United States Department of the Interior

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

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IN REPLY REFER TO:
DESCRM
MC-208

JUL 08 2010

MEMORANDUM

TO: Superintendent, Ft. Berthold Agency

FROM: Regional Director, Great Plains Region

SUBJECT: Environmental Assessment and Finding of No Significant Impact

In compliance with the regulations of the National Environmental Policy Act (NEPA) of 1969, as amended, for one proposed exploratory drilling well by Zenergy on *Dakota-3 #32-29* on the Fort Berthold Reservation, an Environmental Assessment (EA) has been completed and a Finding of No Significant Impact (FONSI) has been issued.

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

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

Attachment

cc: Marcus Levings, Chairman, Three Affiliated Tribes (with attachment)
Perry "No Tears" Brady, Tribal Historic Preservation Officer (with attachment)
Roy Swalling, Bureau of Land Management (with attachment)
Jonathon Shelman, Corps of Engineers (with attachment)
Dawn Charging, Virtual One Stop Shop, Fort Berthold Agency
Jeffrey Towner, Field Supervisor, U.S. Fish and Wildlife Service

Finding of No Significant Impact
Zenergy Operating Company , LLC

One Bakken Exploratory Oil Well:
Dakota-3 #32-29H
Dunn County, North Dakota

The U.S. Bureau of Indian Affairs (BIA) has received a proposal for one oil/gas well, access roads and related infrastructure on the Fort Berthold Indian Reservation to be located in Section 32, Township (T) 150 North (N), Range (R) 93 West (W), Dunn County, North Dakota. Associated federal actions by BIA include determinations of effect regarding cultural resources, approvals of leases, rights-of-way and easements, and a positive recommendation to the Bureau of Land Management regarding the Applications for Permit to Drill.

The potential of the proposed actions to impact the human environment is analyzed in the attached Environmental Assessment (EA), as required by the National Environmental Policy Act. Based on the recently completed EA, I have determined that the proposed projects 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. Agency and public involvement was solicited and environmental issues related to the proposal were identified.

2. 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.

3. Comments U.S. Fish and Wildlife Service have been considered regarding wildlife impacts, particularly in regard to threatened or endangered species. U.S. Fish and Wildlife Service concurred in a letter dated July 7, 2010.

4. The proposed actions are designed to avoid adverse effects to historic, archaeological, cultural and traditional properties, sites and practices. Compliance with the procedures of the National Historic Preservation Act is complete.

5. Environmental justice was fully considered.

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

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

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

Regional Director

7-8-10
Date

ENVIRONMENTAL ASSESSMENT

United States Department of the Interior
Bureau of Indian Affairs

Great Plains Regional Office
Aberdeen, South Dakota

Cooperating Agency:

Bureau of Land Management

North Dakota State Office
Dickinson, North Dakota

Zenergy Operating Company, LLC

One Bakken Exploratory Oil Well:

Dakota-3 Wells #32-29H

Fort Berthold Indian Reservation

July 2010

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

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1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 INTRODUCTION

Zenergy Operating Company, LLC (Zenergy) has acquired the lease and is proposing to drill one horizontal oil and gas well on the Fort Berthold Indian Reservation (Reservation) to evaluate and possibly develop the commercial potential of natural resources. Development has been proposed on lands held in trust by the United States in Dunn County, North Dakota. The Bureau of Indian Affairs (BIA) is the surface management agency for potentially affected tribal lands and individual allotments. The BIA manages lands held in title by the tribe and tribal members to subsurface mineral rights. Development has been proposed in a location that targets specific areas in the Middle Bakken Dolomite member of the Bakken Formation, a known oil reserve. The following proposed well site, shown in Figures 1 and 2, will be located within the Reservation where the majority of the external boundaries are located above the Bakken Formation:

- **Dakota-3 Wells #32-29H:** SW¼ SE¼ of Section 32, Township (T) 150 North (N), Range (R) 93 West (W), Dunn County, North Dakota

A new access road will be constructed to facilitate the construction and operation of the proposed well. A well pad will be constructed to accommodate drilling activities and well operations. A pit constructed for drilled cuttings will be used during drilling operations and reclaimed once drilling operations have ceased. Should the proposed well site result in long-term commercial production, supporting facilities may be constructed on site. All components (e.g., road, well pad, supporting facilities) will be reclaimed upon final abandonment unless formally transferred, with federal approval, to either the BIA or the landowner. The proposed well is exploratory; should it prove productive, further exploration of surrounding areas is possible. This environmental assessment (EA) addresses the potential impacts associated with the construction and possible long-term operation of the above-listed well and directly related infrastructure and facilities. Further oil and gas exploration and development will require additional National Environmental Policy Act (NEPA) analysis and federal actions.

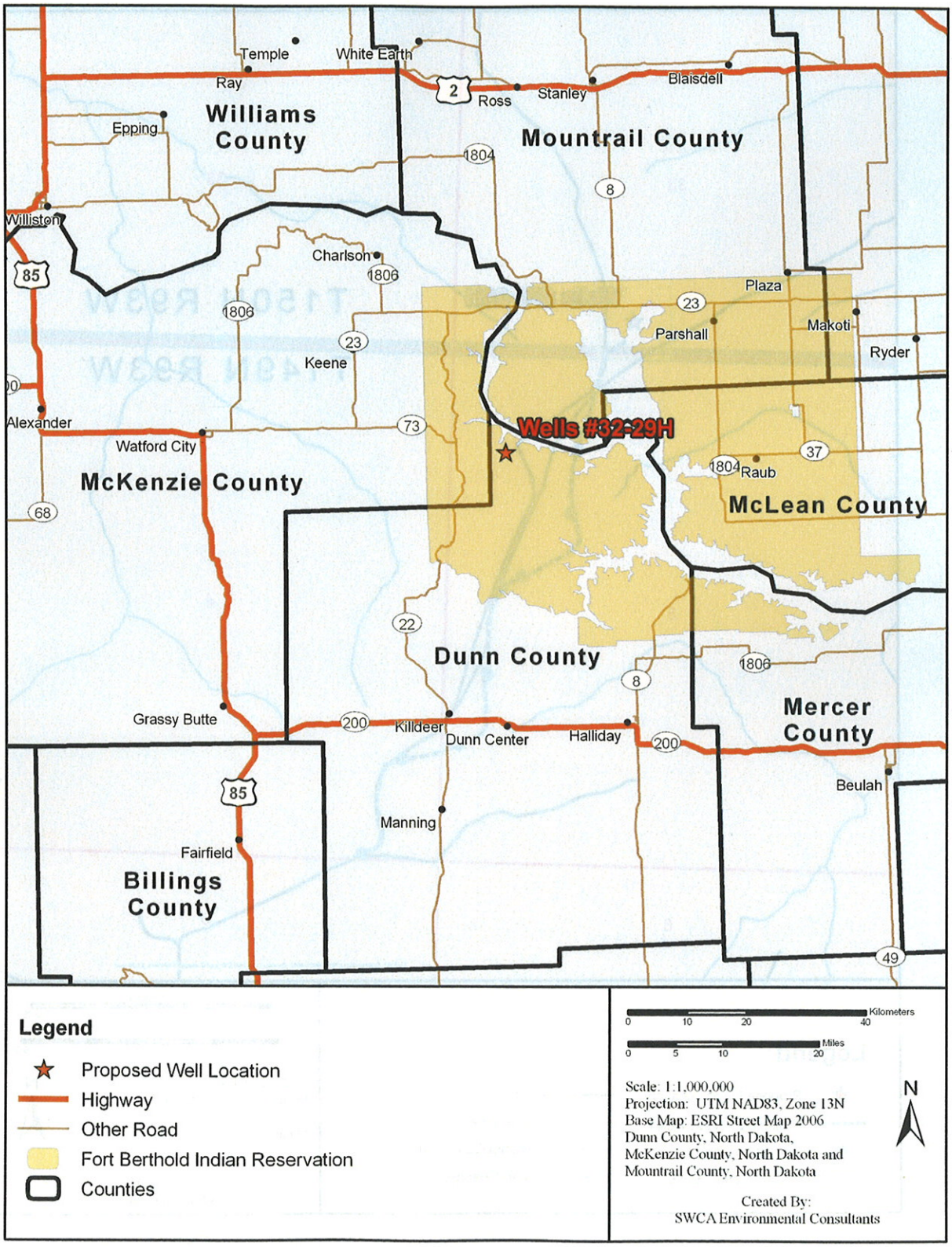

Figure 1. Project location.

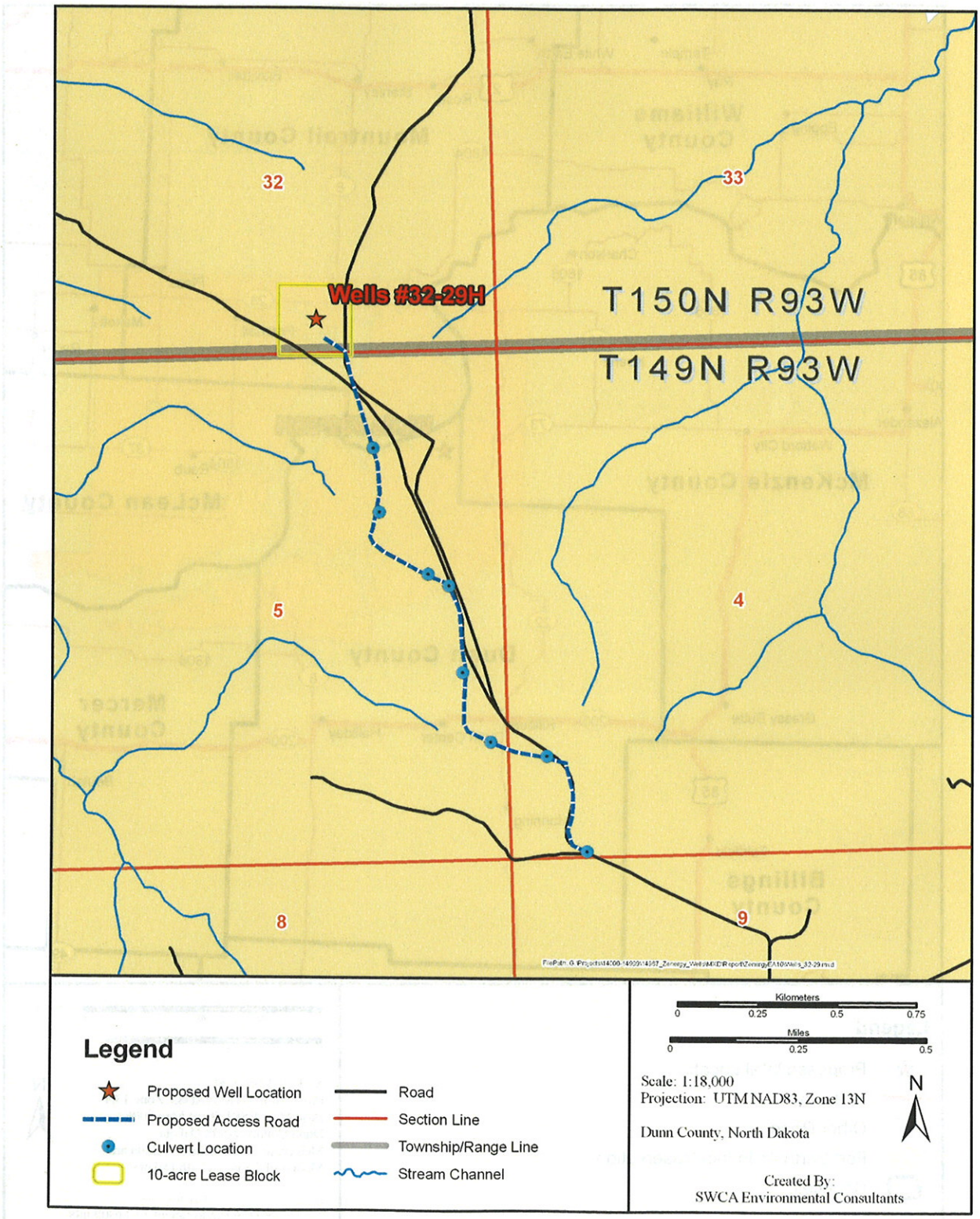

Figure 2. Dakota-3 Wells #32-29H proposed location.

1.2 FEDERAL AND OTHER RELEVANT REGULATIONS AND AUTHORITIES

The BIA's general mission is to represent the interests, including the trust resources, of members of the Three Affiliated Tribes of the Mandan, Hidatsa, and Arikara (MHA Nation), as well as those of individual tribal members. All members of the MHA Nation, including individual allotment owners, may benefit economically from the development of oil and gas exploration on the Reservation. Oil and gas exploration and subsequent development are under the authority of the Energy Policy Act of 2005 (42 United States Code [USC] 15801, et seq.), the Federal Onshore Oil and Gas Royalty Management Act of 1982 (30 USC 1701, et seq.), the Indian Mineral Development Act of 1982 (25 USC 2101, et seq.), and the Indian Mineral Leasing Act of 1938 (25 USC 396a, et seq.). The BIA's role in the proposed project includes approving easements, leases, and rights-of-way (ROWs); determining effects on cultural resources; and making recommendations to the Bureau of Land Management (BLM).

Compliance with the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality regulations (40 CFR 1500–1508), Title 43 Code of Federal Regulations (CFR) 3100, and Onshore Oil and Gas Order Nos. 1, 2, 6, and 7 is required due to the project's location on federal lands. The BLM is responsible for the final approval of all applications for permit to drill (APDs) after receiving recommendations for approval from the BIA. The BLM is also tasked with on-site monitoring of construction and production activities as well as resolution of any dispute that may arise as a result of any of the aforementioned actions.

The procedures and technical practices described in the APD supporting documents and in the EA will describe potential impacts to the project area. This EA will result in either a finding of no significant impact (FONSI) or in the preparation of an environmental impact statement (EIS). Commercial viability of the proposed well could result in additional exploration in the area. Should future oil/gas exploration activities be proposed wholly or partly on trust land, those proposals and associated federal actions would require additional NEPA analysis and BIA consideration prior to implementation and/or production activities.

Zenergy will comply with all applicable federal, state, and tribal laws, rules, policies, regulations, and agreements. No disturbance of any kind can begin until all required clearances, consultations, determinations, easements, leases, permits, and surveys are in place.

2.0 PROPOSED ACTION AND THE NO ACTION ALTERNATIVE

The BIA, as directed by NEPA, must "study, develop, and describe appropriate alternatives to the recommended course of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources..." (NEPA Sec 102[2][e]). Developing a range of alternatives allows for exploration of options designed to meet the purpose and need for the action. Along with the No Action Alternative, the BIA is considering the Proposed Action.

2.1 THE NO ACTION ALTERNATIVE

Under the No Action Alternative, the proposed project (including the well pad, well, and access road) would not be constructed, drilled, installed, or operated. The BIA would not approve easements, leases, or ROWs for the proposed location and the BLM would not approve the APD. No impacts would occur as a result of this project to the following critical elements: air quality, public health and safety, water resources, wetland/riparian habitat, threatened and endangered species, soils, vegetation and invasive species, cultural resources, socioeconomic conditions, and environmental justice. There would be no project-related ground disturbance, use of hazardous materials, or trucking of product to collection areas. Surface disturbance, deposition of potentially harmful biological material, and traffic levels would not change from present levels. Under the No Action Alternative, the MHA Nation, tribal members, and allottees would not have the opportunity to realize potential financial gains from the discovery and resulting development of resources at these well locations.

2.2 THE PROPOSED ACTION

This document analyzes the potential impacts of one exploratory oil and gas well with varied surface and mineral estates located in the west-central portion of the Reservation in Dunn County. The proposed well would test the commercial potential of the Middle Bakken Dolomite Member of the Bakken Formation. The site was chosen by Zenergy in consultation with tribal and BIA resource managers to provide information for future development. The EA on-site meeting for the Wells #32-29H well site location and proposed access road was conducted April 6, 2010. The on-site meeting was attended by the surveyor, natural and cultural resource specialists, the BIA representative, and the Tribal Historic Preservation Office (THPO) monitor. Surveys were conducted at this time to determine potential impacts to resources; topography, potential drainage issues, erosion control measures, pad and related facility locations (topsoil/subsoil stockpiles, reserve pits, tanks, etc.) were also discussed at the on-site and the location was finalized. The well pad was shifted 90 feet to the southeast and the access road was rerouted off of the existing road in two locations to avoid sites of cultural significance. The Wells #32-29H location was approved at that time with no further recommendations or requirements.

2.2.1 Field Camp

A few personnel would be housed in self-contained trailers for a very short period of time. Long-term housing is not being proposed. Most personnel, both construction and drilling, would commute to the site. Human waste would be collected on site in portable toilets and

trailers and it would be transported off site to a state-approved wastewater treatment facility. All other solid waste would be contained in enclosed containers and transported to, and disposed of at state-approved facilities.

2.2.2 Access Roads

2.2.2.1 Access Roads

Up to 6,856 feet (i.e., 1.3 miles) of new access roads would be constructed. A maximum disturbed ROW width of 66 feet for the access road would result in up to 10.4 acres of new surface disturbance. Signed agreements would be in place allowing road construction across affected private and allotted land surfaces, and any applicable approach permits and/or easements would be obtained prior to any construction activity.

Construction would follow road design standards outlined in the BLM Gold Book (BLM and U.S. Forest Service [USFS] 2007). At a minimum, 6 inches of topsoil would be removed from the access road corridors. This stockpiled topsoil would then be placed on the outside slopes of the ditches following road construction. The ditches would be reseeded as quickly as possible using a seed mixture determined by the BIA. Care would be taken during road construction to avoid disturbing or disrupting any buried utilities that may exist along State Highway 22 and BIA Roads 10 and 12. The access road would be surfaced with a minimum of 4 inches of aggregate if the site were to be established as a commercial production site. Also, the roadway would remain in use for the life of the well. Details of road construction are addressed in the APD. A diagram of typical road cross sections is shown in Figure 3.

2.2.3 Well Pad

The proposed well pad would include a leveled area (pad) and a pit. The pad would be used for the drilling rig and equipment, and the pit would be excavated, lined, and used for drilling fluids and cuttings. The pad would be stripped of topsoil and vegetation and then graded. The topsoil would be stockpiled and stabilized with a cover crop until it could be used to reclaim and revegetate the disturbed area. The subsoils would be used in the construction of the pad and would be graded to ensure that water drains away from the pad. Erosion control best management practices (BMPs) would be implemented and could include surface drainage controls, soil surface protection methodologies, and sediment capture features.

The well pad measures approximately 430 by 330 feet (3.3 acres). Cut-and-fill slopes, stockpiled topsoil, and reserve pit backfill placed on the edge of the pad would result in approximately 0.8 acre of additional surface disturbance per pad, resulting in a total surface disturbance of 4.1 acres at the well pad. Details of pad construction and reclamation can be found in the APD.

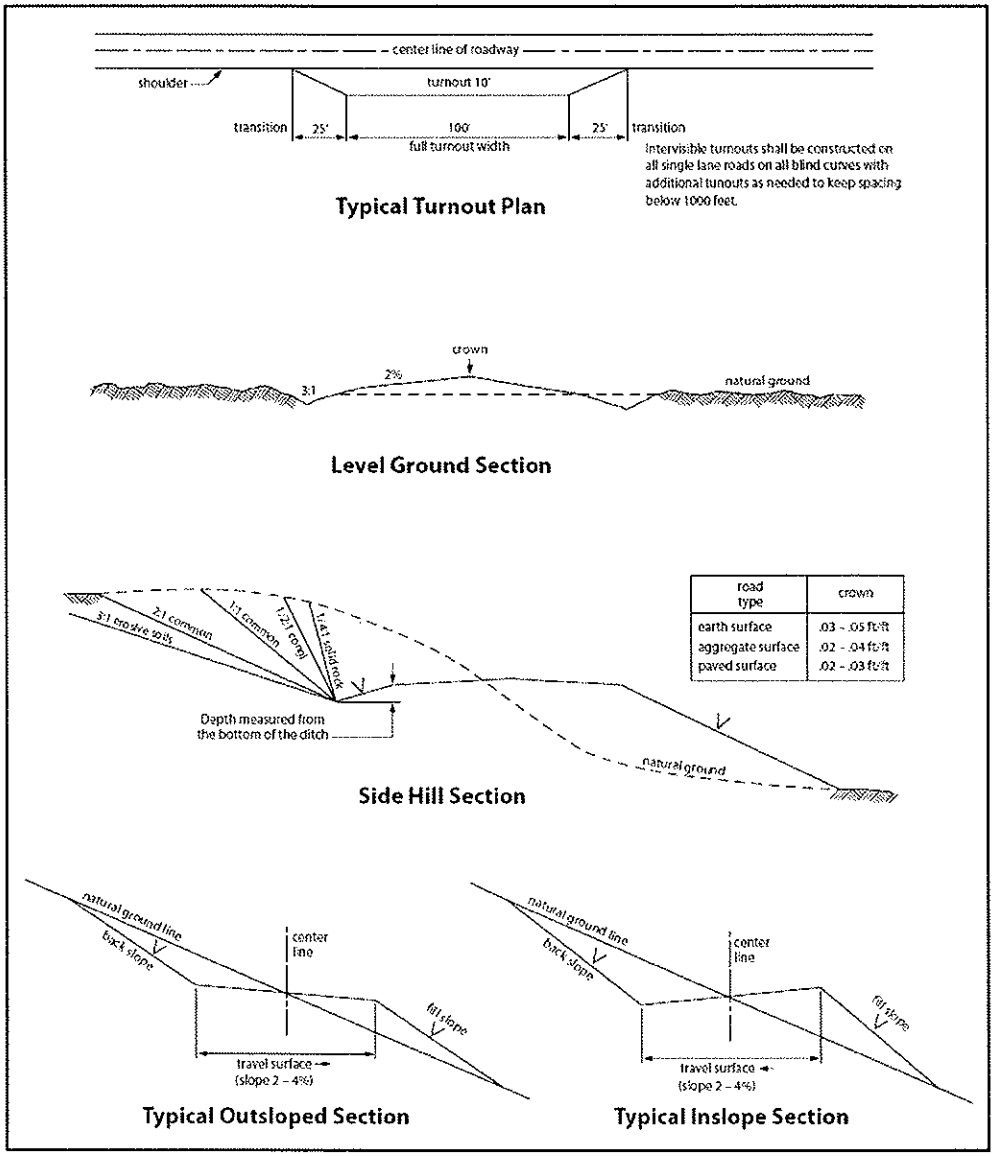

Figure 3. Typical road cross sections (BLM and USFS 2007).

2.2.4 Drilling

After securing mineral leases, Zenergy submitted the Notice of Staking (NOS) to the BLM on May 8, 2010. The BIA's office in New Town, North Dakota, will receive a copy of the APD from the BLM North Dakota Field Office. Construction will begin when the BIA completes the NEPA process and the APD is then approved by the BLM. Additionally, a Section 10 application was submitted to the U.S. Army Corps of Engineers on May 11, 2010.

Rig transport and on-site assembly would take roughly seven days for the well; a typical drill rig is shown in Figure 4. Drilling would require approximately 35 days to reach target depth, using a rotary drilling rig rated for drilling to approximately 15,000 feet. For the first 2,500 feet drilled, a freshwater-based mud system with non-hazardous additives would be used to

minimize contaminant concerns. Water would be obtained from a commercial source for this drilling stage, using approximately 8.4 gallons of water per foot of hole drilled.

After setting and cementing the near-surface casing, an oil-based mud system (80% to 85% diesel fuel and 15% to 20% water) would be used to drill to a 7-inch casing point. Oil-based drilling fluids reduce the potential for hole sloughing while drilling through water-sensitive formations (shales). Approximately 4,720 gallons of water and 18,900 gallons of diesel fuel per well would be used to complete vertical drilling. The lateral reach of the borehole would be drilled using 33,600 gallons of fresh water as mud and adding polymer sweeps as necessary to clean the hole.

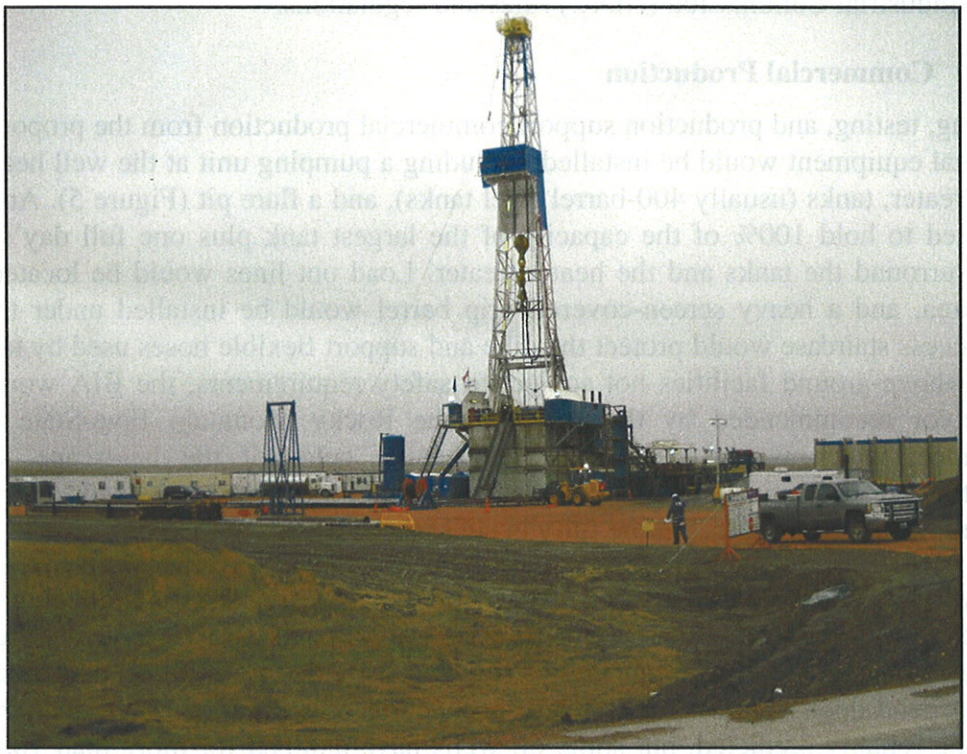

Figure 4. Typical drilling rig (Ruffo 2009).

2.2.5 Casing and Cementing

Surface casing would be set at an approximate depth of 2,500 feet and cemented back to the surface during drilling, isolating all near-surface freshwater aquifers in the project area. The Fox Hills Formation and Pierre Formation would be encountered at depths of approximately 1,700 and 1,800 feet, respectively. Production casing would be cemented from approximately 11,256 feet deep to a depth of about 4,000 feet in order to isolate the hydrocarbon zone present in the Dakota Formation below a depth of 4,500 feet. Casing and cementing operations would be conducted in full compliance with Onshore Oil and Gas Order No. 2 (43 CFR 3160).

2.2.6 Completion Activities

A completion rig unit would be moved on-site following the conclusion of drilling and casing activities. Approximately 30 days is usually required, at the proposed well depth, to clean out the well bore, pressure test the casing, perforate and fracture the horizontal portion of the hole, and run production tubing for commercial production. The typical procedure for fracturing a target formation to increase production includes pumping a mixture of sand and a carrier (e.g., water and/or nitrogen) downhole under extreme pressure. The resulting fractures are propped open by the sand, increasing the capture zone of the well and subsequently maximizing the efficient drainage of the field. After fracturing, the well is "flowed back" to the surface where fracture fluids are recovered and disposed of in accordance with North Dakota Industrial Commission (NDIC) rules and regulations.

