



DAKOTA ACCESS, LLC

DAKOTA ACCESS, LLC

DAKOTA ACCESS PIPELINE
OPTIMIZATION

Docket No. PU-14-842

North Dakota Public Service Commission
Request for Amendment to Certificate No. 179 and Permit No. 191

June 20, 2019

TABLE OF CONTENTS

LIST OF TABLES	ii
APPENDIX	ii
ACRONYMS AND ABBREVIATIONS	iii
LIST OF EXHIBITS	iv
INTRODUCTION	1
1.0 DESCRIPTION OF FACILITY IMPROVEMENTS	2
1.1 PREFERRED LOCATION OF FACILITY	2
1.2 DESCRIPTION OF SITE PREPARATION, CONSTRUCTION, AND RECLAMATION PROCEDURES	2
1.3 LANDOWNER NOTIFICATION, LAND ACQUISITION, AND COMPENSATION	3
2.0 ALTERNATIVES	3
2.1 ALTERNATIVES TO THE PROPOSED FACILITY	3
2.1.1 NO-ACTION ALTERNATIVE	3
2.1.2 TRANSPORTATION ALTERNATIVES	3
2.1.3 PUMP STATION SITE ALTERNATIVES	6
3.0 ENVIRONMENTAL STUDIES	7
3.1 CULTURAL RESOURCE INVENTORY	7
3.2 NATURAL RESOURCE INVENTORY	7
3.2.1 WETLANDS AND WATERBODIES	8
3.2.2 THREATENED AND ENDANGERED SPECIES	8
3.2.3 MIGRATORY BIRD TREATY ACT	10
3.2.4 BALD AND GOLDEN EAGLE PROTECTION ACT	11
3.2.5 TREE/SAPLING/SHRUB INVENTORY	11
3.2.6 NOXIOUS WEEDS INVENTORY	11
4.0 AGENCY NOTIFICATIONS AND PERMITTING	13
5.0 CRITERIA	14
5.1 EXCLUSION AREAS	14
5.2 AVOIDANCE AREAS	15
5.3 SELECTION CRITERIA	16
5.4 POLICY CRITERIA	19
6.0 MITIGATION MEASURES	20
7.0 QUALIFICATION OF PREPARERS	21

LIST OF TABLES

	<u>Page</u>
Table 3.2-1 Potential Federally listed Threatened and Endangered Species in the Optimization Area.....	9
Table 4.0-1 Record of Agency Correspondence.....	13
Table 5.1-1 Exclusion Areas.....	14
Table 5.2-1 Avoidance Areas.....	15
Table 5.3-1 Selection Criteria.....	16

APPENDIX

Appendix A: Agency Correspondence

Appendix A.1 Aeronautics Commission

ACRONYMS AND ABBREVIATIONS

BCC	Birds of Conservation Concern
BCR	Bird Conservation Regions
BGEPA	Bald and Golden Eagle Protection Act
bpd	barrels per day
COE	U.S. Army Corps of Engineers
Commission	North Dakota Public Service Commission
Dakota Access	Dakota Access, LLC
DAPL	Dakota Access Pipeline
EI	Environmental Inspector(s)
ESA	Endangered Species Act
FWS	U.S. Fish and Wildlife Services
Gray & Pape	Gray & Pape, Inc.
IPaC	U.S. Fish and Wildlife Service Information for Planning and Consultations
MOP	maximum operating pressure
MBTA	Migratory Bird Treaty Act
NDDA	North Dakota Department of Agriculture
NDGF	North Dakota Game and Fish Department
Order	Second Supplemental Findings of Fact, Conclusions of Law and Order, dated June 22, 2016
Optimization	Emmons County Pump Station
Perennial	Perennial Environmental Services, LLC
T&E	threatened and endangered [species]
USFS	U.S. Forest Service
USGS	U.S. Geological Survey
USNPS	National Park Service

LIST OF EXHIBITS

- Exhibit A Emmons County Plot Plan
- Exhibit B Map of Optimization Area, Emmons County
- Exhibit C Map of Previously-Surveyed Area
- Exhibit D.1 Letter to State Historical Society of North Dakota
- Exhibit D.2 Wetland Delineation Report
- Exhibit D.3 Official Species List

INTRODUCTION

Dakota Access, LLC (Dakota Access) owns the Dakota Access Pipeline (DAPL or Pipeline), a crude oil transmission facility commencing in North Dakota and terminating in Illinois. Within North Dakota, the DAPL is an approximately 358-mile, 12-, 20-, and 30-inch diameter crude oil pipeline and associated facilities in Mountrail, Williams, McKenzie, Dunn, Mercer, Morton, and Emmons Counties, North Dakota with terminals near Stanley in Mountrail County, near Tioga in Williams County, near Epping in Williams County, near Trenton in Williams County, near Watford City in McKenzie County, and near Johnsons Corner in McKenzie County. DAPL-ETCO Operations Management, LLC is the operator of the DAPL. Dakota Access is proposing to optimize and upgrade the DAPL by installing a new pump station in Emmons County (the Optimization).

On December 22, 2014, Dakota Access made application to the North Dakota Public Service Commission (Commission) for a corridor certificate and route permit for the DAPL. On January 20, 2016, the Commission entered its Findings of Fact, Conclusions of Law and Order granting Certificate of Corridor Compatibility No. 179 and Route Permit No. 191.

On April 6, 2016, Dakota Access made application to the Commission for an amended certificate of corridor compatibility and amended route permit, seeking reroute approval at fifteen (15) locations in order to accommodate landowner requests, make environmental protection adjustments, and incorporate construction modifications that would generally provide for more efficient installation and ultimately minimize long term impacts to landowners' property. The Commission initially approved fourteen (14) of Dakota Access's fifteen (15) requested reroute locations, entered its Supplemental Findings of Fact, Conclusions of Law and Order, and issued the First Amended Certificate of Site Compatibility No. 179 and First Amended Route Permit No. 191 for the Pipeline on May 24, 2016. The Commission requested additional information regarding certain stability concerns of the final reroute request (Reroute Location 50).

