United States Department of the Interior

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

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:
DESCRM
MC-208

FEB 25 2010

MEMORANDUM

TO: Superintendent, Fort Berthold Agency

FROM: Regional Director, Great Plains Region

SUBJECT: Environmental Assessment and Finding of No Significant Impact

In compliance with the regulations of the National Environmental Policy Act (NEPA) of 1969, as amended, for the proposed *Red Tipped Arrow 33-11H Well Site to Bear Paw Energy Connection* by Saddle Butte Pipeline, LLC on the Fort Berthold Reservation, an Environmental Assessment (EA) has been completed and a Finding of No Significant Impact (FONSI) has been issued.

All the necessary requirements of the National Environmental Policy Act have been completed. Attached for your files is a copy of the EA, FONSI and Notice of Availability. The Council on Environmental Quality (CEQ) regulations requires that there be a public notice of availability of the FONSI (1506.6(b)). Please post the attached notice of availability at the Agency and Tribal buildings for 30 days.

If you have any questions, please call Marilyn Bercier, Regional Environmental Scientist, Division of Environment, Safety and Cultural Resources Management, at (605) 226-7656.

Attachment

cc: Marcus Levings, Chairman, Three Affiliated Tribes (with attachment)
Perry "No Tears" Brady, THPO (with attachment)
Roy Swalling, BLM, Dickenson, ND (with attachment)
John Shelman, US Army Corps of Engineers

Finding of No Significant Impact
Saddle Butte Pipeline, LLC

Red Tipped Arrow 33-11H Well Site to Bear Paw Energy Connection

Development and Construction of Oil, Gas, and Water Pipelines and Electrical Utility

Fort Berthold Indian Reservation, North Dakota

The U.S. Bureau of Indian Affairs (BIA) has received a proposal for three 4.5-mile pipelines; natural gas, crude oil, produced water, and an electrical utility line at the same location, on the Fort Berthold Indian Reservation. The pipelines and utility are proposed to begin in Section 33, Township 150 North, Range 94 West, progress through Sections 28 and 18-21, Township 150 North, Range 94 West, ending in the SW ¼ of Section 13, Township 150 North, Range 95 West. Associated federal actions by the BIA include determinations of effect regarding cultural resources and approval of rights-of-way and easements. All construction would take place within a 60-foot Right of Way (ROW). It is tentatively proposed for the gas pipeline to be constructed first; the oil, water and utilities would be constructed at a later date.

Potential of the proposed action to impact the human environment was analyzed in the attached Environmental Assessment (EA), as required by the National Environmental Policy Act. Based on the recently completed EA, I have determined the proposed project will not significantly affect the quality of the human environment. No Environmental Impact Statement is required for any portion of the proposed activities.

This determination is based on the following factors:

1. Protective and prudent measures were designed to minimize impacts to air, water, soil, vegetation, wetlands, wildlife, public safety, water resources, and cultural resources. The remaining potential for impacts was disclosed for both the proposed action and the No Action alternative.

2. The proposed actions are designed to avoid adverse effects to historic, archeological, cultural and traditional properties, sites and practices. The Tribal Historic Preservation Officer has concurred with BIA's determination that no historic properties will be affected.

3. Environmental justice was fully considered.

4. Cumulative effects to the environment are either mitigated or minimal.

5. No regulatory requirements have been waived or require compensatory mitigation measures.

6. The proposed projects will improve the socio-economic condition of the affected Indian community.

Regional Director

2/25/2010
Date

Notice of Availability and Appeal Rights

Saddle Butte Pipeline: Red Tipped Arrow 33-11H Well site to Bear Paw Energy Connection

The Bureau of Indian Affairs (BIA) is planning to issue administrative approvals related to installation of the Red Tipped Arrow 33-11H Well Site to Bear Paw Energy Connection by Saddle Butte Pipeline, LLC as shown on the attached map. Construction is expected to begin in 2010.

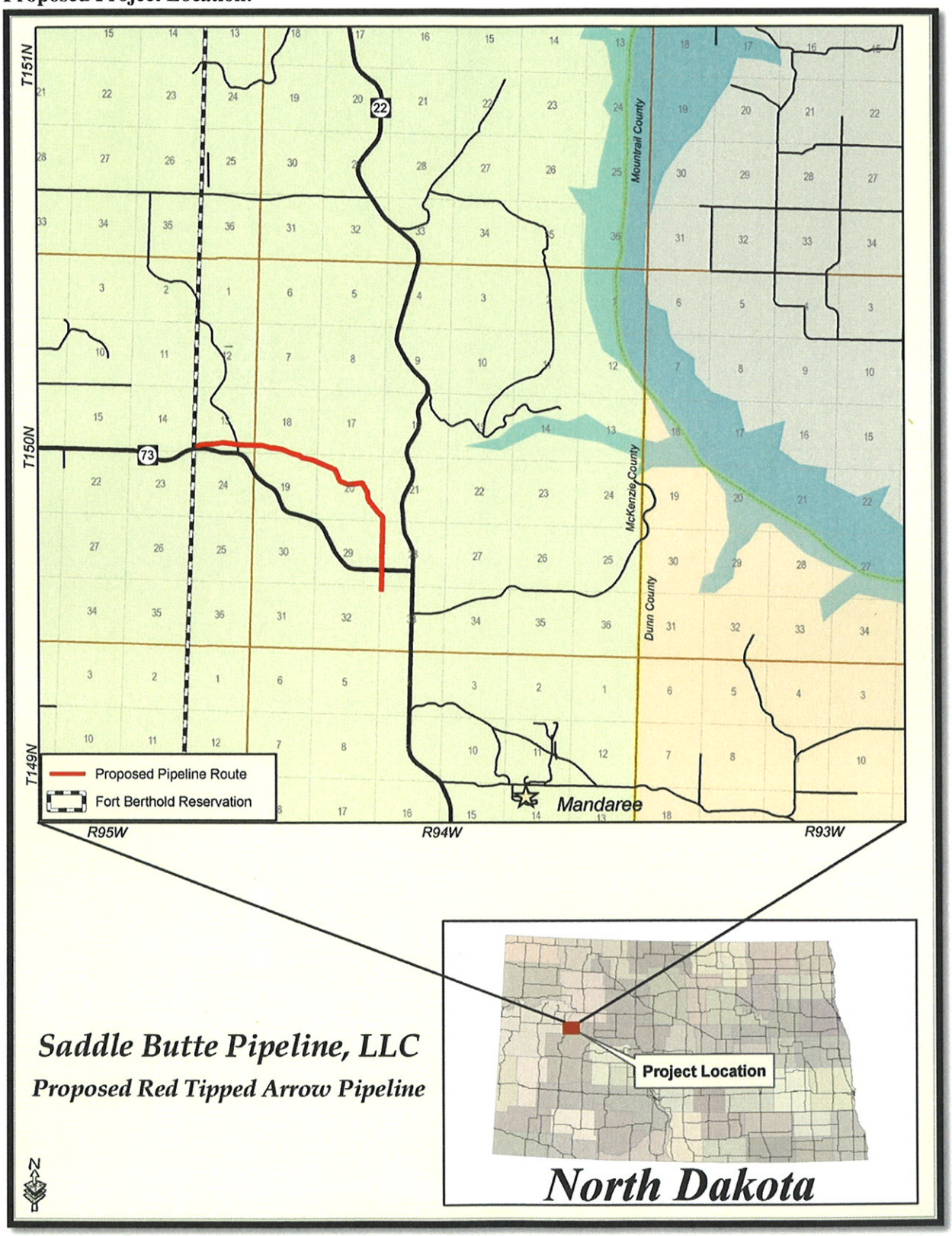
An environmental assessment (EA) determined that proposed activities will not cause significant impacts to the human environment. An environmental impact statement is not required. Contact Howard Bemer, Superintendent at 701-627-4707 for more information and/or copies of the EA and the Finding of No Significant Impact (FONSI).

The FONSI is only a finding on environmental impacts – it is not a decision to proceed with an action and *cannot* be appealed. BIA's decision to proceed with administrative actions *can* be appealed until March 24, 2010, by contacting:

United States Department of the Interior
Office of Hearings and Appeals
Interior Board of Indian Appeals
801 N. Quincy Street, Suite 300, Arlington, Va 22203.

Procedural details are available from the BIA Fort Berthold Agency at 701-627-4707.

Proposed Project Location:



Environmental Assessment

Prepared for:
United States Bureau of Indian Affairs

Great Plains Regional Office
Aberdeen, South Dakota

Saddle Butte Pipeline, LLC

Red Tipped Arrow 33-11H Well Site to Bear Paw Energy Connection

Development and Construction of Oil, Gas, and Water Pipelines and Electrical Utility

Fort Berthold Indian Reservation

February 2010

For information contact:
Bureau of Indian Affairs, Great Plains Regional Office
Division of Environment, Safety and Cultural Resources Management
115 4th Avenue SE
Aberdeen, South Dakota 57401
(605) 226-7656

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Appendix A: Agency Coordination

1 Purpose and Need for the Proposed Action

Saddle Butte Pipeline, LLC (SBP) is proposing to construct approximately 4.5 miles of natural gas, crude oil, and produced water pipelines plus an electrical utility line on the Fort Berthold Indian Reservation. These pipelines are proposed to connect the Red Tipped Arrow 33-11H well site, operated by Peak North Dakota, LLC, to a pipeline operated by Bear Paw Energy, LLC.

Development has been proposed in tribal land held in trust by the United States in McKenzie County, North Dakota. The U.S Bureau of Indian Affairs (BIA) is the surface management agency for potentially affected tribal lands and individual allotments. The proposed project would cross and utilize lands owned in fee simple title. As shown in ***Figure 1: Project Location Map,*** under this proposal SBP would connect one existing well site in the NW ¼ of Section 33, Township 150 North, Range 94 West to a proposed pipe connection in the SW ¼ of Section 13, Township 150 North, Range 95 West.

The economic development of available resources and associated BIA actions are consistent with BIA's general mission. Leasing and development of mineral resources offer substantial economic benefits to the Three Affiliated Tribes, to individual tribal members and fee land owners. SBP is proposing these pipelines and power line to reduce waste of valuable resources associated with continued flaring of produced natural gas and to reduce environmental and public health and safety concerns. The BIA must comply with the National Environmental Policy Act (NEPA) before it authorizes the proposed project. Therefore, an Environmental Assessment (EA) for the proposed action is necessary to analyze the direct, indirect, and cumulative impacts of the BIA's approval of the proposed project.

Oil and gas activities on Indian lands are subject to a variety of federal environmental regulations and policies under authority of the BIA and Bureau of Land Management (BLM). This inspection and enforcement authority derives from the United States trust obligations to the Tribes, the *Indian Mineral Leasing Act* of 1938, the *Indian Mineral Development Act* of 1982, and the *Federal Oil and Gas Royalty Management Act* of 1982. No construction or other ground-disturbing activities will begin until all necessary easements, surveys, clearances, permissions, determinations and permits are in place. Additional NEPA analysis, findings and federal actions will be required prior to development beyond what is described and analyzed in this EA.

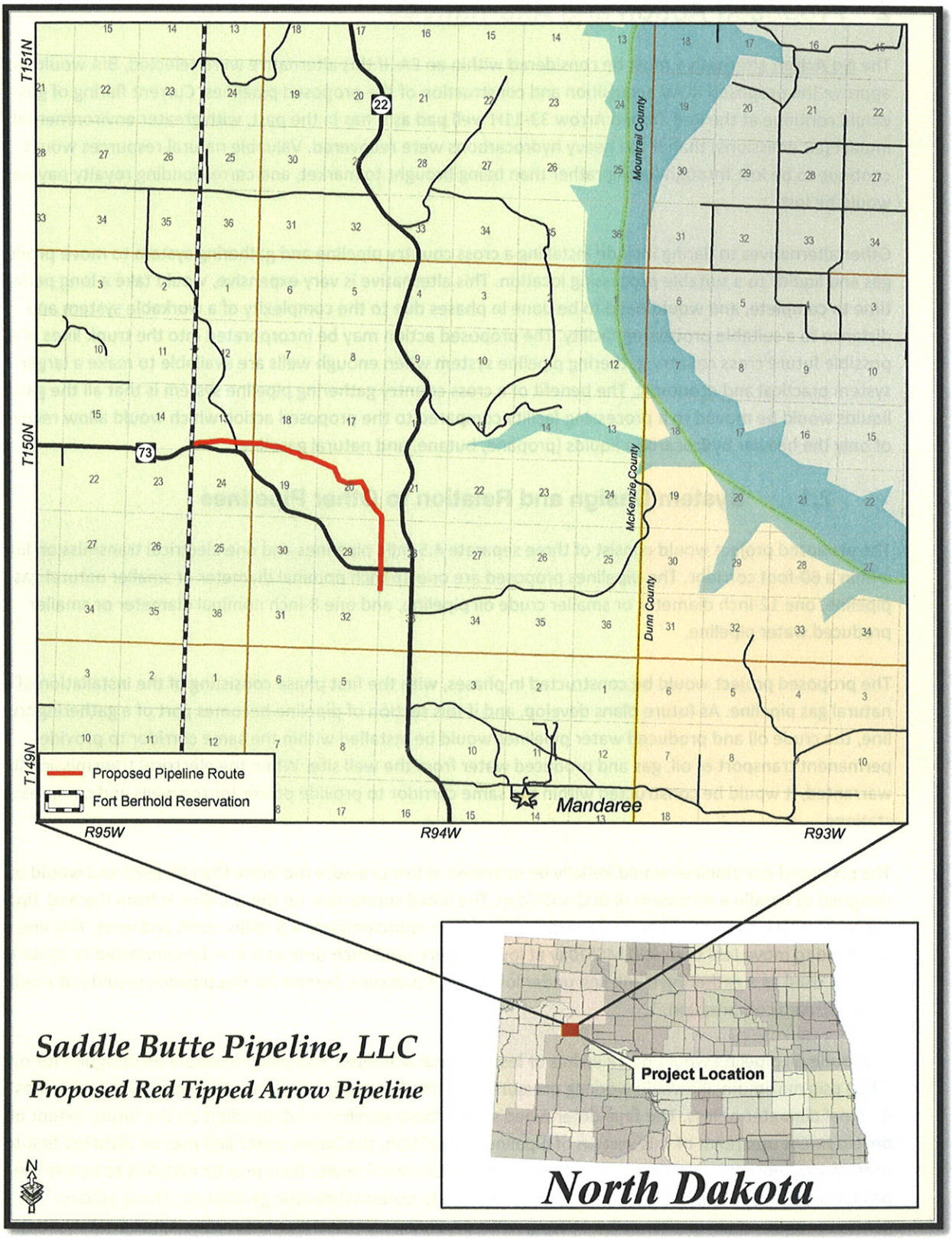

Figure 1: Project Location Map

2 Proposed Action and Alternatives

The **No Action alternative** must be considered within an EA. If this alternative were selected, BIA would not approve the proposed ROW acquisition and construction of the proposed pipelines. Current flaring of gas would continue at the Red Tipped Arrow 33-11H well pad as it has in the past, with greater environmental impact (air emissions) than if the heavy hydrocarbons were recovered. Valuable natural resources would continue to be lost through flaring rather than being brought to market, and corresponding royalty payments would be lost.

Other alternatives to flaring include installing a cross country pipeline and gathering system to move produced gas and liquids to a suitable processing location. This alternative is very expensive, would take a long period of time to complete, and would need to be done in phases due to the complexity of a workable system and distance to a suitable processing facility. The proposed action may be incorporated into the trunk lines of a possible future cross country gathering pipeline system when enough wells are available to make a larger system practical and economic. The benefit of a cross country gathering pipeline system is that all the gas and liquids would be moved to a processing facility compared to the proposed action which would allow recovery of only the heavier hydrocarbon liquids (propane, butane, and natural gasoline).

2.1 System Design and Relation to Other Pipelines

The proposed project would consist of three separate 4.5 mile pipelines and one electrical transmission line within a 60-foot corridor. The pipelines proposed are one 16-inch nominal diameter or smaller natural gas pipeline, one 12-inch diameter or smaller crude oil pipeline, and one 8-inch nominal diameter or smaller produced water pipeline.

