

ENDAWS PIPELINE PROJECT

U.S. FISH AND WILDLIFE SERVICE  
TIERED ENVIRONMENTAL ASSESSMENT  
GRASSLAND AND WETLAND EASEMENT CROSSINGS

February 2024

TABLE OF CONTENTS

1.0 PROJECT INTRODUCTION.....1  
2.0 PURPOSE AND NEED.....4  
2.1 Scope of Analysis.....4  
3.0 ALTERNATIVES.....4  
3.1. Alternative A – No Action..... 4  
3.2 Alternative B.....4  
3.3 Alternative C.....5  
4.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES.....5  
4.1 Grassland Easements.....6  
4.2 Wetland Easements.....6  
4.3 Vegetation.....7  
4.4 Water Quality.....8  
4.5 Air Quality.....8  
4.6 Threatened and Endangered Species.....8  
4.7 Cultural Resources.....9  
4.8 Socioeconomic Impacts .....9  
4.9 Cumulative Effects .....10  
5.0 COORDINATION AND CONSULTATION..... 10  
5.1 Tribal consultation..... 10  
5.2 List of Preparers and Agencies Consulted..... 10  
REFERENCES ..... 10

LIST OF TABLES

Table 1. Comparison of Impacts to Wetland Easements for Alternative Routes East of McClusky

LIST OF FIGURES

Figure 1. Vicinity Map of Project area. ....

LIST OF APPENDICES

Appendix A - ENDAWS Preliminary Design TO5280 Proposed ENDAWS Segment 1 Reroutes TM301 dated January 31, 2023.

Appendix B - ENDAWS Preliminary Design TO5280 Proposed ENDAWS Segment 1 Reroutes TM302 dated April 17, 2023.

Appendix C – Reclamation BMPS

Appendix D – Special Use Permit Conditions

## ABBREVIATIONS

### **B**

BMP: best management practice  
Biota WTP: Biota water treatment plant

### **C**

cfs: cubic feet per second

### **E**

EA: Environmental Assessment  
EIS: Environmental Impact Statement  
ENDAWS: Eastern North Dakota Alternate Water Supply

### **F**

Federal RRVWSP: Federal Red River Valley Water Supply Project

### **G**

Garrison Diversion: Garrison Diversion Conservancy District  
GDU: Garrison Diversion Unit

### **H**

HBB: Hudson Bay Basin

### **N**

NEPA: National Environmental Policy Act of 1969

### **P**

Project: Eastern North Dakota Alternate Water Supply

### **R**

Reclamation: Bureau of Reclamation  
ROW: Right-of-Way

### **S**

State RRVWSP: State-led Red River Valley Water Supply Project  
SHPO: State Historic Preservation Officer  
SUP: Special Use Permit

### **U**

USFWS: U.S. Fish and Wildlife Service

### **W**

WMD: Wetland Management District

This Environmental Assessment (EA) tiers from the Final Environmental Impact Statement Eastern North Dakota Alternate Water Supply Project (Reclamation 2020), which analyzed the impacts to the human environment from the ENDAWS project to provide a needed alternative water source for the State of North Dakota. The Project crosses regions in North Dakota that contain grassland and wetland easements managed by the United States Fish and Wildlife Service (Service) National Wildlife Refuge System. The proposed project crosses three Wetland Management Districts (WMDs) within North Dakota (Audubon, Long Lake, Chase Lake). A significant effort was made to avoid Service easements; however, due to the length of the project and the vast presence of easements in the area avoidance of all easements was not feasible. Therefore, this EA was developed specifically to address potential impacts to the USFWS wetland and grassland easements within the Project area. This EA is in accordance with Section 102(2)(C) of the National Environmental Policy Act (42 U.S.C. § 4321) and implementing regulations (40 CFR 1502.4.2)

## 1.0 PROJECT BACKGROUND

The Garrison Diversion Unit (GDU) Principal Supply Works was authorized by the 1965 Garrison Diversion Unit Act to deliver Missouri River water throughout North Dakota. In 1944, the U.S. Congress passed the Flood Control Act (of which the Missouri-Basin Pick Sloan Act is a part), which authorized construction of dams on the Missouri River and its tributaries. The GDU was authorized in 1965, and construction began in 1967. The GDU project was designed to divert Missouri River water to central and eastern North Dakota for irrigation, municipal and industrial water supply, fish and wildlife conservation and development, recreation, flood control, and other project purposes. Most of the currently authorized principal supply works have been completed (Snake Creek Pumping Plant, McClusky Canal, and New Rockford Canal). The connecting link between the two canals, which would have been Lonetree Reservoir, has since been deauthorized.