After Dakota Access provided the additional information regarding Reroute Location 50 as requested by the Commission, the Commission entered its Second Supplemental Findings of Fact, Conclusions of Law and Order (Order), issuing the Second Amended Certificate of Corridor Compatibility No. 179 and the Second Amended Route Permit No. 191 on June 22, 2016.

Since issuance of the Order and as a result of increasing demand for the transportation of crude oil from the Williston Basin, there is a need for additional transportation capacity on the DAPL. Dakota Access hereby submits to the Commission documentation, in accordance with North Dakota Administrative Code § 69-06-05-02(3) and North Dakota Century Code §§ 49-22.1-06 and 49-22.1-07, requesting approval of Dakota Access's transmission facility improvements and upgrades of the Optimization to meet this need.

Upon receipt of necessary approvals, Dakota Access will begin construction, which is anticipated to take approximately eight to ten months. Completion of the Optimization is desired by the first quarter of 2021.

1.0 DESCRIPTION OF FACILITY IMPROVEMENTS

Dakota Access is proposing to optimize the DAPL by adding a new pump station facility which will allow for transportation of up to 1,100,000 total barrels per day (bpd). The new pump station will consist of five 6,000 HP electrically driven motors and pumps contained within a building (refer to Exhibit A for plot plan). The fence line of the property will encompass approximately 20.8 acres. The new pump station will operate within the existing maximum operating pressure (MOP) of the pipeline. Dakota Access will invest approximately \$35 to \$40 million in North Dakota to accomplish the Optimization.

1.1 PREFERRED LOCATION OF FACILITY

The proposed Optimization is located in the S1/2SE1/4 of Section 5, Township 132 North, Range 77 West, in Emmons County, North Dakota (refer to Exhibit B). The new pump station site boundary extends approximately 16.6 acres outside of the corridor designated by the Second Amended Certificate of Corridor No. 179 and approximately 19.5 acres outside of the route designated by the Second Amended Route Permit No. 191. The proposed Optimization is positioned within an approximately 20.8 acre parcel. Dakota Access has purchased an option for the approximate 20.8 acre site that will ultimately be owned in fee.

1.2 DESCRIPTION OF SITE PREPARATION, CONSTRUCTION, AND RECLAMATION PROCEDURES

Construction techniques will be employed that minimize the area of ground disturbance, off-site deposition of sediments, and long-term impacts to agricultural production. Dakota Access will develop a series of plans as described in Section 6.0 to provide procedures to be followed during construction and through final stabilization of the new pump station site. Additionally, Dakota Access will comply with applicable permit conditions and environmental, civil, or landowner agreements.

1.3 LANDOWNER NOTIFICATION, LAND ACQUISITION, AND COMPENSATION

Prior to conducting field surveys, Dakota Access reviewed courthouse records for the purpose of identifying current landowners of potential pump station sites. Dakota Access contacted landowners to introduce the Optimization and to obtain permission to conduct surveys. Dakota Access has negotiated an agreement with the affected landowner to give the company the right to construct, operate, and maintain the new pump station within a specified portion of the landowner's property in return for monetary compensation. Dakota Access, at all times, negotiates in good faith, and any necessary conditions and/or restrictions are presented to the landowner and discussed.

2.0 ALTERNATIVES

2.1 ALTERNATIVES TO THE PROPOSED FACILITY

Installation of the upgrades to accomplish the Optimization will provide firm, reliable service for capacity of up to 1,100,000 bpd of crude oil on the existing DAPL. Dakota Access identified and evaluated Optimization alternatives; however, these alternatives do not effectively satisfy the Optimization's objectives.

2.1.1 NO-ACTION ALTERNATIVE

The primary objectives of the Optimization are to provide additional, new, firm transportation capacity to an existing crude oil transmission facility and to place the proposed facility into service by first quarter 2021. Under the No-Action Alternative, the Optimization would not be built, and the environmental impacts associated with construction and operation of the proposed Optimization would not occur.

A No-Action Alternative would leave the region constrained by limited transport capacity for safe and reliable transmission of crude oil to markets. Increased crude oil production from the Williston Basin will exceed the capacity of the existing DAPL. Crude oil production from the Williston Basin has already increased from 1.045 million bpd in June of 2017 to almost 1.349 million bpd in December of 2018. Crude oil production is projected to increase by another 350 to 450 thousand bpd over the next five years. This increase in production has led to an increase in demand for crude oil transportation services on the DAPL that exceeds the existing capacity of the pipeline. Thus, an increase in the DAPL's capacity is needed to satisfy the growing demand.

The No-Action Alternative would deny the regional economic benefits that will be provided by the proposed Optimization, and would deny Dakota Access's customers the firm transportation service they have requested. The current maximum capacity of the DAPL is oversubscribed by shippers holding or seeking long-term transportation contracts. During an open season held in the fourth quarter of 2018, seven (7) new shippers participated, along with all current shippers. Both the new and existing shippers have indicated interest in contracting for additional capacity on the DAPL, beyond the open season amounts, in order to support their expected future needs for crude oil transportation services.

In order to accommodate the increase in production of crude oil from the Williston Basin and to meet the needs of Dakota Access's current and potential customers, Dakota Access rejected the No-Action Alternative.