The proposed project would be constructed in phases, with the first phase consisting of the installation of a natural gas pipeline. As future plans develop, and if this section of pipeline becomes part of a gathering trunk line, the crude oil and produced water pipelines would be installed within the same corridor to provide permanent transport of oil, gas and produced water from the well site. When the electrical transmission line is warranted, it would be constructed within the same corridor to provide power for the wells and compressor stations.

The proposed gas pipeline would initially be operated at low pressure (no more than 80 psig) and would be designed to handle a minimum of 600 MCF/day. The initial connection on this pipeline is from the Red Tipped Arrow 33-11H well to the Bear Paw Energy, LLC pipeline approximately 4.5 miles north and west. This line is expected to move less than 300 MCF/day at low pressure until such time as it may be connected to other local wells or used as a gathering trunk line under low or high pressure. Service for this pipeline would not require any upstream compression.

The crude oil pipeline would be 12 inches or less nominal diameter. This pipeline would be designed for over 1,000 psig maximum allowable working pressure (MAOP). The produced water pipeline would be 8 inches nominal diameter or less. The final determined size of these pipelines is dependent on the future extent of development upstream of this section of pipeline. In addition, the future water line may be installed first to be used to transport gas until the gas pipeline is in place. Electrical power lines may be installed to power the producer owned wellhead equipment and accommodate potential electric generators. These electric generator units would further reduce flaring while providing electrical power for sale. Appropriately, they

would only be installed if a future electrical grid, suitable to transmit generated electrical power, is available in the area. At this point in the design process, it is too early to accurately define the size and height specifics of such power lines.

No above ground structures are part of this pipeline system except for the electric transmission line and pipeline identification markers along the route and at road crossings and at tie-in locations. All above ground equipment would be installed on the existing well pad.

This EA discloses the impacts of the acquisition of 30 feet of temporary ROW, 30 feet of permanent ROW, and the installation of three pipelines and an overhead electrical transmission line within this ROW.

2.2 Construction Plan and Specifications

As previously discussed, construction of the crude oil and produced water pipelines, and the electrical transmission line, are dependent on future development and the potential to incorporate this section of pipeline into a gathering trunk line. As such, the first phase of the project would consist of constructing the gas pipeline, with the other facilities being constructed in future phases.

Construction of the gas line is expected to take one month or less and would be confined within a 60-foot wide ROW, 30 feet of which would be temporary, adjacent to the proposed line as shown in ***Figure 1: Project Location Map on page 2.*** Pipeline materials would be staged at existing well pads or trucked directly to the temporary ROW corridor on existing federal, state, county and private roads. Access to the ROW would be made at the well pad and existing roadway crossing points only. Traffic at access points is expected to be heavy during brief periods at the beginning and end of shift and heavy at various times during the day when equipment and materials are delivered to the site. Traffic would be confined to the marked pipeline ROW corridor. Vehicle and personnel travel off the pipeline ROW would be strictly prohibited at all times. Signs would be installed at access points to remind operators that access or travel off the pipeline ROW is not permitted.

Installation of the gas pipeline may require clearing and grading of 60-foot wide sections at locations within the ROW along the entire pipeline corridor. Every effort would be made to minimize surface disturbance during the construction process. Topsoil would be separated and stockpiled along either side of any disturbed cross section to be used for prompt reseeding and reclamation of the disturbed area. Continued use of pasture, livestock grazing areas and other improvements would be maintained during construction via use of temporary fencing or cattle guards when crossing land with livestock present. Trenches would be excavated to a depth sufficient to maintain a minimum of 48 inches of ground coverage over the pipeline. Coverage would be increased to 72 inches of burial depth at road crossings and at any driveway crossings. ***Typical ROW cross section is as shown in Figure 2.*** It is understood that other utilities including phone and water pipelines are also present in the immediate area.

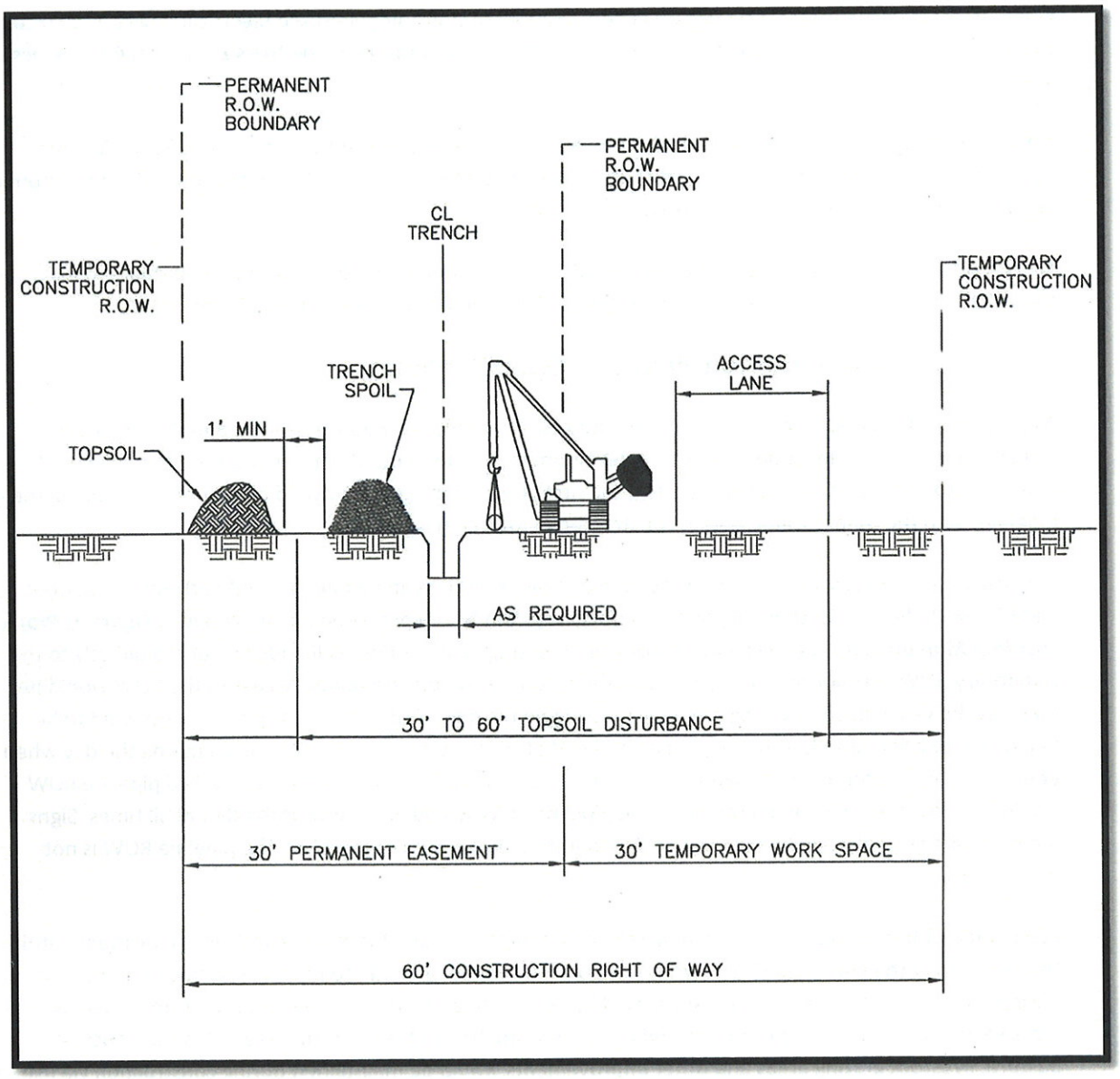

Figure 2: Typical Right-of-way Cross Section

The Fort Berthold Rural Water pipeline would be crossed by the proposed pipeline in two locations. Because of the normal 84-inch burial depth of the water line, the proposed pipelines would pass over the installed water line to achieve no impact on depth or functionality of either line. Five feet of lateral distance would be maintained from all telephone and cable lines. Any line crossing conflicts would be worked out individually at each location with the respective utility.

During construction, the entire distance of trench could be open for several days during excavation, stringing, bending and installation of the pipelines. Crossings would be created at access locations and driveways. Pipe would be strung along the ditch as bending, welding and other installation preparations are completed. After the pipelines are lowered into the ditch they would be hydro-tested with water acquired from a local

commercial source. Water used for hydro-testing would be removed from the site and disposed at a permitted location.

After the trench is backfilled, disturbed areas would be re-graded to original contours, stockpiled topsoil reset over the ROW, pipeline marking signs would be installed, reclamation would be finalized, and the ROW would be reduced to 30 feet.

2.3 Directional Drilling

Directional drilling, also known as boring, is often used to cross sensitive areas such as wetlands and stream beds where the disturbance of ditch excavation may be prohibitive or cause unwarranted stress on the environment. Two environmental related bores under stream crossings are planned along the pipeline route. The two environmental bores include boring under an intermittent stream crossing in the SW/SW ¼ of Section 13, T150N, R95W, and boring under a perennial stream crossing in the SE/SW ¼ of Section 18, T150N, R94W. Directional drilling is also used to cross roadways where traffic should not be disrupted and disturbance of compacted substrate is an issue with open trenches. One bore location is planned to cross ND Highway 73 just west of its intersection with ND Highway 22. A second bore location is planned to cross ND Highway 73 approximately 761 feet northeast of mile marker #7, just west of the Reservation boundary. The approximate length of these bores is 200 feet. A staging area would be constructed on either side of ND Highway 73 in this location within the established pipeline ROW. To construct, a hole is drilled under the identified area at a radius suitable for pulling straight pipe.

2.4 Reclamation

All reclamation is the responsibility of SBP as the ROW permit holder. Reclamation shall be required after initial construction, after additional lines are installed, after any maintenance activity, and after final abandonment of a decommissioned line.

Regrading, contouring, and reseeding of disturbed areas will occur as soon as practical after construction but no later than the next appropriate planting season. The ROW will be reseeded with certified seed mixtures approved by the BIA. All reseeding and planting will comply with BIA directions to ensure successful reclamation. Further, the ROW will be monitored for areas of excessive erosion and subsidence. Periodic monitoring will be performed and repeated reclamation efforts will be undertaken in problem areas until the ROW is certified as reclaimed.

Decommissioning of pipelines would result in mandatory final reclamation of the corridor. All surface facilities would be removed. Foundations, if any, would be hauled to an approved disposal site. Gravel pad would be buried on site or hauled to a disposal site. Compacted areas would be scarified, ripped and re-contoured. Stockpiled topsoil would be redistributed and re-vegetated. Long-term monitoring would be required to ensure successful reclamation and implementation of any necessary remedial efforts. The pipelines would be purged with water to remove hydrocarbons, capped and abandoned in place.

2.5 Operation and Maintenance

After construction is complete, maintenance of the ROW would be confined to the 30-foot ROW width. Access to this section of the line would be confined to the Red Tipped Arrow 33-11H Well Pad access and the Bear Paw Energy Pipeline connection access. Excessive rutting or other surface disturbances, such as installing

additional lines, would be immediately repaired and reclaimed under guidelines from the previous section. If any surface damage occurs that affects crops or other surface activities, repairs would be made immediately. Landowners would be compensated for damages accordingly.

Repair, replacement, inspection or additional lines that require extensive excavation may require ROW increased to 100 feet on a temporary basis. In that event, the BIA would be notified immediately. In the case of an emergency, the BIA may be notified during or after repairs have begun. In all cases, BIA would be consulted as soon as possible. All applicable regulations and best management practices would be followed.

2.6 Preferred Alternative

The preferred alternative is to complete all administrative actions and approvals necessary to authorize or facilitate the installation of the pipelines and electric transmission line in order to protect the environment, reduce public hazards and increase economic gain associated with production of oil and gas.

3 The Affected Environment and Potential Impacts

Located in west-central North Dakota, the Fort Berthold Indian Reservation is home of the Three Affiliated Tribes of the Mandan, Hidatsa, and Arikara nations. With the completion of the Garrison Dam in 1945 and the subsequent creation of Lake Sakakawea, the Reservation was separated into three sections. Today, the Reservation occupies sections of six counties (Dunn, McKenzie, McLean, Mercer, Mountrail, and Ward) and encompasses approximately 988,000 acres. About half of the Reservation land is held in trust by the United States for the Three Affiliated Tribes or individual allottees. The majority of land within the Reservation is owned by non-Indians.

Land surface within McKenzie County is primarily within the Missouri Plateau Ecoregion, which is where the proposed project is located. The Missouri Plateau Ecoregion consists of glaciated uplands, river breaks, valley wall sites and footslopes, coulees, alluvial terraces, and floodplains. The floodplains are primarily located in the bottomlands of the Missouri River. Annual precipitation on the plateau averages between 15 and 17 inches. Mean temperatures fluctuate between -3° and 21° F in January and between 55° and 83° F in July, with 95 to 130 frost-free days each year.

According to data collected by the Natural Resources Conservation Service from 1971–2000 at Dunn Center, temperatures in excess of 80 degrees Fahrenheit are common in summer months. The area receives approximately 16.5 inches of rain annually, predominantly during spring and summer. Winters in this region are cold, with temperatures often falling below zero degrees Fahrenheit. Snow generally remains on the ground from November to March, and approximately 38.5 inches of snow are received annually. Data collected at Keene, located in McKenzie County, during the same time span contains the same general weather patterns as Dunn Center. However, at Keene annual rainfall was approximately 16.0 inches and snow received annually is approximately 32.4 inches.

The proposed project is located within a predominantly rural area. Land within the pipeline corridor is primarily grassland/rangeland (80%) with the remainder consisting of cropland (10%) and woody vegetation (10%). ***See Figure 3: View of Project Corridor—West End, and Figure 4: View of Project Corridor—East End.*** The pipeline corridor crosses native rangeland that is currently used to graze livestock along with two fields used for agricultural production. In addition, the landscape has been previously disturbed by dirt trails and gravel roadways. There are 10 residences within 1-mile of the project corridor.

The following sections address the positive and negative environmental impacts of the proposed project alternatives. The inventory and evaluation of the existing environment provide the necessary baseline from which to determine the impacts of the proposed project alternatives. The potential direct, indirect, and cumulative effects of the proposed project to the environment are discussed below.

Corridor—West End

Corridor—East End

3.1 No Action Alternative

Under the No Action Alternative, the proposed project would not be constructed or operated. Existing conditions would not be impacted for the following critical elements: public health and safety, water resources, wetland/riparian habitat, threatened and endangered species, soils, vegetation and invasive species, cultural resources, and environmental justice. There would be no project-related ground disturbance or right-of-way acquisition. Surface disturbance, deposition of potentially harmful biological material, trucking, and other traffic would not change from present levels. However, under the No Action Alternative air quality may not be improved due to the continuation of flaring of gas which would maintain the higher air emissions than if the heavy hydrocarbons were recovered. Additionally, trucks would still be required to travel to the well site to pick up oil and water produced by the well, and mobile source air toxics from trucking would not be reduced.

3.2 Air Quality

The Clean Air Act, as amended, requires the Environmental Protection Agency (EPA) to establish air quality standards, known as National Ambient Air Quality Standards (NAAQS), for pollutants considered harmful to public health and the environment. There are six criteria pollutants that require NAAQS: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM_{10}), and sulfur dioxide (SO_2). The nearest North Dakota Department of Health Ambient Air Quality Monitoring station is located at the Theodore Roosevelt National Park (North Unit) in McKenzie County. This station does not monitor Pb or CO. ***See Table 1: Air Quality Standards and McKenzie County Air Quality Data.***

Table 1: Air Quality Standards and McKenzie County Air Quality Data

Pollutant	Averaging Period	NAAQS	Theodore Roosevelt National Park (North Unit) Monitoring Station Air Quality Data
CO	1-Hour	35 ppm	—
	8-Hour	9 ppm	—
Pb	3-month	0.15 $\mu g/m^3$	—
NO_2	Annual Mean	0.053 ppm	0.001 ppm
O_3	1-hour	0.12 ppm	0.062 ppm
	8-hour	0.075 ppm	0.058 ppm
PM_{10}	24-hour	150 $\mu g/m^3$	44 $\mu g/m^3$
	Annual Mean	50 $\mu g/m^3$	8.4 $\mu g/m^3$
SO_2	24-hour	0.14 ppm	0.004 ppm
	Annual Mean	0.03 ppm	0.001 ppm

According to the North Dakota Department of Health (NDDH), North Dakota is one of thirteen states in attainment for all of the criteria pollutants (NDDH 2009). As such, McKenzie County and the Fort Berthold Reservation also comply with NAAQS.

