

**Finding of No Significant Impact  
Bear Paw Energy, LLC**

**Installation of a Twelve Inch Natural Gas Pipeline  
Fort Berthold Indian Reservation, North Dakota**

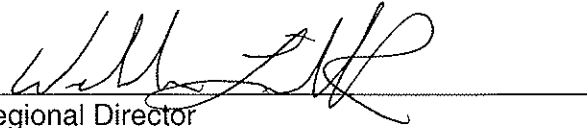
The U.S. Bureau of Indian Affairs (BIA) has received a proposal for an approximate 10 mile natural gas pipeline on the Fort Berthold Indian Reservation. The proposed pipeline would begin in the SE corner of Section 33, Township 151 North, Range 93 West, Mountrail County, extend west, and terminate in the NW corner of Section 36, Township 151 North, and Range 95 West, McKenzie County. 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 100 foot Right of Way (ROW) along the pipeline route except for directional drilling pad locations which would include a 150-foot wide ROW.

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.

ACTING

  
Regional Director

3-5-10  
Date

# **Environmental Assessment**

**Prepared for:  
United States Bureau of Indian Affairs**

**Great Plains Regional Office  
Aberdeen, South Dakota**



**Bear Paw Energy, LLC**

**Proposed Installation of a Twelve Inch Natural Gas Pipeline**

**Fort Berthold Indian Reservation**

**March 2010**

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**Appendix A: Agency Coordination**

# 1 Purpose and Need for the Proposed Action

Bear Paw Energy, LLC (Bear Paw) proposes to construct and operate a 12-inch steel natural gas pipeline on the Fort Berthold Indian Reservation. The proposed pipeline would begin at a compressor station east of Lake Sakakawea in the SE corner of Section 31, Township 151 North, Range 93 West, Mountrail County, and travel west where it would terminate approximately 10 feet west of Reservation property in the NW corner of Section 36, Township 151 North, and Range 95 West, McKenzie County. The total length of the proposed line is approximately 10 miles.

Development has been proposed on tribal land held in trust by the United States in McKenzie and Mountrail Counties, 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 Bear Paw Energy would connect to a natural gas compressor station and gathering system on the east side of Lake Sakakawea, bore underneath the Lake, and continue west with the pipeline until its termination on State of North Dakota land approximately 10 feet west of the Reservation boundary. Lands proposed to be bored under adjacent to Lake Sakakawea fall under the ownership of the Federal government. These lands are regulated by the United States Army Corps of Engineers (USACE). In addition, the State of North Dakota has ownership of land below the ordinary high water mark, within the original Missouri River channel. Future work from the western point of termination as described in this EA will be dependent on the success of the bore under Lake Sakakawea and the volume of gas that is collected by the gathering system.

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. Bear Paw Energy is proposing this pipeline 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. 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 may be required prior to development beyond what is described and analyzed in this EA.

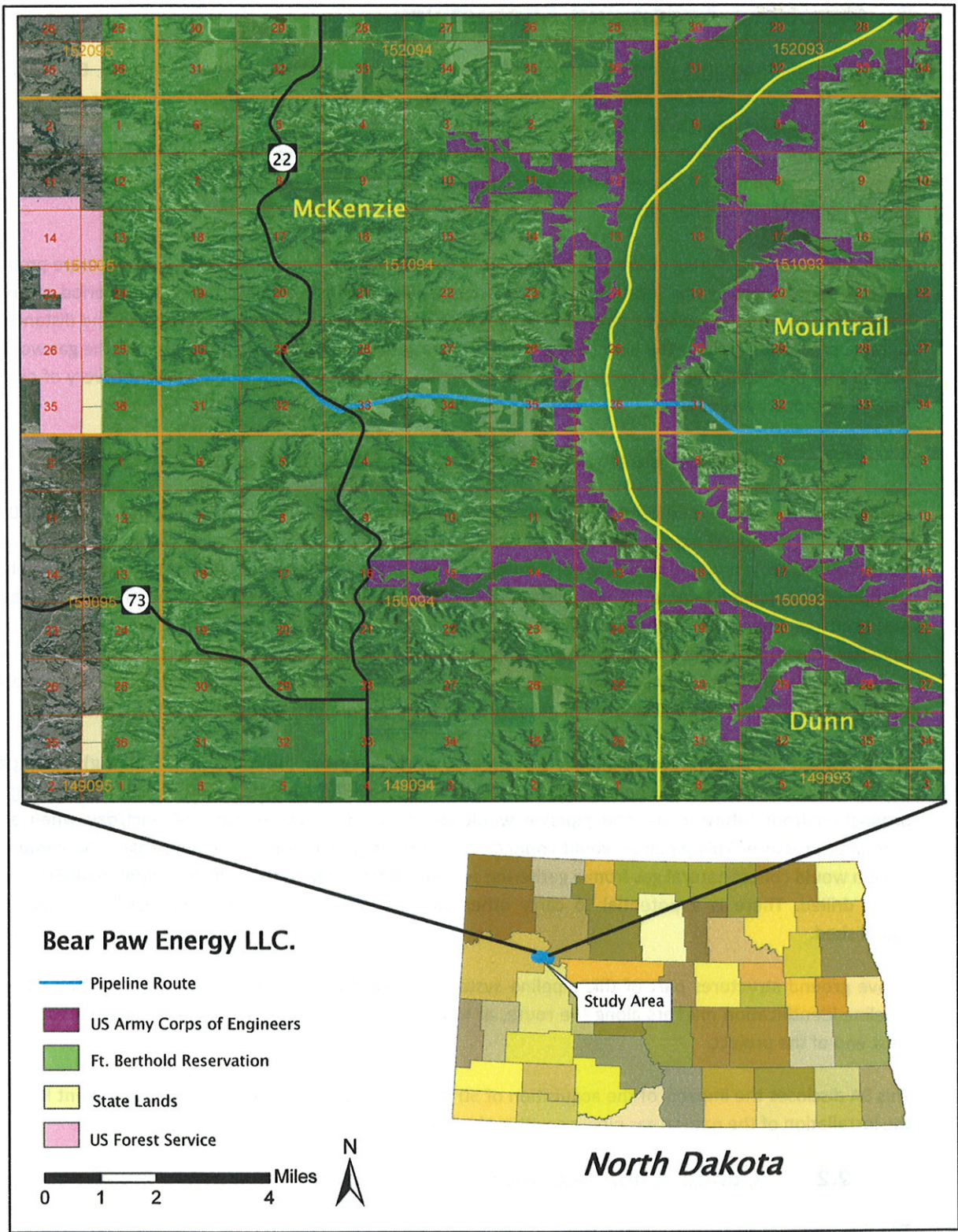


Figure 1: Project Location Map

## 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 pipeline. Current flaring of gas would continue at well pads potentially gathered by this pipeline 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 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 benefit of a cross country gathering pipeline system is that all the gas would be moved to a processing facility compared to the no-action alternative which would allow recovery of only the heavier hydrocarbon liquids.

### 2.1 System Design and Relation to Other Pipelines

The proposed project would consist of constructing an approximately 10-mile long pipeline within a 100-foot corridor. The proposed pipeline is a 12-inch nominal diameter natural gas pipeline with a 0.5-inch sidewall. The proposed project would be phase I of a multiple phase project which would ultimately connect the phase I portion of the pipeline to an existing natural gas pipeline capable of handling the volume of gas carried by the proposed line. Phase I will be broken down further to separate out the HDD (Horizontal Directional Drill) under Lake Sakakawea and trenching in the remaining portion of the pipeline as identified on the project location map. Phase I will be the only portion of this pipeline considered under the EA. Future work is dependent on the success of Phase I and the amount of gas produced from surrounding and future wells.

The proposed gas pipeline would initially be operated at low pressure (no more than 100 psig). The pipeline would be pressure tested to operate at 1440 psig to handle additional gas currently being flared along with production from future wells. The pipeline would be designed to move from 2-5 mcf/day when at full operating pressure. This pipeline would connect to a compressor station east of the Lake. The compressor station would collect natural gas from a gathering system within the Marathon Oil development area currently being drilled. There is a potential to carry other companies' production once the gatherings system is established.

Above ground structures part of this pipeline system include the compressor station east of the Lake, the pipeline identification markers along the route, at road crossings and at tie-in locations, and the valve at the west end of the project.

This EA discloses the impacts of the acquisition of 50 feet of temporary ROW, 50 feet of permanent ROW, and the installation of the natural gas pipeline within this ROW.

### 2.2 Construction Plan and Specifications

The first phase of the project would consist of drilling a 3-inch pilot hole to be used to evaluate the formation under the Lake, determining strength and compatibility. If found to be within industry acceptance, this pilot hole would be used as a guide to back ream to a diameter capable of accommodating the 12-inch steel pipe.



Drilling would take place from drill pads on both sides of the Lake, meeting in the middle to establish the corridor. The proposed depth would be approximately 100-300 feet below the bottom of the Lake. The time to complete the horizontal directional drill is expected to be approximately 90-150 days.

Construction of the main line, excluding boring under Lake Sakakawea, is expected to take between 30-55 days. Construction would be confined within a 100-foot wide ROW, 50 feet of which would be temporary, adjacent to the proposed line as shown in **Figure 1: Project Location Map on page 2**. Directional drill pad locations would require a 150-foot ROW width. Pipeline materials would be staged at drill 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 compressor station, drill pads 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 50-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.