2.1.2 TRANSPORTATION ALTERNATIVES

Approximately 70 percent of all domestically produced petroleum products are transported by pipeline, but upon increased demand and increase of production of such products, transportation has been forced to be supplemented by truck or rail due to the increasing

limitations on pipeline capacity.¹ However, pipeline transportation remains the superior form of transportation for moving crude oil to market when considering safety, environmental factors, and economic factors.

Trucking Transportation Alternative

Nationwide, transportation of crude oil by truck is the most dangerous form of transportation, with an incident rate of 19.95 incidents per billion ton-miles, as compared with transport by hazardous liquid pipeline, which holds an incident rate of just 0.58 incidents per billion ton-miles.² Truck transportation in North Dakota is no exception to these statistics.

In the years preceding the oil boom in North Dakota, the Federal Motor Carrier Safety Administration reported a traffic fatality rate involving large trucks at 13 fatalities per year.³ Following a rapid expansion in the number of commercial trucks linked to the oil industry, however, North Dakota has seen an increase in fatalities involving large trucks. In 2017, the number of fatalities involving large trucks jumped to 21, at a rate of 27.8 fatal crashes involving large trucks per million people – a statistic that surpasses every other state in the country, with the exception of Oklahoma and Wyoming.⁴ Much of this increase in fatalities can be attributed to North Dakota's infrastructure, which is largely comprised of single-lane, rural, and unpaved roads.⁵ Harsh winter weather and seasonal road restrictions further compromise the safety and reliability of truck transportation.

In addition to the personal safety aspects considered, transportation by truck presents great environmental concerns. Although the U.S. Department of Transportation reports approximately 280 pipeline spills nationwide per year, the vast majority of pipeline spills occur in a facility, rather than at the actual pipeline, and such facilities are well-equipped to contain and recover spilled product.⁶ Oil spills that occur during truck transportation, however, occur closer to the general public, where there is the greater potential for human fatality and injury. Moreover, the amount of barrels of oil spilled each year is dramatically higher in transportation by truck, at 326 barrels per million tons moved every mile, as opposed to 269 barrels per million tons moved every mile in pipeline transportation, where nearly forty percent of spilled product is recoverable.⁷

¹ Furchtgott-Roth, *Pipelines are Safest for Transportation of Oil and Gas* (June 23, 2013), available at <https://www.manhattan-institute.org/html/pipelines-are-safest-transportation-oil-and-gas-5716.html#.VEkKrCtdWQw>.

² *Id.*

³ *Id.*

⁴ U.S. Department of Transportation, Federal Motor Carrier Safety Administration Analysis Division, *Large Truck and Crash Facts 2017* (May, 2019), available at <https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/docs/safety/data-and-statistics/461861/lcbbf-2017-final-5-6-2019.pdf>.

⁵ Bachman, J., *North Dakota's Downside to the Oil Boom: Traffic Deaths* (June 9, 2014), available at <http://www.businessweek.com/articles/2014-06-09/north-dakotas-downside-to-the-oil-boom-traffic-deaths>.

⁶ Furchtgott-Roth, D., Green, K., Studies in Energy Transportation, Fraser Institute, *Intermodal safety in the transport of oil* (Oct. 2013), available at <https://www.fraserinstitute.org/sites/default/files/intermodal-safety-in-the-transport-of-oil-rev3.pdf>.

⁷ Dursteler, E., Hansen, M., Strata, *Pipelines, Rail & Trucks: Economic, environmental, and safety impacts of transporting oil and gas in the U.S.* (2017), available at <https://www.strata.org/pdf/2017/pipelines.pdf>.

Transportation by truck also lacks in economic benefits in relation to pipeline transportation. While pipeline transportation does require significant upfront cost, including the costs to permit, build, and maintain the pipeline, such costs are generally less expensive than transportation by truck. On average, it costs about \$20 per barrel to transport crude oil by truck, as compared to by pipeline, which costs only about \$5 per barrel.⁸ Additionally, truck transportation is generally used to transport oil and gas in smaller quantities, and over shorter distances, whereas, pipelines can move billions of barrels of oil a year, over much greater distances.⁹

Analysis of the safety issues, environmental factors, and economic factors of the truck transportation alternative leads to the conclusion that this alternative is not viable.

Railway Transportation Alternative

While transportation by truck carries the highest incident rate nationwide, railway transportation carries the second highest incident rate at a rate of 2.08 incidents per billion ton-miles – still much higher than the rate of incidents from hazardous liquid pipelines at 0.58 incidents per billion ton-miles.¹⁰ Additionally, a series of major accidents taking place in 2013 to 2014 in Canada and the United States has heightened concern about the risks involved in shipping crude oil by rail.¹¹ In fact, when a crude-by-rail derailment occurred in 2013 in Quebec, killing 47 people and releasing 1.6 million gallons of crude oil, the National Transportation Safety Board made recommendations to the U.S. Department of Transportation in an attempt to make railway transportation safer.¹² Such recommendations, in part will be implemented in August of 2019, and will require railroads to establish geographic response zones and ensure that personnel and equipment are staged and prepared to respond in the event of an accident.¹³ While these new rules may assist in preventing the type of personal injury that occurred in Quebec in 2013, they are not measures that can outright prevent a derailment or other incident that would not occur in transportation by pipeline.

Railway transportation, like truck transportation, also lacks in economic benefits when compared to the benefits provided by pipeline transportation. First, it costs two to three times more per barrel to transport via rail than via pipeline.¹⁴ Second, although railway transportation is used to supplement current pipeline capacity limitations, this supplementation will run out of

⁸ *Id.*

⁹ *Id.*

¹⁰ Furchtgott-Roth, *Pipelines are Safest for Transportation of Oil and Gas* (June 23, 2013), available at <https://www.manhattan-institute.org/html/pipelines-are-safest-transportation-oil-and-gas-5716.html#.VEkKrCtdWQw>.