In addition, the Fort Berthold Reservation complies with the North Dakota National Ambient Air Quality Standards and visibility protection. The Clean Air Act affords additional air quality protection near Class I areas. Class I areas include national parks greater than 6,000 acres in size, national monuments, national seashores, and federally designated wilderness areas larger than 5,000 acres designated prior to 1977. There are no Federal Class I areas[1] within the project area. The nearest Class I area to the project corridor is the Theodore Roosevelt National Park (North Unit), which is located approximately 25 miles southwest of the proposed project at its nearest point. The proposed project is located within a Class II attainment area.

3.2.1 Air Quality Impacts; Avoidance, Minimization, and Mitigation

On the Fort Berthold Reservation, the EPA enforces the Clean Air Act standards. Construction of the project would result in temporary emissions of PM_{10}, SO_2, NO_2, CO, and volatile organic compounds. These temporary air emissions during construction are not anticipated to cause or contribute to a violation of NAAQS or to adversely affect the Theodore Roosevelt National Park. The proposed project is anticipated to have a long-term benefit to air quality in the project area because it would reduce emissions associated with gas flaring at the Red Tipped Arrow 33-11H well site location. In addition, instead of trucks having to travel to the well site to collect oil, gas, and possibly produced water, there would ultimately be one consolidated storage location. In the long-term, this may improve air quality in the area by reducing mobile source air toxics associated with trucking operations. No mitigation or monitoring measures are recommended.

3.3 Public Health and Safety

Health and safety are key concerns on any construction project. One objective in designing a pipeline is to minimize the risk to public health and safety. Typically, the highest probability of an accident occurs during the construction phase due to the variety of equipment, number of personnel and types of activity which are present during this period.

Generally, negative impacts, such as noise, dust, air pollution from the use of fossil fuel, ground water contamination from liquid spills as well as traffic hazards from construction are temporary. These temporary negative impacts can be controlled through routine education, safety reminders/briefings, careful planning and proper preparation.

Combustion and explosive hazards, although an extremely unlikely possibility in and around operating pipelines, are a consideration when evaluating public health and safety for any project. The risk and extent of negative impact from system operation is much more difficult to predict than the impact from construction due to the many variables involved.

The size of an area which can potentially be affected by a pipeline leak or rupture and possible resulting fire, or even an explosion, is specific to each particular site. In many instances it is impossible to find a route which does not have some possible negative impact during the life of a project. The ultimate goal is therefore to

[1] Federal Class I areas are generally national parks and wilderness areas.

route, design and construct the pipelines in a manner which has the least probable impact on the environment and on society.

Factors which must be considered in establishing a pipeline corridor location and width include:

- Pipeline diameter, pipe material, and pressure rating
- Normal operating pressure of pipeline
- Product to be conveyed by the pipeline
- Depth to bury below the ground surface
- Type of soil
- Presence of vegetation (grass, trees, shrubs, barren etc.)
- Possibility of leak, fire, explosion, product discharge to surface or ground water etc.
- Topography (flat, rolling, badlands etc) and minimum and maximum gradients of terrain
- Historical wind speed and direction
- Existing nearby structures, occupied and unoccupied
- Nearby roads and trails

3.3.1 Public Health and Safety Impacts; Avoidance, Minimization, and Mitigation

The proposed 16-inch or smaller diameter steel pipelines proposed for this project are to be buried a minimum of 4 feet below the ground surface. Soil conditions found along the pipeline corridor vary from sandy to clay. The initial normal operating pressure is expected to be no more than 80 psig but future pressures could be greater than 200 psig. The products being conveyed within the pipelines include natural gas and crude oil, which can be highly flammable. The topography is variable, ranging from flat with nearly no slope to 1:1 slopes. Vegetative communities range from native uplands and hardwood draws to farmed agricultural fields. Historical wind direction is from the northwest and velocity varies from 0 mph to >40 mph.

An explosion, although extremely unlikely, is possible; therefore, human safety and structural damage are potentially at risk. A pipeline rupture under normal operating pressure could, depending on soil conditions and exact location, create a crater 10–20 feet in diameter to the depth of the buried pipeline. If a fire resulted, temperatures could reach well in excess of 1,000 degrees Fahrenheit at the point of rupture and decrease outward, depending upon wind speed and direction as well as ambient temperatures in the area. This could cause structural damage in an area up to 2,000 feet downwind of the point of the blast. ***See Figure 5: Blast Overview.***

Based upon the above information, the blast impact corridor width would be approximately 1 mile (½-mile on each side of the proposed pipeline). Aerial view imagery shows four residences located within this mile-wide corridor. This corridor also includes approximately 1.6 miles of ND Highway 22, 2.6 miles of ND Highway 73 and approximately 3.75 miles of additional roads and trails which could be utilized at various times of the year.

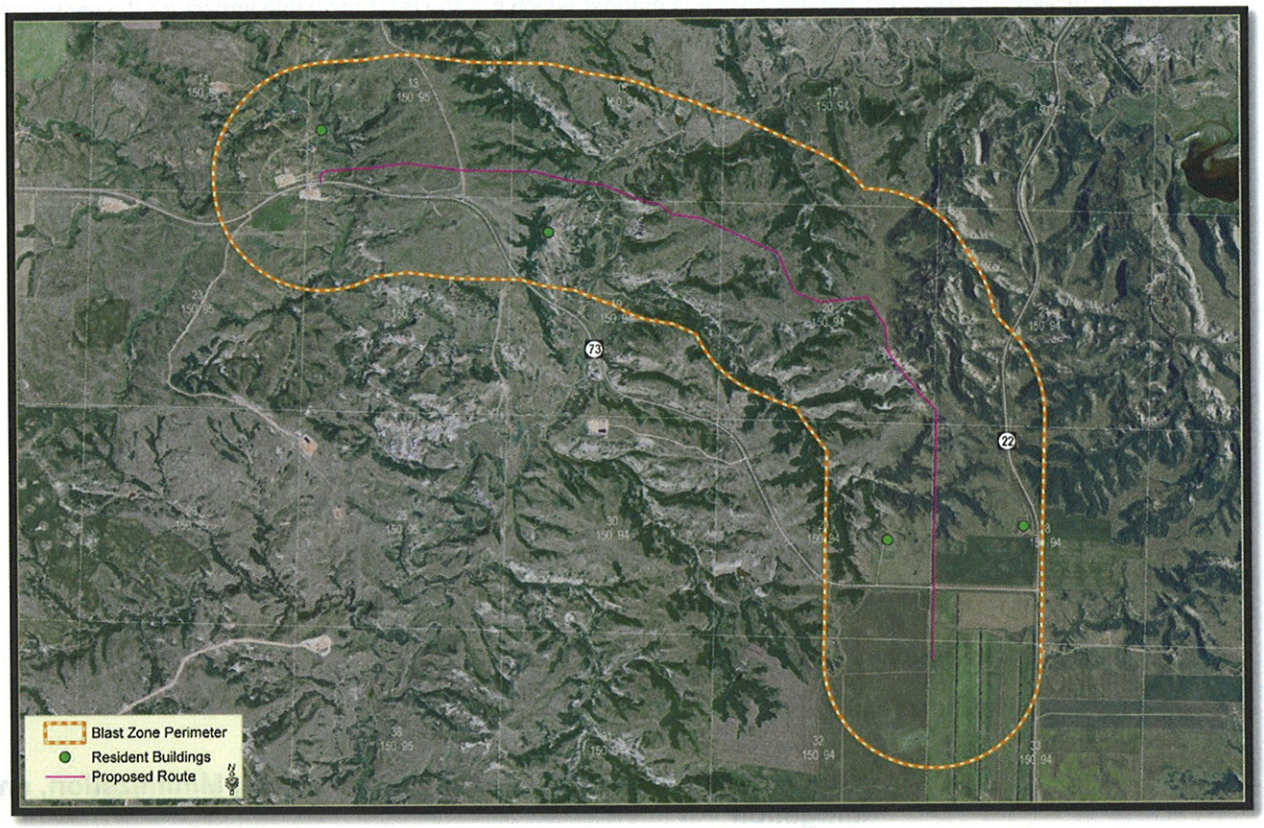

Figure 5: Blast Overview

There are no known local, state or federal regulations for an established "set-back" from occupied dwellings. Pipeline operations will conform to instructions from BIA and Tribal fire management staff. Negative impacts from this project are considered to be minimal based upon the proposed route selected and design parameters. No waivers to laws, regulations or other requirements have been requested or issued and no compensatory mitigation measures are required based upon the available information utilized herein.

3.4 Socioeconomics

Socioeconomic conditions depend on the character, habits, and economic conditions of people living within the proposed action area. Businesses, employment, transportation, utilities, etc., are factors that affect the social climate of a community. The Fort Berthold Reservation and McKenzie County have lower than statewide averages of per capita income and median household income. In addition, they have higher rates of unemployment and individuals living below poverty level than the state average. ***See Table 2: Employment and Income.***

Table 2: Employment and Income

Location	Per Capita Income	Median Household Income	Unemployment Rate	Individuals Below Poverty Level
McKenzie County	$14,732	$29,342	4.1%	17.2%
Fort Berthold Reservation	$10,291	$26,274	11.1%	28.1%
North Dakota	$17,769	$34,604	3.0%	11.9%

Source: U.S. Census Bureau, 2000

Population decline in rural areas of North Dakota has been a growing trend as individuals move toward metropolitan areas of the state, such as Bismarck and Fargo. While McKenzie County's population has been slowly declining, the Fort Berthold Reservation has witnessed a steady increase in population. American Indians are the majority population on the Fort Berthold Reservation but are the minority population in McKenzie County and the state of North Dakota. ***See Table 3: Demographic Trends.***

Table 3: Demographic Trends

Location	Population in 2000	% of State Population	% Change 1990–2000	Predominant Race	Predominant Minority
McKenzie County	5,737	0.89%	-10.1%	White	American Indian (21%)
Fort Berthold Reservation	5,915	0.92%	+9.8%	American Indian	White (26.9%)
North Dakota	642,200	—	+0.5%	White	American Indian (5%)

Source: U.S. Census Bureau, 2000

3.4.1 Socioeconomic Impacts; Avoidance, Minimization, and Mitigation

The proposed project is not anticipated to substantially impact the socioeconomic conditions in the project areas, but it does have the potential to yield beneficial impacts on Tribal employment and income. Qualified individual tribal members may find employment through oil and gas development and increase their individual incomes. Employment opportunities related to oil and gas development may lessen the unemployment rate and increase income levels on the Fort Berthold Reservation. Additionally, the proposed action may result in indirect economic benefits to tribal business owners resulting from construction workers expending money on food, lodging, and other necessities.

3.5 Environmental Justice

Per Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, measures must be taken to avoid disproportionately high adverse impacts on minority or low-income communities.

The Three Affiliated Tribes qualify for environmental justice consideration as both a minority and low-income population. The population of North Dakota is predominantly Caucasian. Tribal members comprise only 5% of North Dakota residents and 21% of the population of McKenzie County. Even in a state with relatively low per capita and household income, Indian individuals and households are distinctly disadvantaged.

3.5.1 Environmental Justice Impacts; Avoidance, Minimization, and Mitigation

Construction of the proposed pipelines would not require relocation of homes or businesses, cause community disruptions or cause disproportionately adverse impacts to the Fort Berthold Reservation. In addition, the proposed project has not been found to pose significant impacts to any other critical element—public health and safety, water, wetlands, wildlife, soils or vegetation— within the human environment, other than the potential to improve air quality within the area. The proposed project is not anticipated to result in disproportionately adverse impacts to minority or low-income populations. No laws, regulations or other requirements have been waived; no compensatory mitigation measures are required.

3.6 Infrastructure and Utilities

The Fort Berthold Reservation's infrastructure consists of roads, bridges and access points, utilities, and facilities for water, wastewater, and solid waste. The proposed pipelines would cross ND Highway 73 in two locations. The first location would be just west of Highway 73's intersection with ND Highway 22 and the second location would be approximately 760 feet northeast of mile marker #7, just west of the Reservation boundary. In addition, a gravel roadway will be trenched across in Section 13, T150N, R95W.

The Fort Berthold Rural Water (FBRW) pipeline serves residences near the project area. The FBRW pipeline parallels ND Highway 73 as well as the rural gravel roadway extending north of ND Highway 73.

The Killdeer Mountain Four Bears Scenic Byway occurs adjacent to the project area on ND Highway 22. To qualify as a scenic byway, the roadway must be an all weather surface which possesses a scenic, natural, historical, cultural, archeological or recreational aspect.

3.6.1 Infrastructure and Utilities Impacts; Avoidance, Minimization, and Mitigation.

Directional drilling (boring) is planned to cross ND Highway 73 just west of its intersection with ND Highway 22. A second bore location is planned to cross ND Highway 73 approximately 760 feet northeast of mile marker #7, just west of the Reservation boundary. The approximate length of these bores is 200 feet. A staging area would be constructed on either side of ND Highway 73 in this location within the established pipeline ROW. In addition, a gravel roadway will be trenched across in Section 13, T150N, R95W. Temporary impacts to traffic using these roadways may be encountered. A temporary bypass will be constructed if the current roadway is impassible due to construction.

The proposed pipeline corridor crosses the FBRW pipeline in Section 28, T150N, R94W, and Section 13, T150N, R95W. The FBRW pipeline is typically buried to a depth greater than the 48-inch depth of the proposed pipeline. The FBRW pipeline would be located at the crossing locations to ensure construction of the proposed pipelines would cause no impacts to the FBRW pipeline.

The proposed pipeline corridor is located approximately ½ mile from the Killdeer Mountain Four Bears Scenic Byway. Construction of the project may temporary impact the scenic qualities of the Byway; however once constructed, no permanent impacts will occur on account of the pipelines. No other mitigation measures would be required for construction of the proposed pipelines.

3.7 Cultural Resources

Historic properties, or cultural resources, on federal or tribal lands are protected by many laws, regulations and agreements. The NHPA (16 USC 470 *et seq.*) at Section 106 requires, for any federal, federally assisted or federally licensed undertaking, that the federal agency take into account the effect of that undertaking on any district, site, building, structure or object that is included in the National Register of Historic Places (National Register) before the expenditure of any federal funds or the issuance of any federal license. Cultural resources is a broad term encompassing sites, objects, or practices of archaeological, historical, cultural and religious significance. Eligibility criteria (36 CFR 60.6) include association with important events or people in our history, distinctive construction or artistic characteristics, and either a record of yielding or a potential to yield information important in prehistory or history. In practice, properties are generally not eligible for listing on the National Register if they lack diagnostic artifacts, subsurface remains or structural features, but those considered eligible are treated as though they were listed on the National Register, even when no formal nomination has been filed. This process of taking into account an undertaking's effect on historic properties is known as "Section 106 review," or more commonly as a cultural resource inventory.

The area of potential effect (APE) of any federal undertaking must also be evaluated for significance to Native Americans from a cultural and religious standpoint. Sites and practices may be eligible for protection under the *American Indian Religious Freedom Act of 1978* (42 USC 1996). Sacred sites may be identified by a tribe or an authoritative individual (Executive Order 13007). Special protections are afforded to human remains, funerary objects, and objects of cultural patrimony under the *Native American Graves Protection and Repatriation Act* (NAGPRA, 25 USC 3001 *et seq.*).

