



**WBI ENERGY TRANSMISSION, INC.**

**North Bakken Expansion Project**

**Resource Report 8  
Land Use, Recreation, and Aesthetics**

**Final**

**Docket No.  
CP20-52-000**

**February 2020**

**WBI ENERGY TRANSMISSION, INC.  
NORTH BAKKEN EXPANSION PROJECT  
RESOURCE REPORT 8 – LAND USE, RECREATION, AND AESTHETICS**

| <b>Minimum Filing Requirements For Environmental Reports:</b>  | <b>Addressed in:</b>                                |
|--|---|
| 1. Classify and quantify land use affected by: Title 18 of the Code of Federal Regulations (CFR) Part § 380.12(j)(1)<br>a. Pipeline construction and permanent rights-of-way;<br>b. Extra work/staging areas;<br>c. Access roads;<br>d. Pipe and contractor yards; and<br>e. Aboveground facilities. | Section 8.2   |
| 2. Identify by milepost all locations where the pipeline right-of-way would at least partially coincide with existing right-of-way, where it would be adjacent to existing rights-of-way, and where it would be outside of existing right-of-way – 18 CFR § 380.12(j)(1)                             | Section 8.2.1 and appendix 1D of Resource Report 1. |
| 3. Provide detailed typical construction right-of-way cross section diagrams showing information such as widths and relative locations of existing rights-of-way, new permanent right-of-way and temporary construction right-of-way – 18 CFR § 380.12(j)(1)   | Appendix 1C of Resource Report 1                    |
| 4. Summarize the total acreage of land affected by construction and operation of the project - 18 CFR § 380.12(j)(1)   | Section 8.2 and table 8.2-1                         |
| 5. Identify by milepost all planned residential or commercial/business development and the timeframe for construction – 19 CFR § 380.12(j)(4)  | Section 8.5   |
| 6. Identify by milepost special land uses (e.g., maple sugar stands, specialty crops, natural areas, national and state forests, conservation land, etc.) – 18 CFR § 380.12(j)(4)  | Sections 8.7, 8.8, 8.9, and 8.10                    |
| 7. Identify by beginning milepost and length of crossing all land administered by federal, state, or local agencies, or private conservation organizations – 18 CFR § 380.12(j)(4)   | Sections 8.4  |
| 8. Identify by milepost all natural, recreational, or scenic areas, and all registered natural landmarks crossed by the project – 18 CFR § 380.12(j)(4 & 6)  | Section 8.9   |
| 9. Identify all facilities that would be within designated coastal zone management areas – 18 CFR § 380.12(j)(4)   | Not Applicable                                      |
| 10. Identify by milepost all residences that would be within 50 feet of the construction right-of-way or extra work area - 18 CFR § 380.12(j)(5)   | Not applicable; see section 8.5                     |
| 11. Identify all designated or proposed candidate National or State Wild and Scenic Rivers crossed by the project – 18 CFR § 380.12(j)(6)  | Not Applicable; see section 8.9                     |
| 12. Describe any measures to visually screen aboveground facilities, such as compressor stations – 18 CFR § 380.12(j)(11)  | Not Applicable; see section 8.12                    |
| 13. Demonstrate that applications for rights-of-way or other proposed land use have been or soon will be filed with federal land-managing agencies with jurisdiction over land that would be affected by the project - 18 CFR § 380.12(j)(12)  | Section 8.10  |

| <b>Additional Info:</b>   | <b>Addressed in:</b>                  |
|---|---------------------------------------|
| Identify all buildings within 50 feet of the construction right-of-way or extra work areas  | Not applicable; see section 8.5       |
| Describe the management and use of all public lands that would be crossed   | Sections 8.4, 8.7, 8.8, 8.9, and 8.10 |
| Provide a list of landowners by milepost or tract number that corresponds to information on alignment sheets  | Appendix 1H of Resource Report 1      |
| Provide a site-specific construction plan for residences within 25 feet of construction or as requested by Federal Energy Regulatory Commission staff | Not applicable; see section 8.5       |

| <b>Federal Energy Regulatory Commission's<br/>January 17, 2020 Environmental Information Request:</b>  | <b>Addressed in:</b>          |
|--|-------------------------------|
| 1. In section 8.9, at the end of the first paragraph, it states that "...the Project will have no impact on these types of recreation or special interest areas." However, the section does discuss temporary, short-term impacts and concludes with "Therefore, the Project is not expected to have a significant impact on recreation and special interest areas." Rectify this discrepancy. | Section 8.9                   |
| 2. For new aboveground facilities, are there any potential visual effects to historic properties? Is visual screening for nearby residences or other properties for any of the aboveground facilities?   | Section 8.12                  |
| 3. Provide further information on why visual effects are not expected to be significant for new aboveground facilities. As the viewshed for the project area is quite extensive, residences being 0.5 mile away is not a sufficient response.  | Section 8.12 and table 8.12-1 |

**WBI ENERGY TRANSMISSION, INC.  
NORTH BAKKEN EXPANSION PROJECT  
RESOURCE REPORT 8 – LAND USE, RECREATION, AND AESTHETICS**

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## ACRONYMS AND ABBREVIATIONS

|            |  |
|------------|--|
| ACEP       | Agricultural Conservation Easement Program |
| ATWS       | additional temporary workspace             |
| BLM        | U.S. Bureau of Land Management             |
| COE        | U.S. Army Corps of Engineers               |
| Commission | Federal Energy Regulatory Commission       |
| EPA        | U.S. Environmental Protection Agency       |
| FERC       | Federal Energy Regulatory Commission       |
| FWS        | U.S. Fish and Wildlife Service             |
| HDD        | horizontal directional drill               |
| LMNG       | Little Missouri National Grassland         |
| MP         | milepost                                   |
| MRLC       | Multi-Resolution Land Characteristics      |
| NDGFD      | North Dakota Game and Fish Department      |
| NRCS       | Natural Resources Conservation Service     |
| PLOTS      | Private Land Open to Sportsmen             |
| Project    | North Bakken Expansion Project             |
| RFFA       | reasonable or foreseeable future actions   |
| USFS       | U.S. Forest Service                        |
| WBI Energy | WBI Energy Transmission, Inc.              |

**WBI ENERGY TRANSMISSION, INC.  
NORTH BAKKEN EXPANSION PROJECT**

**8.0 RESOURCE REPORT 8 – LAND USE, RECREATION, AND AESTHETICS**

WBI Energy Transmission, Inc. (WBI Energy) proposes to construct and operate the North Bakken Expansion Project (or Project), which consists of an approximately 61.9-mile-long, new 24-inch-diameter natural gas pipeline from new facilities at WBI Energy's Tioga Compressor Station near Tioga, North Dakota, to a new compressor station (Elkhorn Creek Compressor Station) southeast of Watford City, North Dakota.

The Project also involves construction of approximately 0.3 mile of new 24-inch-diameter natural gas pipeline between the proposed Elkhorn Creek Compressor Station to a new interconnect with Northern Border Pipeline Company, approximately 20.4 miles of new 12-inch-diameter natural gas pipeline looping along WBI Energy's Line Section 25, approximately 9.4 miles of new 12-inch-diameter natural gas pipeline looping along WBI Energy's Line Section 30, approximately 0.5 mile of new 20-inch-diameter receipt lateral to the Tioga Compressor Station, and uprating of WBI Energy's Line Section 25. The Project includes additional horsepower at the Tioga Compressor Station; the installation of new and modifications to existing delivery, receipt, and transfer stations along WBI Energy's pipeline routes; the replacement of small segments of pipeline facilities; and the installation of block valves, pig launcher/receiver stations, and other associated appurtenances. Figure 1.1-1 of Resource Report 1 provides an overview of the proposed pipeline system and associated facilities.

In accordance with Title 18 of the Code of Federal Regulations Part 380.12(j), Resource Report 8 addresses land use affected by construction and operation of the proposed Project through characterization and quantifying land use types and identifying recreational and visual resources. Impacts on these resources are analyzed, and mitigation measures are proposed to minimize these impacts. Land use data in this report was compiled using a variety of sources, including environmental field surveys, aerial imagery, and Multi-Resolution Land Characteristics (MRLC) Consortium national land cover data and quadrangle maps. Refer to Resource Report 1 for a detailed Project description.

**8.1 LAND USE CLASSIFICATIONS**

Land uses crossed by the proposed Project were classified based on information obtained from the MRLC Consortium national land cover database (MRLC Consortium, 2016) and review of current digital aerial photography. Land use types within the Project area were divided into the following categories:

- agricultural land—actively cultivated cropland, working areas within farms, pastures used for grazing, and hayfields;
- open land—non-forested areas such as grassland and shrubland, and emergent wetlands;

- forest land—hedgerows, wooded upland, and tree stands adjacent to wetlands;
- developed land—existing roads, railroads, and utility lines; and
- open water—standing surface waters.

## **8.2 LAND USE REQUIREMENTS**

Existing land uses within the construction and operational footprints of the Project, including the permanent and temporary pipeline rights-of-way, additional temporary workspace (ATWS), staging areas, permanent and temporary access roads, and aboveground facilities are summarized in table 8.2-1. A more detailed description of land uses within the Project area is provided in sections 8.2.1 through 8.2.5.

### **8.2.1 Pipeline Right-of-Way**

WBI Energy is proposing to use the standard 75-foot-wide construction right-of-way for the proposed 12-inch-diameter Line Section 25 and Line Section 30 Loops and the 20-inch-diameter Tioga Compressor Lateral. Construction of the proposed 24-inch-diameter Tioga-Elkhorn Creek and Elkhorn Creek-Northern Border pipelines will require a 100-foot-wide construction right-of-way. This additional 25 feet of right-of-way width will be necessary to provide sufficient workspace to accommodate topsoil storage while allowing safe passage of construction equipment and material along the working side of the right-of-way during construction. On U.S. Forest Service (USFS) lands crossed by the Tioga-Elkhorn Creek pipeline, construction will be limited to a 50-foot-wide right-of-way with a 25-foot-wide stretch of ATWS for topsoil segregation and travel lanes.

As shown in the drawings provided in appendix 1C of Resource Report 1, the construction right-of-way typically will consist of a 50-foot-wide working side and a 25-foot-wide spoil side for the standard 75-foot-wide construction right-of-way, and a 70-foot-wide working side and a 30-foot-wide spoil side for the 100-foot-wide construction right-of-way. Following construction, a 50-foot-wide permanent easement will be retained for pipeline operations; the remainder of the construction right-of-way will be restored to pre-existing conditions.