¹¹ Fritelli, J., Congressional Research Service, *U.S. Rail Transportation of Crude Oil: Background and Issues for Congress* (Dec. 4, 2014), available at <http://fas.org/sgp/crs/misc/R43390.pdf>.

¹² Shepardson, D., Reuters, *U.S. issues new rules requiring rail oil spill response plans* (Feb. 14, 2019), available at <https://www.reuters.com/article/us-usa-oil-rail/u-s-issues-new-rules-requiring-rail-oil-spill-response-plans-idUSKCN1Q32T1>.

¹³ *Id.*

¹⁴ Dursteler, E., Hansen, M., Strata, *Pipelines, Rail & Trucks: Economic, environmental, and safety impacts of transporting oil and gas in the U.S.* (2017), available at <https://www.strata.org/pdf/2017/pipelines.pdf>.

capacity too, and many drilling companies will need to construct railroad terminals to ship their product, which can cost upwards of \$150 million per terminal.¹⁵ Moreover, although trains have a holding capacity greater than their truck counterpart, such capacity does not come near the capacity of pipelines. In 2013, the peak year for transportation by rail, trains moved a total of 262 million barrels of crude oil, while pipelines on the other hand, moved a total of over 15 billion barrels.¹⁶

While railway transportation is a vital part of the short-haul distribution network for crude oil, pipelines are safer, more reliable, and more economical for the large volumes transported and long distances required for an increase in capacity on the DAPL. As such, the railway transportation alternative is not considered a viable alternative.

New Pipeline Transportation Alternative

Based on current circumstances, a new pipeline or pipelines may be viable transportation alternatives, but are less preferential compared to the Optimization. As proposed, the Optimization can satisfy current demand for take away capacity in the Williston Basin by the first quarter of 2021. A new pipeline or pipelines would have a significantly longer lead time, denying the region the economic benefits of the Optimization for some time. Likewise, construction of a new pipeline or pipelines may have greater environmental impacts compared to the Optimization, if only because of the relative scope of needed construction. While the Optimization has been shown not to impact archeological sites, the ephemeral drainage, or federally listed protected species, a new pipeline or pipelines may cause such impacts. Similarly, while the Optimization has been planned to minimize impacts to agricultural production and migratory bird patterns, a new pipeline or pipelines may have greater impacts. Finally, a new pipeline or pipelines would require significant upfront cost, including the costs to permit, build, and maintain the pipeline, while the proposed Optimization would provide the same service at a much more modest upfront cost.

Thus, while a new pipeline or pipelines may be a viable future option if demand for takeaway capacity in the Williston Basin continues to increase, the proposed Optimization is a more economical alternative with fewer potential impacts and is therefore the preferred alternative.

2.1.3 PUMP STATION SITE ALTERNATIVES

Dakota Access considered several factors in choosing the preferred Optimization site location. The preferred site took into consideration landowner acceptance, exclusion and avoidance area criteria, and environmental factors. Additionally, the preferred location meets the required engineering factors, such as hydraulic balance of the pipeline, and proximity to roads and other existing facilities (i.e., pipeline valves).

¹⁵ *Id.*

¹⁶ *Id.*

3.0 ENVIRONMENTAL STUDIES

The Second Supplemental Findings of Fact, Conclusions of Law and Order were issued for the DAPL on June 22, 2016. These findings concluded that the location, construction, and operation of the proposed crude oil transmission facility would produce only minimal adverse effects on the environment and are compatible with environmental preservation and the efficient use of resources. Dakota Access will comply with the Commission's Order, the conditions and criteria of the certificate and route permit, and the applicable statutes, rules, regulations, standards, and permits of state or federal agencies for the development of the new pump station.

The new pump station addition falls within the 1-mile wide study area analyzed in the DAPL application. A map showing the previously surveyed portion of the proposed pump station is provided in Exhibit C.

3.1 CULTURAL RESOURCE INVENTORY

On behalf of Dakota Access, Perennial Environmental Services, LLC (Perennial) conducted an initial cultural resources background review using a 1-mile radius centered on the approximately 20.8-acre Optimization site. There are three previously reported archaeological sites located within 1-mile of the proposed Optimization; however, none of the sites are located within the Optimization site. Additionally, approximately 62 percent of the Optimization site has been surveyed during three previous cultural resource investigations (011690, 015348, and 132077), but no cultural resources were documented within the Optimization site as a result of these previous survey efforts.

On April 25, 2019, Gray & Pape, Inc. (Gray & Pape) completed a Class II/III cultural resources inventory within the approximately 20.8-acre property on which the new pump station will be located. All field work associated with the inventory was performed in accordance with the State Historical Society of North Dakota guidelines. Gray & Pape determined that the Optimization will not impact any archaeological sites or cultural resources, and that no further archaeological investigations are required. A copy of the concurrence request letter submitted to the State Historical Society of North Dakota is provided as Exhibit D.1. The Class II/III Cultural Resources Inventory Report was submitted to the State Historical Society of North Dakota along with the concurrence request. The Class II/III Cultural Resources Inventory Report contains privileged and confidential information, and for that reason, it is not being filed with this application. Any future correspondence from State Historical Society of North Dakota the will be provided upon receipt.

3.2 NATURAL RESOURCE INVENTORY

On behalf of Dakota Access, Perennial also conducted an environmental survey of the approximately 20.8-acre Optimization site on April 4, 2019. The purpose of the survey was to assess the Optimization site for the following natural resources:

- Wetlands;
- Waterbodies;

- Threatened and endangered (T&E) species protected under Section 7 of the Endangered Species Act (ESA);
- Bald and golden eagles;
- Trees and shrubs that would require mitigation per the Commission’s Tree and Shrub Mitigation Specifications; and
- Noxious weeds.