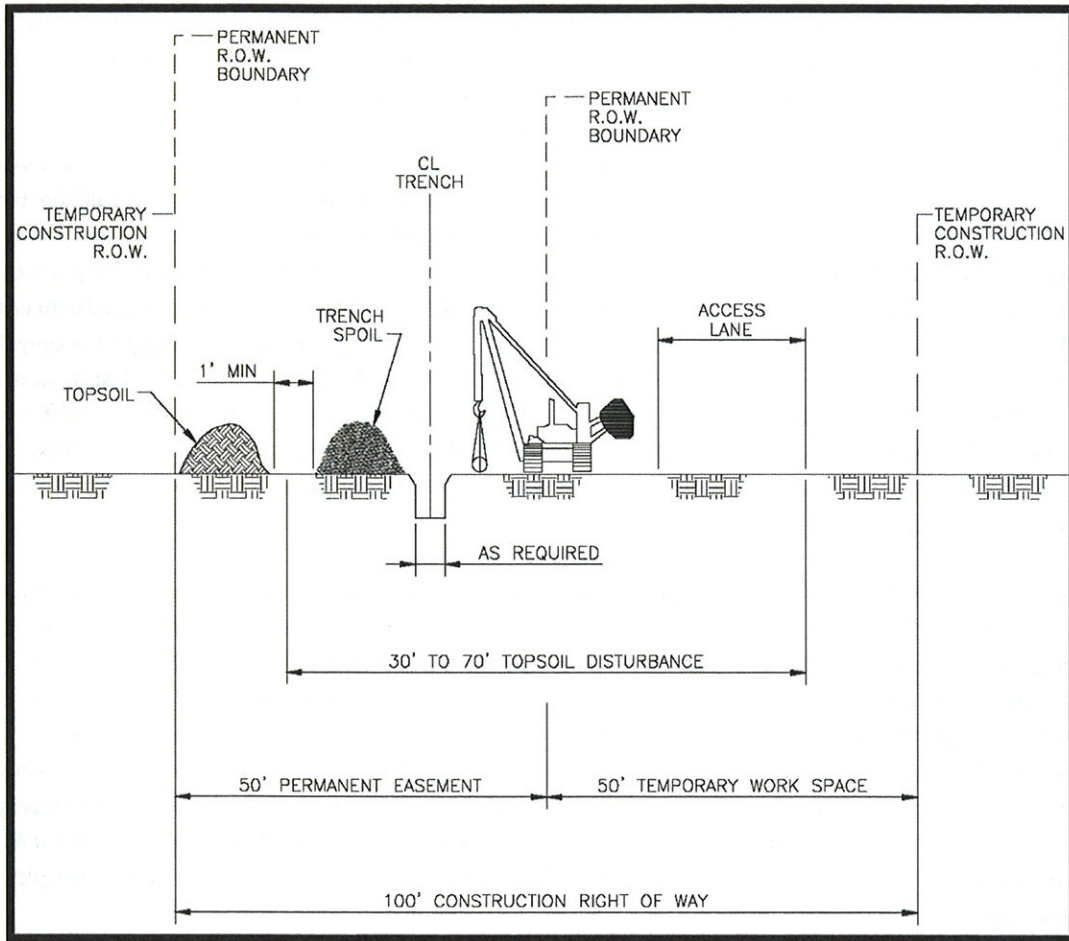


Figure 2: Typical Right-of-way Cross Section

The Fort Berthold Rural Water (FBRW) pipeline would be crossed by the proposed pipeline in one location. 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 50 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. Directional drilling is also used in areas where surface features prohibit or hinder construction by backhoes or trenchers. A directional bore is planned under Lake Sakakawea. The bore will start from a drill pad in Section 35 east of the Lake to a drill pad west of the Lake in Section 31. The ROW at the drill pad locations will consist of 150 feet. The drill pads are approximately 2 miles from each other and will require that the pipe be drilled 100 to 300 feet below the Lake bottom. *See Figure 3 and Figure 4 showing drill pad locations.* Other environmental related bores planned during construction include boring under wooded draws to lessen impacts to trees and prevent potential erosion problems.

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 22 in Section 33, T151N, R94W. The approximate length of this bore is 200 feet. A staging area would be constructed on either side of ND Highway 22 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.



*Figure 3. Drill Pad Location West of Lake*



*Figure 4. Drill Pad Location East of Lake*

## **2.4 Reclamation**

All reclamation is the responsibility of Bear Paw Energy as the ROW permit holder. Reclamation shall be required after initial construction, after any maintenance activity, and after final abandonment of a decommissioned line.

Regarding, 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 pads 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 50-foot ROW width. Access to this section of the line would be confined to the compressor station and roadway crossings. 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 pipeline 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.

The project corridor within Mountrail County is primarily within the Missouri Coteau Slope Ecoregion, with the McKenzie County portion of the pipeline occurring in the River Breaks Ecoregion. The Missouri Coteau Slope consists of few drainage ways or wetlands due to the gently rolling topography sloped to the river. Annual precipitation on the Coteau averages between 15 and 18 inches. Mean temperatures fluctuate between -2° and 20° F in January and between 59° and 86° F in July, with 110 to 130 frost-free days each year. The River Breaks Ecoregion consists of terraces and breaks that descend to the Missouri River and major drainages. The wooded draws and uncultivated areas are typically grazed by livestock along with providing great habitat for wildlife. Annual precipitation in the River Breaks averages between 16 and 18 inches. Mean temperatures fluctuate between -3° and 21° F in January and between 56° and 87° F in July, with 80 to 125 frost-free days each year.

According to data collected by the Natural Resources Conservation Service from 1971–2000 at Dunn Center in Dunn County and at Keene in McKenzie County, temperatures in excess of 80 degrees Fahrenheit are common in summer months. The area receives approximately 16 to 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, with approximately 32 to 38.5 inches of snow received annually.

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.

### **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.

### **3.2 Land Use**

The proposed project is located within a predominantly rural area with the majority of land being used for agricultural production. Land within the pipeline corridor is a mixture of grassland/shrubland (34%) woody draws (7%), and cropland (38%) with approximately 20% of the land being located between the bore sites. *See Figure 5, View of Project Corridor-West End, and Figure 6, View of Project Corridor East End.* The pipeline corridor crosses native rangeland and wooded draws that are currently used to graze livestock along with cropland fields used for agricultural production. In addition, the landscape has been previously disturbed by dirt trails and gravel roadways. There are six residences within 1-mile of the project corridor.

Mountrail County has a zoning ordinance in place for parcels within the pipeline corridor. The proposed pipeline corridor crosses land zoned for agriculture.

#### **3.2.1 Land Use Impacts; Avoidance, Minimization and Mitigation**

Construction of the proposed pipeline will temporarily impact the current land use within the corridor; however, installation of the pipeline will have no permanent impact on land use. Mitigation for destruction of crops during pipeline installation will be coordinated with the landowner. Native rangeland will be promptly reseeded with a native grass seed mixture.

A Conditional Use Permit from Mountrail County will need to be obtained prior to construction of the pipeline.



*Figure 5. View of Project Corridor-West End*



*Figure 6, View of project Corridor-East End*

### 3.3 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<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter (PM<sub>10</sub>), and sulfur dioxide (SO<sub>2</sub>). The nearest North Dakota Department of Health Ambient Air Quality Monitoring station is located approximately 27 miles southwest of the project corridor 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 µg/m <sup>3</sup>	—
NO <sub>2</sub>	Annual Mean	0.053 ppm	0.001 ppm
O <sub>3</sub>	1-hour	0.12 ppm	0.062 ppm
	8-hour	0.075 ppm	0.058 ppm
PM <sub>10</sub>	24-hour	150 µg/m <sup>3</sup>	44 µg/m <sup>3</sup>
	Annual Mean	50 µg/m <sup>3</sup>	8.4 µg/m <sup>3</sup>
SO <sub>2</sub>	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 and Mountrail Counties and the Fort Berthold Reservation also comply with NAAQS.

In addition, 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. The nearest Class I area to the project corridor is the Theodore Roosevelt National Park (North Unit), which is located approximately 27 miles southwest of the proposed project at its nearest point. The proposed project is located within a Class II attainment area.



### 3.3.1 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<sub>10</sub>, SO<sub>2</sub>, NO<sub>2</sub>, 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 well locations east of Lake Sakakawea. No mitigation or monitoring measures are recommended.

## 3.4 Public Health and Safety

Public 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 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

The proposed 12-inch diameter steel pipeline proposed for this project is to be buried a minimum of 4 feet below the ground surface. Soil conditions found along the pipeline are mostly composed of loam soils which contain fairly equal parts of sand, silt and clay. The initial normal operating pressure is expected to be no more than 100 psig but future pressures could be as high as 1440 psig. The product being conveyed within the pipeline is natural gas 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 over 2,000 feet downwind of the point of the blast. Based upon the above information, the blast impact corridor width would be approximately 1-mile (½-mile on each side of the proposed pipeline). In addition, a pipeline blast has the potential to cause a grass fire. Grass fires in rural areas can grow to be very large in size depending upon their location and weather conditions. A fire caused by a blast has the potential to impact areas well outside the blast impact area. Aerial view imagery shows three residences located within this 1-mile wide corridor. This corridor also includes approximately 1.7 miles of ND Highway 22, and approximately 7 miles of additional roads and trails which could be utilized at various times of the year.

### **3.4.1 Public Health and Safety Impacts; Avoidance, Minimization, and Mitigation**

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 anticipated 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.

Equipment used for construction of the pipeline should be well maintained to reduce the potential for injuries to construction workers and impacts to the public. All equipment shall be equipped with the proper safety shields, mufflers, first aid kits and spill cleanup kits to minimize public health and safety impacts.

## **3.5 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 is home to six communities consisting of New Town, White Shield, Mandaree, Four Bears, Twin Buttes and Parshall.

These communities are home to several small businesses such as restaurants, grocery stores and gas stations; however, these communities lack the larger shopping centers that are typically found in larger cities like Minot and Bismarck. Agriculture is the major industry and employer on the Reservation. The Four Bears Casino, Convenience Store and Recreation Park are also major employers, with over 320 employees, 90% of which are tribal members. In addition, several industries are located on the Reservation including Northrop Manufacturing, Mandaree Electrical Cooperative, Three Affiliated Tribes Lumber Construction Manufacturing Corporation and Uniband.

Several paved state highways provide access to the Reservation including ND Highways 22 and 23, and Highway 1804. These highways provide access to larger communities such as Bismarck, Minot and Williston.

In addition, networks of rural gravel roadways are located throughout Reservation boundaries providing access to residences and agricultural land. Major air service is provided out of Bismarck and Minot with smaller airport service being provided out of New Town and Williston.

### **3.5.1 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. 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.