2.2.7 Commercial Production

If drilling, testing, and production support commercial production from the proposed location, additional equipment would be installed, including a pumping unit at the well head, a vertical heater/treater, tanks (usually 400-barrel steel tanks), and a flare pit (Figure 5). An impervious dike sized to hold 100% of the capacity of the largest tank plus one full day's production would surround the tanks and the heater/treater. Load out lines would be located inside the diked area, and a heavy screen-covered drip barrel would be installed under the outlet. A metal access staircase would protect the dike and support flexible hoses used by tanker trucks. For all above-ground facilities not subject to safety requirements, the BIA would choose a paint color recommended by the BLM or the Rocky Mountain Five-State Interagency Committee, which would blend with the natural color of the landscape. Commercial production, if determined to be feasible based on the exploratory wells currently being analyzed, would be discussed more fully in subsequent NEPA analyses.

Initially, oil would be collected in tanks and periodically trucked to an existing oil terminal for sales. Any produced water would be captured in tanks and periodically trucked to an approved disposal site. The frequency of trucking activities for both oil and produced water would depend upon volumes and rates of production. The duration of production operations cannot be reliably predicted, but some oil wells have pumped for more than 100 years. The operator estimates that the well would yield approximately 500 barrels of oil per day and 50 barrels of water during the first year of production. After the first year, the operator estimates production would decrease to approximately 250 barrels of oil per day and 25 barrels of water. Produced water is mostly recovered frac fluids and is expected to become minimal after two years. In the future, Zenergy would complete a ROW application for oil and water pipelines and for an electric line, all of which would be located within existing disturbance along access and arterial roads.

Figure 5. Typical producing oil well pad (Sobotka 2008).

Large volumes of gas are not expected from the location. Small volumes would be flared in accordance with Notice to Lessees (NTL) 4A and adopted NDIC regulations, which prohibit unrestricted flaring for more than the initial year of operation (North Dakota Century Code [NDCC] 38-08-06.4).

2.2.8 Construction Details at the Well Site

Dakota-3 Wells #32-29H

The proposed Dakota-3 Wells #32-29H well site, shown in Figure 6, is located approximately 16.2 miles southwest of New Town in the SW¼ SE¼ of Section 32, T150N, R93W, Dunn County, North Dakota. A new access road approximately 6,856 feet long would be constructed from BIA Road 10 to the well site (Figure 7). The new road would disturb approximately 10.4 acres and the proposed well pad would disturb approximately 4.1 acres; the total anticipated new disturbance would be 14.5 acres.

The spacing unit consists of 1,280 acres (+/-) with the bottom hole located in the NW¼ NE¼ of Section 29, T150N, R93W (Figure 8). Vertical drilling would be completed at approximately 9,300 feet, at which point drilling would turn roughly horizontal to an approximate total vertical depth (TVD) of 10,200 feet and total measured depth (TMD) of 10,800 feet. The complete drilling string would measure approximately 19,500 feet, including approximately 9,700 feet of lateral reach into the Middle Bakken Formation. The drilling target is located approximately 550 feet from the north line and 2,000 feet from the east line, approximately 9,751 feet northwest of the surface hole location. A setback of at least 500 feet would be maintained.

Zenergy has committed to implementing specific mitigation measures and Best Management Practices (BMPs) in an effort to minimized disturbance to natural and cultural resources. Please see Section 3.10 Mitigation and Monitoring for more information.

Figure 6. Dakota-3 Wells #32-29H well pad area, looking south.

Figure 7. Dakota-3 Wells #32-29H access road, looking north.

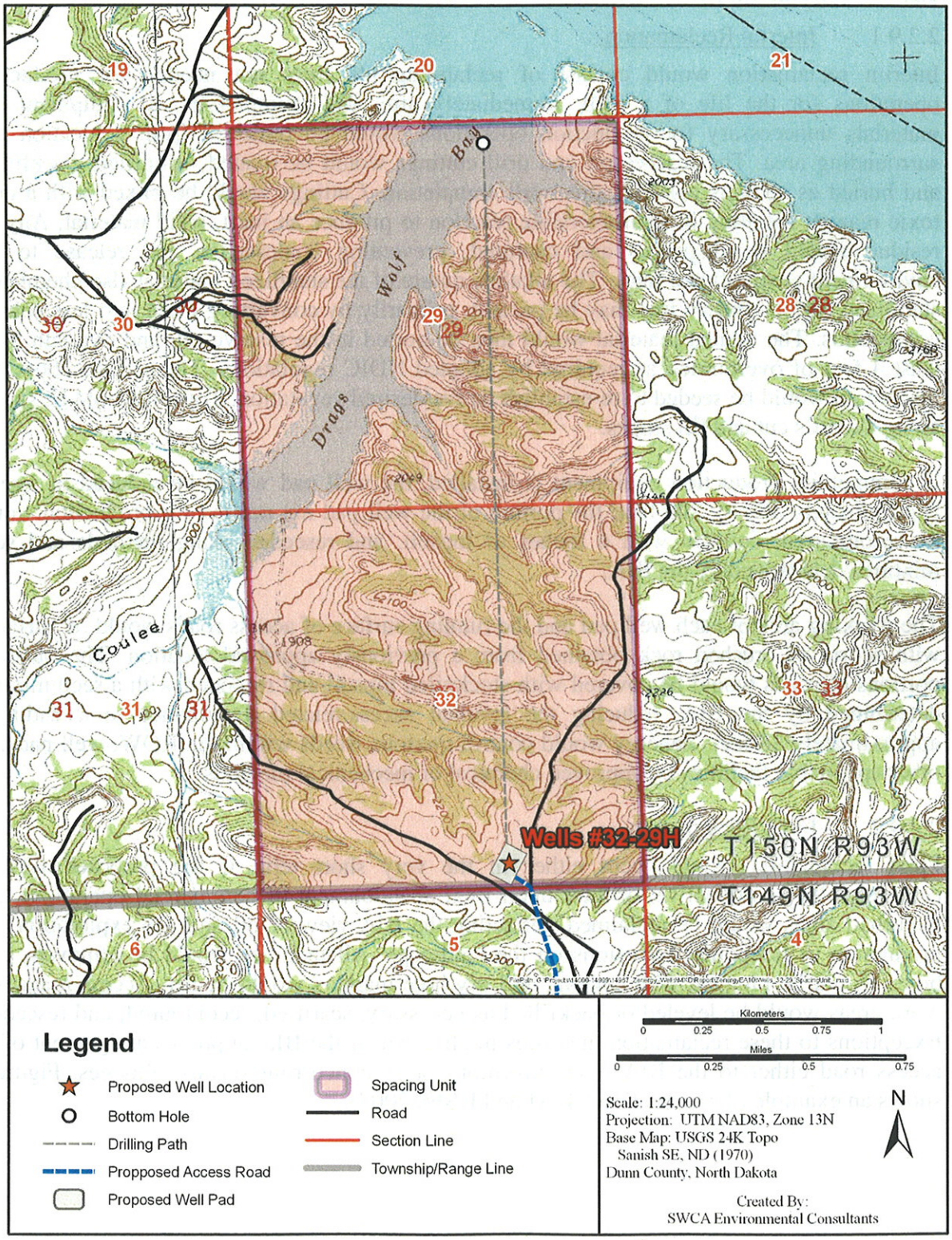

Figure 8. Dakota-3 Wells #32-29H proposed location showing spacing unit and drilling target.

2.2.9 Reclamation

2.2.9.1 Interim Reclamation

Interim reclamation would consist of reclaiming all areas not needed for production operations for the life of a well. Immediately after well completion, all equipment and materials unnecessary for production operations would be removed from a location and surrounding area. The reserve pit and drill cuttings would be treated, solidified, backfilled, and buried as soon as possible after well completion. Cuttings would be mixed with a non-toxic reagent resulting in an irreversible reaction to produce an inert, solid material. Any oil residue would be dispersed and captured, preventing coalescence and release to the environment at significant rates. The alkaline nature of the stabilized material also chemically stabilizes various metals that may be present, primarily by converting them into less soluble compounds. The treated material would then be buried in the reserve pit, and overlain by at least 4 feet of overburden as required by adopted NDIC regulations. The surface above the reserve pit would be seeded to re-establish native/desired vegetation. Topsoil would be spread along a road's cut and fill slopes.

If commercial production equipment is installed, the well pad would be reduced in size to approximately 300 by 200 feet; the portion of the well pad not needed for production would be recontoured, covered with 6 inches of topsoil, and reseeded using methods and seed mixtures determined by the BIA.

The working area of each well pad and the running surface of access roads would be surfaced with scoria or crushed rock obtained from a previously approved location. The outslope portions of roads would be covered with stockpiled topsoil and reseeded with a seed mixture determined by the BIA, reducing the residual access-related disturbance to a width of approximately 28 feet. Zenergy would control noxious weeds within the ROW, well pads, or other applicable facilities by approved chemical or mechanical methods.

2.2.9.2 Final Reclamation

Final reclamation would occur either in the very short term if the proposed well is commercially unproductive, or later upon final abandonment of commercial operations. All disturbed areas would be reclaimed, reflecting the BIA view of oil and gas exploration and production as temporary intrusions on the landscape. All facilities would be removed, well bores would be plugged with cement, and dry hole markers would be set. Access roads and work areas would be leveled or backfilled as necessary, scarified, recontoured, and reseeded. Exceptions to these reclamation measures might occur if the BIA approves assignment of an access road either to the BIA roads inventory or to concurring surface allottees. Figure 9 shows an example of reclamation (BLM and USFS 2007).

The well pad and access road are constructed to the minimum size necessary to safely conduct drilling and completion operations.

The well pad and access road have been recontoured back to the original contour, the topsoil respread, and the site revegetated.

Figure 9. Example of reclamation from the BLM Gold Book (BLM and USFS 2007).

2.3 BIA-PREFERRED ALTERNATIVE

The BIA-preferred alternative is to complete all administrative actions and approvals necessary to authorize or facilitate oil and gas developments at the proposed well location.

3.0 THE AFFECTED ENVIRONMENT AND POTENTIAL IMPACTS

The Reservation is the home of the MHA Nation. Located in west-central North Dakota, the Reservation encompasses more than one million acres, of which almost half are held in trust by the United States for either the MHA Nation or individual allottees. The remainder of the land is owned in fee simple title, sometimes by the MHA Nation or tribal members, but usually by non-Indians. The Reservation occupies portions of six counties, including Dunn, McKenzie, McLean, Mercer, Mountrail, and Ward. In 1945, the Garrison Dam was completed, inundating much of the Reservation. The remaining land was divided into three sections near Lake Sakakawea, an impoundment of the Missouri River upstream of the Garrison Dam.

The proposed well and access road are geologically situated in the Williston Basin, where the shallow structure consists of sandstones, silts, and shales dating to the Tertiary Period (65 to 2 million years ago), including the Sentinel Butte and Golden Valley formations. The underlying Bakken Formation is a well-known source of hydrocarbons; its middle member is targeted by the proposed project. Although earlier oil/gas exploration activity in the Reservation was limited and commercially unproductive, recent economic changes and technological advances now make accessing oil in the Bakken Formation feasible.

The Reservation is within the Northwestern Great Plains ecoregion, which consists of four physiographic units: 1) the Missouri Coteau Slope north of Lake Sakakawea; 2) the Missouri River trench (not flooded); 3) the Little Missouri River badlands; and 4) the Missouri Plateau south and west of Lake Sakakawea (Williams and Bluemle 1978). Much of the Reservation is on the Missouri Coteau Slope. Elevations of the glaciated, gently rolling landscape range from a normal pool elevation of 1,838 feet at Lake Sakakawea to more than 2,600 feet on Phaelan's Butte near Mandaree. Annual precipitation on the plateau averages between 15 and 17 inches. Mean temperatures fluctuate between -3 and 21 degrees Fahrenheit (°F) in January and between 55°F and 83°F in July, with 95 to 130 frost-free days each year (Bryce et al. 1998; High Plains Regional Climate Center 2008).

The proposed well site and spacing unit is in a rural area consisting of mostly grassland, shrubland, and cropland that is currently farmed, idle, or used to graze livestock. The landscape has been previously disturbed by dirt trails and gravel and paved roadways. There are no residences within 1 mile of the proposed well site.

The broad definition of the human and natural environment under NEPA leads to the consideration of the following elements: air quality, public health and safety, water resources, wetland/riparian habitat, threatened and endangered species, soils, vegetation and invasive species, cultural resources, socioeconomic conditions, and environmental justice. Potential impacts to these elements are analyzed for both the No Action Alternative (described in Section 2.1) and the Proposed Action. Impacts may be beneficial or detrimental, direct or indirect, and short-term or long-term. This EA also analyzes the potential for cumulative impacts, and ultimately makes a determination as to the significance of any impacts. In the absence of significant negative consequences, it should be noted that a significant benefit from the project does *not* in itself require preparation of an EIS.

3.1 AIR QUALITY

3.1.1 Introduction

The federal Clean Air Act (CAA), as amended in 1990, established national ambient air quality standards for criteria pollutants to protect public health and welfare. It also set standards for cancer-causing compounds, regulated emissions that cause acid rain, and required federal permits for large sources. National standards have been established for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter, and lead. These standards were set for pervasive compounds that are generally emitted by industry or motor vehicles. Standards for each pollutant meet specific public health and welfare criteria; thus they are called the "criteria pollutants." Some states have adopted more stringent standards for criteria pollutants, or have chosen to adopt new standards for other pollutants. For instance, North Dakota has a standard for hydrogen sulfide that the Environmental Protection Agency (EPA) does not.

3.1.2 Greenhouse Gas Emissions and Climate Change

Carbon dioxide (CO_2) is the primary greenhouse gas (GHG), responsible for approximately 90% of radiative forcing (the rate of energy change as measured at the top of the atmosphere; this can be positive [warmer] or negative [cooler]). To simplify discussion of the various GHGs, the term "equivalent CO_2, or CO_2e" has been developed. CO_2e is the amount of CO_2 that would cause the same level of radiative forcing as a unit of one of the other GHGs. For example, 1 ton of methane (CH_4) has a CO_2e of 22 tons; therefore, 22 tons of CO_2 would cause the same level of radiative forcing as 1 ton of CH_4. Nitrogen dioxide has a CO_2e value of 310. Thus, control strategies often focus on the gases with the highest CO_2e value. CH_4 is a common fugitive gas emission in oil and gas fields and is emitted at many phases of exploration and production.

According to the Center for Integrative Environmental Research at the University of Maryland (2008), climate change will affect North Dakota's climate significantly over time. North Dakota will experience an increase in the unpredictability of droughts, floods, and pests making it harder for farmers to remain economically viable in the agricultural industry. This damage to the agricultural community will subsequently be a detriment to the livestock industry. Additionally, due to reductions in the amount of available wildlife habitat, including receding water levels, North Dakota's hunting, fishing, and tourism industries will be damaged.

3.1.3 Criteria Pollutants

Ozone is a colorless gas with a pungent, irritating odor, and creates a widespread air quality problem in most of the world's industrialized areas. Ozone smog is not emitted directly into the atmosphere but is primarily formed through the reaction of hydrocarbons and nitrogen oxides in the presence of sunlight. Ozone's health effects can include reduced lung function; aggravated respiratory illness; and irritated eyes, nose, and throat. Chronic exposure can cause permanent damage to the alveoli of the lungs. Ozone can persist for many days after formation, and travel several hundred miles.

Respirable particulate matter is a class of compounds that can lodge deep in the lungs causing health problems. Based on extensive health studies, particulate matter is regulated under two classes. PM_{10} describes particles 10 microns or smaller, and $PM_{2.5}$ is 2.5 microns or smaller. Respirable particulate matter can range from inorganic wind-blown soil to organic and toxic compounds found in diesel exhaust. Toxic compounds such as benzene often find a route into the body via inhalation of fine particulate matter.

Nitrogen dioxide (NO_2) is a reddish-brown gas with an irritating odor. Primary sources include motor vehicles, industrial facilities, and power plants. In the summer months, nitrogen dioxide is a major component of photochemical smog. Nitrogen dioxide is an irritating gas that may constrict airways, especially of asthmatics, and increase the susceptibility to infection in the general population. Nitrogen dioxide is also involved in ozone smog production.

Carbon monoxide (CO) is a colorless, odorless gas that is a byproduct of incomplete combustion. Carbon monoxide concentrations typically peak nearest a source such as roadways or areas with high fireplace use, and decrease rapidly as distance from the source increases. Ambient levels are typically found during periods of stagnant weather, such as on still winter evenings with a strong temperature inversion. Carbon monoxide is readily absorbed into the body from the air. It decreases the capacity of the blood to transport oxygen, leading to health risks for unborn children and people suffering from heart and lung disease. The symptoms of excessive exposure are headaches, fatigue, slow reflexes, and dizziness.

Sulfur dioxide (SO_2) is a colorless gas with a strong, suffocating odor. Sulfur dioxide is produced by burning coal, fuel oil, and diesel fuel. Sulfur dioxide can trigger constriction of the airways, causing particular difficulties for asthmatics. Long-term exposure is associated with increased risk of mortality from respiratory or cardiovascular disease. Sulfur dioxide emissions are also a primary cause of acid rain and plant damage.

The federal and state governments have set standards based on set criteria for various air pollutants caused by human activity. Table 1 summarizes the standards for these criteria pollutants.

Table 1. Air Quality Standards and Monitored Data.

Pollutant	Averaging Period	NAAQS ($\mu g/m^3$) or (*ppm*)	Year		
			2006	2007	2008
SO_2 (in ppm)	24-hour	*0.14*	0.011	0.011	0.009
	Annual Mean	*0.03*	0.002	0.002	0.002
PM_{10} (in $\mu g/m^3$)	24-hour	150	50	57	108
	Annual Mean	50	14	13	16
$PM_{2.5}$ (in $\mu g/m^3$)	24-hour	35	18.9	13.5	16.4
	Weighted Annual Mean	15	6.3	6.6	6.7
NO_2 (in ppm)	Annual Mean	*0.053*	0.003	0.003	0.003
O_3 (in ppm)	1-hour	*0.12*	0.076	0.076	0.069
	8-hour	*0.08*	0.067	0.065	0.063

Source: EPA 2009. $\mu g/m^3$ = micrograms per cubic meter; ppm = parts per million
Note: For $PM_{2.5}$ the fourth-highest 24-hour value is reported per EPA attainment evaluation protocol.

3.1.4 Hazardous Air Pollutants

Hazardous air pollutants (HAPs) are a class of compounds known to cause cancer, mutation, or other serious health problems. HAPs are usually a localized problem near an emission source. HAPs are regulated separately from criteria air pollutants. Several hundred HAPs are recognized by the EPA and the State of North Dakota. Health effects of HAPs may occur at exceptionally low levels; for many HAPs, it is not possible to identify exposure levels that do *not* produce adverse health effects. Major sources of toxic air contaminants include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), wood smoke, and motor vehicle exhaust. Unlike regulations for criteria pollutants, there are no ambient air quality standards for HAPs. Examples of HAPs found in gases released by oil field development and operation include benzene, toluene, xylene, and formaldehyde (BLM 2009). HAP emissions receive evaluation based on the degree of exposure that can cause risk of premature mortality, usually from cancer.

Risk assessments express premature mortality in terms of the number of deaths expected per million persons. The North Dakota Department of Health (NDDH) typically reviews projects and either requires an applicant to prepare a risk assessment or assign the state engineers to do the work. The state requires that maximum individual cancer risk be calculated using its adopted protocol (the Determination of Compliance in the state's Air Toxics Policy). For new sources emitting HAPs with known negative health effects, an applicant must demonstrate that the combined impact of new HAP emission does not result in a maximum individual cancer risk greater than 1×10^{-5} (1 in 100,000).

3.1.5 Air Monitoring

Although the state of North Dakota does not have jurisdiction over air quality matters on the Reservation, it is helpful to note the monitoring efforts being made by the state and industry in the area. The NDDH operates a network of monitoring stations around the state that continuously measure pollution levels. Industry also operates monitoring stations as required by the state. The data from all these stations is subject to quality assurance, and when approved, it is published on the Internet (available from the EPA and other sources). Monitoring stations near the project site include Watford City in McKenzie County, Dunn Center in Dunn County, and Beulah in Mercer County. These stations are located west, south, and southeast of the proposed well sites, respectively. Criteria pollutants measured include SO_2, PM_{10}, NO_2, and ozone. Lead and carbon monoxide are not monitored by any of the three stations. Table 1 summarizes federal air quality standards and available air quality data from the three-county study area. The highest value at any of the three monitoring locations is shown for each year.

Note that North Dakota has separate state standards for several pollutants that are different from the federal criteria standards. These are:

- SO_2 (parts per million [ppm]) – 0.023 annual arithmetic mean, 0.099 24-hour concentration, and 0.273 one-hour concentration
- Hydrogen sulfide (H_2S) (ppm) – 10 instantaneous, 0.20 one-hour, 0.10 24-hour, and 0.02 three-month arithmetic mean

All other state criteria pollutant standards are the same as the federal standards (shown in Table 1). North Dakota was one of 13 states that met standards for all federal criteria pollutants in 2008.

The CAA mandates prevention of significant deterioration in the designated attainment areas. Class I attainment areas have national significance and include national parks greater than 6,000 acres, national monuments, national seashores, and federal wilderness areas larger than 5,000 acres that were designated prior to 1977. Theodore Roosevelt National Park, a Class I area that covers about 110 square miles in three units within the Little Missouri National Grassland, lies between Medora and Watford City and is roughly 30 to 40 miles west of the proposed well site. All other parts of the state, including the Reservation, are classified as Class II, affording them a lower level of protection from significant deterioration.

3.1.6 Response to the Threat of Climate Change

The EPA has proposed an endangerment finding that would allow regulation of GHGs under the CAA. The first step is a regulation that requires sources emitting 25,000 tons or more CO_2e to report their emissions. The EPA and the National Highway Traffic Safety Administration have increased corporate fuel economy standards to promote national energy security and reduce GHGs. Standards will equal 35 miles per gallon by 2020, with an estimated savings to drivers of $100 billion annually. Many U.S. states and foreign nations have adopted goals and actions to reduce GHGs to levels scientists forecast will allow the earth's climate to stabilize at 1 to 2 degrees Celsius above the current level. Additional regulation is currently being developed by Congress to roll back emissions to levels recommended by atmospheric scientists.

3.1.7 Typical Project Emissions

Oil field emissions encompass three primary areas: combustion, fugitive, and vented.

- Combustion emissions include SO_2, ozone precursors called volatile organic compounds (VOCs), GHGs, and HAPs. Sources include engine exhaust, dehydrators, and flaring.
- Fugitive emissions include criteria pollutants, H_2S, VOCs, HAPs, and GHGs. Sources include equipment leaks, evaporation ponds and pits, condensate tanks, storage tanks, and wind-blown dust (from truck and construction activity).
- Vented emissions include GHGs, VOCs, and HAPs. Primary sources are emergency pressure relief valves and dehydrator vents.

Pad and road construction, drilling activities, and tanker traffic would generate emissions of criteria pollutants and HAPs. Primary emissions sources during drilling are diesel exhaust, wind-blown dust from disturbed areas and travel on dirt roads, evaporation from pits and sumps, and gas venting. Diesel emissions are being progressively controlled by the EPA in a nationwide program. This program takes a two-pronged approach. First, fuels are improving to the ultra-low sulfur standard, and second, manufacturers must produce progressively lower engine emissions.

3.1.8 Air Quality Best Management Practices

Under the CAA, federal land management agencies have an affirmative responsibility to protect air quality. Tribes, federal land managers, and private entities can make emission controls part of a lease agreement. BMPs can be adopted for various portions of an oil/gas well's lifecycle. BMPs fall into six general categories:

- **Transportation BMPs to reduce the amount of fugitive dust and vehicle emissions**
  - Use directional drilling to drill multiple wells form a single well pad;
  - use centralized water storage and delivery, well fracturing, gathering systems;
  - use telemetry to remotely monitor and control production;
  - use water or dust suppressants to control fugitive dust on roads;
  - control road speeds; and
  - use van or carpooling
- **Drilling BMPs to reduce rig emissions**
  - Use cleaner diesel (Tier 2, 3, and 4) engines;
  - use natural gas-powered engines; and
  - use "green" completions to recapture product that otherwise would have been vented or flared.
- **Unplanned or emergency releases**
  - Use high-temperature flaring if gas is not recoverable.
- **Vapor recovery**
  - Use enclosed tanks instead of open pits to reduce fugitive VOC emissions; and
  - use vapor recovery units on storage tanks.
- **Inspection and maintenance**
  - Use and maintain proper hatches, seals, and valves;
  - optimize glycol circulation and install a flash tank separator;
  - use selective catalytic reduction; and
  - replace high-bleed with low-bleed devices on pneumatic pumps.
- **Monitoring and repair**
  - Use directed inspection and maintenance methods to identify and cost-effectively fix fugitive gas leaks; and
  - install an air quality monitoring station.

3.2 WATER RESOURCES

3.2.1 Surface Water

As shown in Figure 10, the Dakota-3 Wells #32-29H is located near Lake Sakakawea, which is classified by the U.S. Geological Survey (USGS) as perennial. Given the topography of the project area, runoff occurs largely as sheet-flow. Runoff that concentrates near the proposed project well area will flow into Lake Sakakawea.

The proposed Dakota-3 Wells #32-29H is located in the Boggy Creek subwatershed (Hydrologic Unit Code [HUC] 101101012101) of the Independence Point Watershed (Figure 10). The Boggy Creek subwatershed is part of the Lake Sakakawea sub-basin, the Lake Sakakawea basin, the Little Missouri River and subregion, and Missouri region. Runoff from the well pad would flow to the north into an unnamed intermittent waterway (HUC 101101010011 18) and travel approximately 1.77 miles until reaching perennial waters in Lake Sakakawea (Figure 11).

The proposed project would be engineered and constructed to minimize the suspended sediment (i.e., turbidity) concentration of surface runoff, avoid disruption of drainages, and avoid direct impacts to surface water. No surface water would be used for well drilling operations. Any chemicals or potentially hazardous materials would be handled in accordance with the operator's spill prevention, control, and countermeasure plan. Provisions established under this plan would minimize potential impacts to any surface waters associated with an accidental spill.

3.2.2 Groundwater

Aquifers in the project area include, from deepest to shallowest, the Cretaceous Fox Hills and Hell Creek formations and the Tertiary Ludlow, Tongue River, and Sentinel Butte formations (Table 2). Several shallow aquifers related to post-glacial outwash composed of till, silt, sand, and gravel are located in Dunn and McKenzie counties. However, none are within the proposed project area (Figure 10). The shallow Sentinel Butte Formation, commonly used for domestic supply in the area, outcrops in Dunn County and meets standards of the North Dakota Department of Health (Croft 1985). Detailed analyses are available from the North Dakota Geological Survey, Bulletin 68, Part III, 1976.