The GDU project was reauthorized in 1986, which resulted in a reduced emphasis on irrigation and an increased emphasis on meeting the municipal, rural, and industrial water needs throughout North Dakota. The 1986 Reformulation Act, which amended the 1965 Act, authorized a Sheyenne River water supply and release feature, and a water treatment plant capable of delivering 100 cfs of water to eastern North Dakota. The GDU Project was never fully completed, nor delivered water to the Hudson Bay Basin (HBB), limiting intended benefits to North Dakota.

In 2007, the Bureau of Reclamation completed an environmental impact statement (EIS) evaluating the Federal Red River Valley Water Supply Project (Federal RRVWSP), which would have provided Missouri River water to eastern North Dakota communities located in the HBB. The preferred alternative was controversial for several reasons; therefore, a Record of Decision was never signed by the Secretary of the Interior. As a result, the State is pursuing its own State RRVWSP project with state and local funding. The State RRVWSP is being designed to meet the future water needs of central and eastern North Dakota through the year 2075.

The State of North Dakota has requested a contract for an additional 145 cubic feet per second (cfs) of water from the Bureau of Reclamation's (Reclamation) McClusky Canal as an alternate water source for a State-led municipal, rural, and industrial water supply project. The State RRVWSP is currently being developed as a water supply project, with an intake on the Missouri River, to meet the future water needs of central and eastern North Dakota; a portion of which is within the HBB. The portion of the State RRVWSP analyzed by Reclamation is referred

to as the Eastern North Dakota Alternate Water Supply (ENDAWS) Project. GDU estimates that using the proposed alternate water source could save millions of dollars in costs for construction, annual operations, and maintenance, including decreased energy costs for pumping.

This request for an additional 145 cfs of water is in addition to a previous request by GDU for 20 cfs of water from the McClusky Canal to be delivered to the State RRVWSP for use in the Missouri River basin. The Project plans to lay a 6ft diameter water pipeline from the McClusky Canal near North Dakota Highway 200 east to the site of the RRVWSP's Hydraulic Break Tanks located southeast of Cooperstown North Dakota.

A cooperating agency team was established to assist Reclamation in the preparation of a draft EIS for the ENDAWS Project. Cooperating agency members included federal and state agencies with jurisdiction or special expertise including the Service. Reclamation went through a public involvement, consultation, and coordination process that involved the public, relevant federal agencies, the state of North Dakota, and 29 tribes located in the Region who have historically been affiliated within the project area. The process can be found in Chapter 4 of the Final Environmental Impact Statement Eastern North Dakota Alternate Water Supply Project: <https://www.usbr.gov/gp/dkao/nepa/endaws/index.html> (Reclamation 2020). The Notice of Intent to prepare this EIS was published in the Federal Register on November 13, 2019 (77 FR 175). Public scoping began then and ended on December 13, 2019. The final EIS was released on Dec. 4, 2020, and the Record of Decision was signed on January 15, 2021.