Construction of the proposed pipeline may negatively impact roadways from hauling heavy loads to the construction site which may cause unsafe driving conditions due to roadway degradation. Surrounding counties have expressed concern regarding degradation of their roadway, and in turn, oil and gas producers have decided to work with the BIA to find a solution to the problem. In addition, the increased traffic during construction may cause more hazardous driving conditions for residents. Construction crews should follow laws pertaining to overload permits and obey traffic laws to help alleviate hazards to residents.

## **3.6 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% and 30% of the population of McKenzie and Mountrail Counties. Even in a state with relatively low per capita and household income, Native American individuals and households are distinctly disadvantaged.

The Fort Berthold Reservation, McKenzie and Mountrail Counties 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%
Mountrail County	\$13,422	\$27,098	3.4%	18.7%
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 and Mountrail County's populations have 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 and Mountrail Counties 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%)
Mountrail County	6,631	1.03%	-5.6%	White	American Indian (30%)
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*

### **3.6.1 Environmental Justice Impacts; Avoidance, Minimization, and Mitigation**

Construction of the proposed pipeline 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; however, employment opportunities related to oil and gas development may provide a positive impact by lowering the unemployment rate and increasing income levels on the Fort Berthold Reservation. No laws, regulations or other requirements have been waived; no compensatory mitigation measures are required.

## **3.7 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. Several paved state highways provide access to the Reservation including ND Highways 22 and 23, and Highway 1804. These highways provide access to larger communities such as Bismarck, Minot and Williston. In addition, networks of rural gravel roadways are located throughout Reservation boundaries providing access to residences and agricultural land. The proposed pipelines would cross ND Highway 22 in Section 33, T151N, R94W.

The Fort Berthold Rural Water pipeline serves residences near the project area. The FBRW pipeline parallels ND Highway 22 which crosses the proposed pipeline corridor.

The Killdeer Mountain Four Bears Scenic Byway occurs within the project area where the pipeline crosses 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.

### **3.7.1 Infrastructure and Utilities Impacts; Avoidance, Minimization, and Mitigation.**

Construction of the proposed pipeline may negatively impact roadways from hauling heavy loads to the construction site which may cause unsafe driving conditions due to roadway degradation. Surrounding counties have expressed concern regarding degradation of their roadway, and in turn, oil and gas producers have decided to work with the BIA to find a solution to the problem. Directional drilling (boring) is planned to cross ND Highway 22. The approximate length of this bore is 200 feet. A staging area would be constructed on either side of ND Highway 22 in this location within the established pipeline ROW. No impacts are anticipated to traffic while construction is taking place.

The proposed pipeline corridor crosses the FBRW pipeline in Section 33, T151N, R94W. 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 location to ensure construction of the proposed pipeline would cause no impacts to the FBRW pipeline. No other mitigation measures would be required for construction of the proposed pipeline.

The proposed pipeline corridor crosses the Killdeer Mountain Four Bears Scenic Byway. Construction of the project may temporarily 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.

### 3.8 Cultural Resources

Historic properties, or cultural resources, on federal or tribal lands are protected by many laws, regulations and agreements. The *National Historic Preservation Act of 1966* (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 route was conducted by personnel of Kadrmas, Lee & Jackson, Inc., using a pedestrian methodology. Approximately 143.6 acres were intensively inventoried between September 22 and November 19, 2009 (Ó Donnchadha 2010). No historic properties were located 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. 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 February 1, 2010; however, no response was received from the THPO within the allotted 30-day comment period.

### 3.8.1 Cultural Resources Impacts; Avoidance, Minimization, and Mitigation

The proposed pipeline route would have no impact to cultural resources. If cultural resources are discovered during construction or operation, work shall immediately be stopped, the affected site secured, and BIA and THPO notified. In the event of a discovery, work shall not resume until written authorization to proceed has been received from the BIA. All project workers are prohibited from collecting artifacts or disturbing cultural resources in any area under any circumstances.

## 3.9 Wildlife

### 3.9.1 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 and Mountrail Counties are the interior least tern, whooping crane, pallid sturgeon, and gray wolf. In addition, the black-footed ferret is listed as an endangered species for McKenzie County. The piping plover is listed as a threatened species for McKenzie and Mountrail Counties and both counties contain designated critical habitat for the piping plover. In addition, the Dakota skipper is listed as a candidate species for both counties. Field surveys of the study area were conducted on September 22, October 29, and November 18, 2009. No threatened or endangered species were identified within the study area on the day of the surveys.

#### 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.

Lake Sakakawea is approximately ½ mile from the drill pads where directional drilling equipment will be staged to bore the pipeline under the Lake. The drill pads are located on the uplands above the river breaks of the Lake. There is no existing or potential habitat within the area of potential disturbance. No least terns were sighted during the field surveys.

### 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. Several cropland fields were found along the corridor which may provide feeding habitat for whooping cranes. In addition Lake Sakakawea and adjacent wetlands are located along the route. No whooping cranes were sighted during the field surveys.

### 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.

Lake Sakakawea does not provide habitat suitable for pallid sturgeon. The closest pallid sturgeon habitat exists in the Yellowstone River approximately 58 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 is located far from other known wolf populations.

### Piping Plover (*Charadrius melodus*)

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.

Lake Sakakawea is approximately ½ mile from the drill pads where directional drilling equipment will be staged to bore the pipeline under the Lake. The drill pads are located on the uplands above the river breaks of the Lake. There is no existing or potential habitat within the area of potential disturbance. No piping plovers were sighted during the field surveys.

### 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.

Parts of the project area are composed of native rangeland with a wide diversity of wildflowers and grasses. Both wet and dry prairie ecosystems are found within the corridor. No Dakota skippers were observed during the field survey; however, a timely survey when Dakota skippers would have been visible was not completed.

### **3.9.1.1 Threatened, Endangered, and Candidate Species Impacts; Avoidance, Minimization, and Mitigation**

Lake Sakakawea provides suitable habitat for the least tern and piping plover; however the pipeline will be bored under the Lake and will not cause impacts to their habitat. Due to a lack of potential habitat within the proposed disturbed areas 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.

Lake Sakakawea and adjacent wetlands provide suitable habitat for whooping cranes; however, the pipeline will be bored under the Lake and will not cause impacts to these areas. Due to a large percentage of the project area being located on cropland fields and being located within the corridor which 75% of all whooping cranes migrate through, the proposed project may temporarily impact whooping crane feeding and roosting areas during construction. No permanent impacts to whooping cranes or their habitat are expected from the proposed project. If whooping cranes would be sighted within 1-mile of the construction crews, construction would be suspended until the cranes continued their migration from the 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.

### **3.9.2 Big Game Species**

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

#### **3.9.2.1 Big Game Species Impacts; Avoidance, Minimization, and Mitigation**

Due to the sighting of mule deer during the field survey and the occurrence of suitable habitat for white-tailed deer and pronghorn antelope within the project corridor, noise from construction of the proposed project may cause a temporary disturbance to big game wildlife species during construction. In addition, construction of the project may impact big game habitat. 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.

### **3.9.3 Small Game and Waterfowl Species**

Approximately 20 Hungarian partridge (*Perdix perdix*) were seen in a covey along the proposed route and approximately 50 sandhill crane (*Grus canadensis*) were observed flying overhead in a flock during the field survey. In addition, the proposed project corridor contains suitable habitat for turkey (*Meleagris gallopavo*), ring-necked pheasant (*Phasianus colchicus*), sharp-tail grouse (*Tympanuchus phasianellus*) and numerous waterfowl species. No turkeys, ring-necked pheasant, 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. To complete a timely survey for grouse leks, the survey would need to be completed in the spring when the grouse are actively using the leks for mating purposes.

### 3.9.3.1 Small Game and Waterfowl Species Impacts; Avoidance, Minimization, and Mitigation

Due to the sighting of Hungarian partridge and sandhill crane during the field survey and the occurrence of suitable habitat for small game and waterfowl species within the project corridor, the proposed project may cause a temporary disturbance to these species during construction. Lake Sakakawea provides suitable habitat for a variety of waterfowl species; however, impacts will be minimized by boring the proposed pipeline under the Lake. 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.

### 3.9.4 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 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, the drilling pads where equipment used to bore under the lake will be stationed are located within ½ mile of Lake Sakakawea.

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, the drilling pads where equipment used to bore under the lake will be stationed are located within ½ mile of Lake Sakakawea.

The North Dakota Natural Heritage Database, maintained by the North Dakota Parks and Recreation Department, lists the prairie falcon (*Falco mexicanus*) occurring approximately ¼ mile north of the project area in the Blue Buttes area. Raptor species observed during the field surveys included a red-tailed hawk (*Buteo jamaicensis*). Additional raptor species may be found in the surrounding area; however, no indicators of additional species were observed during the on-site visits. No raptor nests were observed during the field surveys.

#### **3.9.4.1 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 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. Red-tailed hawks, observed the day of the field survey, and prairie falcons, listed on the Natural Heritage Inventory, may nest close to the study area; however, no nests were observed within the project area the day of the survey. The proposed project may affect raptor species or their habitat during construction. Impacts to raptors from permanent removal of trees are expected to be minimal due to the small percentage of trees removed in the area. No mitigation would be required for the potential impacts to raptor species.

#### **3.9.5 Non-Game and Furbearer Species**

Non-game wildlife observed during the field survey included the coyote, (*Canis latrans*), black capped chickadee (*Poecile carolinensis*), Baltimore oriole (*Icterus galbula*), western meadowlark (*Sturnella neglecta*) and brown thrasher (*Toxostoma rufum*). A variety of non-game and furbearer species, including song birds, cottontail rabbit (*Sylvilagus floridanus*), red fox (*Vulpes vulpes*), badger (*Taxidea taxus*), and jackrabbit (*Lepus townsendii*) may traverse the project area.