Review of electronic records of the North Dakota State Water Commission revealed 33 existing water wells within an approximate 5-mile boundary of the proposed well (Table 3). Two of these water wells are found within 1 mile of Dakota-3 Wells #32-29H. Water quality would be protected by drilling with freshwater to a point below the base of the Fox Hills Formation, implementing proper hazardous materials management, and using appropriate casing and cementing. Drilling would proceed in compliance with Onshore Oil and Gas Order No. 2, Drilling Operations (43 CFR 3160).

Since none of the proposed project area lies within the boundaries of the post-glacial outwash aquifers, low porosity bedrock near the project well would act as confining layers to prevent impacts to groundwater resources. Additionally, well completion methods would prevent cross contamination between aquifers or the introduction of hazardous materials into aquifers. The majority of the identified groundwater wells may have minimal hydrologic connections due to their respective distance from the project well.

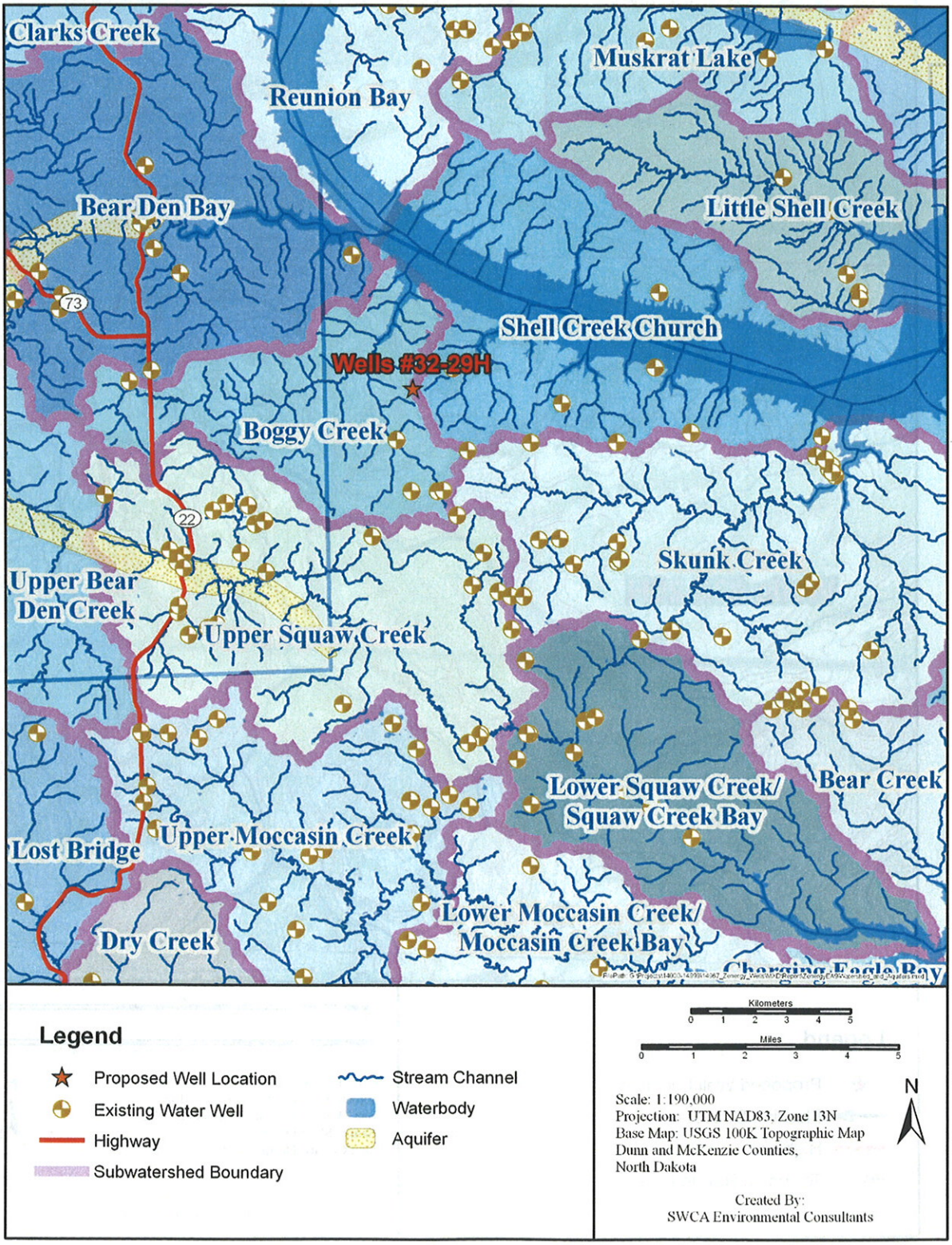

Figure 10. Watersheds and aquifers.

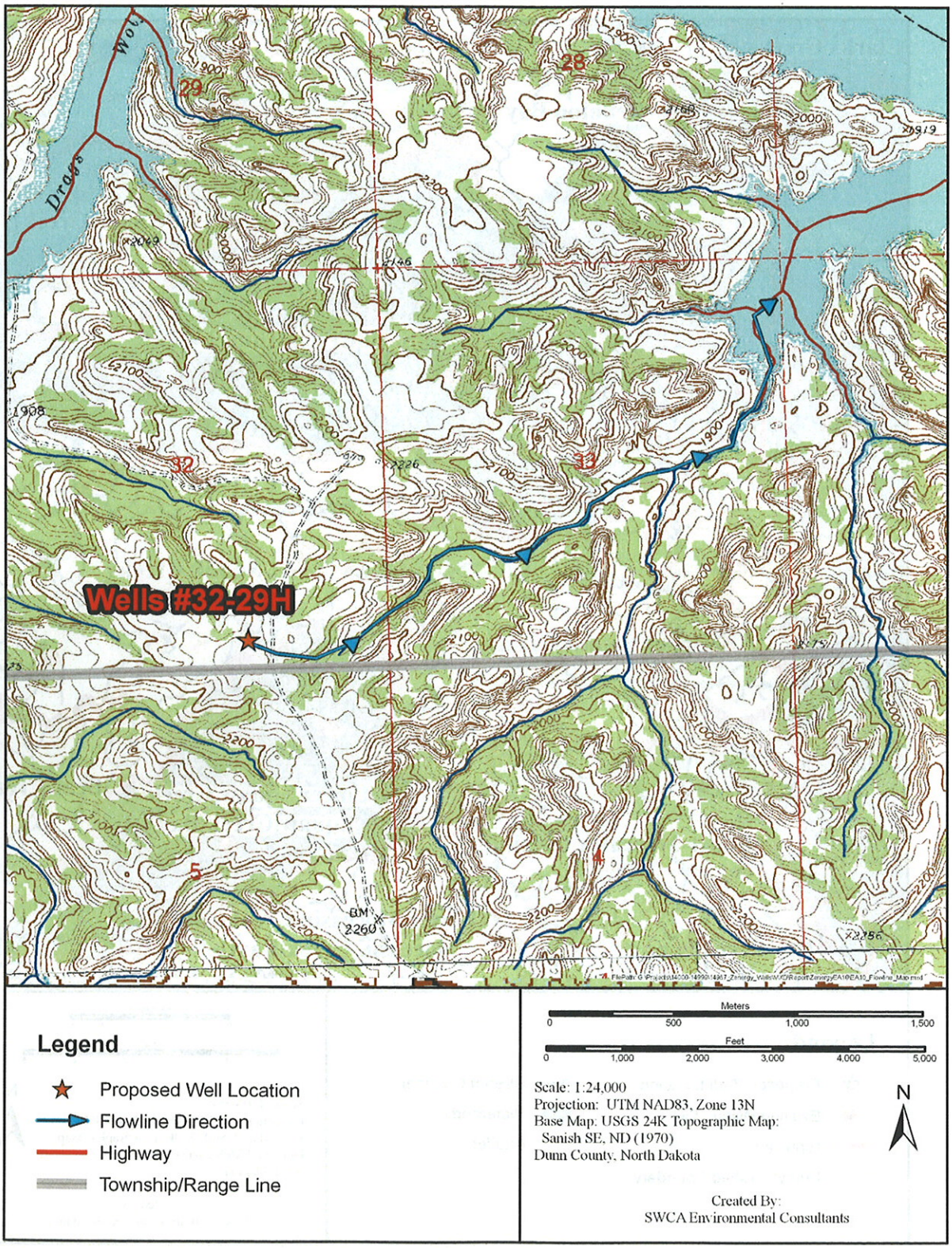

Figure 11. Flow lines from the well pad location.

Table 2. Common Aquifers in the Proposed Project Area and Surrounding Region.

Period	Formation		Depth Range (feet)	Thickness (feet)	Lithology	Water-Yielding Characteristics
Quaternary	Alluvium		0–40	40	Silt, sand, and gravel	Maximum yield of 50 gal/min to individual wells from sand and gravel deposits.
Tertiary	Fort Union Group	Sentinel Butte	0–670	0–670	Silty clay, sand and lignite	5 to 100 gal/min in sandstone. 1 to 200 gal/min in lignite.
		Tongue River	140–750	350–490	Silty clay, sand and lignite	Generally less than 100 gal/min in sandstone.
		Cannonball/ Ludlow	500–1,150	550–660	Fine- to medium-grained sandstone, siltstone, and lignite	Generally less than 50 gal/min in sandstone.
Cretaceous	Hell Creek		1,000–1,750	200–300	Claystone, sandstone, and mudstone	5 to 100 gal/min in sandstone.
	Fox Hills		1,100–2,000	200–300	Fine- to medium-grained sandstone and some shale	Generally less than 200 gal/min in sandstone. Some up to 400 gal/min.

Source: Croft (1985) and Klausing (1979).
gal/min = gallons per minute

Table 3. Existing Water Wells Near the Project Area.

Well Number	Owner	Date Drilled	Section	Township (N)/ Range (W)	Type/Use	Depth (feet)	Aquifer	Miles to Proposed Well
149-093-02ACB	C. Perkins	1962	2	149/093	Stock	647	Sentinel Butte	2.93
149-093-05CDC	Unknown	1961	5	149/093	Stock	84	Sentinel Butte	1.07
149-093-08DCC	M. Fox	1960	8	149/093	Domestic	500	Sentinel Butte	1.99
149-093-09ABD	Dale McGrady	1/1/1981	9	149/093	Stock	135	Unknown	1.60
149-093-09CCC	St. Anthonys	10/3/1988	9	149/093	Domestic	440	Unknown	2.04
149-093-09CCD	St. Anthonys	1952	9	149/093	Domestic	65	Sentinel Butte	2.05
149-093-12AB	Ivan Johnson	7/26/1976	12	149/093	Stock	348	Unknown	4.07
149-093-14CDD2	USGS	10/18/1994	14	149/093	Monitoring	35	Unknown	4.10
149-093-16BDD	Paul Rosario	8/15/1994	16	149/093	Domestic	450	Unknown	2.61
149-093-21AAD	Gerald Fox	12/14/2000	21	149/093	Domestic	5	Unknown	3.50
149-093-21DCA	E. Wicker	Unknown	21	149/093	Unused	35	Unknown	4.02
149-093-22CCD	Arla Muzzy	7/17/2002	22	149/093	Domestic	92	Unknown	4.24
149-093-27ABA2	Patricia McKenzie	8/12/2004	27	149/093	Domestic	89	Unknown	4.57
149-093-27BAA	USGS	10/24/1994	27	149/093	Monitoring	60	Unknown	4.46
149-094-14-1	Mandaree School	3/21/1988	14	149/094	Monitoring	14	Unknown	4.07
149-094-14-2	BIA	1/30/2002	14	149/094	Monitoring	29	Unknown	4.05
149-094-14-3	BIA	1/30/2002	14	149/094	Monitoring	28	Unknown	4.05
149-094-14-4	BIA	4/11/2000	14	149/094	Monitoring	25	Unknown	4.05
149-094-14ACD	Mike Mason	5/25/1973	14	149/094	Domestic	66	Unknown	3.87
149-094-15AAA	Sandy Youngbird	10/16/2006	15	149/094	Domestic	278	Unknown	4.28

Well Number	Owner	Date Drilled	Section	Township (N)/ Range (W)	Type/Use	Depth (feet)	Aquifer	Miles to Proposed Well
149-094-15ABD	Tilly Lone Fight	11/7/2005	15	149/094	Domestic	320	Unknown	4.58
149-094-23ACD	USGS	10/26/1994	23	149/094	Monitoring	119	Unknown	4.56
149-094-23BBA	USGS	10/25/1994	23	149/094	Monitoring	68	Unknown	4.65
150-093-19ACB	Waterford City	10/7/1988	19	150/093	Municipal	90	Unknown	2.86
150-093-31ADD	Unknown	1/1/1961	31	150/093	Unknown	336	Sentinel Butte	0.89
150-093-33CCA	Unknown	1/1/1960	33	150/093	Unknown	388	Sentinel Butte	0.85
149-093-27ABA	H. Younbird	Unknown	27	149/093	Domestic	65	Sentinel Butte	4.58
149-094-14BA	MANDAREE 3	7/21/1970	14	149/094	Public Supply	1,745	Fox Hills	3.97
149-093-10AAA	Tribal	1950	10	149/093	Unused	450	Unknown	2.53
149-093-14CCC	Tribal	Unknown	14	149/093	Unused	432	Sentinel Butte	3.86
149-093-18DDB	Tribal	Unknown	18	149/093	Unused	465	Sentinel Butte	3.00
149-093-23ACD	Unknown	Unknown	23	149/093	Unused	34	Sentinel Butte	4.65
151-092-31BDD	D.R. Manson	Unknown	31	151/092	Domestic and Stock	62	Unknown	4.71

Source: North Dakota State Water Commission (2009).

3.3 WETLANDS, HABITAT, AND WILDLIFE

3.3.1 Wetlands

National Wetland Inventory maps maintained by the U.S. Fish and Wildlife Service (USFWS) do not identify any jurisdictional wetlands in the area of the proposed well pad or access road (USFWS 2009). No wetlands were observed along any access road ROWs or at the well site during surveys conducted in April 2010. No riparian or wetland habitats are anticipated to be directly or indirectly impacted by the proposed access road or well.

According to the USFWS National Wetland Inventory database, a palustrine emergent (PEM) wetland is located approximately 1.36 miles from the proposed project area (Table 4). This PEM wetland would not be impacted as a result of construction, drilling, or production activities associated with the proposed well pad and associated access road.

Table 4. Distance and Bearings from Well Pad Location to PEM Wetlands.

Well Pad	Distance (miles)	Bearings (degrees)
Dakota-3 Wells #32-29H	1.36	249.91

3.3.2 Wildlife

Several wildlife species that may exist in Dunn County are listed as threatened or endangered under the Endangered Species Act (ESA). Listed species in Dunn County include the black-footed ferret, gray wolf, interior least tern, pallid sturgeon, piping plover, and whooping crane (USFWS 2010). Although delisted in 2007, the bald eagle remains a species of special concern to the BIA and the Department of the Interior, and is effectively treated the same as a listed species. Tribes and states may recognize additional species of concern; such lists are taken under advisement by federal agencies but are not legally binding in the manner of the ESA. Listed species are described below.

Bald Eagle (*Haliaeetus leucocephalus*)
Status: Delisted in 2007
Likelihood of impact: May affect, but is not likely to adversely affect

The proposed project area is 1.94 miles from Lake Sakakawea and does not contain suitable nesting/perching habitat, concentrated feeding areas, or other necessary habitat. Though delisted, the bald eagle is afforded some protection under the Migratory Bird Treaty Act (916 USC 703–711) and the Bald and Golden Eagle Protection Act (16 USC 668–668c). No impacts are anticipated.

Black-footed Ferret (*Mustela nigripes*)
Status: Endangered
Likelihood of impact: No effect

Several isolated populations are known to exist in the United States. However, this species is presumed extirpated from North Dakota because it has not been observed in the wild for more than 20 years. No impacts are anticipated.

Dakota Skipper (*Hesperia dacotae*)
Status: Candidate
Likelihood of impact: May affect, but is not likely to adversely affect

The project area is maintained for agricultural use including cultivation and pasture land. Therefore, undisturbed native prairie areas with a high diversity of wildflowers and grasses were not observed in the proposed project area. The absence of suitable habitat makes the presence of Dakota skippers unlikely. No impacts are anticipated.

Golden Eagle (*Aquila chrysaetos*)
Status: Unlisted; protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act
Likelihood of impact: May affect, but is not likely to adversely affect

The golden eagle prefers habitat characterized by open prairie, plains, and forested areas. Usually, golden eagles can be found in proximity to badland cliffs that provide nesting habitat. The proposed project area does not contain suitable nesting habitat for golden eagles; however, eagle prey species may be present in and around the project area. No impacts are expected as a result of any activities associated with the construction, production, or reclamation of the project area.

Gray Wolf (*Canis lupus*)
Status: Endangered
Likelihood of impact: No effect

The proposed project area does not contain suitable habitat for occupation or colonization by gray wolves. Due to the distance of known gray wolf populations in Minnesota, Canada, Montana, and Wyoming, transient wolves are not expected to be present. No impacts are anticipated.

Interior Least Tern (*Sterna antillarum*)
Status: Endangered
Likelihood of impact: May affect, but is not likely to adversely affect

The proposed project area would be located in upland areas that would not provide suitable nesting habitat for the interior least tern. Key habitat includes sparsely vegetated sandbars along rivers, sand and gravel pits, or lake and reservoir shorelines. Interior least tern nests are usually found along the shoreline and islands of Lake Sakakawea. Migrating or foraging interior least terns may transition through the project area; however, no adverse impact is expected as a result of construction, production, or reclamation activities.

Pallid Sturgeon (*Scaphirhynchus albus*)
Status: Threatened
Likelihood of impact: May affect, but is not likely to adversely affect

Activities associated with the construction, production, or reclamation of the proposed project area are not anticipated to adversely affect water quality and subsequently the pallid sturgeon. Pallid sturgeons prefer turbid, main stem river channels. The proposed project area is more than 1.94 miles from Lake Sakakawea, which will reduce the likelihood of adverse effects due to activities. No impacts are anticipated.

Piping Plover (*Charadrius melodus*)
Status: Threatened
Likelihood of impact: May affect, but is not likely to adversely affect

The entire shoreline of Lake Sakakawea has been designated critical habitat for piping plover. These birds nest on sparsely vegetated shoreline beaches, peninsulas, and islands composed of sand, gravel, or shale. The nearest critical habitat would be greater than or equal to 1.94 miles from the proposed project area. Individual piping plovers may transition across or forage at the proposed project area during construction, drilling, production, or reclamation activities. However, no impact is anticipated, though minor impacts could occur as a result of the aforementioned activities.

Whooping Crane (*Grus americana*)
Status: Endangered
Likelihood of impact: May affect, but is not likely to adversely affect

No viable habitat including PEM wetlands is located within the proposed project area. The lack of suitable foraging and nesting habitat makes the proposed project area unsuitable for whooping cranes. No impact is anticipated.

No wildlife species were observed during field visits to the proposed project area. All species listed were visually observed by an ecologist during the field survey (i.e., primary observation). Various secondary indicators, including scat, tracks, and animal carcasses, were not observed in the proposed project area.

The primary impacts to wildlife species will come as a result of the construction of the well pad area including construction of a new access road, increased vehicular traffic density, drilling activities, and potential commercial production. No impacts to listed species are anticipated because of the low likelihood of their occurrence in the proposed project area, confirmed by on-site assessments conducted by biologists from SWCA Environmental Consultants (SWCA). Ground clearing might impact habitat for unlisted species, including small birds, small mammals, and other wildlife species. Proposed projects may affect raptor and migratory bird species through direct mortality, habitat degradation, and/or displacement of individual birds. These impacts are regulated in part through the Migratory Bird Treaty Act of 1918 (916 USC 703–711). Fragmentation of native prairie habitat can detrimentally affect grouse species; however, due to the ratio of each project area to the total landscape area, the overall disturbance would be negligible.

Several precautions that may limit or reduce the possible impact to all wildlife species include:

- locating the well pad over an area with existing disturbance;
- netting the reserve pit between drilling and reclamation;
- removing any oil found in the pit;
- installing covers under drip buckets and spigots; and
- conducting interim reclamation of portions of the disturbed site not needed for production.

Reclamation would begin without delay if the well is determined to be unproductive, or upon completion of commercial production. Any wildlife species inhabiting the project area are likely to adapt to changing conditions, and continue to persist without adverse impact.

3.4 SOILS

The area of potential effect for the proposed project includes the well pad, access road, and the surface area that could be affected by runoff from the well pad and access road. Essentially, this includes the area that is downslope from the well location until it reaches Lake Sakakawea. The Greenhorn Formation, which consists of thin limestone and dark gray to black organic-rich shale, is found from the surface to a depth of approximately 4,000 feet. The Greenhorn is subdivided into lower and upper intervals of limestone and calcareous shale with a middle interval of shale. Near-surface sediment is of Recent, Pleistocene, or Tertiary age, and includes Sauk, Tippecanoe, Kaskaskia, Absaroka, Zuni, and Tejas Sequences.

3.4.1 Natural Resources Conservation Service Soil Data

The Natural Resources Conservation Service (NRCS 2009) soil series present on the well pad and access road areas, and the respective acreages, are summarized in Table 5. The acreage shown in Table 5 is based on the spatial extent of soil series combinations derived from NRCS data (Figure 12); therefore, the acreage is approximate and used as a best estimate of soil series distribution at the proposed project area.

Table 5. Percentage of the Well Pad and Access Road Composed of Specific Soil Types.

Feature	Soil Series	Acres	% of Location
Dakota-3 Wells #32-29H			
Access Road	Cabba loam, 15 to 45 percent slopes	4.4	30.3
	Dogtooth-Cabba complex, 9 to 15 percent slopes	1.7	11.7
	Rhoades silt loam, 0 to 6 percent slopes	2.6	17.9
	Williams loam, 6 to 9 percent slopes	1.7	11.7
Well Pad	Cabba loam, 15 to 45 percent slopes	1.4	9.7
	Williams loam, 6 to 9 percent slopes	2.7	18.6

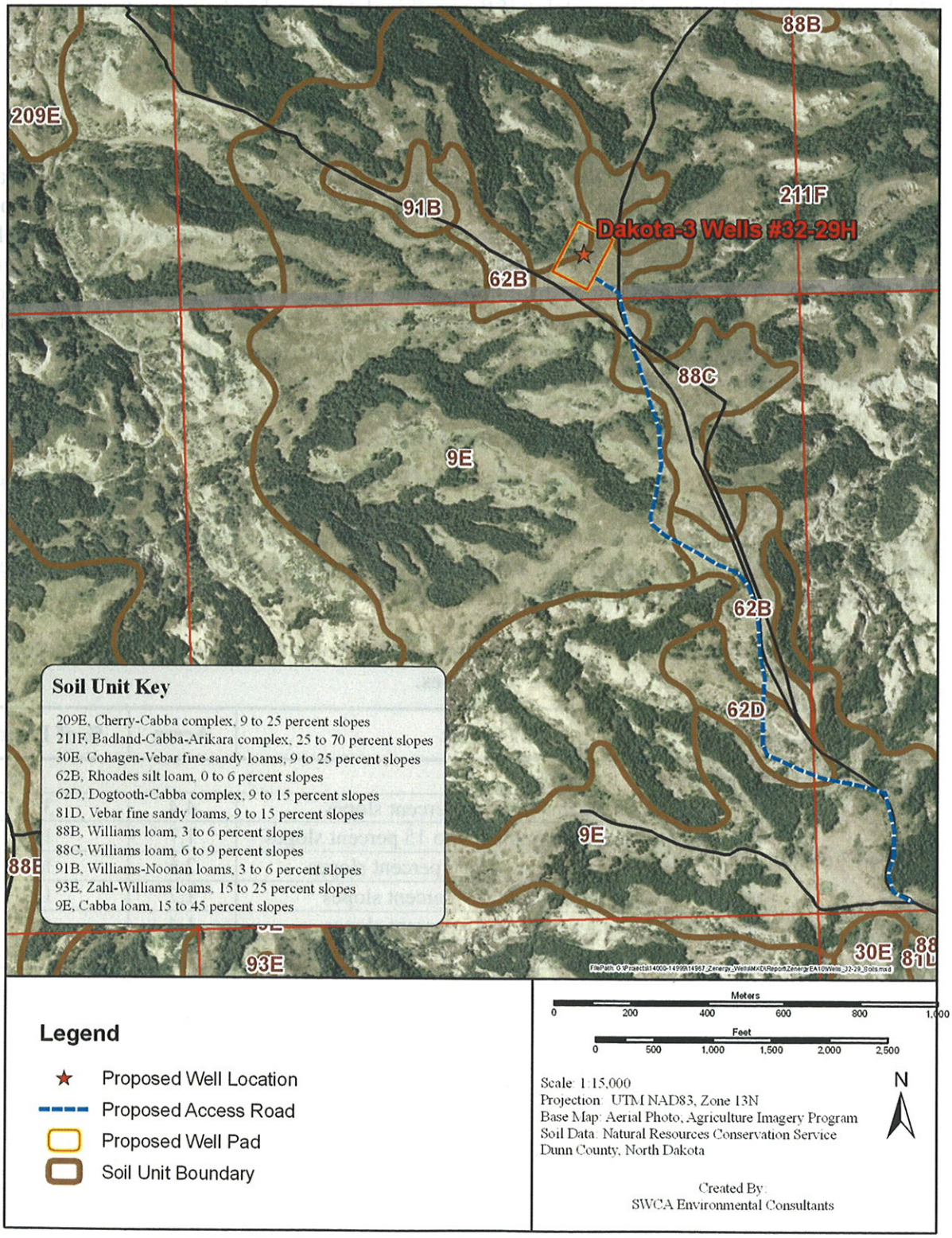

Figure 12. Approximate spatial extent of soil types in and around Dakota-3 Wells #32-29H.

The following soil series descriptions represent individual soil series reported to exist within the proposed project area (NRCS 2009). Each individual soil series does not exist individually in the project area but rather in combination with other soil types.

Arikara: The Arikara series consists of very deep, well-drained soils found on wooded slopes. Permeability is moderate with slopes ranging from approximately 9 to 70 percent. The mean annual precipitation found throughout the spatial extent of this soil type is approximately 15 inches and mean annual air temperature is approximately 40°F. This soil type is used most often for woodland grazing. Native vegetation species common to this soil type include bur oak (*Quercus macrocarpa*), green ash (*Fraxinus pennsylvanica*), quaking aspen (*Populus tremuloides*), paper birch (*Betula papyrifera*), and Rocky Mountain juniper (*Juniperus scopulorum*) (NRCS 2009).

Badland: Miscellaneous areas have essentially no soil and support little or no vegetation. This can be a result of active erosion, washing by water, unfavorable soil conditions, or human activities. Some miscellaneous areas can be made productive but only after major reclamation efforts. Badland is moderately steep to very steep barren land dissected by many intermittent drainage channels. Ordinarily, the areas are not stony. Badland is most common in semiarid and arid regions where streams cut into soft geologic material. Local relief generally ranges between 10 and 200 meters. Potential runoff is very high, and erosion is active. The slope of the badland, outcrop-Patent complex, ranges between 6 to 25 percent. Badland occurs on the barren shoulders and backslopes of ridges. Patent soils occur on alluvial fans. This map unit occurs in badlands (NRCS 2009).