MAP

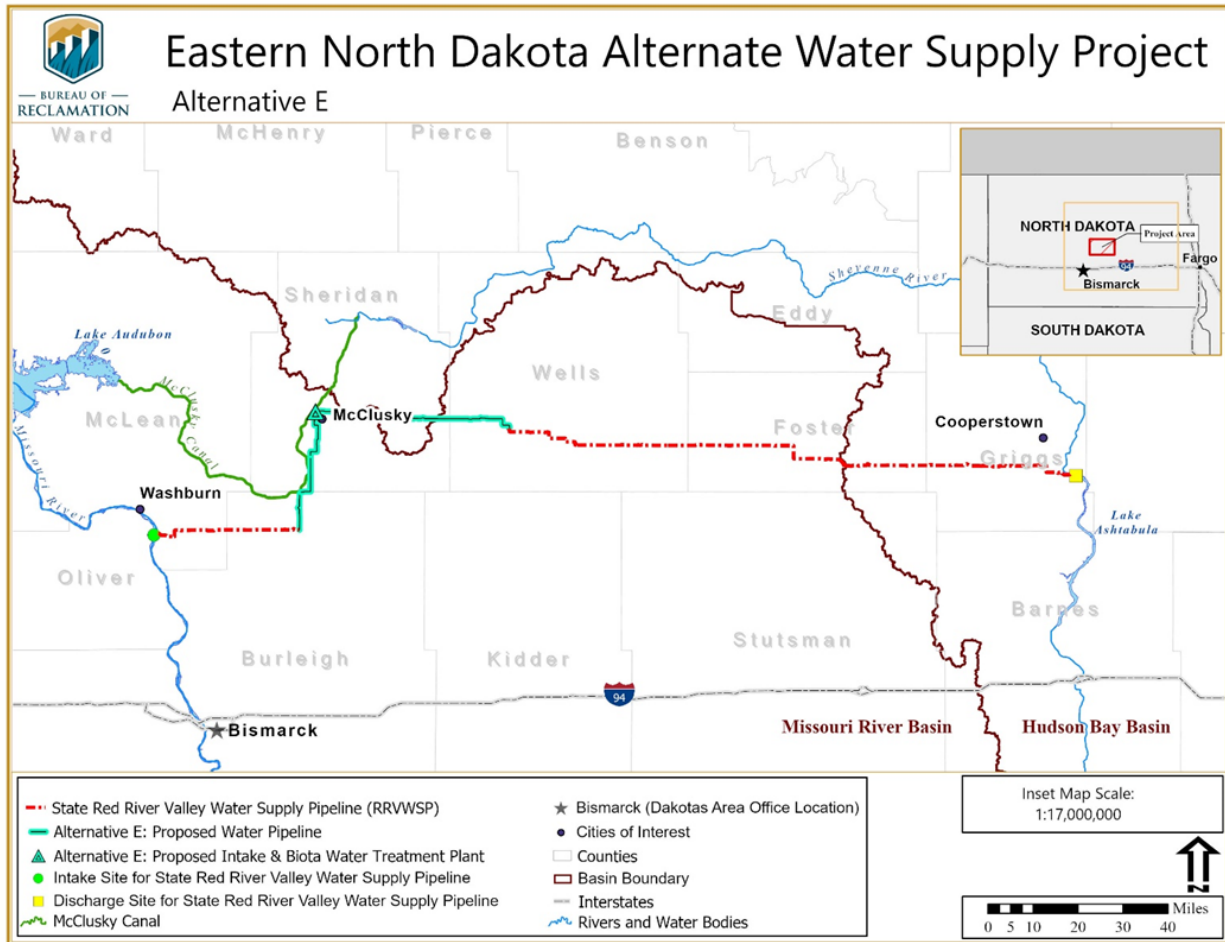


Figure 1: Map of North Dakota depicting proposed pipeline routes, Sheyenne River, Missouri River and Continental Divide.

## 2.0 PURPOSE AND NEED

The purpose and need of this action is for the Service to issue a Special Use Permit (SUP) to GDU that would allow for feasible construction of the ENDAWS project while minimizing impacts to Service wetland and grassland easements in the project area in accordance with the National Wildlife Refuge System Administration Act of 1966, as amended (16 U.S.C. § 668dd-668ee), the permitting requirements and conditions set forth in 50 CFR Part 29, and other applicable laws and regulations.

### 2.1 SCOPE OF ANALYSIS

The Project crosses both grassland and wetland easements within North Dakota. Reclamation determined that the geographic scope for the Project includes the following counties in North Dakota: Burleigh, Sheridan, and Wells. The geographic scope of the resource analysis is limited to areas that could be impacted by the alternatives being evaluated.

Grassland easements are an agreement between the landowner and the Service to keep their land in grass and limit the time of year for mowing, haying, and grass seed harvest. Wetland easements are an agreement between the landowner and the Service to protect wetlands from being drained, leveled, filled, or burned. The Service has jurisdiction over the surface of the grassland included in the boundary of the grassland easement and the Service defined wetland areas within the wetland easements. Based on the Service jurisdiction, the scope of analysis within this EA is limited to the grasslands and wetland areas protected by easements and crossed by the Project. This EA will analyze the effect of the reroute to the preferred alternative route in the ENDAWS EIS, and the application of trench and non-trench pipeline construction methods on grassland and wetland easements.

