlands, shelterbelts, riparian woodlands, woody draws, or woodland vegetation will be avoided to the extent possible. For unavoidable impacts to woody habitats, replacement plants at a 2:1 ratio of appropriate speciation would planted.
Erosion control measures will be employed as appropriate: (a) Care will be exercised to preserve existing trees along the streambank. (b) Stabilization, erosion controls, restoration, and re-vegetation of all streambeds and embankments will be performed as soon as a stream crossing is completed and maintained until stable. Riparian woody shrubs and trees will be replanted where and as necessary to preserve the shading characteristics of the watercourse and the aesthetic nature of the streambank.
Conditions of a water service contract will include maintaining use of the proposed 20 cfs in the Missouri River Basin.
Intake Screen Design
Intake screen designs will comply with the State/Federal Agency Fish Screen Guidelines: Intakes shall be screened and maintained with a ¼ inch or smaller mesh size opening
Intake velocities shall not exceed ½ foot/second with 20 feet of overhead water.
Intake velocities shall not exceed ¼ foot/second if 20 feet of overhead water cannot be achieved.
The intake shall be placed at a maximum practicable depth in relation to extreme, low water elevations.
Intakes shall be marked so they are observable during day and night hours, as appropriate.
Work will not take place in the Canal from April 15 to June 1.
Contact the NDGF to inspect any and all vehicles, vessels, pumps, and equipment that will be used in project waters. A minimum 72-hour notice must be provided to the NDGF for scheduling an inspection (701-368-8368).
Fish and Wildlife Species and Habitat

To the extent possible, construction will avoid: - Wetlands - Federal, State, and Local wildlife areas and refuges - Designated critical habitats
To minimize impacts to fisheries resources any stream identified as a fishery (fisheries – confirm with NDGF) that cannot be directionally bored will be avoided from April 15 to June 1 and crossed later in the summer or fall when flows are low or the stream is dry.
Any new, above ground power lines and an additional equal length of existing power lines in the same vicinity must be marked with visibility enhancement devices to benefit migrating whooping cranes as well as all migratory birds and bats.
Construction within 660 feet of visible nesting bald eagles will be avoided from February through August.
If threatened or endangered species are identified and encountered during construction, all ground-disturbing activities in the immediate area will be stopped until Reclamation can consult with the USFWS to determine appropriate steps to avoid impacting the species.
Construction work is prohibited within ½ mile of designated critical habitat during the piping plover breeding season (April 15 – August 31).
If any tree (with a diameter of greater than 3 inches) removal activities cannot be avoided between April 1 and October 31, consultation will take place with the USFWS.
Native prairie will be avoided to the extent possible. However, if native prairie sod must be broken, existing topsoil will be carefully salvaged and replanted with native grasses in a timely manner, with a seed mix recommended by the local Natural Resources Conservation Service (NRCS) and approved by Reclamation and the landowner.
Any new signage will be placed in a manner as to not allow raptors to perch by covering the top two holes of the post.
Garrison Diversion, as the contracting partner, assumes responsibility to ensure mitigation for all unavoidable wetland and other wildlife habitat loses with equivalent (like) habitat according to local, state and federal regulations.
Reclamation will ensure the USFWS is provided with the latest-version route maps of the pipeline delivery system to ensure that the USFWS appropriate Refuge and Wetland Management District personnel can identify where the pipeline and USFWS lands, including wetland and grassland easements, national wildlife refuges, waterfowl production areas or other USFWS lands interface, allowing for identification of an avoidance route for the contractor.
Cultural Resources
All cultural resource investigations will be performed according to the procedures specified in the programmatic agreement among Reclamation, the North Dakota State Historic Preservation Office (NDSHPO), and the Advisory Council on Historic Preservation for Reclamation activities in North Dakota. Cultural resource inventories will be performed under the direction of an archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-9). All appropriate cultural resource activities will be completed prior to the commencement of ground-disturbing activities, including Class I and Class III surveys and consultation with the NDSHPO. All cultural resources, except those exempted in the programmatic agreement, will be avoided if their significance cannot be established prior to disturbance. If avoidance is not practicable, Reclamation, in consultation with the NDSHPO would determine if the site is eligible for nomination to the National Register of Historic Places [36CFR800.4(c) and 36CFR60.4]. If the site is eligible as a historic property, initially Reclamation, NDSHPO, and other interested parties, depending on the type of property, will consult to determine a plan of mitigation. If an adverse effect cannot be avoided, the Advisory Council on Historic Preservation will be contacted. All ensuing activities will comply with the NHPA, as amended, and the Archaeological Resource Protection Act.

The Tribes will be consulted concerning the locations of unmarked burials or cemeteries. All such burials or cemeteries will be avoided to the extent possible. If a burial or cemetery cannot be avoided or is encountered during construction, Reclamation will comply with the Native American Graves Protection and Repatriation Act if graves are discovered on Federal or trust lands or within reservation boundaries. Reclamation will comply with North Dakota Century Code 23-06-27: "Protection of Human Burial Sites, Human Remains, and Burial Goods" for graves on private or State-owned lands.
If unrecorded cultural resources or traditional cultural properties are encountered during construction, all ground disturbance activity within the area will be stopped, Reclamation and appropriate authorities will be notified, and all applicable stipulations of the NHPA will be followed. Activities in the area will resume only when compliance has been completed.
Paleontological Resources
Reclamation consulted with North Dakota Geological Survey to identify areas for paleontological survey where significant fossils are likely. If fossils are encountered, Garrison Diversion will contact the North Dakota Geological Survey for further information.

Chapter 3 Affected Environment and Environmental Impacts

Introduction

This section describes the existing conditions and potential environmental impacts for resources that may be affected by the Proposed Project. The affected environment includes the existing communities, land, water, and air-sheds that might be affected by the Proposed Project. Environmental impacts include: indirect (generally subsequent to a direct effect but not directly resulting from Proposed Action), positive (beneficial) or negative (adverse), and long term (permanent, long-lasting) or short term (temporary). Measures that would be implemented to reduce, minimize, or eliminate impacts (mitigation measures) are presented in Chapter 2 as an inseparable part of the Proposed Action, Required Mitigation Measures for the Proposed Action, and are discussed under each resource.

The area of potential impacts (affected area) would be resource-specific and is defined in each individual resource discussion. The boundary of the affected area for each resource extends to where effects can be reasonably and meaningfully measured. Direct impacts would generally occur within the Project Area. However, some impacts may occur on a broader scale, encompassing an area beyond the Project Area, particularly for water resources. Impacts that may extend beyond the Project Area are disclosed in the environmental consequences section of each resource.

This Section will address the effects of the No Action, the Proposed Action, and Cumulative Effects, for the following resources: Water Resources and Hydrology, Missouri River Depletions, Threatened and Endangered Species, Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act, Land Resources, Climate Change, Indian Trust Assets, Cultural Resources, and Environmental Justice.

Resource Areas Considered and Eliminated from Further Analysis

In light of Reclamation's environmental commitments (Chapter 2), the programmatic agreement with the North Dakota State Historic Preservation Office, and in response to comments received from the scoping notice, the CNDWSP would have no potential to affect certain resource areas or its affect to certain resource areas is so minor (negligible) that it was not evaluated further in this document. These resources areas include air quality; noise; recreation; public safety, access, and transportation; paleontological resources; wildlife; visual resources, socioeconomics, and environmental justice (Table 3).

Table 3. Resources Eliminated from Further Analysis.

Resource	Rationale for Elimination from Further Analysis
Air Quality	Temporary effects during construction activities including a possible increase in dust. Application of standard construction, industry measures would be taken to minimize fugitive dust emissions during construction activities.

Resource	Rationale for Elimination from Further Analysis
Noise	Temporary effects during construction activities including a possible increase in noise, the impact would be short-term and would occur mainly during daylight hours.
Recreation	Minor impacts to recreation areas (activities including but not limited to hunting, fishing, and camping) are anticipated from the Proposed Action Alternative. Impacts would be temporary and would cease upon completion of construction activities.
Public Safety, Access, and Transportation	No impacts to public safety are anticipated from the Proposed Action Alternative. Public access and transportation have the potential to be temporarily affected during construction activities. Impacts would be temporary and would cease upon completion of construction activities.
Paleontological Resources	No impact to paleontological resources is anticipated from the Proposed Action Alternative. In the event that a paleontological resource is encountered the state paleontologist would be contacted for further instruction.
Wildlife	Impacts to wildlife would include possible displacement due to noise and traffic from construction. Impacts would be temporary and would cease upon completion of construction activities.
Visual Resources	Impacts to visual resources would primarily be temporary and would cease upon completion of construction-type activities. Approximately 0.20 acres of permanent impact would result from the Proposed Action Alternative, including a pump station and parking area.
Socioeconomic	A 20 cfs bulk water supply could result in positive socioeconomic impacts for the communities involved in the project. Information is not available to quantify this affect.
Environmental Justice	No Environmental Justice population has been identified that would disproportionately bear impacts of the project.

Water Resources and Hydrology

Affected Environment

According to the Watershed Boundary Dataset (USDA et al. 2017), the Project Area occurs within the Painted Woods-Square Butte sub-basin Hydrologic Unit (HUC-10130101). The Project Area is further divided into three sub-watershed Hydrologic Units, with the upper portion of the project in Hecker's Lake unit (HUC12-101301010506), the middle portion in Headwaters Painted Woods Creek unit (HUC12-1013010607) and the lower portion in Canfield Lake unit (HUC12-101301010605). The Hecker's Lake unit is classified as a closed basin watershed consisting of 22,483 acres, where all surface drainage is contained within the unit and no overland flow exits the hydrologic unit. However, the construction of the Canal has created an artificial surface connection in the Hecker's Lake Unit, which connects the Canal (New John's Lake) to Painted Woods Creek outlet, which then flows into the Missouri River (USDA et al. 2017). The Headwaters Painted Woods Creek unit consists of 33,394 acre watershed which follows Painted Woods Creek west into the Missouri River. The Canfield Lake unit consists of 31,192 acre watershed which flows north into Painted Woods Creek then west into the Missouri River. Figure 9 depicts surface water flow within the Project Area vicinity. Current reliable surface water supply through the Canal is limited by slides between MM 20 and 22 in Sections 28, 29, 32 and 33, Township 146 North, Range 80 West. An EA to repair that portion of the Canal was completed by Reclamation and the FONSI was signed May 9, 2017 (Reclamation 2017). The repairs, scheduled to occur throughout a 6 year duration, would allow a supply up to

500 cfs through the Canal. Water flow and elevation targets within the Canal are currently operated according to the 1984 Plan of Operation for McClusky Canal (Reclamation 1984).

Due to the potential of saline groundwater from the Painted Woods Creek Aquifer being discharged into the Canal at its intersection with Old John's Lake, a Canal freshening program was implemented from 1984-1986 in order to improve the water quality in Lake Audubon and the Canal (Reclamation 1986). During this freshening program, approximately 40 cfs was routed through the Canal to the Painted Woods Creek outlet at New John's Lake. The water quality of Lake Audubon and the Canal improved during the period of the freshening program; however, data acquired by the Garrison Diversion monitoring program indicates the Painted Woods Creek Outlet has continued to maintain an acceptable level of Total Dissolved Solids (TDS) since the freshening program ended, despite landslide occurrences restricting flow through the Canal (Table 4). The North Dakota Department of Health recommends waters containing more than 500 mg/L TDS not be utilized if other less mineralized sources are available; however, exclusive of most treated public water supplies, Missouri River, and fresh lakes, very few water supplies in the state contain less than 500 mg/L (NDDOH 2014).

Table 4. Monitoring Program Data at the Painted Woods Creek Outlet.

Sample Date	Conductivity (umhos/cm)	Dissolved Solids (Total mg/L)
6/84	-	2905
8/84	-	2655
5/85	-	1715
8/85	-	1150
6/86	-	1275
8/86	-	1110
10/86	-	1115
8/23/2012	1800	1370
6/19/2013	1730	1250
10/1/2014	1810	1300
6/1/2015	1850	1350
8/27/2015	1850	1310
6/6/2016	1860	1380

Environmental Effects of the Proposed Action Alternative

According to the National Wetlands Inventory (NWI) (USFWS 2015), seven freshwater emergent wetlands and one riverine wetland totaling less than two acres are contained within the Project Area (Figure 10). One wetland consists of a temporarily flooded water regime (PEMA), which indicates it receives most of its water from snowmelt and direct precipitation. These types of wetlands are typically farmed each year, since the water has evaporated by mid-summer. Six of the wetlands have a seasonally flooded water regime (PEMC), which indicates they are wet most of the growing season and become dry towards the end of the season; however, the water table is often near the ground surface. One wetland consists of semi-permanently flooded water regime (PEM/ABF), which indicates the surface water persists throughout the growing season in

most years; however, the water table is often near the ground surface in dry years. One riverine wetland is in the Project Area (R2UBGx), which consists of the Canal waters. The description includes the Canal wetland as being contained within an excavated, low gradient, slow velocity channel with sand or mud bottom, and surface water is present throughout the year. (Cowardin et al. 1979).

Consultation with U.S. Fish and Wildlife Service (USFWS) indicates two wetland easements within the Project Area. No field wetland delineations or determinations have been conducted to date.

Within the Project Area, groundwater is derived from precipitation and drainage is typically not integrated, not including the presence of the Canal. Water is collected and stored in depressional wetlands and removed by evapotranspiration and/or percolation (Randich and Hatchett 1966). According to 2017 North Dakota State Water Commission groundwater and surface water well data, no wells occur within the Project Area. Most wells within the Project vicinity occur within the boundaries of the Painted Woods creek Aquifer. The Painted Woods Creek aquifer underlies approximately 20 square miles in northwestern Burleigh County and generally follows the valley of Painted Woods Creek (Figure 9). The aquifer, which largely consists of sand and gravel outwash deposits, absorbs large quantities of water from precipitation and has a water table between 5 and 15 feet below the land surface. It is estimated to produce a sodium bicarbonate type water containing approximately 600 ppm dissolved solids (Randich and Hatchett 1966). The Painted Woods Creek aquifer is in contact with the Canal from approximately MM40 to approximately MM50.

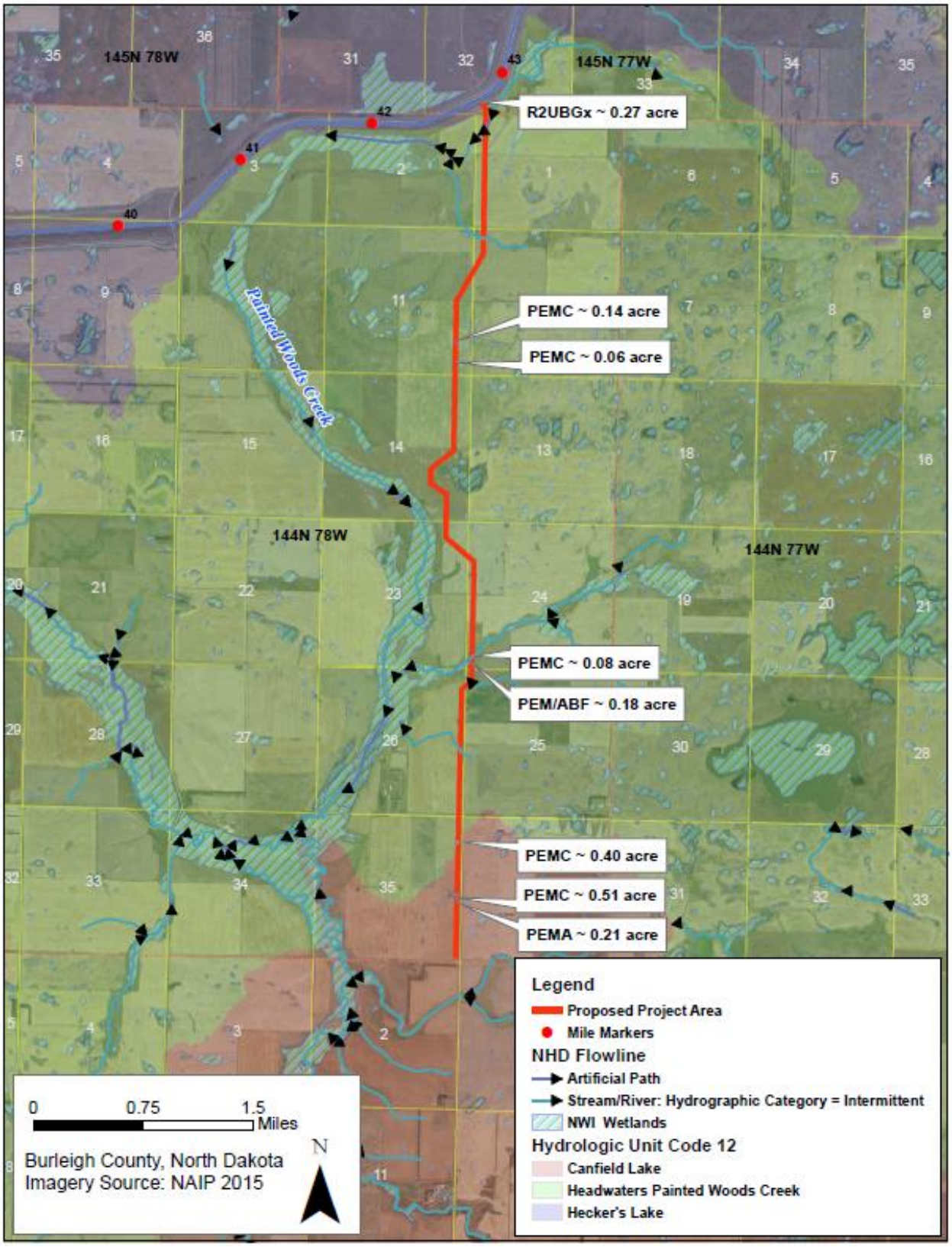


Figure 9. Surface Water Flow and National Wetland Inventory Wetlands within and surrounding the Project Area.

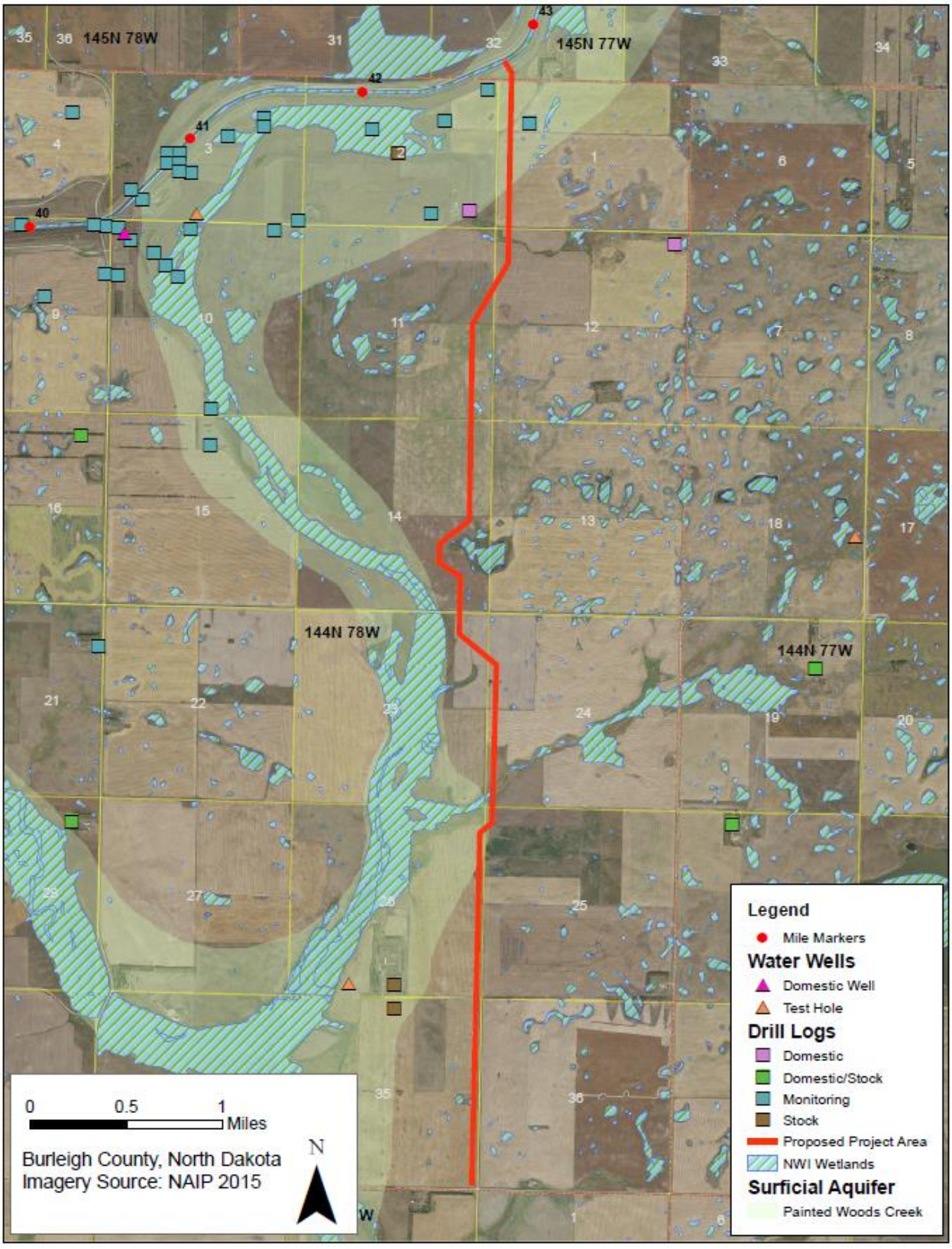


Figure 10. Groundwater in and surrounding the Project Area.