Cabba: The Cabba series consists of shallow, well-drained, moderately permeable soils found on hills, escarpments, and sedimentary plains. The soil slopes broadly range between 2 and 70 percent. The mean annual precipitation found throughout the spatial extent of this soil type is approximately 16 inches and mean annual air temperature is approximately 43°F. The most common vegetation species found on this soil type are little bluestem (*Schizachyrium scoparium*), green needlegrass (*Stipa viridula*), and other various herbs, forbs, and shrub species (NRCS 2009).

Dogtooth: The Dogtooth series consists of moderately deep, well-drained, very slowly permeable soils found in uplands where the predominant slope is between 0 and 25 percent. The mean annual precipitation found throughout the spatial extent of this soil type is approximately 15 inches and mean annual air temperature is approximately 42°F. The most common vegetation species found on this soil type are range and pasture grasses including western wheatgrass (*Pascopyrum smithii*) and blue grama (*Bouteloua gracilis*) (NRCS 2009).

Rhoades: The Rhoades series consists of deep and very deep, well- to moderately well-drained, very slowly permeable soils found on swales and uplands with slopes ranging from approximately 0 to 25 percent. The mean annual precipitation found throughout the spatial extent of this soil type is approximately 16 inches and mean annual air temperature is approximately 42°F. This soil type is largely used for rangeland foraging. Native vegetation species common to this soil type include western wheatgrass and blue grama (NRCS 2009).

Williams: The Williams series consists of very deep, slowly permeable, well-drained soils found on glacial till plains and moraines with slopes at approximately 0 to 35 percent. The mean annual precipitation found throughout the spatial extent of this soil type is approximately 14 inches and mean annual air temperature is approximately 40°F. This soil type is largely used for cultivation. Native vegetation species common to this soil type include western wheatgrass, needle and thread (*Hesperostipa comata*), blue grama, and green needlegrass (NRCS 2009).

3.4.2 Field-derived Soil Data

Soil data derived from on-site excavated soil pits, including the matrix value, hue, chroma, and color name, are summarized in Table 6. Additionally, redoximorphic features (i.e., reduced/oxidized iron or manganese) deposits and soil texture were looked for at each location and noted where found. A Munsell soil color chart was used to determine the color of moist soil samples.

Soil erodibility (or K Factor) indicates the vulnerability of material less than 2 millimeters in size to sheet and rill erosion by water. Values can range from 0.02 (i.e., lowest erosion potential) to 0.69 (i.e., greatest erosion potential). T represents the maximum volume of soil loss, measured in tons/acre/year, which could occur and still allow for maintenance of high levels of crop production.

Table 6. Soil Data Obtained through the Excavation of Soil Pits in the Proposed Project Area.

Feature	Depth (inches)	Soil Matrix Color (color name)	Redoximorphic Feature Color	Texture	Slope (°)	K Factor
Dakota-3 Wells #32-29H						
Well Pad	0–6	10 YR 3/2	N/A	Silty clay	0–3	0.32
	6–20	10 YR 4/3	N/A	Silty clay (gravel at 20")		
Access Road	0–6	10 YR 3/2	N/A	Silty clay	0–3	0.32
	6–20	10 YR 4/3	N/A	Silty clay (gravel at 20")		

3.4.3 Conclusions Regarding Soil Erosion Potential

3.4.3.1 Dakota-3 Wells #32-29H

- The Dakota-3 Wells #32-29H well pad and proposed new access road are dominated by well-drained, moderately to very slowly permeable soils (Table 5). However, the topography in the project area does not exceed approximately 3%, so the potential for runoff in an event is low.
- Reclamation of vegetative communities should be easily obtainable due to the affinity of native grassland species to this soil type (NRCS 2009).
- The well pad location has a K Factor of 0.32; the access road K Factor ranges from 0.28 to 0.32. Using the Revised Universal Soil Loss Equation, there could be 2.26 tons/acre/year of soil loss from the site if it is not properly managed to prevent such

loss. The site would be monitored during and after construction, and BMPs would be used to prevent erosion, minimize runoff and loss of sediment, and ensure soil stabilization.

- Most of the soils are known to support native grassland vegetation, which may substantially increase the probability for successful and permanent reclamation, provided care is taken in areas where the soils are less than ideal for vegetative growth (NRCS 2009).

3.4.3.2 General

Due to the presence of loamy soils and minimal slopes in the proposed project area, no limitations on construction activities in the project area are anticipated. The soil types are not expected to create unmanageable erosion issues or interfere with reclamation of the area. Proven BMPs are known to significantly reduce erosion of various types of soil, including those in the project area (BLM Instruction Memorandum 2004-124, www. blm.gov/bmp; BLM and USFS 2007; Grah 1997). Topsoil stripped from areas of new construction would be retained for use during reclamation. Any areas stripped of vegetation during construction would be reseeded once construction activities have ceased. The implementation of BMPs by the operator is projected to reduce and maintain negligible levels of erosion.

3.5 VEGETATION AND INVASIVE SPECIES

The proposed project area occurs in the Northwestern Great Plains ecoregion (River Breaks) (USGS 2010), which is a western mixed-grass and short-grass prairie ecosystem (Bryce et al. 1998). Native grasses include big bluestem (*Andropogon gerardii*), little bluestem (*Schizachyrium scoparium*), blue grama (*Bouteloua gracilis*), and western wheatgrass (*Pascopyrum smithii*). Common wetland vegetation includes various sedge species (*Carex* spp.), bulrush (*Scirpus* spp.), and cattails (*Typha* spp.). Common plant species found in woody draws, coulees, and drainages include Juniper (*Juniperus spp.*), silver buffaloberry (*Shepherdia argentea*), and western snowberry (*Symphoricarpos occidentalis*).

Vegetation noted at the Dakota-3 Wells #32-29H well pad include green needlegrass (*Stipa viridula*), needle and thread (*Hesperostipa comata*), silver sage (*Artemisia cana*), prairie sagewort (*Artemisia fridiga*), and western snowberry. Vegetation recorded at the proposed Dakota-3 Wells #32-29H access road are green needlegrass, silver sage, western snowberry, little bluestem, buffaloberry, smooth brome (*Bromus inermis*), purple coneflower (*Echinacea Moench*), downy hawthorn (*Crataegus mollis*), and green ash (*Fraxinus pennsylvanica*).

Noxious weeds have the potential to detrimentally affect public health, ecological stability, and agricultural practices. The *North Dakota Century Code* (Chapter 63-01.1) recognizes 12 species as noxious; three species are known to exist in Dunn County. Table 7 indicates total acreage for each noxious weed species. Additional information is available from the NRCS Plants Database for North Dakota at http://www.plants.usda.gov.

Table 7. Occupied Area for Recognized Noxious Weeds in Dunn County, North Dakota.

Common Name	Scientific Name	County
		Dunn (acres)
absinth wormwood	*Artemisia absinthium*	39,300
Canada thistle	*Cirsium arvense*	28,500
Dalmatian toadflax	*Linaria dalmatica*	--
diffuse knapweed	*Centaurea diffusa*	--
field bindweed	*Convolvulus arvensis*	--
leafy spurge	*Euphorbia esula*	18,300
musk thistle	*Carduus nutans*	--
purple loosestrife	*Lythrum salicaria*	--
Russian knapweed	*Acroptilon repens*	--
salt cedar	*Tamarix ramosissima*	--
spotted knapweed	*Centaurea stoebe*	--
yellow starthistle	*Centaurea solstitialis*	--

Source: North Dakota Department of Agriculture 2009.

"Invasive" is a general term used to describe plant species that are not native to a given area, spread rapidly, and have adverse ecological and economic impacts. These species may exhibit high reproductive rates and are usually adapted to occupy a diverse range of habitats otherwise occupied by native species. These species may subsequently out-compete native plant species for resources, causing a reduction in native plant populations and an increase in noxious weed populations.

Evaluation of the existing vegetation during on-site assessment conducted in April 2010 indicated no invasive species were present at the proposed site. The potential disturbance is approximately 4.1 acres at the well pad and 10.4 acres for the access road, for a total of 14.5 acres of disturbance. Removal of existing vegetation may facilitate the spread of invasive species. The APD and this EA require the operator to control noxious weeds throughout the project area. Surface disturbance and vehicular traffic is prohibited outside the approved ROW or the well pad. Areas that are stripped of topsoil must be reseeded and reclaimed at the earliest opportunity. Additionally, certified weed-free straw and seed must be used for all construction, seeding, and reclamation efforts. Construction, operation, and reclamation activities are expected to be carried out in a timely and efficient manner, minimizing adverse impacts and reducing the potential establishment of invasive vegetation species.

3.6 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 well pad and access road was conducted by personnel of SWCA Environmental Consultants, using an intensive pedestrian methodology. Approximately 73.86 acres were inventoried between April 4 and 15, 2010 (Lechert and Klitzka 2010). Two previously known and five newly recorded archaeological sites were located which may 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, as the archaeological sites will be fenced off and avoided. This determination was communicated to the THPO on May 19, 2010, and the THPO concurred on June 2, 2010 (see Part 4).

No cultural resources are known to be present in the APE. If cultural resources are discovered during construction or operation, the operator shall immediately stop work, secure the affected site, and notify the BIA and THPO. Unexpected or inadvertent discoveries of cultural resources or human remains trigger mandatory federal procedures that include work stoppage and BIA consultation with all appropriate parties. Following any such discovery, operations would not resume without written authorization from the BIA. Project personnel are prohibited from collecting any artifacts or disturbing cultural resources in the area under any

circumstance. Individuals outside the ROW are trespassing. No laws, regulations, or other requirements have been waived; no compensatory mitigation measures are required. The presence of qualified cultural resource monitors during construction activities is encouraged.

3.7 PUBLIC HEALTH AND SAFETY

Health and safety concerns include sour gas that could be released as a result of drilling activities, hazards introduced by heavy truck traffic, and hazardous materials used or generated during construction, drilling, and/or production activities.

H_2S is extremely toxic in concentrations above 500 ppm, but it has not been found in measurable quantities in the Bakken Formation. Before reaching the Bakken, however, drilling would penetrate the Mission Canyon Formation, which is known to contain varying concentrations of H_2S. Contingency plans submitted to the BLM comply fully with relevant portions of Onshore Oil and Gas Order No. 6 to minimize potential for gas leaks during drilling. Emergency response plans protect both the drilling crew and the general public within 1 mile of a well; precautions include automated sampling and monitoring by drilling personnel stationed at each well site.

Because there are no residences within 1 mile of the project area, standard mitigation measures would be applied, and release of H_2S at dangerous concentration levels is very unlikely, no direct impacts from H_2S are anticipated with implementation of the project.

Other potential adverse impacts from construction would be largely temporary. Noise, fugitive dust, and traffic hazards would be present for about 60 days during construction, drilling, and well completion as equipment and vehicles move on and off the site, and then diminish sharply during production operations. If the well proved productive, one small pumper truck would visit the well once a day to check the pump. Bakken wells typically produce both oil and water at a high rate initially. Gas would be flared initially and intermittently, while oil and produced water would be stored on the well pad in tanks and then hauled out by tankers until the well could be connected to gathering pipelines. Up to 4 - 400-barrel oil tanks and one 400-barrel water tank would be located on the pad inside a berm of impervious compacted subsoil. The berm would be designed to hold 110% of the capacity of the largest tank.

Tanker trips would depend on production, but Zenergy estimates approximately two trucks per day during the initial production period. Trucks for normal production operations would use the existing and proposed access roads. Produced water would be transported to an approved disposal site. All traffic would be confined to approved routes and conform to established load restrictions and speed limits for state and BIA roadways and haul permits would be acquired as appropriate.

The EPA specifies chemical reporting requirements under Title III of the Superfund Amendments and Reauthorization Act (SARA), as amended. No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds would be used, produced, stored, transported, or disposed of annually in association with the Proposed Action. Furthermore, no extremely hazardous substances, as defined in 40

CFR 355, in threshold planning quantities would be used, produced, stored, transported, or disposed of in association with the Proposed Action. All operations, including flaring, would conform to instructions from BIA fire management staff.

A temporary, lined reserve pit would be constructed within the disturbed area of the well pad and constructed so as not to leak, break, or allow discharge and in a way that minimizes the accumulation of precipitation runoff into the pit.

Spills of oil, produced water, or other produced fluids would be cleaned up and disposed of in accordance with appropriate regulations. Sewage would be contained in a portable chemical toilet during drilling. All trash would be stored in a trash cage and hauled to an appropriate landfill during and after drilling and completion operations.

3.8 SOCIOECONOMICS

The scope of analysis for social and economic resources includes a discussion of current social and economic data relevant to the Analysis Area and surrounding communities of the Reservation and McKenzie, Dunn, McLean, and Mountrail counties, North Dakota. These counties were chosen for analysis because potential socioeconomic impacts would most likely be realized due to their proximity to the proposed well location and overlap of the Reservation. These communities are collectively referred to as the Analysis Area.

This section discusses community characteristics such as population, housing, demographics, employment, and economic trends within the Analysis Area. Also included are data relating to the State of North Dakota and the United States, which provide a comparative discussion when compared to the Analysis Area. Information in this section was obtained from various sources including, but not limited to, the U.S. Census Bureau, the U.S. Bureau of Economics, and the North Dakota State government.

3.8.1 Employment

The economy in the state of North Dakota, including the Reservation and four counties in the Analysis Area, has historically depended on agriculture, including grazing and farming. However, energy development and extraction, power generation, and services related to these activities have increased over the last several years. Consequently, service and trade sectors have also become increasingly important; many of the service sector jobs are directly and indirectly associated with oil and gas development. In 2007, total employment in the state of North Dakota was approximately 487,337 (U.S. Bureau of Economic Analysis 2009a). Of this, the largest employers include government and government enterprises employing 16.6% of the labor force (81,218 jobs); health care and social assistance at 11.7% of the labor force (56,990 jobs); and retail trade at 11.3% of the labor force (55,478 jobs) (U.S. Bureau of Economic Analysis 2009a). Table 8 provides total employment opportunities for the Analysis Area between 2001 and 2007.

Table 8. Total Employment for the Analysis Area and State of North Dakota, 2001 and 2007.

Location	Total Employment (2001)	Total Employment (2007)	Percent Change (+)	Unemployment Rate (2007)
Dunn County	1,941	1,961	1.0	3.8%
McKenzie County	4,164	4,600	10.4	3.1%
McLean County	5,173	5,448	5.3	4.6%
Mountrail County	3,691	3,711	0.5	5.7%
On or Near Fort Berthold Indian Reservation	1,211	1,287*	6.2	71%
North Dakota	448,897	487,337	8.5	3.1%

Source: U.S. Bureau of Economic Analysis 2009a.
* Bureau of Indian Affairs 2005. Represents 2005 data.

Although detailed employment information for the Reservation is not provided by the U.S. Bureau of Economics or the State of North Dakota, residents of the Reservation are employed in similar ventures as those outside the Reservation. Typical employment includes ranching, farming, tribal government, tribal enterprises, schools, federal agencies, and recently, employment related to conventional energy development. The MHA Nation's Four Bears Casino and Lodge, located 4 miles west of New Town, employs approximately 320 people, of which 90% are tribal members (Fort Berthold Housing Authority 2008).

The Fort Berthold Community College, which is tribally chartered to meet the higher education needs of the people of the MHA Nation, had 11 full-time members and 25 adjunct members in academic year 2006–2007. Approximately 73% of the full-time faculty members are of American Indian/Alaska Native descent, approximately 88% of which are enrolled members of the MHA Nation. Additionally, 65% of the part-time faculty members are of American Indian/Alaska Native descent and all (100%) are tribal members.

The BIA publishes biannual reports documenting the Indian service and labor market for the nation. According to the 2005 American Indian Population and Labor Force Report, of the 8,773 tribal members that were eligible for BIA-funded services, 4,381 constituted the total available workforce. Approximately 29%, or 1,287 members, were employed in 2005, indicating a 71% unemployment rate (as a percent of the labor force) for members living on or near the Reservation; 55% of the employed members were living below poverty guidelines. Compared to the 2001 report, 2005 statistics reflect a 6.2% increase in the number of tribal members employed living on or near the Reservation, but unemployment (as a percent of the labor force) has stayed steady at 71% and the percentage of employed people living below the poverty guidelines has increased to 55% (BIA 2005).

3.8.2 Income

Per capita income is often used as a measure of economic performance, but it should be used with changes in earnings for a realistic picture of economic health. Since total personal income includes income from 401(k) plans as well as other non-labor income sources like

transfer payments, dividends, and rent, it is possible for per capita income to rise even if the average wage per job declines over time.

The North American Industry Classification System (NAICS) is the standard used by federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy. According to NAICS standards, per capita personal income for Dunn County was $20,634 in 2000 and $26,440 in 2007, an increase of approximately 28.1%; per capita personal income for McKenzie County was $21,637 in 2000 and $32,927 in 2007, an increase of approximately 52.1%; per capita personal income for McLean County was $23,001 in 2000 and $38,108 in 2007, an increase of approximately 65.6%; per capita personal income for Mountrail County was $23,363 in 2000 and $32,324 in 2007, an increase of approximately 38.3%. These figures compare with a State of North Dakota per capital personal income of $25,105 in 2000 and $36,082 in 2007, an increase of approximately 43.7% from 2000 (U.S. Bureau of Economic Analysis 2009b).

According to a 2008 report published by the Fort Berthold Housing Authority, the average per capita income for the Reservation was $8,855 in 1999, compared to $17,769 for the State and the U.S. average of $21,587 at that time (Fort Berthold Housing Authority 2008).

With the exception of McLean County, counties that overlap the Reservation tend to have per capita incomes and median household incomes below North Dakota statewide averages (Table 9). As presented in Table 9, unemployment rates in all counties, including the Reservation, were equal to or above the state average of 3.1%. Subsequently, Reservation residents and MHA Nation members tend to have per capita incomes and median household incomes below the averages of the encompassing counties, as well as statewide and higher unemployment. Per capita income for residents on or near the Reservation is approximately 28% lower than the statewide average. The median household income reported for the Reservation (i.e., $26,274) is approximately 40% lower than the state median of $43,936. According to the BIA, approximately 55% of tribal members living on or near the Reservation were employed, but living below federal poverty levels (BIA 2005).

Table 9. Income and Unemployment, 2007.

Unit of Analysis	Per Capita Income[1]	Median Household Income	Percent of all People in Poverty[2]
Dunn County	26,440	$37,632	13.5%
McKenzie County	32,927	$41,333	13.8%
McLean County	38,108	$44,421	10.4%
Mountrail County	32,324	$35,981	15.9%
Fort Berthold Reservation[3]	10,291	$26,274	N/A
North Dakota	36,082	$43,936	11.8%

[1] U.S. Bureau of Economic Analysis 2009b
[2] United Stated Department of Agriculture (USDA) 2009
[3] North Dakota State Data Center 2009
N/A = Data not available.

3.8.3 Population

Historic and current population counts for the Analysis Area, compared to the state, are provided below in Table 10. The state population showed little change between the last two census counts (1990–2000), but there were notable changes at the local level. Populations in all four counties have steadily declined in the past. McLean and Dunn counties had a higher rate of population decline among the four counties at 10.5% and 7.8%, respectively. These declines can be attributed to more people moving to metropolitan areas, which are perceived as offering more opportunities for growth. However, population on or near the Reservation has increased approximately 13.3% since 2000. While Native Americans are the predominant group on the Reservation, they are considered the minority in all other areas of North Dakota.

As presented in Table 10, population growth on the Reservation (13.3%) exceeds the overall growth in the state of North Dakota (-0.1%) and four counties in the Analysis Area. This trend in population growth for the Reservation is expected to continue in the next few years (Fort Berthold Housing Authority 2008).

Table 10. Population and Demographics.

County or Reservation	Population in 2008	% of State Population	% Change Between 1990–2000	% Change Between 2000–2008	Predominant Group (%)	Predominant Minority (Percent of Total Minority Population)
Dunn	3,318	0.5	-10.1	-7.8	Caucasian (84.9%)	American Indian (15.1%)
McKenzie	5,674	0.8	-10.1	-1.1	Caucasian (76.3%)	American Indian (23.7%)
McLean	8,337	1.3	-11.0	-10.5	Caucasian (91.3%)	American Indian (8.7%)
Mountrail	6,511	1.0	-5.6	-1.8	Caucasian (62.8%)	American Indian (37.2%)

County or Reservation	Population in 2008	% of State Population	% Change Between 1990–2000	% Change Between 2000–2008	Predominant Group (%)	Predominant Minority (Percent of Total Minority Population)
On or Near Fort Berthold Reservation[1]	11,897	1.8	178.0[2]	13.3[3]	American Indian	Caucasian (~27%)
Statewide	641,481	100	0.005	-0.1	Caucasian	American Indian (8.6%)

Source: U.S. Census Bureau 2009a.
[1] Bureau of Indian Affairs 2005. Population shown reflects the Total enrollment in the Tribe in 2005. 2008 data unavailable. All information related to the Fort Berthold Reservation reflects 2005 data, including state population. 11,897 reflects tribal enrollment on or near the Reservation. According to the BIA, near the Reservation includes those areas or communities adjacent or contiguous to the Reservation.
[2] Bureau of Indian Affairs 2001. Reflects percent change between 1991 and 2001.
[3] Reflects percent change between 2001 and 2005.

3.8.4 Housing

Workforce-related housing can be a key issue associated with development. Historical information on housing in the four counties in the Analysis Area was obtained from the U.S. Census Bureau, 2000 census. Because the status of the housing market and housing availability changes often, current housing situations can be difficult to characterize quantitatively. Therefore, this section discusses the historical housing market. Table 11 provides housing unit supply estimates in the Analysis Area, including the Reservation and four overlapping counties.

Table 11. Housing Development Data for the Reservation and Encompassing Counties.

Region	Total Housing Units						% Change 2000–2008
	Occupied	Owner Occupied	Renter Occupied	Vacant	Total	Total	
	2000	2000	2000	2000	2000	2008	
Dunn	1,378	1,102	276	587	1,965	1,968	0.1
McKenzie	2,151	1,589	562	568	2,719	2,781	2.2
McLean	3,815	3,135	680	1,449	5,264	5,420	2.9
Mountrail	2,560	1,859	701	878	3,438	3,528	2.6
Reservation	1,908	1,122	786	973	2,881	N/A	N/A
North Dakota	257,152	171,299	85,853	32,525	289,677	313,332	8.2

Source: U.S. Census Bureau n.d.

The Fort Berthold Housing Authority manages a majority of the housing units within the Reservation. Housing typically consists of mutual-help homes built through various government programs, low-rent housing units, and scattered-site homes. Housing for government employees is limited, with a few quarters in Mandaree and White Shield available to Indian Health Service employees in the Four Bears Community and to BIA

employees. Private purchase and rental housing are available in New Town. New housing construction has recently increased within much of the Analysis Area, but availability remains low.

Availability and affordability of housing could impact oil and gas development and operations. The number of owner-occupied housing units (1,122) within the Reservation is approximately 58% lower than the average number of owner-occupied housing units found in the four overlapping counties (1,921).

In addition to the relatively low percent change of the total housing units compared to the state average, these four counties are ranked extremely low for both the state and national housing starts and have minimal new housing building permits, as presented in Table 12.

Table 12. Housing Development Data for the Encompassing Counties 2000–2008.

Housing Development	North Dakota County			
	Dunn	McKenzie	McLean	Mountrail
New Private Housing Building Permits 2003–2008	14	14	182	110
Housing Starts-State Rank	51 / 53	15 / 53	21 / 53	17 / 53
Housing Starts-National Rank	3,112 / 3,141	2,498 / 3,141	2,691 / 3,141	2,559 / 3,141

Source: U.S. Census Bureau 2009b, 2009c.

Impacts to socioeconomic resources of the Analysis Area would be minimal and therefore would not adversely impact the local area. Short-term impacts to socioeconomic resources would generally occur during the construction/drilling and completion phase of the proposed well. Long-term effects would occur during the production phase, should the well prove successful. Impacts would be significant if the affected communities and local government experienced an inability to cope with changes including substantial housing shortages, fiscal problems, or breakdown in social structures and quality of life.

As presented in Table 13, implementation of the proposed well is anticipated to require between 14 and 28 workers per well in the short term. If the well proves successful, Zenergy would install production facilities and begin long-term production. To ensure successful operations, production activities require between one and four full-time employees to staff operations. It is anticipated that a mix of local and Zenergy employees would work in the Analysis Areas. Therefore, any increase in workers would constitute a minor increase in population in the Analysis Area required for short-term operations and therefore would not create a noticeable increase in demand for services or infrastructure on the Reservation or the communities near the Analysis Area, including McKenzie and Dunn counties. Because the communities likely impacted by the proposed project have experienced a recent decline in population between 2000 and 2008 (as shown in Table 10), with the exception of the Reservation itself, and the historic housing vacancy rate (Table 11) indicates housing availability despite the growth of the population on the Reservation, these communities are able to absorb the projected slight increase in population related to this proposed project. As such, the proposed project would not have measurable impacts on housing availability or community infrastructure in the area. The proposed project also would not result in any

identifiable impacts to social conditions and structures within the communities in the Analysis Area.

Table 13. Duration of Employment during Proposed Project Implementation.

Activity	Duration of Activity (Average Days per Well)	Daily Personnel (Average Number per Well)
Construction (access road and well pad)	5–8 days	3–5
Drilling	30–35 days	8–15
Completion/Installation of Facilities	Approx. 10 days	3–8
Production	Ongoing – life of well	1–4

Implementation of the proposed project would likely result in direct and indirect economic benefits associated with industrial and commercial activities in the area, including the Reservation, State of North Dakota, and potentially local communities near the Reservation. Direct impacts would include increased spending by contractors and workers for materials, supplies, food, and lodging in McKenzie and Dunn counties and the surrounding areas, which would be subject to sales and lodging taxes. Other state, local, and Reservation tax payments and fees would be incurred as a result of the implementation of the proposed project, with a small percentage of these revenues distributed back to the local economies. Wages due to employment would also impact per capita income for those that were previously unemployed or underemployed. Indirect benefits would include increased spending from increased oil and gas production, as well as a slight increase in generated taxes from the short-term operations. Mineral severance and royalty taxes, as well as other relevant county and Reservation taxes on production would also grow directly and indirectly as a result of increased industrial activity in the oil and gas industry.

3.9 ENVIRONMENTAL JUSTICE

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, signed in 1994 by President Clinton, requires agencies advance environmental justice (EJ) by pursuing fair treatment and meaningful involvement of minority and low-income populations. Fair treatment means such groups should not bear a disproportionately high share of negative environmental consequences from federal programs, policies, decisions, or operations. Meaningful involvement means federal officials actively promote opportunities for public participation, and federal decisions can be materially affected by participating groups and individuals.

The EPA headed the interagency workgroup established by the 1994 Executive Order and is responsible for related legal action. Working criteria for designation of targeted populations are provided in *Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses* (EPA 1998). This guidance uses a statistical approach to consider various geographic areas and scales of analysis to define a particular population's status under Executive Order 12898.