## 3.0 ALTERNATIVES

The EA examines the range of reasonable alternatives developed to meet the Project's purpose and need as well as a No Action alternative. A no action alternative is required to be considered under NEPA (40 CFR 1502.14[d]) as a basis for comparison of the alternatives. In addition to the No Action Alternative, two action alternatives have been evaluated in detail, considering potential environmental effects, as well as technical and economic considerations such as reliability and cost. The action alternatives were developed to provide alternate routes and construction methods to complete the pipeline.

### 3.1. Alternative A – No Action

GDU routes the ENDAWS project around all grassland easements. GDU routes the ENDAWS project around all wetland easements or routes around all protected wetland areas with wetland easements or uses the trenchless method to tunnel under all protected wetland areas on wetland easements without disturbing the wetlands or violating the wetland easement. No construction materials are placed on or transported through grassland easements or protected wetland areas.

### 3.2 Alternative B

GDU routes the ENDAWS project around all grassland easements. GDU avoids routing the ENDAWS project through wetland easements and protected wetland areas when expedient but

prioritizes other factors constraining the project such as cost. GDU traverses wetlands holding water with the trenchless method due to the difficulty of creating a trench in these wetlands. All other wetlands will be trenched through. Garrison Diversion utilizes the BMPs outlined in the Reclamation EIS (Appendix C) and adheres to all SUP conditions (Appendix D). This alternative east of McClusky is listed in the technical memorandum ENDAWS Preliminary Design TO5280 Proposed ENDAWS Segment 1 Reroutes TM301 dated January 31, 2023 and attached in Appendix A.

### 3.3 Alternative C

GDU routes the ENDAWS project around all grassland easements. GDU and Reclamation consult with the Service, including the district managers of the affected WMDs, during the design process to find a route that traverses the minimum number of wetland easements while maintaining a reasonable path from an engineering and financial standpoint. When wetland easements are crossed, Garrison Diversion attempts to find a route through the easement that does not impact any protected wetland areas. If a reasonable alternative route cannot be found to avoid crossing a wetland holding water, the trenchless method will be used to traverse the wetland area. If a reasonable alternative route cannot be found to avoid crossing a dry wetland, and it is not prohibitively expensive to use the trenchless method to go under the wetland, GDU uses the trenchless method of pipeline installation. If a reasonable alternative route cannot be found to avoid crossing a dry wetland, and it is prohibitively expensive to use the trenchless, GDU will use the trenched method of pipeline installation. GDU utilizes the BMPs outlined in the Reclamation EIS (Appendix C) and adheres to all SUP conditions (Appendix D) to minimize environmental impacts during pipeline construction and restore the land protected under the wetland easements to its original condition as high-value native wetland habitat. The reroutes resulting from the consultation between GDU, Reclamation, and the Service that constitute the portion of this alternative east of McClusky are listed in the technical memorandum ENDAWS Preliminary Design TO5280 Proposed ENDAWS Segment 1 Reroutes TM302 dated April 17, 2023, and attached in Appendix B.

## 4.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The following sections evaluate the resources and potential impacts within the affected environment within the scope of this EA; including vegetation, water quality, air quality, threatened and endangered species, cultural resources, and socioeconomic impacts. Impacts are specific to where the ENDAWS pipeline route crosses a wetland easement, runs through a protected wetland area, and a trench is dug through the wetland. Therefore, these effects apply only to alternative B and alternative C where reroutes and the trenchless method of pipeline installation did not circumvent wetland basins. All other impacts have already been evaluated as part of the larger EIS, which can be found here: <https://www.usbr.gov/gp/dkao/nepa/endaws/index.html> (Reclamation 2020).