Prior to visiting the Optimization site, a resource review was conducted using available background information including: historic aerial photography, U.S. Fish and Wildlife Service (FWS) National Wetland Inventory (NWI) data, FWS Information for Planning and Consultations (IPaC) system, and U.S. Geological Survey (USGS) topographic quadrangle maps.

3.2.1 WETLANDS AND WATERBODIES

A wetland delineation, which included the identification and recording of physical features that may be considered “waters of the United States” as defined by the U.S. Army Corps of Engineers (COE), was performed by Perennial to ascertain conditions within the entire 20.8-acre Optimization site. Waters of the United States include most wetlands, rivers, creeks, streams, lakes, tributaries, etc. The delineation was conducted in accordance with the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0)¹⁷ and the routine determination guidelines provided in the COE Wetland Delineation Manual (Technical Report Y-87-1).¹⁸

No wetlands meeting the three COE wetland criteria were identified within the Optimization area. However, Perennial biologists did identify one ephemeral drainage that encompasses approximately 0.02 acre of the approximately 20.8-acre Optimization site. A detailed summary of the wetland delineation is provided in the Wetland Delineation Report (refer to Exhibit D.2).

Dakota Access has designed the new pump station so that construction will avoid all impacts to the ephemeral drainage located within the Optimization site. Therefore, it has been determined that the Optimization does not require a Clean Water Act Section 404 permit from the COE prior to the start of construction.

3.2.2 THREATENED AND ENDANGERED SPECIES

A desktop review of the Optimization site was performed to determine if federally listed T&E species and/or their potential habitat could occur in the Optimization area. Additionally, the Optimization site was assessed for potential T&E species habitat during the April 4, 2019 survey.

¹⁷ U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Great Plains Region. Version 2.0. U.S. Army Engineers Research and Development Center, Vicksburg, MS.

¹⁸ U.S. Army Corps of Engineers Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineers Waterways Experiment Station, Vicksburg, MS.

The Official Species List generated by the FWS IPaC system (refer to Exhibit D.3) identified six federally listed species that could potentially occur within Emmons County, North Dakota. A brief habitat description as well as an assessment of the potential impact on each of the six federally listed species is provided in Table 3.2-1.

Table 3.2-1 Potential Federally listed Threatened and Endangered Species in the Optimization Area					
Common Name	Scientific Name	Federal Status	Habitat Descriptions	Assessment Result	Potential Impact
Mammals					
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	T	The Northern long-eared bat prefers wooded habitat. Generally, this species roosts in trees under loose bark or within cavities. Hibernation occurs within caves and mine shafts. This species has only been identified in a few locations in North Dakota. It has been documented in forested habitat in the Turtle Mountains and the riparian corridors of the Little Missouri and Missouri rivers.	Suitable habitat for the species is not present within the proposed workspace.	No Effect
Birds					
Least Tern	<i>Sterna antillarum</i>	E	Least terns use sparsely vegetated sandbars or shoreline salt flats of lakes along the Missouri River System in North Dakota. This species usually nests in small colonies (less than 20 nests) with nests spaced far apart. The nest is a hollow scrape, sometimes located among stones. The Yellowstone River, Missouri River, Lake Sakakawea, and Lake Oahe are the only areas in North Dakota where least terns reside.	Suitable habitat for the species is not present within the proposed workspace.	No Effect
Piping Plover	<i>Charadrius melodus</i>	T	The piping plover is generally characterized as using exposed, sparsely vegetated shores and islands of shallow, alkali lakes and impoundments for breeding. Salt-encrusted, alkali, or sub-saline semi-permanent lakes, ponds, and rivers with wide shorelines of gravel, sand, or pebbles are preferred. This species nests in slight hollows in the sand or shoreline, generally near an object such as a clump of grass, rock, or small log but never in heavy vegetation. The Alkali Lakes Core Area is a key area where this species is located. Many plovers also nest on sandbars of the Missouri River.	Suitable habitat for the species is not present within the proposed workspace.	No Effect
Red Knot	<i>Calidris canutus rufa</i>	T	Although red knots use primarily marine habitats on their breeding and wintering grounds, both alkaline and freshwater lakes have been used in North Dakota during migration. Red knots have been observed in the Missouri River system as well as sewage lagoons and large permanent freshwater wetlands. The observations of red knots in North Dakota are scattered throughout the state. There are no stopover sites consistently used by red knots.	Suitable habitat for the species is not present within the proposed workspace.	No Effect

Table 3.2-1 Potential Federally listed Threatened and Endangered Species in the Optimization Area					
Common Name	Scientific Name	Federal Status	Habitat Descriptions	Assessment Result	Potential Impact
Whooping Crane	<i>Grus americana</i>	E	During migration, the whooping crane uses primarily wetlands and cropland ponds for roosting, feeding, or both. Seasonal, temporary and semi-permanent wetlands are most commonly used. Large, shallow wetlands are used for roosting and smaller wetlands for foraging. Whooping cranes formerly nested in North Dakota, but no nests have been recorded for more than 100 years. North Dakota provides important stopover habitat as the few birds left in the wild migrate through during both spring and fall.	Final critical habitat for this species is located outside of the Optimization vicinity. Additionally, the Optimization site is characterized as an active agricultural field with no shallow ponds or wetlands. Therefore, there is no suitable stopover habitat located within the proposed workspace.	<i>No Effect</i>
Fish					
Pallid Sturgeon	<i>Scaphirhynchus albus</i>	E	Pallid sturgeon are generally found in stretches of large rivers with 40 to 90 cubic feet per second velocity. Areas at the end of chutes or sandbars are commonly used, most likely for energy conservation and feeding. The range of depths used varies seasonally, with most fish being found in shallow waters in the spring and deeper waters in the fall. Pallid sturgeons are most commonly found in the upper Missouri River upstream of Lake Sakakawea, and in the Yellowstone River near the confluence of the two rivers.	Suitable habitat for the species is not present within the proposed workspace.	<i>No Effect</i>
E = Endangered; T = Threatened					
Sources: FWS, 2019 ¹⁹ ; North Dakota Game and Fish, 2019 ²⁰					

Based on the results of the desktop review and site visit conducted by Perennial biologists, the proposed Optimization site does not contain suitable habitat for the six federally listed T&E species. As such, it has been determined that the Optimization will have *no effect* on the federally listed T&E species that could potentially occur in Emmons County, North Dakota. Therefore, further consultation with the FWS is not required for the Optimization.