EJ is an evolving concept with potential for disagreement over the scope of analysis and the implications for federal responsiveness. Nevertheless, due to the population numbers, tribal members on the Great Plains qualify for EJ consideration as both a minority and low-income population. Table 14 summarizes relevant data regarding minority and low-income populations for the Analysis Area.

Table 14. Population Breakdown by Region and Race, 2002–2008.

Race	Dunn		McKenzie		McLean		Mountrail		North Dakota	
	2002	2008	2002	2008	2002	2008	2002	2008	2002	2008
Caucasian	3,067	2,818	4,493	4,329	8,313	7,610	4,480	4,086	587,085	586,272
African American	1	2	4	30	1	9	8	27	4,931	6,956
American Indians and Alaska Natives	469	467	1,175	1,230	558	587	1,949	2,277	31,104	35,666
Asian / Pacific Islanders	4	3	4	10	17	19	17	20	4,679	5,095
Two or More Races	1	28	32	75	118	112	68	101	6,311	7,492
All Minorities	475	500	1,215	1,345	694	727	2,042	2,425	47,025	55,209

Source: Northwest Area Foundation 2009.

In 2008, North Dakota's total minority population comprised approximately 55,209, or 8.6% of the state's total population. This is an increase of approximately 17.4% over the 2002 minority population numbers, compared with the 1.2% overall increase for the state's total population during the same time. Although 91.3% of the population in North Dakota is classified as Caucasian, this is a decrease of 1.3% from 2002. Conversely, as presented in Table 14, the minority population of the state has increased steadily since 2002. For example, the American Indian and Alaska Native population increased 0.6%, from 4.9% of the 2002 state population to 5.5% of the 2008 state population. Approximately 70% of Reservation residents are tribal members and 14% of the Dunn County population and 21.6% of the McKenzie County population comprises American Indians and Alaska Natives.

Poverty rate data for the counties in the Analysis Area are summarized in Table 15. The data show that poverty rates for Dunn County, Mountrail County, and the State of North Dakota increased from 2000 to 2007. Poverty rates have decreased for McKenzie and McLean counties.

Table 15. Poverty Rates for the Analysis Area.

Location	2000	2007
Dunn County	13.3%	13.5%
McKenzie County	15.7%	13.8%
McLean County	12.3%	10.4%
Mountrail County	15.7%	15.9%
Fort Berthold Reservation	N/A	N/A
North Dakota	10.4%	11.8%

Source: U.S. Census Bureau 2009d.

Generally, existing oil and gas leasing has already benefited the MHA Nation government and infrastructure from tribal leasing, fees, and taxes. Current oil and gas leasing on the Reservation has also already generated revenue to MHA Nation members who hold surface and/or mineral interests. However, owners of allotted surface within the Analysis Area may not necessarily hold mineral rights. In such cases, surface owners do not receive oil and gas lease or royalty income, and their only related income would be compensation for productive acreage lost to road and well pad construction. Those with mineral interests also may benefit from royalties on commercial production if the wells prove successful. Profitable production rates at proposed locations might lead to exploration and development of additional tracts owned by currently non-benefitting allottees. In addition to increased revenue for land and mineral holders, exploration and development would increase employment on the Reservation with oversight from the Tribal Employment Rights Office, which would help alleviate some of the poverty prevalent on or near the Reservation. Tribal members without either surface or mineral rights would not receive any direct benefits, except through potential employment, should they be hired. Indirect benefits of employment and general tribal gains would be the only potential offsets to negative impacts.

Additional potential impacts to tribes and tribal members include disturbance of cultural resources. There is potential for disproportionate impacts, especially if the impacted tribes and members do not reside within the Reservation and therefore do not share in direct or indirect benefits. This potential is reduced following the surveys of proposed well locations and access road routes and determination by the BIA that there would be no effect to historic properties. Furthermore, nothing is known to be present that qualifies as a TCP or for protection under the American Indian Religious Freedom Act. Potential for disproportionate impacts is further reduced by requirements for immediate work stoppage following an unexpected discovery of cultural resources of any type. Mandatory consultation would take place during any such work stoppage, affording an opportunity for all affected parties to assert their interests and contribute to an appropriate resolution, regardless of their home location or tribal affiliation.

The proposed project has not been found to pose a threat for significant impact to any other critical element, including air quality, public health and safety, water quality, wetlands, wildlife, soils, or vegetation within the human environment. Through the avoidance of such impacts, no disproportionate impact is expected to low-income or minority populations. The Proposed Action offers many positive consequences for tribal members, while recognizing EJ concerns. Procedures summarized in this document and in the APD are binding and sufficient.

No laws, regulations, or other requirements have been waived; no compensatory mitigation measures are required.

3.10 MITIGATION AND MONITORING

Many protective measures and procedures are described in this document and in the APD. No laws, regulations, or other requirements have been waived; no compensatory mitigation measures are required. Monitoring of cultural resource impacts by qualified personnel is recommended during all ground-disturbing activities. Each phase of construction and development through production will be monitored by the BLM, BIA, and representatives of the MHA Nation to ensure the protection of cultural, archaeological, and natural resources. In conjunction with 43 CFR 46.30, 46.145, 46.310, and 46.415, a report will be developed by the BLM and BIA that documents the results of monitoring in order to adapt the projects to eliminate any adverse impact on the environment.

Mitigation opportunities can be found in general and operator-committed Best Management Practices (BMPs) and mitigation measures. BMPs are loosely defined as techniques used to lessen the visual and physical impacts of development. The BLM has created a catalog of BMPs that, when properly implemented, can assist industry in a project's design, scheduling, and construction techniques. Zenergy would implement, to the extent possible, the use of BMPs in an effort to mitigate environmental concerns in the planning phase allowing for smoother analysis, and possibly faster project approval. Many of these are required by the BLM when drilling federal or tribal leaseholds and can be found in the surface use plan in the Application for Permits to Drill.

3.10.1 General BMPs

Although largely project-specific, there are a number of BMPs that can, and should, be considered on development projects in general. The following are examples of general BMPs.

- Planning roads and facility sites to minimize visual impacts.
- Using existing roads to the extent possible, upgrading as needed.
- Reducing the size of facility sites and types of roads to minimize surface disturbance.
- Minimizing topsoil removal.
- Stockpiling stripped topsoil and protecting it from erosion until reclamation activities commence. At that time, the soil would be redistributed and reseeded on the disturbed areas. The reclaimed areas would be protected and maintained until the sites are fully stabilized.
- Avoiding removal of, and damage to, trees, shrubs, and groundcover where possible. Trees near construction areas would be marked clearly to ensure that they are not removed.
- Mowing, instead of clearing, a facility or well site to accommodate vehicles or equipment.
- Maintaining buffer strips or using other sediment control measures to avoid sediment migration to stream channels as a result of construction activities.
- Planning for erosion control.

- Proper storage of chemicals (including secondary containment).
- Keeping sites clean, including containing trash in a portable trash cage. The trash cage would be emptied at a WDEQ-approved sanitary landfill.
- Conducting snow removal activities in a manner that does not adversely impact reclaimed areas and areas adjacent to reclaimed areas.
- Avoiding or minimizing topographic alterations, activities on steep slopes, and disturbances within stream channels and floodplains to the extent possible.
- Maintaining buffers around work areas where there is a risk of fire as a result of construction activities.
- Keeping fire extinguishers in all vehicles.
- Planning transportation to reduce vehicle density.
- Posting speed limits on roads.
- Avoiding traveling during wet conditions that could result in excessive rutting.
- Painting facilities a color that would blend with the environment.
- Practicing dust abatement on roads.
- Recontouring disturbed areas to approximate the original contours of the landscape.
- Developing a final reclamation plan that allows disturbed areas to be quickly absorbed into the natural landscape.

Zenergy recognizes that there are several BMPs that can be used to mitigate environmental concerns specific to projects associated with below-ground linear alignments, such as those included in the proposed utility corridor. These include:

- following the contour (form and line) of the landscape;
- avoiding locating ROWs on steep slopes;
- sharing common ROWs;
- co-locating multiple lines in the same trench; and
- using natural (topography, vegetation) or artificial (berms) features to help screen facilities such as valves and metering stations;

Zenergy would implement these and/or other BMPs to the extent that they are technically feasible and would add strategic and measurable protection to the project area.

3.10.2 Mitigation and safety Measures committed to by Zenergy

3.10.2.1 Dust Control

During construction, a watering truck may be kept on site and the access roads would be watered as necessary, especially during periods of high winds and/or low precipitation.

3.10.2.2 Fire Control

Zenergy would implement fire prevention and control measures including, but not limited to:

- requiring construction crews to carry fire extinguishers in their vehicles and/or equipment;
- training construction crews in the proper use of fire extinguishers; and
- contracting with the local fire district to provide fire protection.

3.10.2.3 Traffic

Construction personnel will stay primarily within the ROW or will follow designated access roads.

3.10.2.4 Cultural Resources

Zenergy recognizes the need to protect cultural resources on the project locations and has committed to the following:

- Avoiding, as recommended, all identified NRHP eligible or unevaluated cultural resources. Buffers would be placed between eligible or unevaluated cultural resources and the proposed infrastructure (5-acre well pad or 66-foot-wide access road construction corridor). When avoidance buffers of 50 feet or greater cannot be achieved due to project design constraints, temporary fencing is recommended along the edge of the construction corridor and monitoring by a qualified archaeologist is recommended during all ground-disturbing activities to ensure that inadvertent impacts to cultural resources are avoided.
- Prohibiting all project workers from collecting artifacts or disturbing cultural resources in any area under any circumstances.

Avoiding impacts to NRHP eligible or unevaluated cultural resources on well sites and access roads. If cultural resources are discovered during construction or operation, work shall immediately be stopped, the affected site be 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.

3.11 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Removal and consumption of oil and/or gas from the Bakken Formation would be an irreversible and irretrievable commitment of resources. Other potential resource commitments include land area devoted to the disposal of cutting, soil lost to erosion (i.e., wind and water), unintentionally destroyed or damage cultural resources, wildlife killed as a result of collision with vehicles (e.g., construction machinery and work trucks), and energy expended during construction and operation.

3.12 SHORT-TERM USE VERSUS LONG-TERM PRODUCTIVITY

Short-term development activities would not detract significantly from long-term productivity and use of the project areas. The construction of access roads and well pad areas would eliminate any forage or habitat use by wildlife and/or livestock. Any allottees to which compensation for land disturbance is owed will be properly compensated for the loss of land use. The initial disturbance area would decrease considerably once the wells were drilled and non-necessary areas had been reclaimed. Rapid reclamation of the project area would

facilitate revived wildlife and livestock usage, stabilize soil, and reduce the potential for erosion and sedimentation.

3.13 CUMULATIVE IMPACTS

Environmental impacts may accumulate either over time or in combination with similar events in the area. Unrelated and dissimilar activities may also have negative impacts on critical elements, thereby contributing to the cumulative degradation of the environment. Past and current disturbances near the project area include farming, grazing, roads, and other oil and gas wells. Reasonably foreseeable future impacts must also be considered. Should development of these wells prove productive, it is likely that Zenergy and possibly other operators would pursue additional development in the area. Current farming and ranching activities are expected to continue with little change because virtually all available acreage is already organized into range units to use surface resources for economic benefit. Undivided interests in the land surface, range permits, and agricultural leases are often held by different tribal members than those holding mineral rights. Over the past several years, exploration has accelerated over the Bakken Formation. Most of this exploration has taken place outside the Reservation boundary on fee land, but for purposes of cumulative impact analyses, land ownership and the Reservation boundary are immaterial. Although it is the dominant activity currently taking place in the area, oil and gas development is not expected to have more than a minor cumulative effect on land use patterns.

There are no wells within 1 mile of project location. There are 16, 91, and 464 oil and gas wells (active, confidential, and permitted) within 5, 10, and 20 miles, respectively, of the proposed project area (Tables 16 through 18; Figure 13).

Table 16. Confidential, Active, and Permitted Wells within a 5-mile Radius of the Project Area.

	Wells #32-29H	
Reservation (on/off)	on	off
Confidential Wells	10	0
Active Wells	5	0
Permitted Wells	1	0

Table 17. Confidential, Active, and Permitted Wells within a 10-mile Radius of the Project Area.

	Wells #32-29H	
Reservation (on/off)	on	off
Confidential Wells	42	2
Active Wells	38	6
Permitted Wells	3	0

Table 18. Confidential, Active, and Permitted Wells within a 20-mile Radius of the Project Area.

	Wells #32-29H	
Reservation (on/off)	on	off
Confidential Wells	120	61
Active Wells	91	180
Permitted Wells	11	1

Figure 13. Active, confidential, and permitted wells within a 1-, 5-, 10-, and 20-mile radius of the proposed project location.

Within the Reservation and near the proposed project area, development projects remain few and widely dispersed. The project area proposed in this EA would not share access roads with any other proposed wells, but this may change in the future. If successful commercial production is achieved, new exploratory wells may be proposed, though such developments are merely speculation until APDs are submitted to the BLM and BIA for approval. Zenergy has suggested but not yet formally proposed that potentially six to ten more wells may eventually be drilled in the same general area as the proposed project, using many of the same main access roads and minimizing the disturbance as much as possible.

It is anticipated that the pace and level of natural gas development in this region of the state will continue at the current rate over the next few years and contribute to cumulative air quality impacts. The Proposed Action would incrementally contribute to emissions occurring in the region. In general, however, the increase in emissions associated with the Proposed Action—most of which would occur during well construction—would be localized, largely temporary, and limited in comparison with regional emissions.

No surface discharge of water would occur under the Proposed Action, nor would any surface water or groundwater be used during project development. The Proposed Action, when combined with other actions (cattle grazing, other oil and gas development, and agriculture) that are likely to occur in and near the project area in the future, would increase sedimentation and runoff rates. Sediment yield from active roadways could occur at higher rates than background rates and continue indefinitely. Thus, the Proposed Action could incrementally add to existing and future sources of water quality degradation in the Independence Point Watershed, but increases in degradation would be reduced by Zenergy's commitment to minimizing disturbance, using erosion control measures as necessary, and implementing BMPs designed to reduce impacts.

Unlike well pads, active roadways are not typically reclaimed, thus sediment yield from roads can continue indefinitely at rates two to three times the background rate. The Proposed Action would create additional lengths of unpaved roadway in the project area. Thus, the Proposed Action would incrementally add to existing and future impacts to soil resources in the general area. However, Zenergy is committed to using BMPs to mitigate these effects. BMPs would include implementing erosion and sedimentation control measures such as installing culverts with energy-dissipating devices at culvert outlets to avoid sedimentation in ditches, constructing water bars alongside slopes, and planting cover crops to stabilize soil following construction and before permanent seeding takes place.

Vegetation resources across the project area could be affected by various activities, including additional energy development and surface disturbance of quality native prairie areas that have been largely undisturbed by development activities, grazing, and agriculture. Indirect impacts to native vegetation may be possible due to soil loss, compaction, and increased encroachment of unmanaged invasive weed species. Continued oil and gas development within the Reservation could result in the loss and further fragmentation of native mixed-grass prairie habitat. Past, present, and reasonably foreseeable future activities in the general area have reduced and would likely continue to reduce the amount of available habitat for listed species.

Significant archaeological resources are irreplaceable and often unique; any destruction or damage of such resources can be expected to diminish the archaeological record as a whole. However, no such damage or destruction of significant archaeological resources is anticipated as a result of the Proposed Action because these resources would be avoided, negating the cumulative impacts to the archaeological record.

The Proposed Action would incrementally add to existing and future socioeconomic impacts in the general area. The Proposed Action includes five wells, which would be an additional source of revenue for some residents of the Reservation. Increases in employment would be temporary during the construction, drilling, and completion phases of the proposed project. Therefore, little change in employment would be expected over the long term.

Current impacts from oil and gas-related activities are still fairly dispersed, and the required BMPs would limit potential impacts. No significant negative impacts are expected to affect any critical element of the human environment; impacts would generally be low and mostly temporary. Zenergy has committed to implementing interim reclamation of the roads and well pads immediately following construction and completion. Implementation of both interim and permanent reclamation measures would decrease the magnitude of cumulative impacts.

4.0 CONSULTATION AND COORDINATION

The BIA must continue to make efforts to solicit the opinions and concerns of all stakeholders (Table 19). For the purpose of this EA, a stakeholder is considered any agency, municipality, or individual person that the proposed action may affect either directly or indirectly in the form of public health, environmental, or socioeconomic issues. A scoping letter declaring the location of the proposed project area and explaining the actions proposed at the site was sent in advance of this EA to allow stakeholders ample time to submit comments or requests for additional information. Additionally, a copy of this EA should be submitted to all federal agencies with interests either in, near, or potentially affected by the proposed actions.

United States Department of the Interior

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

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:
DESCRM
MC-208

MAY 19 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 an oil well pad and access road in Dunn County, North Dakota. Approximately 73.86 acres were intensively inventoried using a pedestrian methodology. Potential surface disturbances are not expected to exceed the area depicted in the enclosed report. Two previously known (32DU901, 32DU902) and five newly recorded archaeological sites (32DU1485, 32DU1486, 32DU1487, 32DU1488, 32DU1489) were located which may 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, as the archaeological sites will be fenced off and avoided. Catalogued as **BIA Case Number AAO-1750/FB/10,** the proposed undertaking, location, and project dimensions are described in the following report:

Lechert, Stephanie, and Nelson Klitzka
(2010) A Class I and Class III Cultural Resource Inventory of the Dakota-3 Wells #32-29H Well Pad and Access Road on the Fort Berthold Indian Reservation, Dunn County, North Dakota. SWCA Environmental Consultants for Zenergy Operating Company, LLC, Tulsa, OK.

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,

ACTING
Regional Director

Enclosures

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

2010-06-02 15:01 TAT Preservation 862-2490 >> 605 226 7658 P 2/2

TRIBAL HISTORIC PRESERVATION
Mandan Hidatsa Arikara
Perry 'No Tears' Brady, Director.
404 Frontage Road,
New Town, North Dakota 58763
Ph/701-862-2474 fax/701-862-3401
pbrady@mhanation.com

June 2, 2010

Carson Murdy
Great Plains Regional Office Bureau of Indian
Affairs Fourth Ave. S.E.
Aberdeen, South Dakota 57401

Re: A Class I and Class III Cultural Resource Inventory of the Zenergy
Dakota-3 Wells #32-29H Well Pad and Access Road, Fort Berthold Indian Reservation,
Dunn County, North Dakota

After review of the documentation provided by your office, the Mandan Hidatsa Arikara Nations concur with the determination of "No Adverse Affect"/No Historic Properties Affected' to any pre and post-Historic relics, artifacts or sacred and cultural resources in the proposed Project area. We respectfully request to be notified should any NAGPRA issues arise as the Project progresses.

If you have any questions or need additional information, you can contact me at (701) 862-2474 or 862-2475 or Cell # (701) 421-0547

Sincerely:

Perry "No Tear" Brady
Director
Mandan, Hidatsa, & Arikara Nation

Table 19. Scoping Comments.

Name	Organization	Comment	Response to Comment
Bagley, Lonny	BLM	No Comment	
Benson, Barry	MHA Nation	No Comment	
Bercier, Marilyn	BIA	No Comment	
Berg, George	NoDak Electric Cooperative, Inc.	No Comment	
Black, Mike	BIA	No Comment	
Boyd, Bill	Midcontinent Cable Company	No Comment	
Brady, Perry	THPO, Three Affiliated Tribes	No Comment	
Brugh, V. Judy	MHA Nation	No Comment	
Cayko, Richard	McKenzie County	No Comment	
Chevance, Nick	National Parks Service	No Comment	
Christenson, Ray	Southwest Water Authority	No Comment	
Cimarosti, Dan	USACE	Enclosed Section 10 Application incase a permit is required.	No Section 10 Applications will be needed for this project.
Crooke, Patsy	USACE	No Comment	
Danks, Marvin	Fort Berthold Rural Water Director	No Comment	
Dhieux, Joyce	EPA	No Comment	
Dixon, Doug	Montana Dakota Utilities	No Comment	
Erickson, Carroll	Ward County Board of Commissioners	No Comment	
Ferris, Kade	Turtle Mountain Band of Chippewa	No Comment	
Fitzpatrick, Barbara	FEMA	No Comment	
Flores, J.R.	U.S. Department of Agriculture	No Comment	
Fox, Fred	MHA Nation	No Comment	
Glatt, David	North Dakota Department of Health	Impacts will be minor and can be controlled by proper construction methods.	BMPs discussed in APD and will be covered in Conditions of Approval.
Guzman, Frank	USFS	No Comment	

Name	Organization	Comment	Response to Comment
Hanson, Jesse	North Dakota Parks and Recreation	No Comment	
Hauck, Reinhard	Dunn County	No Comment	
Hefferman, Dan	EPA	No Comment	
His Horse Is Thunder, Ron	Chairman, Standing Rock Sioux Tribe	No Comment	
Hoffman, Warren	Killdeer, Weydahl Field	No Comment	
Hovda, Roger	Reservation Telephone Cooperative	No Comment	
Hudson-Schenfisch, Julie	McLean County Board of Commissioners	No Comment	
Hynek, David	Chair, Mountrail Board of County Commissioners	No Comment	
Johnson, Harley	New Town Municipal Airport	No Comment	
Kadrmas, Ray	Dunn County	No Comment	
Kuehn, John	Parshall-Hankins Field Airport	No Comment	
Kulas, Cheryl	Indian Affairs Commission	No Comment	
Kyner, Dave	FEMA	No Comment	
Latimer, Tom	Red Willow Great Plains, LLC	No Comment	
Laux, Eric	USACE	No Comment	
Lindemann, Larry	Airport Manager, Barnes County Municipal Airport	No Comment	
McKenna, Mike	North Dakota Game and Fish Department	Recommend construction be avoided were possible in native prairie, wooded draws, riparian areas, and wetlands. Botanical and raptor surveys suggested.	See Wildlife, Wetlands, and Vegetation sections in the EA. BMPs discussed in APD and will be covered in Conditions of Approval.
McPhillips, Kelly	Bureau of Reclamation	Map provided showing the location of rural water lines relative to proposed well site.	No waterlines are near proposed well location.
Melhouse, Ronald	Bureau of Reclamation	No Comment	
Nash, Mike	BLM	No Comment	
Nelson, Richard	U.S. Bureau of Reclamation	No Comment	

Name	Organization	Comment	Response to Comment
Nordquist, Don	Petro-Hunt, LLC	No Comment	
Obenauer, Steve	FAA	Patricia Dressler: No objection, provided FAA is notified of any alterations.	No alterations have been made.
Olson, Frances	McKenzie County	No Comment	
Paaverud, Merl	State Historical Society	Request a copy of site forms and reports.	See Cultural Resources section.
Packineau, Mervin	MHA Nation	No Comment	
Paulson, Gerald	Western Area Power Administration	No Comment	
Pearson, Myra	Spirit Lake Sioux Tribe	No Comment	
Peterson, Walter	North Dakota Department of Transportation	No Comment	
Poitra, Fred	MHA Nation	No Comment	
Prchal, Doug	North Dakota Parks and Recreation Department	No Comment	
Renschler, Jason	USACE	No Comment.	
Rudolph, Reginald	McLean Electric Cooperative, Inc.	No Comment	
Schelkoph, David	West Plains Electric Cooperative, Inc.	No Comment	
Selvage, Michael	Chairman, Sisseton-Wahpeton Sioux Tribe	No Comment	
Shortbull, Marietta	Fort Berthold Agency	No Comment	
Smith, Heather	EOG Resources, Inc.	No Comment	
Sorensen, Charles	USACE	Well pad locations in T150N, R93W are in close proximity to the Lake. USACE recommends: Closed-loop system, a catch trench be established, sewage collection be a closed system, additional fill should be weed-free.	This location is not in close proximity to the Lake.
Svoboda, Larry	EPA	No Comment	

Name	Organization	Comment	Response to Comment
Sweeney, Paul	Natural Resources Conservation Service	Confirms receipt of letter requesting a determination of the project affecting farmland according to FPPA [Farmland Protection Policy Act]. Recommends impacts to wetlands be avoided.	FPPA does not apply to the project. See Wetlands section in EA.
Thompson, Brad	USACE	No Comment	
Thorson, Gary	McKenzie Electric Cooperative	No Comment	
Towner, Jeffrey	USFWS	Enclosed fact sheet explaining threatened and endangered species, migratory birds, high value habitat to avoid, habitat fragmentation, recommended construction and survey schedules, and reclamation.	USFWS have concurred that there is no affect
Wells, Marcus	Chairman, MHA Nation	No Comment	
Whitcalf, Frank	MHA Nation	No Comment	
Williams, Damon	MHA Nation	No Comment	
Wolf, Malcolm	MHA Nation	No Comment	
Chief Missile Engineer	Minot Air Force Base	No Comment	
Garrison Project Office	USACE	No Comment	
Insurance & Hazard Director	FEMA	No Comment	
Land Department	Northern Border Pipeline Company	No Comment	
Manager	Xcel Energy	No Comment	
NAGRPA Office	Three Affiliated Tribes	No Comment	
Natural Resources Department	Three Affiliated Tribes	No Comment	

List of Preparers

An interdisciplinary team contributed to this document, following guidance in Part 1502.6 of Council on Environmental Quality regulations. This document was drafted by SWCA under the direction of the BIA. Information was compiled from various sources within SWCA.

Zenergy Operating Company, LLC

- Kelley Bryan, Williston Basin Land Manager

SWCA Environmental Consultants

- Joey Sheeley, Planning Specialist
  Prepared the Environmental Assessment.

- Josh Ruffo, Project Manager and Biologist
  Conducted natural resource surveys for well pads and access roads.

- Stephanie Lechert, Archaeologist
  Conducted cultural resource surveys for well pads and access roads.

- Jon Markman, Archaeologist/Field Coordinator
  Conducted cultural resource surveys for well pads and access roads. Completed cultural reports.

- Amarina Wuenschel, GIS Specialist
  Created maps and spatially-derived data.

- Matt Spann, Environmental Specialist
  Completed water resources, vegetation, and soils sections.

- Claudia Oakes, NEPA Specialist/Senior Project Manager
  Reviewed document for content and adequacy.

5.0 REFERENCES

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6.0 ACRONYMS

°F	degrees Fahrenheit
APD	application for permit to drill
APE	area of potential effect
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BMP	best management practice
CAA	Clean Air Act
CFR	Code of Federal Regulations
EA	environmental assessment
EIS	environmental impact statement
EJ	environmental justice
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FONSI	finding of no significant impact
GHG	greenhouse gas
HAP	hazardous air pollutant
HUC	hydrologic unit code
MHA Nation	Three Affiliated Tribes of the Mandan, Hidatsa, and Arikara Nation
NAGPRA	Native American Graves Protection and Repatriation Act
NDCC	North Dakota Century Code
NDDH	North Dakota Department of Health
NDIC	North Dakota Industrial Commission
NEPA	National Environmental Policy Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NTL	notice to lessees
PEM	palustrine emergent
ppm	parts per million
ROW	right-of-way
SHPO	State Historic Preservation Officer
TCP	traditional cultural property
THPO	Tribal Historic Preservation Officer
TMD	total measured depth
TVD	total vertical depth
USC	United States Code
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VOC	volatile organic compound

Sarah Ruffo

From: Sorensen, Charles G NWO [Charles.G.Sorensen@usace.army.mil]
Sent: Wednesday, February 10, 2010 3:00 PM
To: Sarah Ruffo
Subject: Dakota 3 proposed oil pad/well locations

Thank you for letting the U.S. Army Corps of Engineers Garrison Damn/Lake Sakakawea Project provide comments and concerns regarding the proposed oil well pad locations located in Township 150 North, Range 93 West, Dunn County, North Dakota.