The affected environment for land resources consists of the 150-foot ROW, Biota WTP with 150-ft buffer, and intake facilities with a 150-ft buffer for each alternative. The Project crosses an area within North Dakota with both grassland and wetland easements. Grassland easements are an agreement between the landowner and the Service to keep their land in grass and limit the time of year for mowing, haying, and grass seed harvest. Wetland easements are an



agreement between the landowner and the USFWS to protect wetlands from being drained, leveled, filled, or burned. Both grassland and wetland easements provide and protect habitat for waterfowl and other wildlife that utilize similar habitats. These easements also aim to protect the functions and values that these habitats provide to the surrounding areas. All Service easements that may occur within the affected environment are not documented in the Reclamation EIS because easement acquisition is ongoing. Before construction, Garrison Diversion will provide the Service with the latest-version route maps to identify where the pipeline and Service lands interface, so the Service can identify an avoidance route for the contractor.

The impacts for the portion of ENDAWS Alternative E from McClusky east are fully identified in this EA, however the impacts for the portion of ENDAWS Alternative E from Burleigh County north to McClusky are only estimated because a finalized version of the route and alternatives has not yet been supplied to the Service. This portion of the route likely has some small wetland impacts roughly equivalent to those listed in Table 1 for the portion of the Alternative E route east of McClusky.

#### 4.1 Grassland Easements

Initial coordination between the Service and GDU identified avoidance of grassland easements as priority. GDU, in consultation with Service WMD managers, adjusted the project alignment to avoid crossing all grassland easements. Furthermore, the Service will issue no permits for construction of the ENDAWS project on grassland easements. Additionally, construction materials and soil will not be transported across or stored on grassland easements. Therefore, all temporary and permanent impacts to grassland easements will be avoided under all alternatives.

#### 4.2 Wetland Easements

The best way to avoid impacts to wetland easements is to re-route the water pipeline around them and the wetland areas within them. Failing that, it is less impactful to use the trenchless method than to trench through a wetland area. Throughout the design and permitting process, GDU has, and will continue to, coordinate with the Service to minimize crossing wetland easements to the extent practicable. However, the high density of wetland easements in the project area may make it impossible to complete the project without crossing any wetland easements. Likewise, the high density of wetland areas makes it expensive to avoid all of them. Furthermore, avoiding one wetland area is likely to cause another adjacent wetland area to be impacted. The totals below represent the changes made to the Project design during consultation with the Service that affected the Project’s impact on wetland easements. Note that impacted wetland area acres within the 150’ ROW represents an underestimation of the temporarily impacted wetland acres because wetlands that extend outside the ROW may be impacted throughout the wetland area by construction inside the ROW. Pipeline repairs on the segments that pass under protected wetlands may require another trench or hole to be dug inside the wetland area. This would result in an additional temporary impact.

Table 1 Comparison of Impacts to Wetland Easements for Alternative Routes East of McClusky

	Alternative B	Alternative C
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Wetland easements crossed.	18	18
Wetland areas encountered within 150' ROW.	55	56
Wetland areas rerouted around to avoid.	17	32
Wetland areas bored under.	13	5
Wetland areas trenched through.	25	19
Impacted wetland acres within the 150' ROW.	10.950	5.011
Avoided acres.	10.732	17.254

Under Alternative A there will be no temporary or permanent impacts to any Service interests on wetland easements. Under Alternative B, there will be temporary impacts to Service interests on wetland easements. Alternative B prioritizes cost savings over reducing the Project's environmental impact by minimizing reroutes around wetlands that increase the length and number of turns in the pipeline and reducing the number of trenchless wetland crossings. Wildlife habitat in the project area will be temporarily disturbed including habitat of endangered species, migratory birds, bald eagles, and waterfowl. There will be temporary adverse environmental impact to wildlife due to disturbance and temporary displacement of wildlife from construction and repair activities. Alternative C will also result in a temporary environmental impact to protected wetland areas, however, impacts will be less than in Alternative B as demonstrated in Table 1. Alternative C prioritizes reducing the Project's environmental impact over cost savings by minimizing wetland crossings and using trenched crossings only as a last resort. A small amount of wildlife habitat will be temporarily disturbed including that of, endangered species, migratory birds, bald eagles, and waterfowl. However, we do not anticipate any long-term impacts to the Service's wetland easement interests under either of the action alternatives. Impacts on specific affected resources are discussed further below.