Cumulative Effects

Garrison Diversion is planning to construct the state-sponsored RRVWSP, which would supply additional MR&I water to Burleigh, Sheridan, Wells, Foster, Kidder, McLean and Stutsman counties, as well as additional counties within eastern North Dakota. The tie-in and a small portion of the RRVWSP occurs within the proposed 150-foot ROW of the CNDWSP.

The tie-in and portion of the RRVWSP route has no wetland or stream crossings according to the NWI map and there are no wells in this area.

Garrison Diversion is responsible for compliance with USACE permitting requirements in addition to any other state or federal agency consultations with regard to stream and wetland crossings needed for the state-sponsored RRVWSP.

Environmental Consequences of the No Action Alternative

There would be no environmental consequences under the No Action Alternative because the need for the requested 20 cfs and project power would not be met through Reclamation.

Missouri River Depletions

To evaluate the impacts of the Proposed Action on Missouri River resources, Reclamation reviewed the most recent study it conducted on cumulative effects to the Missouri River System which was completed for the Northwest Area Water Supply (NAWS) Project Supplemental Environmental Impact Statement (Reclamation 2015). That impact analysis was conducted in partnership with the USACE as they are the federal agency responsible for the management and operations of the Missouri River Mainstem System. The final cumulative effects report was published in 2013 (USACE 2013). This is the most recent and comprehensive analysis of its kind within the Missouri River Basin and includes analysis of historic, existing and reasonably foreseeable future actions, including industrial water use for oil and gas.

Environmental Effects of the Proposed Action Alternative

Currently, the average annual depletion in the Missouri River above Garrison Dam is approximately 6.6 million acre-feet (Reclamation 2007a). Thus, withdrawal of an additional 14,483 acre-feet per year would increase annual depletions by about 0.2 percent. Due to the annual depletion for the Proposed Project of 14,483 acre feet, which represents only 0.06 percent of Lake Sakakawea's storage capacity, the effects on reservoir levels and dam releases would likely not be measureable. The Proposed Project would have no impact on Lake Sakakawea storage or ability to meet demand, as the depletions are extremely small relative to the volume of water stored in the reservoir and are already accounted for in the 1,212,348 acre feet of water appropriated in Permit No. 1416 to Reclamation.

Cumulative Effects

This integrated system of Missouri River dams and reservoirs has the capacity to store 72.3 MAF of water. To analyze the potential impacts to the Missouri River resources, Reclamation evaluated the applicability of the recently completed comprehensive Missouri River depletions analysis completed for the NAWS Supplemental Environmental Impact Statement and completed an assessment of any additional reasonably foreseeable future actions identified since

the completion of the 2013 analysis. Reclamation determined the data and analysis completed in 2013 were sufficient and appropriate to use in the Missouri River impact analysis for this EA.

Missouri River Depletions Database

Reclamation maintains a Missouri River depletions database for all of the tributaries within the Missouri River Basin. For background information and details regarding the data and how Missouri River depletions are estimated, please refer to Reclamation's Missouri River Basin Depletions Database report (Reclamation 2012a). The Depletions Database calculates historic water use, present level water use and future water use. Missouri River flow data are maintained by the U.S. Geological Survey with daily data going back to the 1930s. Reclamation used this flow data to calculate Missouri River depletions from 1930 through 2010. Depletions were calculated for irrigated agriculture and public surface water supply systems. Historic depletions are the estimates of the amount of water actually depleted from the surface water in the Missouri River Basin.

Reasonably Foreseeable Future Actions

Based on a review of the criteria used to identify reasonable foreseeable future actions in the 2013 cumulative effects analysis, a reassessment of the reasonably foreseeable future actions included in the 2013 cumulative effects analysis, and an assessment of any additional reasonably foreseeable future actions since the completion of the 2013 analysis; Reclamation concluded the data and analysis were sufficient and appropriate to use in the Missouri River depletions analysis for this CNDWSP EA.

In the 2013 cumulative effects analysis, the following criteria were used to define reasonably foreseeable actions:

- Water withdrawal identified could reasonably be implemented between 2011 and 2060.
- Water withdrawal identified could contribute measurably to cumulative effects in the geographic area and on the Missouri River resources that would be affected by the NAWS Supplemental EIS alternatives.
- Water withdrawal identified has sufficient specifics about the amount of water proposed for withdrawal and other information available to define the activity and conduct a meaningful analysis.
- Water withdrawal has been identified in some type of planning document.
- Reclamation updated a future Missouri River water withdrawal spread sheet updated in 2006 (Reclamation 2006, Red River Valley Water Supply Project EIS) and collected information on the potential new depletions within or from the Missouri River Basin between 2011 and 2060. These potential projects were identified by canvassing Reclamation offices throughout the Missouri River Basin and contacting the Bureau of Indian Affairs to document future tribal projects. When information was readily available, State or local projects were also included if the projects were authorized and funded. Using these data, it was possible to estimate the total anticipated withdrawals through the year 2060 for each Missouri River reach. This collection of information was based on the following assumptions:
    - A previous survey of Missouri River Basin States and intake permit holders to secure current and future water withdrawals was unsuccessful in obtaining

comprehensive water withdrawal information (Corps of Engineers 2004, *Missouri River Mater Water Control Manual March Review and Update FEIS*). It was thought that permitees do not like to reveal this type of information unless required by law. Reclamation determined that the time/cost of doing a comprehensive survey was done in the Master Manual was not reasonable/feasible for the NAWS SEIS. Therefore, no attempt was made to survey states and water permit holders.

- Reclamation recognized there is disparity in water use data available from state water permitting agencies (Committee on USGS Water Resources Research, National Research Council 2002, *Estimating Water Use in the United States: A new Paradigm for the National Water-Use Information Program*). Reclamation used the best available information to document present and future water withdrawals. The availability of water use data varies by state. States within the Missouri River basin do not collect similar types of information. For example, the State of Iowa has a water use permit program, except for agricultural or irrigation water withdrawals from the Mississippi and Missouri Rivers that do not require a permit. Without a permit there is no specific data on withdrawal amounts for this type of water use. The State of Kansas on the other hand permits all water withdrawals. Some states record permitted water withdrawals, but do not require users to report the amount of actual withdrawals.
- It was assumed that large scale projects involving future withdrawals for irrigation and water supply (tribal and state projects) would need to secure federal funding to assist in the development of the project. Historically, sponsors of large scale water projects have relied on federal assistance for the development of their projects and this is not likely to change based on the economic situation faced by most states and tribes.
- Any identified non-federal water supply project for which authorization and funding have been obtained, were added to the list of reasonably foreseeable actions, e.g. Western Area Water Supply Project.
- Missouri River basin future municipal water and public water supply demands were updated and calculated for 2007-2060 and obtained through Reclamation's Great Plains Regional office. This office is responsible for estimating Missouri River depletions that were used by the USACE in their operations of the Missouri River Main Stem System. Population projections from the states and the U.S. Census Bureau were applied to United States Geological Survey (USGS) water use data to estimate future municipal and industrial surface water withdrawals for public water systems.

Projects meeting the criteria above were identified as reasonably foreseeable actions for purposes of the cumulative effects analysis. A majority of the projects identified are dependent upon government funding and may be subject to compact agreements and/or authorizations. Therefore, some of these projects may not be constructed. This was the best available information at the time the analysis was completed and represents a conservative approach that may have overestimated future depletions. Other identified non-federal water supply projects for which authorizations and/or funding had been obtained (e.g. Western Area Water Supply Project and

the state-sponsored RRVWSP in North Dakota) were added to the list of reasonably foreseeable actions.

Twenty-seven tribes are located in the Missouri River basin, 13 of which have reservations located directly on the Missouri River. In 2011-2012, when Reclamation was gathering data on reasonably foreseeable future actions, several of these tribes were in various stages of quantifying their water rights. Tribal projects were considered, but since the water rights have not been adjudicated or specific projects identified, they were not included in the depletion analysis.

Although future projects projected to directly withdrawal water from the Missouri River were accounted for in the analysis; Reclamation addressed reasonably foreseeable water withdrawal throughout the entire Missouri River Basin. Although many of these withdrawals were not a direct withdrawal from the Missouri River, they could affect the amount of water that comes into the Missouri River and therefore were included in the analysis. The process for determining the potential future water withdrawals was based on the primary assumption that public water supply usage would parallel population growth. These depletions for the entire Missouri River Basin were in addition to other future Missouri River depletions directly withdrawn from the Missouri River. The total increase in water depletions for the entire Missouri River Basin was an increase of 205,700 acre-feet. Again, this was a conservative approach to the analysis that may result in an over estimation of future water demands.

Depletions for future industrial water use not supplied by public surface water supply systems were also included as part of the 2013 cumulative effects analysis. At the same time Reclamation was conducting its depletion analysis, the Corps conducted its own independent analyses to evaluate the effects of withdrawing what is called "Surplus Water" for municipal and industrial uses from reservoirs within the Missouri River Mainstem System. "Surplus Water" depletion estimates developed by the Corps for each reservoir included *existing withdrawals* and *potential additional future withdrawals*. The primary water demand driving industrial water needs at this time was the North Dakota oil and gas industry. The Corps' analyses (documented in a series of draft/final reports issued between 2010 and 2012) concluded that the temporary use of Missouri River Reservoir "Surplus Water" would not cause significant adverse effects to existing authorized purposes. These future industrial water use was projected to increase by 10,600 acre-feet.

The 2013 depletion analysis completed by Reclamation and the USACE included a thorough evaluation of historic, present and reasonably foreseeable future actions as explained in the technical report (USACE 2013) and Reclamation's Final SEIS and supporting documents (Reclamation 2015). In preparing the CNDWSP EA, Reclamation reviewed the data used in the Final SEIS depletion analysis to identify any significant changes to the data. The data and evaluation methods used remain valid today. In a review of the reasonably foreseeable future actions evaluated in the 2013 technical report, Reclamation noted a few of the foreseeable projects have changed slightly; however the overall change in the volume of water for the reasonably foreseeable future actions was nearly zero. The changes include a couple of the reasonably foreseeable future actions have not been realized and the volume of water included

for the state-sponsored RRVWSP has increased slightly from the volume that was included in the Final SEIS analysis (from 122 cfs to 165 cfs). But again, the net change in the volume of reasonable foreseeable future action depletions is nearly zero. Therefore, it is reasonable to conclude that the potential impacts of the CNDWSP on the Missouri River Mainstem System would be very similar to the potential impacts disclosed in the Final SEIS (Reclamation 2015) and those impacts were negligible.

Environmental Consequences of the No Action Alternative

Under the No Action Alternative, Garrison Diversion and the communities of North Dakota would need to consider other options to meet the MR&I needs of Central North Dakota.

Threatened and Endangered Species

Reclamation consulted the USFWS, North Dakota Ecological Service's Office website (https://www.fws.gov/northdakotafieldoffice/SEtable.pdf) and the Information, Planning, and Conservation System (IPaC) (https://ecos.fws.gov/ipac/) to obtain a list of threatened and endangered species and critical habitats associated with the affected area (Table 5).

This section constitutes the Biological Assessment for the Proposed Action as required under Section 7(c) of the Endangered Species Act of 1973, as amended, in compliance with regulations found at *50 CFR Part 402 Interagency Cooperation – Endangered Species Act of 1973, as Amended*.

Action Area

The Action Area identified is based on Reclamation's assessment of the potential direct and indirect effects of the Proposed Action to federally listed species (50 CFR 402.02). The evaluation of federally listed species focuses on the aquatic and terrestrial environments that may be influenced by the activities of the CNDWSP. The Action Area for Reclamation's contract decision to make federal power and water available includes the Canal at MM 42.5, MM 42.5 lands, proposed electrical facilities, and the approximate 6 mile water transmission including the 150-foot ROW. Figure 11 illustrates the Action Area and general areas in or associated with Reclamation's Principal Supply Works including Snake Creek Pumping Plant, Audubon Lake, and the Canal.

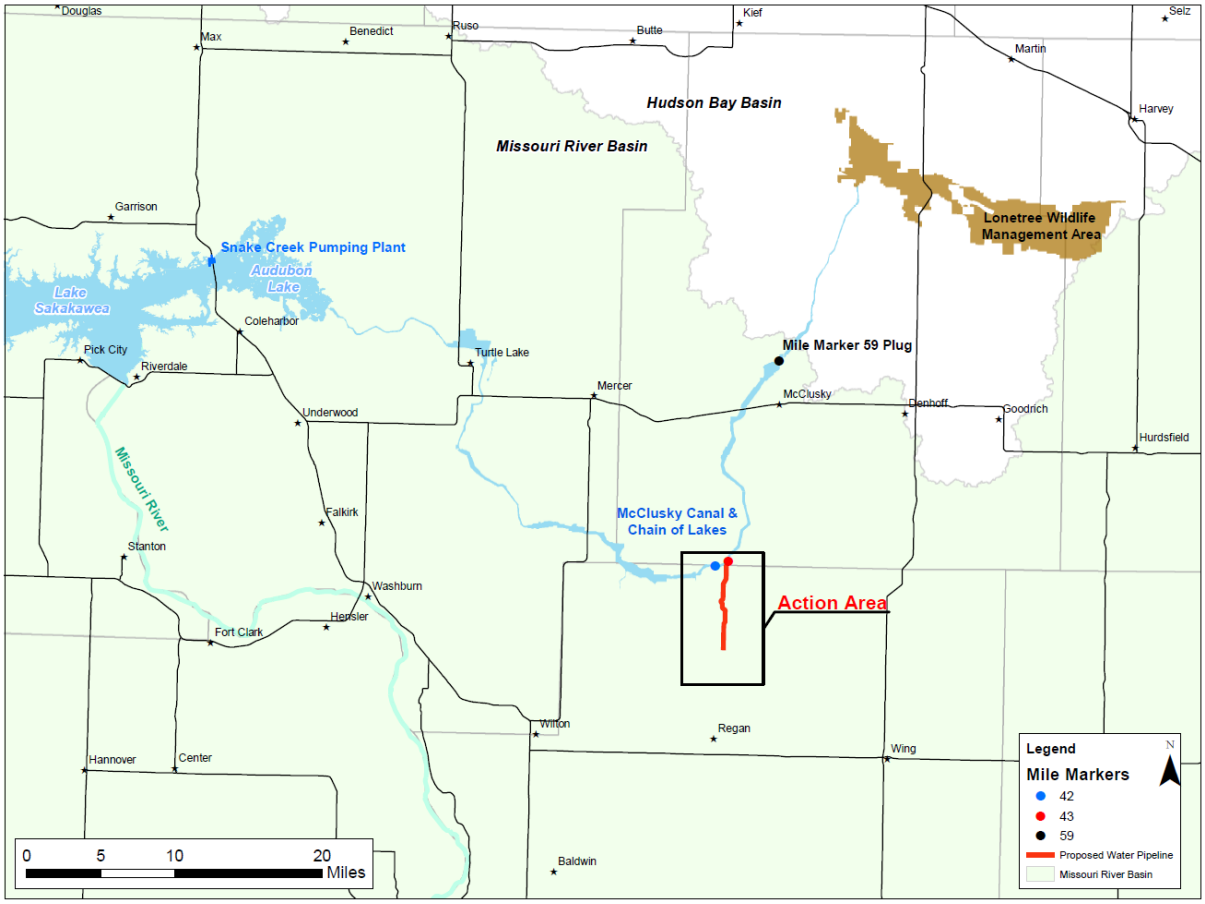


Figure 11. Reclamation's Principal Supply Works and Action Area.

Reclamation's Biological Assessment for the RRVWSP (Reclamation 2007b) and Reclamation's supplemental memo to the USFWS regarding the Biological Assessment for the RRVWSP (Reclamation 2008) have previously found no adverse modification to critical habitat on Lake Sakakawea, the Garrison reach of the Missouri River, Audubon Lake, or the Canal and not likely to adversely affect any threatened or endangered species, including the interior least tern, piping plover, critical habitat for the piping plover, pallid sturgeon, gray wolf, and whooping crane as a result of the project depletions from the Missouri River. The USFWS concurred with that finding. Additionally, Reclamation completed a Biological Assessment for the Northwest Area Water Supply, completed April 2016, which received a concurrence letter from the USFWS dated April 2, 2015, which confirms the above conclusion (Reclamation 2015). Therefore, to avoid duplication of effort and redundancy, Reclamation will incorporate by reference that review and those findings and concurrence regarding the lack of effect on Lake Sakakawea, the Snake Creek Pumping Plant, Audubon Lake, and the Canal outside the vicinity of MM 42.5.

Table 5. Federally Threatened, Endangered Species and Designated Critical Habitat Listed in the Action Area.

Group	Species	Federal Status[1]
Bird	Interior Least Tern	E

	Whooping Crane	E
	Piping Plover	T, CH
	Rufa Red Knot	T
Fish	Pallid Sturgeon	E
Mammal	Gray Wolf	E
	Northern Long-Eared Bat	T

T = threatened, E = endangered, CH = critical habitat.

Interior Least Tern (*Sterna antillarum*)

Source: http://tpwd.texas.gov/huntwild/wild/species/leasttern/

Interior least terns are 8 to 10 inches in length, have a black crown on their head, a white underside and forehead, grayish back and wings, orange legs, and a yellow bill with a black tip.

Population Rangewide

There are three subspecies of least tern: the eastern or coastal least tern (*Sterna antillarum antillarum*) that breeds along the Atlantic and Gulf Coast, the California least tern (*Sterna antillarum browni*) that breeds along the California Coast, and the interior least tern (*Sterna antillarum athallasos*) that extends from Texas to Montana, and from eastern Colorado and New Mexico to southern Indiana. The interior least tern was listed as endangered in 1985 (*Federal Register* 50:21784-21792). Historically, interior least terns utilized major river systems from Texas to Montana, and from eastern Colorado and New Mexico to southern Indiana. However, due to dams and channelization, much of their suitable nesting habitat has been eliminated and their food sources have been disturbed. Wintering locations have been documented along the Central American and South American coasts, from Venezuela to northeastern Brazil. Partial monitoring data from 2012 show population estimates at 13,855 (USFWS 2013a). The range-wide survey would suggest that overall the interior population of the least tern has surpassed the 7,000 birds' recovery goal, but the distribution of those numbers and management of those areas are not yet as envisioned by the USFWS when the recovery plan was written.

Action Area

In North Dakota, the interior least tern nests on sparsely vegetated sandbars on the Missouri River and on shorelines of Missouri River reservoirs, where they feed mostly on small fish. The majority of interior least terns in North Dakota are on the Garrison Reach of the Missouri River. Partial monitoring data for the Missouri River from 2012 show interior least tern numbers at 742 (USFWS 2013a). Breeding season lasts from May through August, with peak nesting from mid-June to mid-July. Although the Action Area contains small fish, the interior least tern preferred nesting and foraging habitat of sandy, vegetated shorelines and sandbars does not occur within the Action Area.

Piping Plover (*Charadrius melodus*) and its Designated Critical Habitat

Source: https://www.fws.gov/midwest/endangered/pipingplover/pipingpl.html

Piping plovers are about 7 inches in length and have a sand-colored upper body, and white underside. Breeding birds have a single black breastband, a black bar across the forehead, bright orange legs and bill, and a black tip on the bill. In the winter, piping plovers lose the black band, legs become a pale yellow, and the bill is mostly black.

Population Rangewide

Three sub-populations of piping plover have been identified: an interior Great Plains population, Atlantic Coast population, and a Great Lakes population. The piping plover was listed as threatened in 1985 (*Federal Register* 50:50726-50734). The breeding range includes Alberta, Saskatchewan, Manitoba, Montana, North Dakota, Minnesota, South Dakota, Nebraska, and Iowa. Wintering locations includes the Atlantic Coast from North Carolina south to Florida and on the Gulf of Mexico from Florida to Texas; northern Cuba, Puerto Rico, Bahamas, Greater Antilles, eastern Mexico, and the Yucatan Peninsula. Much like the interior least tern, piping plover numbers have declined due to dams and channelization, reducing suitable habitat. In 2006, the adult population of piping plovers was estimated at approximately 8,100, with 3,000 of that estimate in the Northern Great Plains (Elliott-Smith et al. 2009).