Whatever the nature of the cultural resource addressed by a particular statute or tradition, implementing procedures invariably include consultation requirements at various stages of a federal undertaking. The MHA Nation has designated a Tribal Historic Preservation Officer (THPO) by Tribal Council resolution, whose office and functions are certified by the National Park Service. The THPO operates with the same authority exercised in most of the rest of North Dakota by the State Historic Preservation Officer (SHPO). Thus, BIA consults and corresponds with the THPO regarding cultural resources on all projects proposed within the exterior boundaries of the Fort Berthold Reservation.

A cultural resource inventory of this pipeline and various reroutes was conducted by personnel of Beaver Creek Archaeology, Inc., using a pedestrian methodology. Approximately 64.2 acres were intensively inventoried on November 5, 2009 (Burns and Roehrdanz 2009). No historic properties were located within the

project area that appear to possess the quality of integrity and meet at least one of the criteria (36 CFR 60.6) for inclusion on the National Register. Reroute locations were cleared around three avoidance areas identified during the Class III Survey which may qualify for protection under 42 USC 1996. As the lead federal agency, and as provided for in 36 CFR 800.5, on the basis of the information provided, BIA reached a determination of **no historic properties affected** for this undertaking. This determination was communicated to the THPO on December 1, 2009; however, no response was received from the THPO within the allotted 30-day comment period (see Part 4).

3.8 Wildlife

3.8.1 Threatened, Endangered, and Candidate Species

In accordance with Section 7 of the Endangered Species Act of 1973, 50 CFR Part 402 as amended, each federal agency is required to ensure the following two criteria. First, any action funded or carried out by such agency must not be likely to jeopardize the continued existence of any federally-listed endangered or threatened species or species proposed to be listed. Second, no such action can result in the destruction or adverse modification of habitat of such species that is determined to be critical by the Secretary. An endangered species is in danger of extinction throughout all or a significant portion of its range. A threatened species is one that is likely to become endangered in the foreseeable future. A candidate species is one which may warrant listing as an endangered or threatened species, but the data are inconclusive. While candidate species are not legally protected under the Endangered Species Act, it is within the spirit of the Endangered Species Act to consider these species as having significant value and worth protecting.

According to the United States Fish and Wildlife Service (USFWS) North Dakota field office website, endangered species that may be found within McKenzie County are the black-footed ferret, interior least tern, whooping crane, pallid sturgeon, and gray wolf. The piping plover is listed as a threatened species for McKenzie County and the county contains designated critical habitat for the piping plover. In addition, the Dakota skipper is listed as a candidate species for McKenzie County. A field survey of the study area was conducted on November 10, 2009. No threatened or endangered species were identified within the study area on the day of the survey.

Black-footed Ferret (*Mustela nigripes*)

STATUS: ENDANGERED

The black-footed ferret historically could be found throughout the Rocky Mountains and Great Plains. In North Dakota, the black-footed ferret may potentially be present in prairie dog towns; however, they have not been confirmed in the state for over 20 years and are presumed extirpated. Their preferred habitat includes areas around prairie dog towns, as they rely on prairie dogs for food and live in prairie dog burrows. Black-footed ferrets require at least an 80-acre prairie dog town to survive.

No prairie dog towns or black-footed ferrets were observed while conducting the survey of the project area.

Interior Least Tern (*Sterna antillarum*)

STATUS: ENDANGERED

The interior least tern nests along inland rivers rather than along the coast. The interior least tern is found in isolated areas along the Missouri, Mississippi, Ohio, Red, and Rio Grande Rivers. In North Dakota, it is sighted along the Missouri River during the summer nesting season. The interior least tern nests in sandbars or barren beaches, preferably in the middle of a river for increased safety while nesting. These birds nest close together, using safety in numbers to scare away predators.

A bay of Lake Sakakawea is approximately 1.5 miles northeast of the project area. There is no existing or potential habitat within or near the project area.

Whooping Crane (*Grus americana*)

STATUS: ENDANGERED

The whooping crane is the tallest bird in North America. In the United States, this species ranges through the Midwest and Rocky Mountain regions from North Dakota south to Texas and east into Colorado. Whooping cranes migrate through North Dakota along a band running from the south central to the northwest parts of the state. They use shallow, seasonally and semi-permanently flooded palustrine (marshy) wetlands for roosting and various cropland and emergent wetlands for feeding. During migration, whooping cranes are often recorded in riverine habitats, including the Missouri River. Currently there are three wild populations of whooping cranes, yielding a total species population of about 365. Of these flocks, only one is self-sustaining.

The proposed project is located in the corridor where 75 percent of confirmed whooping crane sightings have occurred. Two wetlands were identified adjacent to a perennial stream and an intermittent stream within the project corridor. The identified wetlands do not exhibit wetland characteristics typical of stopover habitat used by whooping cranes. Two cropland fields were found along the corridor which may provide feeding habitat for whooping cranes.

Pallid Sturgeon (*Scaphirhynchus albus*)

STATUS: ENDANGERED

The pallid sturgeon is known to exist in the Yellowstone, Missouri, middle and lower Mississippi, and Atchafalaya Rivers, and seasonally in some tributaries. In North Dakota, the pallid sturgeon is found principally in the Missouri River and upstream of Lake Sakakawea in the Yellowstone River. Dating to prehistoric times, the pallid sturgeon has become well adapted to living close to the bottom of silty river systems. According to the US Fish & Wildlife Service, its preferred habitat includes "a diversity of water depths and velocities formed by braided river channels, sand bars, sand flats, and gravel bars." Weighing up to 80 pounds, pallid sturgeons are long lived, with individuals possibly reaching 50 years of age.

The closest pallid sturgeon habitat exists in the Yellowstone River approximately 55 miles west of the project area.

Gray Wolf (*Canis lupus*)

STATUS: ENDANGERED

The gray wolf is the largest wild canine species in North America. In North America, the gray wolf is found throughout northern Canada, Alaska, and the forested areas of Northern Michigan, Minnesota, and Wisconsin. They have been re-introduced to Yellowstone National Park in Wyoming. While the gray wolf is not common in North Dakota, occasionally individual wolves do pass through the state. Historically, its preferred habitat includes biomes such as boreal forest, temperate deciduous forest, and temperate grassland. Gray wolves typically live in packs with numbers reaching over 20 members; however, some individuals will roam alone.

It is unlikely that gray wolves would inhabit the project area as it located far from other known wolf populations.

Piping Plover (*Charadrius meoldus*)

STATUS: THREATENED

The piping plover is a small migratory shorebird. Historically, piping plovers could be found throughout the Atlantic Coast, Northern Great Plains, and the Great Lakes. Drastically reduced, sparse populations presently occur throughout this historic range. In North Dakota, breeding and nesting sites can be found along the Missouri River. Preferred habitat for the piping plover includes riverine sandbars, gravel beaches, alkali areas of wetlands, and flat, sandy beaches with little vegetation. The USFWS has identified critical habitat for the piping plover on the Missouri River system. Critical habitat includes reservoir reaches composed of sparsely vegetated shoreline beaches, peninsulas, islands composed of sand, gravel, or shale, and their interface with water bodies.

A bay of Lake Sakakawea is approximately 1.5 miles northeast of the project area. Potential habitat for the piping plover does not occur within or near the project area.

Dakota Skipper (*Hesperia dacotae*)

STATUS: CANDIDATE

The Dakota skipper is a small butterfly with a one-inch wing span. These butterflies historically ranged from southern Saskatchewan, across the Dakotas and Minnesota, to Iowa and Illinois. Preferred habitat for the Dakota skipper consists of high quality native prairie containing vast diversity of wildflowers and grasses, including both wet and dry prairie ecosystems.

The project area is largely composed of native rangeland with a wide diversity of wildflowers and grasses. Both wet and dry prairie ecosystems are found within the corridor.

3.8.1.1 Threatened, Endangered, and Candidate Species Impacts; Avoidance, Minimization, and Mitigation

Due to a lack of potential habitat or the observance of species within the project areas, the proposed project may affect, but is unlikely to adversely affect, the black footed ferret, interior least tern, pallid sturgeon, gray wolf and piping plover. The proposed project is not likely to jeopardize the continued existence of these species and is not likely to destroy or adversely modify critical habitat.

Due to two cropland fields being located within the project corridor and the proposed project being located within the corridor which 75% of all whooping cranes migrate through, the proposed project may temporarily impact the whooping crane during construction. No permanent impacts to whooping cranes or their habitat are expected from the proposed project. If whooping cranes were sighted during construction, construction would be suspended until the cranes continued their migration from the surrounding area.

Due to the pipeline corridor being planned to cross native rangeland with a wide diversity of wildflowers and grasses, it was determined that construction of the proposed pipeline may affect the Dakota skipper or its habitat. These potential impacts would be temporary in nature and include a very small percentage of total Dakota skipper habitat throughout its range. Reclamation of disturbed areas with a native grass seed mixture shall take place after construction is complete.

3.8.2 Big Game Species

Big game species observed during the field survey included mule deer (*Odocoileus hemionus*) and whitetail deer (*Odocoileus virginianus*). In addition to the two species observed during the survey, the proposed corridor contains suitable habitat for antelope (*Antilocapra americana*).

3.8.2.1 Big Game Species Impacts; Avoidance, Minimization, and Mitigation

Due to the sighting of mule deer and whitetail deer during the field survey and the occurrence of suitable habitat for pronghorn antelope within the project corridor, the proposed project may cause a temporary disturbance to big game wildlife species during construction. Following construction, habitat for these species would be restored. The proposed project would have no permanent affect on big game wildlife species. No mitigation would be necessary for the temporary impacts.

3.8.3 Small Game and Waterfowl Species

Canada geese (*Branta canadensis*) were observed during the field survey. In addition, the proposed project corridor contains suitable habitat for turkey (*Meleagris gallopavo*), ring-necked pheasant (*Phanianus colchicus*) Hungarian partridge (*Perdix perdix*), sharp-tail grouse (*Tympanuchus phasianellus*) and numerous waterfowl species. No turkeys, ring-necked pheasant, Hungarian partridge, sharp-tailed grouse or additional waterfowl species were observed in the field. In addition, no grouse leks were observed within the corridor; however, a timely survey for the presence of sharp-tailed grouse leks was not completed.

3.8.3.1 Small Game and Waterfowl Species Impacts; Avoidance, Minimization, and Mitigation

Due to the sighting of waterfowl during the field survey and the occurrence of suitable habitat within the project corridor, the proposed project may cause a temporary disturbance to small game and waterfowl species during construction. Following construction, potential habitat for these species would be restored. The proposed project would have no permanent effect on small game or waterfowl species. No mitigation would be necessary for the temporary impacts.

3.8.4 Raptor Species

The Bald and Golden Eagle Protection Act of 1940, 16 U.S.C. 668–668d, as amended, was written with the intent to protect and preserve bald and golden eagles, both of which are treated as species of concern within the Department of the Interior. In addition, the Migratory Bird Treaty Act (916 U.S.C. 703–711) regulates impacts to these species such as direct mortality, habitat degradation, and/or displacement of individual birds.

The bald eagle (*Haliaeetus leucocephalus*) is not common in North Dakota, but is sighted along the Missouri River during spring and fall migration periods and periodically in other places in the state such as the Devils Lake and Red River areas, where open water is present. There were at least 20 breeding pairs of bald eagles in North Dakota at the time of their delisting in 2007, most of which nest along the Missouri River. Its preferred habitat includes open areas, forests, rivers, and large lakes. Bald eagles tend to use the same nest year after year, building atop the previous year's nest. The project corridor and the surrounding area contain large ash, elm and oak trees suitable for nesting and roosting/perching for bald eagles. In addition, Lake Sakakawea is located 1.5 miles to the southeast of the proposed corridor.

The golden eagle (*Aquila chrysaetos*) can be spotted in North Dakota throughout the badlands and along the upper reaches of the Missouri River in the western part of the state. Golden eagle pairs maintain territories that can be as large as 60 square miles and nest in high places including cliffs, trees, and human-made structures. They perch on ledges and rocky outcrops and use soaring to search for prey. Golden eagle preferred habitat includes open prairie, plains, and forested areas. The project corridor and the surrounding area contain large ash, elm and oak trees suitable for nesting and roosting/perching for golden eagles. In addition, a bay of Lake Sakakawea is located 1.5 miles to the southeast of the proposed corridor.

Additional raptor species, including red tail hawk (*Buteo jamaicensis*) and American kestrel (*Falco sparverius*), may be found in the surrounding area. However, no indicators of either species were observed during the on-site visits. No raptor nests were observed during the field survey.

3.8.4.1 Raptor Species Impacts; Avoidance, Minimization, and Mitigation

While suitable habitat for raptor species is found within the project area and several trees will be removed due to construction, no bald eagles, golden eagles or additional raptor species or their nests were observed the day of the field survey. In addition, a very limited number of trees are expected to be impacted in relation to the total number of trees located in the surrounding area. The proposed project may affect raptor species or their habitat during construction; however, once constructed, the proposed project would have no permanent effect on raptor species or their habitat. No mitigation would be required for the potential temporary impacts to raptor species.

3.8.5 Non-Game and Furbearer

Non-game wildlife observed during the field survey included the black capped chickadee (*Poecile carolinensis*). In addition, active beaver (*Castor canadensis*) dams were observed in both stream crossings and in one of the hardwood draws toward the southern end of the proposed corridor. A variety of non-game and furbearer species, including song birds, cottontail rabbit (*Sylvilagus floridanus*), coyote (*Canis latrans*), red fox (*Vulpes vulpes*), badger (*Taxidea taxus*), and jackrabbit (*Lepus townsendii*) may traverse the project area.

3.8.5.1 Non-Game and Furbearer Impacts; Avoidance, Minimization, and Mitigation

Many of the non-game and furbearer species are transitory in nature. These species are generally expected to adapt to changing conditions and continue to thrive. Disturbance to these species would be temporary in nature and, following construction, habitat for these species would be restored. The proposed project would have no permanent effect on non-game and furbearer species. No mitigation would be necessary for temporary impacts to non-game and furbearer species.

3.9 Soils

The published soil survey for McKenzie County dates from 2006. Updated information is available online from the Natural Resources Conservation Service, with updated information available online through the NRCS Web Soil Survey. Soils encountered in the project area are identified in ***Table 4: Soil Mapping Units and Attributes.***

Table 4: Soil Mapping Units and Attributes

Soil Type	Map Unit Symbol	Slope (%)	Composition (in upper 60 inches)			Erosion Factor[2]		Hydrologic Soil Group[3]
			% sand	% silt	% clay	Kf	T	
Williams-Bowbells Loams	41B	3–6	35	35	30	.28	5	B
Williams Loam	42C	6–9	35	35	30	.28	5	B
Cabba-Badland, Outcrop-Arikara Complex	211F	9–70	40	40	20	.32	2	D
Brandenburg-Cabba-Dogtooth Complex	88F	15–70	8	87	5	.24	2	D
Noonan-Williams Loams	341C	6–9	34	35	31	.28	5	B
Zahl-Cabba-Maschetah Complex	45F	3–70	34	35	31	.32	5	B
Arikara-Shambo-Cabba Loams	154F	9–70	37	38	25	.02	5	B

[2] Erosion Factors indicate susceptibility of a soil to sheet and rill erosion by water. Kf indicates the erodibility of material less than two millimeters in size. Values of K range from 0.02 to 0.69. Higher values indicate greater susceptibility. T Factors estimate maximum average annual rates of erosion by wind and water that will not affect crop productivity. Tons/acre/year range from 1 for shallow soils to 5 for very deep soils. Soils with higher T values can tolerate higher rates of erosion without loss of productivity.

[3] Hydrologic Soil Groups (A, B, C, and D) are based on estimates of runoff potential according to the rate of water infiltration under the following conditions: soils are not protected by vegetation, soils are thoroughly wet, and soils receive precipitation from long-duration storms. The rate of infiltration decreases from Group A (high infiltration, low runoff) to D (low infiltration, high runoff).