1 Due to the close proximity of the well location to lands managed by the U.S. Army Corps of Engineers (USACE) and the potential of possible contamination of the Little Missouri River and Lake Sakakawea due to the loss of drilling mud's and or fluids it is USACE recommendation that a Closed Loop mud and drilling fluid system be used vs. the standard pit containment methods for drilling fluids.

2. That a catch trench be established on the that side of the pad closest to the COE boundary for the purpose of catching, holding, and preventing any run off from the pad and associated facilities from entering tributaries to Little Missouri River and Lake Sakakawea. All fluids that accumulate in said trench should be pumped out of the trench and disposed of properly.

3. If living quarters will be onsite it is requested that all sewage collection systems are to be of a closed system ensuring that there are no open or exposed tanks, catch basins, etc.

4. That all additional fill material come from a private source that has been certified as being free of all noxious weeds; so as to prevent the spreading of said weeds on to COE lands.

5. If you have any questions regarding the above conditions or recommendations please feel free to contact me

Thank you

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

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

REPLY TO
ATTENTION OF

March 1, 2010

North Dakota Regulatory Office

[NWO-2010-00273-BIS]

SWCA Environmental Consultants
Attn: Sarah Ruffo, Environmental Specialist
115 North 4th Street, Suite 1
Bismarck, North Dakota 58501

Dear Ms. Ruffo:

This is in response to your solicitation letter on behalf of **Zenergy Operating Company, LLC (Zenergy)**, received on February 10, 2010 requesting Department of the Army (DA), United States Army Corps of Engineers (Corps) comments for four proposed oil and gas exploratory wells within the Fort Berthold Indian Reservation. The proposed five wells include; **Dakota-3 John Elk #28-27H, Dakota-3 Wells #32-29H, Dakota-3 Helena Ruth Grant #33-34H, Dakota-3 Morgan Smith #36-35H.** The proposed projects are located within Dunn County, North Dakota.

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 in or affecting navigable waters. This would include work over, through, or under Section 10 water. Section 10 waters in North Dakota include the Missouri River (Lake Sakakawea and Lake Oahe), Yellowstone River, James River south of Jamestown, North Dakota, Bois de Sioux River, Red River of the North, and the Upper Des Lacs Lake. 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 waters of the United States.

For any proposed well where the well line and/or bottom hole is under or crosses under Lake Sakakawea, regardless of depth, we require that project proponent provide a DA permit application (ENG Form 4345) to the Corps.

Enclosed for your information is the fact sheet for Nationwide Permit 12, Utility Line Activities. Pipeline projects are already authorized by Nationwide Permit 12 **provided the utility line can be placed without any change to pre-construction contours and all other proposed construction activities and facilities are in compliance with the Nationwide's permit conditions and 401 Water Quality Certification is obtained.** Please note the pre-construction notification requirements on page 2 of the fact sheet. **If a project involves any one of the seven notification requirements, the project proponent must submit a DA application.** Furthermore, a project must also be in compliance with the "Regional Conditions for Nationwide Permits within the State of North Dakota", found on pages 12 and 13 of the fact sheet. Please be advised that the United States Environmental Protection Agency (EPA), Region 8 has denied 401 Water Quality Certification for activities in perennial drainages and wetlands. Furthermore, EPA has placed conditions on activities in ephemeral and intermittent drainages. It is recommended you contact the U.S. Environmental Protection Agency, Region 8, Attn: Brent Truskowski, 1595 Wynkoop Street, Denver, Colorado 80202-1129 to review the conditions pursuant to Section 401 of the Clean Water Act prior to any construction.

Also enclosed for your information is the fact sheet for Nationwide Permit 14, Linear Transportation Projects. Road crossings are already authorized by Nationwide Permit 14 **provided the discharge does not cause the loss of greater than ½ acre of waters of the United States per crossing and all other proposed construction activities are in compliance with the Nationwide's permit conditions.** Please note the pre-construction notification requirements on the front page of the fact sheet (highlighted in yellow). **If a project involves (1) the loss of waters of the United States exceeding 1/10 acre per crossing; or (2) there is a discharge in a special aquatic site, including wetlands, the project proponent must submit a DA application prior to the start of construction.** Please reference General Condition 27, Pre Construction Notification on page 8 of the fact sheet. Furthermore, a project must also be in compliance with the "Regional Conditions for Nationwide Permits within the State of North Dakota", found on pages 11 and 12 of the fact sheet. Enclosed is a copy of the United States Environmental Protection Agency, Region 8's; General Conditions for all Nationwide Permits and specific conditions for Nationwide Permit 14.

In the event your project requires approval from the U.S. Army Corps of Engineers and cannot be authorized by Nationwide Permit(s), a Standard or Individual Permit will be required. A project that requires a Standard or Individual Permit is intensely reviewed and will require the issuance of a public notice. A Standard or Individual Permit generally requires a minimum of 120 days for processing but based on the project impacts and comments received through the public notice may extend will beyond 120 days.

This correspondence letter **does not approve** the proposed construction work or **does not verify** the proposed project complies with the Nationwide Permit(s).

If any of these projects require a Section 10 and/or Section 404 permit, please complete and submit the enclosed Department of the Army permit application (ENG Form 4345) to the U.S. Army Corps of Engineers, North Dakota Regulatory Office, 1513 South 12th Street, Bismarck, North Dakota 58504. If you are unsure if a permit is required, you may submit an application; include a project location map, description of work, and construction methodology.

If we can be of further assistance or should you have any questions regarding our program, please do not hesitate to contact this office by letter of phone at (701) 255-0015.

Sincerely,

Daniel E. Cimarosti
Regulatory Program Manager
North Dakota

Enclosure
ENG Form 4345
Fact Sheet NWP 12
Fact Sheet NWP 14
EPA 401 Conditions for Nationwide Permits

CF w/o encl
EPA Denver (Brent Truskowski)

FACT SHEET
NATIONWIDE PERMIT 12
(2007)

UTILITY LINE ACTIVITIES. Activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2 acre of waters of the United States.

Utility lines: This NWP authorizes the construction, maintenance, or repair of utility lines, including outfall and intake structures, and the associated excavation, backfill, or bedding for the utility lines, in all waters of the United States, provided there is no change in pre-construction contours. A "utility line" is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and radio and television communication. The term "utility line" does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a power line or utility line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2 acre of waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for overhead utility line towers, poles, and anchors: This NWP authorizes the construction or maintenance of foundations for overhead utility line towers, poles, and anchors in all waters of the United States, provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including overhead power lines and utility line substations, in non-tidal waters of the United States, provided the total discharge from a single and complete project does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (See 33 CFR Part 322). Overhead utility lines constructed over section 10 waters and utility lines that are routed in or

under section 10 waters without a discharge of dredged or fill material require a section 10 permit.

This NWP also authorizes temporary structures, fills, and work necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if any of the following criteria are met: (1) the activity involves mechanized land clearing in a forested wetland for the utility line right-of-way; (2) a section 10 permit is required; (3) the utility line in waters of the United States, excluding overhead lines, exceeds 500 feet; (4) the utility line is placed within a jurisdictional area (i.e., water of the United States), and it runs parallel to a stream bed that is within that jurisdictional area; (5) discharges that result in the loss of greater than 1/10-acre of waters of the United States; (6) permanent access roads are constructed above grade in waters of the United States for a distance of more than 500 feet; or (7) permanent access roads are constructed in waters of the United States with impervious materials. (Sections 10 and 404)

Note 1: Where the proposed utility line is constructed or installed in navigable waters of the United States (i.e., section 10 waters), copies of the pre-construction notification and NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.

Note 2: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, accordance with the requirements for temporary fills.

Note 3: Pipes or pipelines used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to Section 9 of the Rivers and Harbors Act of 1899. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15).

General Conditions: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as appropriate, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety.

15. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

16. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

17. Endangered Species. (a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical

habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide Web pages at http://www.fws.gov/ and http://www.noaa.gov/fisheries.html respectively.

18. Historic Properties. (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

19. Designated Critical Resource Waters. Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the district engineer after notice and opportunity for public comment. The district engineer may also designate additional critical resource waters after notice and opportunity for comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 27, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

20. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10 acre and require pre-construction notification, unless the district engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. For wetland losses of 1/10 acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream restoration, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2 acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2 acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address

documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

21. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality. *Specifically in North Dakota, the North Dakota Department of Health has denied certification for projects under this Nationwide Permit proposed to cross* ***all classified rivers, tributaries and lakes****; individual certification for project in these waterways must be obtained by the project proponent prior to authorization under this Nationwide Permit. For utility line crossings of all other waters, the Department of Health has issued water quality certification provided the attached Construction and Environmental Disturbance Requirements are followed.*

22. Coastal Zone Management. *Not Applicable.*

23. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

24. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

25. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:
"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

(Transferee)

(Date)

26. Compliance Certification. Each permittee who received a NWP verification from the Corps must submit a signed certification regarding the completed work and any required mitigation. The certification form must be forwarded by the Corps with the NWP verification letter and will include:

(a) A statement that the authorized work was done in accordance with the NWP authorization, including any general or specific conditions;

(b) A statement that any required mitigation was completed in accordance with the permit conditions; and

(c) The signature of the permittee certifying the completion of the work and mitigation.

27. Pre-Construction Notification. *See attached pages.*

28. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project.

General Condition 27. Pre-Construction Notification.

(a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, as a general rule, will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) Forty five calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 17 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 18 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) is completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee cannot begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed project;

(3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided result in a quicker decision.);

(4) The PCN must include a delineation of special aquatic sites and other waters of the United States on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters of the United States, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, where appropriate;

(5) If the proposed activity will result in the loss of greater than 1/10 acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP 48 activities requiring pre-construction notification and for other NWP activities requiring pre-construction notification to the district engineer that result in the loss of greater than 1/2-acre of waters of the United States, the district engineer will immediately provide (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy of the PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps multiple copies of pre-construction notifications to expedite agency coordination.

(5) For NWP 48 activities that require reporting, the district engineer will provide a copy of each report within 10 calendar days of receipt to the appropriate regional office of the NMFS.

(e) District Engineer's Decision: In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If the proposed activity requires a PCN and will result in a loss of greater than 1/10 acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any conditions the district engineer deems necessary. The district engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (3) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan.

2007 NATIONWIDE PERMITS
REGIONAL CONDITIONS
STATE OF NORTH DAKOTA
OMAHA DISTRICT – CORPS OF ENGINEERS

The U.S. Army Corps of Engineers has adopted the following regional conditions for activities authorized by nationwide permits within the State of North Dakota. However, the pre-construction notification requirements defined below are not applicable to Nationwide Permit 47.

1. Wetlands Classified as Fens

All Nationwide Permits, with the exception of 3, 5, 20, 32, 38, 45, and 47, are revoked for use in fens in North Dakota. For nationwide permits 3, 5, 20, 32, 38, and 45 permittees must notify the Corps in accordance with General Condition 27 (Notification) prior to initiating any regulated activity impacting fens in North Dakota.

Fens are wetlands that develop where a relatively constant supply of ground water to the plant rooting zone maintains saturated conditions most of the time. The water chemistry of fens reflects the mineralogy of the surrounding and underlying soils and geological materials. The substrate is carbon-accumulating, ranging from muck to peat to carbonates. These wetlands may be acidic to alkaline, have pH ranging from 3.5 to 8.4 and support a range of vegetation types. Fens may occur on slopes, in depressions, or on flats (i.e., in different hydrogeomorphic classes; after: Brinson 1993).

2. Waters Adjacent to Natural Springs

For all Nationwide Permits permittees must notify the Corps in accordance with General Condition No. 27 (Notification) for regulated activities located within 100 feet of the water source in natural spring areas in North Dakota. For purposes of this condition, a spring source is defined as any location where there is artesian flow emanating from a distinct point at any time during the growing season. Springs do not include seeps and other groundwater discharge areas where there is no distinct point source.

3. Missouri River, including Lake Sakakawea and Lake Oahe within the State of North Dakota

For all Nationwide Permits permittees must notify the Corps in accordance with General Condition No. 27 (Notification) prior to initiating any regulated activity in the Missouri River, including Lake Sakakawea and Lake Oahe, within the State of North Dakota.

4. Historic Properties

That the permittee and/or the permittee's contractor, or any of the employees, subcontractors or other persons working in the performance of a contract(s) to complete the work authorized herein, shall cease work and report the discovery of any previously unknown historic or archeological remains to the North Dakota Regulatory Office. Notification shall be by telephone or fax within 24 hours of the discovery and in writing within 48 hours. Work shall not resume until the permittee is notified by the North Dakota Regulatory Office.

5. Spawning Condition

That no regulated activity within waters of the United States listed as Class III or higher on the 1978 Stream Evaluation Map for the State of North Dakota or on the North Dakota Game and Fish Department's website as a North Dakota Public Fishing Water shall occur between 15 April and 1 June. No regulated activity within the Red River of the North shall occur between 15 April and 1 July.

Additional Information

Permittees are reminded that General Condition No. 6 prohibits the use of unsuitable material. In addition, organic debris, some building waste, and materials excessive in fines are not suitable material.

Specific verbiage on prohibited materials and the 1978 Stream Evaluation Map for the State of North Dakota can be accessed on the North Dakota Regulatory Office's website at: https://www.nwo.usace.army.mil/html/od-rnd/ndhome.htm

NORTH DAKOTA
DEPARTMENT of HEALTH

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

Construction and Environmental Disturbance Requirements

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

Soils

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

Surface Waters

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

Fill Material

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

FACT SHEET
NATIONWIDE PERMIT 14
(2007)

COPY

LINEAR TRANSPORTATION PROJECTS. Activities required for the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge cannot cause the loss of greater than 1/2-acre of waters of the United States. For linear transportation projects in tidal waters, the discharge cannot cause the loss of greater than 1/3-acre of waters of the United States. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project.

This NWP also authorizes temporary structures, fills, and work necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) the loss of waters of the United States exceeds 1/10 acre; or (2) there is a discharge in a special aquatic site, including wetlands. (Sections 10 and 404)

Note: Some discharges for the construction of farm roads or forest roads, or temporary roads for moving mining equipment, may qualify for an exemption under Section 404(f) of the Clean Water Act (see 33 CFR 323.4).

General Conditions: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as appropriate, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety.

15. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

16. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

17. Endangered Species. (a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical

habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide Web pages at http://www.fws.gov/ and http://www.noaa.gov/fisheries.html respectively.

18. Historic Properties. (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

19. Designated Critical Resource Waters. Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the district engineer after notice and opportunity for public comment. The district engineer may also designate additional critical resource waters after notice and opportunity for comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 27, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

20. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10 acre and require pre-construction notification, unless the district engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. For wetland losses of 1/10 acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream restoration, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2 acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2 acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address

documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

21. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality. *Specifically for North Dakota, the North Dakota Department of Health has issued water quality certification for projects under this Nationwide Permit provided the attached Construction and Environmental Disturbance Requirements are followed.*

22. Coastal Zone Management. *Not Applicable.*

23. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

24. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

25. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:
"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

_____

(Transferee)

(Date)

26. Compliance Certification. Each permittee who received a NWP verification from the Corps must submit a signed certification regarding the completed work and any required mitigation. The certification form must be forwarded by the Corps with the NWP verification letter and will include:

(a) A statement that the authorized work was done in accordance with the NWP authorization, including any general or specific conditions;

(b) A statement that any required mitigation was completed in accordance with the permit conditions; and

(c) The signature of the permittee certifying the completion of the work and mitigation.

27. Pre-Construction Notification. *See attached pages.*

28. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project.

General Condition 27. Pre-Construction Notification.

(a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, as a general rule, will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) Forty five calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 17 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 18 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) is completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee cannot begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed project;

(3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided result in a quicker decision.);

(4) The PCN must include a delineation of special aquatic sites and other waters of the United States on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters of the United States, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, where appropriate;

(5) If the proposed activity will result in the loss of greater than 1/10 acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP 48 activities requiring pre-construction notification and for other NWP activities requiring pre-construction notification to the district engineer that result in the loss of greater than 1/2-acre of waters of the United States, the district engineer will immediately provide (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy of the PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps multiple copies of pre-construction notifications to expedite agency coordination.

(5) For NWP 48 activities that require reporting, the district engineer will provide a copy of each report within 10 calendar days of receipt to the appropriate regional office of the NMFS.

(e) District Engineer's Decision: In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If the proposed activity requires a PCN and will result in a loss of greater than 1/10 acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any conditions the district engineer deems necessary. The district engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (3) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan.

2007 NATIONWIDE PERMITS
REGIONAL CONDITIONS
STATE OF NORTH DAKOTA
OMAHA DISTRICT – CORPS OF ENGINEERS

The U.S. Army Corps of Engineers has adopted the following regional conditions for activities authorized by nationwide permits within the State of North Dakota. However, the pre-construction notification requirements defined below are not applicable to Nationwide Permit 47.

1. Wetlands Classified as Fens

All Nationwide Permits, with the exception of 3, 5, 20, 32, 38, 45, and 47, are revoked for use in fens in North Dakota. For nationwide permits 3, 5, 20, 32, 38, and 45 permittees must notify the Corps in accordance with General Condition 27 (Notification) prior to initiating any regulated activity impacting fens in North Dakota.

Fens are wetlands that develop where a relatively constant supply of ground water to the plant rooting zone maintains saturated conditions most of the time. The water chemistry of fens reflects the mineralogy of the surrounding and underlying soils and geological materials. The substrate is carbon-accumulating, ranging from muck to peat to carbonates. These wetlands may be acidic to alkaline, have pH ranging from 3.5 to 8.4 and support a range of vegetation types. Fens may occur on slopes, in depressions, or on flats (i.e., in different hydrogeomorphic classes; after: Brinson 1993).

2. Waters Adjacent to Natural Springs

For all Nationwide Permits permittees must notify the Corps in accordance with General Condition No. 27 (Notification) for regulated activities located within 100 feet of the water source in natural spring areas in North Dakota. For purposes of this condition, a spring source is defined as any location where there is artesian flow emanating from a distinct point at any time during the growing season. Springs do not include seeps and other groundwater discharge areas where there is no distinct point source.

3. Missouri River, including Lake Sakakawea and Lake Oahe within the State of North Dakota

For all Nationwide Permits permittees must notify the Corps in accordance with General Condition No. 27 (Notification) prior to initiating any regulated activity in the Missouri River, including Lake Sakakawea and Lake Oahe, within the State of North Dakota.

4. Historic Properties

That the permittee and/or the permittee's contractor, or any of the employees, subcontractors or other persons working in the performance of a contract(s) to complete the work authorized herein, shall cease work and report the discovery of any previously unknown historic or archeological remains to the North Dakota Regulatory Office. Notification shall be by telephone or fax within 24 hours of the discovery and in writing within 48 hours. Work shall not resume until the permittee is notified by the North Dakota Regulatory Office.

5. Spawning Condition

That no regulated activity within waters of the United States listed as Class III or higher on the 1978 Stream Evaluation Map for the State of North Dakota or on the North Dakota Game and Fish Department's website as a North Dakota Public Fishing Water shall occur between 15 April and 1 June. No regulated activity within the Red River of the North shall occur between 15 April and 1 July.

Additional Information

Permittees are reminded that General Condition No. 6 prohibits the use of unsuitable material. In addition, organic debris, some building waste, and materials excessive in fines are not suitable material.

Specific verbiage on prohibited materials and the 1978 Stream Evaluation Map for the State of North Dakota can be accessed on the North Dakota Regulatory Office's website at: https://www.nwo.usace.army.mil/html/od-rnd/ndhome.htm

NORTH DAKOTA
DEPARTMENT of HEALTH

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

Construction and Environmental Disturbance Requirements

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

Soils

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

Surface Waters

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

Fill Material

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

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

May 11, 2007

Ref: 8EPR-EP

Colonel Ronald N. Light
District Engineer, Sacramento District
Attn: Michael S. Jewel, Regulatory Section
U.S. Army Corps of Engineers
1325 J Street, 14th floor
Sacramento, California 95814-2922

Colonel David Press,
District Engineer, Omaha District
Attn: Martha Chieply, Chief of Regulatory
U.S. Army Corps of Engineers
106 S. 15th Street
Omaha, Nebraska 68102

Colonel Bruce Estok
District Engineer, Albuquerque District
Attn: Don Borda, Chief of Regulatory
U.S. Army Corps of Engineers
4101 Jefferson Plaza NE, Room 313
Albuquerque, New Mexico 87109-3435

Re: Certification of Nationwide Permits in Indian Country
Pursuant to Section 401 of the Clean Water Act

Dear Colonels Light, Press and Estok:

This letter is in response to the US Army Corps of Engineers Final Notice of Issuance of Nationwide Permits (NWPs) listed in the Monday, March 12, 2007, Federal Register for Clean Water Act (CWA) Section 401 water quality certification. This water quality certification applies only to waters of the United States within Environmental Protection Agency (EPA) Region 8 where Tribes have not assumed CWA Section 401 Water Quality Certification and Section 303 Water Quality Standards Programs.

Region 8 has not received any final regional conditions from the USACE. Therefore, if final regional conditions are modified such that changes necessitate a change in 401 certification, Region 8 will modify this certification following receipt of final NWP regional conditions.

The USACE and applicants should consider contacting EPA, Region 8 as early as possible for potential permits and actions that may be complicated and when early discussions may be beneficial to all parties. EPA requests notification when the USACE District Engineer intends to exert discretionary authority or waive the acreage, linear feet or cubic yard limits of the 2007 Nationwide Permits. We would like the opportunity to discuss the rationale and finding of minimal impact in these instances.

For NWPs that do require an individual 401 certification application, submission or notification, the information should be sent to the EPA and to the appropriateTribe. Suggested minimum information needed by EPA is enclosed; if minimum information is not included, the request for 401 certification may not be considered complete. The USACE should be aware of tribal trust lands that are outside of commonly known reservation boundaries. A state certification is not valid on these waters; and without a valid 401 certification, a permit would not be valid.

Your staff may contact Ms. Toney Ott at 303-312-6909, ott.toney@epa.gov, or your assigned Region 8 Section 404 staff if there are any questions or if clarification is necessary.

Sincerely,

Original signed by Gene R. Reetz for

Brian Caruso, Unit Chief
Wetlands and Watershed Unit
Ecosystems Protection Program

cc: Region 8 Tribal Environmental Directors
Cheryl Goldsberry, Omaha District

Enclosures:

USEPA Region 8 Water Quality Certification in Accordance with Section 401 of the Clean Water Act for the 2007 Nationwide Permits in Indian Country

Application Checklist for Completeness - - 401 Certifications for USACE NWPs

Tribal Contacts in U.S.E.P.A. Region 8, Current as of May 8, 2007

Region 8 Tribes with Treatment as State Status for CWA Section 303 and Section 401, Current as of May 8, 2007

Environmental Protection Agency, Region 8

Water Quality Certification in Accordance with Section 401 of the Clean Water Act for the 2007 Nationwide Permits in Indian Country

May 11, 2007

These requirements apply to permitted activities occurring within "Indian country" as defined at 18 U.S.C. Section 1151, which includes lands located within formal Indian reservations as well as lands held in trust by the United States for Indian tribes and located outside the boundaries of formal Indian reservations. Please be aware that tribal trust lands located outside the boundaries of formal Indian reservations exist in Region 8.

A. SPECIFIC NATIONWIDE PERMITS CWA Section 401 CERTIFICATION DENIED

USEPA Region 8 is denying CWA Section 401 certification on all waters for the following NWPs: # 16, # 17, # 21, # 33, # 34, # 44, # 45, # 46, # 47, # 49 and # 50. On NWPs that have been "denied" the EPA will review the proposed permit activity and issue a project-specific 401 Certification decision on each permit.

B. GENERAL CONDITIONS FOR ALL NATIONWIDE PERMITS

1. Project proponent/contractor must have the following on-site:
   - a copy of the appropriate USEPA Regional 401 certification general and specific conditions contained in this certification;

   in addition, for NWP permits requiring a 401 certification application to USEPA:
   - the 401 certification application, and
   - EPA Region 8 CWA Section 401 certification document if applicable.

2. Certification is denied for any activity affecting fens and springs.
   Note: EPA adopts the definitions of these aquatic resources as defined by the 2007 Regional Conditions, as defined by the published draft conditions.

3. This certification does not authorize the placement or construction of septic/leach systems or other sewage/waste treatment plants in wetlands.

4. This certification does not authorize the construction of dams, except for stream restoration projects.

5. This certification does not authorize the construction of any portion of a facility for confined animal feeding operations, including, but not limited to, the construction of buildings, holding/detention and sewage lagoons, and/or livestock holding areas.

6. Wetland mitigation under these nationwide permits shall be completed prior to, or concurrent with, the project impacts. Wetland mitigation should be in-kind and on-site replacing native wetland plant communities lost from all project impacts. If the USACE

recommends a mitigation bank or in-lieu fee program and the permittee chooses to utilize the option of a mitigation bank or in-lieu fee program, the applicant must submit the name of the bank or program, and the number and type of credits to be purchased prior to project impacts.

7. For any general or specific nationwide permit conditions requiring notification in accordance with the Preconstruction Notification general condition #27 (72 Fed. Reg. 11092, 11195 (March 12, 2007)), "Agency Coordination" for project activities should include coordination with Native American Tribe or Tribes affected by such project activities.

8. Based on experience with invasive species, infestations of invasive plant species may result in increased erosion and/or pesticide applications, have the potential to reduce water quality, impact aquatic habitat, and impact designated water quality uses. This certification requires the use of certified weed-free hay/straw with any revegetation of project areas for activities authorized under these nationwide permits. This certification requires the use of seed that contain no noxious weed seed and meets certified seed quality. All seed must have a valid seed test within one year of the use date, from a seed analysis lab by a registered seed analyst (Association of Official Seed Analysts). The seed lab results shall show no more than 0.5 percent by weight of other weed seeds; and the seed lot shall contain no noxious, prohibited, or restricted weed seeds according to State seed laws in the respective State(s).

9. This certification requires monitoring for and control of invasive species during project construction if areas are disturbed and not immediately revegetated. This certificate requires monitoring for and immediate control of invasive species after project completion through at least one growing season. A maximum goal of less than 5% weed-species plants should be set, unless local, State, Tribal, or USACE rules, ordinances or permit conditions require more stringent monitoring and response.

10. Vegetation should be protected except where its removal is absolutely necessary for completion of the work. Applicant should revegetate disturbed soil in a manner that optimizes plant establishment for that specific site. Revegetation may include topsoil replacement, planting, seeding, fertilization, liming, and weed-free mulching as necessary. Applicant should use native material where appropriate and feasible. Where practical, stockpile weed-seed-free topsoil and replace it on disturbed areas. All cut and fill slopes that will not be protected with riprap should be revegetated with appropriate species to prevent erosion.