The USFWS designated critical habitat for the Great Plains breeding population in 2002 (*Federal Register* 67:57637), Great Lakes breeding population in 2001 (*Federal Register* 66:22938), and the winter piping plover population in 2001 (*Federal Register* 66:36038).

Action Area

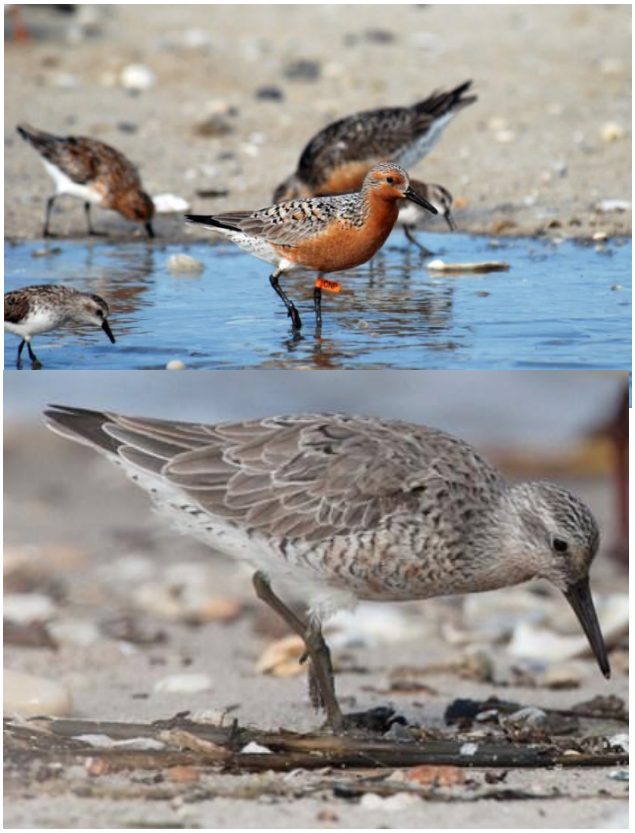
Piping plover nesting and foraging habitat in North Dakota consists of barren sand and gravel bars and shorelines of the Missouri River and shorelines of prairie alkali lakes. The piping plover occurs in North Dakota from mid-April to August, with peak breeding season from May to mid-July. The piping plover preferred nesting and foraging habitat of barren sand and gravel bars and shorelines of alkali lakes does not occur within the Action Area.

Designated critical habitat of the piping plover in North Dakota includes numerous alkaline lakes, Lake Sakakawea and the Missouri River. No designated critical habitat for the piping plover occurs within the Action Area. The Action Area lies between two areas of designated critical habitat. McLean 8 occurs approximately 14 miles northwest and Burleigh 1 occurs approximately 16 miles southeast from the Action Area (Figure 12).

Figure 12. Designated Critical Habitat for the Piping Plover in North Dakota.

Rufa Red Knot (*Calidris canutus rufa*)

Rufa red knots are typically 9 to 11 inches in length. During the breeding seasons they are a mottled gray, black, and white that run into stripes on their head and face with a cinnamon-brown underside and face. The legs and bill are black. The bill is straight tapering to the tip. During the non-breeding season rufa red knots are white and gray.



Source: http://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=B0DM; https://www.allaboutbirds.org/guide/red_knot/id

Population Rangewide

The rufa red knot was listed as threatened in 2014 (*Federal Register* 79:73706-73748). The red knot migrates between its breeding grounds in the Canadian Arctic and several wintering regions, including the southeast United States, the northeast Gulf of Mexico, northern Brazil, and Tierra del Fuego at the southern tip of South America. During both the northbound and southbound migrations, red knots use key staging and stopover areas to rest and feed. Long-distance migrant shorebirds are highly dependent on the continued existence of quality habitat at a few key staging areas. These areas serve as stepping stones between wintering and breeding areas. Many of the key migration staging areas are along the coasts but there are records that show small numbers (fewer than 10) of red knots migrating together in the interior states as well.

Action Area

While little is known about interior migrating red knots, they are believed to be rare migrants through North Dakota, occasionally utilizing wetlands as stopover habitat. Migration through North Dakota occurs from mid-May to mid-September, early October. Geolocator results from a study of eight knots wintering in Texas found five of the birds used the Northern Great Plains (Saskatchewan, Canada and North Dakota) as a stopover (USFWS 2013b). According to Ebirds.org, ten locations throughout North Dakota have documented observations of small number of red knots since 1982, with the nearest observations to the Action Area at Audubon Lake and Lonetree Wildlife Management Area (WMA), both approximately 32 miles away. Migration of the red knot through North Dakota is rare and although wetlands occur within the Action Area, the habitat is marginal in comparison to surrounding areas with documented use, such as Lonetree WMA.

Whooping Crane (*Grus americana*)

Whooping cranes reach approximately 5 feet tall and have a wingspan that can reach 7½ feet. Whooping cranes are almost entirely white with black wingtips, and have a red patch on the head that extends from the cheek along the bill. The eyes are yellow and they have black legs.

Source: https://www.fws.gov/midwest/whoopingcrane/

Population Rangewide

The whooping crane was listed as endangered in 1967 (*Federal Register* 32:4001). Whooping crane recovery efforts have made great strides over the years, with new populations being established in Florida and Wisconsin. The birds that migrate through North Dakota are part of the Aransas-Wood Buffalo population. Approximately, 329 whooping cranes were estimated during the winter 2015-2016 survey, centered on the Aransas National Wildlife Refuge (Whooping Crane Conservation Association 2016).

The whooping crane recovery plan includes scientific information about the species and provides objectives and actions needed to down-list the species (Canadian Wildlife Service and U.S. Fish and Wildlife Service 2007). Recovery actions designed to achieve these objectives include protection and enhancement of the breeding, migration, and wintering habitat for the Aransas-Wood Buffalo population. The goals are to allow the wild flock to grow and reach ecological and genetic stability; reintroduction and establishment of geographically separate self-sustaining wild flocks to ensure resilience to catastrophic events; and maintenance of a captive breeding flock that is genetically managed to retain a minimum of 90 percent of the whooping cranes' genetic material for 100 years.

Action Area

The whooping crane passes through North Dakota each spring and fall while migrating between its breeding territory in northern Canada and wintering grounds on the Gulf of Mexico, frequently migrating with sandhill cranes. Whooping cranes are usually found in small groups

of seven or fewer individuals and are easily disturbed when roosting or feeding. They prefer freshwater marshes, wet prairies, shallow portions of rivers and reservoirs, grain and stubble fields, shallow lakes, and wastewater lagoons for feeding, loafing, and roosting. Fall migration occurs in North Dakota from late September to mid-October, while spring migration occurs from late April to mid-June. Birds can appear in all parts of North Dakota, although most sightings are in the western two-thirds of the state. Whooping crane observations have been made adjacent to the Canal during migration, but are considered rare. The closest observation occurred on April 2008, approximately 2.5 miles northwest of MM 42.5. Please refer to Figure 13 for Whooping Crane Observations in the CNDWSP Area.

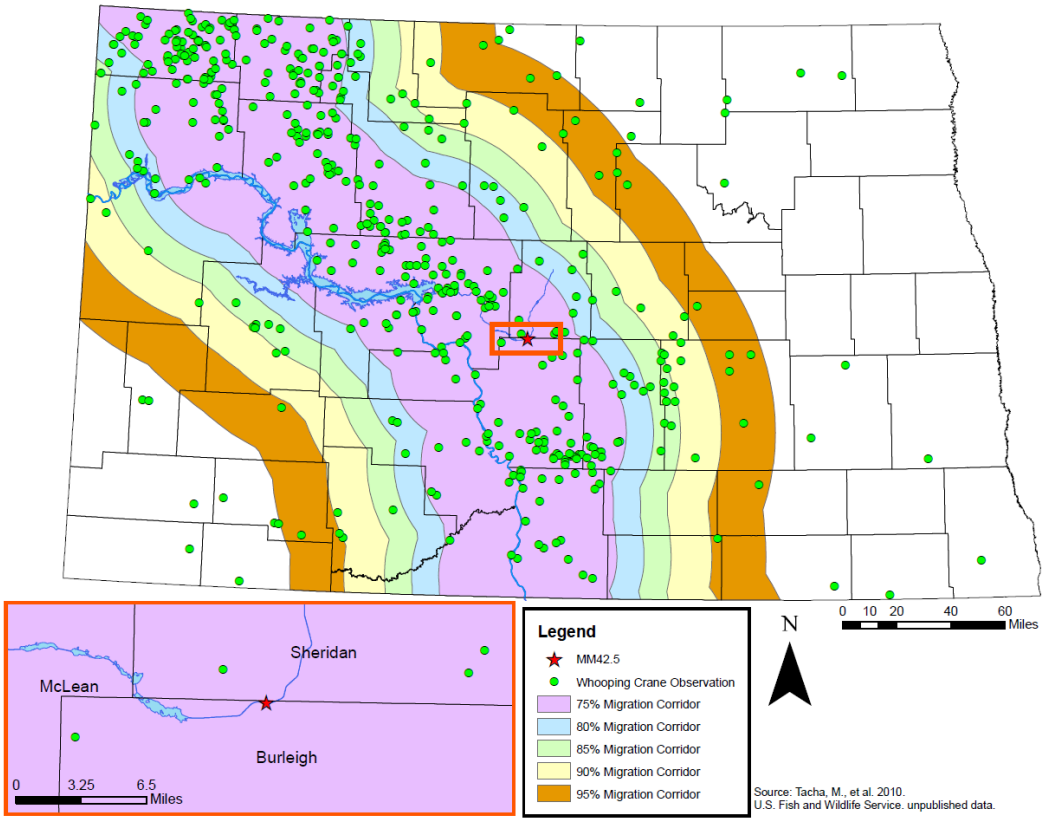


Figure 13. Whooping Crane Observations in the Central North Dakota Water Supply Project Area.

Pallid Sturgeon (*Scaphirhynchus albus*)

Pallid sturgeon are one of the largest fish found in the Missouri and Mississippi River Systems, weighing up to 85 pounds. Pallid sturgeon are typically light brown with a white underside. The snout is flat and shovel-shaped with fleshy chin barbels.

Source: https://www.fws.gov/southdakotafieldoffice/STURGEON.HTM

Population Rangewide

The pallid sturgeon was listed as endangered in 1990 (*Federal Register* 55:36641-36647). The pallid sturgeon requires turbid water and flow rates of large, free-flowing rivers. Historically, the geographic range included the lower 200 miles of the Yellowstone River; the Missouri River (from Fort Benton, MT to St. Louis, MO); the Mississippi River from St. Louis south to Louisiana; larger tributaries include the Platte, Kansas, St. Francis, Ohio, Arkansas, and Yazoo/Big Sunflower Rivers; and the Atchafalaya River. The total length of the pallid sturgeon's historical range was approximately 3,515 river miles (USFWS 2014b). A majority of its habitat has declined due to river channelization, construction of impoundments, and related changes in water flow. Today, the pallid sturgeon has been limited to fragmented segments of free-flowing rivers within its historical range (Figure 14).

Figure 14. Current Range of Wild and Hatchery-Reared Pallid Sturgeon (available at: https://www.fws.gov/mountain-prairie/species/fish/pallidsturgeon/recoveryplan2014.pdf).

Action Area

Pallid sturgeon observations have been reported on the Missouri River in North Dakota between Fort Peck Dam and Lake Sakakawea (Jordan 2006). The Canal does not contain habitat for the pallid sturgeon.

Northern Long-eared Bat (*Myotis septentrionalis*)

Northern long-eared bats are a medium-sized bat, with very long ears. Their length is 3.0 – 3.7 inches with a wingspan of 9 – 10 inches. The fur color is medium to dark brown on the back with a tawny to pale-brown on their underside.

Source: https://www.fws.gov/wyominges/Species/NLEBat.php

Population Rangewide

The northern long-eared bat was listed as threatened in 2015 (*Federal Register* 80:17974-18033) with a 4(d) rule in 2016 (*Federal Register* 81:1900-1922). The range of the northern long-eared bat includes much of the eastern and north-central United States and most of the Canadian provinces. The northern long-eared bat spends winters hibernating in caves and mines. In summer, the northern long-eared bat roosts underneath bark of live and dead trees, rock crevices, caves, mines, barns, and sheds. The dramatic decline of the northern long-eared bat is due to white-nose syndrome. There are many unknowns regarding white-nose syndrome, however it is expected that the disease will spread throughout the United States (Figure 15). Other sources of decline include impacts to hibernacula, degradation of summer habitat, and wind farm operation.

Action Area

Little work has been conducted in North Dakota to document the distribution of the northern long-eared bat in North Dakota. Summer surveys in North Dakota (2009 – 2011) documented this species in the Turtle Mountains, the Missouri River Valley, and the Badlands (Gillam and Barnhart 2012). Gillam and Barnhart (2012) found most of this bat species using tree roosts particularly cottonwoods. To date, no hibernacula or bat activity during the winter months has been documented in the state. Based on this species ecology and range, it is unlikely that this species would occur in the Action Area.

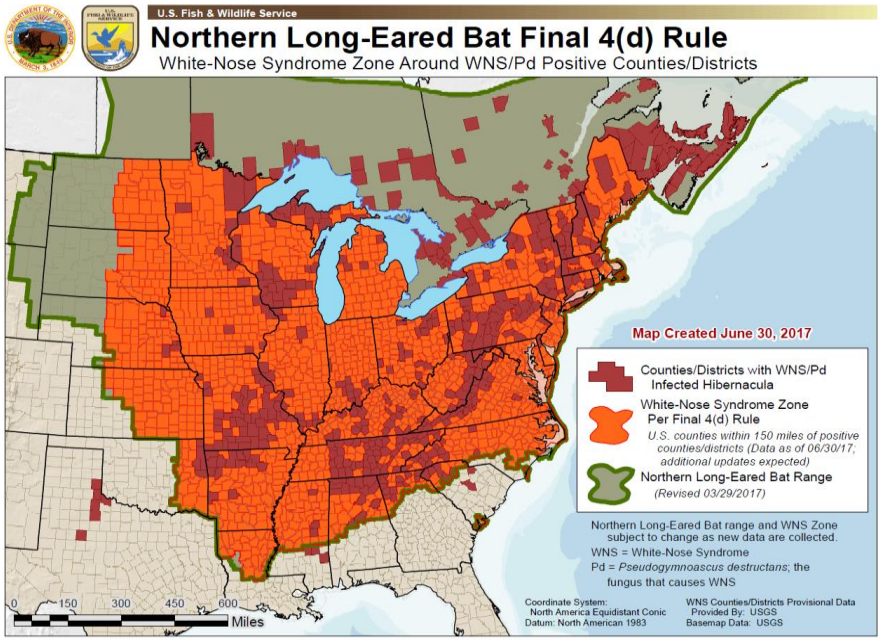


Figure 15. White-Nose Syndrome Zone (available at: https://www.fws.gov/Midwest/endangered/mammals/nleb/pdf/WNSZone.pdf).

Gray Wolf (*Canis lupus*)

The gray wolf is the largest living member of its family (Canidae), with males averaging 88 pounds and females generally weighing 5-10 pounds less. Fur color in individuals can range from black to gray to white, sometimes red and brown. The gray wolf is a keystone predator and is considered a habitat generalist, occurring in temperate and boreal forests, mountains, tundra, and grasslands.

Population Rangewide

By the time wolves were protected by the ESA of 1973, only a few hundred remained in extreme northeastern Minnesota and a small number on Isle Royale, Michigan. The status of the gray wolf has changed multiple times since the original 1973 listing. In December 2011, the USFWS revised and removed the Western Great Lakes Distinct Population Segment of gray wolf from the list of endangered and threatened wildlife (*Federal Register* 76:81665-81726). In February 2015, following court orders, the USFWS reinstated the March 9, 1978 (*Federal Register* 43:9607) regulatory protection for the gray wolf, including the endangered status for gray wolves in the eastern half of North Dakota (*Federal Register* 80:9218-9229). Wolves can occupy a wide range of habitats where large ungulates are typically found, including forests, prairies, including agricultural and pasture lands.

Action Area

The gray wolf is an infrequent visitor to North Dakota, occasionally entering the state from Minnesota or from Manitoba, Canada. The increasing wolf population in Minnesota and the accompanying expansion of wolf range westward and southwestward in the state have led to an increase in dispersing wolves in North Dakota. As the Minnesota and Canada populations continue to increase, North Dakota could expect to see additional transients. No surveys have

been conducted to document the number of wolves in North Dakota; however, occasional lone dispersers that appear primarily in the eastern portion of the state. There were reports of pups in the Turtle Mountains of North Dakota, one wolf sighting was confirmed in early 2004, and two wolf depredation incidents were verified north of Garrison in late 2005 (*Federal Register* 71 (58):15286). There have been no verified recent sightings in the Project Area.

Due to the relative absence of secluded habitat in most of North Dakota, there is considerable uncertainty regarding whether a wolf pack will establish or become more common in the state. According to Licht and Huffman (1996), wolves could recolonize portions of their former range on the prairie in the Dakotas. However, the agricultural dominated landscape (cropland, hayland and pasture) and relatively high densities of roads would facilitate negative encounters between wolves and humans, which could preclude their re-establishment.

Environmental Effects of the Proposed Action Alternative

Due to the distance of the Action Area to the Missouri River and the absence of suitable habitat within the Action Area, ***the Proposed Project will have no effect on the interior least tern, piping plover, piping plover designated critical habitat, or pallid sturgeon.***

Although wetlands providing potential habitat for whooping crane and rufa red knot occur in the Action Area, sightings of both species are rare in North Dakota and no recorded observations of either species has occurred within the Action Area. Therefore, ***the Proposed Project will have no effect on the rufa red knot and whooping crane.***

North Dakota is not identified as a recovery area and gray wolves occur as rare, sporadic transients with no established populations in the state; therefore, ***the Proposed Project will have no effect on the gray wolf.***

Northern long-eared bat may use "suitable" roosting trees within the Action Area. However, Reclamation is not aware of any survey results, nor have maternity roost trees or hibernacula been identified within the Action Area. Using 2015 National Agriculture Imagery Program (NAIP) aerial imagery, approximately 0.11 acres of tree removal would occur within the Action Area. The trees would be removed during the non-active time of year from November 1 to March 31; ***therefore, the Proposed Project will have no effect on the northern long-eared bat.***

No endangered species are known to occupy the Action Area; however, Reclamation will require that Garrison Diversion incorporate into their construction plans, instructions to the contractor that in the event that any threatened or endangered species are encountered during activities, the contractor will contact Reclamation. Reclamation will consult with the USFWS to determine the appropriate steps to avoid any effects to these species, including cessation of construction. Additionally, any new, above ground power lines and an additional equal length of existing power lines in the same vicinity must be marked with visibility enhancement devices to benefit migrating whooping cranes as well as all migratory birds and bats.

Cumulative Effects

Garrison Diversion is planning to construct the state-sponsored RRVWSP. The tie-in of the proposed CNDWSP to the state-sponsored RRVWSP and a small segment of the state-sponsored

RRVWSP would occur in the Action Area. Pipeline construction activities would be temporary and Garrison Diversion would reclaim lands as outlined in Land Resources.

Environmental Consequences of the No Action Alternative

The No Action Alternative would not involve ground disturbing activities associated with pipeline or intake construction. The No Action Alternative would have ***no effect on the interior least tern, piping plover, piping plover designated critical habitat, rufa red knot, whooping crane, pallid sturgeon, gray wolf, or northern long-eared bat.***

Bald and Golden Eagle Protection Act

Bald eagles (*Haliaeetus leucocephalus*) range in size from 30 – 43 inches in length, with a wingspan of 80 inches (6.5 feet). Their weight ranges from 6 – 14 pounds, with females typically larger than males. Adult bald eagles have a dark brown body with a white head and tail. The geographic range of the bald eagle is throughout most of North America. Both year-round and migratory individuals occur in North Dakota. Preferred habitat includes the Missouri River system, including Lake Sakakawea, the Heart River, Cannonball River, Sheyenne River, Red River, Souris River, and the Devils Lake basin (Figure 16A).

Source: http://www.southdakotamagazine.com/eagle-season

Golden eagles (*Aquila chrysaetos*) range in size from 30 – 40 inches in length, with a wingspan of 79 inches (6.5 feet). Their weight ranges from 6.5 – 13.0 pounds, with females typically larger than males. Adult golden eagles are mostly dark brown, with golden brown feathers on head and nape. The geographic range of the golden eagle is throughout most of North America, with breeding in the western United States, southwestern Canada, and northern Mexico. Both year-round and migratory individuals occur in North Dakota. The badlands and Lake Sakakawea breaks are preferred habitat of golden eagles (Figure 16B).