The Tioga-Elkhorn Creek pipeline and Line Section 30 Loop will be collocated from the Tioga Compressor Station to approximately milepost (MP) 2.6 of the Tioga-Elkhorn Creek pipeline (MPs 6.8 to 9.4 of the Line Section 30 Loop). Overlapping portions of the temporary and permanent rights-of-ways along the collocated distance will be used during construction and/or operation of both pipelines.



| TABLE 8.2-1   |              |       |           |       |        |       |           |       |            |       |        |       |  |
|---|--------------|-------|-----------|-------|--------|-------|-----------|-------|------------|-------|--------|-------|--|
| North Bakken Expansion Project  |              |       |           |       |        |       |           |       |            |       |        |       |  |
| Land Uses Affected by Construction and Operation of the Project (in acres) <sup>a</sup> |              |       |           |       |        |       |           |       |            |       |        |       |  |
| Facility/County/Workspace   | Agricultural |       | Open Land |       | Forest |       | Developed |       | Open Water |       | Total  |       |  |
|   | Const.       | Oper. | Const.    | Oper. | Const. | Oper. | Const.    | Oper. | Const.     | Oper. | Const. | Oper. |  |
| <b>Burke</b>  |              |       |           |       |        |       |           |       |            |       |        |       |  |
| <b>Pipeline Facilities</b>  |              |       |           |       |        |       |           |       |            |       |        |       |  |
| Line Section 25 Loop  | 61.5         | 40.9  | 26.4      | 17.8  | 0.0    | 0.0   | 2.9       | 1.9   | <0.1       | <0.1  | 90.8   | 60.6  |  |
| Uprate Line Section 25  | 0.7          | 0.5   | 2.4       | 2.0   | 0.0    | 0.0   | 0.8       | 0.6   | 0.0        | 0.0   | 3.8    | 3.0   |  |
| <b>ATWS</b>   |              |       |           |       |        |       |           |       |            |       |        |       |  |
| Line Section 25 Loop  | 9.5          | 0.0   | 5.5       | 0.0   | 0.0    | 0.0   | 0.6       | 0.0   | 0.0        | 0.0   | 15.6   | 0.0   |  |
| Uprate Line Section 25  | 3.9          | 0.0   | 7.4       | 0.0   | 0.0    | 0.0   | 0.3       | 0.0   | 0.0        | 0.0   | 11.6   | 0.0   |  |
| <b>Aboveground Facilities</b>   |              |       |           |       |        |       |           |       |            |       |        |       |  |
| Norse Plant Receipt Station   | <0.1         | <0.1  | 0.3       | 0.3   | 0.0    | 0.0   | 0.3       | 0.3   | 0.0        | 0.0   | 0.6    | 0.6   |  |
| Norse Transfer Station  | <0.1         | <0.1  | 1.0       | 0.3   | 0.0    | 0.0   | 0.3       | 0.0   | 0.0        | 0.0   | 1.3    | 0.3   |  |
| Lignite Plant Receipt Station and Lignite Town Border Station                           | 0.0          | 0.0   | 0.1       | 0.1   | 0.0    | 0.0   | 0.4       | 0.4   | 0.0        | 0.0   | 0.5    | 0.5   |  |
| <b>Access Roads</b>   | 6.6          | 0.1   | 3.5       | 0.1   | 0.0    | 0.0   | 2.0       | <0.1  | 0.0        | 0.0   | 12.2   | 0.2   |  |
| <b>Subtotal</b>   | 82.2         | 41.5  | 46.6      | 20.6  | 0.0    | 0.0   | 7.6       | 3.2   | <0.1       | <0.1  | 136.6  | 65.4  |  |
| <b>McKenzie</b>   |              |       |           |       |        |       |           |       |            |       |        |       |  |
| <b>Pipeline Facilities</b>  |              |       |           |       |        |       |           |       |            |       |        |       |  |
| Tioga-Elkhorn Creek   | 233.0        | 116.2 | 178.4     | 98.1  | 2.0    | 1.1   | 9.1       | 4.8   | 2.0        | 2.0   | 424.5  | 222.2 |  |
| Elkhorn Creek-Northern Border   | 2.8          | 1.4   | 0.7       | 0.4   | 0.0    | 0.0   | 0.0       | 0.0   | 0.0        | 0.0   | 3.5    | 1.8   |  |
| <b>ATWS</b>   |              |       |           |       |        |       |           |       |            |       |        |       |  |
| Tioga-Elkhorn Creek   | 11.3         | 0.0   | 18.5      | 0.0   | 0.1    | 0.0   | 2.3       | 0.0   | <0.1       | 0.0   | 32.2   | 0.0   |  |
| <b>Staging Areas</b>  |              |       |           |       |        |       |           |       |            |       |        |       |  |
| Boehm Staging Yard  | 0.0          | 0.0   | 6.0       | 0.0   | 0.0    | 0.0   | 0.2       | 0.0   | 0.0        | 0.0   | 6.2    | 0.0   |  |
| Delta Contractors Yard  | 13.1         | 0.0   | 0.0       | 0.0   | 0.0    | 0.0   | 10.5      | 0.0   | 0.0        | 0.0   | 23.6   | 0.0   |  |

| TABLE 8.2-1 (cont'd)  |              |       |           |       |        |       |           |       |            |       |        |       |  |
|---|--------------|-------|-----------|-------|--------|-------|-----------|-------|------------|-------|--------|-------|--|
| North Bakken Expansion Project  |              |       |           |       |        |       |           |       |            |       |        |       |  |
| Land Uses Affected by Construction and Operation of the Project (in acres) <sup>a</sup> |              |       |           |       |        |       |           |       |            |       |        |       |  |
| Facility/County/Workspace   | Agricultural |       | Open Land |       | Forest |       | Developed |       | Open Water |       | Total  |       |  |
|   | Const.       | Oper. | Const.    | Oper. | Const. | Oper. | Const.    | Oper. | Const.     | Oper. | Const. | Oper. |  |
| Flatlands Yard 1  | 4.2          | 0.0   | 0.4       | 0.0   | 0.0    | 0.0   | 0.3       | 0.0   | 0.0        | 0.0   | 4.9    | 0.0   |  |
| Flatlands Yard 2  | 0.3          | 0.0   | 1.1       | 0.0   | 0.0    | 0.0   | 4.8       | 0.0   | 0.0        | 0.0   | 6.1    | 0.0   |  |
| <b>Aboveground Facilities</b>   |              |       |           |       |        |       |           |       |            |       |        |       |  |
| Elkhorn Creek Compressor Station  | 9.6          | 8.6   | 2.2       | 2.2   | 0.0    | 0.0   | 0.2       | 0.1   | 0.0        | 0.0   | 12.0   | 10.9  |  |
| Northern Border Interconnect  | 0.6          | 0.2   | 1.5       | 0.7   | 0.0    | 0.0   | 0.0       | 0.0   | 0.0        | 0.0   | 2.1    | 1.0   |  |
| Cherry Creek Block Valve  | 0.0          | 0.0   | 0.9       | 0.9   | 0.0    | 0.0   | 0.0       | 0.0   | 0.0        | 0.0   | 0.9    | 0.9   |  |
| <b>Access Roads</b>   | 5.8          | 1.0   | 7.4       | 1.8   | 0.0    | 0.0   | 2.1       | 0.2   | 0.0        | 0.0   | 15.4   | 3.1   |  |
| <b>Subtotal</b>   | 280.8        | 127.4 | 217.1     | 104.2 | 2.1    | 1.1   | 29.5      | 5.1   | 2.0        | 2.0   | 531.5  | 239.8 |  |
| <b>Mountrail</b>  |              |       |           |       |        |       |           |       |            |       |        |       |  |
| <b>Pipeline Facilities</b>  |              |       |           |       |        |       |           |       |            |       |        |       |  |
| Line Section 25 Loop  | 23.0         | 15.3  | 9.4       | 6.2   | 0.0    | 0.0   | 0.9       | 0.6   | 0.0        | 0.0   | 33.4   | 22.2  |  |
| <b>ATWS</b>   |              |       |           |       |        |       |           |       |            |       |        |       |  |
| Line Section 25 Loop  | 2.8          | 0.0   | 0.7       | 0.0   | 0.0    | 0.0   | 0.0       | 0.0   | 0.0        | 0.0   | 3.5    | 0.0   |  |
| <b>Aboveground Facilities</b>   |              |       |           |       |        |       |           |       |            |       |        |       |  |
| Robinson Lake Plant Receipt Station   | 1.4          | 0.6   | 0.0       | 0.0   | 0.0    | 0.0   | 0.0       | 0.0   | 0.0        | 0.0   | 1.4    | 0.6   |  |
| Valve No. 6.8   | <0.1         | <0.1  | 0.0       | 0.0   | 0.0    | 0.0   | 0.0       | 0.0   | 0.0        | 0.0   | <0.1   | <0.1  |  |
| <b>Staging Areas</b>  |              |       |           |       |        |       |           |       |            |       |        |       |  |
| Enget Yard  | 0.0          | 0.0   | 39.3      | 0.0   | 0.0    | 0.0   | 0.1       | 0.0   | 0.4        | 0.0   | 39.8   | 0.0   |  |
| <b>Access Roads</b>   | 1.7          | 0.1   | 2.6       | 0.0   | 0.0    | 0.0   | 0.6       | <0.1  | 0.0        | 0.0   | 4.9    | 0.1   |  |
| <b>Subtotal</b>   | 28.9         | 16.0  | 52.0      | 6.3   | 0.0    | 0.0   | 1.6       | 0.7   | 0.4        | 0.0   | 82.9   | 22.9  |  |
| <b>Williams</b>   |              |       |           |       |        |       |           |       |            |       |        |       |  |
| <b>Pipeline Facilities</b>  |              |       |           |       |        |       |           |       |            |       |        |       |  |
| Tioga-Elkhorn Creek   | 234.2        | 117.9 | 37.2      | 18.8  | 0.0    | 0.0   | 5.6       | 3.2   | 12.8       | 12.7  | 289.8  | 152.5 |  |
| Line Section 25 Loop  | 35.1         | 23.4  | 24.5      | 16.5  | 0.0    | 0.0   | 1.3       | 0.9   | 0.0        | 0.0   | 60.9   | 40.7  |  |
| Line Section 30 Loop  | 71.6         | 47.7  | 11.9      | 8.0   | 0.0    | 0.0   | 2.4       | 1.5   | 0.1        | 0.1   | 85.9   | 57.2  |  |
| Tioga Compressor Lateral  | 1.5          | 1.0   | 1.6       | 1.2   | 0.0    | 0.0   | 0.8       | 0.6   | 0.0        | 0.0   | 3.9    | 2.8   |  |