Soil Type	Map Unit	Slope (%)	Composition (in upper 60 inches)			Erosion Factor[2]		Hydrologic Soil Group[3]
Korchea Loam, Channeled	14	0–2	39	43	18	.28	5	B
Zahl-Williams-Arikara Loams	242F	9–45	34	35	31	.28	5	B
Williams-Bowbells Loams	38F	6–30	47	5	48	.28	2	D
Williams Loam	83F	9–70	40	40	20	.32	2	D
Cabba-Badland, Outcrop-Arikara Complex	442F	15–45	34	35	31	.28	5	B
Brandenburg-Cabba-Dogtooth Complex	43C	6–9	35	35	30	.28	5	B
Noonan-Williams Loams	84F	3–70	62	18	20	.32	2	B

The Arikara soil series consists of deep, well drained soils that have a moderate to high permeability. These soils occur on ridges and are formed from loamy colluviums derived from mudstone.

The Badlands soil series consists of shallow soils ranging from 0-5 inches to paralithic bedrock. These soils have a moderate permeability. The badlands soils are primarily found on ridges.

The Bowbells soil series consists of deep, moderately well drained soils that have a moderate permeability. These soils are primarily located on hills and are formed from fine loamy till.

The Brandenburg soil series consists of moderately deep, excessively drained soils, that have a moderate to very high permeability. These soils occur on knobs and ridges and are formed from loamy residuum weathered from porcelionite.

The Cabba soil series consists of shallow, well drained soils that have moderate permeability. These soils are primarily located on uplands and formed in residuum weathered from siltstone.

The Daglum soil series consists of deep, moderately well drained soils with very slow permeability. This series primarily occurs on uplands and formed in silty and clayey alluvium.

The Dogtooth soil series are primarily located on hills and ridges and formed in residuum. This series consists of moderately deep, well drained soils with very slow permeability.

The Havrelon soil series consists of deep, well drained soils that have moderate permeability. These soils are primarily found on flood plains or river valleys and are formed from fine loamy alluvium derived from sedimentary rock.

The Jamesburg soil series consists of moderately shallow, well drained soils with a very low to moderate permeability. These soils occur on ridges and are formed from clayey residuum weathered from shale.

The Korchea soil series consists of deep, well drained soils with a moderate to very high permeability. These soils occur on floodplains and river valleys and are formed from stratified fine loamy alluvium derived from sedimentary rock.

The Maschetah soil series consists of deep, well drained soils that have a moderate permeability. These soils occur on ridges and are formed from fine silty alluvium derived from sedimentary rock.

The Noonan soil series primarily occur on uplands and formed in calcareous till. This series consists of deep, moderately well drained soils with slow permeability.

The Shambo soil series consists of deep, well drained soils that have a moderate to high permeability. These soils occur on ridges and are formed from fine loamy alluvium derived from sedimentary rock.

The Williams soil series primarily occur on uplands and formed in loam or clay loam till. This series consists of deep, well drained soils with moderately slow permeability.

The Zahl soil series consists of deep, well drained soils that have a moderate permeability. These soils occur on ridges and are formed from fine loamy till.

Table 5: Acres of Disturbance by Soil Mapping Unit

Soil Type	Acres within the corridor
Williams-Bowbells Loams	4.1
Williams Loam	1.7
Cabba-Badland, Outcrop-Arikara Complex	1.3
Brandenburg-Cabba-Dogtooth Complex	0.2
Noonan-Williams Loams	3.9
Zahl-Cabba-Maschetah Complex	2.9
Arikara-Shambo-Cabba Loams	1.2
Korchea Loam, Channeled	0.4
Zahl-Williams-Arikara Loams	1.7
Dogtooth-Janesburg-Cabba Complex	4.4
Cabba-Badlands, Outcrop	2.4
Zahl-Williams Loams, Dissected	2.4
Williams-Zahl Loams	1.9
Cabba-Chama-Havrelon Silt Loams	0.5
Zahl-Cabba-Arikara Complex	4.0
Total Impacts	**33**

3.9.1 Soils Impacts; Avoidance, Minimization, and Mitigation

Construction of the proposed pipelines would disturb subsoil and topsoil within the project area. Construction would result in the removal of vegetation from the soil surface. As a result, the soil surface could become more prone to accelerated erosion by wind and water. BMPs used to reduce these impacts would include; the use of erosion and sediment control measures during and after construction, segregating topsoil from subsurface material for future reclamation, reseeding of disturbed areas, the use of construction equipment appropriately sized to the scope and scale of the project and maintaining proper drainage.

Another soil resources issue is soil compaction, which can occur by use of heavy equipment. When soil is compacted, it decreases permeability and increases surface runoff. This is especially evident in silt and clay soils. In addition, soils may be impacted by mixing of soil horizons. Soil compaction and mixing of soil horizons would be minimized by the previously discussed topsoil segregation.

Disturbed areas would be reseeded following construction. No mitigation for soil impacts is anticipated.

3.10 Water Resources

The Federal Water Pollution Control Act of 1972, as amended by the Clean Water Act of 1977, provides the authority to establish water quality standards, control discharges into surface and ground waters, develop waste treatment management plans and practices, and issue permits for discharges (Section 402) and for dredged or fill material (Section 404).

3.10.1 Surface Water

The proposed project is located in the Bear Den Creek Watershed and the Handy Water Creek and Bear Den Bay sub-watersheds. Along the proposed pipeline route water travels by sheet-flow and flows through wooded draws including one perennial stream and two intermittent streams. These streams meander through the steep topography carrying the runoff from 2 to 4.6 miles where they connect to Bear Den Creek, which eventually flows into Lake Sakakawea. The proposed project is located approximately 1.5 miles southwest of Lake Sakakawea. ***See Figure 6: Water Resources.***

3.10.1.1 Surface Water Impacts; Avoidance, Minimization, and Mitigation

The proposed project has been sited to minimize direct impacts to surface water and disruption of drainages. No identified floodplains exist within the proposed corridor. Erosion control measures should be used to mitigate migration of sediment downhill or downstream. No measurable increase in runoff or impacts to surface waters is expected. The two areas identified during the field surveys as having surface water present would be bored under causing no surface water impacts. No mitigation for surface water impacts would be required.

3.10.2 Groundwater

Review of the electronic records of the North Dakota State Water Commission revealed that there are no permitted water wells or surface water impoundments in the project corridor. Within one mile of the project corridor, there are six permitted water wells. The proposed corridor crosses the Fort Union Aquifer. ***See Figure 6: Water Resources.***

3.10.2.1 Groundwater Impacts; Avoidance, Minimization, and Mitigation

Construction of the proposed project would have no impact to groundwater resources. No mitigation for ground water impacts would be required.

Figure 6: Water Resources

3.11 Wetlands

Wetlands are defined in Executive Order 11990, Protection of Wetlands, as those areas that are inundated by surface or groundwater with a frequency to support, and under normal circumstances do support, a prevalence of vegetation or aquatic life that requires saturated soil conditions for growth and reproduction. Three parameters that define a wetland, as outlined in the Federal Manual for Delineating Jurisdictional Wetlands (US Army Corps of Engineers, 1987), are hydrophytic vegetation, hydrology, and hydric soils. The term "wetlands" generally includes lakes, ponds, rivers, streams, sloughs, prairie potholes, and wet meadows. Wetlands are an important natural resource serving many functions, such as providing habitat for wildlife, storing floodwaters, recharging groundwater, and improving water quality through purification.

A field wetlands delineation was conducted by Kadrmas, Lee & Jackson on November 10, 2009. Results of the field delineation indicated two areas with positive wetland indicators present. A total of 0.3 acres of wetlands were delineated within the proposed corridor. ***See Table 6: Wetlands Summary.***

Table 6: Wetlands Summary

	Wetland 1	Wetland 2
Location	SW/SW¼ Section 13 T150N – R95W	SE/SW ¼ Section 18 T150N – R94W
Latitude/Longitude	-102.787156 / 47.805850	-102.762785 / 47.805423
Cowardin Classification	R2UBb	R2UBb
Wetland Type	Intermittent Stream	Perennial Stream
Wetland Feature	Natural	Natural
Wetland Size (Acres)	0.06	0.24
Wetland Protected Under E.O. 11990	✔	✔
Likely USACE Jurisdictional Wetland	✔	✔
Permanent ROW Impacted Wetland Acres	0.0	0.0
Temporary ROW Impacted Wetland Acres	0.0	0.0
Total Impacted Acres	**0.0**	

3.11.1 Wetlands Impacts; Avoidance, Minimization, and Mitigation

SBP plans to bore under these two locations. Poles associated with the electric transmission line would be sited to avoid wetlands within the project corridor. No wetland impacts are anticipated. A United States Army Corps of Engineers (USACE) Section 404 permit would not be required if the wetlands were not disturbed. No mitigation or monitoring for wetland impacts would be required.

3.12 Vegetation and Invasive Species

Botanical resources were evaluated using visual inspection, GPS data collection, and mapping of dominant plant communities. The project corridor was also investigated for the presence of invasive plant species.

Six distinct vegetative communities were identified and mapped along the project corridor. The six communities include native upland, clay pan, badlands, wooded draw, wetlands and cropland. Native upland makes up the majority of the route. The native upland community was dominated by western wheatgrass (*Pascopyrum smithii*), green needlegrass (*Nassella viridula*) and blue grama (*Bouteloua gracilis*) with distinct patches of little bluestem (*Schizachyrium scoparium*) occurring throughout the corridor. The clay pan community was mostly void of vegetation with sparse patches of blue grama, western wheatgrass and little bluestem. The badlands ecosystem occurred on a steep hillside which was dominated by blue grama, western wheatgrass, prairie sandreed (*Calamovilfa longifolia*), little bluestem, creeping juniper (*Juniperus horizontalis*), juniper (*Juniperus communis*) and a variety of woody vegetation. Wooded draws included distinct mixtures of green ash (*Fraxinus pennsylvanica*), American elm (*Ulmus Americana*), bur oak (*Quercus macrocarpa*), quacking aspen (*Populus tremuloides*) and paper birch (*Betula papyrifera*) trees. Wetlands were dominated with prairie cordgrass (*Spartina pectinata*), giant reedgrass (*Arundo donax*), and cattail (*Typhia sp.).* Cropland was assigned to the tillable acres in the corridor.

Table 7: Plant Species Summary and ***Figure 7: Dominant Plant Species and Noxious Weed Distribution*** reflect the dominant plant species found within the project corridor.

Table 7: Plant Species Summary

Scientific Name	Common Name	Vegetation Type
Achillea millefolium	Yarrow	Forb
Agropyron smithii	Western Wheatgrass	Grass
Andropogon gerardii	Big bluestem	Grass
Antennaria neglecta	Field Pussytoes	Forb
Andropogon scoparius	Little Bluestem	Grass
Artemisia campestris	Green Sagewort	Forb
Artemisia cana	Silver Sagebrush	Forb
Artemisia frigid	Fringed Sagewort	Forb
Artistida purpurea	Red Threeawn	Grass
Arundo donax	Giant Reedgrass	Grass
Aster ericoides	White Prairie Aster	Woody
Betula papyrifera	Paper birch	Woody
Bouteloua gracilis	Blue Grama	Grass
Boutelous curtipendula	Sideoats Grama	Grass
Bromus inermus	Smooth Bromegrass	Grass
Calamovilfa longifolia	Prairie Sandreed	Grass
Carex filifolia	Threadleaf sedge	Sedge
Chrysothamnus nauseosus	Rubber Rabbitbrush	Woody
Cornus sericea	Red Dogwood	Woody
Echinacea angusifolia	Purple Coneflower	Forb
Elymus Canadensis	Canada Wildrye	Grass
Equisetum arvense	Field horsetail	Forb
Erysimum asperum	Western Wallflower	Forb
Fraxinus pennsylvanica	Green Ash	Woody
Grindelia squarrosa	Curly Cup Gumweed	Forb
Helianthus annus	Annual Sunflower	Forb
Juniperus communis	Common Juniper	Woody
Juniperus horizontalis	Creeping Juniper	Woody
Juniperus Virginiana	Eastern Cedar	Woody
Koeleria macrantha	Junegrass	Grass
Lepidium densiflorum	Pepperweed	Forb

Scientific Name	Common Name	Vegetation Type
Linum rigidum	Stiffstem flax	Forb
Melilotus officinalis	Sweet Clover	Forb
Monarda fustulosa	Wild Bergamot	Forb
Opuntia humifusa	Prickly Pear Cactus	Forb
Orthocarpus luteus	Owl clover	Forb
Pascopyrum smithii	Western Wheatgrass	Grass
Poa pratensis	Kentucky Bluegrass	Grass
Populus tremuloides	Quaking aspen	Woody
Prunus virginiana	Chokecherry	Woody
Psoralea esculenta	Breadroot Scurfpea	Forb
Psoralea argophylla	Silverleaf scurfpea	Forb
Quercus macrocarpa	Bur Oak	Woody
Ratibida pinnata	Prairie coneflower	Forb
Rosa arkansa	Prairie Wild Rose	Forb
Schizachyrium scoparium	Little Bluestem	Grass
Shepherdia argentea	Silver Buffalo Berry	Forb
Solidago mollis	Soft goldenrod	Forb
Spartina pectinata	Prairie Cordgrass	Grass
Stipa comata	Needle and Thread	Grass
Stipa viridula	Green Needle Grass	Grass
Symphoricarpos occidentalis	Western Snowberry	Forb
Tragopogon dubius	Goatsbeard	Forb
Typhia sp.	Cattail	Grass
Ulmus americana	American Elm	Woody

Noxious weeds can easily spread to the detriment of public health, crops, livestock and recreation. Of twelve species declared noxious under the North Dakota Century Code (Chapter 63-01.1) seven are known to occur in McKenzie County: absinth wormwood, Canada thistle, leafy spurge, musk thistle, Russian knapweed, saltcedar and spotted knapweed. ***See Table 8: McKenzie County Noxious Weed Distribution.*** In addition, counties and cities have the option to add species to a list to be enforced only in their jurisdiction. McKenzie County has added black henbane, common burdock, hound's tongue and yellow toadflax. One noxious weed was identified within the project corridor: A few scattered Canada thistle plants were found at the edge of the agricultural field north of Highway 73. ***See Figure 7: Dominant Plant Species and Noxious Weed Distribution.***