Source:
http://www.sdakotabirds.com/species/golden_eagle_info.htm

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d, 54 Stat. 250) as amended, was enacted in 1940 and prohibits anyone, without a permit, from taking bald eagles or golden eagles, including their parts, nests, or eggs.

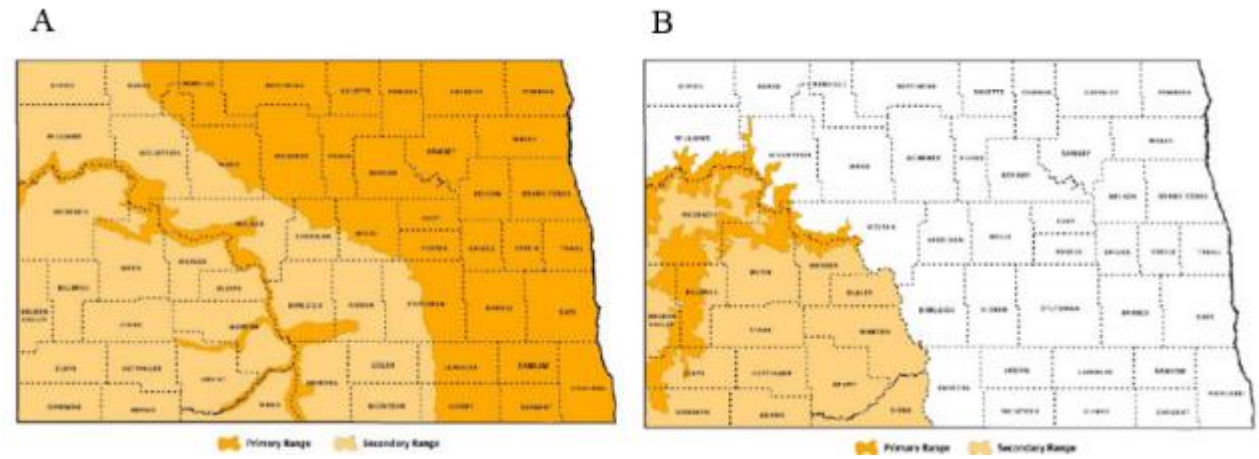


Figure 16. Primary and Secondary Range of Bald Eagles (A) and Golden Eagles (B) in North Dakota (NDGF 2016a; NDGF 2016b).

Environmental Effects of the Proposed Action Alternative

Golden eagle habitat does not occur in the Project Area. The Project Area occurs in the secondary range of the bald eagle. No known bald eagle nests occur in the Project Area. However, in the event that a bald eagle nest is observed:

- Construction within 660 feet of visible nesting bald eagles will be avoided from February 1 to August 15;
- Any new, above ground power lines and an additional equal length of existing power lines in the same vicinity must be marked with visibility enhancement devices to benefit migrating whooping cranes as well as all migratory birds and bats.

Cumulative Effects

Garrison Diversion is planning to construct the state-sponsored RRVWSP. The tie-in and portion of state-sponsored RRVWSP occurs in the secondary range of the bald eagle (Figure 16A). Pipeline construction activities would be temporary and Garrison Diversion would reclaim land as outlined in Land Resources. Garrison Diversion would coordinate with the USFWS, as necessary, for the Bald and Golden Eagle Protection Act.

Environmental Consequences of the No Action Alternative

The No Action Alternative does not include any ground disturbance or construction activities. Therefore, the No Action Alternative would have no impact to golden eagles or bald eagles.

Land Resources

Affected Environment

Landcover in the Project Area includes agricultural crops, native grasslands and tame grasslands. According to LANDFIRE (2013) data, 10 classifications of landcover occur in the Project Area. The dominant landcover includes Modified/Managed northern Tallgrass Grassland (Table 6; Figure 17), which is an area that is dominated by introduced perennial forbs or grassland species including but not limited to: *Cirsium* spp. (thistle spp.), *Centaurea* spp. (knapweed spp.), *Euphorbia esula* (leafy spurge), *Melilotus* spp. (sweetclover spp.), *Agropyron cristatum* (crested

wheatgrass), and *Bromus inermis* (smooth brome) (LANDFIRE 2013). According to USDA (2016), crops in the Project Area include: spring wheat, barley, and soybeans, with a large percentage of the area in developed/open space and grass/pasture.

Table 6. Landcover Types in Project Area (LANDFIRE 2013).

LANDFIRE Classification	Acres
Modified/Managed Northern Tallgrass Grassland	53.6
Western Cool Temperate Urban Herbaceous	15.8
Western Cool Temperate Close Grown Crop	15.6
Western Cool Temperate Wheat	8.9
Developed-Roads	5.8
Western Cool Temperate Undeveloped Ruderal Grassland	4.9
Western Cool Temperate Developed Ruderal Grassland	2.7
Western Cool Temperate Pasture and Hayland	2.7
Open Water	0.7
Western Great Plains Depressional Wetland Systems	0.7
Total Acres	**111.2**

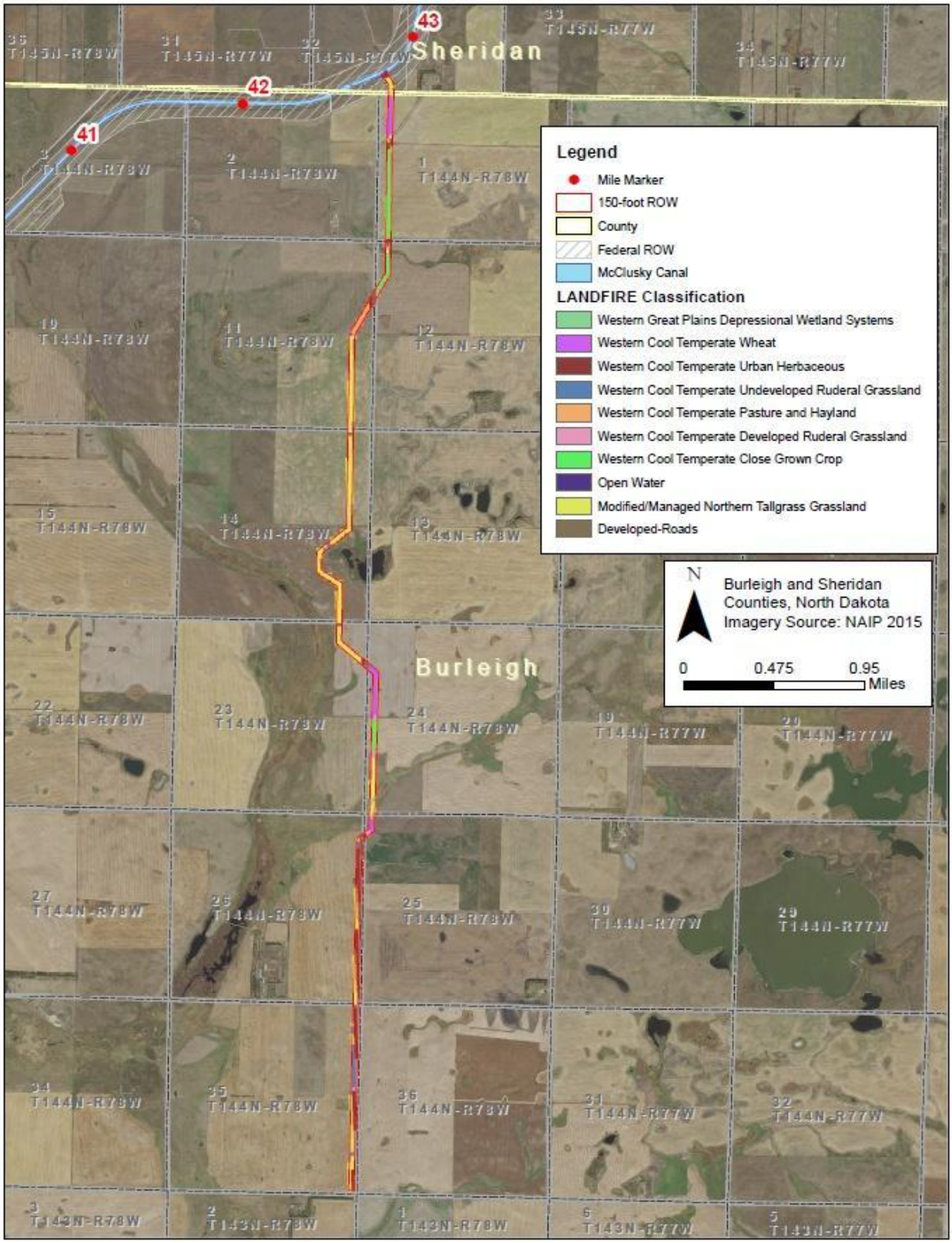


Figure 17. Landcover Types in Project Area (LANDFIRE 2013).

There are 11 weeds declared noxious by the state of North Dakota. Counties are able to list additional weeds if needed, Burleigh County has no additional weeds listed as noxious and Sheridan includes *Cirsium vulgare* (bull thistle) and *Asclepias syriaca* (common milkweed). Six noxious weeds were recorded in 2016 for Burleigh County, for a total of 18,522 acres and three noxious weeds were recorded in 2016 for Sheridan County, for a total of 175 acres (Table 7).

To limit and prevent the spread of noxious weeds, standard cleaning and inspection practices are required for all equipment used in the Project Area (Reclamation 2010).

Table 7. Noxious Weed Acreage in Burleigh and Sheridan Counties, North Dakota (North Dakota Department of Agriculture 2016).

Common Name	Scientific Name	Burleigh (acres)	Sheridan (acres)
Absinth wormwood	*Artemisia absinthium*	9,100	60
Canada thistle	*Cirsium arvense*	6,600	75
Dalmatian toadflax	*Linaria genistifolia*	-	-
Diffuse knapweed	*Centaurea diffusa*	-	-
Leafy spurge	*Euphorbia esula*	2,800	40
Musk thistle	*Carduus nutans*	14	-
Purple loosestrife	*Lythrum salicaria*	1	-
Russian knapweed	*Centaurea repens*	-	-
Saltcedar	*Tamarisk ramosissima*	-	-
Spotted knapweed	*Centaurea maculosa*	7	-
Yellow toadflax	*Linaria vulgaris*	-	-
Total		**18,522**	**175**

According to Web Soil Survey, a majority of the 14 soil types in the area consist of a loamy surface texture and are categorized as Williams-Bowbells loam soil type or Lehr loam (Table 8, Figure 18). According to the average K factor value for the Project Area, the soils are moderately susceptible to sheet and rill erosion by water. According to the average Wind Erodibility Group for the soils in the Project Area, they are not highly susceptible to wind erosion in cultivated areas. Approximately 56 acres of Farmland of Statewide Importance occur within the Project Area. This land includes areas identified at the state level that contain soils that produce high yields of crops when treated and managed according to acceptable farming methods. While they are not classified as prime farmlands, they contain similar characteristics to prime farmlands (NRCS 2017).

Table 8. Soil Types and Classifications (NRCS 2017).

Acres	Soil Type	Farmland Classification	Surface Texture	Wind Erodibility Group (Most 1-Least 8)	K Factor Whole Soil (Low 0.02-High 0.69)
46.11	Williams-Bowbells loams, 3 to 6% slopes	Statewide importance	loam	6	0.24

Acres	Soil Type	Farmland Classification	Surface Texture	Wind Erodibility Group (Most 1-Least 8)	K Factor Whole Soil (Low 0.02-High 0.69)
15.96	Lehr loam, 0 to 2% slopes	Not prime	loam	5	0.28
13.96	Lehr loam, 2 to 6% slopes	Not prime	loam	5	0.28
8.50	Flaxton-Livona fine sandy loams, 3 to 6% slopes	Statewide importance	fine sandy loam	3	0.15
7.56	Appam sandy loam, 2 to 6% slopes	Not prime	sandy loam	3	0.15
6.48	Williams-Zahl-Zahill complex, 6 to 9% slopes	Not prime	loam	4L	0.24
3.70	Wabek-Lehr-Appam complex, 9 to 25% slopes	Not prime	loam	5	0.32
3.62	Marysland loam, 0 to 1% slopes	Not prime	loam	4L	0.20
1.97	Appam sandy loam, 0 to 2% slopes	Not prime	sandy loam	3	0.15
1.61	Vallers, moderately saline-Parnell complex, 0 to 1% slopes	Not prime	loam	4L	0.2
1.34	Ustarents loamy, canal-Water complex, 0 to 75% slopes	Not prime	loam	4L	0.32
1.03	Roseglen silt loam, 0 to 2% slopes	Statewide importance	silt loam	6	0.37
0.68	Tansem-Roseglen silt loams, 2 to 6% slopes	Statewide importance	loam	6	0.32
0.16	Zahl-Williams loams, 9 to 15% slopes	Not prime	loam	4L	0.24
112.68	**Total**				

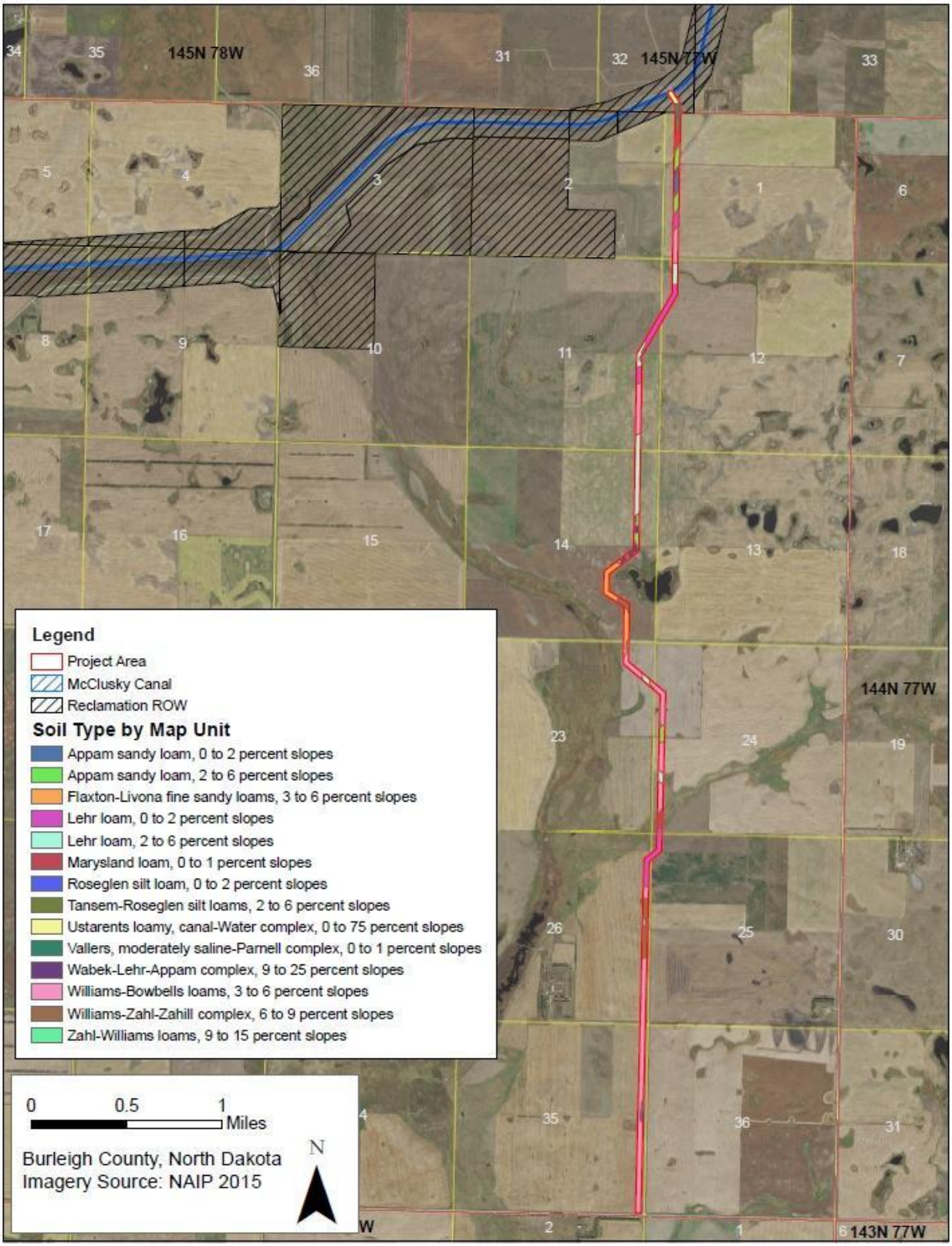


Figure 18. Soil Types and Classifications (NRCS 2017).

Environmental Effects of the Proposed Action Alternative

The Proposed Project would cross Reclamation lands, private lands, and intersect two USFWS wetland easements. To proceed with the pipeline route, the USFWS requests a meeting with Garrison Diversion at the easement locations prior to siting/construction. North Dakota State Trust Lands contacted Reclamation during the release of the draft EA and noted the proposed route would traverse State School Trust Land. An easement would need to be obtained prior to construction. Private landowners would be contacted to obtain easements and determine the best route across their property. Approximately 0.20 acres of lands would be permanently impacted through the construction of the pump station and associated facilities.

Temporary impacts to cropland and soil resources during project construction may include the introduction of noxious and invasive vegetation, increased susceptibility to erosion, mixing of soils horizons, and compaction. To mitigate any potential crop damages to private landowners, Garrison Diversion has agreed to pay demonstrated crop damage incurred as part of the construction, installation, repair or maintenance of the water pipeline. BMPs would be implemented to prevent the spread of noxious and invasive weeds, including washing equipment prior to bringing on-site. After construction, noxious weeds would be controlled within the pipeline ROW by Garrison Diversion. BMPs to prevent wind and water erosion include the use of fiber rolls or mats, straw waddles or silt fences where appropriate, and vegetation establishment as approved by the landowner once construction is complete. Topsoil would be segregated from subsoil prior to construction and placed on the surface after pipeline construction is complete. Impacts are expected to be temporary.

Cumulative Effects

Garrison Diversion is planning to construct the state-sponsored RRVWSP. The tie-in of the proposed CNDWSP to the state-sponsored RRVWSP and a small segment of the state-sponsored RRVWSP would occur in the defined geographic scope. The area crossed by the tie-in and portion of the state-sponsored RRVWSP includes Modified/Managed Northern Tallgrass Grassland, Western Cool Temperate Urban Herbaceous, and Developed-Roads (LANDFIRE 2013). According to LANDFIRE (2013), Modified/Managed Northern Tallgrass Grassland are areas dominated by introduced perennial forb or grassland species; Western Cool Temperate Urban Herbaceous includes areas with a mixture of some constructed materials, but mostly vegetation in the form of lawn grasses; and Developed-Roads are roads in highly developed areas where people reside or work in high numbers (impervious surface account for 80 to 100% of the total cover).

One major soil type occurs in the tie-in of the proposed CNDWSP to the state-sponsored RRVWSP and a small segment of the state-sponsored RRVWSP and includes Williams-Bowbells loams (3 to 6 percent slopes). Williams Bowbells loams is classified as farmland of statewide importance.

According to the “Red River Valley Water Supply Project- Serving the Water Supply Needs of Central ND and the Red River Valley Landowner Process” (Garrison Diversion 2017b), the following land reclamation actions would be implemented as part of the state-sponsored RRVWSP:

1. Excavate and segregate soils into three categories; black topsoil, brown root growing zone, and gray no grow zone (Figure 19);
2. Fill trench with appropriate soils for maximum growing conditions;
3. Crop Damage Policy that works for the landowners;
4. Investigate BMPs used by other water systems and industry leaders.

A typical pipe trench section is depicted in Figure 20.

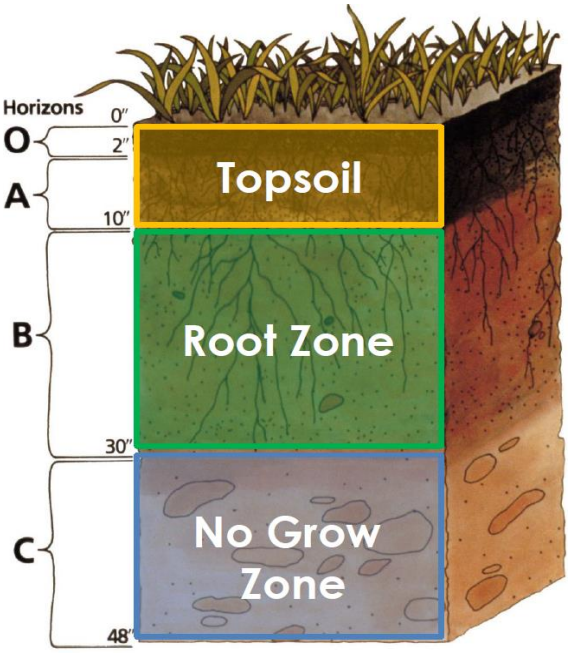


Figure 19. Soil Categories in the Soils Excavation and Segregation Plan for the State-sponsored RRVWSP (Kover 2017).

