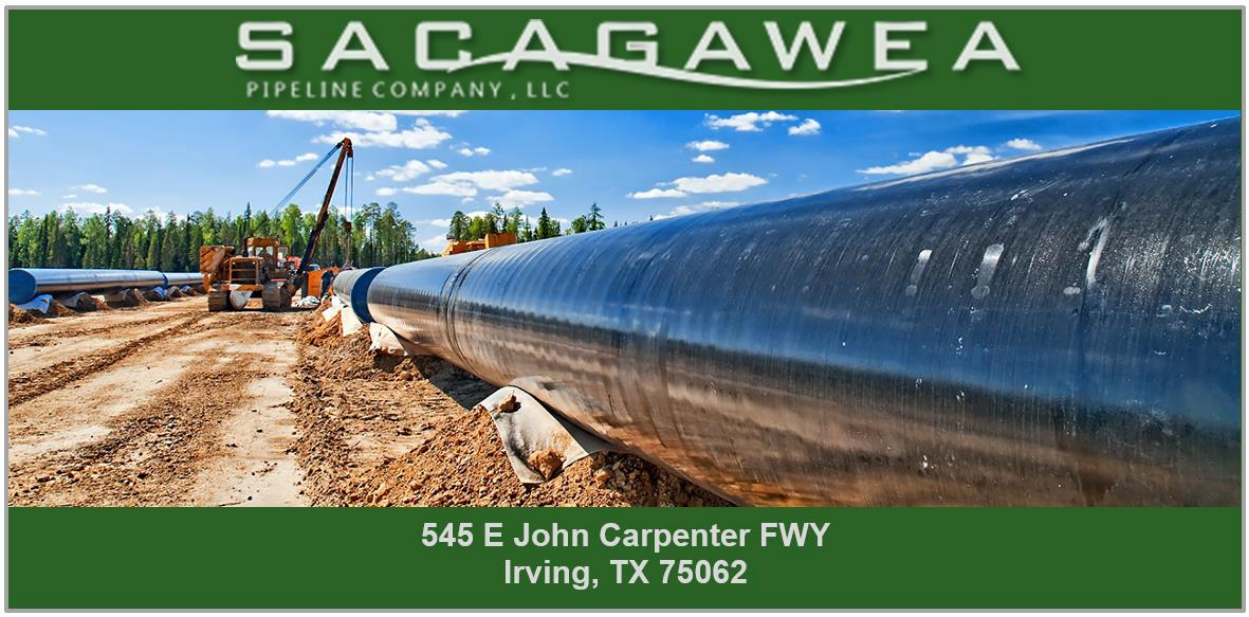
Amendment of Pipeline Route Application

PU-15-744

Johnson's Corner Connector Crude Oil Pipeline
McKenzie County

February 2016



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INTRODUCTION

Sacagawea Pipeline Company, LLC ("Sacagawea"), submitted a Route Permit Application to the North Dakota Public Service Commission ("Commission" or "PSC") for the proposed construction of a 16-inch crude oil pipeline approximately 13 miles in length located in McKenzie County, North Dakota on November 20, 2015 (PU-15-744). Since the original submittal, Sacagawea has identified the need for an additional pipeline segment that would originate from Johnson's Corner, North Dakota and terminate at an interconnection with the Dakota Access Pipeline ("DAPL"). Sacagawea has prepared this Amended Application to address this additional segment known as "JC to DAPL".

In accordance with Chapter 49-22 of the North Dakota Century Code, Section 69-06-08-02 of the North Dakota Administrative Code, and the Commission's Energy Conversion and Transmission Facility Siting Guidelines, Sacagawea provides the following information to support its amended request for a Route Permit for the Project.

SECTION A DESCRIPTION OF FACILITY

A.1 Type of Facility

The JC to DAPL segment will involve approximately 2 miles of pipeline installation. The purpose of the JC to DAPL segment will be to transport crude oil from Johnson's Corner to an interconnection with the DAPL. The interconnection with DAPL will provide pipeline access to multiple refinery markets throughout the United States, including the Illinois market.

The JC to DAPL segment would originate from a location near Johnson's Corner, North Dakota and terminate at an interconnection with DAPL. The Project is located entirely within McKenzie County. Figure A3.A.1 is an updated general location map of the entire Project.

No additional above ground facilities will result from the amendment.

The total cost of the Project is estimated to be $22.8 million.

A.2 Product

Refer to the Application as filed on November 20, 2015; no changes have resulted from the modification.