3.2.3 MIGRATORY BIRD TREATY ACT

Although the Migratory Bird Treaty Act (MBTA) provides protection for all migratory birds, the FWS developed lists of Birds of Conservation Concern (BCC) to foster proactive conservation actions by federal and state agencies and private parties by focusing first on species of concern.²¹ In addition, the United States is divided into Bird Conservation Regions (BCR),

¹⁹ U.S. Fish and Wildlife Service: North Dakota Ecological Services Field Office. 2019. Information for Planning and Consultation Official Species List. <https://ecos.fws.gov/ipac/>. Accessed May 2019

²⁰ North Dakota Game and Fish Department. 2016. Species Identification. <https://gf.nd.gov/wildlife/id>. Accessed May 2019

²¹ FWS. 2008 Birds of Conservation Concern 2008. FWS, Division of Migratory Bird Management. Available online at <https://www.fws.gov/migratorybirds/pdf/grants/BirdsofConservationConcern2008.pdf>.

each of which has a list of birds present or possibly present within the region that are considered BCCs. The Optimization is located within BCR 17, or Badlands and Prairies.²²

The Optimization is most likely to impact migratory birds if construction and operation activities occur during the nesting season. Within the Optimization area, birds generally nest from late March to early August, with the peak nesting season for migratory birds taking place between April 15 and July 30. Clearing activity is not planned during peak nesting season, assuming regulatory approvals are received by no later than October 15, 2019, and provided that weather does not cause delay.

A portion of the Optimization site is characterized as an active agricultural field that would not provide suitable nesting habitat for the BCCs identified for BCR 17. However, the remaining portion of the site, which is characterized as open pastureland, could provide nesting habitat for 12 of the BCC species. Dakota Access intends to complete clearing efforts prior to the migratory bird nesting season. Should clearing be delayed resulting in clearing during the nesting season, Dakota Access will develop a Migratory Bird Conservation and Compliance Plan to outline measures it will implement to avoid, minimize, and reduce possible impacts on migratory birds.

3.2.4 BALD AND GOLDEN EAGLE PROTECTION ACT

Bald and golden eagles are protected by both the MBTA and the Bald and Golden Eagle Protection Act (BGEPA). The BGEPA prohibits the take of bald or golden eagle adults, juveniles, or chicks, including their parts, nests, or eggs without a permit. Take is defined by the BGEPA as to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb. The BGEPA also addresses impacts resulting from human induced alterations occurring around previously used nesting sites.

A review of the Optimization site was conducted on April 4, 2019 to determine the potential presence of bald and golden eagles and/or their nests. No primary or secondary signs of bald or golden eagles or active nests were observed within the Optimization vicinity. Further, there is no suitable nesting habitat located within the Optimization site.

3.2.5 TREE/SAPLING/SHRUB INVENTORY

The survey conducted on April 4, 2019 confirmed that no trees, saplings, or shrubs are present within the proposed Optimization site.

3.2.6 NOXIOUS WEEDS INVENTORY

The Federal Noxious Weed Act of 1974 established a federal program to control the spread of noxious weeds. The U.S. Secretary of Agriculture was given the authority to declare

²² Bird Studies Canada and NABCI. 2014. Bird Conservation Regions. Published by Bird Studies Canada on behalf of the North American Bird Conservation Initiative. <http://www.birdscanada.org/research/gislab/index.jsp?targetpg=bcr>.

plants “Noxious Weeds” and limit the interstate spread of such plants without a permit. Two federally listed noxious weeds (*Cuscuta L.* and *Orobancha ludoviciana*) occur in North Dakota.

North Dakota law (North Dakota Century Code § 4.1-47-02) requires every person to do all things necessary and proper to control the spread of noxious weeds and makes it illegal for any person to distribute, sell, or offer for sale within this state a noxious weed. The North Dakota Department of Agriculture (NDDA) lists 13 species of noxious weed and invasive species.

In addition to the NDDA noxious weed and invasive species list, localized weed boards within each county manage noxious weeds and invasive species, and may develop a list of additional weeds for enforcement within their jurisdiction. Emmons County has designated four species of noxious weeds.

It is Dakota Access’s intent to minimize the potential introduction and/or spread of undesirable species (i.e., invasive species and noxious weeds) within the Optimization site during construction activities. However, it is not practicable for Dakota Access to eradicate undesirable species that are outside the site boundary. Dakota Access will comply with the previously submitted DAPL Weed Management Plan.

4.0 AGENCY NOTIFICATIONS AND PERMITTING

As part of general company planning and project development, Dakota Access maintains relationships with and has been in recent contact with federal, state, and local agencies and organizations that have an interest in the area surrounding the Optimization site. Per the Commission’s regulations, Dakota Access has noticed each of the agencies identified in Table 4.0-1 regarding the Optimization. Dakota Access will provide the Commission with any future correspondence with the agencies upon receipt.