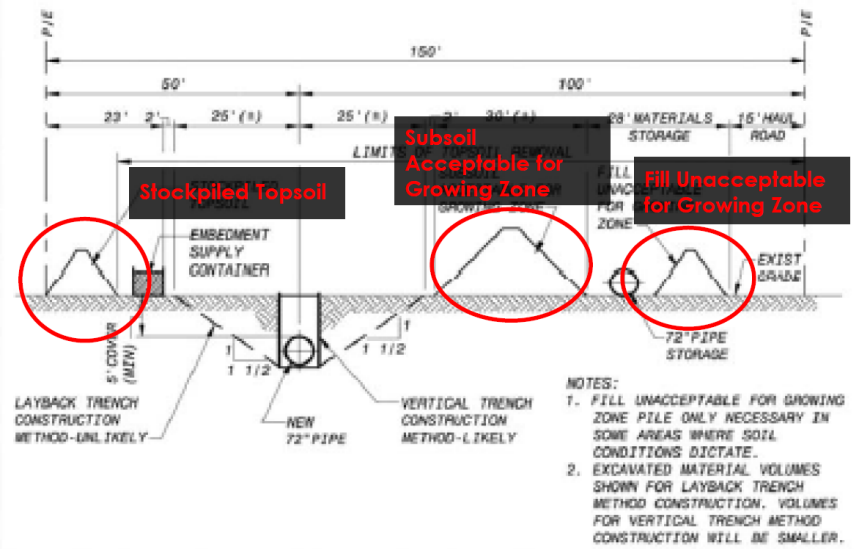


Figure 20. Typical Pipeline Trench Section Proposed for the State-sponsored RRVWSP (Kovar 2017).

Environmental Consequences of the No Action Alternative
The No Action Alternative, would not result in impacts to land resources.

Climate Change
Greenhouse gases (GHGs) including water vapor, carbon dioxide (CO_2), and methane absorb energy, preventing the loss of heat to space, known as the greenhouse effect (EPA 2016). Anthropogenic sources of GHGs, especially from the burning of fossil fuels, have increased the greenhouse effect, thus causing an increased amount of heat retained by Earth's atmosphere (EPA 2016). This section describes the current climate conditions and predictions associated with climate change for the affected area.

Methods
Climate data for this section of the EA were obtained from Reclamation. Projected changes in precipitation and temperature utilized 231 downscaled climate projections from 36 Coupled Model Intercomparison Project phase 5 (CMIP5) global climate models (Reclamation 2013). The CMIP5 projections start from different pre-industrial estimates of climate state, or initial conditions, and considers the multiple future pathways for GHG emissions while simulating a climate response to these GHG scenarios. Additionally, Reclamation utilized the West-Wide Climate Risk Assessment (WWCRA) for flow projections (Reclamation 2012b).

Affected Environment
North Dakota's climate is typical of continental climate with extremes of winter cold and summer heat. January is the coldest month with average temperatures from 0 °F located in the northeast to 15 °F in the southwest and July is the warmest month with average temperatures from 65 °F in the northeast to 72 °F in the south (NOAA n.d.). The highest and lowest temperature on record is 121 °F and -60 °F, respectively (NOAA n.d.). Annual precipitation ranges from approximately 14 to 22 inches from northwestern to southeastern North Dakota, with most precipitation occurring from April through September (NOAA n.d.).

The uncertainties of climate change make reliability of site-specific prediction speculative. Between 1901 and 2008, temperatures in the northern Great Plains have risen approximately 1.85 °F and precipitation has increase more than 4% (Reclamation 2013). In combination with these trends the area also is experiencing a decline in spring snowpack, reduced snowfall to winter precipitation ratios, and earlier snowmelt runoff (Reclamation 2013).

Based on the CMIP5 climate projections, the trend depicted in historical data will likely continue into the future for the northern Great Plains. Figure 21 illustrates the percent change in precipitation and °C change from 1970-1999 to 2040-2069, utilizing the median downscaled CMIP5 projection. The region, including the Project Area, is projected to generally become warmer and wetter as a result of climate change.

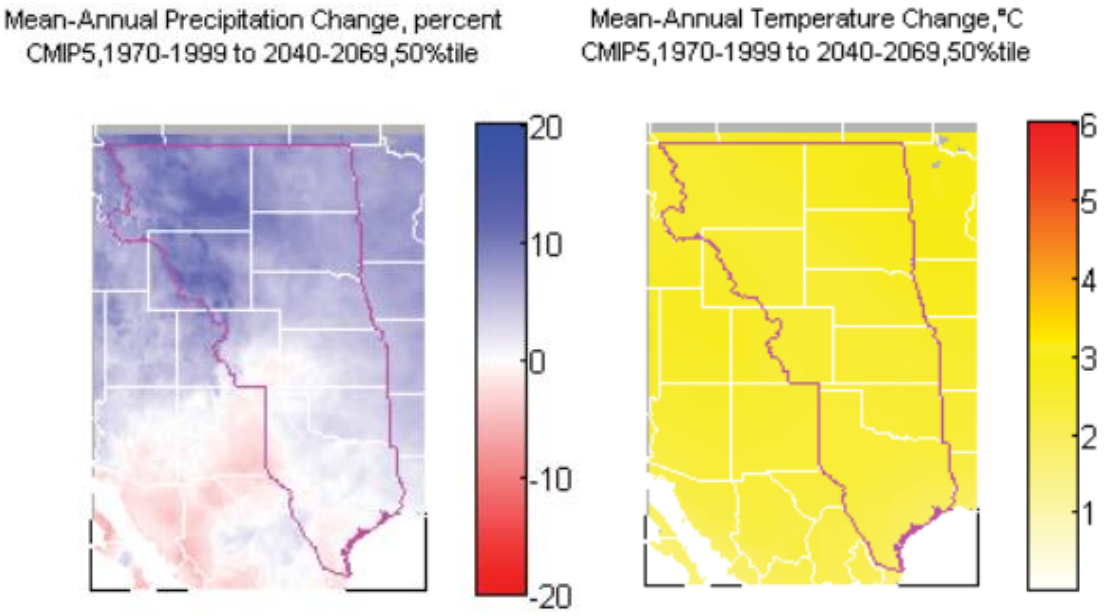


Figure 21. Ensemble-median changes in precipitation and temperature for 2040-2069 relative to 1970-1999, utilizing CMIP5 (Bureau of Reclamation 2013).

Changes would be expected for runoff and streamflow with warming temperatures. A large proportion of annual runoff comes from spring snowmelt, and increased temperatures may change the patterns of runoff and streamflow (Gleick and Adams 2000). For example, more precipitation may fall as rain instead of snow in the winter months. Figure 22 depicts the range of monthly flow changes for the 2040-2069 period relative to 1950-1999 at the Missouri River, Garrison Dam, North Dakota, based on 112 downscaled CMIP3 climate and hydrology projections (Bureau of Reclamation 2012b). Flows are predicted to increase from December to June and decrease from July to November.

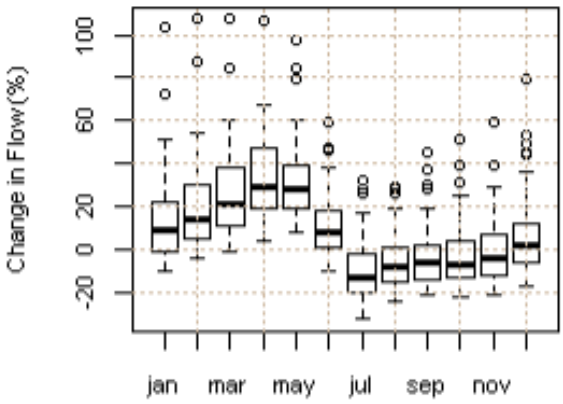


Figure 22. Boxplot of Mean Monthly Flow Changes in the Missouri River at the Garrison Dam, North Dakota (2040-2069 relative to 1950-1999) (Bureau of Reclamation 2012b). The box represents the 25th- and 75th- percentile projections, the whiskers represent the 5th- and 95th- percentile projections, the bar within the box represents the median projection, and open circles represent the outliers (outside of the 5th and 95th percentile).

Environmental Effects of the Proposed Action

Effect of the Project on Climate Change
Emissions of CO_2 and other GHGs from the construction component of the Proposed Project would be low, and would not substantively contribute to climate change.

Effect of Climate Change on the Project
Water availability and need could be affected by climate change and would affect the Proposed Action Alternative and the No Action Alternative. As temperatures increase, the demand for water would potentially increase. Changes in annual precipitation have the potential to affect the volume and seasonality of runoff in the Missouri River, the source of water for the CNDWSP. Any potential increase in cfs or additional system infrastructure needed due to an increase in water demand would be addressed through additional NEPA and National Historic Preservation Act (NHPA) compliance.

Cumulative Effects
Garrison Diversion is proposing to construct the state-RRVWSP; however it is speculative at this point to quantify emissions from their proposed construction activities due to the lack of detailed plans available at this time.

Environmental Consequences of the No Action Alternative
Under the No Action Alternative, no additional greenhouse gas emissions would occur.

Indian Trust Assets

Affected Environment
ITAs are "legal interests in property or resources held in trust by the United States for Indian tribes or individual Indians" (Reclamation 1993). The Secretary of the Interior is the trustee for the United States on behalf of Indian tribes. ITAs include land, minerals, timber, ethnobotanical resources, hunting and fishing rights, water rights, and in-stream flows. ITAs may be located on or off-Reservation lands. During the NEPA process, Reclamation, as a representative of the Secretary of the Interior, must evaluate whether the Proposed Action may affect ITAs. This policy reaffirms the legal trust relationship and the government-to-government relationship between the Secretary of the Interior and Indian tribes.

For the Proposed Project, Indian water rights are the primary ITA involved. The tribe's water right to the Missouri River stems from the Supreme Court decision in *Winters v. United States* (1908), known as the Winters doctrine. According to the doctrine, the establishment of an Indian reservation implied that sufficient water was reserved to fulfill purposes for which the reservation was created, with the priority date being the date the reservation was established. As such, quantified Indian water rights for both surface and groundwater, constitute an ITA. In *Arizona v. California* (1963) the U.S. Supreme Court held that water allocated should be sufficient to meet both present and future needs of the reservation to assure the viability of the reservation as a homeland. These rights are also not forfeited by non-use. To date, several

Missouri River Basin tribes in Montana and Wyoming have quantified their water rights on the Missouri River; however, water rights in North Dakota remain unquantified. The Three Affiliated Tribes, with the Agreement at Fort Berthold (July 27, 1866) and subsequent establishment of the Fort Berthold Indian Reservation, have water rights to the Missouri River main-stem flow; this water right is currently unquantified.

The USACE is responsible for operation of reservoirs within the Missouri River Basin, including Lake Sakakawea. Under the Winters doctrine, the USACE recognizes that American Indian Tribes are entitled to water rights in streams running through and along Reservation boundaries. The USACE recognizes tribal water rights to the Missouri River regardless of whether these rights have not been quantified or adjudicated. In effect, if a tribe adjudicated their water right on Lake Sakakawea, the USACE would consider it an existing depletion and adjust operations accordingly.

> "When a Tribe exercises its water rights, these consumptive uses will then be incorporated as an existing depletion. Unless specifically provided for by law, these rights do not entail an allocation of storage. Accordingly, water must actually be diverted to have an impact on the operation of the System. Further modifications to System operation, in accordance with pertinent legal requirements, will be considered as Tribal water rights are exercised in accordance with applicable law" (USACE 2006).

Environmental Effects of the Proposed Action

The Proposed Action Alternative would not preclude the Tribes right or ability to exercise their water right to the Missouri River. However, in the event Tribes quantify their reserved water rights in the future and put the water to beneficial use, the volume of water available for other users in the Missouri River Basin may be affected. Therefore the CNDWSP could be affected if it were to lose the 20 cfs source of water from the Missouri River. The Proposed Action Alternative would not affect ITAs, including land, minerals, timber, ethnobotanical resources, hunting and fishing rights, water rights, and in-stream flows.

Environmental Consequences of the No Action Alternative

The No Action Alternative would not affect ITAs including land, minerals, timber, ethnobotanical resources, hunting and fishing rights, water rights, and in-stream flows.

Cultural Resources

Affected Environment

Reclamation manages cultural resources along the Canal in accordance with Section 110 and Section 106 of the NHPA and other applicable laws and regulations. Under Section 110 of the NHPA, Reclamation has completed cultural resource surveys at the Canal and has conducted evaluations to determine what cultural resource sites are eligible for listing on the National Register of Historic Places (NRHP). Sites that are determined to be eligible for listing on the NRHP are given high cultural resource management consideration and status as historic properties. Section 106 of the NHPA requires Reclamation to consider effects to historic properties when planning and implementing actions such as those identified in this EA.

The Canal is located in the Southern Missouri River Study Unit, which is one of 13 Study Units (drainage basins) used for prehistoric and protohistoric archeological site studies and management in North Dakota (Gregg et al. 2008). The majority of the cultural resource sites along the Canal are prehistoric stone circle sites and cairns. Stone circle sites, also called tipi ring sites, are distinguished by one or more circular rings of stone. Cairn are a pile or clustering of stones of varying size and shape. Rock cairns have been used for various purposes including, but not limited to, capping human burials, and ceremony, cache, trail, and boundary markers. Additional site types include prehistoric occupation sites, lithic scatters, historic sites, and sites consisting of the skeletal remains of prey animals. Occupation sites are scatters of artifacts, bone, pottery shards, and fire-cracked rock. Lithic scatters are distinct accumulations of stone (lithic) tools and/or debris from tool making. The sites consisting of faunal remains lack artifacts, but they appear to be have been made as the result of human activity. The Canal itself does not yet meet the criteria of a historic property due to its age.

The Canal right-of-way was originally surveyed by the River Basin Survey staff of the Smithsonian in 1966 (Mallory). Additional surveys were performed by University of North Dakota Archaeological Research (UNDAR) in 1997 (Wermers and Klinner 1998) and 1998 (Wermers and Klinner 1999), along with evaluative test excavations in 2000 (Klinner et al. 2002).

Potential Effects of the Proposed Action

Activities under the Proposed Action would occur within in the Canal ROW and in parcels of private land adjacent and south of the Canal. A Class I and Class III cultural resource inventory will be completed for the portions of the Project Area that fall outside of the existing Canal ROW prior to the commencement of ground-disturbing activities. Under the NHPA, criteria are used to determine a cultural resource site's NRHP eligibility (36 CFR 60.4). In addition, criteria in 36 CFR Part 800 are applied to determine effects to historic properties. Any new cultural resources and historic properties identified during the survey(s) will be evaluated for listing on the NRHP, as necessary. Newly recorded resources whose significance cannot be established prior to disturbance will be left unevaluated for the NRHP. Previously identified cultural resources and historic properties outside of the Canal ROW will be assessed based on their previous NRHP evaluations.

- Cultural resources determined to not be NRHP eligible are managed to the discretion of Reclamation.

- The preferred treatment of the unevaluated cultural resource sites would be avoidance. However, if avoidance is not possible, the unevaluated sites within the area of potential effect would be evaluated for eligibility to the NRHP. Reclamation would then consult with the NDSHPO on the determination of NRHP eligibility and effects in accordance with the NHPA.

- As stated above, cultural resource sites that are included in or eligible for listing on the NRHP are given special status as historic properties. The preferred treatment of historic properties would be physical avoidance through the planning and design of activities and facilities and/or the avoidance of adverse effects. Reclamation would consult with the

NDSHPO on the determination of effect in accordance with the NHPA if avoidance is not possible. The resolution of adverse effects would be done in consultation with the NDSHPO and tribes.

With the above stipulations, Reclamation has determined that Proposed Action would have no effect on historic properties.

Environmental Consequences of the No Action Alternative

There would be no effect to historic properties under the No Action Alternative.

Cumulative Effects

Garrison Diversion plans to construct the state-sponsored RRVWSP and is responsible to comply with the rules and regulations for cultural resources management as determined by NDSHPO.

Chapter 4 Agency Consultation and Coordination

Reclamation sent a scoping notice announcement to approximately 50 individuals including Native American Tribes, North Dakota's congressional delegation, appropriate state and federal agency contacts, associated county government auditor offices, private individuals, non-government organizations and 3 published newspapers, the Bismarck Tribune, McClusky Gazette, and Jamestown Sun (Appendix B). Reclamation's Scoping Notice and responses to Reclamation's Scoping Notice are included in Appendix C. No private party responses were received. Seven agency letters of response were received: North Dakota Department of Health, North Dakota Geological Survey (State Geologist), North Dakota Geological Survey (State Paleontologist), North Dakota State Historical Preservation Office, North Dakota Department of Transportation, North Dakota Game and Fish Department, and the State Water Commission.

Multiple phone calls and email correspondence took place between Reclamation and the USFWS regarding wetland easements in the Project Area. The USFWS advised on two wetland easement tracts crossed by the proposed pipeline alignment. If the alignment crosses the easement, the USFWS requests a meeting with Garrison Diversion and Reclamation before siting or construction.

A draft EA was released in August 2017. Multiple comments were received including a request for a 30-day extension for review from Missouri DNR. Reclamation granted a 15-day extension for additional review. Comments were received from the BIA, Coalition to Protect the Missouri River, Global Affairs Canada, Manitoba Sustainable Development, Missouri DNR, North Dakota Trust Lands, North Dakota Department of Health, and the North Dakota State Water Commission (Appendix A).

North Dakota State Trust Lands contacted Reclamation during the release of the draft EA and noted the proposed route would traverse State School Trust Land. An easement would need to be obtained prior to construction.

The North Dakota State Water Commission requests that a surface drain application be submitted if any ponds, sloughs, lakes or any series thereof are impacted by the project and have a watershed area of 80 acres or more. Also to be notified if there are any impacts to water resources that a drainage permit(s) may be required.

Substantial comments were received from the Coalition to Protect the Missouri River, Global Affairs Canada, Manitoba Sustainable Development and the Missouri DNR that required the revision of sections to the draft EA.

Compliance with Environmental Statutes

If the Proposed Action Alternative would be implemented, it would be accomplished in accordance and compliance with the following environmental laws, regulations, directives and compliance with the following:

- American Indian Religious Freedom Act of 1978 (P.L. 95-341)

- National Historic Preservation Act of 1966 (P.L. 89-665), as amended 1992 (P.L. 102-575)
- Native American Grave Protection and Repatriation Act (P.L. 101-601)
- Archaeological and Historic Preservation Act (P.L. 93-291)
- Archaeological Resources Protection Act of 1979 (P.L. 96-95)
- National Environmental Policy Act of 1969 (42 USC 4321)
- Clean Air Act (33 USC 7401) and Amendments
- Clean Water Act (33 USC 1251 et seq.), Sections 401, 402, and 404
- Endangered Species Act of 1973 (P.L. 93-205) (16 USC 1531-1544)
- Farmland Protection Policy Act (P.L. 97-98)
- Fish and Wildlife Coordination Act of 1958 (P.L. 85-624)
- Indian Trust Responsibilities (512 DM Chapter 2)
- Executive Order 13175 – Consultation and Coordination with Indian Tribal Governments
- Federal Energy Policy Act of 2005
- Executive Order 11988 – Floodplain Management (1977)
- Executive Order 11990 – Protection of Wetlands (1977)
- Executive Order 12898 – Environmental Justice (1994)
- Executive Order 13007 – Indian Scared Sites (1996)
- Executive Order 11593 – Protection and Enhancement of the Cultural Environment (1971)
- Executive Order 13186 – Protection of Migratory Birds (2001) Responsibilities of Federal Agencies to Protect Migratory Birds in furtherance of the purposes of the migratory bird conventions
- Executive Order 13112 – Invasive Species
- Migratory Bird Treaty Act (16 USC 703-711)
- Bald and Golden Eagle Protection Act (16 USC 668-668d)
- Fish and Wildlife Coordination Act (16 USC 661-666c)
- Endangered Species Act of 1973 (16 USC 1531-1544)

List of Preparers

A list of individuals with primary responsibility for conducting this study, preparing the documentation, and providing technical reviews is below:

Kate Kenninger – Natural Resource Specialist – DKAO – Bismarck, North Dakota
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Alicia Waters – Program Analyst – DKAO – Bismarck, North Dakota
Dani Fettig – Civil Engineer – DKAO – Bismarck, North Dakota
Randy Ehlis – Natural Resource Specialist – DKAO – Bismarck, North Dakota
Matt Cox – Archaeologist – DKAO – Bismarck, North Dakota
Damien Reinhart – Supervisory Natural Resource Specialist – DKAO – Bismarck, North Dakota

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Appendix A: Letter Responses to Draft Environmental Assessment

United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Great Plains Regional Office
115 Fourth Avenue S.E., Suite 400
Aberdeen, South Dakota 57401

IN REPLY REFER TO:
DECRM
MC-208

SEP - 1 2017

MEMORANDUM

TO: Andrea Gue, Natural Resource Specialist, Bureau of Reclamation – Dakotas Area Office

FROM: ACTING Regional Director, Great Plains Region

SUBJECT: Draft Environmental Assessment

We received your draft Environmental Assessment regarding the Issuance of Water Service and Power Contracts to Garrison Diversion Conservancy District for the Central North Dakota Water Supply Project, North Dakota. We have considered the potential for both environmental damage and impacts to archeological and Native American religious sites on lands held in trust by the Bureau of Indian Affairs, Great Plains Region. You should be aware; however, that tribes or tribal members may have lands in fee status near the sites of interest. These lands would not necessarily be in our databases, and the tribes should be contacted directly to be sure all concerns are recognized.