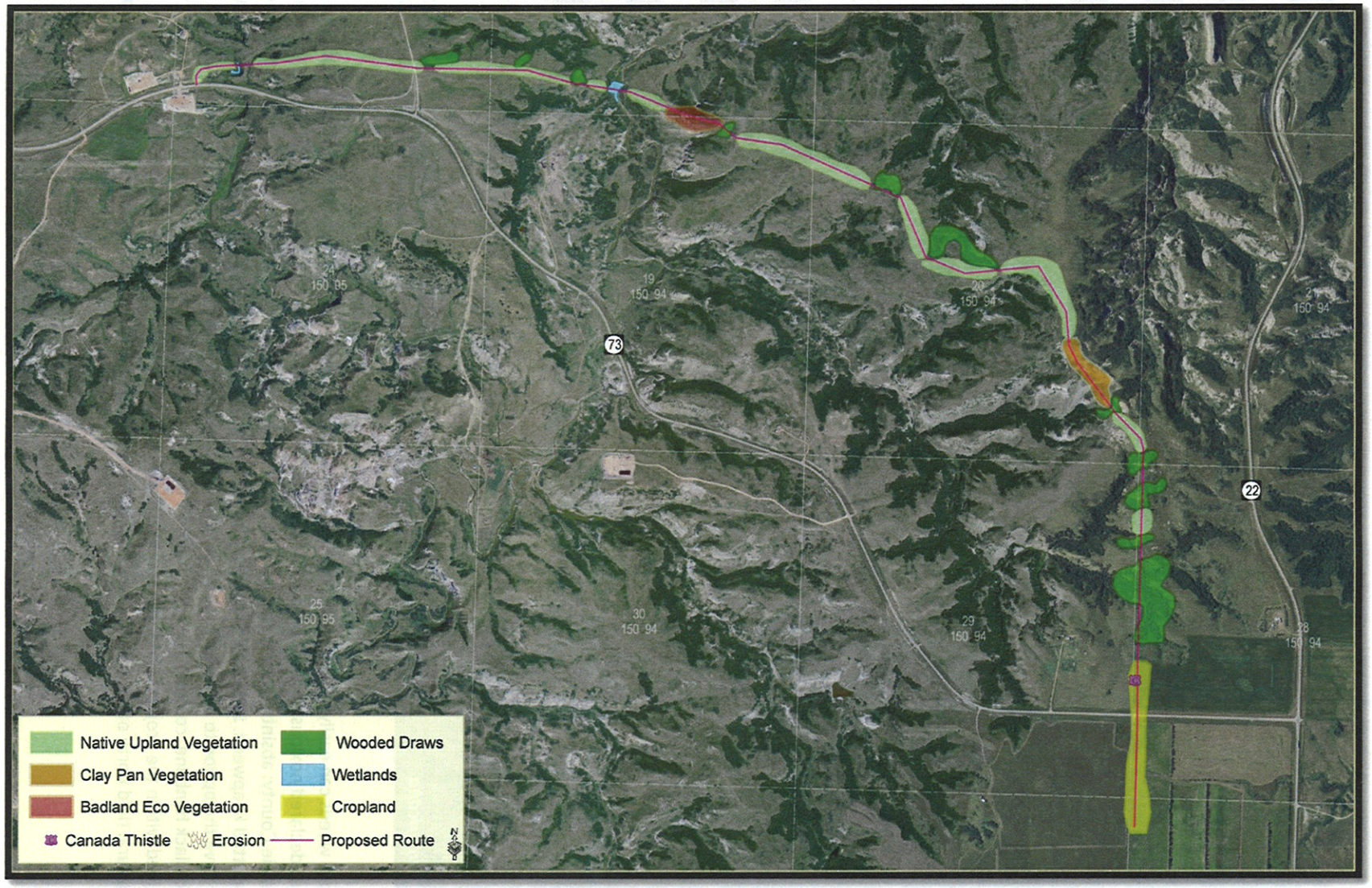

Figure 7: Dominant Plant Species and Noxious Weed Distribution

Table 8: McKenzie County Noxious Weed Distribution

Common Name	Scientific Name	McKenzie County Acres	Present in the Study Area
Absinth wormwood	*Artemesia abinthium L.*	43	No
Black henbane	*Hyoscyamus niger*	—	No
Canada thistle	*Cirsium arvense (L.) Scop*	4,300	Yes
Common Burdock	*Arctium minus*	——	No
Dalmation toadflax	*Linaria genistifolia ssp. Dalmatica*	—	No
Diffuse knapweed	*Centaurea diffusa Lam*	—	No
Field bindweed	*Convolvulus arvensis L.*	—	No
Hound's tongue	*Cynoglossum officinale*	—	No
Leafy spurge	*Euphorbia esula L.*	1,300	No
Musk thistle	*Carduus nutans L.*	2	No
Purple loosestrife	*Lythrum salicaria*	—	No
Russian knapweed	*Acroptilon repens (L.) DC.*	1	No
Saltcedar (tamarisk)	*Tamarix ramosissima*	1	No
Spotted knapweed	*Centaurea maculosa Lam.*	1	No
Yellow starthistle	*Centaurea solstitalis L.*	—	No
Yellow toadflax	*Linaria vulgaris*	—	No

3.12.1 Vegetation and Invasive Species Impacts; Avoidance, Minimization, and Mitigation

Construction of the proposed project would disturb vegetation within the project corridor. Disturbed areas would be re-vegetated following construction. Careless construction of the proposed project could introduce undesirable species to the area. Infestations within the project area could spread to neighboring tracts, causing reductions in the quality or quantity of forage or crop production. Reclamation of the disturbed area should include monitoring of the project corridor to identify and help coordinate the control of noxious weeds.

3.13 Mitigation and Monitoring

Many protective measures and procedures are described in this document. No laws, regulations, or other requirements have been waived; no compensatory mitigation measures are required. Monitoring of cultural resource impacts by qualified personnel is recommended during all ground-disturbing activities. In addition, it

is recommended that all areas reclaimed and reseeded are monitored following reclamation efforts to ensure the area is properly reclaimed and the spread of noxious weeds is prevented.

3.14 Irreversible and Irretrievable Commitment of Resources

Potential irreversible and irretrievable commitments of resources include soil lost through wind and water erosion, cultural resources inadvertently destroyed, wildlife killed during earthmoving activities or in collisions with vehicles, and energy expended during construction and operation.

3.15 Short-term Use of the Environment versus Long-term Productivity

Short-term activities would not detract significantly from long-term productivity of the project area. The project area would generally remain available for livestock grazing, crop production, wildlife habitat and other uses. The Tribes and/or allottees with surface rights would be compensated for loss of productive acreage during construction. Successful and ongoing reclamation of the landscape would quickly support wildlife habitat, crop production, livestock grazing, stabilize the soil, and reduce the potential for erosion and sedimentation. Long-term productivity of the oil and gas well would improve as previously lost hydrocarbons are collected and brought to market. In addition, there would be a long-term benefit as the proposed project would reduce air emissions associated with flaring and trucking of stored liquids at the well site.

3.16 Cumulative Impacts

Cumulative impacts result from the incremental consequences of an action "when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions" (40 CFR 1508.7). Effects of an action may be minor when evaluated in an individual context, but these effects can add to other disturbances and collectively may lead to a measureable environmental change. By evaluating the impacts of the proposed action with the effects of other actions, the relative contribution of the proposed action to a projected cumulative impact can be estimated.

The proposed action occurred within the context of other oil and gas exploration activities being undertaken and proposed on the Fort Berthold Reservation, including drilling of wells and associated infrastructure such as access roads and other pipelines similar to the one evaluated in this EA. There are no existing exploratory oil and gas wells, other than the one associated with the proposed project (Red Tipped Arrow 33-11H), within the project area. While information regarding other oil and gas proposals remain proprietary, it is reasonable to assume that these activities will continue to be proposed and developed in the foreseeable future. The FBRW water pipeline occurs within the project area. The proposed pipelines would cross the FBRW pipeline in Section 28, T150N, R94W, and Section 13, T150N, R95W. Pipelines within the area generally result in temporary surface disturbance, as would the proposed pipelines; therefore, when adding on to past, present, or reasonably foreseeable pipeline proposals, it is not anticipated that a significant cumulative impact would occur. Furthermore, the proposed project impacts are mainly related to construction and, therefore, would not add to the impacts resulting from operation of the existing oil and gas well associated with the project or potential future oil and gas wells. In the long-term, the proposed project is anticipated to aid in the reduction of air emissions within the project area through reduced flaring from the well site and reduced truck traffic to the site. When added to potential impacts of any future oil and gas pipelines, the reduction in air emissions is anticipated to provide a small cumulative benefit.

3.17 Permits

Prior to construction the developer will need to apply for a utility crossing consent from McKenzie County to cross the gravel roadway in Section 13, T150N, R95W. In addition, a utility crossing permit from the NDDOT, Williston District Office, will need to be obtained for boring under ND State Highway 73.

On Indian land in North Dakota the EPA is responsible for permitting SWPPPs through permit NDR1000I using the National Pollutant Discharge Elimination System (NPDES). For NPDES permitting, both the construction and operation activities for oil and gas are subject to permitting if any of three criteria are met:

- Has had a discharge of storm water resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 117.21 or 40 CFR 302.6 at any time since November 16, 1987; or
- Has had a discharge of storm water resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 110.6 at any time since November 16, 1987; or
- Contributes to a violation of a water quality standard.

Construction of the proposed pipelines do not meet any of the three criteria; therefore, a SWPPP is not required for construction of the proposed project. Should one of these criteria be met during construction or operation of the pipelines, a SWPPP would need to be acquired through coordination with the EPA.

4 Consultation and Coordination

To initiate early communication and coordination, an early notification package was distributed on November 23, 2009 to local, state, federal and tribal agencies. This Solicitation of Views package included information on the project and project location map. Pursuant to Section 102(2) (D) (IV) of the National Environmental Policy Act of 1969, a solicitation of views was requested to ensure that social, economic, and environmental effects were considered in the development of the PCR for this project.

At the conclusion of the 30-day comment period, seven responses were received. The comments were referenced and incorporated where appropriate within the environmental impact categories addressed in this document. ***Please refer to Appendix A, Agency Coordination.***

4.1 Agency Recommendations

4.1.1 North Dakota Game and Fish

- Avoid destruction of native prairie and woody draws to every extent possible. Disturbed areas should be reclaimed to preconstruction conditions.
- Steps should be taken to avoid wetland disturbances. No alterations should be made to existing drainage patterns.

4.1.2 North Dakota State Water Commission

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

4.1.3 North Dakota Parks and Recreation

- Development should be completed with the least amount of or no visual impact to the Killdeer Mountain Four Bears Scenic Byway.

4.1.4 North Dakota Department of Health

- All necessary measures must be taken to minimize fugitive dust emissions created during construction.

- Care is to be taken near any water of the state to minimize adverse affect to a water body. This includes minimal disturbance of stream beds and banks to prevent excess siltation, and the replacement and revegetation of any disturbed area as soon as possible after work has been completed.

- Noise levels should be minimized by ensuring that construction equipment is equipped with a recommended muffler in good working order.

4.1.5 United States Army Corps of Engineers

- If during project design, impacts to the tributary systems or adjacent wetlands cannot be avoided, permits would be necessary prior to commencement of construction.

4.1.6 Natural Resources Conservation Service

- Wetland impacts should be avoided if possible. If avoidance is not possible, the following measures shall be taken: 1) disturbance to wetlands must be temporary, 2) no drainage of wetlands, 3) preconstruction contours are maintained, 4) temporary sidecast material must not be placed in the wetland, 5) all trenches must be backfilled to the original wetland bottom elevation.

4.1.7 Bureau of Reclamation

- The proposed pipelines are located in the vicinity of the Fort Berthold Rural Water Pipeline. Coordination with the director should take place prior to construction.

United States Department of the Interior

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

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:
DESCRM
MC-208

DEC 0 1 2009

Perry 'No Tears' Brady, THPO
Mandan, Hidatsa and Arikara Nation
404 Frontage Road
New Town, North Dakota 58763

Dear Mr. Brady:

We have considered the potential effects on cultural resources of an oil pipeline in McKenzie County, North Dakota. Approximately 64.2 acres were intensively inventoried using a pedestrian methodology. Potential surface disturbances are not expected to exceed the area depicted in the enclosed report. No historic properties were located that appear to possess the quality of integrity and meet at least one of the criteria (36 CFR 60.4) for inclusion on the National Register of Historic Places. Three "avoidance areas" were located that may qualify for protection under the American Indian Religious Freedom Act (42 USC 1996).

As the surface management agency, and as provided for in 36 CFR 800.5, we have therefore reached a determination of **no historic properties affected** for this undertaking. Catalogued as **BIA Case Number AAO-1715/FB/10,** the proposed undertaking, location, and project dimensions are described in the following report:

Burns, Christina, and Jennifer Roehrdanz
(2009) Red Tipped Arrow (RTA) North Pipeline: A Class III Cultural Resource Inventory, McKenzie County, North Dakota. Beaver Creek Archaeology, Inc. for Saddle Butte Pipeline, LLC, Durango, CO.

If your office concurs with this determination, consultation will be completed under the National Historic Preservation Act and its implementing regulations. The Standard Conditions of Compliance will be adhered to.

If you have any questions, please contact Dr. Carson N. Murdy, Regional Archaeologist, at (605) 226-7656.

Sincerely,

Regional Director

Enclosure

cc: Chairman, Three Affiliated Tribes
Superintendent, Fort Berthold Agency

5 List of Preparers

Kadrmas, Lee & Jackson, Inc. (KL&J) prepared this EA and conducted field work under a contractual agreement between Saddle Butte Pipeline, LLC and KL&J, and under the direction of the BIA, Great Plains Regional Office, Division of Energy and Environment. ***See Table 9: Preparers and Reviewers.***

Table 9: Preparers and Reviewers

Organization and Title	Name and Title	Role
Saddle Butte Pipeline, LLC	Jim Nichols, Project Manager	Project Development, Purpose and Need Development, and Alternatives Development
Kadrmas, Lee & Jackson, Inc.	Shanna Braun, Environmental Scientist	Agency and Client Coordination
Kadrmas, Lee & Jackson, Inc.	Charlotte Brett, Environmental Planner	Client Coordination and Senior Review
Kadrmas, Lee & Jackson, Inc.	Jerry Krieg, Senior Engineer	Project Development
Kadrmas, Lee & Jackson, Inc.	Jerry Reinisch, Environmental Scientist	Biological and Botanical Surveys
Kadrmas, Lee & Jackson, Inc.	Skip Skattum, GIS Analyst	Existing Conditions, Impact Analysis, and Exhibit Creation
Kadrmas, Lee & Jackson, Inc.	Mitch Steckler, Engineer	Chapters 1 & 2
Kadrmas, Lee & Jackson, Inc.	Grady Wolf, Environmental Scientist	Biological and Botanical Surveys, Chapters 3 – 5
Beaver Creek Archaeology	Wade Burns, Principal Investigator	Cultural Resource Surveys and Traditional Cultural Property Surveys
Beaver Creek Archaeology	Jennifer Pollman, Archaeologist	Cultural Resource Surveys and Traditional Cultural Property Surveys

6 References and Acronyms

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ACRONYMS

APE	Area of Potential Effect
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
CO	Carbon Monoxide
EA	Environmental Assessment
FBRW	Fort Berthold Rural Water
FPPA	Farmland Protection Policy Act
FONSI	Finding of No Significant Impact
MAOP	Maximum Allowable Working Pressure
NAAQS	National Ambient Air Quality Standards
NDDH	North Dakota Department of Health
NEPA	National Environmental Policy Act
NO_2	Nitrogen Dioxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	Ozone
Pb	Lead
PM_{10}	Particulate Matter
ROW	Right-of-way
SBP	Saddle Butte Pipeline, LLC
SO_2	Sulfur Dioxide
SWPPP	Stormwater Pollution Prevention Plan
THPO	Tribal Historic Preservation Officer
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
WHP	Wellhead Processing Unit

Appendix A
AGENCY COORDINATION

"VARIETY IN HUNTING AND FISHING"

NORTH DAKOTA GAME AND FISH DEPARTMENT

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

RECEIVED
DEC 23 2009
BY:

December 18, 2009

Charlotte Brett
Environmental Planner
Kadrmas, Lee & Jackson, Inc.
PO Box 1157
Bismarck, ND 58502-1157

Dear Ms. Brett:

RE: Proposed Pipeline Route Right-of-Way (ROW)
Fort Berthold Reservation

Saddle Butte Pipeline, LLC is proposing construction of three pipelines (oil, gas and water) and an electric utility line within a 100-foot ROW on the Fort Berthold Reservation in McKenzie County, North Dakota.

Our primary concern with this project is the possible disturbance of native prairie and wooded draws associated with construction of the pipeline and access roads. We ask that work within these areas be avoided to the extent possible, every effort be made to prevent destruction of woody vegetation, and disturbed areas be reclaimed to pre-project conditions.

The National Wetland Inventory indicates various wetlands, such as Bear Den Creek, within the project corridor. Steps should be taken to protect any wetlands that cannot be avoided, above-ground appurtenances should not be placed in wetland areas, and no alterations should be made to existing drainage patterns.

We do not believe this project will have any significant adverse effects on wildlife or wildlife habitat provided best management practices are implemented.

Sincerely,

Steve Dyke

(for) Michael G. McKenna
Chief
Conservation & Communication Division

js

North Dakota State Water Commission

900 EAST BOULEVARD AVENUE, DEPT 770 • BISMARCK, NORTH DAKOTA 58505-0850
701-328-2750 • TDD 701-328-2750 • FAX 701-328-3696 • INTERNET: http://swc.nd.gov

December 29, 2009

Charlotte Brett
Kadrmas, Lee & Jackson
PO Box 1157
Bismarck, ND 58502-1157

Dear Ms. Brett:

This is in response to your request for review of environmental impacts associated with the development of three pipelines and an electric utility line located on the Fort Berthold Reservation in McKenzie County, ND.