#### **3.9.5.1 Non-Game and Furbearer Species 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.

### **3.10 Soils**

The published soil survey dates from 2006 for McKenzie County and from 1991 for Mountrail County. Updated information is available online from the Natural Resources Conservation Service at 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 <sup>1</sup>		Hydrologic Soil Group <sup>2</sup>	Acres Within Corridor
			% sand	% silt	% clay	Kf	T		
Amor-Shambo Loams	51B	3-6	40	38	22	.43	3	B	0.75
Arikara-Shambo-Cabba Loams	154F	9-70	38	37	25	.28	5	B	4.77
Arnegard Loam	24	0-2	40	37	23	.28	5	B	0.17
Badland-Cabba Complex	57F	9-70	15	55	20	.43	1	D	2.79
Bowbells Loam	32	1-3	35	35	30	.37	5	B	<.01
Bowdle Loam	12	1-3	35	35	30	.37	5	B	.07
Cabba-Badland, Outcrop Complex	83F	9-70	41	39	20	.43	2	D	.91
Cabba-Badland, Outcrop-Arikara Complex	211F	9-70	41	39	20	.43	2	D	7.55
Dogtooth-Janesburg Silt Loams	38B	0-6	5	47	48	.32	2	D	5.03
Dogtooth-Janesburg-Cabba Complex	38F	6-30	5	47	58	.32	2	D	14.83
Farnuf Loam	25B	2-6	37	38	26	.32	5	B	2.01
Hamerly-Tonka Complex	17	0-3	38	38	26	.37	5	C	0.70
Moreau Silty Clay	72B	0-6	5	47	48	.43	3	D	2.55
Regent-Janesburg Complex	71C	6-9	8	49	43	.43	3	C	2.47
Rhoades-Daglum Complex	36B	0-6	11	51	38	.32	2	D	2.77

<sup>1</sup> 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.

<sup>2</sup> 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 Symbol	Slope (%)	Composition (in upper 60 inches)			Erosion Factor <sup>1</sup>		Hydrologic Soil Group <sup>2</sup>	Acres Within Corridor
Sen-Janesburg Silt Loams	55B	0-6	8	49	43	.43	3	B	1.40
Vebar-Flasher Complex	63B	3-6	75	15	10	.49	3	B	0.12
Water	W								11.57
Williams Loam	23	1-3	35	35	30	.37	5	B	4.67
Williams Loam	42C	6-9	35	35	30	.37	5	B	1.11
Williams-Bowbells Loams	41B	3-6	35	35	30	.37	5	B	9.05
Williams-Zahl Loams	23B	3-6	35	35	30	.37	5	B	21.31
Williams-Zahl Loams	43C	6-9	35	34	31	.37	5	B	10.41
Williams-Zahl Loams	24C	6-9	35	35	30	.37	5	B	5.62
Zahl-Williams Loams	44E	15-25	35	34	31	.37	5	B	3.59
Zahl-Williams Loams	44D	9-15	35	34	31	.37	5	B	3.65
Zahl-Williams Loams	24E	9-25	35	34	31	.37	5	B	2.95

### 3.10.1 Soils Impacts; Avoidance, Minimization, and Mitigation

Construction of the proposed pipeline 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 resource 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.

## 3.11 Water Resources

The Federal Water Pollution Control Act of 1972, as amended by the Clean Water Act of 1977, provides federal 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).

### 3.11.1 Surface Water

The proposed project is located in the Bear Den Creek, Sanish Bay and Van Hook State Wildlife Management Area (SWMA) Watersheds. Sub-watersheds which will carry runoff from the project corridor include the Bear Den Bay, Clarks Creek, Reunion Bay and Muskrat Creek sub-watersheds. Along the proposed pipeline route water travels by sheet-flow and flows through wooded draws including intermittent streams. These streams meander through the steep topography and eventually flow into Lake Sakakawea. Surface disturbance from the proposed project is located approximately 0.5 miles on either side of Lake Sakakawea at the closest location. *See Figure 7: Water Resources.*

#### 3.11.1.1 Surface Water Impacts; Avoidance, Minimization, and Mitigation

The proposed project has been sited to minimize direct impacts to surface water and disruption of drainages. Directional drilling would be used to install the pipeline across wooded draws with steep topography and intermittent streams to minimize erosion from surface runoff. No identified floodplains exist within the area of proposed surface disturbance in 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.

Due to the close proximity of the project area to Lake Sakakawea, equipment used for construction of the pipeline should be well maintained to avoid leaks and spills of hazardous materials. Hazardous materials such as oils, chemicals and fuels should be kept in approved containers and in a secure location when not in use. Spill clean-up kits should be located at the construction site and at staging areas in case of accidental spills. All spills shall be cleaned up immediately to the point that contamination of soils or water is no longer evident, and contaminated materials shall be disposed of at an approved location.

### 3.11.2 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 three permitted water wells. There are no identified aquifers below the proposed pipeline corridor. *See Figure 7: Water Resources.*

#### 3.11.2.1 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.

## 3.12 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 or would 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 during the field visits. Results of the field wetland delineation indicated one area with positive wetland indicators present. The wetlands in this area occurred as springs running out of the river breaks on the west side of Lake Sakakawea. These wetlands are located between the drill pads where the pipeline is going to be bored under the Lake; therefore, they will not be disturbed by the proposed construction.

*Table 5: Wetlands Summary*

Wetland 1	
Location	E ½ Section 35 T150N – R94W
Latitude/Longitude	-102.669671 / 47.854761
Cowardin Classification	PEMA
Wetland Type	Springs
Wetland Feature	Natural
Wetland Size (Acres)	Not mapped due to no potential ground disturbance
Wetland Protected Under E.O. 11990	✓
Likely USACE Jurisdictional Wetland	✓
Permanent ROW Impacted Wetland Acres	0.0
Temporary ROW Impacted Wetland Acres	0.0
<b>Total Impacted Acres</b>	<b>0.0</b>

### 3.12.1 Wetlands Impacts; Avoidance, Minimization, and Mitigation

Bear Paw Energy plans to directional drill the pipeline under Lake Sakakawea and its adjacent wetlands. The drill pads are positioned above the river breaks; therefore no wetland impacts are anticipated. Bear Paw Energy has applied for a Section 10 permit from the United States Army Corps of Engineers (USACE) for drilling under Lake Sakakawea. A USACE section 404 permit would not be required if the wetlands were not disturbed. No mitigation or monitoring for wetland impacts would be required.



Figure 7: Water Resources

### 3.13 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, mixed shrubs/native upland, wooded draws, cropland, hayland and erosion/scattered claypan. 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 mixed shrubs/native upland community included the same native vegetation as the upland community with the additions of silver buffaloberry (*Shepherdia argentea*) and western snowberry (*Symphoricarpos occidentalis*). Wooded draws included distinct mixtures of green ash (*Fraxinus pennsylvanica*), American elm (*Ulmus Americana*), and bur oak (*Quercus macrocarpa*). Cropland was assigned to the tillable acres in the corridor. The hayland community included smooth brome grass (*Bromus inermis*) and Kentucky Bluegrass (*Poa pretensis*). The erosion/scattered claypan community consisted of barren ground with scattered blue grama and western wheatgrass plants.

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, and seven are known to occur in Mountrail County: absinth wormwood,

Canada thistle, leafy spurge, musk thistle, Russian knapweed, saltcedar and field bindweed. *See Table 6: McKenzie and Mountrail Counties 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 and Mountrail County has added common tansy, yellow toadflax and hound's tongue.

Two noxious weeds were identified within the project corridor. Canada thistle plants were found at the edge of the agricultural fields and continued down the wooded draws west of the Lake. Field bindweed was identified in the agricultural fields throughout the project area. *See Figure 8: Dominant Plant Species and Noxious Weed Distribution.*

### **3.13.1 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. The USACE requests that all equipment be meticulously cleaned prior to being moved onto the construction site to prevent the possibility of contamination of USACE lands by noxious weeds or any other undesirable vegetation.