A.3 Size and Design

The JC to DAPL segment will involve approximately 2 miles of pipeline installation. The total Project will involve approximately 15 miles of pipeline installation.

Refer to the Application as filed; no other changes have resulted from the modification.

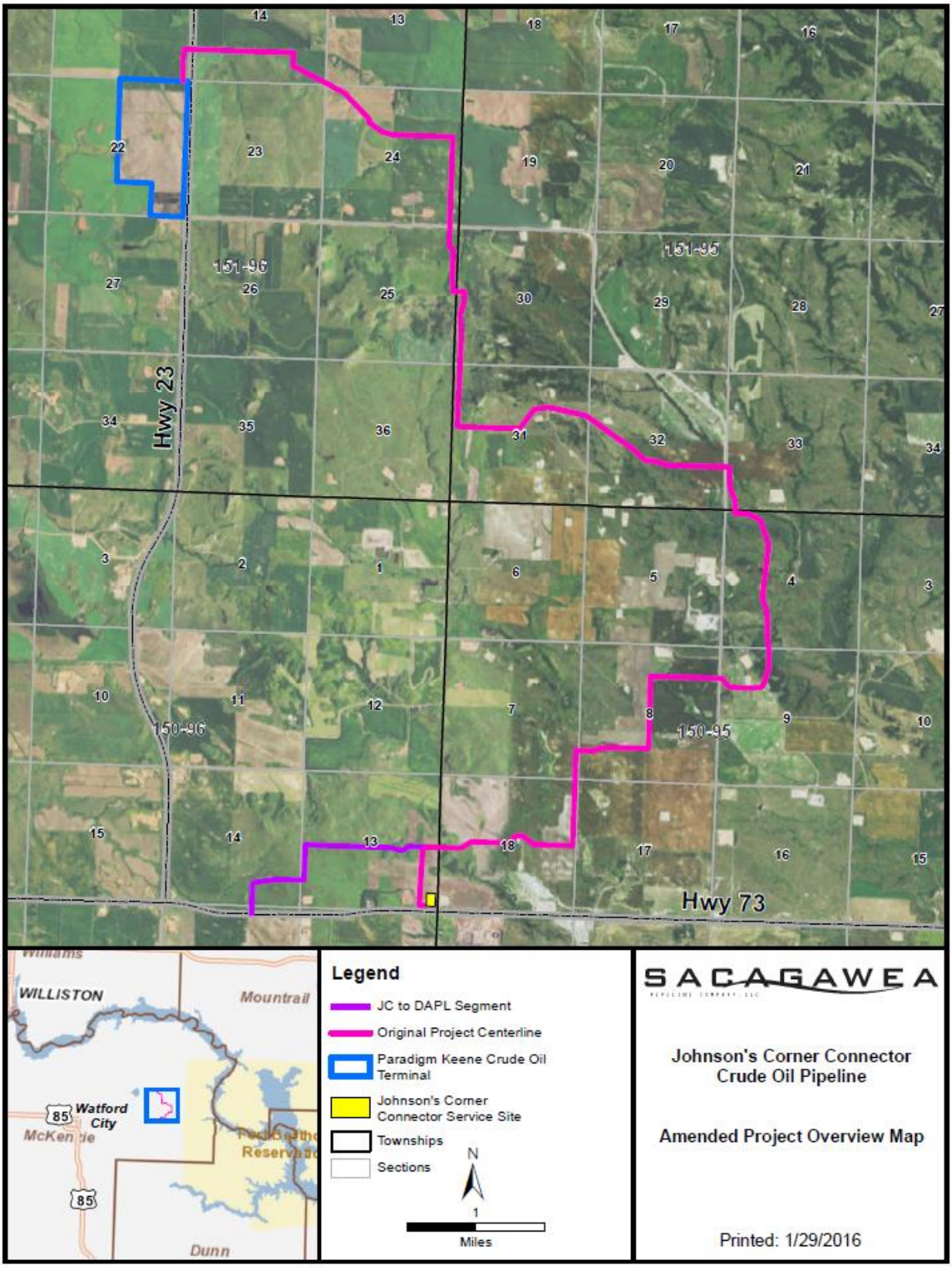

FIGURE A3.A.1 – Updated General Project Location Map

A.4 Time Schedule

Refer to the Application as filed; no changes have resulted from the modification.

SECTION B ROUTE ANALYSIS AND STUDIES

A number of criteria, including but not limited to the criteria required by Section 69-06-08-02 of the North Dakota Administrative Code, were considered in evaluating the location of the JC to DAPL segment, specifically: Exclusion and Avoidance Areas, Selection and Policy Criteria, Design and Construction Limitations, Economic Considerations, Human Environment, Soils, Vegetation/Wildlife, Land Use, Water Resources, and Cultural Resources. Each criterion is discussed in detail, including descriptions, potential impacts, and mitigation measures where appropriate, in Section B involving analysis and studies, or in Section C regarding siting criteria.

Analysis of the JC to DAPL Corridor entailed both desktop studies and field surveys. A 1-mile-wide desktop study corridor was utilized for the entire route ("Study Area"). Field surveys were conducted along the entire route on foot within the 200-foot-wide survey corridor ("Survey Area").

The proposed route has been superimposed on both aerial photographic maps as well as U.S. Geological Survey ("USGS") Topographic Maps that are presented in Tab A4 as Appendix 4.C, as well as electronically presented as ESRI ArcGIS software compatible data files in Tab A7.

The proposed Project will be subject to approval and permit conditions from other regulatory offices that have jurisdiction over portions of construction. Table A3.B.1 shows the updated status of other federal, state, and local permits that have been, or will be applied for prior to the applicable aspect of construction.

TABLE A3.B.1 – Updated Project Permit Status

Permit	Agency	Application Submitted	Status
McKenzie County Road/Section Crossing	McKenzie County	9-16-2015	Approved 9-18-2015
Additional Crossings	McKenzie County	Will be submitted prior to hearing.	
McKenzie County Conditional Use Permit	McKenzie County	12-1-2015	Approved 1-11-2016
JC to DAPL Segment	McKenzie County	Will be submitted February 2016.	
HWY 23	ND DOT	Will be submitted once contractor is picked.	
Hydrostatic Water Discharge Permit	NDDH	Will be submitted prior to discharge	
Stormwater Permit (NOI)	NDDH	Will be submitted at least 7 days prior to construction	
SWPPP Plan	NDDH	Will be prepared prior to construction	

B.1 Location

Refer to the Application as filed; no changes have resulted from the modification.

B.2 Human Environment

Road crossings for the JC to DAPL segment are summarized in Table A3.B.2. This segment transects U.S. Highway 73. A permit will be acquired from the ND Department of Transportation for this crossing. The other two crossings are section lines only (with no road).

Refer to the Application as filed; no other changes have resulted from the modification.

TABLE A3.B.2 – JC to DAPL Road Crossings

Legal Description	Coordinates	Road Name	Description of Road
McKenzie County			
SWSW S13 T150N R96W	47°48'25.26"N 102°55'11.93"W	No Road	Section Line
SWSE S14 T150N R96W	47°55'39.15"N 102°55'39.15"W	No Road	Section Line
NWNE S23 T150N R96W	47°48'11.87"N 102°55'39.14"W	U.S. Highway 73	Paved

B.3 Terrain and Geology

Refer to the Application as filed; no changes have resulted from the modification.

B.4 Soils

Refer to the Application as filed; no changes have resulted from the modification.

B.5 Vegetation and Wildlife

Keitu Engineers & Consultants, Inc. ("Keitu") of Mandan, North Dakota conducted natural resource field surveys to identify exclusion and avoidance areas as specified in North Dakota Administrative Code Section 69-06-08-02 for the JC to DAPL segment. Field surveys were conducted using a 200-foot-wide survey corridor in October of 2015. Keitu conducted a wildlife survey and habitat assessment that covered threatened and endangered species; a tree, sapling, and shrub enumeration survey; and a noxious weed survey.

B.5 (a) Vegetation

During the field survey for the JC to DAPL segment, Keitu surveyors identified three general types of vegetative communities within the Survey Area. These vegetative communities were classified as herbaceous upland, woody vegetation, and agriculture land. One noxious weed, Canada thistle (Circium arvense) was found in a road ditch.

The herbaceous upland community consists of areas dominated by non-woody vegetation such as grasses and forbs. Herbaceous uplands observed commonly consisted of smooth brome (Bromus inermis), Kentucky bluegrass (Poa pratensis), prairie Junegrass (Koeleria macrantha), crested wheatgrass (Agropyron cristatum), little bluestem (Schizachyriu, scoparium), Missouri goldenrod (Solidago missouriensis), white sage (Artemisia ludoviciana), and western snowberry (Symphoricarpos occidentalis).

Forested upland vegetation consisted of green ash (Fraxinus pennsylvanica), silver buffaloberry (Sheperdia argentea), Siberian elm (Ulmus pumila), arnold hawthorn (Crataegus arnoldiana) and chokecherry (Prunus virginana).

Two fields that are used for an agricultural purpose were confirmed in the Survey Area. One was primarily a smooth brome and crested wheatgrass hay field while the other was planted with wheat (Triticum aestivum).

B.5 (b) Wildlife

Prior to conducting field surveys, Keitu reviewed information obtained from the U.S. Fish and Wildlife Service ("USFWS"), including a list of threatened and endangered species by North Dakota county (USFWS 2015) regarding the presence of threatened or endangered species that could occur within the Survey Area. This document does not represent a comprehensive survey but rather acknowledges the past and/or current presence of listed species. The lack of discovery of threatened or endangered species during the survey does not signify their non-existence within the area, only that no primary or secondary indications of these species were recorded. Keitu completed a survey for all listed species and suitable habitat.

A line-of-sight binocular survey for raptor species was also conducted for a distance of approximately 0.5 miles. Keitu surveyors noted all wildlife observed during the field survey. Wildlife sightings can involve primary observations (i.e., actual sighting of an animal) or secondary observations (i.e., observation of scat, tracks, or fur deposits).

Several wildlife species that may exist in McKenzie County are listed as threatened or endangered under the Endangered Species Act (ESA) (USFWS 2015) (16 USC 1531 et seq.). According to the USFWS, ESA-listed endangered species in McKenzie County, North Dakota, include the black-footed ferret (*Mustela nigripes*), gray wolf (*Canis lupus*), whooping crane (*Grus americana*), interior least tern (*Sterna antillarum*), and pallid sturgeon (*Scaphirhynchus albus*). Threatened species include the piping plover (*Charadrius melodus*) and its designated critical habitat, Dakota skipper (*Hesperia dacotae*) and its designated critical habitat, rufa red knot (*Calidris canutus rufa*), and northern long-eared bat (*Myotis septentrionalis*). In addition, Sprague's pipit (*Anthus spragueii*) is a candidate species. During Keitu's survey, no primary indication (i.e., actual sighting) or secondary indication (i.e., tracks, scat, fur, or feathers) of the presence of threatened or endangered species were identified.

Due to a lack of suitable habitat, the proposed Project is not expected to result in a taking of the gray wolf or black-footed ferret. The whooping crane, interior least tern, piping plover, and rufa red knot have the potential to occur within the Study Area as migrants. However, due to the low probability of occurrence and only temporary disturbance during construction, take of those species is not expected. The Study Area occurs within the same watershed as Lake Sakakawea; Lake Sakakawea, however, is approximately 22 stream miles from the Project, so take of the pallid sturgeon is not expected. The northern long-eared bat has the potential to

occur within the Study Area, which may contain suitable habitat. However, due to the relatively minor impact to the area's woody vegetation, and the fact that the Study Area is on the edge of the bat's habitat range, take of the northern long-eared bat is not expected. Also, under an ESA Section 4(d) interim rule, incidental take of this species is exempt in North Dakota. Field surveys confirmed a lack of suitable habitat for the Dakota skipper; therefore, take of the Dakota skipper is not expected. As a candidate species, no requirement to consider effects to Sprague's pipit exists under the ESA. Nevertheless, the proposed Project is not likely to contribute to the future listing of the Sprague's pipit.

B.6 Cultural Resource Studies

Beaver Creek Archaeology, Inc. ("Beaver Creek") conducted a Class I cultural resource inventory in support of the amendment of this Project to include the JC to DAPL segment.

The file search revealed eight sites and twelve isolated finds within a one-mile radius of the JC to DAPL segment. None of the previously recorded cultural resources are located within the Project ROW and will not be impacted by this proposed project. Portions of the segment have been previously inventoried at Class III levels. However, approximately 5,750 feet of the segment has not been surveyed for cultural resources. Due to the number of previously recorded sites and isolated finds in the vicinity, BCA recommends a Class III for those portions not previously surveyed at a Class III level. A Class III field survey will be performed on a 200-foot-wide corridor prior to the hearing.

Beaver Creek has been contracted to complete a Class III cultural resource inventory on the entire JC to DAPL segment. The State Historic Preservation Office will be provided with a complete version of the Class III Cultural Resource Inventory report issued by Beaver Creek.

The cultural resource location details are not presented here in a publicly available document per request of the North Dakota State Historic Society. The abstract of the Class I report is being submitted as part of this application in Tab A4 as Appendix 4.D. The Class III Report abstract will be made available prior to the hearing.

B.7 Land Use

Refer to the Application as filed; no changes have resulted from the modification.

B.8 Water Resources

B.8 (a) Water Resources-Ground Water

Refer to the Application as filed; no changes have resulted from the modification.

B.8 (b) Surface Waters

Topographic maps and current aerial photos were reviewed to identify streams, rivers, lakes, and wetlands near the Project. No additional waterbody crossings were identified for the JC to DAPL segment.

Refer to the Application as filed; no other changes have resulted from the modification.

B.8 (c) Wetlands

Refer to the Application as filed; no changes have resulted from the modification.

B.8 (d) Water Use

Refer to the Application as filed; no changes have resulted from the modification.

B.8 (e) Water Runoff from Surfaces

Refer to the Application as filed; no changes have resulted from the modification.

B.8 (f) Discharges to Surface Waters

Refer to the Application as filed; no changes have resulted from the modification.

B.8 (g) Protection from Fuel Spills

Refer to the Application as filed; no changes have resulted from the modification.

SECTION C SITING CRITERIA

C.1 Relative Value and Effects upon Each Criterion Including Location, Construction, and Operation of the Facility (N.D.A.C. § 69-06-05-01(2)(k))

Refer to the Application as filed; no changes have resulted from the modification.

A general analysis of the existing human and natural environment along the JC to DAPL segment and potential impacts of ROW preparation, construction practices, and operation and maintenance procedures for the JC to DAPL segment are included in Section B. The additional factors and criteria to be considered are discussed below.

C.2 Factors to be Considered in Evaluating Applications and Designation of Sites, Corridors, and Routes (N.D.C.C. § 49-22-09)

C.2 (a) Available Research and Investigations Relating to the Effects of the Location, Construction, and Operation of the Proposed Facility on Public Health and Welfare, Natural Resources, and the Environment

Keitu conducted natural resource field surveys to identify exclusion and avoidance areas for the JC to DAPL segment using a 200-foot-wide survey corridor in October of 2015. Beaver Creek conducted a Class I Cultural Resource Inventory in January of 2016.

C.2 (b) The Effects of New Energy Conversion and Transmission Technologies and Systems Designed to Minimize Adverse Environmental Effects

The Project does not include new energy conversion or transmission technologies. The Project design is consistent with existing pipeline technologies.

C.2 (c) The Potential for Beneficial Uses of Waste Energy from a Proposed Energy Conversion Facility

The Project does not involve construction of an energy conversion facility.

C.2 (d) Adverse Direct and Indirect Environmental Effects which cannot be Avoided Should the Proposed Site or Route be Designated

Refer to the Application as filed; no changes have resulted from the modification.

C.2 (e) Alternatives to the Proposed Site, Corridor, or Route which are Developed During the Hearing Process and which Minimize Adverse Effects

The route was selected based on voluntary landowner participation and landowner input regarding the specific location of the Project. The route is described in Section A and depicted in diagrams presented in Tab A4. Studies and surveys were done to choose the route which would minimize adverse effects.

C.2 (f) Irreversible and Irretrievable Commitments of Natural Resources Should the Proposed Site, Corridor, or Route be Designated

Sacagawea is not aware of any irreversible or irretrievable commitments of natural resources that would result from the requested approvals.

C.2 (g) The Direct and Indirect Economic Impacts of the Proposed Facility

Refer to the Application as filed; no changes have resulted from the modification.

C.2 (h) Existing Plans of the State, Local Government, and Private Entities for Other Developments at or in the Vicinity of the Proposed Site, Corridor, or Route

Refer to the Application as filed; no changes have resulted from the modification.

C.2 (i) The Effect of the Proposed Site or Route on Existing Scenic Areas, Historic Sites and Structures, and Paleontological or Archaeological Sites

Beaver Creek has been contracted to complete a Class III cultural resource inventory on the entire JC to DAPL segment. The State Historic Preservation Office will be provided with a complete version of the Class III Cultural Resource Inventory report issued by Beaver Creek.

The cultural resource location details are not presented here in a publicly available document per request of the North Dakota State Historic Society. The abstract of the Class I report is being submitted as part of this application in Tab A4 as Appendix 4.D. The Class III Report abstract will be made available prior to the hearing.

C.2 (j) The Effect of the Proposed Route on Areas which Are Unique Because of Biological Wealth or Because They are Habitats for Rare and Endangered Species

Keitu conducted a threatened and endangered species survey for the Project. Biologists observed no primary indication (i.e., actual sighting) or secondary indication (i.e., tracks, scat, fur, or feathers) of the presence of threatened or endangered species.

Due to a lack of suitable habitat, the proposed Project is not expected to result in take of the gray wolf or black-footed ferret. The whooping crane, interior least tern, piping plover, and rufa red knot have the potential to occur within the Study Area as migrants. However, due to the low probability of occurrence and only temporary disturbance during construction, take of those species is not expected. The Study Area occurs within the same watershed as Lake Sakakawea; Lake Sakakawea, however, is approximately 22 stream miles from the Project, so take of the pallid sturgeon is not expected. The northern long-eared bat has the potential to occur within the Study Area, which may contain suitable habitat. However, due to the relatively minor impact to the area's woody vegetation, and the fact that the Study Area is on the edge of the bat's habitat range, take of the northern long-eared bat is not expected. Also, under an ESA Section 4(d) interim rule, incidental take of this species is exempt in North Dakota. Field surveys confirmed a lack of suitable habitat for the Dakota skipper; therefore, take of that species is not expected. As a candidate species, no requirement to consider effects to Sprague's pipit exists under the ESA. Nevertheless, the proposed Project is not likely to contribute to the future listing of the Sprague's pipit.

C.2 (k) Problems Raised by Federal Agencies, Other State Agencies, and Local Entities

No problems or concerns have been raised by federal agencies, state agencies, or local entities.

C.3 Exclusion Areas (N.D.A.C. § 69-06-08-02(1))

Refer to the Application as filed; no changes have resulted from the modification.

C.4 Avoidance Areas (N.D.A.C. § 69-06-08-02(2))

Refer to the Application as filed; no changes have resulted from the modification.

C.5 Selection Criteria (N.D.A.C. § 69-06-08-02(3))

C.5 (a) – (i)

Refer to the Application as filed; no changes have resulted from the modification.

C.5 (j) Impact on Woodlands and Wooded Areas

During Keitu's work, two (2) upland tree areas were geographically referenced within the Survey Area. Keitu recorded all trees with a diameter breast height of 1 inch or greater. It was determined that 497 trees, saplings, or shrubs are located within the 100-foot-wide construction ROW.

Impacts to trees will be avoided to the extent practicable in a manner compatible with safe operation, maintenance, and inspection of the pipeline. It may become necessary to clear some mature trees during construction; however, Sacagawea will work with the appropriate state agencies and private landowners to determine appropriate replacement measures following construction.

Sacagawea will satisfy the requirements of the Commission's Tree and Shrub Mitigation Specifications regarding replacement of trees and shrubs impacted by the Project.

C.5 (k) – (n)

Refer to the Application as filed; no changes have resulted from the modification.

C.6 Policy Criteria (N.D.A.C. § 69-06-08-02(4))

Refer to the Application as filed; no changes have resulted from the modification.

C.7 Design and Construction Limitations

Refer to the Application as filed; no changes have resulted from the modification.

C.8 Economic Considerations

Refer to the Application as filed; no changes have resulted from the modification.

SECTION D MITIGATION MEASURES

Refer to the Application as filed; no changes have resulted from the modification.

SECTION E QUALIFICATIONS OF PERSONS CONTRIBUTING TO THE STUDY

The qualifications of the personnel who contributed to the route application include:

(1) Thomas G. Janik, VP Engineering – Paradigm Energy Partners, LLC

Degree: Bachelor of Science - Civil Engineering, Texas A&M University

Experience: 38 years of experience in the oil and gas industry including executive management experience in engineering and corrosion services, project and construction management, operations, and pipeline and facilities construction. In addition, he is experienced in the development and management of pipeline integrity management process safety management programs.

(2) Kathleen Spilman, Managing Director – Keitu Engineers & Consultants, Inc.

Degree: Bachelor of Science - Chemical Engineering, University of North Dakota
Masters in Management, University of Mary

Experience: 33 years' experience in petroleum refining and fuels transportation field as well as regulatory affairs and compliance.

Professional License: Registered Professional Engineer: North Dakota, South Dakota, Montana

(3) Heather Patch, Staff Engineer (Chemical) – Keitu Engineers & Consultants, Inc.

Degree: Bachelor of Science - Chemical Engineering, University of North Dakota

Experience: 3 years' experience in engineering, regulatory affairs and compliance.

SECTION F MAPS

See Tab A4, Figure A4.C, for the Project Mapbook and Tab A7 for ESRI software shapefiles.

SECTION G OTHER MATTERS

Refer to the Application as filed; no changes have resulted from the modification.