We have no environmental objections to this action, as long as the project complies with all pertinent laws and regulations. Questions regarding environmental opinions and conditions can be addressed to Marilyn Bercier, Regional Environmental Scientist, at (605) 226-7656.

We also find that the listed action will not affect cultural resources on tribal or individual landholdings for which we are responsible. Methodologies for the treatment of cultural resources now known or yet to be discovered – particularly human remains – must nevertheless utilize the best available science in accordance with provisions of the Native American Graves Protection and Repatriation Act, the Archaeological Resources Protection Act of 1979 (as amended), and all other pertinent legislation and implementing regulations. Archeological concerns can be addressed to Dr. Sebastian C. LeBeau II, Acting Regional Archaeologist, at (605) 226-7656.

COALITION TO PROTECT THE MISSOURI RIVER

October 7, 2017

Ms. Andrea Gue
Bureau of Reclamation
Dakotas Area Office
P.O. Box 1017
Bismarck, ND 58502-1017

Re: Draft Environmental Assessment – Issuance of Water Service and Power Contracts to Garrison Diversion Conservancy District for the Central North Dakota Water Supply Project, North Dakota

Dear Ms. Gue:

The Coalition to Protect the Missouri River (CPMR) appreciates the opportunity to comment on the *Draft Environmental Assessment - Issuance of Water Service and Power Contracts to Garrison Diversion Conservancy District for the Central North Dakota Water Supply Project, North Dakota.* The CPMR, established in 2001, represents a broad base of interests throughout the lower Missouri River, including flood control, navigation, agriculture, and public energy and water utilities. We support responsible management of Missouri River resources and maintenance of congressionally authorized purposes of the river, including flood control, navigation, water quality and water supply.

To begin, we wish to thank you and the Bureau of Reclamation (Bureau) for granting an extension of the comment period on the Draft EA, as we first became aware of this document only a few days prior to the original comment period deadline. Quite frankly, we are dismayed that the Draft EA does not appear in the *Federal Register.* We are equally frustrated by the narrow scoping activity that took place as part of the Draft EA. Despite the document's assertion on page 3-7 that *"effects on reservoir levels and dam releases would likely not be measurable,"* lower river interests such as those of the CPMR should always be consulted on projects that involve diversions of water from the Missouri River mainstem. We respectfully request that for all Bureau out-of-basin water transfer projects, that a good-faith effort is made to engage all stakeholders throughout both donor and recipient basins and a full evaluation of the impacts to congressionally-authorized purposes is made.

While the CPMR empathizes with the basic human need of reliable water supply, we find the Draft EA to be woefully short on details on page 1-2 in which the document attempts to describe the "*Purpose and Need for the Proposed Action*" of supplying 20 cubic feet per second for the Central North Dakota Water Supply Project (CNDWSP). Here, the Draft EA simply states this water supply project is necessary for *"growing communities"* as requested by various local governmental agencies. We request this section of Draft EA to be revised to include specific information on population growth as documented by the U.S. Census Bureau and a clearer depiction of the ***actual*** municipal, rural, and industrial water supply needs.

The CPMR has major concerns about the potential of the CNDWSP to contribute to an out-of-basin transfer of Missouri River water to the Hudson Bay Basin. Page 1-2 of the Draft EA states that the CNDWSP will *"tie into the state-funded Red River Water Supply Project main transmission line to serve the Central North Dakota Area."* As mentioned previously, we are sincere in our concern to improve water supply for human needs after they are properly demonstrated. However, we have major concerns that this project could be part of a larger scheme to divert precious Missouri River water to another basin that ultimately flows north to Canada. Such diversions certainly do not honor congressional intent of the Missouri River's authorized purposes and we view them as a slippery slope that could harm the interests of our members.

We look forward to a revised EA by the Bureau that adequately addresses our concerns. We also request the Bureau conduct an Environmental Impact Statement for the CNDWSP due to the scope of the project. Again, thank you for the opportunity to comment on the Draft EA. Should you have any questions or comments, please do not hesitate to contact me.

Respectfully,

Dan Engemann
Executive Director
Coalition to Protect the Missouri River
519 W. 9th Street
Hermann, Missouri 65041
(573) 690-2324

Global Affairs Canada | Affaires mondiales Canada

Thursday September 21, 2017

Andrea Gue,
Dakotas Area Office,
Bureau of Reclamation
P.O. Box 1017,
Bismarck, ND
58502-1017

Email: ague@usbr.gov

Dear Ms. Gue:

On behalf of the Government of Canada, I would like to thank you for the opportunity to provide comments on the Draft Environmental Assessment (EA) related to the Central North Dakota Water Supply Project, issued August 2017 by the U.S. Department of the Interior, Bureau of Reclamation's Dakotas Area Office.

The Government of Canada has reviewed the Draft EA and appreciates the opportunity to share concerns and request clarifications about the project and how it fits into larger inter-basin water supply projects currently being planned, or under development, by the State of North Dakota and/or the Bureau of Reclamation.

By way of background, the Government of Canada has shared its concerns about two water supply projects – the Northwest Area Water Supply Project and the Red River Valley Water Supply Project – for years. Canada's concerns about these types of water supply projects stem from the inter-basin transfer of water from the Gulf of Mexico watershed to the Hudson Bay watershed, which carries with it the threat of invasive species moving between the two watersheds. Although we understand that the geographic scope of the project lies within the State of North Dakota, Canada could face negative impacts, as once harmful invasive biota transfers across the watershed divide, Canadian waters and ecosystems would be at risk. The potential risk posed by invasive biota transferring into the Hudson Bay basin could be significant and irreversible.

According to the project description in the draft EA, the Central North Dakota Water Supply Project does not transfer water from the Missouri River across the watershed divide into the Hudson Bay basin. However, the text of the EA makes clear that the Central North Dakota Water Supply Project would be part of, or utilize, facilities associated with, the Red River Valley Water Supply Project. Planners of the Red River Valley Water Supply project envision an inter-basin transfer of water which carries with it the associated risk of the introduction of invasive species into Canadian waters.

.../2

Canada

As such, the Government of Canada, which continues to be concerned about the Red River Valley Water Supply Project, seeks clarification on the following questions related to the Central North Dakota Water Supply Project.

1. Is this project considered a potential piece, facility, or in any way a module of the Red River Valley Water Supply Project?

2. If so, at what stage of the project will the Bureau of Reclamation consider inter-basin impacts of this type of water supply project, including transboundary impacts to Canada?

3. How will the Bureau of Reclamation consider the Central North Dakota Water Supply Project and its relation to other potential water supply projects in North Dakota, including in terms of cumulative impacts?

4. The Draft EA references the Red River Valley Water Supply Project, stating that "any water service contract would be subject to environmental review" and that currently this is "too speculative to study within this EA." At what point will the Bureau of Reclamation conduct an environmental review of the water service contract needs of the Red River Valley Water Supply Project? And what type of environmental review would be conducted?

5. The State of North Dakota has taken steps to develop both the Central North Dakota Water Supply Project and the Red River Valley Water Supply Project. How do the federal and state governments plan to coordinate in order to address transboundary impacts and *Boundary Waters Treaty* implications of these projects?
    a) And could a subsequent inter-basin water diversion project draw water from infrastructure created by or used by the Central North Dakota Water Supply Project without undergoing a further federal environmental assessment?

6. Recent court orders make clear the Bureau of Reclamation is required to take a "hard look" at potential transboundary impacts of projects. How will the Bureau of Reclamation undertake this "hard look" as part of this project, which is part of a larger, inter-basin water supply project?

Thank you for the opportunity to provide comments and seek clarifications related to this Draft EA for the referenced project.

Yours sincerely,

Martin Benjamin
Director General
North America Strategy Bureau
Global Affairs Canada

Manitoba

Sustainable Development

Water Stewardship and Biodiversity Division
Box 11, 200 Saulteaux Crescent
Winnipeg MB R3W 3J3
CANADA

http://www.gov.mb.ca/sd/

October 6, 2017

Ms. Andrea Gue
Dakotas Area Office
Bureau of Reclamation
P.O. Box 1017
Bismarck North Dakota 58502-1017
E-mail: ague@usbr.gov

Dear Ms. Gue:

On behalf of the Government of Manitoba, I would like to thank you for the opportunity to provide comments on the Bureau of Reclamation's ("BOR" or "Bureau") draft Environmental Assessment ("EA") for the proposed issuance of water service and power contracts to the Garrison Diversion Conservancy District ("GDCD") for the Central North Dakota Water Supply Project ("CNDWSP").

Manitoba's interest in the CNDWSP stems from our long-standing concern with proposed projects in North Dakota to move water from the Missouri River Basin to the Hudson Bay Basin. Manitoba has consistently opposed these inter-basin water transfers because they carry an inherent risk of transferring harmful alien and invasive biota into Manitoba's waters. The risks of transferring invasive biota and the need for pre-treatment have been outlined repeatedly by Manitoba in several comments and submissions to the Bureau, including as part of National Environmental Policy Act ("NEPA") reviews of the Northwest Area Water Supply (NAWS) Project and the Bureau-sponsored version of the Red River Valley Water Supply Project ("federal RRVWSP").

To summarize these concerns, the Missouri River and Hudson Bay watersheds are unique, separate, and ecologically distinct, and have different species compositions, including pathogenic species such as bacteria, viruses, fungi, and other microscopic plant and animal

parasites. The introduction of such species into Hudson Bay Basin waters where they are not present could cause significant and irreversible damage to Manitoba's aquatic ecosystems, including Lake Winnipeg, the tenth largest freshwater lake in the world. Manitoba has further argued that if inter-basin transfers do proceed despite the inherent risks they pose, it is critical that Missouri River water be filtered and treated before it enters the Hudson Bay Basin to remove and deactivate biota. This includes the need for careful consideration of planned and unplanned pipeline releases, disposal of treatment waste, and other potential biota transfer pathways associated with the projects.

In the case of both the NAWS Project and the federal RRVWSP, Bureau-led Environmental Impact Statement processes found that these risks would constitute a significant impact, and resulted in a requirement for pre-treatment and other risk mitigation measures in the Records of Decision issued for each project. The validity of these concerns has also been widely recognized, including by the federal district court during litigation on the NAWS Project, by the International Joint Commission during its review of the original Garrison Diversion, and in the Dakota Water Resources Act of 2000, which authorized the NAWS Project and the federal RRVWSP. Moreover, as the federal district court has noted, the Bureau has agreed that invasive biota transfer in the context of inter-basin water transfers from the Missouri River Basin to the Hudson Bay Basin "could have catastrophic consequences" that would be irreversible.[1]

These concerns apply equally to the Red River Valley Water Supply Project (state RRVWSP) being advanced by the GDCD with support from the State of North Dakota, of which the proposed CNDWSP would be part. The state RRVWSP is a proposed inter-basin transfer from the Missouri River Basin to the Hudson Bay Basin in eastern North Dakota. While the CNDWSP as strictly defined in the draft EA does not directly constitute an inter-basin transfer, the sole purpose of the proposed six mile pipeline is to provide water from the Missouri River to the RRVWSP and together they will convey water into the Red River basin. The CNDWSP cannot provide water to the proposed service area or accomplish its intended goals without the RRVWSP, and would not serve a useful purpose on its own. Indeed, the CNDWSP is properly seen as a segment of the RRVWSP, and therefore it is not possible as a practical matter, or appropriate under NEPA, to consider the environmental impacts of the CNDWSP separately from those of the RRVWSP.

Despite the evident similarities between the state RRVWSP and the federal RRVWSP, and potential for significant environmental impacts found in the NEPA review processes for the federal RRVWSP, the state RRVWSP has not undergone any separate NEPA analysis. State RRVWSP proponents have explicitly sought to "[limit] contact with the federal government as

[1] *Gov't of Province of Manitoba v. Norton,* 398 F. Supp. 2d 47 (D.D.C. 2005)

much as possible,"[2] and to avoid triggering federal review requirements.[3] The GDCD has also made no commitments regarding pre-treatment of water, and is contemplating "water to water transfer" of untreated Missouri River water as one "treatment" option for the project.[4]

Moreover, although the draft EA indicates that any water service contract for an inter-basin transfer is "too speculative to study within this EA,"[5] the McClusky Canal is one of the three intake options under consideration by the GDCD for the state RRVWSP, and it is worth noting that it was the "Preferred Alternative" for the federal RRVWSP. Moreover, recent statements from GDCD officials suggest a renewed focus on the advantages of using the McClusky Canal for the RRVWSP to achieve project cost savings.[6]

The state RRVWSP is undoubtedly intended to be an inter-basin transfer, one with as yet unexamined environmental impacts in the Hudson Bay Basin. As such, from Manitoba's perspective, this clear connection between the proposed CNDWSP and the RRVWSP inter-basin water transfer project raises a number of serious questions which are not addressed in the draft EA.

First, the draft EA does not analyze the potential that Missouri River water provided by the CNDWSP may be transferred to the Hudson Bay Basin through the RRVWSP. The draft EA asserts that the CNDWSP, using RRVWSP infrastructure, will provide municipal, rural, and industrial water within the Missouri River Basin. However, the draft EA does not analyze the proposed RRVWSP infrastructure to establish that water entering that system from the CNDWSP would remain in the Missouri River Basin, whether through design or engineered controls, nor does it provide any indication of measures that would be needed to monitor, assess, or mitigate this risk. It would seem that such an analysis would be necessary to provide a full picture of the environmental impacts of the CNDWSP.

Second, several of the counties in the proposed CNDWSP service area, including McLean, Sheridan, Wells, Foster, and Stutsman Counties, straddle the divide between the Missouri River Basin and the Hudson Bay Basin. The draft EA does not assess whether existing or planned local water distribution networks that may be connected to the CNDWSP in these areas approach or encroach the boundaries of the Hudson Bay Basin, nor does it provide any indication that this issue will be monitored or addressed in the future as the CNDWSP proceeds. There is also no assessment of the potential for further distribution of untreated Missouri River

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[2] Quote from Duane DeKrey, "Large strides expected for water projects," *Bismarck Tribune*, May 22, 2017, http://bismarcktribune.com/news/local/govt-and-poiltics/large-strides-expected-for-water-projects/article_cec8c457-26b3-5caa-8561-0bf1db37929c.html

[3] CH2MHill, *Final Report, Red River Valley Water Supply Project Alternative Route Engineering Study*, June 6, 2014.

[4] Garrison Diversion Conservancy District, http://www.rrvwsp.com/features/treatment/

[5] Draft EA, 2-6

[6] "Large Strides," *Bismarck Tribune*; "Reservoir embankment's potential to collapse poses new hurdle for Red River Valley Water Supply Project," *Fargo Forum*, June 16, 2017, http://www.inforum.com/news/4284886-reservoir-embankments-potential-collapse-poses-new-hurdle-red-river-valley-water-supply

water from these local distribution systems through non-pipeline means, for example by truck from CNDWSP/state RRVWSP connected local water distribution systems. Without a clear understanding of these pathways, the risk of transferring invasive biota cannot be assessed in sufficient depth to rule out a significant environmental impact or to identify appropriate mitigation measures.

Third, the Bureau indicates that it will rely on the GDCD to operate and maintain the system, and to implement and monitor environmental commitments.[7] It is unclear from the draft EA how the Bureau will ensure that water supplied through the CNDWSP will remain in the Missouri River Basin in this context.

Fourth, the draft EA indicates that additional NEPA analysis and review may be required "if the McClusky Canal is identified as a water source for the entire 150 to 180 cfs needed for the [state] RRVWSP."[8] This must be presumed to include the environmental impacts of transferring Missouri River water to the Hudson Bay Basin. However, it is not clear how the environmental risks entailed if the McClusky Canal were to be the sole source of water for the RRVWSP are avoided if the McClusky Canal is only a partial source of water for the RRVWSP. As noted above, there is no analysis in the draft EA of whether or how transferred water will be kept within the Missouri River Basin. Even if mechanical control valves were built into the RRVWSP, something not contemplated in the draft EA but which has been suggested by GDCD officials,[9] there is no analysis in the draft EA to assess the risks entailed or the efficaciousness of any particular mitigation action.

Fifth, while there is some consideration given to the effects of climate change on water quantity and need, there may also be climate change effects on water quality that could affect the risks of transferring invasive biota through the CNDWSP/state RRVWSP, as well as the efficacy of potential mitigation measures. For example, climate change could impact the species found in the Missouri River and the climate change driven changes in constituents such as turbidity could impact the efficacy of water treatment technologies to remove invasive biota.

Sixth, while the draft EA examines potential annual depletions of the Missouri River through the CNDWSP, it does not include consideration of the cumulative impacts of depletions as a result of other inter-basin water transfers currently planned or under development. This would certainly include the state RRVWSP, as well as the NAWS Project.

Finally, Manitoba would note that any inter-basin water transfer from the Missouri River Basin to the Hudson Bay Basin, including the state RRVWSP and therefore the connected CNDWSP, would have significant environmental impacts on boundary waters within the

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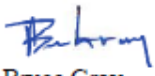
[7] Draft EA, 2-2
[8] Draft EA, 2-6
[9] Duane DeKrey quoted in "$1B N.D. water supply pipeline aims to begin filing permits in 2017," *Bismarck Tribune*, December 26, 2016, http://bismarcktribune.com/b-n-d-water-supply-pipeline-aims-to-begin-filing/article_febbd841-1d35-57c7-8656-64f07c66af6f.html

meaning of the *Boundary Waters Treaty* between Canada and the United States. Article IV of the Treaty provides that "boundary waters and waters flowing across the [US-Canada] boundary shall not be polluted on either side to the injury of health or property on the other side." The Bureau has recognized in the context of other projects that the risk of biota transfer from the Missouri River Basin to the Hudson Bay Basin must be addressed if the United States is to honor its commitments in the Treaty. For the reasons outlined above, Manitoba would contend that those obligations are triggered in the case of the state RRVWSP and connected CNDWSP as well.

Given these questions and concerns, it is Manitoba's view that a "Finding of No Significant Impact" would not be warranted in this case, and would submit that the Bureau needs to undertake detailed analysis and consider mitigation of any potential environmental impacts of the CNDWSP as a result of its interdependence with the RRVWSP, specifically including the risks and consequences of transferring Missouri River water into the Hudson Bay Basin and potential effects downstream in Canada.

Again, thank you for the opportunity to comment on the draft EA for this project.

Sincerely,



Bruce Gray
Assistant Deputy Minister
Water Stewardship and Biodiversity

c: Rob Olson, Deputy Minister, Sustainable Development
Michael Richards, Deputy Cabinet Secretary and Deputy Minister, Intergovernmental Affairs
Nicole Armstrong, Director, Water Science and Watershed Management
International Joint Commission and International Red River Board Co-Chairs

Missouri Department of NATURAL RESOURCES
dnr.mo.gov
Eric R. Greitens, Governor
Carol S. Comer, Director

September 19, 2017

Ms. Andrea Gue
Bureau of Reclamation
P.O. Box 1017
Bismarck, ND 58502

Re: Issuance of Water Service and Power Contracts to Garrison Diversion Conservancy District for the Central North Dakota Water Service Project, North Dakota, Draft EA

Dear Ms. Gue:

On behalf of the Missouri Department of Natural Resources (Department), I request a 30-day extension for the Draft Environmental Assessment (Draft EA) for the *Issuance of Water Service and Power Contracts to Garrison Diversion Conservancy District for the Central North Dakota Water Service Project, North Dakota.*

The Department has consistently requested the Bureau of Reclamation (Bureau) notify us of any project developments that relate to the Missouri River. As the Bureau is well aware, the Department has been an active participant on these types of projects for many years. Even so, the Department did not receive notification of the Draft EA, or find a copy of the notification in the Federal Register. We were made aware of the Draft EA from a third party just three days prior to the close of the comment period. In light of the importance of this project and the impact it could have to Missouri, a 30-day extension is warranted to allow time for proper review and comment.

If you have any question regarding the specifics of our request, please contact Mr. Robert Bacon of my staff at 573-751-6632.

Please let me know if you intend to grant this request.

