

Appendix C

Consultations



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
3425 Miriam Avenue
Bismarck, North Dakota 58501



APR 20 2011

Mr. William McCarthy
Project Manager
E3 Environmental, LLC
817 Vandalia Street
Suite 100
St. Paul, Minnesota 55114

Re: Arrow Pipeline, LLC – 4 Bears CDP Connect
Project

Dear Mr. McCarthy:

The U.S. Fish and Wildlife Service (Service) has reviewed 4 Bears CDP Connect Pipeline Project in McKenzie County, ND. The project would entail approximately 1.5 miles of new 8-inch diameter pipeline. The proposed project would transport crude from an existing facility at the eastern terminus of the proposed project to the existing 4 Bears pipeline at the western terminus of the proposed project. The specific location is as follows:

T. 150 N., R. 95 W., S. 17-20
T. 150 N., R. 96 W., S. 13, 24

We offer the following comments under the authority of and in accordance with the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 et seq.), the Endangered Species Act (ESA) (16 U.S.C. 1531 et seq.), and the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668-668d, 54 Stat. 250).

Below are recommendations to assist in complying with each of these authorities. Your plans should integrate these recommendations to ensure compliance. Recommendations addressing the trust resources under Service authorities are tailored to address protective measures for a variety of species. As such, recommended timing restrictions are not identical and the Federal action agency or project proponent should evaluate the trust resources that may be affected by the proposed project and use the protective timing restriction accordingly.

Threatened, Endangered and Candidate Species

A list of federally endangered and threatened species that may be present within the proposed project's area of influence is enclosed. This list fulfills requirements of the Service under the Endangered Species Act. This list remains valid for 90 days.

Section 10(a)(1)(B) of the ESA allows non-Federal parties planning activities that have no Federal nexus, but which could result in the incidental taking of listed animals, to apply for an incidental take permit. (A Federal nexus exists whenever an activity is conducted, funded, or licensed or permitted by a Federal agency). The application must include a habitat conservation plan (HCP) laying out the proposed actions, determining the effects of those actions on federally-listed plant and wildlife species and their habitats (and may include proposed or candidate species), and defining measures to minimize and mitigate adverse effects.

The Aransas Wood Buffalo Population (AWBP) of endangered whooping cranes is the only self-sustaining migratory population of whooping cranes remaining in the wild. These birds breed in the wetlands of Wood Buffalo National Park in Alberta and the Northwest Territories of northern Canada, and overwinter on the Texas coast. Whooping cranes in the AWBP annually migrate through North Dakota during their spring and fall migrations. They make numerous stops along their migration route to feed and roost before moving on.

Endangered whooping cranes have been documented using stopover habitat in the vicinity of this proposed pipeline. The proposed pipeline is located within that portion of the whooping crane migration corridor that includes 95% of all confirmed whooping crane sightings in North Dakota extending into Montana (enclosure 2). The presence of suitable roosting and feeding habitat for whooping cranes, and location within the whooping crane migration corridor, document the potential for whooping crane presence in the proposed project area.

The highest known source of mortality to fledged whooping cranes is from striking power lines. Currently, collisions with power lines have accounted for the death or serious injury of at least 46 whooping cranes since 1956. If power lines will be constructed in association with this project, the Service recommends they be placed underground to avoid collision mortality. If underground construction is not practicable, we recommend installation and maintenance of visual marking devices on all new power lines within 1 mile of potentially suitable whooping crane stopover habitat and an equal length of existing power line in the whooping crane migration corridor within 1 mile of potentially suitable whooping crane habitat. The additional line marking is necessary because data suggests that marking is only from 50-to-80 percent effective. Some of the available marking devices include: aerial marker spheres, swinging plates, spiral vibration dampers, and bird flight diverters.

Whooping cranes are unlikely to spend more than a few days in any one spot during migration. The Service suggests that Bridger include a requirement that if a whooping crane is sighted within 1 mile of the proposed project area during construction, that all work cease within 1 mile

of that part of the project and the Service be contacted immediately. In coordination with the Service, work may resume after the bird(s) leave the area.