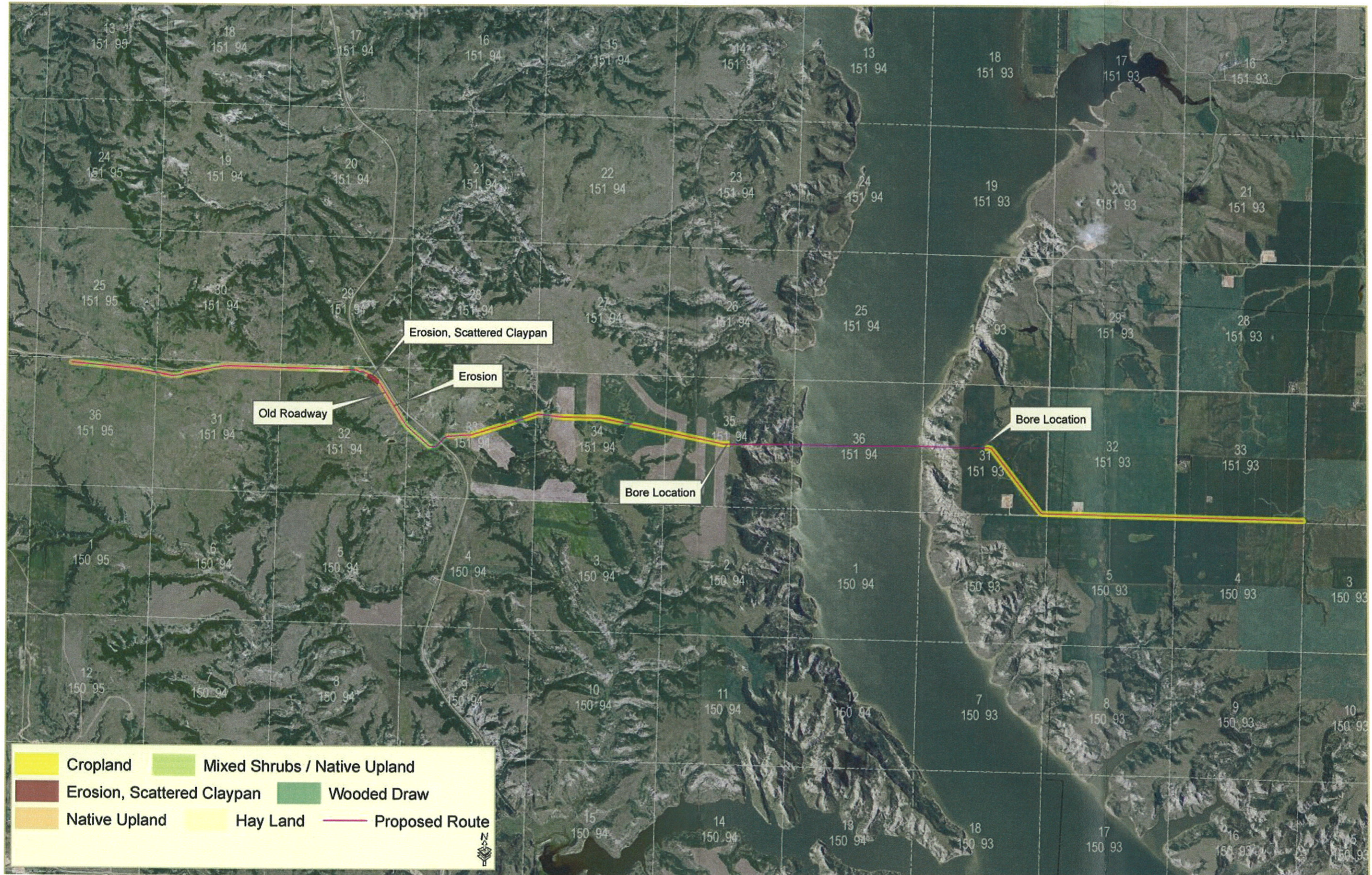


Figure 8: Dominant Plant Species and Noxious Weed Distribution

Table 6: McKenzie and Mountrail Counties Noxious Weed Distribution

Common Name	Scientific Name	McKenzie County Acres	Mountrail County Acres	Present in the Study Area
Absinth wormwood	<i>Artemesia abinthium L.</i>	43	1,600	No
Black henbane	<i>Hyoscyamus niger</i>	—	—	No
Canada thistle	<i>Cirsium arvense (L.) Scop</i>	4,300	52,500	Yes
Common Burdock	<i>Arctium minus</i>	—	—	No
Common Tansy	<i>Tanacetum vulgare</i>	—	—	No
Dalmation toadflax	<i>Linaria genistifolia ssp. Dalmatica</i>	—	—	No
Diffuse knapweed	<i>Centaurea diffusa Lam</i>	—	—	No
Field bindweed	<i>Convolvulus arvensis L.</i>	—	900	Yes
Hound's tongue	<i>Cynoglossum officinale</i>	—	—	No
Leafy spurge	<i>Euphorbia esula L.</i>	1,300	12,300	No
Musk thistle	<i>Carduus nutans L.</i>	2	2	No
Purple loosestrife	<i>Lythrum salicaria</i>	—	—	No
Russian knapweed	<i>Acroptilon repens (L.) DC.</i>	1	—	No
Saltcedar (tamarisk)	<i>Tamarix ramosissima</i>	1	1,100	No
Spotted knapweed	<i>Centaurea maculosa Lam.</i>	1	300	No
Yellow starthistle	<i>Centaurea solstitialis L.</i>	—	—	No
Yellow toadflax	<i>Linaria vulgaris</i>	—	—	No

### 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. None of these impacts are expected to be significant.

### 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, and livestock grazing, stabilize the soil, and reduce the potential for erosion and sedimentation. Long-term productivity of the oil and gas wells connected to this pipeline 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.

#### **3.16.1 Past, Present, and Reasonably Foreseeable Actions**

At the time this EA was written, there were approximately six oil and gas wells existing within 1-mile of the proposed project. Current impacts from oil and gas development are still fairly dispersed across the reservation; however, the number of wells has grown to over 200 in the last couple of years and gathering systems continue to be installed. Future development of wells on the Reservation is expected to continue at an all time rate in the near future. The current and future success of oil and gas exploration near the proposed pipeline will likely result in additional oil and gas wells, transport systems, and associated infrastructure on land adjacent to the pipeline. Several gathering systems have been constructed or are in the planning stages to be constructed in the future; information about those in the planning stages remains proprietary. BMPs would be implemented to minimize impacts of the proposed projects.

The proposed project is being constructed in a rural area which is sparsely populated and relatively free of roads and additional infrastructure. Agriculture production has been the main land use and has been the main form of employment in these rural areas. Construction of the proposed pipeline in addition to recently drilled and future oil and gas wells and associated access roads will greatly increase the amount of infrastructure and non agricultural activity in these rural areas.

#### **3.16.2 Cumulative Impact Assessment**

The proposed pipeline project will have a beneficial impact to wells connected to the gathering system which will utilize this pipeline for gas transportation. In addition, future phases of this project, including continuation of this pipeline to a larger gas transportation system, may cause impacts similar to the proposed pipeline. Impacts from future phase of this pipeline cannot be analyzed until a route is selected. Construction of the proposed pipeline is not anticipated to directly impact other oil and gas projects not being considered for inclusion in this pipelines gathering system. The following discussion addresses potential cumulative environmental impacts associated with the proposed project and other past, present, and reasonably foreseeable actions.

**Air Quality** — McKenzie and Mountrail Counties are currently well below the Ambient Air Quality Standards and it is anticipated that mobile air source toxics from construction of the proposed project and other projects is expected to be minor. 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. 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.

**Wetlands, Wildlife, and Vegetation** — The proposed project, when added to previously constructed and reasonably foreseeable oil and gas wells and pipeline construction, may result in a temporary cumulative impact to wildlife and vegetative resources. The proposed natural gas pipeline has also been sited to avoid sensitive areas such as surface water, wetlands, or riparian areas to the extent practicable. In addition, the use of BMPs and continued reclamation are anticipated to minimize and mitigate disturbed habitat. Therefore, it is not anticipated that the proposed project, when added to past, present, and reasonably foreseeable oil and gas activity, would result in a significant cumulative impact.

**Infrastructure and Utilities** — The contribution of the proposed project and other projects stress on local roadways used for hauling materials may result in a cumulative impact to local roadways. Hauling of heavy loads is currently, and in the future will continue to degrade roadway surface conditions. Surrounding counties have expressed concern regarding degradation of their roadway, and in turn, oil and gas producers have decided to work with the BIA to find a solution to the problem. Abiding by permitting requirements and roadway restrictions with from the jurisdictional entities, as well as working with the BIA to find a solution to roadway degradation, are anticipated to offset any cumulative impact that may result from the proposed project and other past, present, or future projects. In addition, completion of the project will likely make future oil and gas development within the vicinity of the pipeline more lucrative and therefore the area will likely see an increase in infrastructure.

The proposed action has been planned to avoid impacts to resources such as wetlands, floodplains, surface water, geologic setting, land use and cultural resources. Unavoidable impacts to these or other resources would be minimized and/or mitigated in accordance with applicable regulations. No significant cumulative impacts are reasonably foreseen from existing or proposed activities.

### 3.17 Permits

Prior to construction, the developer will need to apply for a utility crossing permit from the NDDOT, Williston District Office, for boring under ND State Highway 22.

Directional drilling planned for boring the proposed pipeline under Lake Sakakawea will require that a Sovereign Lands Permit be acquired from the North Dakota State Water Commission prior to drilling taking place.

The North Dakota State Lands Department requires that a Right-of-Way permit be applied for prior to construction taking place on State Lands. The western most portion of the proposed pipeline would terminate approximately 10-feet west of Reservation property on State of ND Land. A Right-of-Way permit would be required prior to construction.

Mountrail County has adopted zoning regulation for agricultural property. A conditional use permit would need to be obtained prior to construction of the pipeline.

Lake Sakakawea is considered a navigable water of the US which is regulated under Section 10 of the River and Harbors Act. The USACE, acting as the regulatory agency, requires a section 10 permit be acquired prior to work taking place in, over or under navigable waters of the US. Bear Paw Energy has coordinated with the USACE regarding the proposed project and has applied for a section 10 permit for boring under Lake Sakakawea.

On Indian land in North Dakota the EPA is responsible for permitting Storm Water Pollution Prevention Plans (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 pipeline does 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 pipeline, a SWPPP would need to be acquired through coordination with the EPA.

## 4 Consultation and Coordination

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

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

### 4.1 Agency Recommendations

#### 4.1.1 North Dakota Game and Fish Department

- 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 Parks and Recreation Department**

- Development should be completed with the least amount of or no visual impact to the Killdeer Mountain Four Bears Scenic Byway.
- The project should be constructed with no impacts to critical habitats listed in the Natural Heritage Database to help secure rare species conservation in North Dakota.

#### **4.1.3 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.

#### **4.1.4 North Dakota State Water Commission**

- A sovereign Land Permit is required.
- All waste material associated with the project must be disposed of properly and not placed in identified floodway areas.

#### **4.1.5 United States Army Corps of Engineers (Regulatory Office in Bismarck and Riverdale Office)**

- If during project design, impacts to wetlands cannot be avoided or if work is to take place within, over or under navigable waters of the US, permits would be necessary prior to commencement of construction.
- No staging of any equipment associated with the pipeline construction will be allowed on lands managed by the COE.
- All equipment associated with the construction of the pipeline should be meticulously cleaned prior to being moved onto the construction site to prevent contamination of COE lands by noxious weeds.
- Due the drilling locations close proximity to Lake Sakakawea, all necessary measures shall be taken to prevent ground contamination from petroleum based materials.

#### **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.

#### **4.1.8 Mountrail County Planning and Zoning Board**

- The zoning ordinance of Mountrail County requires that a conditional use permit be acquired prior to construction taking place.



## United States Department of the Interior

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



IN REPLY REFER TO:  
DESCRM  
MC-208

FEB 01 2010

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 the proposed Bear Paw HDD Lake Sakakawea Pipeline in McKenzie and Mountrail Counties, North Dakota. Approximately 143.6 acres were intensively inventoried using a pedestrian methodology. Potential surface disturbances are not expected to exceed the areas 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. No properties were located that appear to 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-1747/FB/10**, the proposed undertaking, locations, and project dimensions are described in the following report:

Ó Donnchadha, Brian  
(2010) Bear Paw HDD Lake Sakakawea Pipeline: A Class III Cultural Resource Inventory, McKenzie and Mountrail Counties, North Dakota. KLJ Cultural Resources for Bear Paw Energy, LLC, Sydney, MT.