| TABLE 8.2-1 (cont'd)  |              |              |              |              |            |            |             |             |                |                |               |              |  |
|---|--------------|--------------|--------------|--------------|------------|------------|-------------|-------------|----------------|----------------|---------------|--------------|--|
| North Bakken Expansion Project  |              |              |              |              |            |            |             |             |                |                |               |              |  |
| Land Uses Affected by Construction and Operation of the Project (in acres) <sup>a</sup> |              |              |              |              |            |            |             |             |                |                |               |              |  |
| Facility/County/Workspace   | Agricultural |              | Open Land    |              | Forest     |            | Developed   |             | Open Water     |                | Total         |              |  |
|   | Const.       | Oper.        | Const.       | Oper.        | Const.     | Oper.      | Const.      | Oper.       | Const.         | Oper.          | Const.        | Oper.        |  |
| <b>ATWS</b>   |              |              |              |              |            |            |             |             |                |                |               |              |  |
| Tioga-Elkhorn Creek   | 40.7         | 0.0          | 4.4          | 0.0          | 0.0        | 0.0        | 1.7         | 0.0         | 0.0            | 0.0            | 46.8          | 0.0          |  |
| Line Section 25 Loop  | 5.5          | 0.0          | 5.1          | 0.0          | 0.0        | 0.0        | 0.2         | 0.0         | 0.0            | 0.0            | 10.7          | 0.0          |  |
| Line Section 30 Loop  | 8.3          | 0.0          | 1.0          | 0.0          | 0.0        | 0.0        | 0.8         | 0.0         | 0.0            | 0.0            | 10.1          | 0.0          |  |
| Tioga Compressor Lateral  | 0.1          | 0.0          | 0.4          | 0.0          | 0.0        | 0.0        | 0.0         | 0.0         | 0.0            | 0.0            | 0.5           | 0.0          |  |
| <b>Staging Areas</b>  |              |              |              |              |            |            |             |             |                |                |               |              |  |
| Weffen Staging Yard   | 17.2         | 0.0          | 0.0          | 0.0          | 0.0        | 0.0        | 0.5         | 0.0         | 0.0            | 0.0            | 17.7          | 0.0          |  |
| 68th Street Yard  | 14.2         | 0.0          | 5.6          | 0.0          | 0.0        | 0.0        | 0.6         | 0.0         | 0.0            | 0.0            | 20.4          | 0.0          |  |
| CRS Yard  | 9.8          | 0.0          | 13.0         | 0.0          | 0.0        | 0.0        | <0.1        | 0.0         | 0.0            | 0.0            | 22.8          | 0.0          |  |
| Lobell Yard   | 5.8          | 0.0          | 0.0          | 0.0          | 0.0        | 0.0        | 33.7        | 0.0         | 0.0            | 0.0            | 39.5          | 0.0          |  |
| Schmidt Yard  | 7.9          | 0.0          | 0.0          | 0.0          | 0.0        | 0.0        | 0.5         | 0.0         | 0.0            | 0.0            | 8.4           | 0.0          |  |
| <b>Aboveground Facilities</b>   |              |              |              |              |            |            |             |             |                |                |               |              |  |
| Tioga Compressor Station  | 0.0          | 0.0          | 8.0          | 4.4          | 0.0        | 0.0        | 0.5         | 0.0         | 0.1            | <0.1           | 8.5           | 4.4          |  |
| Tioga Plant Receipt Station   | 1.1          | 1.1          | 0.0          | 0.0          | 0.0        | 0.0        | 0.0         | 0.0         | 0.0            | 0.0            | 1.1           | 1.1          |  |
| Springbrook Plant Receipt Station   | 1.0          | 0.4          | 0.0          | 0.0          | 0.0        | 0.0        | 0.0         | 0.0         | 0.0            | 0.0            | 1.0           | 0.4          |  |
| 104th Ave N.W. Pig Launcher   | 0.1          | 0.1          | 0.0          | 0.0          | 0.0        | 0.0        | 0.1         | 0.1         | 0.0            | 0.0            | 0.2           | 0.2          |  |
| <b>Access Roads</b>   | 13.9         | <0.1         | 6.1          | 0.0          | 0.0        | 0.0        | 6.1         | 0.2         | 0.0            | 0.0            | 26.1          | 0.3          |  |
| <b>Subtotal</b>   | 468.0        | 191.6        | 118.7        | 48.9         | 0.0        | 0.0        | 54.9        | 6.5         | 12.9           | 12.8           | 654.4         | 259.8        |  |
| <b>SUBTOTALS BY FACILITY TYPE</b>   |              |              |              |              |            |            |             |             |                |                |               |              |  |
| <b>Pipeline Facilities</b>  | <b>663.4</b> | <b>364.3</b> | <b>292.4</b> | <b>169.0</b> | <b>2.0</b> | <b>1.1</b> | <b>23.7</b> | <b>13.9</b> | <b>14.8</b>    | <b>14.7</b>    | <b>996.4</b>  | <b>563.2</b> |  |
| <b>ATWS</b>   | <b>82.0</b>  | <b>0.0</b>   | <b>43.0</b>  | <b>0.0</b>   | <b>0.1</b> | <b>0.0</b> | <b>5.8</b>  | <b>0.0</b>  | <b>&lt;0.1</b> | <b>0.0</b>     | <b>131.1</b>  | <b>0.0</b>   |  |
| <b>Staging Areas</b>  | <b>72.4</b>  | <b>0.0</b>   | <b>65.4</b>  | <b>0.0</b>   | <b>0.0</b> | <b>0.0</b> | <b>51.2</b> | <b>0.0</b>  | <b>0.4</b>     | <b>0.0</b>     | <b>189.4</b>  | <b>0.0</b>   |  |
| <b>Aboveground Facilities</b>   | <b>13.8</b>  | <b>11.1</b>  | <b>14.1</b>  | <b>8.9</b>   | <b>0.0</b> | <b>0.0</b> | <b>1.7</b>  | <b>0.9</b>  | <b>&lt;0.1</b> | <b>&lt;0.1</b> | <b>29.6</b>   | <b>21.0</b>  |  |
| <b>Access Roads</b>   | <b>28.1</b>  | <b>1.2</b>   | <b>19.7</b>  | <b>2.0</b>   | <b>0.0</b> | <b>0.0</b> | <b>10.9</b> | <b>0.5</b>  | <b>0.0</b>     | <b>0.0</b>     | <b>58.6</b>   | <b>3.7</b>   |  |
| <b>PROJECT TOTAL</b>  | <b>859.7</b> | <b>376.6</b> | <b>434.6</b> | <b>179.9</b> | <b>2.1</b> | <b>1.1</b> | <b>93.3</b> | <b>15.3</b> | <b>15.3</b>    | <b>14.8</b>    | <b>1405.1</b> | <b>587.8</b> |  |

<sup>a</sup> The numbers in this table have been rounded for presentation purposes. As a result, the totals may not reflect the sum of the addends.

As shown in table 8.2-1, the construction right-of-way for the proposed pipelines will require approximately 996.4 acres of land, including approximately 663.4 acres of agricultural land (67 percent), 292.4 acres of open land (29 percent), 2.0 acres of forested land (less than 1 percent), 23.7 acres of developed land (2 percent), and 14.8 acres of open water (1 percent). Following construction, approximately 433.2 acres of temporary construction right-of-way will revert to preconstruction condition and use. The remainder, about 563.2 acres, will be encumbered as permanent easement, including approximately 364.3 acres of agricultural land (65 percent), 169.0 acres of open land (30 percent), 1.1 acres of forested land (less than 1 percent), 13.9 acres of developed land (2 percent), and 14.7 acres of open water (3 percent). The majority of the open water acres presented above are associated with the proposed horizontal directional drill (HDD) crossing of Lake Sakakawea and a natural pond, and a permanent right-of-way will not be maintained at this crossing.

While routing the proposed pipelines, WBI Energy sought opportunities to collocate the pipelines with existing linear corridors (pipelines, utilities, and roads) to minimize impacts on the environment. The proposed pipelines will be collocated along 42.6 miles of the route or 46 percent. More information, including a summary table of collocated facilities, can be found in appendix 1D of Resource Report 1.

### **8.2.2 Additional Temporary Workspace**

ATWS outside of the 75- and 100-foot-wide construction rights-of-way will be required for certain road crossings, points of inflection along the route, areas where special construction methods will be implemented (e.g., the HDD or guided bore method), and areas where additional space is needed for storage of stripped topsoil. The ATWS locations are provided in appendix 8A and depicted on the route maps provided in appendices 1A and 1B of Resource Report 1.

In total, approximately 131.1 acres of land will be required for ATWS during Project construction, including 82.0 acres of agricultural land (63 percent), 43.0 acres of open land (33 percent), 5.8 acres of developed land (4 percent), 0.1 acre of forested land (less than 1 percent), and less than 1.0 acre of open water (less than 1 percent). Impacts on ATWS will be temporary. Following construction, all ATWS areas will be restored to their preconstruction conditions and uses; therefore, no permanent impacts on land use will result from the use of ATWS areas.

### **8.2.3 Staging Areas**

WBI Energy has proposed ten staging areas for office trailers, parking, vehicle maintenance, and storage of pipe and equipment during Project construction. Locations of the staging areas are depicted on the Project route maps provided as appendices 1A and 1B of Resource Report 1. As shown in table 8.2-1, the staging areas collectively encompass about 189.4 acres of land, consisting of 72.4 acres of agricultural lands (38 percent), 65.4 acres of open land (35 percent), 51.2 acres of developed land (27 percent), and 0.4 acre of open water (less than 1 percent).

Preparation of the staging areas will consist of minor grading and leveling; however, these impacts will be temporary. Once construction is completed, the land within the staging areas will be restored to preconstruction conditions, and returned to preconstruction land uses in accordance with landowner agreements. There will be no permanent impacts on these sites.

#### **8.2.4 Access Roads**

WBI Energy will use existing public and private access roads on a temporary basis to transport personnel, equipment vehicles, and materials to the proposed Project work areas during construction. Standard-maintenance public roads will be used for access without modification or improvement. Some minimum maintenance public roads and private roads, may require improvements (such as grading, blading, and placement of gravel for stability) to safely accommodate Project equipment and vehicles. Locations of access roads are depicted on the Project route maps provided as appendices 1A and 1B of Resource Report 1, and a list of these access roads is provided in appendix 8B.

Temporary access road land uses based on the MRLC Consortium national land cover data comprise a mixture of agricultural lands, open lands, and developed land. Aside from the 3.7 acre required for the 10 proposed permanent access roads, all access roads will be restored to pre-existing condition or better. As a result, the Project will have minor impacts on these areas.

#### **8.2.5 Aboveground Facilities**

WBI Energy proposes to construct and operate a new compressor station, the Elkhorn Creek Compressor Station at MP 61.9 of the Tioga-Elkhorn Creek pipeline. Construction of the compressor station will require approximately 12.0 acres of land, consisting of a mixture of agricultural, open, and developed land. Of these 12.0 acres, 10.9 acres will be retained for use during Project operation resulting in the conversion of 8.6 acres of agricultural land and 2.2 acres of open land to developed land. As part of the Project, WBI Energy will modify its Tioga Compressor Station at MP 0.0 of the Tioga-Elkhorn Creek pipeline, which will affect about 8.5 acres of land during construction (8.0 acres of open land, 0.5 acre of developed land, and 0.1 acre of open water) and 4.4 acres of open land during operation. All 4.4 acres is within WBI Energy's Tioga Compressor Station owned property boundaries; however, 2.2 acres are outside of the existing chain linked fenced facility. The fence will be extended to encompass the compressor station expansion.

The Project will also require construction of new and/or modifications to existing delivery, receipt, and transfer stations, including the Tioga Plant Receipt Station, Lignite Plant Receipt Station and Lignite Town Border Station, Robinson Lake Plant Receipt Station, Springbrook Plant Receipt Station, Northern Border Interconnect, Norse Plant Receipt Station, and the Norse Transfer Station. Additionally, three block valves and one pig launcher/receiver will extend outside of the permanent right-of-way. Together these facilities will affect 9.1 acres of land during construction (4.2 acres agricultural land, 3.8 acres open land, and 1.1 acres developed land) and 5.6 acres during operation (2.4 acres agricultural land, 2.3 acres open land, and 0.8 acre developed land).

### **8.3 LAND USE IMPACTS AND MITIGATION**

Project construction is expected to result in the disturbance of approximately 1,405.1 acres of land, including approximately 996.4 acres for pipeline construction rights-of-way, 131.1 acres for ATWS, 189.4 acres for staging areas, 58.6 acres for temporary and permanent access roads, and 29.6 acres for aboveground facility sites. Following construction, approximately 817.4 acres, including the temporary portion of the construction right-of-way, the ATWS, the staging areas, and temporary access roads, will revert to preconstruction land uses. Operation of the Project is anticipated to result in the permanent encumbrance of approximately

587.8 acres of land, including 563.2 acres of permanent pipeline easements, 3.7 acres for permanent access roads, and 21.0 acres for aboveground facility sites.

Operation of the proposed aboveground facilities will permanently convert the land use at these sites to developed (i.e., commercial/industrial) land. Impacts on most of the land uses crossed by the pipelines, however, will be temporary and short term because land uses such as agricultural land and open land will be restored to pre-existing conditions after construction is complete (with certain restrictions, such as no building of structures within the permanent easement).

After construction, or before leaving a work area, construction personnel will be required to clean up surplus materials and debris that remain on the site. Areas affected by construction will be restored, revegetated, and monitored in accordance with the Federal Energy Regulatory Commission's (FERC or Commission) *Upland Erosion Control, Revegetation, and Maintenance Plan* (Plan) and *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures). Copies of WBI Energy's plans are provided in appendix 1F of Resource Report 1. The following sections discuss potential impacts by land use category.

### **8.3.1 Agricultural Lands**

Agricultural lands in the Project area consist of cultivated fields, working areas within farms, and adjacent hedgerows. Construction of the proposed Project will affect approximately 859.7 acres of agricultural land, including lands within the temporary and permanent rights-of-way (663.4 acres), ATWS (82.0 acres), staging areas (72.4 acres), access roads (28.1 acres), and aboveground facilities (13.8 acres). To date, no irrigation or drainage structures have been identified along the proposed pipeline routes; however, if any drainage structures or irrigation facilities are identified and damaged by construction, WBI Energy will restore these structures and facilities to preconstruction condition as stipulated in the Plan or in accordance with landowner agreements.

Following construction, all agricultural land associated with the Project will be restored to preconstruction condition and allowed to revert to preconstruction use. While about 364.3 acres of agricultural land will be within the permanent pipeline rights-of-way, continued use of the land for agriculture will be allowed. The proposed pipelines will be installed with a minimum depth of 48 inches to allow for continued agricultural use. WBI Energy will remove the entire topsoil layer from the pipeline corridor and maintain proper topsoil and subsoil segregation in accordance with the FERC Plan. Agreements will be made with individual landowners to provide compensation for crop damages or losses caused by Project construction.

Construction and operation of the proposed aboveground facilities will permanently convert a combined 11.1 acres of agricultural land to developed land. Approximately 28.1 acres of agricultural land will be affected by construction of temporary and permanent access roads. Of these, 1.2 acre will be permanently converted to developed land. WBI Energy will restore the temporary access roads to pre-existing condition or better and in accordance with landowner agreements. Use of temporary access roads is not anticipated to result in permanent impacts on agricultural lands.

### **8.3.1.1 Prime Farmland**

The U.S. Department of Agriculture defines prime farmland as “land that is best suited to food, feed, fiber, and oilseed crops” (Natural Resources Conservation Service [NRCS], 2019a). This designation includes cultivated land, pasture, woodland, or other lands that are either used for food or fiber crops or are available for these uses. Prime farmland is optimal for crop production. See section 7.3.1 in Resource Report 7 for a discussion of impacts on prime farmland.

### **8.3.1.2 Agricultural Drain Tiles**

To date, no agricultural drain tile systems have been identified within the Project area. If drain tile systems are identified, WBI Energy will work with landowners and drain tile experts to move, restructure, or replace existing tiles and minimize impacts.

## **8.3.2 Open Land**

Open land in the Project area consists of non-forested areas such as grassland and shrubland, isolated stands of trees, emergent wetlands, and shrub/scrub wetlands and is the major land use type affected by the proposed Project. Project construction will affect approximately 434.6 acres of open land, including lands within the temporary and permanent rights-of-way (292.4 acres), ATWS (43.0 acres), staging areas (65.4 acres), access roads (19.7 acres), and aboveground facilities (14.1 acres). Following construction, the temporary pipeline rights-of-way, ATWS, staging areas, and temporary access roads will be restored to preconstruction condition and allowed to revert to preconstruction use.

Approximately 169.0 acres of open land will be within the permanent pipeline easements; however, it will be restored to preconstruction condition and allowed to revert to preconstruction use. Impacts on open land will be minimized through implementation of construction and restoration methods identified in the FERC Plan and Procedures. No long-term impacts are expected on open land, though pipeline maintenance practices will periodically remove woody shrubs from within the permanent right-of-way. Additionally, WBI Energy will ensure topsoil and subsoil remain segregated throughout the construction process. Any vegetated areas that are disrupted will be reseeded and restored with native vegetation and vegetation similar to what is existing in the area. WBI Energy will consult with landowners and local soil conservation specialists regarding recommended seeding methods, rates, and timing. Per the FERC Plan, restoration success will be monitored until final stabilization and revegetation establishment is reached.

Construction and operation of the proposed aboveground facilities will permanently convert a combined 8.9 acres of open land to developed land. Approximately 19.7 acres of open land will be affected by construction of temporary and permanent access roads, 2.0 acres of which will be permanently converted to developed land for operation of permanent access roads. WBI Energy will restore the temporary access roads to pre-existing condition or better and in accordance with landowner agreements. Use of temporary access roads is not anticipated to result in permanent impacts on open lands.

## **8.3.3 Forested Land**

The forested land use category includes wooded upland, hedgerows, and tree stands near wetlands. Construction of the Project will affect approximately 2.1 acres of forested land, all of

which is within the temporary and permanent right-of-way and ATWS areas for the Tioga-Elkhorn Creek pipeline. Once construction is complete, approximately 1.1 acres of the forested land will be retained as open land within the new permanent right-of-way. No forested lands are located within the staging areas, access roads, or aboveground facilities.

Construction in forested areas along the pipeline rights-of-way will require the removal of trees to prepare the construction workspace. Following construction, trees and shrubs in the temporary construction right-of-way will be allowed to revegetate. Forested land within the 50-foot-wide permanent right-of-way will be permanently affected as a result of the maintenance activities as described in the FERC Plan and Procedures.

#### **8.3.4 Developed Land**

Developed land affected by the Project primarily consists of existing roads and utility lines crossed by the pipeline rights-of-way. Construction of the proposed Project will affect approximately 93.3 acres of developed land including lands within the temporary and permanent rights-of-way (23.7 acres), ATWS (5.8 acres), staging areas (51.2 acres), access roads (10.9 acres), and aboveground facilities (1.7 acres). Operational impacts will include 15.3 acres required for the permanent pipeline rights-of-way (13.9 acres), permanent access roads (0.5 acre), and aboveground facilities (0.9 acre).

Construction across roads and utility corridors will be conducted in accordance with the FERC Plan and applicable crossing permits and approvals. Existing transmission line corridors will be crossed by methods agreed upon with the facility operators. As described in Resource Report 1, most paved roads and highways will be crossed by conventional subsurface boring, which will minimize direct impacts on these features as well as impacts on traffic. Unpaved roads, two-tracks, and driveways, as well as roads in areas with a high water table, will be crossed using the open-cut method and then restored to preconstruction condition. WBI Energy will implement traffic control measures to minimize impacts on traffic within major roadways and assist with transportation of construction equipment and materials. Impacts resulting from slow-moving construction vehicles and road closures will be short term and will occur mostly during daylight hours. WBI Energy will use the guided bore method for most road crossings to minimize the impacts to vehicle traffic. Where required by the landowner, a temporary bridge or bypass may be established on small roads or driveways. Impacts on the existing transportation system are anticipated to be temporary and minimal. The pipeline routes are located in areas that are primarily rural and do not experience heavy traffic volumes.

Operation and maintenance of the proposed Project facilities will not affect traffic flow on any of the roads or highways in the Project area. Required periodic maintenance and inspection procedures along the pipeline routes will involve a low frequency of light vehicle movement on and off roadways; therefore, no impacts are expected.

#### **8.3.5 Open Water**

Open water in the Project area consists of lakes, prairie pothole wetlands, and smaller creeks. Lake Sakakawea is the largest body of open water in the Project area. Construction of the proposed Project will affect approximately 15.3 acres of open water. The vast majority of the open water (14.8 acres) is within the HDD path for the proposed crossing of Lake Sakakawea. The remaining 0.5 acre of open water includes smaller waterbody crossings along the Line Section 25 Loop and Line Section 30 Loop pipelines and two manmade ponds located in the



Enget Yard and the Tioga Compressor Station. Because WBI Energy proposes to cross Lake Sakakawea and a natural pond via the HDD method, minimal impacts on the open water land use classification are expected to occur from construction or operation of the Project. See Resource Report 2 for additional information on waterbody crossings.

#### **8.4 LAND OWNERSHIP**

The Project crosses a combined amount of 1.0 mile of state lands, 4.6 miles of federal lands, and 87.5 miles of lands that are privately held. All federal lands crossed are along the Tioga-Elkhorn Creek pipeline (see figure 8.4-1). The pipeline crosses U.S Army Corps of Engineers (COE) land between MPs 23.0 and 25.7 and USFS land between MPs 27.2 and 27.5 and MPs 28.1 and 29.7. More information on these crossings can be found in section 8.10. The Line Section 25 Loop crosses state lands between MPs 4.1 and 5.1. The remainder of the proposed routes cross privately owned lands, including about 3.7 miles of private lands subject to conservation easements held by the FWS. Additionally, all aboveground facilities will be located on privately owned land.

#### **8.5 EXISTING RESIDENCES AND PLANNED DEVELOPMENTS**

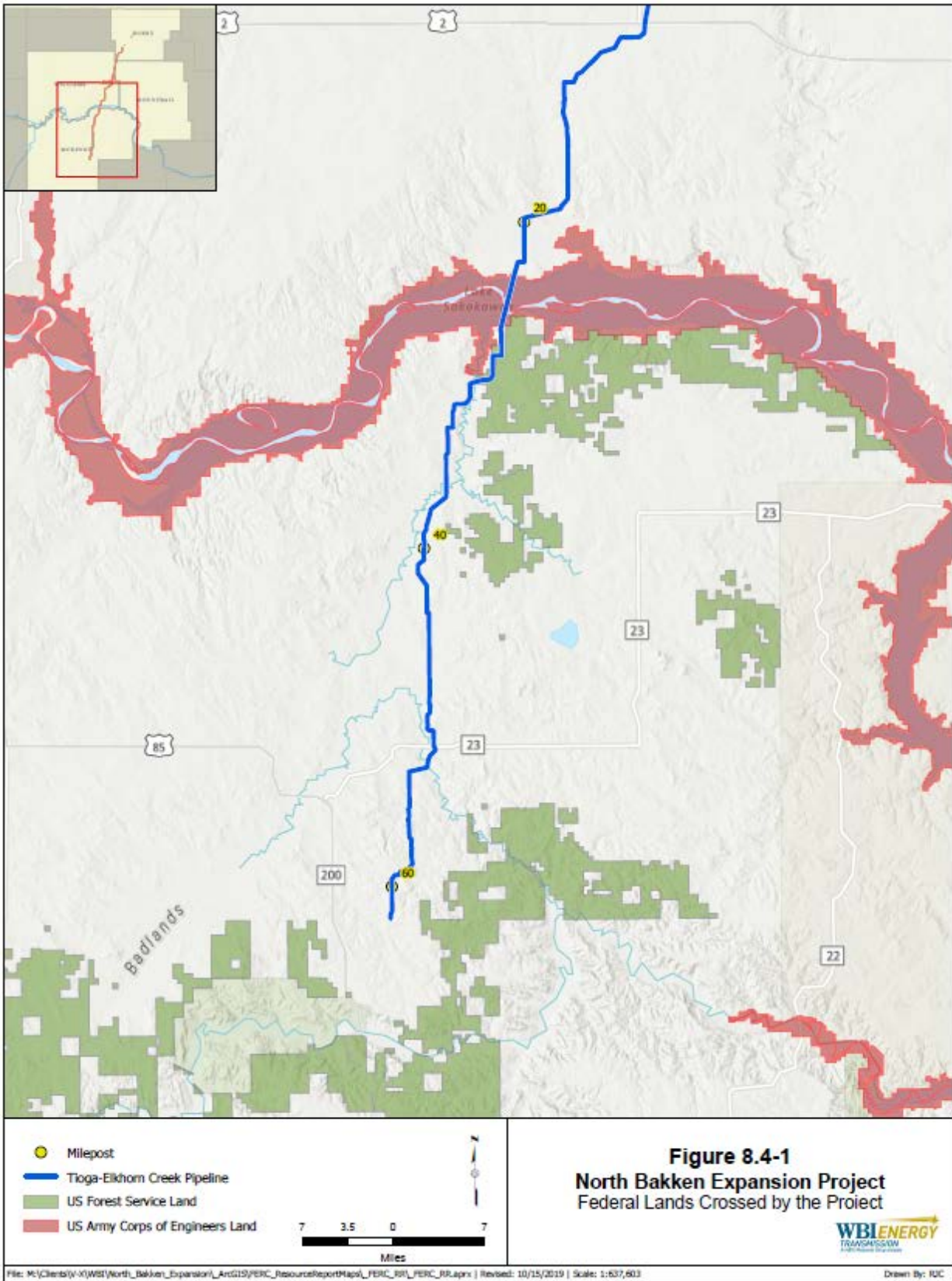
The Project does not cross any residential areas or pass within 50 feet of any residences or other existing structures. WBI Energy preferentially routed the pipeline facilities to avoid residences. The route passes within 500 feet of residences in 11 locations near:

- Tioga-Elkhorn Creek pipeline at MPs 22.4, 23.0, 28.1, 30.3, 38.9, and 54.8;
- Line Section 25 Loop at MPs 8.0, 10.9, 11.6, and 19.4; and
- Line Section 30 Loop at MP 5.1.

In all instances, the pipelines will be greater than 350 feet from the nearest farmstead or residence. Should changes in the Project design require construction in residential areas or within 50 feet of a residence or existing structure, WBI Energy will comply with FERC's regulations and file the necessary information for these areas.

As shown in appendix 11, WBI Energy received scoping comments on maintaining access to a landowner's property during construction and repairing fences and gates damaged during construction. WBI Energy will work with individual landowners on an as-needed basis to work out any potential issues with property access and potential damage to gates and fences.

Additionally, comments were received about eminent domain, compensation for acquisition of a right-of-way, and right-of-way easement lease terms. WBI Energy does not currently have recourse to eminent domain to obtain an easement for the Project. Under section 7(h) of the Natural Gas Act, WBI Energy will obtain the right to eminent domain if FERC issues a Certificate of Public Convenience and Necessity for the Project. Regardless, WBI Energy will attempt to negotiate an easement agreement with each landowner along the proposed pipeline route.



With regard to compensation, WBI Energy will negotiate with affected landowners in good faith and in a fair and honest manner to obtain an easement to construct, operate, and maintain the proposed pipeline in return for monetary compensation. Compensation for easements will be based on fair market value and will be paid on a one-time, lump-sum basis. With regards to easement terms, WBI Energy will follow the requirements in the North Dakota Century Code T47C05.

Planned developments are those that are permitted and not yet constructed, or developments for which permit applications have been filed but not yet approved by a zoning or permitting authority. WBI Energy consulted with the Williams, Mountrail, McKenzie, and Burke County Planning and Zoning Offices as well as the planning and zoning offices for Tioga and Watford City. Based on this research, no planned residential or commercial developments are proposed in the Project area; therefore, the Project will have no impacts on planned residential or commercial developments.

There are two planned industrial/energy projects within 0.5 mile of the proposed Project. The Aurora Wind Project will encompass approximately 44,000 acres, and will consist of a maximum of 121 turbines, with a capacity of 300 megawatts. Construction is anticipated to begin in 2019 and the project will be in-service by the end of 2020 (Prairie Public News, 2019; Tradewind Energy, 2019). Additionally, the Gunslinger Federal and Gladstone Oil and Gas Well Pads projects will include the installation of 10 and 7 wells, respectively. These projects will include the construction of new access roads as well as associated oil and gas equipment and utilities. The Aurora Wind Project and Gunslinger Federal and Gladstone Oil and Gas Well Pads projects are included in the cumulative impact analysis for each resource including land use (section 8.14).

## **8.6 LANDFILLS AND HAZARDOUS WASTE SITES**

WBI Energy reviewed the U.S. Environmental Protection Agency's (EPA) EnviroFacts Website as well as an EPA dataset for landfill sites to identify hazardous waste sites, landfills, or other sites with potential for soil or groundwater contamination within 0.25 mile of the pipeline routes (EPA, 2019a and 2019b). Table 8.6-1 lists the hazardous waste sites identified during this search. No landfills were identified within 0.25 mile of the pipeline routes.

WBI Energy will minimize the potential impact of spills of hazardous materials during construction by adhering to its *Spill Prevention, Control, and Countermeasure Plan* (see appendix 1F of Resource Report 1). The *Spill Prevention, Control, and Countermeasure Plan* describes preventative measures such as personnel training, equipment inspection, and refueling procedures to reduce the likelihood of spills, as well as mitigation measures such as containment and cleanup to minimize potential impacts should a spill occur.

| TABLE 8.6-1   |   |                                 |                                    |
|---|---|---------------------------------|------------------------------------|
| <b>North Bakken Expansion Project<br/>Hazardous Waste Sites Within 0.25 Mile of the Project</b> |   |                                 |                                    |
| Facility Site   | Location  | Distance to Pipeline<br>(miles) | Direction from<br>Pipeline to Site |
| Andeavor High Plains Company<br>LLC Tioga Station   | 10318 68th Street NW<br>Tioga, ND 58852         | 0.1                             | Southeast                          |
| Former "The Attic" Building   | 302 Elm St. NE<br>Tioga, ND 58852               | 0.2                             | North                              |
| Triple Aggregate LLC – White<br>Earth Pit   | 1027 S Welo St<br>Tioga, ND 58852               | 0.1                             | North                              |
| Tioga Gas Processing Plant  | 10340 68th Street Northwest                     | 0.1                             | Southeast                          |
| Tioga Airport Authority – Tioga<br>Municipal Airport  | 67th St. NW<br>Tioga, ND 58852                  | <0.1                            | North                              |
| Hess Corporation – Tioga Gas<br>Plant Lab   | 10340 68th Street North West<br>Tioga, ND 58852 | 0.1                             | Southeast                          |
| Hess Corporation  | Remote Location<br>Unknown, ND 58000            | <0.1                            | North                              |
| <small><sup>a</sup> EPA 2019a</small>   |   |                                 |                                    |

## 8.7 CONSERVATION RESERVE PROGRAM

The Conservation Reserve Program is a voluntary program administered in North Dakota by the U.S. Department of Agriculture’s Farm Service Agency, which allows owners of agricultural lands to conserve environmentally sensitive lands with financial assistance from the federal government. WBI Energy consulted with the Farm Service Agency and interviewed landowners to determine if any Conservation Reserve Program lands are crossed by the Project. Based on these landowner discussions, WBI Energy determined that no Conservation Reserve Program lands are crossed by the Project.

## 8.8 AGRICULTURAL CONSERVATION EASEMENT PROGRAM

The Agricultural Conservation Easement Program (ACEP) is a program administered in North Dakota by the NRCS that combines the purposes of the former Farmland and Ranch Lands Protection Program, Grassland Reserve Program, and Wetland Reserve Program. The ACEP is a voluntary program that provides financial and technical assistance to help conserve agricultural lands and wetlands and their related benefits. For the agricultural lands, the NRCS provides assistance to tribal, state, and local governments, and non-governmental organizations to protect these lands and reduce non-agricultural uses. For the Wetlands Reserve Easements, the NRCS assists in the restoration, protection, and enhancement of enrolled wetlands (NRCS, 2019b).

WBI Energy consulted with the NRCS on a preliminary version of the proposed pipeline routes. Based on this initial consultation, the Project did not cross any ACEP lands. WBI Energy has sent the current pipeline routes to the NRCS for a second round of review and will provide FERC with the results of these consultations once they are available. The Project is not expected to have any impacts on ACEP lands. Associated agency correspondence is provided in appendix 1G of Resource Report 1.

## 8.9 RECREATION AND SPECIAL INTEREST AREAS

WBI Energy reviewed a variety of digital datasets and maps to identify recreation and special interest areas within or in the immediate vicinity (i.e., within 0.25 mile) of the Project area (America’s Scenic Byways, 2019; National Park Service, 2019; National Wild and Scenic Rivers System, 2019; North Dakota Game and Fish Department [NDGFD], 2019a; North Dakota Parks and Recreation, 2019a). Based on this review, the proposed pipelines will not cross or pass near any wild and scenic rivers, national or state scenic byways, wildlife management areas, old growth forests, designated scenic areas, nature/forest preserves, state, county, or local parks, campgrounds, or natural landmarks. Therefore, the Project will have no impact on these types of recreation or special interest areas. Recreational opportunities present in the Project area and the potential impacts on those recreational opportunities are discussed in the paragraphs below.

The Private Land Open to Sportsmen (PLOTS) program identifies lands open to hunting due to agreements between the NDGFD and private landowners. The PLOTS program also identifies public lands, wildlife management areas, and waterfowl production areas open to hunting. These lands provide walk-in public access only, defined as, “an individual traveling by foot with any legal firearm or bow, plus other equipment, accessories and provisions for the purposes of hunting” (NDGFD, 2019b). These lands do not allow activities such as horseback riding, placing bait, driving all-terrain vehicles or snowmobiles, or dog training, among other activities, without written permission from the landowner (NDGFD, 2019b). The proposed Project crosses one section of PLOTS land near MP 0.3 of the Line Section 30 Loop and will run parallel to one PLOTS parcel near MPs 10.8 of the Tioga-Elkhorn Creek pipeline. Additionally, one access road will cross a small portion of a PLOTS parcel. In total, the Project will affect 2.3 acres of PLOTS lands. The PLOTS lands change often and WBI Energy will continue to monitor to see if any additional lands are crossed between now and construction. Construction of the proposed pipeline facilities is scheduled to begin in spring of 2021 and will overlap with hunting season in the Project area. However, due to the small amount of PLOTS lands crossed, any potential impacts on PLOTS lands will be minor and temporary.

As discussed in section 2.2.1 of Resource Report 2, recreation is one of the congressionally authorized purposes of the COE Garrison Project. Recreational use of Garrison Project lands is encouraged through the availability of public parks, and recreational facilities and the Garrison Project is managed to provide a diverse and high quality outdoor recreation experience. Planning for the development and use of recreation facilities is coordinated with Tribal, state, county, municipal, and local non-government entities who lease and manage most of the higher use recreation sites on Lake Sakakawea (COE, 2007). WBI Energy proposes to cross Lake Sakakawea via the HDD method (see Resource Report 2 for additional information). Lake Sakakawea is a reservoir on the Missouri River and is about 368,000 acres in size. The land crossed by the proposed Project does not have public access to the COE land or the lake; all access is private. Therefore, Project construction will not have a direct impact on recreational opportunities on Lake Sakakawea. The lake crossing will occur approximately 1.3 miles from Tobacco Garden Bay, which has a restaurant, convenience store, bait and tackle shop, as well as 100 campsites, two log cabins, and picnic shelters. This area also provides access to the Birnt Hills Trail and a boat launch located on the north side of this site, which is one of the main access points to recreate on the river (North Dakota Tourism, 2019). Temporary impacts on recreational opportunities on Lake Sakakawea would be limited to noise, visual, and traffic impacts during HDD construction.

Due to the length of the proposed HDD crossing of Lake Sakakawea, land will be required on the north side of the lake for the temporary pipeline pullback area. The pipe pullback will extend approximately 2.8 miles north across agricultural land. There is potential for temporary traffic impacts on 51<sup>st</sup> Street N.W. near MP 22.4 of the Tioga-Elkhorn Creek pipeline as the pipe string will be elevated across the road. There are three recreation areas (Links of North Dakota Golf Course, Lund's Landing, and 3 D's Campground) accessed using 51<sup>st</sup> Street N.W. While the proposed Project will not have any direct impacts on these recreation areas, visitors could experience temporary traffic delays while attempting to access the sites during the pipe pullback operation. The pullback is anticipated to take between 24 and 36 hours to complete. If a road closure is necessary, WBI Energy will work with local law enforcement and county agencies to ensure that impacts on local traffic are minimized. Construction vehicles and equipment will comply with all federal, state, and county regulations as well as local load weight restrictions.

The proposed Tioga-Elkhorn Creek pipeline crosses the Little Missouri National Grassland (LMNG), a part of the Dakota Prairie Grasslands, in the northeast unit of the McKenzie Ranger District for approximately 1.8 miles between MPs 27.3 and 27.6 and MPs 28.2 and 29.7. The USFS-managed LMNG encompasses 1,033,271 acres of land and is the largest grassland in the United States (USFS, 2019a). The LMNG is considered a mixed grass prairie and offers a variety of recreational opportunities including mountain biking, backpacking/camping, fishing, horseback riding, and small game hunting. There are also opportunities for outdoor learning through interpretive signs and picnicking. Additionally, some of the land within the grassland is leased to ranchers for cattle grazing. The portion of the LMNG crossed by the proposed Project does not contain any designated recreation areas or trails and is classified as having a low Scenic Integrity Objective in the LMNG. The proposed Tioga-Elkhorn Creek pipeline will cross two dirt two track USFS roads (at MPs 27.2 and 28.6) and one paved/graveled USFS road (MP .29.7) which is 115<sup>th</sup> Ave NW and primarily managed by McKenzie County. WBI Energy is consulting with the USFS regarding the appropriate permitting and mitigation for these crossings; however, impacts on recreational opportunities within the LMNG are not anticipated.

Temporary construction activities may have an impact on recreational activities due to traffic, visual impacts, and noise associated with construction; however, these impacts will be local, short term, and temporary as construction activities proceed through any given area, including activities near Lake Sakakawea, where the HDD is anticipated to take approximately 6 months to complete. Therefore, the Project is not expected to have a significant impact on recreation and special interest areas.

## **8.10 FEDERAL LAND MANAGEMENT PLANS**

According to the Mineral Leasing Act (Title 30 U.S. Code § 185) and Title 43 of the Code of Federal Regulations Part 2881.11, the U.S. Bureau of Land Management (BLM) is responsible for issuing a Right-of-Way Grant and Temporary Use Permit for an oil or gas pipeline, or related facility, crossing federally owned land either under the BLM's jurisdiction or the jurisdiction of two or more federal agencies. The BLM's Right-of-Way Grant will authorize the operation and maintenance of the pipeline, while the Temporary Use Permit will authorize construction of the pipeline. The Project will cross two areas of federally owned land, the COE Garrison Dam/Lake Sakakawea Project (Garrison Project), and the USFS Dakota Prairie Grasslands, LMNG. Because the proposed Tioga-Elkhorn Creek pipeline involves two federal agencies, the BLM will request concurrence from the heads of the agencies administering the lands that the proposal meets their respective management plans. WBI Energy will submit a Standard Form 299 and

supporting Plan of Development to acquire the BLM authorization and will continue to consult with the federal land management agencies on the Project. Copies of correspondence with the BLM can be found in appendix 1G of Resource Report 1.

### **8.10.1 U.S. Army Corps of Engineers**

The Project's crossing at the COE's Garrison Project will be reviewed by the COE's Real Estate Department before issuing an Outgrant to cross federally owned land. The Outgrant is a real estate instrument that provides construction and operation authority to a private or public entity. The Real Estate Department will confirm that the proposed Lake Sakakawea crossing meets the Regulatory Branch's Section 404 authority and the Civil Works program's Section 408 authority. The specific management plan for this area is described in the COE's Garrison Project – Lake Sakakawea Oil and Gas Management Plan dated December 2013 (COE, 2013). The Oil and Gas Management Plan defines the authority and administrative process to cross the Garrison Project and provides a template for best management practices, mitigation, and HDD requirements. All COE-owned land crossed by the proposed Project will be encompassed within the proposed HDD crossing of Lake Sakakawea. No standard pipeline right-of-way construction will occur on COE lands. WBI Energy has been consulting with the COE on the proposed Project and copies for correspondence can be found in appendix 1G of Resource Report 1.

### **8.10.2 U.S. Forest Service**

The Project's crossing at the USFS Dakota Prairie Grasslands, LMNG is situated within the northeast unit of the McKenzie Ranger District. This portion of the LMNG contains existing oil and gas development and the USFS will determine if the proposed crossing conforms to the Land and Resource Management Plan for the DPG Northern Region (LRMP) dated 2001. The LRMP provides specific Standards and Guidelines that the Project must meet before issuing a Special Use Permit to cross National Forest System land. As discussed in section 8.2.1, the proposed pipeline construction right-of-way will be 50 feet wide across USFS land with an additional 25 feet of ATWS along the full length of the USFS land crossing. At guided bore crossings on USFS land, additional ATWS outside of these areas will be required for the bore equipment. WBI Energy is continuing to work with the USFS to refine any additional stipulations that may be required on their land. Copies of correspondence with the USFS can be found in appendix 1G of Resource Report 1.

## **8.11 GRASSLAND CONSERVATION EASEMENTS**

Grassland conservation easements are held by the U.S. Fish and Wildlife Service (FWS) and define permanent agreements between the FWS and all present and future landowners to keep their land in native or restored grassland. Grassland conservation easements help reduce soil erosion, protect water supplies, provide food for livestock, and provide nesting habitat (FWS, 2019). Ground-disturbing activities within grassland easements are prohibited without prior approval of the FWS. Such activities are subject to review by FWS staff to determine if they are appropriate and compatible with the objectives of the easement program, and require a special use permit/right-of-way grant if they are found to be compatible. No grassland conservation easements are crossed by the proposed pipeline facilities.

Copies of correspondence to-date between WBI Energy and the FWS regarding conservation easements are provided in appendix 1G of Resource Report 1.

## 8.12 VISUAL RESOURCES

The visual character of the existing landscape is defined by historic and current land uses such as agricultural, open land, and development. The visual qualities of the landscape are further influenced by existing linear installations such as highways, railroads, pipelines, and electrical transmission and distribution lines. The proposed Project will affect primarily undeveloped rural, grasslands, or agricultural lands. There are few residences in the immediate vicinity of the Project, and the pipeline routes do not cross any designated scenic areas.

Most visual and aesthetic impacts associated with the Project will be limited to the period of active construction as a result of construction equipment, personnel, and disturbed soil. After pipeline construction is complete, the landscape will be re-contoured to as near preconstruction conditions as practicable and revegetated in accordance with the FERC Plan and Procedures. The portions of the route crossing agricultural and open lands will return to preconstruction conditions within one to five growing seasons. Any disturbed areas will be restored and requested vegetation species planted; therefore, the Project will have no long-term visual impacts.

The Tioga-Elkhorn Creek pipeline will cross Lake Sakakawea and the LMNG. WBI Energy will be crossing Lake Sakakawea using the HDD crossing method. Temporary visual impacts will occur during construction due to the entry/exit points on either side of the lake. These entry and exit points are offset from the lake itself by approximately 900 feet on the north side of the lake and 2,200 feet on the south side of the lake. It is not anticipated that the HDD equipment will be visible to recreationalists on the lake; however, short-term temporary visual impacts could occur to visitors traveling to the lake. Because the HDD entry/exit sites will be restored to preconstruction condition, the Project will have no permanent visual impacts on Lake Sakakawea.

For the crossing of the LMNG, publicly available mapping indicates that the portion of the LMNG crossed has a Low Scenic Integrity Objective, which generally means that visual disturbances are allowed (USFS, 2019b). The route will not cross any forested areas within the LMNG. WBI Energy will revegetate and restore the right-of-way after construction in accordance with USFS requirements and no permanent visual impacts are anticipated on USFS lands.

Visual impacts from the construction of aboveground facilities are anticipated to be minimal. Table 8.12-1 outlines the proposed new and modified aboveground facilities associated with the Project and the potential visual resource impacts associated with each facility. As shown in Resource Report 4 appendix 4D, there are currently no historic structures along the Project routes that are recommended as potentially eligible for the National Register of Historic Places.

As shown in table 8.12-1, the Tioga Compressor Station, Lignite Plant Receipt Station and Lignite Town Border Station, Norse Plant Receipt Station, Robinson Lake Plant Receipt Station, Springbrook Plant Receipt Station, and Tioga Plant Receipt Station are all existing aboveground facilities that will be modified as part of the Project. Given the existing presence of an industrial facility at these locations, no impacts on the current visual character of these locations is expected.



| TABLE 8.12-1  |                                     |   |  |
|---|-------------------------------------|---|--|
| <b>North Bakken Expansion Project<br/>Potential Visual Resource Impacts Associated with the Proposed Aboveground Facilities</b> |                                     |   |  |
| Aboveground Facility  | New or Existing Facility            | Approximate Distance to Nearest Residence | Description of Existing Conditions and Proposed Mitigation   |
| Tioga Compressor Station  | Existing<br>(Proposed Modification) | 2,221 feet east                           | This is an expansion of an existing facility; therefore, no impacts on the existing visual character of the location are anticipated.  |
| Elkhorn Creek Compressor Station  | New                                 | 3,465 feet east                           | While this is a new facility, there is an existing energy facility in the area, which has changed the visual appearance of the area. This facility will change the landscape, but overall, no significant changes to the existing visual character of the area are anticipated.  |
| Lignite Plant Receipt Station and Lignite Town Border Station   | Existing<br>(Proposed Modification) | 2,900 feet northwest                      | This is an expansion of an existing facility; therefore, no impacts on the existing visual character of the location are anticipated.  |
| Norse Plant Receipt Station   | Existing<br>(Proposed Modification) | 2,478 feet north                          | An upgrade of an existing facility; therefore, no impacts on the existing visual character of the location are anticipated.  |
| Norse Transfer Station  | New                                 | 2,478 feet north                          | This facility will be built behind the existing Norse Plant Receipt Station; therefore, no significant changes to the existing visual character of the area are anticipated.   |
| Northern Border Interconnect  | New                                 | 3,130 feet southwest                      | While this is a new facility, there are existing energy facilities in the area, which have changed the visual appearance of the area. This facility will change the landscape, but overall, no significant changes to the existing visual character of the area are anticipated. |
| Robinson Lake Plant Receipt Station   | Existing<br>(Proposed Modification) | 892 feet southwest                        | This is an expansion of an existing facility; therefore, no impacts on the existing visual character of the location are anticipated.  |
| Springbrook Plant Receipt Station   | Existing<br>(Proposed Modification) | 5,200 feet southwest                      | This is an expansion of an existing facility; therefore, no impacts on the existing visual character of the location are anticipated.  |
| Tioga Plant Receipt Station   | Existing<br>(Proposed Modification) | 2,878 feet west                           | This is an expansion of an existing facility; therefore, no impacts on the existing visual character of the location are anticipated.  |

The new Elkhorn Creek Compressor Station will be constructed primarily on agricultural land and land associated with a retired scoria pit. The nearest residence is over 0.6 mile east of the site. While the compressor station will be a new facility, there are two existing industrial facilities less than 0.25 mile east of the proposed compressor station. The compressor station is expected to be visible from the nearest residence; however, the two existing industrial facilities are also visible from the residence (in the same direction but closer in proximity to the residence). Therefore, construction and operation of the new Elkhorn Creek Compressor Station are anticipated to have no significant changes to the overall visual character of the area.

The new Norse Transfer Station will be constructed primarily on open land and the nearest residence is approximately 0.5 mile north of the proposed facility. The Norse Transfer Station will be constructed adjacent to the existing Norse Plant Receipt Station. While the proposed station will be visible from the nearest residence, no significant changes to the overall visual character of

the area are expected due to the existing site conditions and because the station will be constructed adjacent to an existing facility.

The new Northern Border Interconnect facility will be constructed primarily on agricultural and open land. The nearest residence is approximately 0.6 mile to the southwest of the facility site with an existing industrial facility located approximately halfway between the residence and the proposed facility. While the interconnect facility is expected to be visible from the nearest residence, no significant changes to the overall visual character of the area are expected given the existing energy development present within the viewshed.

### **8.13 LANDOWNER COMPLAINT RESOLUTION PROCEDURE**

WBI Energy will implement a landowner complaint resolution procedure, providing landowners with directions for identifying and resolving environmental concerns or issues during the construction and restoration phases of the Project. Prior to construction, WBI Energy will mail a letter describing the procedure to landowners whose property will be affected by the Project. The letter will provide a WBI Energy contact that landowners should call with their concerns. Additionally, the letter will provide landowners with a copy of FERC's "An Interstate Natural Gas Facility On My Land? What Do I Need To Know?" which instructs landowners that they should contact the Commission's Dispute Resolution Hotline at 1-877-337-2237 or by email at [landownerHelp@ferc.gov](mailto:landownerHelp@ferc.gov) if they are not satisfied with the response from WBI Energy.

In addition to this procedure, WBI Energy will include in its biweekly status report to FERC a table that contains the following information for each problem/concern:

- date of the call;
- identification number from the construction alignment sheets of the affected property and approximate location by MP or station number;
- description of the problem/concern; and
- an explanation of how and when the problem was resolved or will be resolved or why it has not been resolved.

### **8.14 CUMULATIVE IMPACTS**

Section 1.10 of Resource Report 1 defines a cumulative impact and describes the general scope of the cumulative impact analysis. This section describes the potential cumulative impacts to land use, recreation, and visual resources from the Project combined with the past, present, and reasonable or foreseeable future actions (RFFA) identified in appendix 1J and figure 1.10-1 of Resource Report 1. The location, proposed schedule, and a description of each RFFA are provided in appendix 1J.

This geographic scope of impacts on land use, recreation, and visual resources includes impacts from RFFAs that could reasonably extend within a 1.0-mile radius of the Project during construction. Impacts on land use, recreation, and visual resources will be restricted to the construction workspaces and the immediate surrounding vicinity. Where a permanent conversion from one land use type to another will occur, the temporal scope is expanded to include operation.

### 8.14.1 Land Use

Development of the pipeline construction rights-of-way, ATWS, staging areas, and temporary access roads, will result in temporary land disturbance. Permanent access roads, aboveground facility sites, and the permanent pipeline easements will result in permanent land disturbance. Acreages are provided in Section 8.3.

The following RFFAs fall within the Project's geographic and temporal scope for land use impacts.