Sprague's pipit was added to the candidate species list in 2010. Migratory bird species, such as the Sprague's pipit that are candidates, are not protected under the ESA, but are still protected under the MBTA. Sprague's pipits require large patches of grassland habitat for breeding, with preferred grass height between 4 and 12 inches. The species prefers to breed in well-drained, open grasslands and avoids grasslands with excessive shrubs. They can be found in lightly-to-heavily grazed areas. They avoid intrusive human features on the landscape, so the impact of a development can be much larger than the actual footprint of the feature. The proposed pipeline route crosses suitable Sprague's pipit habitat. A major reason that the Sprague's pipit was listed as a candidate species is because of habitat fragmentation and conversion. The proposed project has the potential to contribute to fragmentation, if the project route is not reclaimed fully or if the disturbance creates a pathway for exotic species to spread into the nearby prairie. The Service requests that you document any steps taken to avoid and minimize disturbance of this habitat, and to reclaim the habitat. If the pipeline followed the section line more closely, impacts to grassland habitat could be reduced. Information regarding your decision on project placement should be shared with our office.

The Dakota skipper is a small-to-medium-sized hesperiine butterfly associated with high-quality prairie ranging from wet-mesic tallgrass prairie to dry-mesic mixed grass prairie. The first type of habitat is relatively flat and moist native bluestem prairie. Three species of wildflowers are usually present: wood lily (*Lilium philadelphicum*), harebell (*Campanula rotundifolia*), and smooth camas (*Zygadenus elegans*). The second habitat type is upland (dry) prairie that is often on ridges and hillsides. Bluestem grasses and needlegrasses dominate these habitats. On this habitat type, three wildflowers are typically present in high-quality sites that are suitable for Dakota skipper: pale purple (*Echinacea pallida*) and upright (*E. angustifolia*) coneflowers and blanketflower (*Gaillardia sp.*). Because of the difficulty of surveying for Dakota skippers and a short survey window, we recommend that the project avoid any impacts to potential Dakota skipper habitat.

For candidate species such as the Dakota skipper and Sprague's pipit, non-Federal applicants can conference with the Service to ensure that their actions do not negatively impact candidate species. We can work with you to develop a programmatic document to avoid impacts to candidates for this and future projects.

Bald and Golden Eagles

The BGEPA prohibits anyone without a permit issued by the Secretary of the Interior from taking bald eagles, including their parts, nests, or eggs. The Act provides criminal and civil penalties for persons who take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald or golden eagle, alive or dead, or any part, nest, or egg thereof. The Act defines take as pursue, shoot, shoot at, poison, wound,

kill, capture, trap, collect, molest or disturb. "Disturb means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagles return, such alterations agitate or bother an eagle to a degree that injures an eagle or substantially interferes with normal breeding, feeding, or sheltering habits and causes, or is likely to cause, a loss of productivity or nest abandonment.

There are numerous documented golden eagle nests in McKenzie County. The Service recommends surveying ½ mile out from the proposed pipeline route to determine the presence of any eagle nests. Ideally, surveys should be conducted between March 1 and May 15, before leaf-out so that nests are visible. If an eagle nest is observed within ½ mile of the proposed pipeline route, the Service requests that the pipeline be re-routed to avoid the nest. The Service requests that the nest location be documented. A permit is required for any take of bald or golden eagles or their nests. Permits to take bald eagles or their nests are available only for legitimate emergencies or as part of a program to protect bald eagles.

Migratory Birds

The MBTA prohibits the taking, killing, possession, and transportation (among other actions) of migratory birds, their eggs, parts, and nests, except when specifically permitted by regulations. While the MBTA has no provision for allowing unauthorized take, the Service realizes that some birds may be killed during project construction and operation even if all known reasonable and effective measures to protect birds are used. The Service Office of Law Enforcement carries out its mission to protect migratory birds through investigations and enforcement, as well as by fostering relationships with individuals, companies, and industries that have taken effective steps to avoid take of migratory birds, and by encouraging others to implement measures to avoid take of migratory birds. It is not possible to absolve individuals, companies, or agencies from liability even if they implement bird mortality avoidance or other similar protective measures. However, the Office of Law Enforcement focuses its resources on investigating and prosecuting individuals and companies that take migratory birds without identifying and implementing all reasonable, prudent, and effective measures to avoid that take. Companies are encouraged to work closely with Service biologists to identify available protective measures when developing project plans and/or avian protection plans, and to implement those measures prior to/during construction or similar activities.