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

- The property is not located in an identified floodplain and it is believed the project will not affect an identified floodplain.

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

- No sole-source aquifers have been designated in ND.

There are no other concerns associated with this project that affect State Water Commission or State Engineer regulatory responsibilities.

Thank you for the opportunity to provide review comments. If you have any questions, please call me at 328-4969.

Sincerely,

Larry Knudtson
Research Analyst

LJK:ds/1570

JOHN HOEVEN, GOVERNOR
CHAIRMAN

DALE L. FRINK
SECRETARY AND STATE ENGINEER

John Hoeven, Governor
Douglass A. Prchal, Director

1600 East Century Avenue, Suite 3
Bismarck, ND 58503-0649
Phone 701-328-5357
Fax 701-328-5363
E-mail parkrec@nd.gov
www.parkrec.nd.gov

RECEIVED
DEC 16 2009

December 11, 2009

Charlotte Brett
Kadrmas, Lee & Jackson
PO Box 1157
Bismarck, ND 58502-1157

Re: Saddle Butte Pipeline, LLC Three Pipelines and an Electric Utility Line Project Proposal
Fort Berthold Reservation

Dear Ms. Brett:

The North Dakota Parks and Recreation Department has reviewed the above referenced project proposal to place three pipelines (oil, gas, and water) and an electric utilities line located in Sections 18, 19, 20, 28, and 29, T150N, R94W; and Section 13, T150N, R95W, McKenzie County.

Our agency scope of authority and expertise covers recreation and biological resources (in particular rare species and ecological communities). The project as defined does not affect state park lands that we manage or Land and Water Conservation Fund recreation projects that we coordinate.

The North Dakota Parks and Recreation Department is responsible for coordinating North Dakota's Scenic Byway and Backway Program. This proposed project is in proximity to the Killdeer Mountain Four Bears Scenic Byway and as such we recommend any project development be completed with the least amount of or no visual impact to the immediate and distant views from that Byway. North Dakota Parks and Recreation Department staff should be contacted at 701-328-5355 to assist in mitigation of any potential impacts.

The North Dakota Natural Heritage biological conservation database has been reviewed to determine if any current or historic plant or animal species of concern or other significant ecological communities are known to occur within an approximate one-mile radius of the project area. Based on this review, there are no known occurrences within or adjacent to the project area.

Because this information is not based on a comprehensive inventory, there may be species of concern or otherwise significant ecological communities in the area that are not represented in the database. The lack of data for any project area cannot be construed to mean that no significant features are present. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources.

Regarding any reclamation efforts, we recommend that any impacted areas be revegetated with species native to the project area.

Thank you for the opportunity to comment on this project. Please contact Kathy Duttenhefner (701-328-5370 or kgduttenhefner@nd.gov) of our staff if additional information is needed.

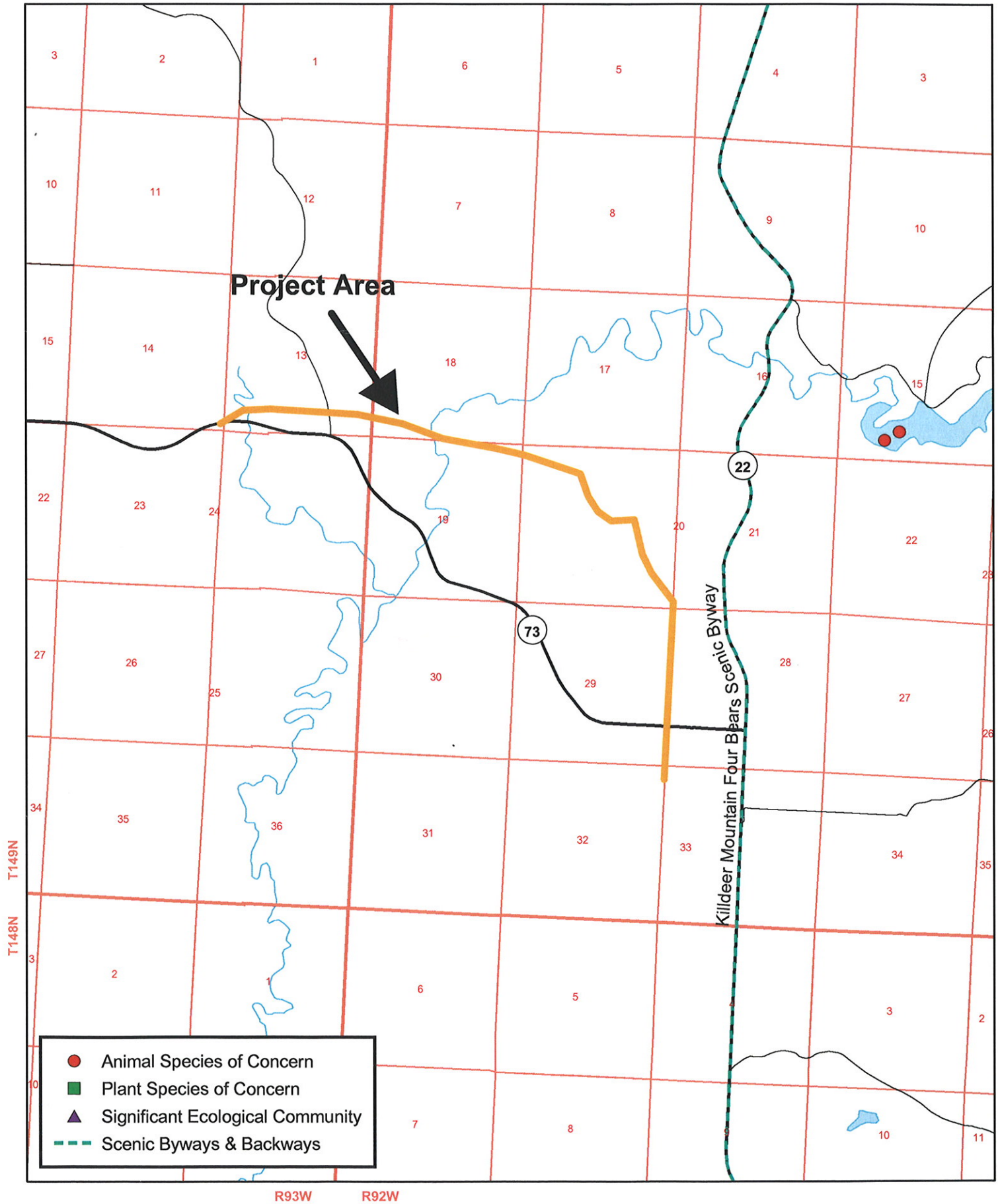
Sincerely,

Jesse Hanson

Jesse Hanson, Coordinator
Planning and Natural Resources Division

R.USNDNHI*2009-368

North Dakota Natural Heritage Inventory
Species of Concern and Significant Ecological Communities



North Dakota Parks & Recreation Department
North Dakota Natural Heritage Inventory
December 2009

NORTH DAKOTA
DEPARTMENT of HEALTH

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

December 1, 2009

RECEIVED
JAN 15 2010

Ms. Charlotte Brett
Environmental Planner
Kadrmas, Lee & Jackson, Inc.
P.O. Box 1157
Bismarck, ND 58502-1157

Re: Saddle Butte Pipeline, LLC
Proposed Red Tipped Arrow Pipeline on the
Fort Berthold Reservation, McKenzie County

Dear Ms. Brett:

This department has reviewed the information concerning the above-referenced project submitted under date of November 23, 2009, with respect to possible environmental impacts.

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

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

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

3. Oil and gas related construction activities located within tribal boundaries within North Dakota may be required to obtain a permit to discharge storm water runoff from the U.S. Environmental Protection Agency. Further information may be obtained from the U.S. EPA website or by calling the U.S. EPA - Region 8 at (303) 312-6312. Also, cities or counties may impose additional requirements and/or specific best management practices for construction affecting their storm drainage system. Check with the local officials to be sure any local storm water management considerations are addressed.

4. Noise from construction activities may have adverse effects on persons who live near the construction area. Noise levels can be minimized by ensuring that construction equipment is equipped with a recommended muffler in good working order. Noise effects can also be minimized by ensuring that construction activities are not conducted during early morning or late evening hours.

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

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

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

Sincerely,

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

LDG:cc
Attach.

NORTH DAKOTA
DEPARTMENT *of* HEALTH

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

Construction and Environmental Disturbance Requirements

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

Soils

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

Surface Waters

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

Fill Material

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

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
NORTH DAKOTA REGULATORY OFFICE
1513 SOUTH 12TH STREET
BISMARCK ND 58504-6640

REPLY TO
ATTENTION OF
North Dakota Regulatory Office

December 1, 2009

Kadrmas, Lee & Jackson
ATTN: Charlotte E. Brett, Environmental Planner
PO Box 1157
Bismarck, North Dakota 58502-1157

Dear Ms. Brett:

This is in response to your request for comments received November 25, 2009 concerning **Saddle Butte Pipeline LLC's** proposal to install three pipelines (oil, gas and water) and an electric utility line on the Fort Berthold Reservation in McKenzie County, north and west of Mandaree, North Dakota. The proposal is referred to as the Red Tipped Arrow Pipeline. We have assigned Application Number (**NWO-2009-2980-BIS**) to your request. Please reference this number when you write or call us regarding your proposal.

The Corps of Engineers regulates work affecting navigable waterways under Section 10 of the Rivers and Harbors Act and the discharge of dredged or fill material into waters of the United States under Section 404 of the Clean Water Act. Navigable waterways regulated under Section 10 in North Dakota are: the entire Missouri River system, including Lake Sakakawea and Lake Oahe; the Yellowstone River from the North Dakota/Montana border to its mouth; Upper Des Lacs Lake; Red River of the North; Bois De Sioux; and James River from Jamestown south to the North Dakota/South Dakota border. Waters of the United States may include, but are not limited to, rivers, streams, ditches, coulees, lakes, ponds and their adjacent wetlands. Fill material includes, but is not limited to, rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mines or other excavation activities and materials used to create any structure or infrastructure in waters of the United States.

If during project design, impacts to the tributary systems or adjacent wetlands cannot be avoided, permits would be required prior to commencement of construction. A DA permit application is enclosed for your convenience. If there is a question on whether or not permits would be required, the application and design specifications of the project should be forwarded our office for review and authorization prior to commencement of construction. It is essential to identify impacts to waters of the United States resulting from the project.

If you have any questions regarding this letter or our program, please do not hesitate to write me at the above address, or call this office at (701) 255-0015.

Sincerely,

Toni R. Erhardt
Project Manager
North Dakota Regulatory Office

Enclosure

Printed on Recycled Paper

Instructions for Preparing a
Department of the Army Permit Application

Blocks 1 through 4. To be completed by Corps of Engineers.

Block 5. Applicant's Name. Enter the name and the E-mail address of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the application, please attach a sheet with the necessary information marked Block 5.

Block 6. Address of Applicant. Please provide the full address of the party or parties responsible for the application. If more space is needed, attach an extra sheet of paper marked Block 6.

Block 7. Applicant Telephone Number(s). Please provide the number where you can usually be reached during normal business hours.

Blocks 8 through 11. To be completed, if you choose to have an agent.

Block 8. Authorized Agent's Name and Title. Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, or any other person or organization. Note: An agent is not required.

Blocks 9 and 10. Agent's Address and Telephone Number. Please provide the complete mailing address of the agent, along with the telephone number where he / she can be reached during normal business hours.

Block 11. Statement of Authorization. To be completed by applicant, if an agent is to be employed.

Block 12. Proposed Project Name or Title. Please provide name identifying the proposed project, e.g., Landmark Plaza, Burned Hills Subdivision, or Edsall Commercial Center.

Block 13. Name of Waterbody. Please provide the name of any stream, lake, marsh, or other waterway to be directly impacted by the activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

Block 14. Proposed Project Street Address. If the proposed project is located at a site having a street address (not a box number), please enter it here.

Block 15. Location of Proposed Project. Enter the latitude and longitude of where the proposed project is located. If more space is required, please attach a sheet with the necessary information marked Block 15.

Block 16. Other Location Descriptions. If available, provide the Tax Parcel Identification number of the site, Section, Township, and Range of the site (if known), and / or local Municipality that the site is located in.

Block 17. Directions to the Site. Provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site. You may also provide description of the proposed project location, such as lot numbers, tract numbers, or you may choose to locate the proposed project site from a known point (such as the right descending bank of Smith Creek, one mile downstream from the Highway 14 bridge). If a large river or stream, include the river mile of the proposed project site if known

Block 18. Nature of Activity. Describe the overall activity or project. Give appropriate dimensions of structures such as wing walls, dikes (identify the materials to be used in construction, as well as the methods by which the work is to be done), or excavations (length, width, and height). Indicate whether discharge of dredged or fill material is involved. Also, identify any structure to be constructed on a fill, piles, or float-supported platforms.

The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper marked Block 18.

Block 19. Proposed Project Purpose. Describe the purpose and need for the proposed project. What will it be used for and why? Also include a brief description of any related activities to be developed as the result of the proposed project. Give the approximate dates you plan to both begin and complete all work.

Block 20. Reasons for Discharge. If the activity involves the discharge of dredged and/or fill material into a wetland or other waterbody, including the temporary placement of material, explain the specific purpose of the placement of the material (such as erosion control).

Block 21. Types of Material Being Discharged and the Amount of Each Type in Cubic Yards. Describe the material to be discharged and amount of each material to be discharged within Corps jurisdiction. Please be sure this description will agree with your illustrations. Discharge material includes: rock, sand, clay, concrete, etc.

Block 22. Surface Areas of Wetlands or Other Waters Filled. Describe the area to be filled at each location. Specifically identify the surface areas, or part thereof, to be filled. Also include the means by which the discharge is to be done (backhoe, dragline, etc.). If dredged material is to be discharged on an upland site, identify the site and the steps to be taken (if necessary) to prevent runoff from the dredged material back into a waterbody. If more space is needed, attach an extra sheet of paper marked Block 22.

Block 23. Description of Avoidance, Minimization, and Compensation. Provide a brief explanation describing how impacts to waters of the United States are being avoided and minimized on the project site. Also provide a brief description of how impacts to waters of the United States will be compensated for, or a brief statement explaining why compensatory mitigation should not be required for those impacts.

Block 24. Is Any Portion of the Work Already Complete? Provide any background on any part of the proposed project already completed. Describe the area already developed, structures completed, any dredged or fill material already discharged, the type of material, volume in cubic yards, acres filled, if a wetland or other waterbody (in acres or square feet). If the work was done under an existing Corps permit, identity the authorization, if possible.

Block 25. Names and Addresses of Adjoining Property Owners, Lessees, etc., Whose Property Adjoins the Project Site. List complete names and full mailing addresses of the adjacent property owners (public and private) lessees, etc., whose property adjoins the waterbody or aquatic site where the work is being proposed so that they may be notified of the proposed activity (usually by public notice). If more space is needed, attach an extra sheet of paper marked Block 24.

Information regarding adjacent landowners is usually available through the office of the tax assessor in the county or counties where the project is to be developed.

Block 26. Information about Approvals or Denials by Other Agencies. You may need the approval of other federal, state, or local agencies for your project. Identify any applications you have submitted and the status, if any (approved or denied) of each application. You need not have obtained all other permits before applying for a Corps permit.

Block 27. Signature of Applicant or Agent. The application must be signed by the owner or other authorized party (agent). This signature shall be an affirmation that the party applying for the permit possesses the requisite property rights to undertake the activity applied for (including compliance with special conditions, mitigation, etc.).

DRAWINGS AND ILLUSTRATIONS

General Information.

Three types of illustrations are needed to properly depict the work to be undertaken. These illustrations or drawings are identified as a Vicinity Map, a Plan View or a Typical Cross-Section Map. Identify each illustration with a figure or attachment number.

Please submit one original, or good quality copy, of all drawings on 8½ x11 inch plain white paper (electronic media may be substituted). Use the fewest number of sheets necessary for your drawings or illustrations.

Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross-section). **While illustrations need not be professional (many small, private project illustrations are prepared by hand), they should be clear, accurate, and contain all necessary information.**

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT *(33 CFR 325)*	OMB APPROVAL NO. 0710-0003 EXPIRES: 31 August 2012

Public reporting burden for this collection of information is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters, Executive Services and Communications Directorate, Information Management Division and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME: First - Middle - Last – Company – E-mail Address –	8. AUTHORIZED AGENT'S NAME AND TITLE (an agent is not required) First - Middle - Last – Company – E-mail Address –
6. APPLICANT'S ADDRESS. Address - City – State – Zip – Country –	9. AGENT'S ADDRESS Address - City – State – Zip – Country –
7. APPLICANT'S PHONE NOs. W/AREA CODE. a. Residence b. Business c. Fax	10. AGENT'S PHONE NOs. W/AREA CODE a. Residence b. Business c. Fax

STATEMENT OF AUTHORIZATION

11. I hereby authorize, _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

_____

APPLICANT'S SIGNATURE DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)

13. NAME OF WATERBODY, IF KNOWN (if applicable)	14. PROJECT STREET ADDRESS (if applicable) Address
15. LOCATION OF PROJECT Latitude: °N Longitude: °W	City - State – Zip -

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)
State Tax Parcel ID Municipality
Section – Township – Range –

17. DIRECTIONS TO THE SITE

18. Nature of Activity (Description of project, include all features)

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres

Or

Liner Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

24. Is Any Portion of the Work Already Complete? Yes ☐ No ☐ IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (If more than can be entered here, please attach a supplemental list).

Address –

City – State – Zip –

26. List of Other Certifications or Approvals/Denials Received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT _____ DATE _____ SIGNATURE OF AGENT _____ DATE _____

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

United States Department of Agriculture

NRCS

Natural Resources Conservation Service
P.O. Box 1458
Bismarck, ND 58502-1458

December 8, 2009

Charlotte Brett
Kadrmas, Lee & Jackson
128 Soo Line Drive
PO Box 1157
Bismarck, ND 58502-1157

RE: The proposed action includes approval by the BIA and BLM of the development of three pipelines (oil, gas, and water) and an electric utility line approximately 4.5 miles long, all within 100-foot right-of-way, on the Fort Berthold Reservation - McKenzie County, ND

Dear Ms. Brett:

The Natural Resources Conservation Service (NRCS) has reviewed your letter dated November 23, 2009, regarding the approval of three pipelines on the Fort Berthold Reservation, McKenzie County, North Dakota.

Important Farmlands - NRCS has a major responsibility with FPPA in documenting conversion of farmland (i.e., prime, statewide, and local importance) to non-agricultural use. It appears your proposed project is not supported by Federal funding or actions; therefore, no further action is required.

Wetlands – The Wetland Conservation Provisions of the 1985 Food Security Act, as amended, provide that if a USDA participant converts a wetland for the purpose of, or to have the effect of, making agricultural production possible, loss of USDA benefits could occur. NRCS has developed the following guidelines for the installation of buried utilities. If these guidelines are followed, the impacts to the wetland(s) will be considered minimal allowing USDA participants to continue to receive USDA benefits. Following are the requirements: 1) Disturbance to the wetland(s) must be temporary, 2) no drainage of the wetland(s) is allowed (temporary or permanent), 3) mechanized landscaping necessary for installation is kept to a minimum and preconstruction contours are maintained, 4) temporary side cast material must be placed in such a manner not to be dispersed in the wetland, and 5) all trenches must be backfilled to the original wetland bottom elevation.

NRCS would recommend that impacts to wetlands be avoided. If the project requires passage through or disturbance of a wetland, NRCS can complete a certified wetland determination, if requested by the landowner/operator.

If you have additional questions pertaining to FPPA, please contact Steve Sieler, State Soil Liaison, at (701) 530-2019.

Sincerely,

JOHN GLOVER
Acting State Conservationist

cc:
Kyle Hartel, DC, NRCS, Watford City, ND
Terry Gisvold, ASTC (FO), NRCS, Dickinson, ND

United States Department of the Interior
BUREAU OF RECLAMATION
Dakotas Area Office
P.O. Box 1017
Bismarck, North Dakota 58502

TAKE PRIDE IN AMERICA

DK-5000
ENV-6.00

DEC 2 2009

Ms. Charlotte Brett
Environmental Planner
Kadrmas, Lee & Jackson, Inc.
P.O. Box 1157
Bismarck, ND 58502-1157

Subject: Solicitation for Environmental Assessment for Three Pipelines (Oil, Gas, Water) and Utilities Line by Peak North Dakota LLC on the Fort Berthold Reservation, McKenzie County, North Dakota

Dear Ms. Brett:

This letter is written to inform you that your letter was received on November 25 and the information and maps have been reviewed by Bureau of Reclamation staff.

Proposed pipeline sites located in McKenzie County could potentially affect Reclamation facilities in the form of the rural water pipelines of the Fort Berthold Rural Water System. The proposed pipelines are located in the vicinity of a water pipeline either existing or proposed for construction.

McKenzie County

Starting at Sections 32 and 33, T149N, R94W and terminating in Section 13, T150N, R94W.

We are providing maps depicting the proposed water line alignments in the vicinity of the proposed pipeline locations that could potentially affect Reclamation facilities. Since Reclamation is the lead Federal agency for the Fort Berthold Rural Water System, we request that any work planned on the reservation be coordinated with Mr. Marvin Danks, Fort Berthold Rural Water Director, Three Affiliated Tribes, 308 4 Bears Complex, New Town, North Dakota 58763.

Thank you for providing the information and opportunity to comment. If you have any further questions, please contact Ron Melhouse at 701-221-1288 or Kelly McPhillips at 701-221-1287.

Sincerely,

Ronald D. Melhouse
Environmental Specialist

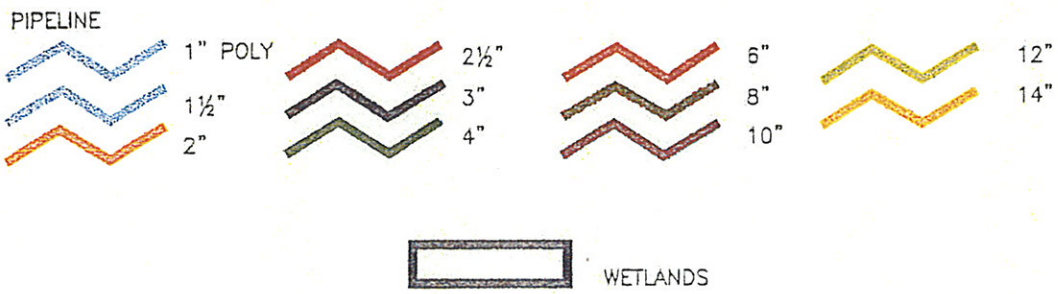
Enclosure

cc: See next page.

cc: Bureau of Indian Affairs
Great Plains Regional Office
Attention: Ms. Marilyn Bercier
Regional Environmental Scientist
115 Fourth Avenue S.E.
Aberdeen, SD 57401

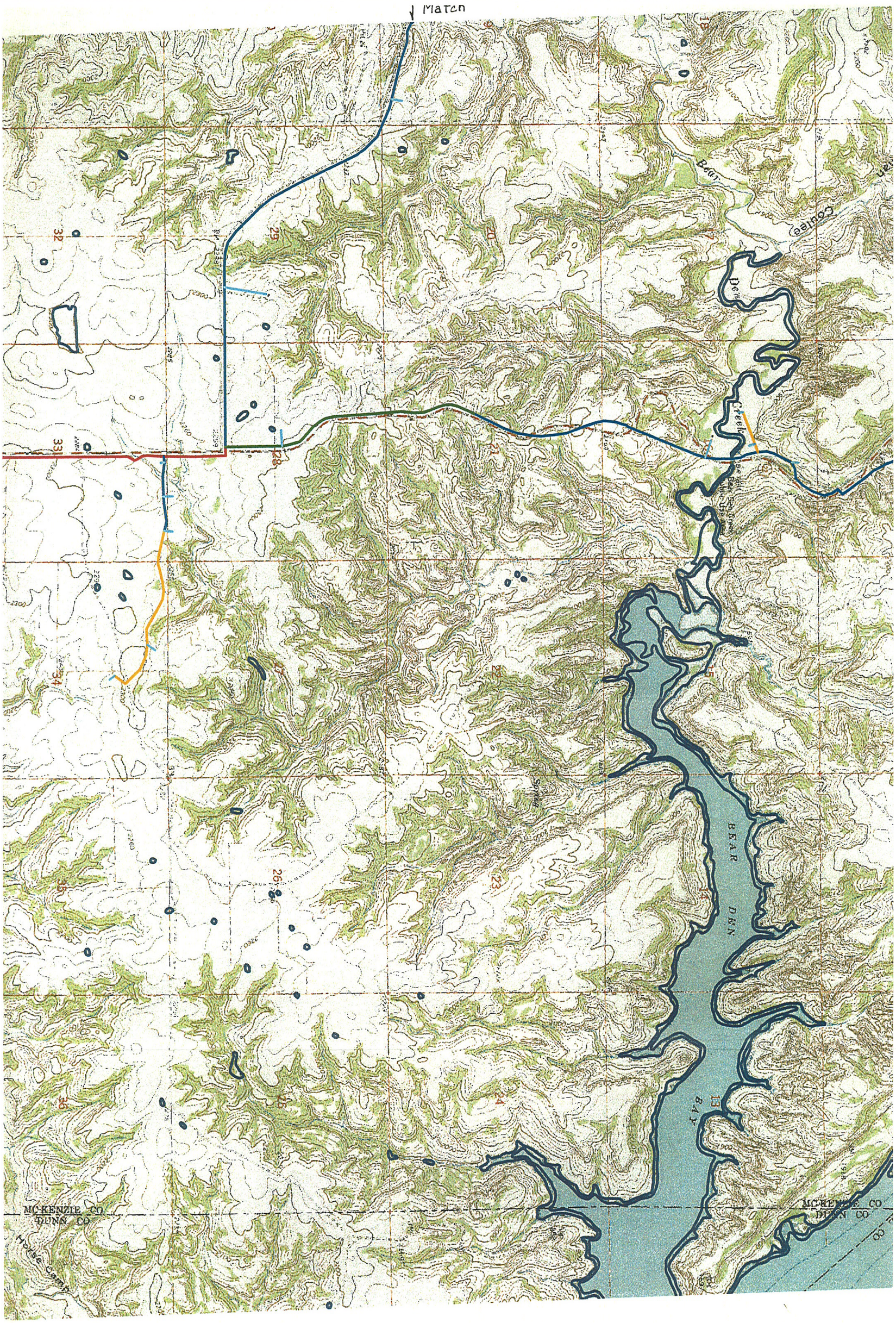
Mr. Marvin Danks
Fort Berthold Rural Water Director
Three Affiliated Tribes
308 4 Bears Complex
New Town, ND 58763
(w/encl)

LEGEND



G R A I L

1 Match


Match
Bear
Coulee
Creek
BEAR DEN BAY
MC-KENZIE CO
DUNN CO
Horse Camp

Notice of Availability and Appeal Rights

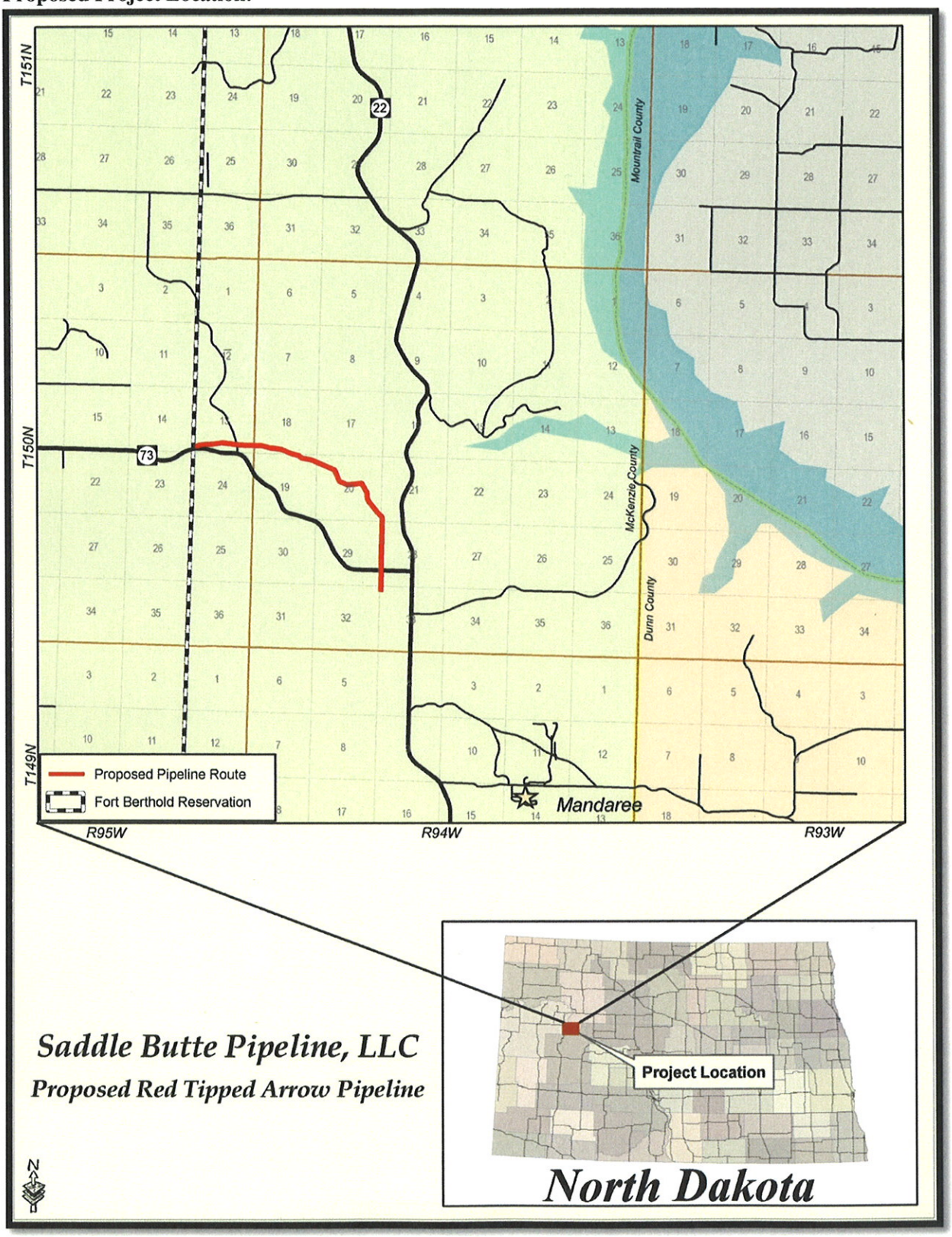
Saddle Butte Pipeline: Red Tipped Arrow 33-11H Well site to Bear Paw Energy Connection

The Bureau of Indian Affairs (BIA) is planning to issue administrative approvals related to installation of the Red Tipped Arrow 33-11H Well Site to Bear Paw Energy Connection by Saddle Butte Pipeline, LLC as shown on the attached map. Construction is expected to begin in 2010.

An environmental assessment (EA) determined that proposed activities will not cause significant impacts to the human environment. An environmental impact statement is not required. Contact Howard Bemer, Superintendent at 701-627-4707 for more information and/or copies of the EA and the Finding of No Significant Impact (FONSI).

The FONSI is only a finding on environmental impacts – it is not a decision to proceed with an action and *cannot* be appealed. BIA's decision to proceed with administrative actions *can* be appealed until March 24, 2010, by contacting:

United States Department of the Interior
Office of Hearings and Appeals
Interior Board of Indian Appeals
801 N. Quincy Street, Suite 300, Arlington, Va 22203.

Procedural details are available from the BIA Fort Berthold Agency at 701-627-4707.

Proposed Project Location: