

# 1.0 Introduction

Basin Electric Power Cooperative (BEPC) proposes to construct and operate a new 230-kilovolt (kV) transmission line to meet existing and future electric power requirements in northwestern North Dakota, and to interconnect this new transmission line to the Western Area Power Administration's (Western) transmission system. BEPC's proposed new Williston to Tioga Transmission Line Project (hereafter referred to as BEPC's Proposed Project) would transfer power from Western's transmission system at Williston, North Dakota, to the Montana-Dakota Utilities Tioga Substation, near Tioga, North Dakota, in Williams and Mountrail counties.

## 1.1.1 Western Area Power Administration

Western is the Lead Federal Agency for this Environmental Assessment (EA). Western is a Federal power-marketing agency within the U. S. Department of Energy (DOE) that markets and delivers Federal electric power to municipalities, public utilities, Federal and State agencies, and Native American tribes in 15 western and central States. As a Federal agency, Western is required to comply with the National Environmental Policy Act (NEPA, 42 United States Code [USC] 4321 *et seq.*) and regulations set forth under Council on Environmental Quality (CEQ, 40 CFR parts 1500 – 1508) and DOE regulations 10 CFR parts 1021 and 1022. BEPC is the Project applicant (also referred to as Project sponsor or Project proponent) and would be responsible for construction, operation, maintenance, and decommissioning of the proposed Project. BEPC is one of the largest electric generation and transmission cooperatives in the U.S. and provides power to 121 member rural electric systems in nine states. Western's service area and BEPC's northern service area are shown on **figures 1-2** and **1-3**, respectively.

NEPA requires Federal agencies to evaluate their proposed Federal actions for expected impacts on environmental resources that could result from the proposed action and reasonable alternatives. Potential direct, indirect, and cumulative environmental impacts must be identified and assessed. If impacts cannot be fully avoided, mitigation measures must be implemented to reduce the severity of impacts. Based on DOE's NEPA implementation policies, an EA is required to address Western's Federal action and BEPC's Proposed Project to determine if these actions could potentially cause significant environmental impacts.

Letters were mailed to potentially affected landowners, Federal and State agencies, Native American tribes, special interest groups, and elected governmental officials during March 2008. BEPC opened a field office in Williston, North Dakota, during the spring of 2008 to facilitate interaction with landowners and the public, and public scoping meetings were held in Williston and Tioga on March 17 and 18, 2008, respectively. Feedback from the public was used to refine transmission line alignments and to identify potential impacts and mitigation measures. BEPC engineers and right-of-way (ROW) specialists met with individual landowners during the detailed routing process. Additional information about public involvement is provided in Section 1.5, Public Involvement.

## 1.1.2 Western's Purpose and Need

Western's Open Access Transmission Service Tariff provides open access to its transmission system. Open access is provided through an interconnection, if transmission system capacity is available. BEPC has applied to interconnect to Western's power transmission system at the Williston Substation. Western must make a determination that the requested interconnection can be made. In order to make that determination, the potential system and environmental effects need to be determined and evaluated, and are presented in this EA.

Western must consider BEPC's request for interconnection at Williston Substation and, if the Action Alternative is adopted, make modifications to the substation necessary to accommodate the interconnection. If Western adopts the No Action Alternative, Western would not approve the interconnection request, and no modification of the Williston Substation will take place. In response to the Need for Agency Action, Western must adhere to the following:

- Provide Transmission Service. Under Western’s tariff, the agency offers capacity on its transmission system to deliver electrical power when such capacity is available. The Tariff complies with the Federal Energy Regulatory Commission’s Final Order Numbers 888, 888A, 888B, and 888C, which are intended to ensure non-discriminatory transmission system access.
- Protect Transmission System Reliability and Service to Existing Customers. Western needs to ensure that existing transmission system reliability and service is not degraded. Western conducts transmission and system studies to ensure that system reliability and service to existing customers are not adversely affected by proposed new interconnections.
- Consider the Applicant’s Objectives. Since the statement of Purpose and Need affects the extent to which alternatives are considered reasonable, it is important to understand both Western’s Purpose and Need and that of the applicant.

The expansion of the Williston Substation was evaluated for potential environmental impacts in this analysis and in the Wolf Point to Williston Transmission Line Rebuild EA (prepared August 2003). If Western approves the interconnection request, the Williston to Tioga Transmission Line Project would interconnect to substation equipment within this expansion.

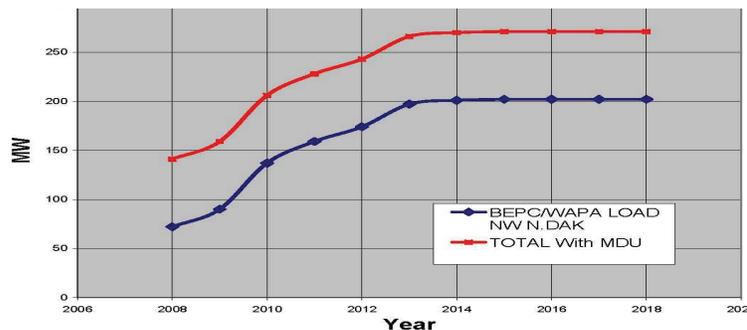
### 1.1.3 BEPC’s Project Purpose and Need

BEPC’s Transmission Services Division completed a comprehensive transmission system study in September 2008 that addressed load forecasts in portions of northwestern North Dakota and northeastern Montana. The study analyzed impacts of the latest load forecast for the region that has been affected by rapid increases in oil and gas extraction and delivery. The load forecast for this area is shown on **figure 1-1**.

The study showed that the existing system will have insufficient capacity to accommodate projected loads by 2011. Furthermore, Western’s Williston to Charlie Creek 115-kV transmission line is in poor physical condition and is currently being rebuilt to provide 230-kV service.

The existing Tioga 230/115-kV transformer limits the power imports from Saskatchewan to 165 megawatts (MW). The increased 115-kV network load has increased loading on the Tioga 230/115-kV transformer to the extent the 165-MW Saskatchewan import can no longer be accommodated. Also, the loss of the Tioga 230/115-kV transformer causes low voltage on the 115-kV system. Therefore, a parallel transformer is needed to mitigate the existing overload and provide a backup for the existing transformer. This project also is underway.

The proposed Williston to Tioga 230-kV transmission line project would complete the 230-kV loop from Tioga to Charlie Creek and to meet the projected loads. Without the facility, the existing Williston to Tioga 115-kV line would be subject to overload, resulting in noncompliance with utility practice and requirements, reduced substation equipment service life, or failure outage to end users.



**Figure 1-1 Northwest North Dakota Load Forecast – 2007 Forecast**

## 1.2 Assessment Process

BEPC's Proposed Project is being analyzed in this EA, and requires a permit issued by the North Dakota Public Service Commission (NDPSC). NEPA and NDPSC requirements are integrated into a single Environmental Assessment (EA) supporting selection of a preferred alternative. A corridor level assessment that is required by the NDPSC is provided in **Appendix A**, The Proposed Project that follows a Preferred Route. Two other transmission line Route Options and the No Action Alternative, are evaluated as part of this EA. The No Action Alternative is applicable to the proposed interconnection at Western's Williston Substation. Selection of a No Action Alternative would preclude an interconnection at Western's Williston Substation and indirectly preclude construction of the proposed transmission line. Detailed transmission line routing was carried out by BEPC to maximize the use of existing linear features, avoid sensitive areas and receptors, minimize environmental impacts, and comply with landowner requests, and to comply with NDPSC requirements. Aerial photography, field reconnaissance, and available published data were used to identify potential routes that would accomplish these objectives. Cultivated fields were avoided, to the extent practicable, to minimize impacts to agricultural activities. BEPC transmission line engineers and right-of-way (ROW) specialists met with landowners during detailed routing to refine potential routes to accommodate specific landowner wishes. Based on public comments from a previous project with similar environmental issues, BEPC elected to use single-pole transmission line structures during the planning stages of the Williston to Tioga Transmission Project. Use of single-pole structures would greatly reduce land requirements, conflicts with agricultural activities, and the introduction and spread of noxious weeds.

## 1.3 Project Location

The proposed Project would be located in northwestern North Dakota, almost entirely in Williams County. Williston Substation is located west of the City of Williston, in Williams County; Tioga Substation is located northeast of the City of Tioga, less than two miles into western Mountrail County. The Project location is shown on **figure 1-2**.

## 1.4 Project Conformance with Policies, Plans, and Programs

Interconnection to the Western transmission system requires approval from Western, and construction and operation of a new transmission line requires a permit from the NDPSC.

Under NEPA and CEQ regulations an EA must be prepared on Western's Federal action and BEPC's Proposed Project. This EA process analyzes the environmental impacts of both actions. The EA process could result in a Finding of No Significant Impact or a decision to prepare an Environmental Impact Statement (EIS). If significant impacts are identified that cannot be avoided or mitigated to less-than-significant, an EIS would be required.

A transmission line routing study was carried out in compliance with the NDPSC guidelines for Energy Conversion and Transmission Siting, as defined in title 49 of the North Dakota Century Code (NDCC). State approval of the project is granted by a decision from the NDPSC.

### 1.4.1 North Dakota Public Service Commission

The NDPSC has regulatory authority over the siting and permitting of BEPC's Proposed Project. It is the policy of the NDPSC "... to route transmission facilities in an orderly manner compatible with environmental preservation and the efficient use of resources. In accordance with this policy, sites and routes shall be chosen which minimize adverse human and environmental impacts while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion." (Chapter 49-22 of the North Dakota Energy Conversion and Transmission Facility Siting Act.)

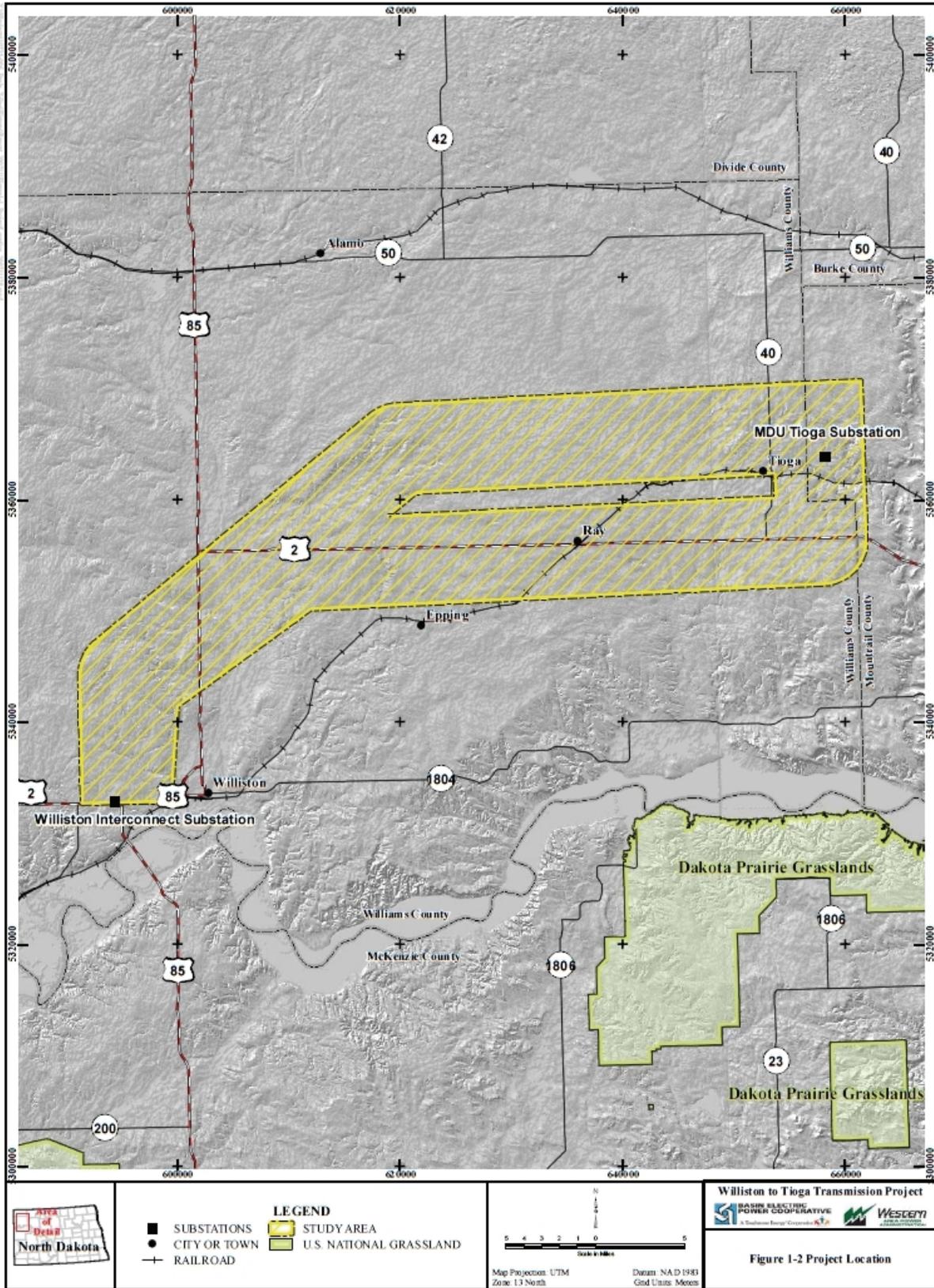


Figure 1-2 Project Location

State requirements include the identification and evaluation of a proposed transmission line corridor or corridors. Corridor widths are to be 10 percent of the length, but no more than 6 miles wide. Potential transmission line alignments are then routed within the identified corridor, or corridors. Although corridor and alignment routing are two-step processes, BEPC requested, and was granted, a combined approach for the Williston to Tioga Transmission Line Project.

Section 49-22-05.1 (Exclusion and Avoidance Areas – Criteria) of the North Dakota Energy Conversion and Transmission Facility Siting Act states that "... areas within five hundred feet (152.4 meters) of an inhabited rural residence must be designated as avoidance areas." The section also indicates that the "... five hundred foot (152.4 meters) avoidance area criteria for inhabited rural residence may be waived by the owner of the inhabited rural residence ..."

The State also identifies additional exclusion areas that include National and State parks, landmarks, historic districts, wilderness areas, archaeological sites, Federal and State designated grasslands, game refuges, game management areas and threatened and endangered species habitat. The State does not distinguish critical habitat, as defined in the Federal Endangered Species Act (ESA).

Avoidance areas are identified in section 69-06-08-02 as historical resources that are not designated as exclusion areas, areas within city limits, areas within 100-year event floodplains, geologically unstable areas, woodlands and wetlands, and areas of recreational significance that are not designated as exclusion areas.

Route selection criteria designated in section 69-06-08-02(3) require that the applicant (i.e., BEPC) demonstrate that "... adverse effects resulting from the location, construction, and operation of the facility ... (must) be at an acceptable minimum, or that those effects will be managed and maintained at an acceptable minimum." Selection criteria include minimizing impacts to: agriculture; community resources and infrastructure; and human, plant, and animal resources.

State routing criteria that are applicable to the proposed Williston to Tioga Transmission Line are addressed in full in Section 3.1, NDPSC Routing Criteria.

#### **1.4.2 Permits, Authorizations, and Consultation Required**

Permitting and agency authorization and Consultations would be required from various Federal, State, and county agencies. Permitting and coordination requirements include:

- Western – System Interconnection Authorization, compliance with NEPA, National Historic Preservation Act (NHPA), and other applicable Federal laws, regulations, and executive orders.
- U.S. Army Corps of Engineers – Compliance with the Clean Water Act.
- U.S. Fish and Wildlife Service (USFWS) – Compliance with the ESA (section 7 consultation), compliance with the Migratory Bird Treaty Act (MBTA).
- North Dakota Department of Transportation – Permit to construct and operate a transmission line across or within highway ROW.
- North Dakota Public Service Commission – Certificate of Corridor Compatibility and Route Permit.
- State of North Dakota Historic Preservation Office – Compliance with the National Historic Preservation Act (NHPA) (section 106 consultation).
- North Dakota Game and Fish Department (NDGFD) – Consultation to identify any State-listed species of concern that could potentially be affected by the Proposed Project.
- Williams County – Planning and Zoning Board indicated that a Conditional Use Permit would be required for the Proposed Project.

- Zoning permits are likely to be required by some townships.
- Burlington Northern – Santa Fe Railroad – Authorization to construct and operate a transmission line across railroad ROW.

Western’s and BEPC’s service areas are shown on **figures 1-3** and **1-4**, respectively.

## 1.5 Public Involvement

The primary public involvement goal for the Williston to Tioga Transmission Project is to share Project information and to obtain relevant input from participants about the Proposed Project. The following discussion describes the scoping process for the Williston to Tioga Transmission Project.

### 1.5.1 Notification

Western initiated the EA notification process by mailing letters to potential affected landowners, interested individuals, non-governmental organizations, interest groups, and agencies on March 5, 2008. The notification letters announced the public scoping meetings scheduled for March 17 and 18, 2008, as well as the intent to prepare an EA. Notification letters also were sent to Native American tribes that traditionally used the area.

In addition to the notification letters, advertisements were placed in two local newspapers: the *Williston Herald* and *Tioga Tribune*. Advertisements in the *Williston Herald* were published on Wednesday, March 9, 2008, and Sunday, March 12, 2008; advertisements were published in the *Tioga Tribune* on Wednesday, March 5, 2008, and Wednesday, March 12, 2008. Radio advertisements announcing the public meetings were broadcast on one local radio station (KTGO-AM), five times a day, on Monday and Tuesday, from 6:00 a.m. to 7:00 p.m. and three additional times a day on Tuesday from 6:00 a.m. to 12 noon during the week of March 11 through March 18, 2008. Flyers were posted in storefronts and other community gathering places in the towns of Williston, Tioga, Epping, Springbrook, Ross, Stanley, and Ray.

The “owner’s preferred route” presented during the scoping period was revised in response to public comments. As a result of the changes, landowners that could be affected by the new Preferred Route were identified. Advertisements notifying the public of the proposed changes were placed in the *Williston Herald* on May 25, 2008, and June 1, 2008. Additionally, BEPC representatives visited every landowner along the new route to discuss the Preferred Route and obtain survey permission.

### 1.5.2 Scoping Meetings

Two scoping meetings were held to provide the public an opportunity learn more about the Proposed Project and to discuss their concerns. The dates, locations, and number of attendees at the scoping meetings are provided in **table 1-1**.

**Table 1-1 Public Scoping Meetings**

Meeting Location	Meeting Date	Number of Attendees that Signed In
El Rancho Motor Hotel Williston, North Dakota	March 17, 2008	58
Jungle Restaurant Tioga, North Dakota	March 18, 2008	25



Figure 1-3 Western's Service Area

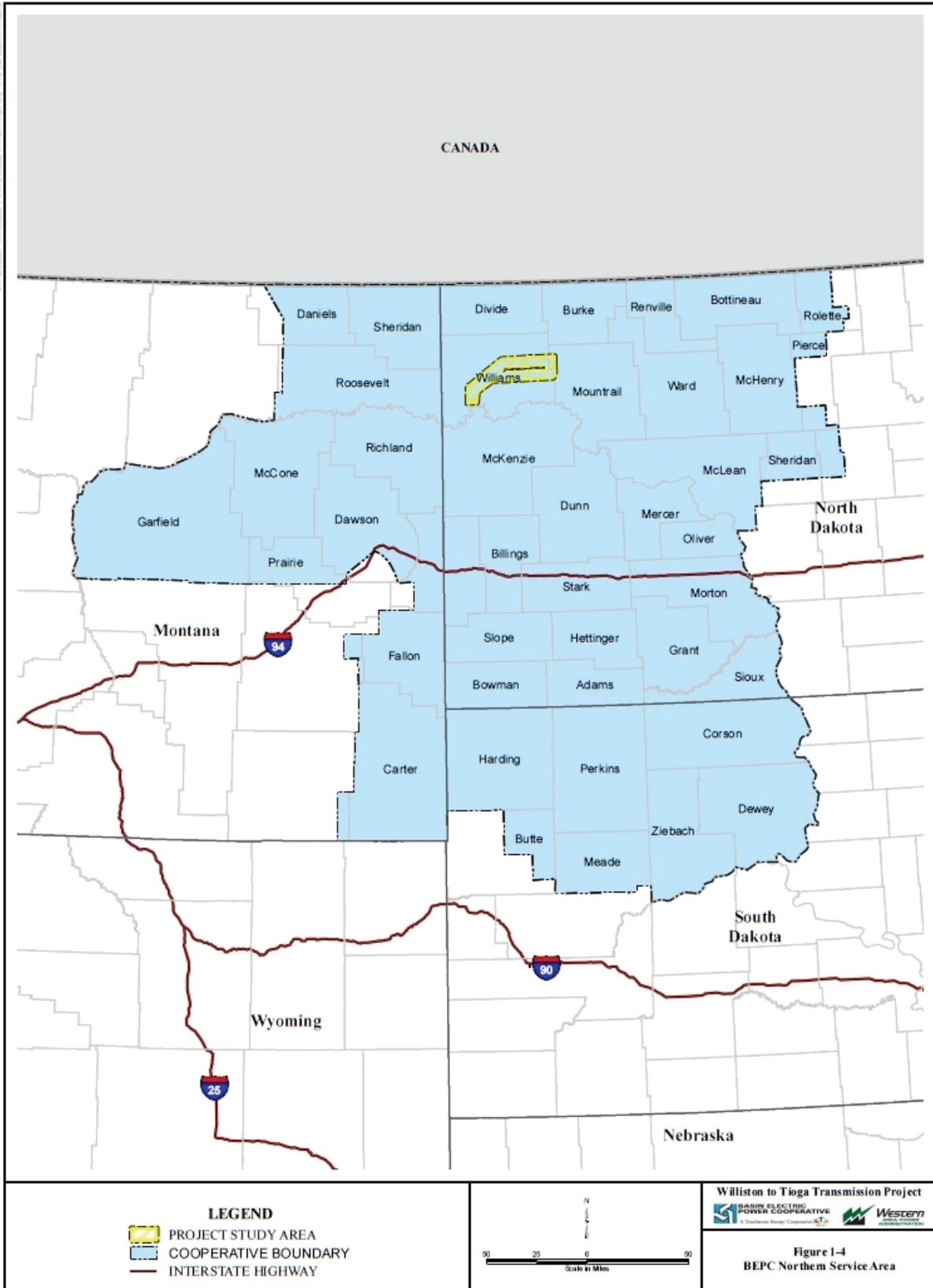


Figure 1-4 BEPC Northern Service Area

The meetings were held in an open house format to promote information exchange about the Proposed Project and to gather public input. Poster boards and aerial photographs showing the Proposed Project and the environmental review process were available to facilitate discussion between meeting attendees and Western and BEPC representatives. Project maps were provided for meeting attendees to note their suggestions and comments. Also, comment forms were available for meeting attendees to complete and submit at the meeting or mail to Western at a later date.

#### Ray City Commissioners' Meeting

BEPC representatives met with the City of Ray's commissioners on May 12, 2008. A map of the revised Preferred Route was presented to the city and a request to survey city lands was submitted, which was approved by the Commissioners.

#### Williams County Planning and Zoning Board

BEPC representatives presented the scope of the proposed Project to the Williams County Planning and Zoning Board on September 2, 2008. Additional meetings are planned to acquire county permits for the Proposed Project.

#### Additional Meetings and Outreach

The revised Preferred Route would parallel 28 miles of U.S. Highway 2. Accordingly, BEPC met with the North Dakota DOT about routing the line adjacent to the highway ROW. BEPC representatives also met with the area's crop sprayers and the City of Ray grain elevator manager to discuss the potential of the revised Preferred Route interfering with crop spraying. Additionally, the North Dakota State Land office was contacted to get their input on routing options where the revised Preferred Route would cross State lands.

#### Consultation and Coordination with Federal, State, and Local Governments

Specific regulations require Western to coordinate and consult with Federal, State, and local agencies about the potential of the Preferred Route and Route Options that could affect sensitive resources. The coordination and consultation must occur in a timely manner and these activities are required before any final decisions are made. Issues related to agency consultation may include biological resources, cultural resources, socioeconomic, land and water management. Biological resource consultation included section 7 consultation with the USFWS, as prescribed in the ESA, and consultation with State resource agencies. Cultural resource consultations apply to potential impacts to important cultural or archaeological sites, including section 106 consultation with the State Historic Preservation Officer (SHPO), as prescribed in the NHPA. The Federal, State, and local agencies that Western contacted are provided in **Appendix B**, Notification and Public Comments.

#### Native American Consultation

In compliance with the NHPA, Western initiated government-to-government consultation for BEPC's Proposed Project by sending letters and Project maps on August 1, 2008, to the following tribal groups: Eastern Shoshone Tribe, Northern Arapaho Tribe, Northern Cheyenne Tribe, Oglala Lakota Nation, Rosebud Sioux Tribe, Cheyenne River Sioux Tribe, Standing Rock Sioux, Crow Tribe, Fort Peck Tribes, and Three Affiliated Tribes. The letters were sent to inform the tribal groups of the proposed undertaking and to solicit comments concerning traditional cultural properties (TCPs) or places of cultural and religious importance. The Rosebud Sioux tribe, the only tribe to respond to the letters, indicated that they had no objection to the Proposed Project. At this time, no TCPs or places of cultural and religious importance have been identified within the Project area either through inventory or by the contacted tribal groups.

### **1.5.3 Summary of Scoping Comments**

Western received a total of 34 comment submittals (e.g., letters, comment forms) containing 53 individual comments, and numerous verbal comments during the public scoping period. Most of the comments were from landowners; comments from agencies included the North Dakota DOT and the NDGFD.

Following the close of the public scoping period, comments were compiled and analyzed to identify issues and concerns. Each comment was reviewed and entered into an electronic database. As each comment was entered, the mailing list was updated to ensure that all interested parties would receive information throughout the process. Reports were generated categorizing the issues by topic and/or resources; reports were then reviewed to identify data entry errors and to eliminate duplication.

#### **1.5.4 Identification of Issues**

Information gained during scoping assists Western in identifying the potential environmental issues, Route Options, and mitigation measures associated with development of the Proposed Project. Transmission line segments that were presented during public meetings are shown on **figures 1-5** through **1-7**.

Most of the comments were related to potential impacts to landowner property. As a result of the landowner comments during the scoping period, transmission line routes that were presented in the scoping meetings were revised. The revised routes were published in the *Williston Herald* on May 25, 2008. Additionally, BEPC personally responded, either by email or mail, to approximately 30 individual landowners who requested additional information and/or maps of the routes.

In addition to impacts to landowner property, there were concerns about potential impacts from the Proposed transmission line route northwest of the Sloulin Field International Airport, where a runway expansion is planned. The proposed routes would avoid potential impacts to airport operations. The NDGFD expressed concern about potential disturbance of native prairie, riparian corridors, and wetlands areas related to construction of H-frame structures. However, during the planning phase of the Project, BEPC determined the single-pole structures would be used.

Additional comments and requests received during detailed routing were used by BEPC engineers and lands specialists to refine the routing process. BEPC engineers and lands specialists worked one-on-one with landowners to address each individual concern. Route alignments were adjusted in most instances to accommodate landowner concerns where it was practical and did not result in greater impact to other landowners and natural resources. Comments received during the scoping process have been summarized and are included in **appendix B**. Routing adjustments that were made as a result of collaborative discussions with landowners are described in **appendix C**.

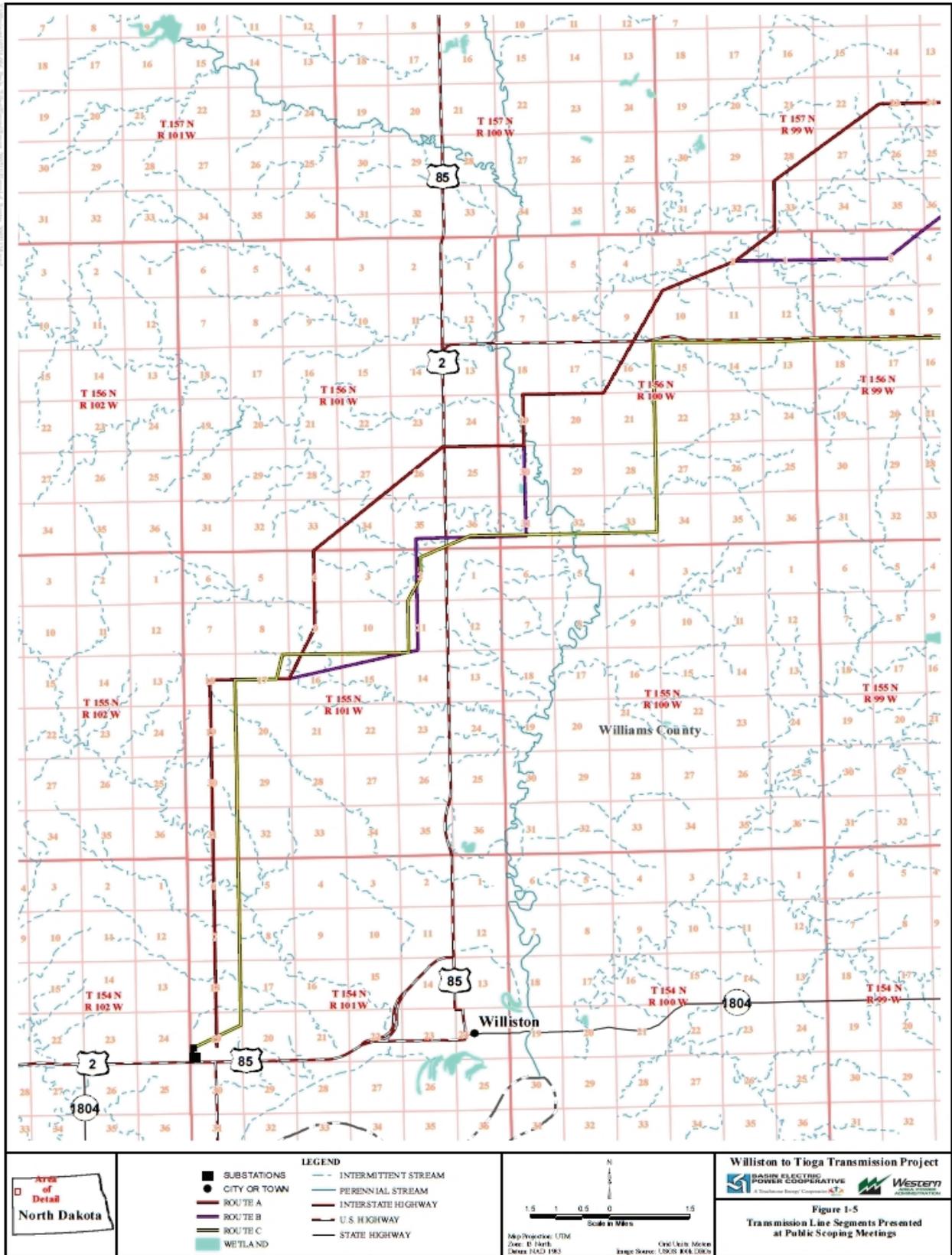


Figure 1-5 Transmission Line Segments Presented at Public Scoping Meetings

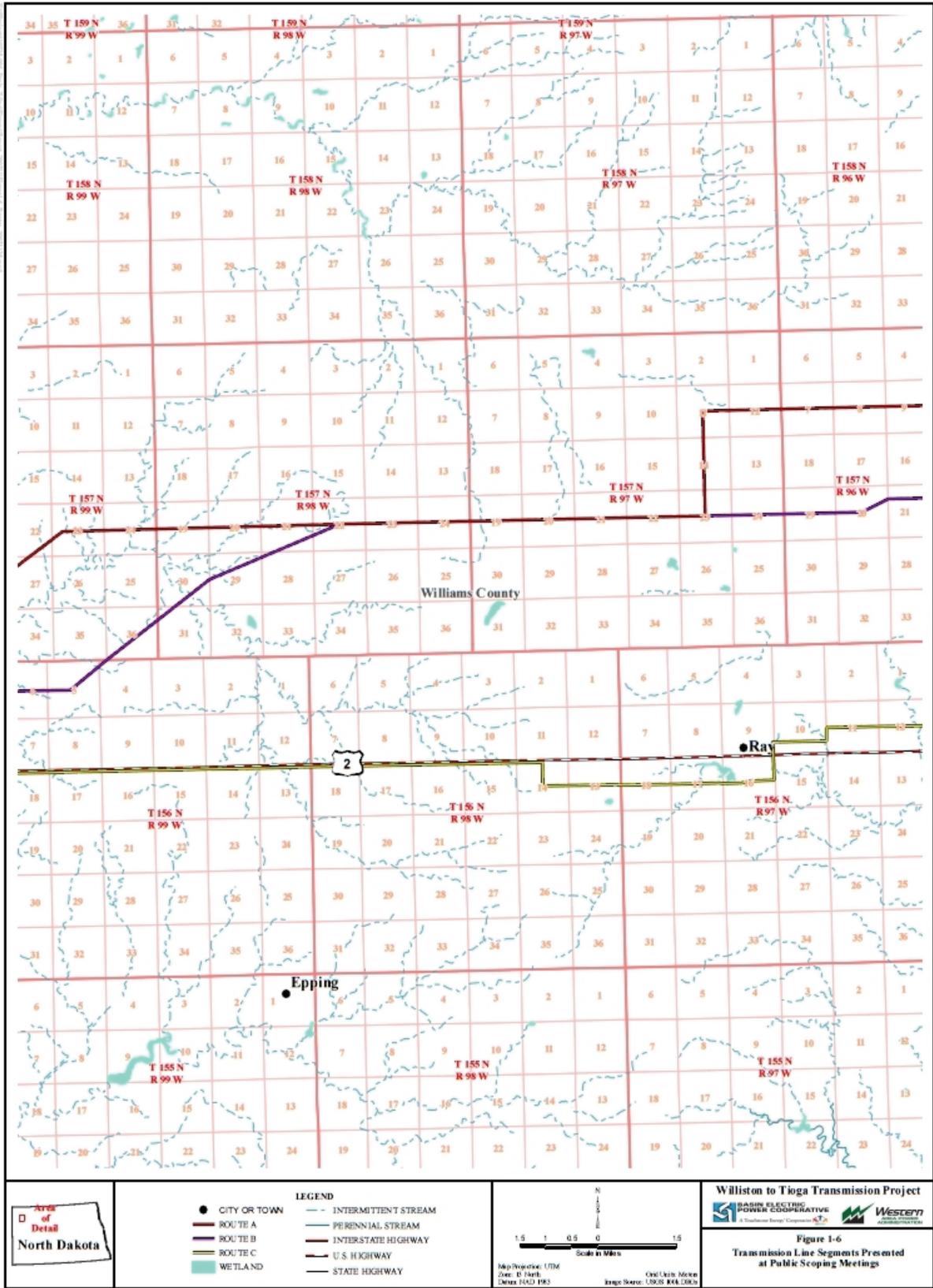


Figure 1-6 Transmission Line Segments Presented at Public Scoping Meetings

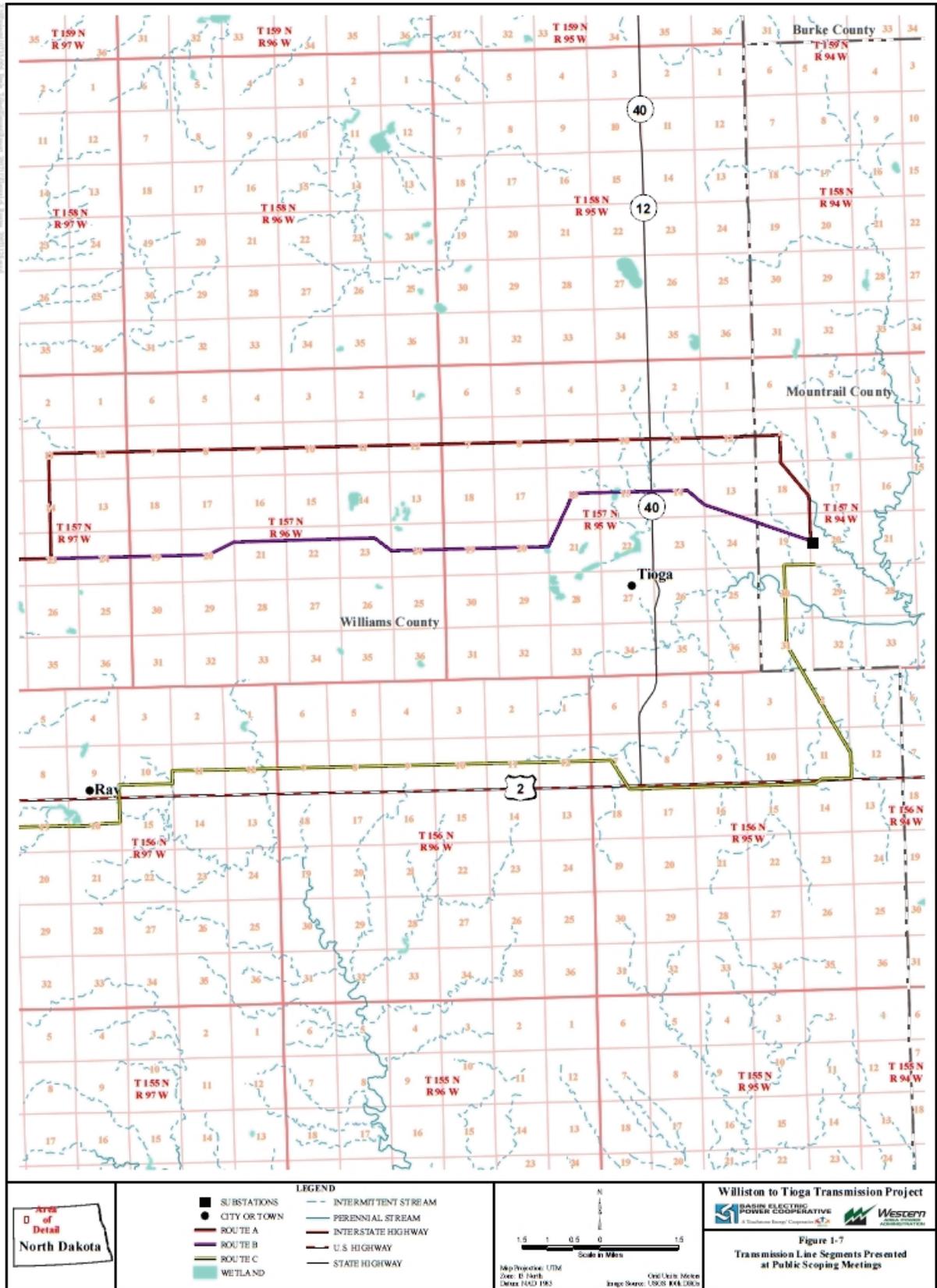


Figure 1-7 Transmission Line Segments Presented at Public Scoping Meetings