The letter states that the proposed project will begin in July. Note that bald and golden eagles and other raptors can start nesting activities as early as February 1, and may actively use the nest through August 31. Most other species have largely completed nesting by July 15, so postponing construction until after then would reduce impacts to migratory birds. If work is proposed to

take place during the breeding season or at any other time which may result in the take of migratory birds, their eggs, or active nests, the Service recommends that the project proponent implement all practicable measures to avoid all take, such as suspending construction where necessary, and/or maintaining adequate buffers to protect the birds until the young have fledged. The Right of Way (ROW) where the proposed pipeline will be placed can be mowed or cleared and grubbed prior to the nesting season to make it unsuitable for most nesting bird species; however, note that many grassland bird species will begin to nest in May. The Service further recommends that if you choose to conduct field surveys for nesting birds with the intent of avoiding take, that you maintain any documentation of the presence of migratory birds, eggs, and active nests, along with information regarding the qualifications of the biologist(s) performing the survey(s), and any avoidance measures implemented at the project site. Should surveys or other available information indicate a potential for take of migratory birds, their eggs, or active nests, the Service requests that you contact this office for further coordination on the extent of the impact and the long-term implications of the intended use of the project on migratory bird populations.

Even if all measures are taken to avoid take of migratory birds during the construction phase, there is likely to be some migratory bird take associated with the ongoing operation and maintenance of the proposed pipeline. The Service recommends that the applicant develop a Conservation Plan in cooperation with the Service to identify potential impacts to migratory birds during all phases of the proposed project. This Conservation Plan should evaluate impacts both from the immediate footprint of the project as well as from the larger impacts from ongoing disturbance. We recommend that this plan include a Habitat Equivalency Analysis or similar habitat analysis method, which may include funding to allow for conservation actions to be directed towards the greatest needs of migratory birds in the proposed pipeline project area.

High-Value Habitat Avoidance

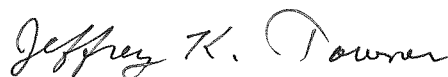
- Our review of the National Wetland Inventory (NWI) maps and photographs indicates the proposed planning area includes numerous wetland basins and stream channels. You may access the NWI data directly through their website (wetlands.fws.gov). Projects which involve the burying of a pipeline should not significantly affect wetland basins or stream channels, provided precautions are taken to restore natural basin contours. Precautions should also be taken during installation of underground facilities by sufficiently compacting trenches through the wetlands to prevent drainage along the trench or through bottom seepage. The Service recommends that construction through or adjacent to these areas be avoided where possible or measures be taken (e.g. directional boring) to minimize disturbance to these areas.
- Avoid construction in native prairie, if possible, and reseed disturbed native prairie with a comparable native grass/forb seed mixture. The Service recommends planting a diverse mixture of native cool and warm season grasses and forbs. Recent research has

suggested that a more diverse mix, including numerous forb species, is not only ecologically beneficial, but is also more weed resistant, allowing for less intensive management and chemical use. In essence, the more species included in a mixture, the higher the probability of providing competition to resist invasion by non-native plants. The seed source should be as local as possible, preferably collected from the nearby native prairie. Obtain seed stock from nurseries within 250 miles of the project area to insure the particular cultivars are well adapted to the local climate. The Natural Resources Conservation Service (NRCS) compiles a list of vendors in North Dakota that supply conservation seed and plants (<http://www.plant-materials.nrcs.usda.gov/pubs/ndpmcmt8152.pdf>). Additional information on native grasses and forbs may be found at the NRCS Bismarck Plant Materials Center (<http://www.plant-materials.nrcs.usda.gov/ndpmc/>).

- Make no stream channel alterations or changes in drainage patterns. We recommend you directionally bore under wetlands and intermittent and perennial streams.
- Locate construction to avoid placement of fill in wetlands along the route.
- Replace unavoidable loss of wetland habitat with functionally-equivalent wetlands.
- Install and maintain appropriate erosion control measures to reduce sediment transport to adjacent wetlands and stream channels.
- Keep the disturbed area along the ROW as narrow as possible, especially in or near sensitive resources such as native prairie, wetlands, or streams.

Thank you for the opportunity to comment on this project. If additional information is required, please contact Carol Aron of my staff, or contact me directly at (701) 250-4481 or at the letterhead address.

Sincerely,



Jeffrey K. Towner
Field Supervisor
North Dakota Field Office

Enclosures

FEDERAL THREATENED, ENDANGERED, AND CANDIDATE SPECIES
AND DESIGNATED CRITICAL HABITAT FOUND IN
MCKENZIE COUNTY, NORTH DAKOTA

ENDANGERED SPECIES

Birds

Interior least tern (*Sterna antillarum*): Nests along midstream sandbars of the Missouri and Yellowstone Rivers.

Whooping crane (*Grus Americana*): Aransas-Wood Buffalo Population (264 birds) occurs in North Dakota counties during spring and fall migration between breeding and wintering areas. Whooping cranes prefer to roost overnight in shallow open water wetland habitat with good visibility during migration stopovers.

Fish

Pallid sturgeon (*Scaphirhynchus albus*): Known only from the Missouri and Yellowstone Rivers. No reproduction has been documented in 15 years.

Mammals

Black-footed ferret (*Mustela nigripes*): Exclusively associated with prairie dog towns. No records of occurrence in recent years, although there is potential for reintroduction in the future.

Gray wolf (*Canis lupus*): Occasional visitor in North Dakota. Most frequently observed in the Turtle Mountains area.

THREATENED SPECIES

Birds

Piping plover (*Charadrius melodus*): Nests on midstream sandbars of the Missouri and Yellowstone Rivers and along shorelines of saline wetlands. More nest in North Dakota than any other state.

CANDIDATE SPECIES

Birds

Sprague's Pipit (Anthus spragueii): Nests in native and planted grassland. Prefers patches of grassland at least 72 acres (29 hectares).

Invertebrates

Dakota skipper (Hesperia dacotae): Found in native prairie containing a high diversity of wildflowers and grasses. Habitat includes two prairie types: 1) low (wet) prairie dominated by bluestem grasses, wood lily, harebell, and smooth camas; 2) upland (dry) prairie on ridges and hillsides dominated by bluestem grasses, needlegrass, pale purple and upright coneflowers and blanketflower.

DESIGNATED CRITICAL HABITAT

Birds

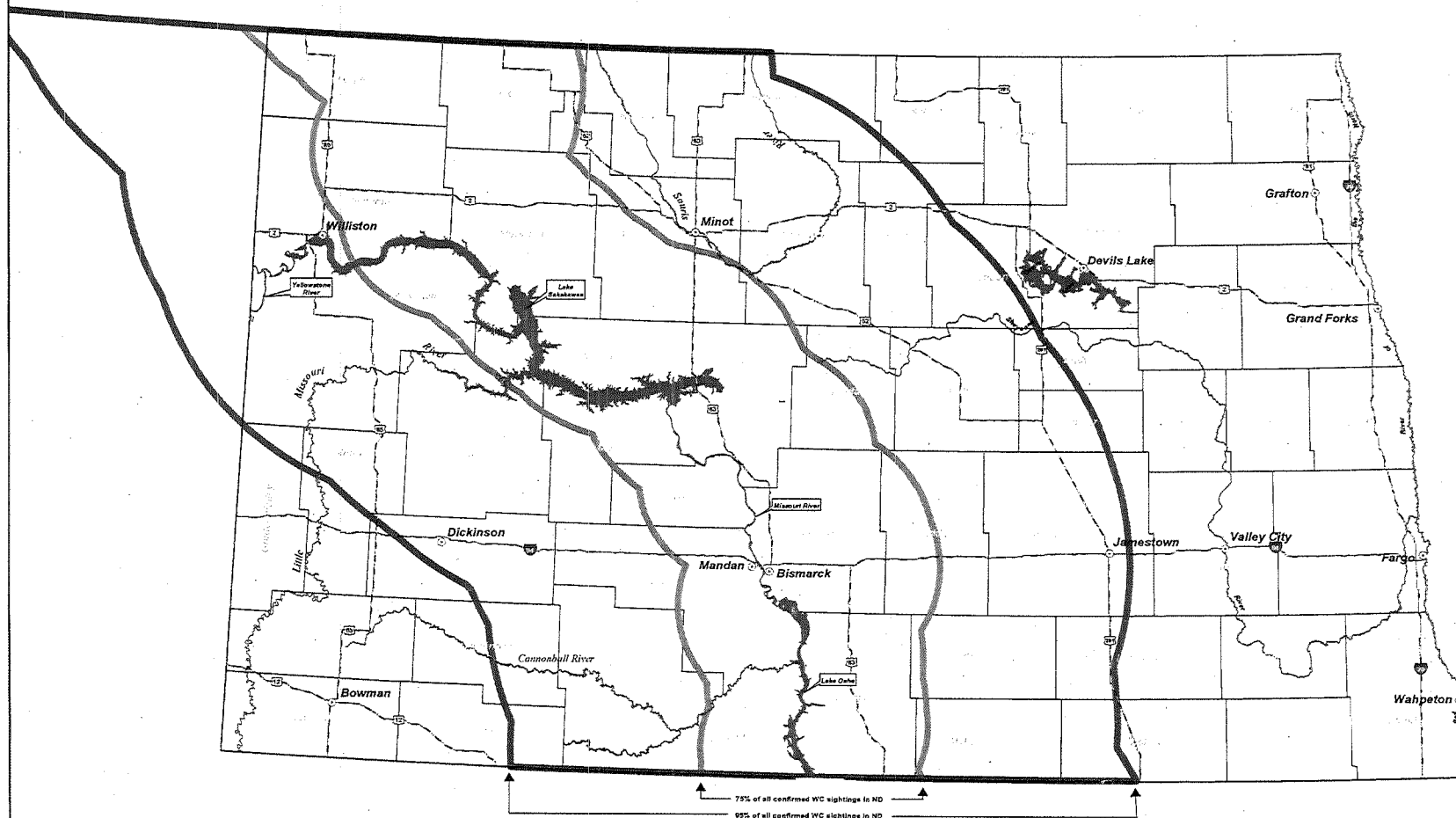
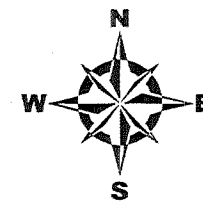
Piping Plover - Alkali Lakes and Wetlands - Critical habitat includes: (1) shallow, seasonally to permanently flooded, mixosaline to hypersaline wetlands with sandy to gravelly, sparsely vegetated beaches, salt-encrusted mud flats, and/or gravelly salt flats; (2) springs and fens along edges of alkali lakes and wetlands; and (3) adjacent uplands 200 feet (61 meters) above the high water mark of the alkali lake or wetland.