Sincerely,

DEPARTMENT OF NATURAL RESOURCES

Dru Buntin

Dru Buntin
Deputy Director

DB/ja

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REPLY DATE		
INFO. COPY TO:		
DATE	INITIAL	TO
9/26/17	AG	Andrea
9/29/17	KLK	Kate
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Missouri Department of NATURAL RESOURCES
dnr.mo.gov
Eric R. Greitens, Governor
Carol S. Comer, Director

OCT 0 6 2017

Andrea Gue
Bureau of Reclamation
Dakotas Area Office
PO Box 1017
Bismarck, ND 58502

Dear Ms. Gue:

The Missouri Department of Natural Resources (Department) hereby submits its comments on the Draft Environmental Assessment (Draft EA) for the "Issuance of Water Service and Power Contracts to Garrison Diversion Conservancy District for the Central North Dakota Water Supply Project, North Dakota." As a preliminary matter, we would point out that the Department has asked for the Bureau of Reclamation (Bureau) to keep us apprised of any project developments concerning the diversion from the Missouri River. This request continues to go unheeded. We only became aware of the Draft EA on September 19 through a third party. Furthermore, the failure to publish the Draft EA in the *Federal Register* may well constitute a violation of the National Environmental Policy Act.

The Department has voiced strong opposition to transfers of Missouri River water to the Hudson Bay drainage basin for many years, and will continue to do so. The Bureau states that the purpose of this project is to deliver power and provide water supply to the controversial Red River Valley Water Supply Project (RRVWSP). The Department has opposed the various iterations of the federal RRVWSP project for more than thirty years (see enclosures). Providing delivery of water, power service, and land access to this inter-basin transfer is a major federal action, which requires an Environmental Impact Statement (EIS). The Bureau is also obligated to demonstrate that this project satisfies the requirements of the Boundary Waters Treaty with Canada, which is not mentioned in the Draft EA.

Purpose and Need

The Bureau has not demonstrated that there is a need for the proposed project. The Draft EA presents a general, three-sentence paragraph as its purpose and need statement. It contains no current population data or projections or a water demand analysis for the Central North Dakota Water Supply Project (CNDWSP) service area that justifies the need for 20 cubic feet per second (cfs) of water supply. The Draft EA also fails to provide alternatives to or analyze the benefits and impacts of the project, which are the essential elements of a NEPA review. The Bureau has not demonstrated a sufficient purpose and need for the project.

Project Area Description
The project area description in the Draft EA describes the location of the proposed intake along the McClusky Canal and the six mile stretch of the proposed intake and 36-inch diameter pipeline. Since the Bureau intends to deliver water from the McClusky Canal to the CNDWSP via the RRVWSP, these projects should be described as well. The Draft EA lacks maps and descriptions of the CNDWSP and RRVWSP service areas or the proposed communities that would be served by these projects. The project area description found in the Draft EA is inadequately described. There is no mention of the RRVWSP even though the plan, apparently, is to connect directly to that water distribution system.

Red River Valley Water Supply Project (RRVWSP)
The Department's long-standing concerns remain the same as with the federal RRVWSP project, since it is the apparent intention that the Bureau and Garrison Diversion Conservancy District propose to complete the project piecemeal, and mostly with state funds. The Bureau apparently intends to connect to the state-funded, inter-basin RRVWSP to deliver Missouri River water to the Red River basin. The Department has consistently opposed this concept since such transfers would reduce downstream flow support in time of drought in the Missouri River basin. Impacts to the lower Missouri River occur frequently as reservoir levels decrease early in a drought and downstream flow support is reduced. The Bureau has failed to evaluate the impacts of these actions. During the 2000-2008 drought, the Corps greatly reduced downstream flow support to the Missouri River, impacting users throughout the lower basin. As a consequence, power generation and water supplies were impacted.

Cumulative Impacts
The Bureau's Draft EA fails to consider cumulative impacts to downstream flow support. NEPA requires that the Bureau determine if the proposed action has significant environmental effects, and that the Bureau consider the environmental and related social and economic effects of their proposed actions. It is imperative that the Bureau conduct a cumulative impact analysis for the proposed project, which links to the highly contentious RRVWSP. In conducting its cumulative impact analysis, the Bureau must consider all past, present, and reasonably foreseeable actions.

Summary
We urge the Bureau to rescind the Draft EA and commit to a full investigation of the water resources within the Red River Valley. In doing so, the Bureau should work cooperatively with the states of Minnesota and North Dakota as well as the Province of Manitoba to explore in-basin options that fulfill the water supply needs of the Red River Valley. One such opportunity is the flood control diversion project for the City of Fargo which the Corps of Engineers is exploring. This particular project could easily incorporate water supply storage to address the additional water supply needs of the Red River Valley.

We would appreciate the Bureau's careful consideration of these comments on the Draft EA. If you have questions regarding our comments, please contact Bob Bacon at 573-751-6632.

Sincerely,

DEPARTMENT OF NATURAL RESOURCES

Dru Buntin
Deputy Director

DB:bb

Enclosures

Gue, Andrea <ague@usbr.gov>

Draft EA for Water Service Contract and Power Contract to Garrison Diversion Conservancy District for the Central ND Water Supply Project

Humann, Michael T. <mhumann@nd.gov> Fri, Aug 25, 2017 at 7:58 AM
To: "ague@usbr.gov" <ague@usbr.gov>

Andrea,

We have reviewed the draft EA for the above described project and find that the current pipeline route will cross the SW4-24-144-78 Burleigh County which is State School Trust Land. Please be aware an easement will need to be obtained prior to construction from the North Dakota Department of Trust Lands should this project be approved and the before mentioned State School Trust Land remain part of the project. Applications must be submitted on-line using the electronic application form found on the department of Trust Lands website (https://land.nd.gov/SurfaceROW/RightOfWay). Please be aware there is a review process which considers many factors (environmental, financial benefit to the trust etc.) prior to approval. Let me know if you have any questions. Thank you

Michael Humann

Surface Division Manager, CPRM

ND Department of Trust Lands

PO Box 5523

Bismarck ND 58506-5523

PH: (701)328-1917

email: mhumann@nd.gov

NORTH DAKOTA
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov

August 29, 2017

Ms. Andrea Gue
U.S. Bureau of Reclamation
Dakotas Area Office
P.O. Box 1017
Bismarck, ND 58502

Re: Draft Environmental Assessment for the Issuance of a Water Service Contract and Power Contract to Garrison Diversion Conservancy District for the Central North Dakota Water Supply Project, Burleigh County

Dear Ms. Gue:

This department has reviewed the information concerning the above-referenced project submitted under date of August 17, 2017, with respect to possible environmental impacts.

This department believes that environmental impacts from the proposed construction will be minor and can be controlled by proper construction methods. With respect to construction our comments remain the same as those in our December 5, 2016 letter included in the draft environmental assessment.

If you have any questions regarding our comments, please feel free to contact this office.

Sincerely,

L. David Glatt, P.E., Chief
Environmental Health Section

LDG:cc

North Dakota Department of Transportation

Thomas K. Sorel
Director

Doug Burgum
Governor

September 6, 2017

Arden Freitag
Acting Area Manager
US Department of Interior
P.O. Box 1017
Bismarck, ND 58502-1017

DRAFT EA FOR ISSUANCE OF A WATER SERVICE AND POWER CONTRACT TO GARRISON DIVERSION CONSERVANCY DISTRICT, BURLEIGH COUNTY, NORTH DAKOTA

We have reviewed your August 17, 2017, letter.

This project should have no adverse effect on the North Dakota Department of Transportation highways.

However, if because of this project any work needs to be done on highway right of way, appropriate permits and risk management documents will need to be obtained from the Department of Transportation District Engineers, Larry Gangl at 701-328-6955.

Robert Fode

ROBERT A. FODE, P.E., DIRECTOR – OFFICE OF PROJECT DEVELOPMENT

57/raf/js
c: Larry Gangl, Bismarck District Engineer

608 East Boulevard Avenue • Bismarck, North Dakota 58505-0700
Information: 1-855-NDROADS (1-855-637-6237) • FAX: (701) 328-0310 • TTY: 711 • dot.nd.gov

North Dakota State Water Commission

900 EAST BOULEVARD AVENUE, DEPT 770 • BISMARCK, NORTH DAKOTA 58505-0850
(701) 328-2750 • TTY 1-800-366-6888 or 711 • FAX (701) 328-3696 • http://swc.nd.gov

September 15, 2017

Arden Freitag
US Department of the Interior
Bureau of Reclamation
Dakota Area Office
PO Box 1017
Bismarck, ND 58502-1017

Dear Mr. Freitag:

This is in response to your request for a review of the environmental impacts associated with the Water Service Contract and Power Contract to Garrison Diversion Conservancy District for the Central North Dakota Water Supply Project, North Dakota.

The proposed project has been reviewed by State Water Commission staff, and the following comments are provided:

- No permits relative to the NFIP are required based on the current effective FIRM and state minimum standards.

- Initial review indicates the project does not require a conditional or temporary permit for water appropriation. However, if surface water or groundwater will be diverted for construction of the project, a water permit will be required per North Dakota Century Code (NDCC) § 61-04-02. Please consult with the Water Appropriations Division of the Office of the State Engineer (OSE) at 701-328-2754 or waterpermits@nd.gov if you have questions.

- The OSE Engineering and Permitting Section reviewed the project route and determined that the project route traverses over or through surface water resources, such as identified ponds, sloughs, or lakes (i.e. wetlands). The OSE requests that a surface drain application (enclosed) be submitted if any ponds, sloughs, lakes, or any series thereof are impacted by the project and have a watershed area of 80 acres or more. The OSE also requests to be notified regarding the proposed project's impacts, if any, to water resources such as watercourses (i.e. streams or rivers), drains, and wetlands (i.e. ponds, sloughs, lakes, or any series thereof) as any alterations, modifications, improvements, or impacts to those water resources may require a drainage permit(s) or a construction permit(s) from the OSE. For further information on the OSE's permitting requirements, please visit the Regulation & Appropriations tab on the OSE's website (swc.nd.gov). Please contact the OSE Engineering and Permitting Section at 701-328-2752 if you have questions.

Thank you for the opportunity to provide review comments. If you have any questions, please call me at 701-328-4967.

Sincerely,

Jared Huibregtse

Jared Huibregtse
Water Resource Planner IV

JH:dm/1570

APPLICATION FOR SURFACE DRAIN
OFFICE OF THE STATE ENGINEER
Water Development Division
SFN 2830 (8/11)

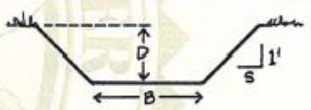
DATE RECEIVED BY OFFICE OF THE STATE ENGINEER

I, the undersigned, am applying for a permit under NDCC Section 61-32-03, to drain a pond, slough, lake, or sheetwater, or any series thereof, which has a watershed area comprising 80 acres or more.

No._____
(OSE USE ONLY)

This application must be accompanied by FSA aerial photos or equivalent showing the location of the proposed drain(s).

(1)	WATER RESOURCE DISTRICT IN WHICH PROJECT IS LOCATED:				
(2)	LEGAL DESCRIPTION - DRAIN CENTERLINE: [use separate sheet(s) if necessary]	1/4	SECTION	TOWNSHIP	RANGE
		1/4	SECTION	TOWNSHIP	RANGE
		1/4	SECTION	TOWNSHIP	RANGE
(3)	LEGAL DESCRIPTION - DRAIN OUTLET:	1/4 1/4	SECTION	TOWNSHIP	RANGE
(4)	PURPOSE:				
(5)	Drain Method: ☐ Pumping ☐ Filling ☐ Gravity				
(6)	DESCRIPTION OF AREA TO BE DRAINED:				
	TOTAL Drainage Area Acres	Project Drainage Area Acres			
	Water Area Acres	Average Depth of Water Feet			
(7)	DESCRIPTION OF DRAIN:				
	Pumping Rate (if applicable) gpm cfs	Fill Volume (if applicable) cubic yards	Bottom Width (B) Feet		
	TOTAL Length of Drain Feet	Length of Drain Project Feet	Side Slopes (S) :1 Foot		
(8)	Anticipated completion date:	(9) Assessment drain? ☐ YES ☐ NO	Maximum Cut (D) Feet		
(10)	Do you own the land to be drained in fee? ☐ YES ☐ NO	If NO, give the name and address of the legal landowner(s):			



The filing of this application and its approval does not relieve the applicant and/or landowner(s) from any responsibility or liability for damages resulting from the construction, operation or failure of this drain.

APPLICANT'S CERTIFICATION

I understand that I must undertake and agree to pay the expense incurred in making an investigation. If the investigation discloses that the quantity of water to be drained will flood or adversely affect downstream lands, I will be required to obtain flowage easements and must file the easements in the office of the county recorder before a permit may be issued. My signature below acknowledges that I have read and agree to these statements, and will adhere to the conditions given on the back of this application.

NAME (PRINT OR TYPE):	DATE SUBMITTED:
ADDRESS:	PHONE NO:
CITY, STATE, ZIP CODE:	
SIGNATURE (Owner of the land on which the project is located or legal entity sponsoring project):	

FOR USE BY WATER RESOURCE DISTRICT AND STATE ENGINEER

☐ The Water Resource District Board has investigated according to NDAC Section 89-02-01-09.2.

☐The proposed drainage (☐ will ☐ will not) flood or adversely affect lands of downstream landowners.

This application is hereby:

☐ Denied Signature: _____
Chairman or Secretary of Water Resource District Board

☐ Approved Date: _____

(1) The State Engineer or Water Resource District Board may revoke or modify the project and the rights granted under the permit to protect the public health, safety, and welfare; to protect property; or to ensure the orderly control of water resources.

(2) Construction must be completed within two years from the date of final approval.

This application:

☐ does Involve drainage of state-wide or Interdistrict significance

☐ does not involve drainage of state-wide or interdistrict significance

If the State Engineer has determined that this application does not involve drainage of state-wide or Interdistrict significance, approval by the Water Resource District Board constitutes a permit to drain.

If the State Engineer has determined that this application involves drainage of state-wide or interdistrict significance, approval by both the Water Resource District Board and the State Engineer must be given to constitute a permit to drain.

This application involving drainage of state-wide or interdistrict significance is:

☐ Denied Signature: _____
State Engineer

☐ Approved Date: _____

CONDITIONS:

(1) The State Engineer may revoke or modify the project and the rights granted under the permit to protect the public health, safety, and welfare; to protect property; or to ensure the orderly control of water resources.
(2) Construction must be completed within two years from the date of final approval.

Mail to:

Office of the State Engineer
900 East Boulevard Avenue, Dept 770
Bismarck, ND 58505

Appendix B: Scoping Notice Contact List

AUDUBON DAKOTA CHAPTER, EXECUTIVE DIRECTOR

AUDUBON NATIONAL WILDLIFE REFUGE, MR. TODD FRERICHS

BUREAU OF INDIAN AFFAIRS- GREAT PLAINS REGIONAL OFFICE, PROGRAM DIRECTOR

BUREAU OF LAND MANAGEMENT, NORTH DAKOTA FIELD OFFICE

BURLEIGH COUNTY AUDITOR

BURLEIGH COUNTY WATER RESOURCE DISTRICT

DAKOTA RESOURCE COUNCIL

DUCKS UNLIMITED

GARRISON DIVERSION CONSERVANCY DISTRICT, MR. DUANE DEKREY

FEDERAL HIGHWAY ADMINISTRATION, MR. WENDALL MEYER

INDIAN AFFAIRS COMMISSION, MR. SCOTT DAVIS

MHA NATION, HONORABLE MARK FOX, CHAIRMAN

MHA NATION- TRIBAL HISTORIC PRESERVATION OFFICE, ELGIN CROWS BREAST

NATURAL RESOURCES CONSERVATION SERVICE, MR. DAVID HENDRICKSON

NATURAL RESOURCE CONSERVATION SERVICE, MS. MARY PODOLL

NORTH DAKOTA CHAPTER OF THE WILDLIFE SOCIETY, PRESIDENT

NORTH DAKOTA DEPARTMENT OF COMMERCE, MR. AL ANDERSON

NORTH DAKOTA DEPARTMENT OF HEALTH, MR. WAYNE KERN

NORTH DAKOTA DEPARTMENT OF HEALTH- ENVIRONMENTAL HEALTH SECTION, MR. DAVID GLATT

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION, MR. GRANT LEVI

NORTH DAKOTA DEPARTMENT OF TRUST LANDS, MR. MIKE HUMANN

NORTH DAKOTA GAME AND FISH DEPARTMENT, NATURAL RESOURCES CHIEF

NORTH DAKOTA GEOLOGICAL SURVEY, STATE GEOLOGIST

NORTH DAKOTA GEOLOGICAL SURVEY, STATE PALONTOLOGIST

NORTH DAKOTA GOVENOR JACK DALRYMPLE

NORTH DAKOTA INDUSTRIAL COMMISSION

NORTH DAKOTA IRRIGATION ASSOCIATION

NORTH DAKOTA PARKS AND RECREATION DEPARTMENT, MR. MARK ZIMMERMAN

NORTH DAKOTA PARKS AND RECREATION DEPARTMENT, MS. KATHY DUTTENHEFNER

NORTH DAKOTA STATE WATER COMMISSION, MR. GARLAND ERBELE

NORTH DAKOTA STATE WATER COMMISSION, MR. JEFFREY MATTERN

NORTH DAKOTA TOURISM DIVISION, MS. SARAH OTTE COLEMAN

NORTH DAKOTA WILDLIFE FEDERATION, MR. MIKE MCENROE

SIERRA CLUB, PRESIDENT DAKOTA CHAPTER

SPIRIT LAKE TRIBE, HONORABLE MYRA PEARSON, CHAIRWOMAN

SPIRIT LAKE TRIBE- TRIBAL HISTORIC PRESERVATION OFFICER, DR. ERICH LONGIE

STANDING ROCK SIOUX TRIBE, HONORABLE DAVE ARCHAMBAULT II, CHAIRMAN

STANDING ROCK SIOUX TRIBE, TRIBAL HISTORIC PRESERVATION OFFICER, JON EAGLE

STATE HISTORICAL SOCIETY OF NORTH DAKOTA, MS. CLAUDIA BERG

TURTLE LAKE IRRIGATION DISTRICT

TURTLE MOUNTAIN BAND OF CHIPPEWA, HONORABLE CHARIMAN RICHARD MCCLOUD

TURTLE MOUNTAIN BAND OF CHIPPEWA, TRIBAL HISTORIC PRESERVATION OFFICER

U.S. ARMY CORPS OF ENGINEERS, MS. PATRICIA MCQUEARY

U.S. ARMY CORPS OF ENGINEERS, MR. TODD LINDQUIST

USDA RURAL UTILITIES SERVICE

U.S. FISH AND WILDLIFE SERVICE, MR. KEVIN SHELLEY

U.S. FISH AND WILDLIFE SERVICE, ZONE ARCHAEOLOGIST

U.S. GEOLOGICAL SURVEY

UNITED STATES HOUSE OF REPRESENTATIVES, HONORABLE KEVIN KRAMER

UNITED STATES SENATOR, HONORABLE HEIDI HIETKAMP

UNITED STATES SENATOR, HONORABLE JOHN HOVEN

Appendix C: Scoping Letter and Scoping Letter Responses

United States Department of the Interior

BUREAU OF RECLAMATION
Great Plains Region
Dakotas Area Office
P.O. Box 1017
Bismarck, ND 58502-1017

IN REPLY REFER TO:
DK-5000-16-02
ENV-6.00

NOV 18 2016

Subject: Bureau of Reclamation's Preparation of an Environmental Assessment for Issuance of a Water Service and Power Contracts to Garrison Diversion Conservancy District for the Central North Dakota Water Supply Project, Burleigh County, North Dakota

Dear Interested Party:

The Bureau of Reclamation (Reclamation) is preparing an Environmental Assessment (EA) for issuance of a water service contract and power contract to the Garrison Diversion Conservancy District (Garrison Diversion) for the Central North Dakota Water Supply Project. Reclamation is the lead Federal agency responsible for ensuring compliance with the National Environmental Policy Act, National Historic Preservation Act, and related federal environmental and cultural resource legislation.

Garrison Diversion has requested a water service contract and project pumping power to withdraw up to 20 cubic feet per second of water from the McClusky Canal, at Mile Marker 42, to serve areas of Stutsman Rural Water District/Jamestown, Central Plains Water District, Tuttle, and potentially other communities within the Missouri River Basin, North Dakota. Municipal and rural water supply from the McClusky Canal, constructed under the Pick-Sloan Missouri River Basin Program, is authorized under the Dakota Water Resources Act of 2000 (Act of December 21, 2000, PL 106-554, 114 Stat. 2763). Reclamation will use this EA to evaluate the environmental impacts associated with the issuance of a water service contract and power contract; and to allow Garrison Diversion to construct an intake, wet well, pump station, 28-inch pipeline, and electric facilities on the McClusky Canal right-of-way. The intake screen would comply with State/Federal guidelines. Existing canal roads would provide access to the location.