#### 4.3 Vegetation

The vegetation communities crossed within the affected environment include agriculture, native grassland, and wetlands. Dominant native grass species identified within native grassland in North Dakota include: Green needlegrass (*Nassella viridula*), needle-and-thread (*Hesperostipa comata*), western wheatgrass (*Pascopyrum smithii*), prairie junegrass (*Koeleria macrantha*), prairie sandreed (*Calamovilfa longifolia*), big bluestem (*Andropogon gerardi*), switchgrass (*Panicum virgatum*), porcupine grass (*Miscanthus sinensis*), prairie dropseed (*Sporobolus heterolepis*), little bluestem (*Schizachyrium scoparium*), blue gramma (*Bouteloua gracillis*), needleleaf sedge (*Carex eleocharis*), western snowberry (*Symphoricarpos occidentalis*), and prairie rose (*Rosa arkansana*). Dominant wetland vegetation identified within the wetland basins in North Dakota included broadleaf cattail (*Typha latifolia*), prairie cordgrass (*Spartina pectinata*), foxtail barley (*Hordeum jubatum*), sedges (*Carex* sp.), northern reedgrass (*Calamagrostis inexpectata*), water smartweed (*Persicaria amphibia*), reed canarygrass (*Phalaris arundinacea*), fowl bluegrass (*Poa palustris*), baltic rush (*Juncus balticus*), River bulrush (*Schoenoplectus fluviatilis*), bur-reed (*Sparganium* sp.), phragmites (*Phragmites* sp.), and manna grass (*Glyceria* sp.).

Surface vegetation will be removed entirely during construction where the trench is dug. Spoil piles and pipeline materials placed on adjacent land will kill the vegetation there. Heavy vehicles and construction equipment driving across the ground will also kill native vegetation. The heavy disturbance of the surface vegetation and soil will provide invasive plant species and noxious weeds an opportunity to become established at the site. These state invasive species are regulated under North Dakota Law (North Dakota Century Code § 4.1-47-02). After the completion of construction native plants will be reseeded or replanted on the exposed bare ground left from trench construction, however a native vegetative layer may not establish itself with the same cover quantity and quality or productivity if topsoil is lost during trench excavation or has other soil and dirt less conducive to growing native plants mixed into it. Impacts to vegetation on wetland easements will be greater in Alternative B compared to Alternative C due to the greater number of wetland easements crossed.

#### 4.4 Water Quality

Wetlands represent an important water resource for numerous species of wildlife in North Dakota including, invertebrates, fish, reptiles, amphibians, mammals, and birds. Trench excavation through wetlands will increase water turbidity. This decreases wetland habitat quality for aquatic life such as invertebrates and fish, as well as land animals that drink water from those wetlands or consume the aquatic life within them. Construction equipment will be cleaned off before moving from one wetland to another to reduce the spread of aquatic invasive species. Wetlands hold water on the surface because they have a layer of soil underneath them that water does not easily pass through. If a trench is dug through that layer of soil lining the wetland bottom the wetland will drain into the groundwater through more porous soils below. Even when the soil excavated from the trench is returned and properly compacted there may still be a path left for water to drain out of the wetland and into the ground water. In this case the wetland would be permanently drained negatively effecting the abundance of surface water and the natural progression of the water cycle. The BMPs listed in the Reclamation EIS require contractors to make at least two boring attempts before using an alternate wetland, stream or river crossing method (Reclamation 2020). This implies that some of the wetlands planned to be traversed under with the trenchless method may have a trench excavated through them if two boring attempts fail. This would increase the environmental impact of the Project. All wetlands with proposed trenchless crossings that end up trenched through must be restored to their original condition according to the same standards and BMPs as wetlands with trenched crossings in the original plan.

Under Alternative B, there will be temporary impacts to Service interests on wetland easements. Alternative B prioritizes cost savings over reducing the Project's environmental impact by minimizing reroutes around wetlands that increase the length and number of turns in the pipeline and reducing the number of trenchless wetland crossings. Water quality will be temporarily reduced. There will be temporary adverse environmental impact to wildlife and livestock that rely on wetland water for habitat and consumption. Alternative C will also result in a temporary environmental impact to protected wetland areas, however, impacts will be less than in Alternative B as demonstrated in Table 1. Alternative C prioritizes reducing the Project's environmental impact over cost savings by minimizing wetland crossings and using trenched crossings only as a last resort. Water quality will be temporarily reduced for fewer wetland areas. However, we do not anticipate any long-term impacts to Service wetland easement interests under either of the action alternatives.