Agency Name	Notice Submittal Date	Date of Response
Aeronautics Commission	6/12/2019	6/14/2019
Attorney General	6/12/2019	Pending
County Commission	6/12/2019	Pending
Department of Agriculture	6/12/2019	Pending
Department of Career and Technical Education	6/12/2019	Pending
Department of Commerce	6/12/2019	Pending
Department of Human Services	6/12/2019	Pending
Department of Transportation	6/12/2019	Pending
Department of Trust Lands	6/12/2019	Pending
Energy Development Impact Office	6/12/2019	Pending
Federal Aviation Administration	6/12/2019	Pending
North Dakota Game and Fish Department	6/12/2019	Pending
North Dakota Office of the Governor	6/12/2019	Pending
Indian Affairs Commission	6/12/2019	Pending
Industrial Commission	6/12/2019	Pending
North Dakota Department of Labor and Human Rights	6/12/2019	Pending
North Dakota Pipeline Authority	6/12/2019	Pending
North Dakota Transmission Authority	6/12/2019	Pending
North Dakota Parks and Recreation Department	6/12/2019	Pending
North Dakota State Soil Conservation Committee	6/12/2019	Pending
State Department of Health	6/12/2019	Pending
State Historical Society of North Dakota	6/12/2019	Pending
State Water Commission	6/12/2019	Pending
U.S. Army Corps of Engineers	6/12/2019	Pending
U.S. Department of Defense	6/12/2019	Pending
U.S. Fish and Wildlife Service	6/12/2019	Pending

5.0 CRITERIA

In accordance with North Dakota Administrative Code § 69-06-08-02, Dakota Access evaluated the location of the Optimization site in relation to the Commission’s Exclusion Area, Avoidance Area, and Selection Criteria. No exclusion area or avoidance areas are located within the new pump station site. As discussed above, no cultural or natural resources will be impacted, and the analysis with respect to the remaining selection criteria remains largely consistent with the information set forth in Section 3.4 of the Application for a Route Permit, except as it relates to the conversion of approximately 20.8 acres of agricultural land to industrial use. Further, Dakota Access has concluded that the proposed modifications do not alter the conclusion that minimal adverse impacts will result from the location, construction, and operation of the Optimization at the adjusted locations, as set forth in Conclusions of Law Paragraph No. 4 of the Commission’s Order.

5.1 EXCLUSION AREAS

Table 5.1-1 Exclusion Areas			
Exclusion Area	Located within the Study area	Located within the Optimization site	Administering Agency
National parks	No	No	National Park Service (USNPS)
National Memorial Parks	No	No	USNPS
National Historic Sites and Landmarks	No	No	USNPS
National Natural Landmarks	No	No	USNPS
National Wilderness Areas	No	No	USNPS and U.S. Forest Service (USFS)
National Monuments	No	No	USNPS and State Historical Society
State Parks	No	No	State Park Service
State Historic Sites	No	No	State Historical Board
State Monuments	No	No	State Historical Board
State Historical Markers	No	No	State Historical Society
State Archaeological Sites	No	No	State Historical Board
State Nature Preserves	No	No	State Park Service
County parks and Recreation Areas, Municipal Parks, and Parks under Other Governmental Jurisdiction	No	No	Various
Areas Critical to the Life Stages of Threatened or Endangered Animal or Plant Species	No	No	FWS

Table 5.1-1 Exclusion Areas			
Exclusion Area	Located within the Study area	Located within the Optimization site	Administering Agency
Areas Where Animal or Plant Species Unique or Rare to the State Would be Irreversibly Damaged	No	No	Various
Areas within 1,200 feet of an ICBM facility	No	No	Department of Defense
Areas within 30 feet of direct line of ICBM launch facility	No	No	Department of Defense

5.2 AVOIDANCE AREAS

Table 5.2-1 Avoidance Areas			
Avoidance Area	Located within the Study area	Located within the Optimization site	Administering Agency
National Historic Districts	No	No	State Historic Society
National Wildlife Areas	No	No	FWS
National Wild, Scenic, or Recreational Rivers	No	No	Heritage Conservation Recreation Service, State
National Wildlife Refuges	No	No	FWS
National Grasslands	No	No	USFS
State Wild, Scenic or Recreational Rivers	No	No	State of North Dakota Legislative Assembly
State Game Refuges	No	No	NDGF
State Game Management and Management Areas	No	No	NDGF
State Forests	No	No	State Forest Service
State Forest management Lands	No	No	State Forest Service
State Grasslands	No	No	State park Service
Historical Resources which are not specifically designated as Exclusion or Avoidance Areas	No	No	State and County Historical Society
Areas which are Geologically unstable	No	No	State Geological Survey
Within 500 Feet of a Residence, School or Place of Business	No	No	Landowner
Reservoirs	No	No	U.S. Army Corps of

Table 5.2-1 Avoidance Areas			
Avoidance Area	Located within the Study area	Located within the Optimization site	Administering Agency
			Engineers and State Water Commission
Municipal Water Supplies	No	No	State Water Commission
Water Sources for Organized Rural Water Districts	No	No	State Water Commission
Irrigated Land	No	No	State Water Commission
Areas of Recreational Significance but not designated Exclusion Areas	No	No	Various

5.3 SELECTION CRITERIA

Table 5.3-1 Selection Criteria	
Selection Criteria	Discussion
Impacts on Agriculture	
Agricultural Production	A majority of the Optimization area is utilized for agriculture and livestock production. Construction and operation of the Optimization would result in the permanent conversion of 20.8 acres of agricultural land to industrial land, which would result in the loss of crop production. Additionally, the Optimization would permanently impact approximately 6.36 acres that are considered prime farmland; however, this area is currently not utilized for crop production. All temporarily impacted areas would be restored to pre-construction conditions and would be allowed to revert back to previous land uses. Further, Dakota Access will compensate the landowner for all crop losses and/or reduced yields caused by construction of the Optimization.
Family farms and ranches	The primary impact on family farms and ranches would be the loss of crop production and grazing land as a result of the permanent conversion of the Optimization site to industrial land. However, Dakota Access will compensate the landowner for all crop losses and/or lost land use caused by the Optimization.