Piping Plover - Missouri River - Critical habitat includes sparsely vegetated channel sandbars, sand and gravel beaches on islands, temporary pools on sandbars and islands, and the interface with the river.

Piping Plover - Lake Sakakawea and Oahe - Critical habitat includes sparsely vegetated shoreline beaches, peninsulas, islands composed of sand, gravel, or shale, and their interface with the water bodies.





North Dakota Whooping Crane Migration Corridor

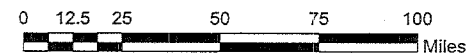


DISCLAIMER:

The USFWS makes no claim as to the accuracy or completeness of the displayed information. Species occurrence and habitat information is provided for illustrative purposes only. Federal action agencies and project proponents should contact the USFWS North Dakota Field Office for more detailed species information and technical assistance in evaluating potential project impacts to fish and wildlife resources.

Map produced 04/21/2010 by USFWS Ecological Services, Bismarck, ND.

-  75% Whooping Crane Migration Corridor
-  95% Whooping Crane Migration Corridor





March 31, 2011

Mr. Jeff Towner, Field Supervisor
U.S. Fish and Wildlife Service
North Dakota Field Office
3425 Miriam Avenue
Bismarck, ND 58501-7926

RE: Arrow Pipeline, LLC –4 Bears CDP Connect Project
Federally Listed Species, USFWS Managed Lands, and Migratory Bird Consultation

Arrow Pipeline, LLC (APL), has proposed the 4 Bears CDP Connect Pipeline Project (Project) to be located in McKenzie County, North Dakota. This project would entail the construction of approximately 1.5 miles of new 8-inch diameter pipeline. The project is designed to serve local producers by transporting crude from an existing facility located at the eastern terminus of the Project and transporting it to the existing 4 Bears Pipeline located at the western terminus of the Project. The capacity of this system once fully in service will be approximately 9,600 barrels per day (Bpd). Pipeline construction activities will typically occupy a 100-foot right-of-way. Following construction, the pipeline will occupy a 50-foot permanent right-of-way. This project is currently to scheduled to commence construction no later than July of 2011 with an in-service date no later than September of 2011. The proposed pipeline corridor and route is outlined below and depicted on the attached topographic map.

In McKenzie County, North Dakota, the pipeline will be located in:
Township 150N, Range 95W, Sections 17, 18, 19, 20;
Township 150N, Range 96W, Section 13, 24

The purpose of this request is to compile U.S. Fish and Wildlife Service's (USFWS) comments on environmental topics that are relevant to the North Dakota Public Service Commission's (PSC) siting requirements for Energy Transmission facility. On March 31, 2011, a web-based consultation with USFWS's IPaC system was conducted, however, due to the limitations of the system, this request has been prepared to augment that effort and facilitate a thorough project review.

E3 Environmental, LLC (E3) has been retained by APL to provide environmental consulting support for this project.

Federally Listed Species Analysis:

On March 31, 2011, E3 reviewed the USFWS's web site and conducted a protected species review for McKenzie County, North Dakota. The results of the search are as follows:

Whooping crane (*Grus americana*) – Endangered
Piping plover (*Charadrius melodus*) – Threatened
Least tern (*Sterna antillarum*) – Endangered
Sprague's pipit (*Anthus spragueii*) – Candidate
Pallid sturgeon (*Scaphirhynchus albus*) – Endangered
Dakota skipper (*Hesperia dacotae*) - Candidate

Black-footed ferret (*Mustela nigripes*) – Endangered
Gray wolf (*Canis lupus*) - Endangered

E3 has reviewed the available data describing the life history, critical habitat, and conservation measures associated with each species to evaluate the potential effects of the project on these resources. The results of this analysis are as follows:

Whooping crane: The whooping crane is a large bodied marsh species that breeds primarily in Canada and winters in the Gulf of Mexico. This species has been closely studied and monitored in recent years due to its small population. North Dakota provides migratory habitat for the species, providing roosting and feeding opportunities during migration. This species prefers larger wetland complexes for roosting habitat, typically using adjacent uplands for foraging opportunities. The proposed project will not result in a loss of crane habitat. Construction activities would likely serve as a deterrent, and once constructed the proposed facility would present a fairly prominent feature to be avoided relative to its surrounding landscape.

Piping plover: The piping plover is associated with shorelines along small alkaline lakes, large reservoir beaches, and river islands and adjacent sand pits. Breeding birds select wide beaches with highly clumped vegetation covering less than 25% of the area. Regionally the Missouri River is known to host breeding populations of the plovers.

Least tern: The interior population(s) of the least tern has historically been associated with large river systems for breeding and migratory habitats. Breeding birds are known to breed in colonies, utilizing sandbar habitat common to larger rivers. Regionally the Missouri River is known to host remnant breeding populations of the terns.

Pallid sturgeon: The pallid sturgeon is known to occur in the Missouri River. This species is sensitive to changes in water quality due to turbidity, water temperature, and flow.

Black-footed ferret: The black-footed ferret is limited to open grasslands, steppe, and shrub steppe habitat in close association with prairie dogs. They use underground burrows, typically made by prairie dogs, for resting and birthing.

Gray wolf: The gray wolf is a large carnivore that through conservation measures has experienced strong population recovery, particularly in the Great Lakes states of the upper Midwest. As populations rebound, individuals may break from packs to explore opportunities to establish packs in unoccupied territory. Roaming individuals can cover great distances without establishing viable breeding populations in previously unoccupied habitat(s). This species is not tolerant of human disturbance and will tend to avoid interaction with humans. The activities associated with construction would likely serve as a deterrent to this species.

Based upon this analysis it is concluded that the proposed project will not result in the taking of or adverse impact to these listed species. Species that USFWS has listed as “candidate” or populations identified as “Experimental” are not yet considered threatened or endangered and were not included in this study. APL requests your comments regarding this analysis.



USFWS Managed Lands:

Conservation programs such as Waterfowl Production Areas and wetland and grassland easements represent an important tool used by USFWS to identify and manage high quality wildlife habitat. A review of public records failed to identify any of these USFWS managed lands in the project study area. APL requests confirmation regarding the presence or absence of USFWS managed lands within the proposed study area.

Migratory Bird Consultation:

USFWS administers various wildlife related mandates of national concern including the Migratory Bird Treaty Act (MBTA). APL understands that unlike the Endangered Species Act, the MBTA has no provisions for the allowance of a take and therefore compliance may best be achieved by avoiding or minimizing the potential to interact with migratory species during the active breeding season. APL also understands that in North Dakota, the breeding season is typically defined as occurring annually from February 1 through July 15.

On behalf of APL, E3 seeks to complete the project analysis previously initiated with the IPaC web-based project review by augmenting those efforts with USFWS comments on the topics detailed in this request. Should you have questions or require additional information, please contact me at 651-282-0652 or kschmidt@go2e3.com.

Sincerely,

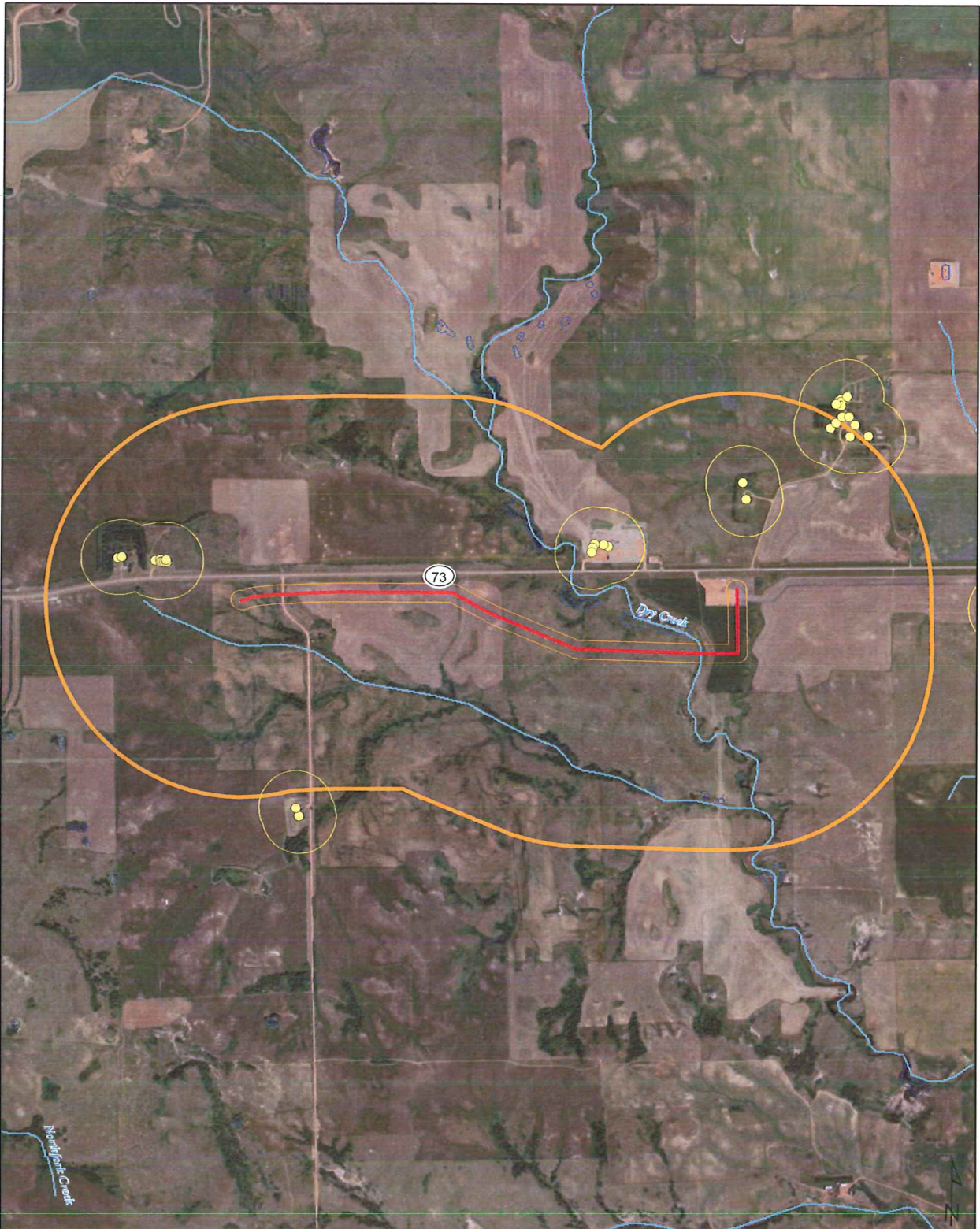
William McCarthy
Project Manager
E3 Environmental, LLC

Attachments:

- Map of project area – USGS topographic
- Aerial photograph of project area

cc: Nelson Klitzka, SWCA

Path: R:\Projects\DEF\IE3\Environmental\2026\0008-SWCA\Arrow_PSC_Pipeline\Route\Maps.mxd