#### 4.5 Air Quality

Dust generated from excavation and exhaust from construction equipment will have a negative localized impact on air quality. Emissions from construction of the pipeline would be temporary and mobile, therefore impacts to air quality from the construction of the Project are not anticipated under any of the alternatives.

#### 4.6 Threatened and Endangered Species

There may be a temporary loss of habitat for threatened and endangered species during trench construction. The process of constructing the pipeline may also temporarily disturb threatened and endangered species. However, the Project will not affect Least Terns, Piping Plovers, Pallid Sturgeon, or Northern Long-Eared Bats due to their geographic or temporal separation from it. Whooping Cranes and Red Knots will not be adversely affected because there is an abundance of suitable habitat available adjacent to the project for the brief period that they migrate through the project area. Dakota skipper occurred historically in Wells, Sheridan, Kidder, and Burleigh Counties and currently occur in Wells County (USFWS 2018). No critical habitat occurs in the affected environment, but based on National Land Class Database data, suitable high-quality native grassland habitat does. Suitable Dakota Skipper habitat in the ROW will be surveyed prior to construction to confirm that there were no butterflies in the Project area. If trenched wetland areas are not restored to their original condition, trenching would result in the permanent degradation of habitat for threatened and endangered species. See the Endangered Species Act Section 7 consultation listed in Appendix C of the final EIS for the ENDAWS project authored by Reclamation.

Under Alternative B, there will be temporary impacts to Service interests on wetland easements. Alternative B prioritizes cost savings over reducing the Project's environmental impact by minimizing reroutes around wetlands that increase the length and number of turns in the pipeline and reducing the number of trenchless wetland crossings. Wildlife habitat in the project area will be temporarily disturbed including habitat of endangered species, migratory birds, bald eagles, and waterfowl. There will be temporary adverse environmental impact to wildlife due to disturbance and temporary displacement of wildlife from construction and repair activities. Alternative C will also result in a temporary environmental impact to protected wetland areas; however, impacts will be less than in Alternative B as demonstrated in Table 1. Alternative C prioritizes reducing the Project's environmental impact over cost savings by minimizing wetland crossings and using trenched crossings only as a last resort. A small amount of wildlife habitat will be temporarily disturbed including that of, endangered species, migratory birds, bald eagles, and waterfowl. However, we do not anticipate any long-term impacts to Service wetland easement interests under either of the action alternatives. Impacts on specific affected resources are discussed further below.

#### 4.7 Cultural Resources

Refer to ND SHPO Ref: 22-5434 BOR ENDAWS.0769.2022.01 "Red River Valley Water Supply Project: A Class III Cultural Resource Inventory in Griggs, Foster, Wells and Sheridan Counties, North Dakota". We concur with the State Historic Preservation Office's determination of "No Historic Properties Affected" for this project. We are not aware of any cultural resources

that will be impacted directly due to the construction of the pipeline across wetland easements. A Class I cultural resource overview, describing, in general, the types of known resources in the study area, was prepared for the Reclamation EIS (Reclamation 2020). The literature search to identify known historic properties was conducted using the National Register of Historic Places (NRHP), the North Dakota State Historic Preservation Office (NDSHPO) database, and General Land Office plat maps. The NRHP and SHPO database show that no sites in the study area are currently listed on the NRHP.

#### 4.8 Socioeconomic Impacts

A thorough analysis of the Project's socioeconomic impacts can be found in Section 3.9 of the Final ENDAWS EIS: <https://www.usbr.gov/gp/dkao/nepa/endaws/index.html> (Reclamation 2020). Additional details on the construction costs for the trenched and trenchless installation methods can be found in Appendix B. Based on RRVWSP construction project costs from 2021 and 2022, trenchless wetland crossings are approximately six times more costly than trenched crossings. The Project's construction costs will be greater for alternative C than alternative B because more wetlands are crossed with the trenchless method and the reroutes in alternative C make the pipeline longer. This will result in a slightly greater positive economic impact on the local community for Alternative C due to increased temporary work during construction. It is likely impossible or prohibitively expensive to find a route for the Project that avoids all impacts to Service easements due to their high frequency on the landscape. Therefore, under Alternative A the project will likely not be completed, and eastern North Dakota will not receive enough water to support its projected water needs into 2075.