**Table 5.3-1
Selection Criteria**

Selection Criteria	Discussion
Land which the owner demonstrates has soil, topography, drainage, and an available water supply that cause the land to be economically suitable for irrigation	The Optimization would not impact any irrigation systems.
Surface drainage patterns and ground water flow patterns	<p>Construction of the Optimization would impact surface drainage patterns within the Optimization site as a result of the installation of impervious surfaces. However, the facilities would be designed so as to minimize these impacts to the greatest extent practicable. Dakota Access has designed the new pump station so that construction would not result in any impacts to the ephemeral drainage located within the Optimization site. Therefore, the Optimization would not result in significant impacts on surface drainages.</p> <p>Any construction impacts that may occur to groundwater flow would be in surficial aquifers and would be highly localized and temporary in nature. Therefore, no permanent impacts on groundwater flow are expected as a result of the Optimization.</p>
Impacts on Other Resources	
Sound-sensitive land uses	Construction activities would be temporary and limited primarily to the daylight hours. Operation-related noise would be associated with normal operations of a pump station. The nearest noise-sensitive area (e.g., a residence) is located approximately 1,500 feet south of the Optimization site. Dakota Access will comply with all applicable noise requirements and regulations; therefore, noise-related impacts associated with construction and operation of the Optimization will be insignificant.
The visual effect on the adjacent area	The visual landscape surrounding the Optimization site consists of open agricultural fields and pastureland with occasional rural structures, roadways, and overhead powerlines. The landscape is open with long sightlines and few vertical features to break the horizon. The proposed aboveground facilities would result in a permanent visual effect on the adjacent area; however, the pump station is located in a rural setting and would only be visible to those in the immediate vicinity of the facility.

**Table 5.3-1
Selection Criteria**

Selection Criteria	Discussion
Extractive and storage resources	Based on a review of information provided by the North Dakota Department of Mineral Resources, Oil and Gas Division, the Project would not impact any oil and gas wells. Additionally, the Optimization would not impact any gravel/sand mines, economically viable coal deposits, or uranium resources.
Wetlands, woodlands, and wooded areas	Based on the results of the surveys conducted on April 4, 2019, Optimization would not impact any wetlands, woodlands, or wooded areas.
Radio and television reception, and other communication or electronic control facilities	Based on a review of publically available information, no radio and TV reception and other communication or electronic facilities are located within the Optimization area. Therefore, no impacts on these facilities are anticipated as a result of the Optimization.
Human health and safety	During construction, residences in proximity to construction activities will be exposed to short-term increases in construction-related noise and dust. Dakota Access will minimize these impacts by limiting construction to the daylight hours to the greatest extent practicable, and by applying water to all disturbed areas to minimize fugitive dust emissions. All Optimization facilities would be constructed in accordance with or exceedance of all applicable laws and standards. These regulations are intended to ensure adequate protection of the public and to prevent accidents and failures. Further, Dakota Access would ensure that an extensive public education and outreach program is developed to promote public awareness of the safety standards associated with the construction and operation of the pump station.
Animal health and safety	Construction of the Optimization would have minor impacts on domestic animals and wildlife. The clearing of vegetation would reduce cover, nesting, and foraging habitat for some species, and would displace individuals that utilize these areas. All temporarily impacted areas would be restored to pre-existing conditions; therefore, it is likely that wildlife could reestablish within these areas upon completion of construction. Temporary fencing would also be installed as necessary to keep livestock and wildlife away from the Optimization site during construction.

Table 5.3-1 Selection Criteria	
Selection Criteria	Discussion
Plant life	Construction of the Optimization would result in the permanent removal of vegetation in areas that are converted from their current land uses (e.g., agricultural field and pastureland) to industrial land. Vegetation clearing would be kept to the minimum necessary to successfully construct the Optimization. In areas that require revegetation, Dakota Access would specify appropriate native seed mixes, application, and timing such that recommendations of federal, state, and landowners are taken into account.

5.4 POLICY CRITERIA

In accordance with North Dakota Administrative Code § 69-06-08-02(4), Dakota Access has analyzed the Optimization site and has concluded that the proposed site will not alter any of Dakota Access’s commitments with respect to Policy Criteria as set forth in the Findings of Fact Paragraph No. 32 of the Commission’s Order.

6.0 MITIGATION MEASURES

Dakota Access developed control documents as part of its construction of the DAPL. The control documents, where applicable, will be utilized during construction activities related to the Optimization in order to minimize and mitigate impacts to environmental resources. These plans will include, at a minimum:

- Stormwater Pollution Prevention Plan
 - Construction stormwater management and erosion/sediment control.
- Spill Prevention, Containment, and Countermeasure Plan
 - Spill prevention and best management practices, with details on spill response and notification procedures in the event of a spill.
- Unanticipated Discoveries Plan
 - Response measures to be followed in the event of a discovery of cultural resources or human remains.
- Noxious Weed Plan
 - Measures to control the spread of invasive and noxious weeds
- Dust Control Plan
 - Control of fugitive dust caused by construction activities/soil exposure

To further ensure compliance with permits, plans, obligations, and commitments, Dakota Access will employ at least one Environmental Inspector(s) (EI) during the Optimization. The EI(s) will be responsible for monitoring construction activities and will provide reports to Dakota Access staff.

7.0 QUALIFICATIONS OF PREPARES

Keegan Pieper, Associate General Counsel

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Chuck Frey, VP Engineering

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