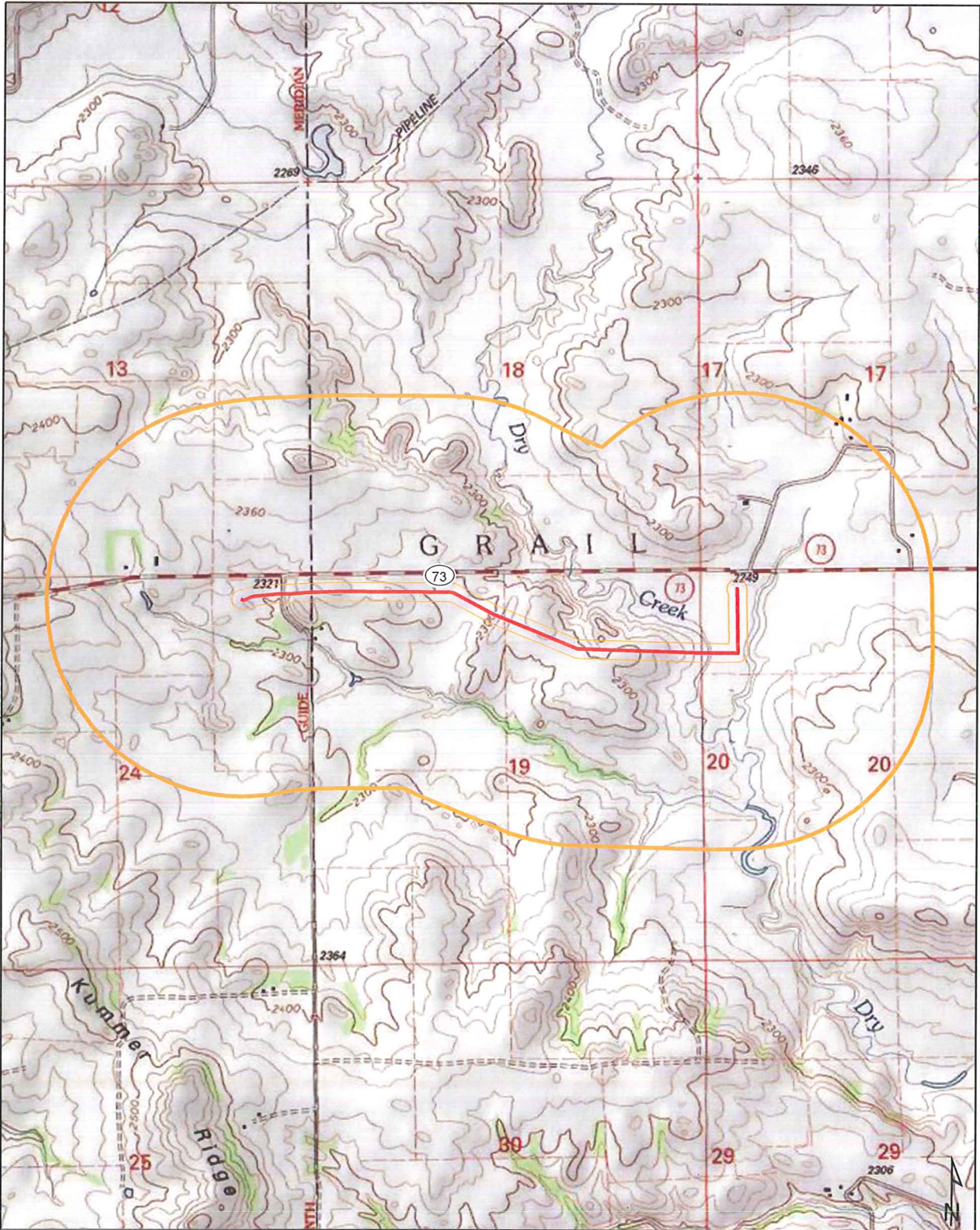


**ARROW
PIPELINE, LLC**
McKenzie County,
North Dakota
Aerial Map

- Proposed Pipeline
 - 250ft Corridor
 - Mile Corridor
 - River or Stream
 - Structure
 - 500ft Buffer
 - NWI Wetland
- 0 1,000 2,000 Feet




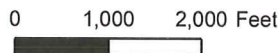
Path: R:\Projects\DEF\ES\Environmental\2025\0008-SWCA\Arrow_PSC_Pipeline\RouteMaps\SSURGO.mxd



ARROW PIPELINE, LLC

McKenzie County,
North Dakota
Topographic Map

-  Proposed Pipeline
-  250ft Corridor
-  Mile Corridor






 **Enhancing Execution with Experience**