#### 4.9 Cumulative Effects

The Project's cumulative effect is minimal because it crosses a very small proportion of easements. In alternative B and C, the portion of the Project east of McClusky crosses 18 out of the 1095 wetland easements found within the three counties that contain the project area and impacts no grassland easements. An equivalent impact is expected for the remainder of the project. Furthermore, although slightly more wetlands are crossed in Alternative B than Alternative C, only a small percentage of the wetlands crossed within each easement will be impacted in either Alternative. There are other persistent impacts to easements from past projects within the project area such as drain and fill easement violations, road expansions in ROWs, and mines. However, these impacts also only affect a very small percentage of easements. Therefore, the combined impact of the Project and existing easement impacts will not have a significant cumulative impact on the quantity and quality of habitat provided by land with easements on it. Future pipeline repairs may cause temporary impacts and contribute to future cumulative effects. There are existing power, water, and other utility lines running through easements, therefore the Project will not set a precedent for permitting future easement impacts. Cumulative effects are more broadly discussed in the Final Environmental Impact Statement Eastern North Dakota Alternate Water Supply Project: <https://www.usbr.gov/gp/dkao/nepa/endaws/index.html> (Reclamation 2020).

#### 5.0 COORDINATION AND CONSULTATION

This section will be completed after public review and comment has taken place.

### 5.1 Tribal consultation

USFWS will seek additional comment and involvement during the planning and preparation of this EA by communication and consultation with Native American tribes.

### 5.2 List of Preparers and Agencies Consulted

Samuel Vassallo .....U.S. Fish and Wildlife Service  
Kathy Baer .....U.S. Fish and Wildlife Service  
Sean Lofgren.....U.S. Fish and Wildlife Service

### REFERENCES

AE2S. 2023. ENDAWS Preliminary Design TO5280 Proposed ENDAWS Segment 1 Reroutes TM301 Technical Memorandum. From Brent Erickson, PE, Senior Project Manager, AE2S, to Kip Kovar, PE, District Engineer, Garrison Conservancy District. January 31, 2023.

———. 2023. ENDAWS Preliminary Design TO5280 Proposed ENDAWS Segment 1 Reroutes TM302 Technical Memorandum. From Brent Erickson, PE, Senior Project Manager, AE2S, to Kip Kovar, PE, District Engineer, Garrison Conservancy District. April 17, 2023.

Cowardin L. M., V. Carter, F. C. Golet, E. T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. United States Department of Interior, Fish and Wildlife Service. U.S. Government Printing Office Washington, D.C. 20402.

Homer, C, J. Dewitz, S. Jin, G. Xian, C. Costello, P. Danielson, L. Gass, M. Funk, J. Wickham, S. Stehman, R. Auch, K. Riitters. 2020. Conterminous United States land cover change patterns 2001–2016 from the 2016 National Land Cover Database. ISPRS Journal of Photogrammetry and Remote Sensing, Volume 162, 2020, Pages 184-199, ISSN 0924-2716, <https://doi.org/10.1016/j.isprsjprs.2020.02.019>.

LaBaugh, J.W., T.C. Winter, and D.O. Rosenberry. 1998. Hydrologic functions of prairie wetlands. Great Plains Research. 8 (Spring 1998): 17-37. Available at: <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1361&context=greatplainsresearch>. Accessed April 1, 2020.

Reclamation 2020. Biological Assessment for the Eastern North Dakota Alternate Water Supply Project (ENDAWS). Missouri Basin Region, Dakotas Area Office, Bismarck, ND.

———. 2020. Final Environmental Impact Statement Eastern North Dakota Alternate Water Supply Project. Missouri Basin Region, Dakotas Area Office, Bismarck, ND. <https://www.usbr.gov/gp/dkao/nepa/endaws/index.html>

U.S. Fish and Wildlife Service (USFWS). 2015. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.  
<http://www.fws.gov/wetlands/>