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

Kadrmass, Lee & Jackson, Inc. (KL&J) prepared this EA and conducted field work under a contractual agreement between Bear Paw Energy, LLC and KL&J, and under the direction of the BIA, Great Plains Regional Office, Division of Energy and Environment. *See Table 7: Preparers and Reviewers.*

*Table 7: Preparers and Reviewers*

Organization and Title	Name and Title	Role
Bear Paw Energy, LLC	Troy Fitchner, Land Manager	Project Development, Purpose and Need Development, and Alternatives Development
Kadrmass, Lee & Jackson, Inc.	Charlotte Brett, Environmental Planner	Senior Review
	Jerry Reinisch, Environmental Scientist	Biological and Botanical Surveys
	Skip Skattum, GIS Analyst	Existing Conditions, Impact Analysis, and Exhibit Creation
	Mitch Steckler, Engineer	Chapters 1 & 2
	Grady Wolf, Environmental Scientist	Client Coordination, Biological and Botanical Surveys, Chapters 3 – 5
	Brian Ó Donnchadha, Principal Investigator	Client Coordination, Cultural Resource Surveys
Tribal Historic Preservation Office	Sherman Sierra, Tribal Monitor	Tribal Cultural Property Survey
Tribal Historic Preservation Office	Casey Fox, Tribal Monitor	Tribal Cultural Property Survey

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## ACRONYMS

<b>APE</b>	Area of Potential Effect
<b>BIA</b>	Bureau of Indian Affairs
<b>BLM</b>	Bureau of Land Management
<b>CO</b>	Carbon Monoxide
<b>EA</b>	Environmental Assessment
<b>EPA</b>	Environmental Protection Agency
<b>FBRW</b>	Fort Berthold Rural Water
<b>MCF</b>	Million Cubic Feet
<b>NAAQS</b>	National Ambient Air Quality Standards
<b>NDDH</b>	North Dakota Department of Health
<b>NEPA</b>	National Environmental Policy Act
<b>NO<sub>2</sub></b>	Nitrogen Dioxide
<b>NPDES</b>	National Pollutant Discharge Elimination System
<b>NRHP</b>	National Register of Historic Places
<b>O<sub>3</sub></b>	Ozone
<b>Pb</b>	Lead
<b>PM<sub>10</sub></b>	Particulate Matter
<b>ROW</b>	Right-of-way
<b>SWMA</b>	State Wildlife Management Area
<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>SWPPP</b>	Stormwater Pollution Prevention Plan
<b>THPO</b>	Tribal Historic Preservation Officer
<b>USACE</b>	United States Army Corps of Engineers
<b>USDA</b>	United States Department of Agriculture
<b>USFWS</b>	United States Fish and Wildlife Service



**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  
JAN 27 2010

January 25, 2010

Grady Wolf  
Environmental Planner  
Kadmas, Lee & Jackson, Inc.  
PO Box 1157  
Bismarck, ND 58502-1157

Dear Mr. Wolf:

RE: Natural Gas Pipeline – Phase I

Bear Paw Energy, LLC is proposing a 12-inch natural gas pipeline within a 100-foot ROW on the Fort Berthold Reservation in Mountrail & McKenzie Counties, North Dakota. The proposed pipeline will bore under Lake Sakakawea.

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.

As well, 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.

Sincerely,

A handwritten signature in blue ink that reads "Steve Dyke". The signature is fluid and cursive.

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

js

RECEIVED

JAN 12 2010



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](mailto:parkrec@nd.gov)  
[www.parkrec.nd.gov](http://www.parkrec.nd.gov)

January 11, 2010

Grady Wolf  
Kadmas, Lee & Jackson  
PO Box 1157  
Bismarck, ND 58502-1157

Re: Bear Paw Energy LLC Development of a 12-inch Natural Gas Pipeline

Dear Mr. Wolf:

The North Dakota Parks and Recreation Department (the Department) has reviewed the above referenced project proposal submitted by Bear Paw Energy LLC to develop 10 miles of 12-inch natural gas pipeline located in Section 25, T151N, R95W; Sections 29-36, T151N, R94W; McKenzie County; Sections 31-33, T151N, R93W; and Sections 4-6, T150N, R93W; Mountrail County.

Our agency scope of authority and expertise covers recreation and biological resources (in particular rare plants 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 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, several occurrences have been identified within or adjacent to the project area including: *Falco mexicanus* (prairie falcon), *Andropogon gerardii* – *Sporobolus heterolepis* – *Schizachyrium western hillslope prairie* (Western big bluestem prairie), and *Hesperostipa curtiseta* – *Elymus lanceolatus herbaceous vegetation* (Western porcupine grass prairie). Please see the attached spreadsheet and map for more specific information on these species. We defer further comments regarding animal species to the North Dakota Game and Fish Department and the United States Fish and Wildlife Service.

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.

The Department recommends that the project be accomplished with minimal impacts and that all efforts be made to ensure that critical habitats not be disturbed in the project area to help secure rare species conservation in North Dakota. Regarding any reclamation efforts, we recommend that any impacted areas be revegetated with species native to the project area.

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.

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

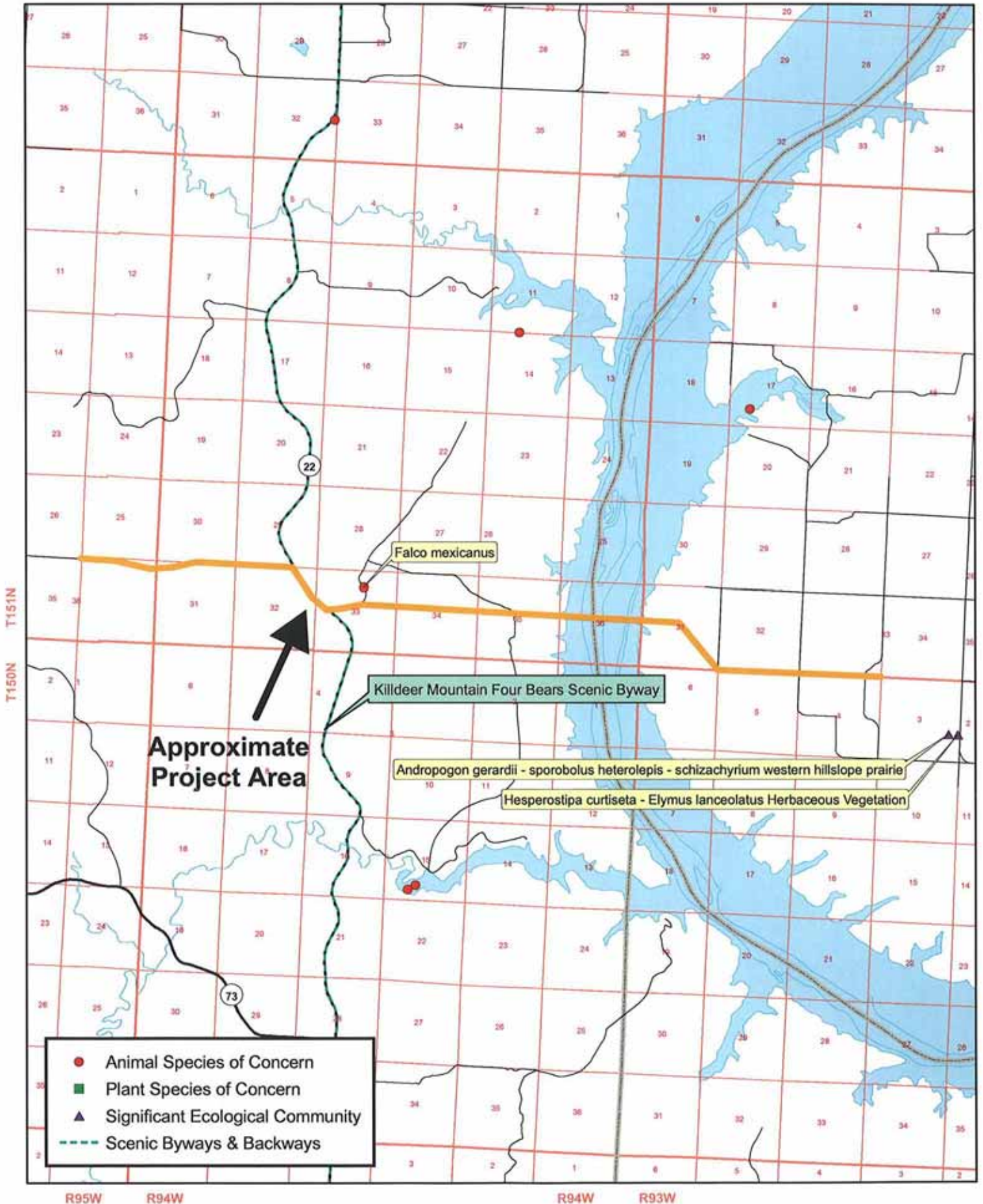
Sincerely,

  
Jesse Hanson, Coordinator  
Planning and Natural Resources Division

R.USNDNHI\*2010-004

.....  
Play in our backyard!

# North Dakota Parks and Recreation Department North Dakota Natural Heritage Inventory



North Dakota Natural Heritage Inventory  
 Rare Animal and Plant Species and Significant Ecological Communities

State Scientific Name	State Common Name	State Rank	Global Rank	Federal Status	Township Range Section	County	Last Observation	Estimated Representation Accuracy	Precision
<i>Andropogon gerardii</i> - sporobolus heterolepis - schizachyrium western hillside prairie	Western Big Bluestem Prairie	S1	GNR		150N093W - 03	Mountrail	1967		S
<i>Hesperostipa curtiseta</i> - Elymus lanceolatus Herbaceous Vegetation	Western Porcupine Grass Prairie	S2	GNR		150N093W - 03; 150N093W - 02; 151N094W - 33; 150N094W - 05; 151N094W - 29; 150N094W - 03; 151N094W - 32; 150N094W - 04; 151N094W - 21; 151N094W - 27; 151N094W - 34; 151N094W - 28	Mountrail	1967		S
<i>Falco mexicanus</i>	Prairie Falcon	S3	G5			McKenzie	1980		M



December 30, 2009

Mr. Grady Wolf  
Environmental Planner  
Kadmas, Lee & Jackson, Inc.  
P.O. Box 1157  
Bismarck, ND 58502-1157

Re: Bear Paw Energy LLC Natural Gas Pipeline  
Crossing the Fort Berthold Reservation  
Mountrail and McKenzie Counties

Dear Mr. Wolf:

This department has reviewed the information concerning the above-referenced project submitted under date of December 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.