The project would be financed by the local users and the State of North Dakota and would be eligible for Federal Municipal, Rural & Industrial funding.

We are requesting your input about the proposed action and information or concerns you may have regarding potential project effects. If no significant issues are identified during scoping or preparation of the EA, Reclamation would issue a Finding of No Significant Impact. Conversely, if any significant issues are identified, Reclamation would consider whether to proceed with the preparation of an environmental impact statement.

Reclamation defines significance in accordance with 40 CFR 1508.27. To be most helpful to the preparers of the EA please provide any comments, concerns or information regarding this project

by December 23, 2016. Questions or comments regarding the preparation of the EA may be directed to Kate Kenninger at 701-221-1282, kkenninger@usbr.gov, or in writing to: Area Manager, Bureau of Reclamation, P.O. Box 1017, Bismarck, North Dakota 58502.

Sincerely,

ARDEN FREITAG

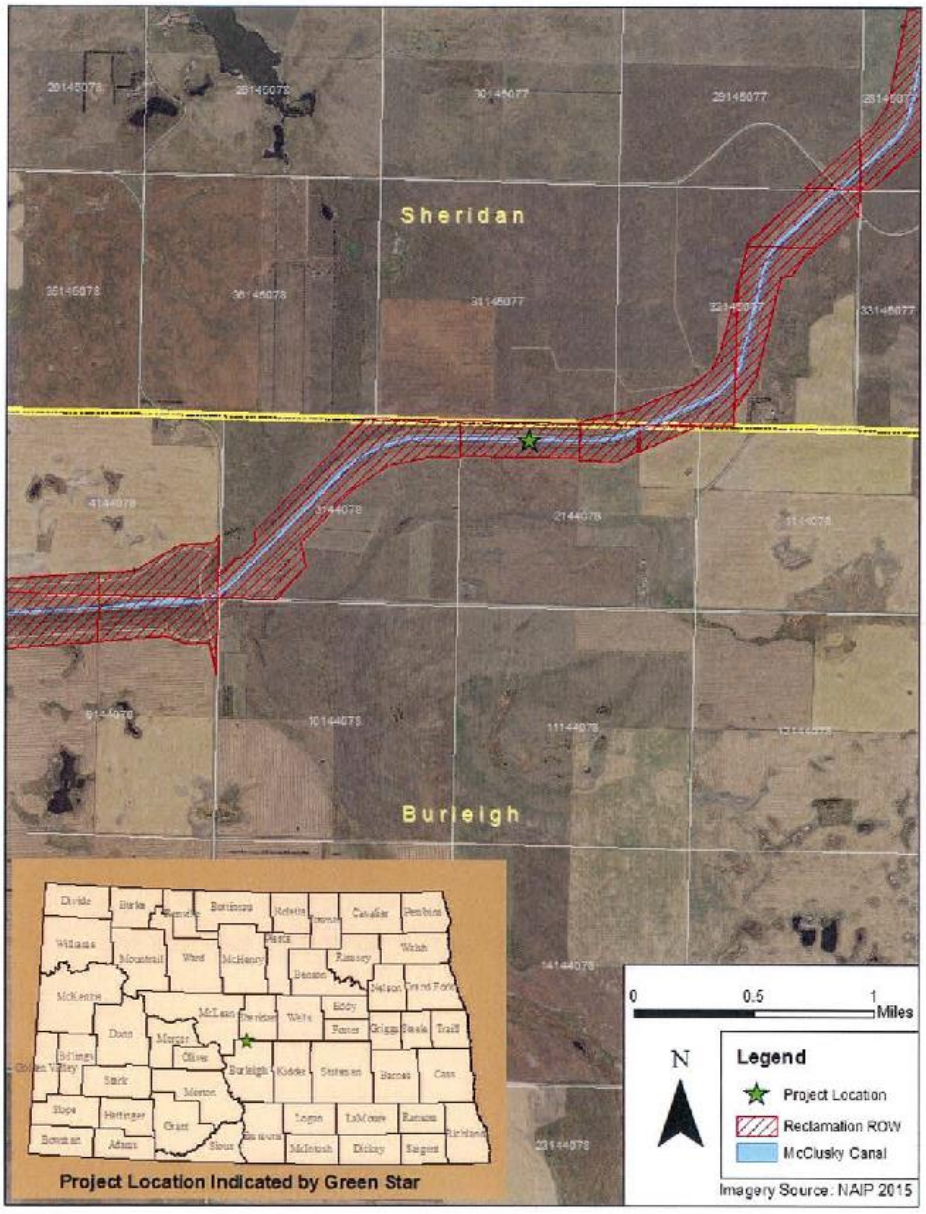
Arden Freitag
Acting Area Manager

Enclosure - Map

cc: Contact List Available From Dakotas Area Office

bc: DK-1000 (Freitag), DK-2000 (Fisher), DK-4100 (Goetzfried, Marohl, Kraft), DK-5000 (Hall, Kenninger, Ehlis), DK-5100 (Boen)
(via electronic copy)

WBR:KKenninger:AVinchattle:11/17/2016:701-221-1282
V:\Public\NEPA\Central ND Water Supply\Scoping Notice\Scoping Letter Final CNDWS 11.17.2016.docx


Sheridan
Burleigh
Project Location Indicated by Green Star
0
0.5
1
Miles
N
Legend
Project Location
Reclamation ROW
McClusky Canal
Imagery Source: NAIP 2015

Kenninger, Kate <kkenninger@usbr.gov>

EA for the Water Service Project with Central ND Water Supply

1 message

Baer, Kathy <kathy_baer@fws.gov> Mon, Nov 28, 2016 at 10:01 AM
To: Kate Kenninger <kkenninger@usbr.gov>
Cc: Jonathan Beyer <jonathan_beyer@fws.gov>, Todd Frerichs <todd_frerichs@fws.gov>

Kate,

I received your letter regarding the upcoming EA on the Water Supply Project. As I'm sure you are aware, the FWS has numerous wetland and grassland easements throughout ND east of the Missouri River. I'm certain that at some point the waterlines involved in this project will be crossing a wetland or grassland easement. We would like to be included as a cooperating agency in your EA. If you have any questions, please feel free to give Jon Beyer or myself a call.

Thanks,

Kathy Baer
Wetland District Manager
Audubon NWR Complex
3275 11th St NW
Coleharbor, ND 58531
701-442-5474 ext. 114

The Prairie is calling and I must go...

--

NORTH DAKOTA
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov

December 5, 2016

Arden Freitag
Acting Area Manager
Bureau of Reclamation
P.O. Box 1017
Bismarck, ND 58502

Re: Bureau of Reclamation's Preparation of an EA for Issuance of Water Service & Power Contracts to Garrison Diversion Conservancy District for the Central North Dakota Water Supply Project, Burleigh County

Dear Mr. Freitag:

This department has reviewed the information concerning the above-referenced project submitted under date of November 18, 2016, with respect to possible environmental impacts.

This department believes that environmental impacts from the proposed construction will be minor and can be controlled by proper construction methods. With respect to construction, we have the following comments:

1. All necessary measures must be taken to minimize fugitive dust emissions created during construction activities. Any complaints that may arise are to be dealt with in an efficient and effective manner.

2. Care is to be taken during construction activity near any water of the state to minimize adverse effects on a water body. This includes minimal disturbance of stream beds and banks to prevent excess siltation, and the replacement and revegetation of any disturbed area as soon as possible after work has been completed. Caution must also be taken to prevent spills of oil and grease that may reach the receiving water from equipment maintenance, and/or the handling of fuels on the site. Guidelines for minimizing degradation to waterways during construction are attached.

3. Projects disturbing one or more acres are required to have a permit to discharge storm water runoff until the site is stabilized by the reestablishment of vegetation or other permanent cover. Further information on the storm water permit may be obtained from the department's website or by calling the Division of Water Quality (701-328-5210). Also, cities may impose additional requirements and/or specific best management practices for construction affecting their storm drainage system. Check with the local officials to be sure any local storm water management considerations are addressed.

4. The proposed construction project location directly overlies the Painted Woods Creek aquifer which has been designated as a sensitive groundwater area by this department. Two private water supply wells (one stock well, one domestic/municipal well) lie approximately one-half mile and one mile southeast of the site, respectively. Care should be taken to avoid spills of any materials that may have an adverse effect on groundwater quality. All spills must be immediately reported to this Department and remedial actions performed.

5. All water taken from the McClusky Canal for use as drinking water must fully meet all surface water treatment requirements under the Safe Drinking Water Act. Such treatment shall be provided prior to the first point(s) of consumption.

6. Plans and specifications for all project features shall be submitted to and approved by this department prior to construction.

The department owns no land in or adjacent to the proposed improvements, nor does it have any projects scheduled in the area. In addition, we believe the proposed activities are consistent with the State Implementation Plan for the Control of Air Pollution for the State of North Dakota.

These comments are based on the information provided about the project in the above-referenced submittal. The U.S. Army Corps of Engineers may require a water quality certification from this department for the project if the project is subject to their Section 404 permitting process. Any additional information which may be required by the U.S. Army Corps of Engineers under the process will be considered by this department in our determination regarding the issuance of such a certification.

If you have any questions regarding our comments, please feel free to contact this office.

Sincerely,

L. David Glatt, P.E., Chief
Environmental Health Section

LDG:cc
Attach.

NORTH DAKOTA
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov

Construction and Environmental Disturbance Requirements

These represent the minimum requirements of the North Dakota Department of Health. They ensure that minimal environmental degradation occurs as a result of construction or related work which has the potential to affect the waters of the State of North Dakota. All projects will be designed and implemented to restrict the losses or disturbances of soil, vegetative cover, and pollutants (chemical or biological) from a site.

Soils

Prevent the erosion of exposed soil surfaces and trapping sediments being transported. Examples include, but are not restricted to, sediment dams or berms, diversion dikes, hay bales as erosion checks, riprap, mesh or burlap blankets to hold soil during construction, and immediately establishing vegetative cover on disturbed areas after construction is completed. Fragile and sensitive areas such as wetlands, riparian zones, delicate flora, or land resources will be protected against compaction, vegetation loss, and unnecessary damage.

Surface Waters

All construction which directly or indirectly impacts aquatic systems will be managed to minimize impacts. All attempts will be made to prevent the contamination of water at construction sites from fuel spillage, lubricants, and chemicals, by following safe storage and handling procedures. Stream bank and stream bed disturbances will be controlled to minimize and/or prevent silt movement, nutrient upsurges, plant dislocation, and any physical, chemical, or biological disruption. The use of pesticides or herbicides in or near these systems is forbidden without approval from this Department.

Fill Material

Any fill material placed below the high water mark must be free of top soils, decomposable materials, and persistent synthetic organic compounds (in toxic concentrations). This includes, but is not limited to, asphalt, tires, treated lumber, and construction debris. The Department may require testing of fill materials. All temporary fills must be removed. Debris and solid wastes will be removed from the site and the impacted areas restored as nearly as possible to the original condition.

Environmental Health Section Chief's Office 701.328.5150 | Division of Air Quality 701.328.5188 | Division of Municipal Facilities 701.328.5211 | Division of Waste Management 701.328.5166 | Division of Water Quality 701.328.5210

North Dakota Geological Survey

Edward C. Murphy - State Geologist

Department of Mineral Resources

Lynn D. Helms - Director

North Dakota Industrial Commission

https://www.dmr.nd.gov/ndgs/

November 29, 2016

Reply to DK-5000-16-02, ENV-6.00

Arden Freitag
Acting Area Manager
Bureau of Reclamation, Great Plains Region

Dear Arden Freitag,

Thank you for requesting our comments. If you have not already, we encourage you to visit the North Dakota Geological Survey (NDGS) website at https://www.dmr.nd.gov/ndgs/ which hosts a surplus of maps and information.

The proposed project location does not present any concerns. However, if the project location were to change please be aware of locations adjacent to the McClusky Canal that are susceptible to slope failure. Currently, the NDGS is mapping the Surface Geology of the 1:24,000 Pickardville Quadrangle to the north of the project location. Areas of slope failure will be mapped on the McClusky Canal. Please be aware for any future projects you may have.

Please contact me if you have any questions.

Best Regards,

Christopher Maike
Geologist
North Dakota Geological Survey

600 E Boulevard Ave - Dept 405, Bismarck, North Dakota 58505-0840 Phone (701)328-8000 Fax (701)328-8010

North Dakota Geological Survey

Edward C. Murphy - State Geologist
Department of Mineral Resources
Lynn D. Helms - Director
North Dakota Industrial Commission
www.state.nd.us/ndgs

November 29, 2016

Area Manager
Bureau of Reclamation
P.O. Box 1017
Bismarck, North Dakota 58502

To Whom it May Concern,

I have reviewed our records to determine if any paleontological sites would be impacted by the following project:

Bureau of Reclamation's preparation of an environmental assessment for issuance of a water service and power contracts to Garrison Diversion Conservancy District for the Central North Dakota Water Supply Project
Burleigh County, North Dakota

No paleontological sites have been reported within the designated area of impact. It is unlikely that paleontological resources will be encountered in that area because it is covered by generally unfossiliferous glacial material. However, if fossils are encountered please feel free to contact our office so we can provide guidance for proper mitigation solutions.

Sincerely,

Clint Boyd
Senior Paleontologist
North Dakota Geological Survey

600 E Boulevard Ave - Dept 405, Bismarck, North Dakota 58505-0840 Phone (701)328-8000 Fax (701)328-8010

STATE HISTORICAL SOCIETY OF NORTH DAKOTA

November 22, 2016

Mr. Arden Freitag
Acting Area Manager
U.S. Department of the Interior
Bureau of Reclamation
PO Box 1017
Bismarck ND 58502

ND SHPO REF.: 17-0144 Bureau of Reclamation EA for Issuance of a Water Service and Power Contracts to Garrison Diversion Conservancy District for the Central North Dakota Water Supply Project in portions of [T144N R78W Section 2] Burleigh County, North Dakota

Dear Mr. Freitag,

We received your initial correspondence regarding ND SHPO REF.: 17-0144 Bureau of Reclamation EA for Issuance of a Water Service and Power Contracts to Garrison Diversion Conservancy District for the Central North Dakota Water Supply Project.

We look forward to review by the BOR archaeologist of this project and his recommendations.

Thank you for the opportunity to review to date. Please include the ND SHPO Reference number listed above in any further correspondence for this specific project. If you have any questions please contact Susan Quinnell, Review and Compliance Coordinator at (701) 328-3576 or squinnell@nd.gov

Sincerely,

Claudia J. Berg
State Historic Preservation Officer (North Dakota)

C: Mr. Damien Reinhart, BOR Bismarck

North Dakota Department of Transportation

Grant Levi, P.E.
Director

Doug Burgum
Governor

OFFICIAL FILE COPY
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JAN 17 2017
REPLY DATE
INFO. COPY TO:

DATE	INITIAL	TO
		Rode

CLASSIFICATION
PROJECT
CONTROL NO.
FOLDER I.D.

January 10, 2017

Arden Freitag
Acting Area Manager
US Department of Interior
P.O. Box 1017
Bismarck, ND 58502-1017

EA FOR ISSUANCE OF A WATER SERVICE AND POWER CONTRACT TO GARRISON DIVERSION CONSERVANCY DISTRICT, BURLEIGH COUNTY, NORTH DAKOTA

We have reviewed your November 18, 2016, letter.

This project should have no adverse effect on the North Dakota Department of Transportation highways.

However, if because of this project any work needs to be done on highway right of way, appropriate permits and risk management documents will need to be obtained from the Department of Transportation District Engineers, Kevin Levi at 701-328-6955.

Robert Fode

ROBERT A. FODE, P.E., DIRECTOR – OFFICE OF PROJECT DEVELOPMENT

57/raf/js
c: Kevin Levi, Bismarck District Engineer

608 East Boulevard Avenue • Bismarck, North Dakota 58505-0700
Information: 1-855-NDROADS (1-855-637-6237) • FAX: (701) 328-0310 • TTY: 711 • www.dot.nd.gov

"VARIETY IN HUNTING AND FISHING"

NORTH DAKOTA GAME AND FISH DEPARTMENT

100 NORTH BISMARCK EXPRESSWAY BISMARCK, NORTH DAKOTA 58501-5095 PHONE 701-328-6300 FAX 701-328-6352

December 12, 2016

Arden Freitag
Bureau of Reclamation
Dakotas Area Office
PO Box 1017
Bismarck, North Dakota 58502

Dear Mr. Freitag:

Re: Central North Dakota Water Supply Project Water Service Contract

The North Dakota Game and Fish Department has received notification of the Bureau of Reclamations (Reclamation) intention to prepare an environmental assessment (EA) for issuance of a water service contract and power contract to the Garrison Diversion Conservancy District (Garrison Diversion) for the Central North Dakota Water Supply Project. Garrison Diversion has requested a water service contract and project pumping power to withdraw up to 20 cubic feet per second of water from the McClusky Canal at Mile Marker 42. Reclamation will use the EA to evaluate the environmental impacts associated with the issuance of a water service contract and power contract; and to allow Garrison Diversion to construct an intake, wet well, pump station, 28-inch pipeline, and electric facilities on the McClusky Canal right-of-way. The intake screen would comply with State/Federal guidelines. Existing canal roads would provide access to the location.

A primary concern of the Department's is the water elevation and flow through the McClusky Canal. Will there be a water management plan developed? Will the canal be managed at the same elevation, and if so what impacts will the additional flows have on the freshening of the canal system?

The Department is also concerned the proposed intake could negatively impact fish populations by increasing mortality due to impingement or entrainment if precautions are not incorporated into the design of the project. The following guidelines should be included in the design of the new intake:

1. Intake shall be screened and maintained with ¼" or smaller mesh size openings.

2. Intake velocities shall not exceed ½ foot/second.

3. The intake shall be placed at least 20 vertical feet below the existing water level.

4. The intake shall be elevated 2 to 4 feet off the bottom.

5. If the 20-foot depth is not attainable, then the intake velocity shall be limited to ¼ foot per second, with the intake placed at a maximum practicable attainable depth.

6. Pumping sound levels shall not exceed 75DB at 50 feet.

We request work does not take place within the canal from April 15 to June 1 to protect aquatic resource. Erosion control measures should be implemented to minimize the opportunity for sediments to enter the lake or wetlands and to isolate suspended sediments within the work site (i.e. silt fences, floating turbidity barriers).

Aquatic Nuisance Species (ANS) rules were enacted by the North Dakota Game and Fish Department in 2008. These regulations are to prevent the introduction of undesirable species of plants and animals. Preventive measures are now required to bring equipment into the state. State law allows for fines up to $1,000 and the confiscation of equipment.

Required measures include removing any and all aquatic vegetation from vessels, motors, trailers, or construction equipment; all water shall be drained from bilge(s) or confined spaces on vessels, boat motors or construction equipment; all species of ANS (this list can be found on the North Dakota Game and Fish Department website) must be removed from vessels, motors, trailers or construction equipment; and water must be drained from confined spaces on vessels, boat motors or construction equipment. These ANS preventative measures extend to any and all vehicles, vessels, trailers, pumps and such equipment that will be used in the project or any/all construction efforts connected with this project in or on the waters of the State. This requirement should be included if occurring during the open water season or if the operation proceeds on the ice pack.

The contractor or his agents or subcontractors must provide the Department a reasonable opportunity to inspect any and all vehicles, vessels, pumps and equipment that will be used in the project in or on the waters of the state prior to those items being launched or placed in the waters of the state. A minimum of 72-hour notice must be provided to the Department for scheduling an inspection. The Department's ANS Biologist, Ms. Jessica Howell, is to be contacted at the Jamestown Office (701-368-8368) for equipment inspections or any additional information regarding ANS prevention protocols.

Sincerely,

Greg Link
Chief
Conservation & Communication Division

blk

North Dakota State Water Commission

900 EAST BOULEVARD AVENUE, DEPT 770 • BISMARCK, NORTH DAKOTA 58505-0850
(701) 328-2750 • TTY 1-800-366-6888 or 711 • FAX (701) 328-3696 • http://swc.nd.gov

December 23, 2016

Arden Freitag
Bureau of Reclamation
PO Box 1017
Bismarck, ND 58502

Dear Mr. Freitag:

This is in response to your request for a review of the environmental impacts associated with the Central North Dakota Water Supply Project located in Burleigh County, ND.

The proposed project has been reviewed by State Water Commission staff, and the following comments are provided:

- No permits relative to the National Flood Insurance Program are required based on the current effective FIRM and State minimum standards.

- All waste material associated with the project must be disposed of properly and not placed in identified floodway areas.

Thank you for the opportunity to provide review comments. If you have any questions, please call me at 701-328-4967.

Sincerely,

Jared Huibregtse
Water Resource Planner IV

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