11. The following conditions apply when operating equipment or otherwise undertaking construction in a water of the U.S.

A. This certification requires all equipment to be inspected for oil, gas, diesel, anti-freeze, hydraulic fluid and other petroleum leaks. All such leaks will be properly repaired and equipment cleaned prior to being allowed on the project.

Leaks that occur after the equipment is moved to the project site will be fixed that same day or the next day or removed from the project area. The equipment is not allowed to continue operating once the leak is discovered.

B. Construction equipment should not be operated below the existing water surface except as follows:

a) Fording at one location is acceptable; however, vehicles should not push or pull material along bed or bank below the existing water level. Impacts from fording should be minimized.

b) Work below the waterline which is essential should be done in a manner to minimize impacts to the aquatic system and water quality.

C. All equipment that has been operated in waters of the US, with known invasive species infestation(s) is to be inspected and cleaned before entering waters of the U.S. for this permit. All equipment is to be inspected and cleaned after use.

12. Any temporary crossings, bridge supports, cofferdams or other structures that are necessary during the permit activity should be designed to handle high flows that can be anticipated during permit activity. All temporary structures should be completely removed from the waterbody at the conclusion of the permitted activity and the area restored to a natural appearance.

13. This certification does not authorize any unconfined discharge of liquid cement in waters of the United States. Grouting riprap must occur under dry conditions with no exposure of wet concrete to the waterbody.

14. All discharges must occur during the low flow or no flow period of the season.

C. ADDITIONAL CONDITIONS FOR SPECIFIC NATIONWIDE PERMITS

In addition to the general conditions for all Nationwide Permits, the following conditions are specific to each listed nationwide permit.

Nationwide Permit 3. Maintenance Activities

A. For the repair of low water crossings, this certification is denied for discharges of any fill or dredged material that would result in an increase in land contour height beyond the original dimensions.

B. Silt and sediment removal associated with low water crossings shall be limited to a maximum of 50 linear feet.

C. Silt and sediment removal associated with bridge crossings shall be limited to a maximum of 100 linear feet.

Nationwide Permit 4. Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities

This certification does not allow for the introduction of non-native flora or fauna.

Nationwide Permit 7. Outfall Structures and Associated Intake Structures

For construction and maintenance activities:

A. Construction of the outfall structure shall be placed at the streambed elevation and, at a minimum; the pipeline should be oversized to prevent high-pressure discharge of stormwater.

B. Certification is denied for construction of the outfall structure in wetlands.

C. Controls shall be put in place to stabilize all areas of the bed and bank around and adjacent to the outfall structure and associated intake structures that may be affected by outfall or stream flows, respectively.

D. This certification does not authorize structures for drainage activities that result in a loss of waters of the U.S., such as tile systems.

Nationwide Permit 11. Temporary Recreational Structures

This certification does not allow for the introduction of non-native flora or fauna.

Nationwide Permit 12. Utility Line Activities

A. Project proponent/contractor must have a copy of the 401 certification application and the EPA 2007 water-quality-certification-document on-site.

B. Certification is denied for activities in perennial drainages and wetlands.

C. Certification is denied for all water intake structures.

D. Activities in ephemeral and intermittent drainages are certified with the following conditions:

a) Crossings must be placed as close to perpendicular to the watercourse as possible.

b) Affected streambanks must be sloped such that the stream bottom width is not reduced and bottom elevations are restored to original elevations.

c) Disturbed stream banks must be reconfigured to mimic a stable naturally vegetated portion of the same stream within ½ mile in either direction of the project and not reduce the bottom width of the stream. If a natural/native stream reach is not available within the adjacent reach, other natural portions of the drainage can serve as a reference condition.

E. USACE General Condition 20. Mitigation, (72 Fed. Reg. 11092, 11193-11194 (March 12, 2007)) requires permittees to avoid and minimize adverse effects to the maximum extent practicable on the project site. A statement or other evidence that General Condition 20 has been met should be submitted.

F. Applications for this NWP water quality 401 certification must include the following detailed information at a minimum and will serve as baseline certification conditions for the project.

a) Location and Wetland Map:
- Narrative describing both the location (i.e., Section, Township Range, and decimal Latitude/Longitude) of the proposed construction project, the affected waters/wetlands, and the type of utility line.
- An aerial photograph with wetland overlays must be provided with Ordinary High Water Mark delineated.

b) Waters of the U.S. Description:
- A description of the waterbody/wetlands including the dominant plant communities present in the wetlands or riparian areas.
- On-site photographs of the site must be taken during the growing season to include a colored overlay line indicating the alignment of the pipeline across the waterbody/wetlands or other construction features.

c) Construction Description:
- A description of the methods by which the utility will be constructed on the site including (but not limited to) the trench size and depth, backfill materials (specifications), construction machinery to be used, cofferdam or road crossing specifications, and best

management practices to be implemented on-site (including invasives controls).

- Access roads must be constructed outside of waters /wetlands where alternatives are available.
- Proposed under drains (tile, french drains, etc.) must be described if proposed with the project.
- Details on pipeline corrosion protection methods must be provided.
- Where a positive gradient exits the wetlands such that drainage along the pipeline may occur, clay blocks, or another suitable method that will protect aquatic resources from inadvertent drainage, are required to prevent said wetland drainage.
- Site-specific cross-sectional drawings should be provided, including a drawing of the clay block or other method used to stop drainage.

d) Description of Impacts to Waters of the U.S.:

- A description of the amount (acreage and square feet) of disturbance/loss to waters of the U.S. (including wetlands) must be provided. Loss of waters includes both temporary and permanent impacts to wetlands resources from the construction project, including access roads.
- The length and width of the crossing and amount of impacts to the dominant plant communities must be provided.
- All unavoidable temporary sidecasting of materials (dredge or fill material) in wetlands must be placed on landscaping fabric or a weed-free hay/straw layer to mark the existing wetlands elevation.

e) Mitigation and Restoration Plan:

- Where proposed construction of the utility results in the conversion of a wetland type (i.e., forested/shrub willow type) to an herbaceous wetland type (i.e., wet meadow type), mitigation of the shrub community must be accomplished on-site to restore designated uses.
- The top six to 12 inches must be backfilled with topsoil from the trench.
- Mitigation plans (including road design specifications to minimize adverse impacts to adjacent wetlands) for unavoidable impacts resulting from access roads must be provided.

Nationwide Permit 13. Bank Stabilization

A. For this certification to be valid, the use of root wads, tree trunks, planting of live vegetation, proper bank sloping or a combination thereof will be used as bank stabilization structures. Native plants shall be planted in all disturbed areas and artificial soil stabilizing material (e.g. mulch, matting, netting etc) shall be used to reduce soil erosion. These materials, to include all plants and plant seed

shall be on site or scheduled for delivery prior to or upon completion of the earth moving activities. Sediment control measures shall be maintained in good working order at all times.

For the purpose of this condition, "proper sloping" is defined as configuring the disturbed bank to mimic a stable portion of the same stream within ½ mile in either direction of the project and not reduce the bottom width of the stream.

B. If flow conditions dictate the use of hardened structures, only appropriately sized angular rock may be used. The use of soil cement, concrete, grouted riprap, etc. is NOT certified.

Nationwide Permit 14. Linear Transportation Projects

A. Stormwater resulting from both the construction and operation of these authorized projects (including runoff from bridge decks) must be routed into constructed runoff water quality control systems (e.g. sediment basins, wet ponds, etc.) in order to eliminate sediment and other pollutants prior to entry of stormwater into waters of the United States.

B. Affected streambanks must be sloped such that the steam bottom width is not reduced and bottom elevations are restored to original elevations.

C. Crossings must be placed as close to perpendicular to the watercourse as possible.

D. The upland and riparian areas adjacent to all sides of the crossing must be revegetated in all directions from the banks of the tributary with native vegetation that is common to the geographical area. Native plants shall be planted in all disturbed areas and artificial soil stabilizing material (e.g. mulch, matting, netting etc) shall be used to reduce soil erosion. These materials, to include all plants and plant seed shall be on site or scheduled for delivery prior to or upon completion of the earth moving activities.

Nationwide Permit 15. U.S. Coast Guard Approved Bridges

A. Stormwater resulting from both the construction and operation of these authorized projects (including runoff from bridge decks) must be routed into constructed runoff water quality control systems (e.g. sediment basins, wet ponds, etc.) in order to eliminate sediment and other pollutants prior to entry of stormwater into waters of the United States.

B. Affected streambanks must be sloped such that the steam bottom width is not reduced and bottom elevations are restored to original elevations.

C. Crossings must be placed as close to perpendicular to the watercourse as possible.

D. The upland and riparian areas adjacent to all sides of the crossing must be revegetated in all directions from the banks of the tributary with native vegetation that is common to the geographical area. Native plants shall be planted in all disturbed areas and artificial soil stabilizing material (e.g. mulch, matting, netting etc) shall be used to reduce soil erosion. These materials, to include all plants and plant seed shall be on site or scheduled for delivery prior to or upon completion of the earth moving activities.

E. Bridge decks should be designed such that they do not drain directly into the waterbody.

Nationwide Permit 16. Return Water From Upland Contained Disposal Areas.

Certification is denied.

Nationwide Permit 17. Hydropower Projects.

Certification is denied.

Nationwide Permit 19. Minor Dredging

A. Dredge or fill may **not** be placed on temporary islet, islands, sandbars, landmass or other area of sediment accumulation, within the banks of a stream, shore of lake, edge of wetland or other type of waterbody; unless the vegetation and geomorphology signify a long term stable configuration. (e.g. Areas of accumulation are not formed from temporary situations such as drought conditions or temporary upstream reservoir release conditions).

B. Dredge materials must be placed in an upland and controlled such that it cannot return to waters of the U.S.

Nationwide Permit 21. Surface Coal Mining Operations. Nationwide Permit 21. Surface Coal Mining Activities

Certification is denied.

Nationwide Permit 23. Approved Categorical Exclusions

This certification is valid only for Categorical Exclusions listed in RGL 05-07.

Nationwide Permit 27. Aquatic Habitat Restoration, Establishment, and Enhancement Activities

A. This certification does not allow conversion of one habitat type to another (e.g. wetlands to open water, woody vegetation to herbaceous).

B. This certification does not allow for the introduction of non-native flora or fauna.

Nationwide Permit 28. Modifications of Existing Marinas

This certification does not allow for expansion.

Nationwide Permit 29. Residential Developments

A. Certification is denied for discharges into wetlands, intermittent or perennial drainages.

B. Subdivisions not authorized under this certification.

C. USACE General Condition 20. Mitigation (72 Fed. Reg. 11092, 11193-11194 (March 12, 2007)) requires permittees to avoid and minimize adverse effects to the maximum extent practicable on the project site. Statement or other evidence that General Condition 20 has been met should be submitted.

Nationwide Permit 30. Moist Soil Management for Wildlife

This certification does not allow for the introduction of non-native flora or fauna.

Nationwide Permit 33. Temporary Construction, Access and Dewatering

Certification is denied.

Nationwide Permit 34. Cranberry Production Activities

Certification is denied.

Nationwide Permit 37. Emergency Watershed Protection and Rehabilitation

A. In addition to the information specified in USACE General Condition 27 Preconstruction Notification (72 Fed. Reg. 11092, 11188 (March 12, 2007)), the notification to USEPA must include documentation that the work qualifies as an "emergency" situation and that immediate action will be taken if nationwide authorization is verified. In addition, notification must include:

a) A delineation of special aquatic sites;

b) Any spoil must be placed in an upland and controlled such that it cannot return to waters of the U.S.; and

c) A delineation of riparian areas to be cleared and an analysis of alternatives to such clearing.

B. Certification is denied for discharges for which notification is submitted more than one year after the official conclusion of the emergency that caused the situation.

C. Certification is denied for channelization of streams or sloughs or for removal of silt beyond what was deposited by the emergency.

Channelization is defined, for this purpose, as the placement of excess material in a manner that modifies the bank alignment, and subsequently the channel alignment, from its present condition.

D. Certification is denied for a discharge of fill or dredged material into special aquatic sites if a practicable alternative that does not involve discharge into a special aquatic site is available. If discharge into a special aquatic site is unavoidable, discharge must be minimized.

E. The disturbing or clearing of riparian areas shall be minimized to enough space to provide equipment access.

F. Construction of temporary structures or drains for the purpose of reducing or preventing flood damage is certified if the site is returned to pre-flood condition within 60 days following the emergency.

G. Repair of permanent structures damaged by floodwaters is certified to the extent that it returns the structure to pre-flood condition.

Nationwide Permit 38. Cleanup of Hazardous and Toxic Waste

For this certification to be valid, notification to USEPA and the Tribe is required.

Nationwide Permit 39. Commercial and Institutional Developments

A. Certification is denied for discharges into wetlands, intermittent or perennial drainages.

B. Certification is denied for subdivisions

C. USACE General Condition 20. Mitigation, (72 Fed. Reg. 11092, 11193-11194 (March 12, 2007)) requires permittees to avoid and minimize adverse effects to the maximum extent practicable on the project site. Statement or other evidence that general condition 20 has been met should be submitted.

Nationwide Permit 40. Agricultural Activities

A. Certification is denied for the construction of new levees, ditches, or drainage activities.

B. Certification is denied for the construction of building pads causing the loss of greater than 1/10 acre of wetlands for both USDA program participants and non-participants.

C. Certification is denied for activities related to tile construction.

Nationwide Permit 41. Reshaping Existing Drainage Ditches

A. Clearing of riparian corridors must be limited to the minimum necessary for project construction. Clearing limits must be specified in the construction contract.

B. This certification does not authorize stream relocation projects.

Nationwide Permit 42. Recreation Facilities

A. Certification is denied for the construction of parking lots, golf course, golf course buildings, ponds and reservoirs, ski areas and ski infrastructures, race tracks, and amusement parks.

B. Certification is denied for discharges resulting in the loss of more than 100 linear feet of channel, streambank, and/or wetlands for a single and complete project.

C. Clearing of riparian corridors and wooded and scrub shrub areas must be limited to the minimum necessary for project construction. Clearing limits must be specified in the construction contract on a drawing and/or map, and in narrative format.

Nationwide Permit 43. Stormwater Management Facilities

Certification is denied for the construction of new stormwater management facilities.

Nationwide Permit 44. Mining Activities. Nationwide Permit 44. Mining Activities

Certification is denied.

Nationwide Permit 45. Repair of Uplands Damaged by Discrete Events.

Certification is denied.

Nationwide Permit 46. Discharges in Ditches

Certification is denied.

Nationwide Permit 47. Pipeline Safety Program Designated Time Sensitive Inspections and Repairs

A. Certification is denied, unless there is imminent danger to human health or the health of the environment.

B. Notification and restoration should begin immediately after inspections and repairs are completed. After the fact, notification should be done as soon as possible and include documentation that the work done qualifies as an "emergency" situation and that immediate action was necessary.

Nationwide Permit 49. Coal Remining Activities.

Certification is denied.

Nationwide Permit 50. Underground Coal Mining Activities

Certification is denied.

APPLICATION CHECKLIST FOR COMPLETENESS
401 CERTIFICATIONS for USACE NWPs

1. Application date.
2. Applicant's full identity whether individual or corporate.
3. Applicant's full mailing address or addresses.
4. Signature of the legal applicant is required.
5. Telephone number and e-mail address (and FAX, if available) at which the applicant may be reached during normal business hours.
6. If the applicant is utilizing the services of a legal agent to apply for certification, items 2, 3, 4 and 5 will be also needed for this agent.
7. Full names and addresses of all property owners of the project.
8. Full names and addresses of all adjoining property owners to the project.
9. Overall project description and range of project. (This includes all phases of work.)
10. Purpose of the project (flood control, drainage improvement, erosion control, road construction, etc.).
11. Project dimensions (length, width, height) expressed in standard, commonly-used, units of measurement.
12. Site maps and engineering drawings for more complex projects are recommended, sketches may suffice for smaller or less complex projects. Maps or aerial photographs should be clear and readable. Aerial photographs should be marked with wetlands, waterbodies or high water mark and areas of activity marked.
13. Legal description of the project location (appropriate breakdown into Section(s), Township, Range and County sufficient to locate and define on topographic maps). The notification should also include locational information in decimal degree latitude and longitude.
14. General travel directions to the site.
15. Name or identity of the water body(s) that the project is expected to impact. If the stream is not permanent flow, the applicant will need to include an evaluation by the Corps of Engineers that the water body is jurisdictional.
16. Specifically, state which NWP(s) the applicant is applying for from the USACE. Include measures of impact to waterbody (for example: acreage for surface water impacts, linear feet of bank, shoreline linear feet and acreage) for each NWP.
17. A statement of the cubic yards of material or fill proposed to be placed below the ordinary high water mark within the watercourse, in a wetland, or other waterbody and a complete description as to the source and type of material or fill to be used.
18. A complete description of all work initiated or completed prior to the application submission at this site and within the vicinity. If there has been recent work done by others, this should be noted also.
19. As unavoidable losses to the aquatic resources (including streams and wetlands) must be mitigated, a detailed mitigation plan must be submitted where such losses will be incurred.
20. Statement discussing the avoidance and minimization, a presumption of NWPs and required for individual permits.
21. Monitoring of site, including photograph of site from marked sites, photograph of site after work is complete.
22. Complete copy of USACE application or Checklist (such as the PCN Checklist available from Southern Pacific Division), with supporting material.

STATE HISTORICAL SOCIETY OF NORTH DAKOTA

February 10, 2010

Ms. Sarah Ruffo
SWCA
Bismarck Office
115 North 4th St, Suite 1
Bismarck ND 58501

NDSHPO REF. 10-0665 BIA/BLM/MHAN Environmental Assessment for four oil, gas, water pipelines and utilities Zenergy Operating Company, LLC Dakota-3
John Elk 28-27H in portions of [NW SW T150N R93W Section 28]
Wells 32-29H in portions of [SW SE T150N R93W Section 32]
Helena Ruth Grant 33-34H in portions of [NW NW T150N R93W Section 33]
Morgan Smith 36-35H in portions of [NW SE T150N R93W Section 36] all in Dunn County, North Dakota

Dear Ms. Ruffo,

We received your letter regarding NDSHPO REF. 10-0665 BIA/BLM/MHAN Environmental Assessment for four oil, gas, water pipelines and utilities Zenergy Operating Company, LLC Dakota-3, Dunn County, North Dakota as detailed above.

We request that a copy of cultural resource site forms and reports be sent to this office so that the cultural resources archives can be kept current. Perhaps one might consider putting TCP (Traditional Cultural Properties) related information in separate reports not sent to this office.

Thank you for your consideration. Consultation is with MHAN THPO. If you have any questions please contact Susan Quinnell, Review & Compliance Coordinator at (701)328-3576 or squinnell@nd.gov

Sincerely,

Merlan E. Paaverud, Jr.
State Historic Preservation Officer (North Dakota)
and Director, State Historical Society of North Dakota

United States Department of Agriculture

NRCS

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

March 3, 2010

Sarah Ruffo
SWCA Environmental Consultants
Bismarck Office
115 North 4th Street, Suite 1
Bismarck, ND 58501

RE: The proposed action includes approval by the BIA and BLM for the construction, drilling, completion and production of four exploratory oil and gas wells on the Forth Berthold Reservation by Zenergy Operating Company, LLC (Zenergy), Dunn County, ND

Dear Ms. Ruffo:

The Natural Resources Conservation Service (NRCS) has reviewed your letter dated February 9, 2010, concerning the construction, drilling, completion and production of four exploratory oil and gas wells on the Forth Berthold Reservation by Zenergy Operating Company, LLC (Zenergy), Dunn County, North Dakota.

NRCS has a major responsibility with the Farmland Protection Policy 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.

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.

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,

PAUL J. SWEENEY
State Conservationist

cc:
Susan Tuhy, DC, NRCS, Killdeer, ND
Terry Gisvold, ASTC (FO), NRCS, Dickinson, ND

"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

March 8, 2010

Sarah J. Ruffo
Environmental Specialist
SWCA Environmental Consultants
115 North 4th Street, Suite 1
Bismarck, ND 58501

Dear Ms. Ruffo:

RE: Exploratory Oil & Gas Wells
Forth Berthold Reservation

Zenergy Operating Company, LLC has proposed four exploratory oil and gas wells on the Fort Berthold Reservation in Sections 28, 32, 33 & 36, T150N, R93W, of Dunn County, North Dakota.

Our primary concern with oil and gas development is the fragmentation and loss of wildlife habitat associated with construction of the well pads and access roads. We recommend that construction be avoided to the extent possible within native prairie, wooded draws, riparian corridors, and wetland areas.

We also suggest that botanical surveys be completed during the appropriate season and aerial surveys be conducted for raptor nests before construction begins.

Sincerely,

Steve Dyke

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

js

NORTH DAKOTA
DEPARTMENT of HEALTH

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

February 16, 2010

Sarah Ruffo, Environmental Specialist
SWCA Environmental Consultants
115 North 4th Street, Suite 1
Bismarck, ND 58501

Re: Zenergy Operating Co., LLC
Four Exploratory Oil & Gas Wells on
Fort Berthold Reservation, Dunn County

Dear Ms. Ruffo:

This department has reviewed the information concerning the above-referenced project submitted under date of February 9, 2010 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. Development of the production facilities and any access roads or well pads should have a minimal effect on air quality provided measures are taken to minimize fugitive dust. However, operation of the wells has the potential to release air contaminants capable of causing or contributing to air pollution. We encourage the development and operation of the wells in a manner that is consistent with good air pollution control practices for minimizing emissions.

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's 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.

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

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

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

Sincerely,

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

LDG:cc
Attach.

NORTH DAKOTA
DEPARTMENT of HEALTH

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

Construction and Environmental Disturbance Requirements

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

Soils

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

Surface Waters

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

Fill Material

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

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
3425 Miriam Avenue
Bismarck, North Dakota 58501

MAR 2 2010

Ms. Sarah Ruffo
Environmental Specialist
SWCA Environmental Consultants
115 North 4th Street, Suite 1
Bismarck, North Dakota 58501

Re: Four exploratory oil and gas wells on the Fort Berthold Reservation

Dear Ms. Ruffo:

This is in response to your February 9, 2010, letter regarding proposed exploratory oil and gas wells on the Fort Berthold Reservation. Zenergy Operating Company, LLC (Zenergy) has proposed four exploratory oil and gas wells on the Fort Berthold Reservation, Dunn County, North Dakota.

Specific locations are:

Dakota-3 John Elk #28-27H: T. 150 N., R. 93 W., Section 28, NW¼SW¼
Dakota-3 Wells #32-29H: T. 150 N., R. 93 W., Section 32, SW¼SE¼
Dakota-3 Helena Ruth Grant #33-34H: T. 150 N., R. 93 W., Section 33, NW¼NW¼
Dakota-3 Morgan Smith #36-35H: T. 150 N., R. 93 W., Section 36, NW¼SE¼

We offer the following comments under the authority of and in accordance with the Migratory Bird Treaty Act (16 U.S.C. 703 et seq.) (MBTA), the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.) (NEPA), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d, 54 Stat. 250) (BGEPA), Executive Order 13186 "Responsibilities of Federal Agencies to Protect Migratory Birds", the Endangered Species Act (16 U.S.C. 1531 et seq.) (ESA), and the National Wildlife Refuge System Improvement Act of 1997 (Public Law 105-57).

In an e-mail dated October 13, 2009, the Bureau of Indian Affairs (BIA) designated SWCA to represent the BIA for informal Section 7 consultation under the ESA. Therefore, the U.S. Fish and Wildlife Service (Service) is responding to you as the designated non-Federal representative.

Threatened and Endangered Species

A list of federally endangered and threatened species that may be present within the proposed project's area of influence is enclosed. This list fulfills requirements of the Service under Section 7 of the ESA. This list remains valid for 90 days. The BIA or designated non-Federal agent should make a determination of the proposed projects' effects on listed species, including whether there is anticipated destruction or adverse modification of designated critical habitat. This determination may be included in the EA. It should state whether or not the BIA plans to incorporate the Service's recommendations to avoid and minimize any adverse effects. If the BIA does not plan to take the recommended measures, the document should explain why not.

There is designated critical habitat for the piping plover in Dunn County. We recommend that a buffer of at least one-half mile be maintained from piping plover critical habitat. Critical habitat can be viewed on the Service website (http://www.fws.gov/northdakotafieldoffice/endspecies/species/piping_plover.htm). GIS layers of critical habitat can be obtained by contacting our office at the letterhead address.

The proposed Dakota-3 Morgan Smith #36-35H well appears to be within one-half mile of piping plover critical habitat. The Service suggests that Zenergy relocate this well to maintain a one-half mile buffer from Lake Sakakawea reservoir. If Zenergy does not relocate the well, the Service requests that you inform us of how the well will be designed so that neither construction nor ongoing operations of the well, including any potential spills, will impact critical habitat.

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

Whooping cranes in the AWBP annually migrate through North Dakota during their spring and fall migrations. The proposed project lies within a 90 mile corridor that includes approximately 75 percent of all reported whooping crane sightings in the State (enclosure).

Whooping cranes are unlikely to spend more than a few days in any one spot during migration. The Service suggests that the Environmental Assessment (EA) include a requirement that if a whooping crane is sighted within one mile of a well site or associated facilities while it is under construction, that all work cease within one mile of that part of the project and the Service be contacted immediately. In coordination with the Service, work may resume after the bird(s) leave the area.

Potential habitat for the Dakota skipper exists on the Fort Berthold Reservation. In 1995, the Dakota skipper was determined to be a candidate species under the ESA. No legal requirement exists to protect candidate species; however, it is within the spirit of the ESA to consider these species as having significant value and worth protecting.

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

Migratory Birds

The MBTA has no provisions for incidental take. Regardless, it is understood that some birds may be killed even if all reasonable conservation measures are implemented. The Service's Office of Law Enforcement carries out its mission to protect migratory birds through investigations and enforcement, and through fostering relationships with individuals and industries seeking to eliminate their impacts to migratory birds. While it is not possible under the MBTA and BGEPA to absolve individuals or companies from liability by following these guidelines, enforcement will be focused on those individuals or companies that take migratory birds with disregard for the law, and where no legitimate conservation measures have been applied. Please inform us as to whether you intend to follow the following recommendations to minimize impacts to migratory birds, including bald and golden eagles.

Schedule construction for late summer or fall/early winter so as not to disrupt migratory birds or other wildlife during the breeding season (February 1 to July 15). If work is proposed to take place during the breeding season or at any other time which may result in the take of migratory birds, their eggs, or active nests, the Service recommends that the project proponent arrange to have a qualified biologist conduct a field survey of the affected habitats to determine the presence of nesting migratory birds. If nesting migratory birds, their eggs, or active nests are found, we request you contact this office, suspend construction, or take other measures, such as maintaining adequate buffers, to protect the birds until the young have fledged. The Service further recommends that field surveys for nesting birds, along with information regarding the qualifications of the biologist(s) performing the surveys, and any avoidance measures implemented at the

project site, be thoroughly documented and that such documentation be shared with the Service and maintained on file by the project proponent.