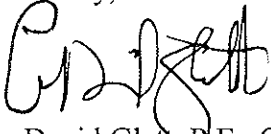
4. Noise from construction activities may have adverse effects on persons who live near the construction area. Noise levels can be minimized by ensuring that construction equipment is equipped with a recommended muffler in good working order. Noise effects can also be minimized by ensuring that construction 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 Glat, P.E., Chief  
Environmental Health Section

LDG:cc  
Attach.



## 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.





# 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>

February 11, 2010

Grady Wolf  
Kadrmas, Lee and Jackson  
PO Box 1157  
Bismarck, ND 58502-1157



Dear Mr. Wolf:

This is in response to your request for review of environmental impacts associated with the development of a 12-inch natural gas pipeline approximately 10 miles in length, within a 100 foot right-of-way, located in Mountrail and McKenzie Counties.

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

- A Sovereign Land permit is required, enclosed.
- 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



# APPLICATION FOR AUTHORIZATION TO CONSTRUCT A PROJECT WITHIN ISLANDS AND BEDS OF NAVIGABLE STREAMS AND WATERS

Office of the State Engineer  
900 East Boulevard  
Bismarck, ND 58505-0850

Permit No. \_\_\_\_\_

Project No. 1625

Date \_\_\_\_\_  
Received Stamp \_\_\_\_\_  
Location \_\_\_\_\_  
SWC/USE ONLY

I, the undersigned, do hereby submit the following information to the Office of the State Engineer as an application to construct a project that may impact islands and beds of navigable streams and waters of North Dakota under NDCC Chapter 61-33.

### GENERAL INFORMATION:

This Application must include a map from an actual survey, aerial photo or topographic map and plot map (if a development). The size of the map shall be 8½ by 11 inches. The map shall have a north arrow and approximate scale. Indicate the existing or proposed work on the drawing. Plans and specifications must be submitted if project includes construction work.

- (1) Project will be located in the: \_\_\_\_\_ Water Resource District
- (2) Legal description to the nearest 40 acre tract: \_\_\_\_\_ ¼ \_\_\_\_\_ ¼ Section \_\_\_\_\_ Township \_\_\_\_\_ Range \_\_\_\_\_
- (3) Is this application for modification of an existing project  Yes  No If so, what year was project constructed: \_\_\_\_\_  
By whom: \_\_\_\_\_
- (4) Proposed project involves  water crossing, type \_\_\_\_\_  boat dock,  boat ramp,  water intake,  dredge, volume \_\_\_\_\_ cu. yds.  filling, volume \_\_\_\_\_ cu. yds. , type \_\_\_\_\_,  other (explain) \_\_\_\_\_
- (5) Water body on which project will be located: \_\_\_\_\_
- (6) Purpose: \_\_\_\_\_
- (7) Project Description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- (8) Contractor, if known: \_\_\_\_\_
- (9) Anticipated construction start date: \_\_\_\_\_ Completion date: \_\_\_\_\_

The filing of this application and its approval in no way relieves the applicant or riparian landowner from any responsibility or liability resulting from the construction, operation or failure of the project.

Riparian Land Owner or Organization Sponsor: (Print) \_\_\_\_\_

Applicant: (Print) \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Phone: (H) \_\_\_\_\_

(W) \_\_\_\_\_

Signature: \_\_\_\_\_ Date Submitted: \_\_\_\_\_

(Riparian landowner or Organization Sponsoring the project)



REPLY TO  
ATTENTION OF

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

December 29, 2009

North Dakota Regulatory Office

[NWO-2009-3165-BIS]

Kadrmass Lee & Jackson  
Attn: Grady Wolf, Environmental Planner  
P.O. Box 1157  
Bismarck, North Dakota 58502-1157



Dear Mr. Wolf:

This is in response to a letter received December 24, 2009 requesting Department of the Army, U.S. Army Corps of Engineers (Corps) comments regarding the construction of a natural gas pipeline located in Mountrail and McKenzie Counties and the Fort Berthold Reservation, North Dakota, by Bear Paw Energy LLC.

Corps regulatory offices administer Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Section 10 of the Rivers and Harbors Act regulates work impacting navigable waters. Work over, in, or under navigable waters is considered to have an impact. Section 404 of the Clean Water Act regulates the discharge of dredge or fill material (temporarily or permanently) in waters of the United States. 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 the waters of the United States.

Please submit a location map and completed Corps permit application (copy enclosed) describing all proposed work and construction methodology, to the letterhead address if a Section 10/404 permit is required.

Do not hesitate to contact this office by letter or telephone (701-255-0015) if we can be of further assistance.

Sincerely,

*Daniel E. Cimarosti*  
for: Daniel E. Cimarosti  
Regulatory Program Manager  
North Dakota

Enclosure

**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
--------------------	----------------------	------------------	------------------------------

*NW0-2009-03165-BLS*

**(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.

**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, identify 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.**

## Grady Wolf

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**From:** Sorensen, Charles G NWO [Charles.G.Sorensen@usace.army.mil]  
**Sent:** Tuesday, January 12, 2010 9:14 AM  
**To:** grady.wolf@kljeng.com  
**Cc:** charles.g.sorensen@usace.army.mil  
**Subject:** Bear Paw Energy Myrmidon Pipeline

Mr. Wolf

- In reply to your request for comments regarding the Environmental Assessment (EA) for the Bear Paw Energy (BPE) Myrmidon Pipeline, the U.S. Army Corps of Engineers Garrison Dam/Lake Sakakawea Project requests that the following concerns be addressed in drafting the EA.
  
- No staging of any equipment associated with the pipeline construction will be allowed on lands managed by the COE.
  
- All equipment associated with the construction of the pipeline should be meticulously cleaned prior to being moved onto the construction site to prevent to the fullest extent the possibility of contamination of COE lands by noxious weeds or any other undesirable vegetation.
  
- BPE will be required to obtain all state and federal permits, easements, or other land based documentation required.
  
- Due to the close proximity of Lake Sakakawea to the proposed drilling location the COE requests that BPE utilize the best engineering methods possible to prevent ground contamination from petroleum based materials.

Thank you

Charles Sorensen  
Natural Resource Specialist  
U.S. Army Corps of Engineers  
Riverdale, North Dakota Office  
(701) 654 7411 ext 232



United States Department of Agriculture



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

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January 11, 2010

Grady Wolf  
Kadrmass, Lee & Jackson  
128 Soo Line Drive  
PO Box 1157  
Bismarck, ND 58502-1157

RE: Development of a 12-inch natural gas pipeline approximately 10 miles in length, within 100-foot right-of-way in Dunn County, ND

Dear Mr. Wolf:

The Natural Resources Conservation Service (NRCS) has reviewed your letter dated December 23, 2009, concerning the development of a 12-inch natural gas pipeline approximately 10 miles in length, within 100-foot right-of-way in Dunn County, North Dakota.

NRCS has a major responsibility with the Farmland Protection Act (FPPA) in documenting conversion of farmland (i.e., prime, statewide importance and local importance) to non-agricultural use. It appears your proposed project is not supported by federal funding or actions; therefore, FPPA does not apply and no further action is needed.

*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 permanent structures where wetlands occur. 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.

*Helping People Help the Land*

An Equal Opportunity Provider and Employer



Mr. Wolf

Page 2

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,

A handwritten signature in blue ink, appearing to read "Irwin Russell".

IRWIN RUSSELL

Acting State Conservationist

cc:

Susan Tuhy, DC, NRCS, Killdeer, ND

Terry Gisvold, ASTC (FO), NRCS, Dickinson, ND



DK-5000  
ENV-6.00

United States Department of the Interior  
BUREAU OF RECLAMATION

Dakotas Area Office  
P.O. Box 1017  
Bismarck, North Dakota 58502



JAN 5 2010



Mr. Grady Wolf  
Environmental Planner  
Kadrmas, Lee & Jackson, Inc.  
P.O. Box 1157  
Bismarck, ND 58502-1157

Subject: Solicitation for Environmental Assessment for Development of a 12-Inch Natural Gas Pipeline Approximately 10 Miles in Length, Within a 100 Foot Right-of-Way on the Fort Berthold Reservation in Mountrail and McKenzie Counties, North Dakota

Dear Mr. Wolf:

This letter is written to inform you that the letter sent on December 23 was received and the information and map have been reviewed by Bureau of Reclamation staff.

Installation of natural gas pipelines in Mountrail and McKenzie Counties could potentially affect Reclamation facilities in the form of the rural water pipelines of the Fort Berthold Rural Water System.

From the map you provided it appears that the proposed natural gas pipeline corridor is located in section 36, T. 151 N., R. 95 W.; sections 29, 30, 31, 32, 33, 34, 35, 36 T. 151 N., R. 94 W.; sections 31, 32, 33 T. 151 N., R. 93 W.; and sections 4 and 5, T. 150 N., R. 93 W. The proposed natural gas pipeline is in the vicinity of existing or proposed rural water pipelines and would cross a water pipeline in section 33, T. 151 N., R. 94 W.

We are providing maps depicting the water pipeline alignments in the vicinity of the proposed natural gas pipeline corridor 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 me at 701-221-1288.

Sincerely,

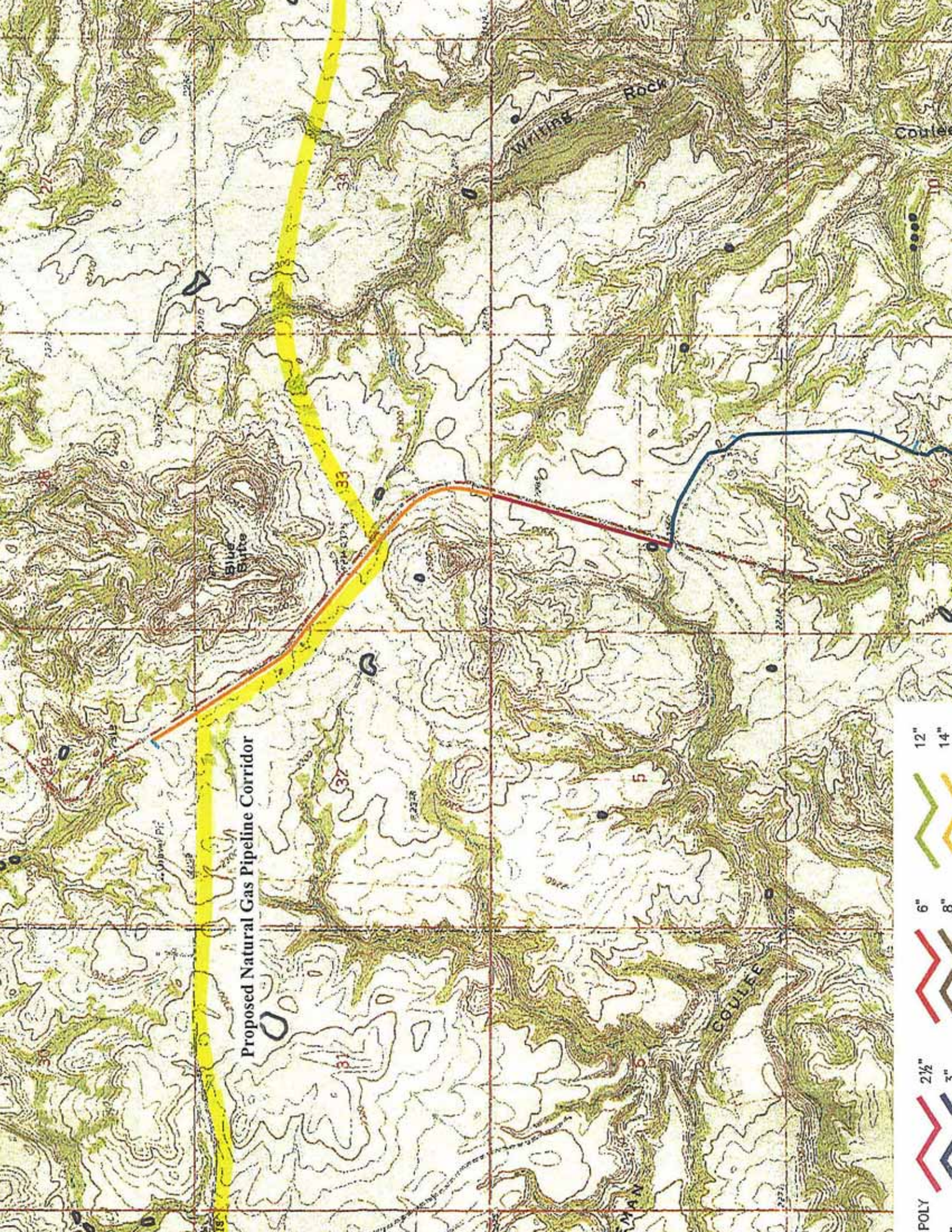
Ronald D. Melhouse  
Environmental Specialist

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)



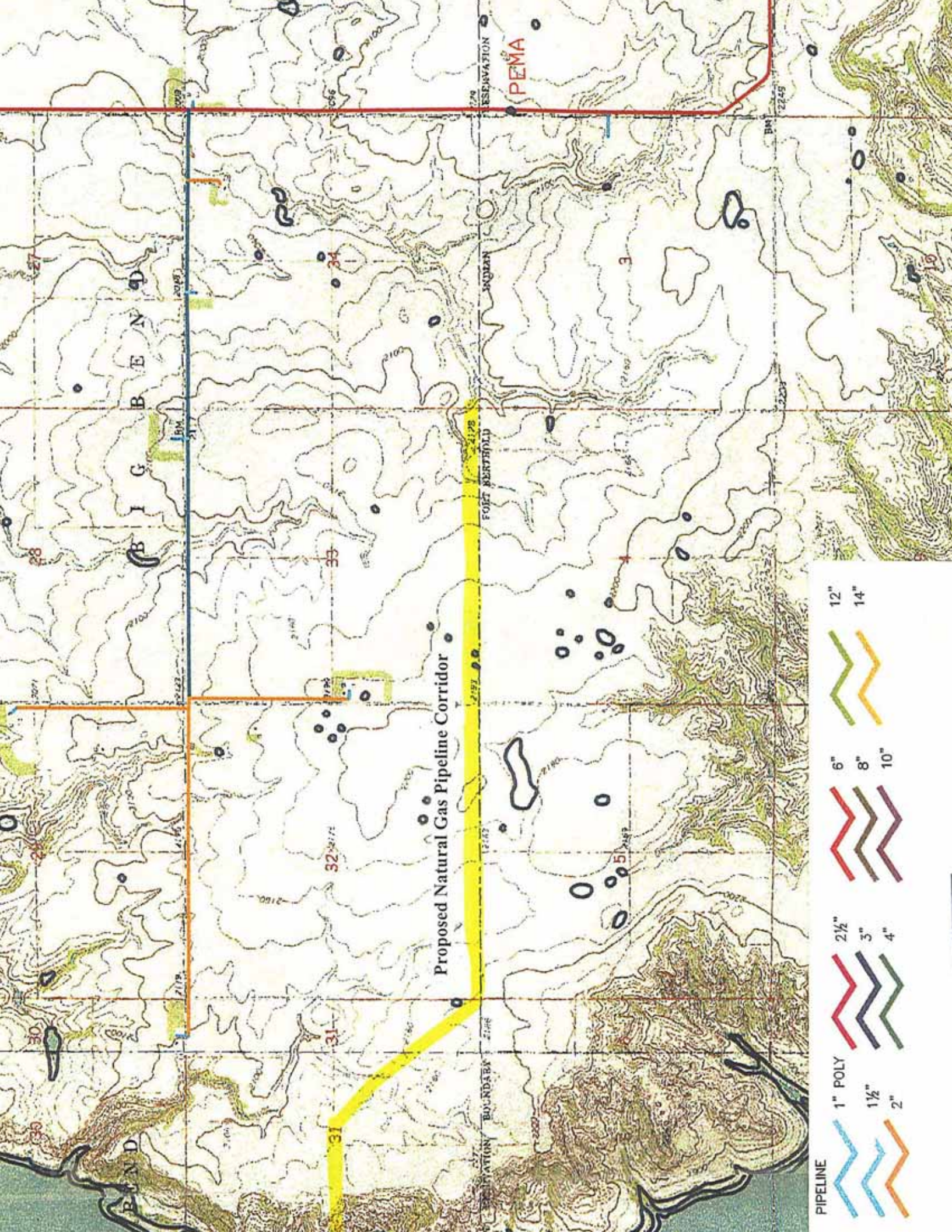
Proposed Natural Gas Pipeline Corridor

Blue Bluffs

Writing Rock

Coulter





Proposed Natural Gas Pipeline Corridor



**PLANNING & ZONING BOARD  
COUNTY OF MOUNTRAIL**

PO Box 248  
Stanley, North Dakota 58784-0248  
(701) 628-2909  
donl@co.mountrail.nd.us

**Board Members:**

STANLEY WRIGHT  
MICHAEL HYNEK  
LOREN HOFFMAN  
ROSEMARIE BIERI  
DUANE LINDBERG  
ARLO BORUD  
DARRELL SALTER

December 29, 2009

Grady Wolf, Environmental Planner  
Kadmas Lee & Jackson  
P.O. Box 1157  
Bismarck, ND 58502-1157

Re: Bear Paw Energy LLC

Dear Mr. Wolf:

Mountrail County has had a Zoning Ordinance in place since 1982. I call your attention to Article II Section IV and Article V Section II Paragraph 31, an excerpt of which is included. Please note Bear Paw Energy LLC will need to apply for a conditional use permit prior to any construction taking place.

If you have any questions, please contact our office.

Sincerely,

  
Donald W. Longmuir Jr., AICP  
Zoning Administrator

Enclosure

**Excerpt from the  
Mountrail County Zoning Ordinance  
Article II**

**Sec. IV Utilities:**

- A. All new utilities shall be considered as a conditional use and, as such, shall conform to all requirements put on them by the Planning Commission.
- B. No conditional use permit shall be issued unless satisfactory provisions for the following has been made:
  - 1. Underground utilities shall be placed a minimum depth of four (4) feet so as not to constitute a hazard to normal farming or general county maintenance.
    - a. Above ground utilities shall be placed in a manner which will not place undue hardship on normal farming operations.
    - b. Shall conform with section lines, highway (state and federal) and railroad right-of-ways.
  - 1. The activities will not result in undue damage or injury to roads, bridges, rights-of-way in the county or to any county, public, or private property.
  - 2. Excavation costs for purposes of construction or maintenance of a utility shall be borne by the contractor or owner of said utility.

**Article V  
Section II Definitions:**

- 31. Utilities: For the purpose of this ordinance, the definition of utilities shall be limited to electrical transmission lines, oil pipelines and natural gas pipelines. This definition shall exclude electrical distribution lines as a utility.

**If you have any questions please contact the Mountrail County Zoning Administrator's Office. The contact information is:**

**Zoning Administrator  
Mountrail County  
P.O. Box 248  
Stanley, ND 58784-0248  
Telephone #701.628.2909  
donl@co.mountrail.nd.us**



# **Notice of Availability and Appeal Rights**

**Bear Paw Energy: 10 Miles of 12 inch Natural Gas Pipeline**

**The Bureau of Indian Affairs (BIA) is planning to issue administrative approvals related to installation of ten miles of twelve inch natural gas pipeline as shown on the attached map. Construction by Bear Paw Energy is expected to begin in the Spring of 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 April 4, 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.**

**Project location.**