The Service estimates that 500,000 to 1 million birds are killed nationwide every year from exposed oil at oil drilling and/or production sites. The unauthorized take of migratory birds at oil production facilities can be prevented with a minimum of expense and effort. Wildlife mortalities in North Dakota are most often observed in association with drilling reserve pits, flare pits, and/or drip buckets and barrels. The Service strongly recommends that the pads be constructed as closed-loop systems, without a reserve pit. Regardless of whether the pads are built with reserve pits, we recommend that the BIA include the following measures in the EA so as to ensure compliance with the MBTA.

- **Keep Oil Off Open Pits or Ponds**. Immediate clean up of oil in open pits is critical to prevent wildlife mortalities.

- **Place Covers on Drip Buckets/Barrels Located Under Valves and Spigots.** Bird entrapments are common within the small (55 gallon or less) barrels placed under valves and spigots to collect dripped oil. Placing a wire mesh or grate over the top of these barrels is a very practical way of preventing access for wildlife.

- **Use Effective and Proven Exclusionary Devices.** Netting is the most effective method of keeping birds from entering open pits (reserve and flare pits). Flagging, reflectors, and strobe lights are not effective. Published scientific studies as well as field inspections by Service personnel have documented bird mortalities at oil pits with flagging, reflectors, and strobe lights (e.g. Esmoil 1995). The effectiveness of netting pits to exclude birds and other wildlife depends on its installation. Effective installation requires a design allowing for snow-loading and one that also prevents ground entry by small mammals and birds. A maximum mesh size of 1.5 inches will allow for snow-loading and will exclude most birds. Nets or wire mesh over flare pits can be implemented if the flare tube is high enough to keep flame away from the net. Some examples of both effective and ineffective netting techniques can be found on the Service's website at http://www.fws.gov/mountain%2Dprairie/contaminants/contaminants1c.html.

Bald and/or golden eagles may use the project area where the proposed wells will be located. Golden eagles inhabit a wide variety of habitat types, including open grassland areas. They are known to nest on cliffs, in trees, manmade structures, and on the ground (Kochert et al. 2002). There are numerous records of golden eagle nests on the Fort Berthold reservation (Pers. Comm. Anne Marguerite Coyle, Dickinson State University). While the bald eagle tends to be more closely associated with forested areas near water (Buehler 2000), they have been found nesting in single trees several miles from the nearest water body. Therefore, there may also be potential habitat for the bald eagle at the proposed project sites. Especially early in the nesting season, eagles can be very sensitive to disturbance near the nest site and may abandon their nest as a result of low disturbance levels, even from foot traffic. A buffer of at least 1/2 mile should be

maintained for golden and bald eagle nests. A permit is required for any take of bald or golden eagles or their nests. Permits to take golden eagles or their nests are available only for legitimate emergencies and as part of a program to protect golden eagles.

The Service recommends that aerial raptor surveys be conducted prior to any on-the-ground activities. The Service recommends that an aerial nest survey (preferably by helicopter) be conducted within one mile of any proposed ground disturbances to identify active and inactive nest sites near the proposed well pad and associated facilities, including proposed new roads. Aerial surveys should be conducted between March 1 and May 15, before leaf-out so that nests are visible.

Aerial surveys should include the following:

1. Due to the ability to hover and facilitate observations of the ground, helicopters are preferred over fixed wing aircraft, although small aircraft may also be used for the raptor surveys. Whenever possible, two observers should be used to conduct the surveys. Even experienced observers only find approximately 50 percent of nests on a flight (Pers. Comm. Anne Marguerite Coyle, Dickinson State University), so we recommend that two flights be performed prior to any on-the-ground work, including other biological surveys or other work.

2. Observations of raptors and nest sites should be recorded using GPS. The date, location, nest condition, activity status, raptor species, and habitat should be recorded for each sighting.

3. We request that you share the qualifications of the biologist(s) conducting the survey, method of survey, and results of the survey with the Service.

High Value Habitat Avoidance

To minimize disturbance to fish and wildlife habitat in the project area, the Service provides the following recommendations:

- Make no stream channel alterations or changes in drainage patterns.

- Install and maintain appropriate erosion control measures to reduce sediment transport to adjacent wetlands and stream channels.

- Reseed disturbed areas with a mixture of native grass and forb species immediately after construction to reduce erosion.

Cumulative Effects Analysis

A large number of wells and appurtenant facilities are being constructed in the western portion of North Dakota. The Service is concerned that the wells, and especially the associated roads, are being put in piecemeal without an overarching plan to ensure that

the facilities are being constructed to access all new pads most efficiently, while disturbing the least amount of habitat. While we understand that there is still some level of uncertainty regarding the extent of the oil formations, there has been enough drilling in this area that the Service believes that the uncertainty is relatively small and decreasing. It would be appropriate for the EA to include some cumulative effects analysis of the existing and proposed pads, roads, electrical transmission lines, and preferably pipelines to transport the products.

Habitat Fragmentation

Prairie habitat is increasingly being lost or fragmented because of the large number of wells and associated roads that are being constructed in areas of the State that were formerly relatively undeveloped. Only about 30 percent of native prairie in North Dakota remains from pre-settlement times (Strong et al. 2005), with nearly all native tallgrass prairie converted nationwide (Ricketts et al. 1999). Oil pads, associated roadways, and vehicle traffic can cause fragmentation of the landscape, disrupting wildlife patterns and making it more likely that non-native plant species may invade an area. The Service recommends placing as few well pads as possible on the landscape and locating pads so as to avoid or minimize the construction of new roads. Many prairie species require large, contiguous blocks of grasslands for their biological needs and may either avoid patchy habitat or experience reduced reproductive success.

- The Service recommends that impacts to native prairie be avoided or minimized. If native prairie cannot be avoided, the Service recommends outlining stringent reclamation requirements, including a bond sufficient to cover the cost of reclamation, as described in the "Post-production Phase – Reclamation" section below.

- The Service recommends that oil wells use existing roads and trails to the greatest extent possible, minimizing all new road construction.

- If a new road is necessary, the Service recommends avoiding native prairie to the greatest extent possible.

- If new roads are constructed, the Service recommends that the disturbed areas along the road be reseeded immediately with a native prairie mix to reduce erosion and prevent invasion by non-native species. Disturbed areas should be monitored regularly throughout the life of the project, and treated with herbicide as necessary to ensure that exotic species are not infesting disturbed areas.

- If multiple companies are developing well pads in the same general area, roads should be shared to the greatest extent possible to minimize disturbance.

- Install and maintain appropriate erosion control measures to reduce sedimentation and water quality degradation of wetlands and streams near the project area.

The Service recommends that the BIA incorporate the relevant requirements described in the Dakota Prairie Grasslands Land and Resource Management Plan (USDA 2001). This document includes a number of requirements to avoid sensitive resources. In particular, the Service suggests that the BIA incorporate the relevant portions of Appendix D, Oil and Gas Stipulations.

Post-production Phase – Reclamation

Each project should include a plan to restore the landscape following project completion, including a bond sufficient to reclaim the area in full. Within one year of a well's closure, the well pads, roads, and associated facilities should be completely removed from the landscape, the land recontoured back to its original profile, and the area reseeded with a native prairie mix. Since native prairie species take some time to establish, and intensive management may be required for several years to ensure that weeds do not infest the area, the Service recommends that the BIA follow the timeline requirements set out in the 2003 *North Dakota Public Service Commission, Standards for evaluation of revegetation success and recommended procedures for pre-and postmining vegetation assessments* (available on-line at http://www.psc.state.nd.us/jurisdiction/reclamation/files/revegdocjuly2003final.pdf). This document requires that reclaimed areas be managed for a minimum of ten years, starting in the year when first seeded. Starting in the sixth year, for at least two consecutive years, or three out of the last five, including the last year, the reclaimed area must meet the approved standard as described in the document.

For prairie areas, the Service recommends planting a diverse mixture of native cool and warm season grasses and forbs. While the North Dakota Public Service Commission document requires only five native grass species, recent research has suggested that a more diverse mix, including numerous forb species, is not only ecologically beneficial, but is also more weed resistant, allowing for less intensive management and chemical use. In essence, the more species included in a mixture, the higher the probability of providing competition to resist invasion by non-native plants. The seed source should be as local as possible, preferably collected from the nearby native prairie.

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

Sincerely,

Jeffrey K. Towner

Jeffrey K. Towner
Field Supervisor
North Dakota Field Office

Enclosures

cc: Bureau of Indian Affairs, Aberdeen
(Attn: Marilyn Bercier)
Bureau of Land Management, Dickinson
ND Game & Fish Department, Bismarck

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FEDERAL THREATENED, ENDANGERED, AND CANDIDATE SPECIES
AND DESIGNATED CRITICAL HABITAT FOUND IN
DUNN COUNTY, NORTH DAKOTA
March 2010

ENDANGERED SPECIES

Birds

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

Whooping crane (Grus Americana): Migrates through west and central counties during spring and fall. Prefers to roost on wetlands and stockdams with good visibility. Young adult summered in North Dakota in 1989, 1990, and 1993. Total population 140-150 birds.

Fish

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

Mammals

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

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

THREATENED SPECIES

Birds

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

CANDIDATE SPECIES

Invertebrates

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

DESIGNATED CRITICAL HABITAT

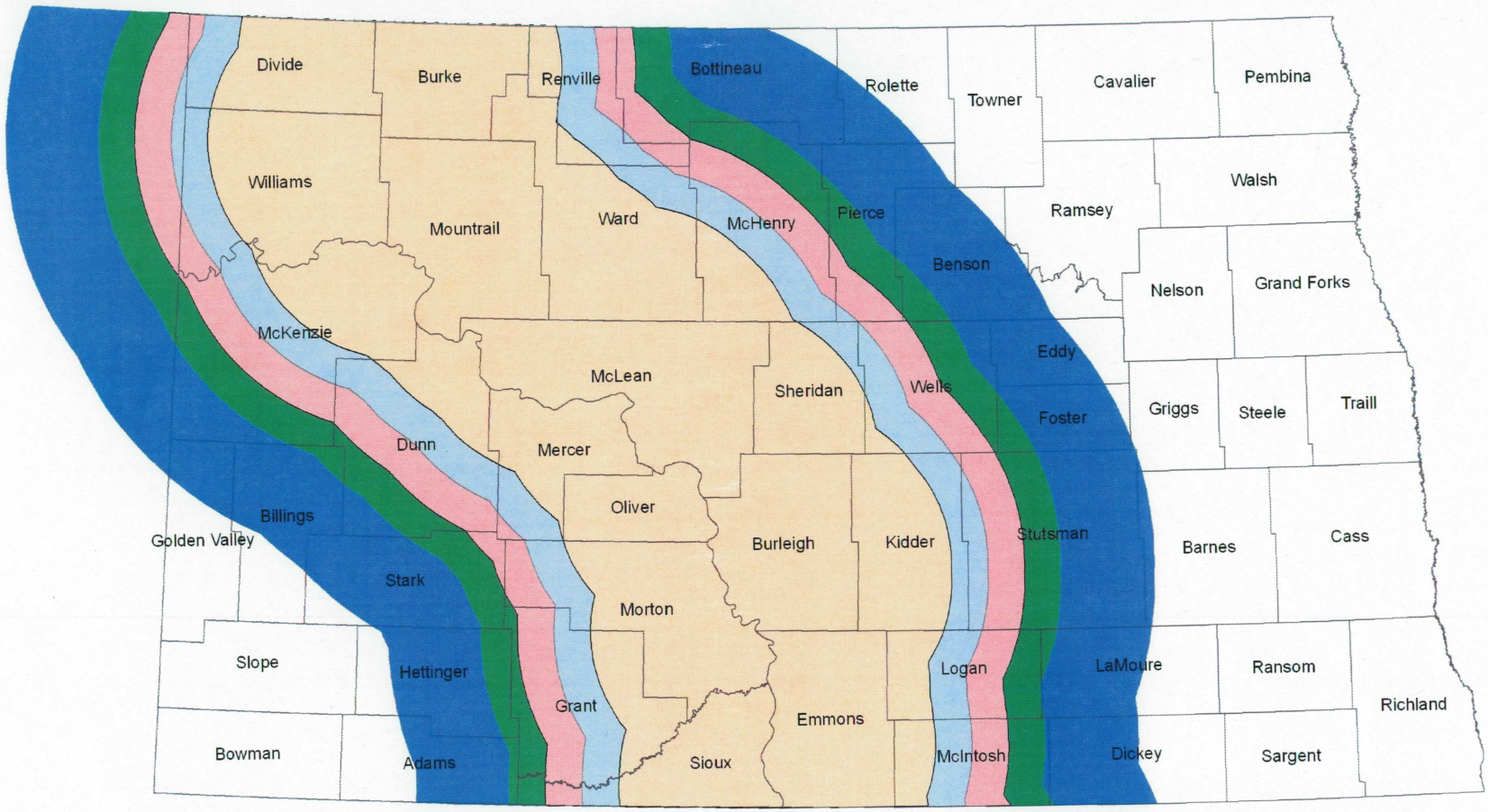
Birds

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

U.S. Fish and Wildlife Service

North Dakota and Montana Whooping Crane Migration Corridor

Central Flyway of the United States



Legend
Percent of Central Flyway Confirmed Sightings

- 75%
- 80%
- 85%
- 90%
- 95%

N
W E
S

0 10 20 40 60 80 Miles

Produced for Ecological Services
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February 9, 2010

Dear Interested Party:

The Bureau of Indian Affairs (BIA) is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA), in cooperation with the Bureau of Land Management (BLM). The proposed action includes approval by the BIA and BLM for the construction, drilling, completion and production of four exploratory oil and gas wells on the Fort Berthold Reservation by Zenergy Operating Company, LLC (Zenergy). The surface locations for the wells are proposed in the following locations and shown on the enclosed project location map.

- **Dakota-3 John Elk #28-27H:** NW¼ SW¼, Section 28, T150N, R93W, Dunn County, North Dakota
- **Dakota-3 Wells #32-29H:** SW¼ SE¼, Section 32, T150N, R93W, Dunn County, North Dakota
- **Dakota-3 Helena Ruth Grant #33-34H:** NW¼ NW¼, Section 33, T150N, R93W, Dunn County, North Dakota
- **Dakota-3 Morgan Smith #36-35H:** NW¼ SE¼, Section 36, T150N, R93W, Dunn County, North Dakota

All four wells would be located within their own 1280-acre spacing unit. The wells would be positioned to utilize existing roadways for access to the greatest extent possible. The drilling of these well sites is proposed to begin as early as May 1, 2010.

The associated facilities required by the project would include roads, utility lines, production facilities (production tanks), and equipment storage facilities. In general, oil would be stored, on location in tank batteries and then hauled to the nearest processing plant or sales point. Produced water would be transported by truck to water disposal wells or enclosed tanks. Any gas produced from these wells would initially be flared until a gas pipeline could be planned, permitted and constructed, if necessary. In the future, Zenergy would complete a right-of-way application for a gas and salt water pipeline to be constructed along access roads to a future-found market for gas and salt water. Zenergy would utilize existing roads and previous disturbances to the greatest extent practicable. Project development would result in the construction of less than 5.5 miles of new or upgraded/improved roads to access the four well pads, each of which would be approximately 3.3 acres. Existing highways and arterial roads would provide the main access to the Project Area.

To ensure that any affect on social, economic, and environmental issues are analyzed accurately, we solicit your views and comments on the proposed action, pursuant to Section 102(2) (D) (IV) of NEPA, as amended. We are interested in developments proposed or underway that should be considered in connection with the proposed project. We also ask your assistance in identifying any property or resources that you own, manage, oversee or otherwise value that might be adversely impacted. Please send your replies and requests for additional project information to:

SWCA Environmental Consultants
Sarah Ruffo, Environmental Specialist
115 North 4th Street, Suite 1
Bismarck, North Dakota 58501
(701) 258-6622
sruffo@swca.com

Comments should be submitted before March 12, 2010 so that they may be addressed in the final document. Questions for the BIA can be directed to Marilyn Bercier, Regional Environmental Scientist, or Mark Herman, Environmental Engineer, at (605) 226-7656.

Sincerely,

Sarah J. Ruffo

U.S. Department of Transportation
Federal Aviation Administration

Date 4/14/10

No objection provided the Federal Aviation Administration is notified of construction or alterations as required by Federal Aviation Regulations, Part 77, Objects Affecting Navigable Airspace, Paragraph 77.13. Notice may be filed on-line at https://oeaaa.faa.gov.

Patricia L. Dressler, Environmental Protection Specialist
Federal Aviation Administration, Bismarck Airports District Office
2301 University Drive, Building 23B, Bismarck, ND 58504

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

TAKE PRIDE IN AMERICA

DK-5000
ENV-6.00

FEB 11 2010

Ms. Sarah J. Ruffo
Environmental Specialist
SWCA Environmental Consultants
115 North 4th Street Suite 1
Bismarck, ND 58501

Subject: Solicitation for Environmental Assessment for Construction, Drilling, Completion, and Production of Four Exploratory Oil and Gas Wells by Zenergy Operating Company, LLC, on the Fort Berthold Reservation in Dunn County, North Dakota

Dear Ms. Ruffo:

This letter is written to inform you that your letter was received on February 10, 2010, and the information and map have been reviewed by Bureau of Reclamation staff.

Proposed oil well sites located in Dunn County appear to be sufficient distance from Fort Berthold Rural Water System lines to avoid affects; however, access roads are not depicted on your map. Therefore I have enclosed a copy of the overall rural water system pipeline key in the general proximity so your plans may account for potential affects to Reclamation facilities in the form of access roads or other disturbances.

Dunn County

Dakota-3 Wells #32-29H: SW¼SE¼, Section 32, T150N, R93W, Dunn County, North Dakota

Dakota-3 John Elk #28-27H: NW¼SW¼, Section 28, T150N, R93W, Dunn County, North Dakota

Dakota-3 Helena Ruth Grant #33-34H: NW¼NW¼, Section 33, T150N, R93W, Dunn County, North Dakota

Dakota-3 Morgan Smith #36-35H: NW¼SE¼, Section 36, T150N, R93W, Dunn County, North Dakota

Please note that I have prepared a detailed map to correspond with the general proximity of the proposed wells within the two quadrangles 150N, 93W and 149N, 93W. Should you require more detailed maps for more specific locations, please do not hesitate to contact me. 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 the opportunity to comment. If you have any further questions, please contact me at 701-221-1287 or Ron Melhouse at 701-221-1288.

Sincerely,

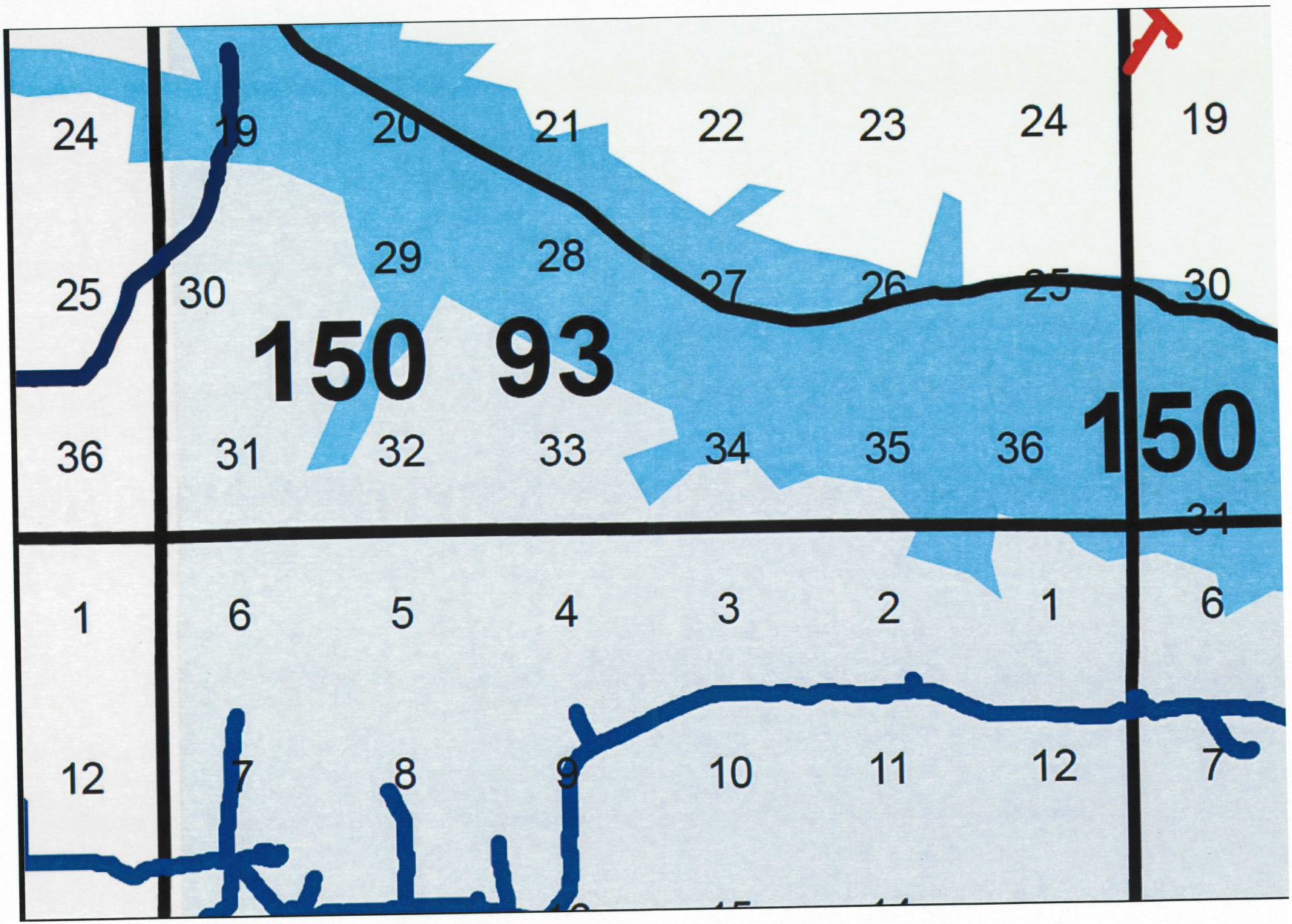
Kelly B. McPhillips
Environmental Specialist

Enclosure

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)

Pipeline Overview Key – **Blue and Orange Lines** Represent Fort Berthold **Rural Water System Waterlines.**



NOTICE OF AVAILABILITY

ZENERGY: Dakota-3 #32-29H

THE BUREAU OF INDIAN AFFAIRS (BIA) AND THE THREE AFFILIATED TRIBES ARE PLANNING ON DRILLING ONE HORIZONTAL OIL/GAS WELL ON *Dakota-3 #32-29H*, ON THE FORT BERTHOLD RESERVATION. CONSTRUCTION IS SCHEDULED TO BEGIN IN THE SUMMER OF 2010.

BASED ON THE ENVIRONMENTAL ASSESSMENT (EA), IT HAS BEEN DETERMINED THAT THE ACTION WILL NOT RESULT IN SIGNIFICANT IMPACTS TO THE QUALITY OF THE HUMAN ENVIRONMENT; THEREFORE, AN ENVIRONMENTAL IMPACT STATEMENT IS NOT REQUIRED.

FOR FURTHER INFORMATION OR TO OBTAIN A COPY OF THE FINDING OF NO SIGNIFICANT IMPACT (FONSI) AND EA, CONTACT HOWARD BEMER, SUPERINTENDENT AT THE FORT BERTHOLD AGENCY AT 701-627-4707.

THE FONSI IS A FINDING ON ENVIRONMENTAL EFFECTS, NOT A DECISION TO PROCEED WITH AN ACTION, THEREFORE CANNOT BE APPEALED.

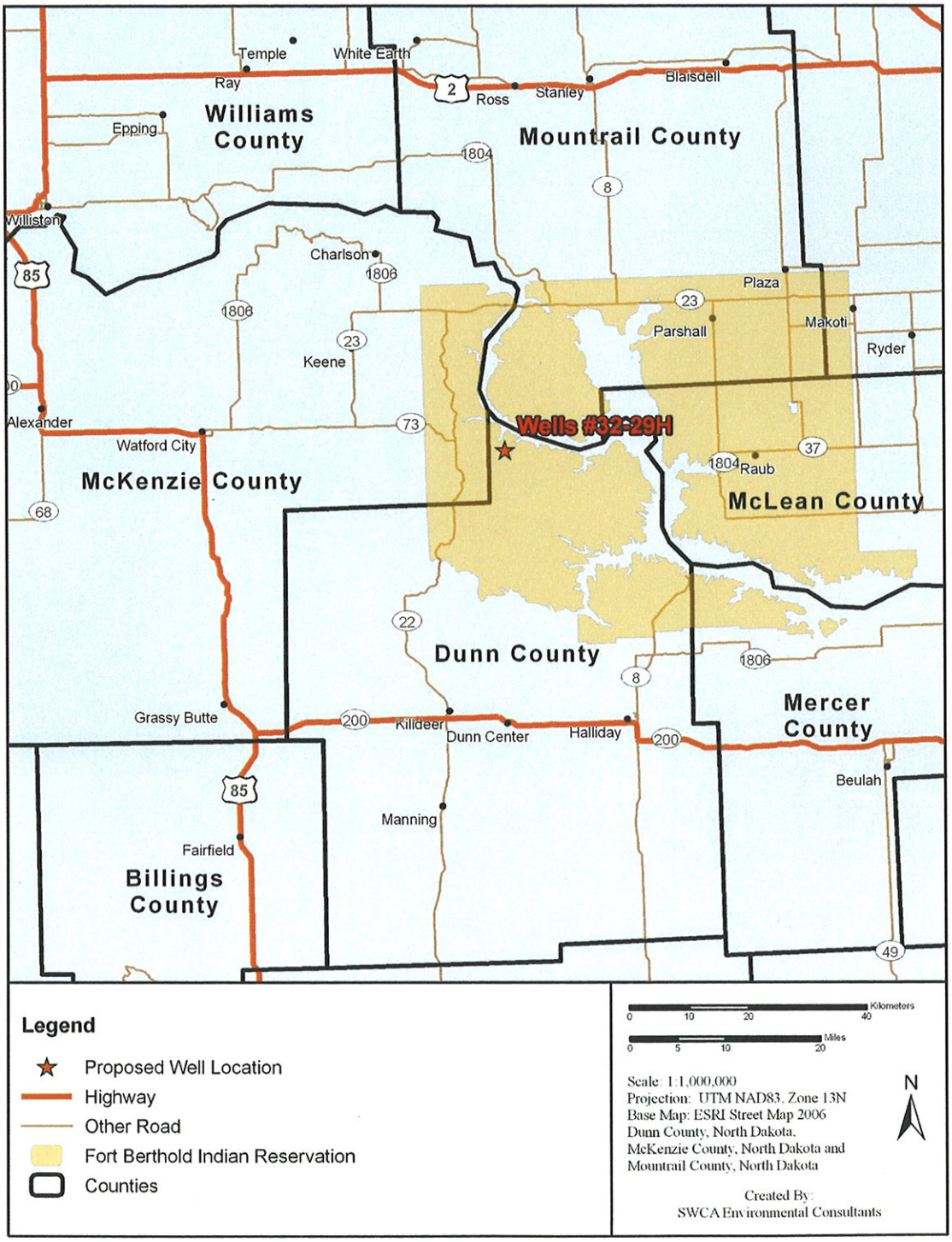


Figure 1. Project location.