- Two proposed electric transmission lines exist within the geographic scope for land use impacts. The Aurora Wind transmission line is not expected to result in a significant change in land use. The Montana-Dakota Utilities overhead electric transmission line project is in the early permitting phases and the specific location is currently unknown. If the Montana-Dakota Utilities overhead electric transmission line project does fall within the geographic scope for the Project, it is not likely to permanently affect land use due to the nature of the project and its location within Watford City.
- The Arrow Bear Den Gas Processing Plant II site would permanently affect about 51.0 acres of a 73.0-acre parcel currently classified as herbaceous upland/rangeland and cropland. Twenty acres of the parcel were recently developed as Arrow's Bear Den Gas Plant.
- Gunslinger Federal and Gladstone Oil and Gas Well Pads would disturb approximately 50.4 acres on USFS lands within the LMNG. Of the 50.4 acres, approximately 9.7 acres would be within previously disturbed areas (developed and cultivated lands) and 40.7 acres would be within undisturbed areas (grassland, shrubland, wetlands, or woodlands land use classes).
- Several pipeline projects would affect land use. The proposed Cenex pipeline project would temporarily disturb approximately 1,360 acres of land associated with the construction corridor. Permanent impacts are not anticipated. Little information is publically available regarding potential impacts of the Western Area Water Supply Project; however, it is likely that the impacts associated with the pipeline construction will be temporary and that utilities will be collocated with existing roads.

The proposed utility line associated with the Gunslinger Federal and Gladstone Oil and Gas Well Pads project is collocated or overlapping with the Tioga-Elkhorn Creek pipeline along Highway 1806 for approximately 0.9 total mile within the LMNG. The time during which impacts to vegetation would occur in this area would be extended; however, due to the temporary and localized nature of impacts of these two utility corridors, significant cumulative impacts to land use are not expected. Due to the proposed timing for construction of the projects listed above, it is unlikely that construction impacts would occur simultaneously; however, restoration activities from the proposed Project could be ongoing. Ongoing maintenance of the permanent right-of-way is not anticipated to affect current land use and permanent impacts from aboveground facilities would be highly localized. WBI Energy would reduce impacts on land use by implementing the

mitigation measures described in section 8.3. As a result, significant cumulative impacts on land use are not expected.

#### **8.14.2 Recreation and Special Interest Areas**

The proposed Tioga-Elkhorn Creek pipeline will cross Lake Sakakawea near Tobacco Garden Bay. Impacts of the 2.5-mile crossing on recreation will be mitigated by using the HDD crossing method. WBI Energy is consulting with the USFS regarding the appropriate permitting and mitigation for the 1.8-mile-long crossing of the LMNG. As discussed above, the Gunslinger Federal and Gladstone Oil and Gas Well Pads project is collocated and/or overlapping with the proposed Project across the LMNG. There are no designated recreation areas within this portion of the LMNG; therefore, cumulative impacts on recreation are not expected.

The proposed Cenex pipeline project would temporarily disturb approximately 22.0 acres of NDGFD PLOTS land and 120 acres of FWS wetland easements. Permanent impacts are not anticipated. With implementation of the proposed mitigation measures described above, significant cumulative impacts of the Project when combined with the Cenex pipeline project are not anticipated.

#### **8.14.3 Visual Resources**

Permanent visual impacts associated with the Project will be limited to the areas of proposed aboveground facilities. The majority of aboveground facilities associated with the proposed Project will consist of modifications to existing structures. Modifications to the Tioga Compressor Station will be conducted within or adjacent to WBI Energy's existing station building in an area that has many oil and gas plants. Two existing receipt stations and a town border station (Tioga Plant Receipt Station, Lignite Plant Receipt Station and Lignite Town Border Station) will be rebuilt as part of the Project. Visual impacts associated with these facilities are expected to be of the same magnitude of those for the current existing facilities.

Construction of the new Elkhorn Creek Compressor Station, Northern Border Interconnect, and Norse Transfer Station are not anticipated to result in significant visual impacts on the surrounding area given the surrounding oil and gas development and implementation of any site-specific mitigation measures such as maintaining vegetative buffers where possible.

Temporary minor cumulative impacts on visual resources will occur for those RFFAs within the same geographic and temporal scope for visual resources. Permanent cumulative visual impacts will occur only if an RFFA that also includes a permanent aboveground facility were to occur in the same viewshed as a new aboveground facility for the proposed Project. No RFFAs with permanent aboveground facilities have been identified within the 1-mile geographic scope for visual resources; therefore, no permanent cumulative visual impacts are anticipated from the proposed Project.

### **8.15 REFERENCES**

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**NORTH BAKKEN EXPANSION PROJECT**

**Resource Report 8**

**APPENDIX 8A  
Additional Temporary Workspaces**

| APPENDIX 8A   |  |          |                         |                                       |          |
|---|--|----------|-------------------------|---------------------------------------|----------|
| <b>North Bakken Expansion Project<br/>Additional Temporary Workspaces</b> |  |          |                         |                                       |          |
| Project Facility  | Additional Temporary Workspaces (ATWS) | Milepost | Existing Land Uses      | Area Affected by Construction (acres) | County   |
| Tioga-Elkhorn Creek   | TEC_327                                | 0.3      | Developed, Open Land    | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_326                                | 0.3      | Open Land               | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_328                                | 0.3      | Agricultural, Developed | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_329                                | 0.3      | Agricultural            | 0.2                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_321                                | 0.8      | Agricultural            | 0.4                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_300                                | 0.8      | Agricultural, Open Land | 0.8                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_298                                | 0.9      | Agricultural            | 0.8                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_299                                | 0.9      | Agricultural            | 0.4                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_317                                | 1.8      | Agricultural, Developed | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_318                                | 1.8      | Agricultural, Developed | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_319                                | 1.8      | Agricultural            | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_320                                | 1.8      | Agricultural            | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_309                                | 1.9      | Agricultural            | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_312                                | 2.0      | Agricultural            | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_311                                | 2.0      | Agricultural, Developed | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_310                                | 2.0      | Agricultural, Developed | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_315                                | 3.0      | Agricultural            | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_316                                | 3.0      | Agricultural            | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_314                                | 3.1      | Agricultural            | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_313                                | 3.1      | Agricultural            | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_307                                | 4.2      | Agricultural            | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_308                                | 4.2      | Agricultural            | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_306                                | 4.2      | Agricultural, Developed | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_305                                | 4.3      | Agricultural, Developed | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_322                                | 5.2      | Agricultural            | 0.2                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_325                                | 5.2      | Agricultural            | 0.7                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_323                                | 5.3      | Agricultural            | 0.2                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_324                                | 5.3      | Agricultural            | 0.7                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_304                                | 6.0      | Agricultural, Developed | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_303                                | 6.0      | Agricultural, Developed | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_302                                | 6.1      | Agricultural            | 0.3                                   | Williams |



| APPENDIX 8A (cont'd)  |  |          |                         |                                       |          |
|---|--|----------|-------------------------|---------------------------------------|----------|
| <b>North Bakken Expansion Project<br/>Additional Temporary Workspaces</b> |  |          |                         |                                       |          |
| Project Facility  | Additional Temporary Workspaces (ATWS) | Milepost | Existing Land Uses      | Area Affected by Construction (acres) | County   |
| Tioga-Elkhorn Creek   | TEC_301                                | 6.1      | Agricultural            | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_296                                | 7.0      | Agricultural, Developed | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_162                                | 7.0      | Agricultural, Developed | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_285                                | 7.1      | Agricultural            | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_297                                | 7.1      | Agricultural, Developed | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_283                                | 7.3      | Agricultural            | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_284                                | 7.3      | Agricultural            | 0.0                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_282                                | 7.4      | Agricultural, Developed | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_281                                | 7.4      | Agricultural, Developed | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_290                                | 8.3      | Agricultural, Developed | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_291                                | 8.4      | Agricultural, Developed | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_293                                | 8.4      | Agricultural            | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_292                                | 8.4      | Agricultural            | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_287                                | 9.1      | Agricultural, Developed | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_286                                | 9.1      | Agricultural, Developed | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_288                                | 9.1      | Agricultural            | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_289                                | 9.2      | Agricultural, Developed | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_330                                | 12.0     | Agricultural, Open Land | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_294                                | 12.0     | Agricultural, Open Land | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_161                                | 12.1     | Open Land               | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_295                                | 12.1     | Open Land               | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_272                                | 14.1     | Agricultural            | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_273                                | 14.1     | Agricultural            | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_271                                | 14.1     | Agricultural, Developed | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_270                                | 14.1     | Agricultural, Developed | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_278                                | 16.1     | Agricultural, Developed | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_280                                | 16.1     | Agricultural, Developed | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_269                                | 16.1     | Agricultural, Developed | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_279                                | 16.1     | Agricultural, Developed | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_174                                | 18.0     | Open Land               | 0.2                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_171                                | 18.1     | Agricultural, Open Land | 0.2                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_172                                | 18.2     | Agricultural            | 0.2                                   | Williams |

| APPENDIX 8A (cont'd)  |  |          |                                    |                                       |          |
|---|--|----------|------------------------------------|---------------------------------------|----------|
| <b>North Bakken Expansion Project<br/>Additional Temporary Workspaces</b> |  |          |                                    |                                       |          |
| Project Facility  | Additional Temporary Workspaces (ATWS) | Milepost | Existing Land Uses                 | Area Affected by Construction (acres) | County   |
| Tioga-Elkhorn Creek   | TEC_173                                | 18.2     | Agricultural                       | 0.7                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_277                                | 18.3     | Agricultural, Developed            | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_275                                | 18.3     | Agricultural, Developed            | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_274                                | 18.4     | Agricultural, Developed            | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_276                                | 18.4     | Agricultural, Developed            | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_267                                | 19.6     | Agricultural, Developed            | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_332                                | 19.6     | Agricultural, Developed, Open Land | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_265                                | 19.7     | Open Land                          | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_266                                | 19.7     | Open Land                          | 0.4                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_268                                | 19.8     | Developed                          | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_256                                | 20.7     | Agricultural, Developed            | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_264                                | 20.8     | Agricultural                       | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_263                                | 20.8     | Developed                          | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_254                                | 21.0     | Agricultural, Developed, Open Land | 27.8                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_262                                | 22.3     | Agricultural, Developed            | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_261                                | 22.3     | Agricultural, Developed            | 0.3                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_255                                | 22.8     | Agricultural, Open Land            | <0.1                                  | Williams |
| Tioga-Elkhorn Creek   | TEC_260                                | 22.9     | Agricultural, Open Land            | 0.6                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_259                                | 22.9     | Open Land                          | 1.4                                   | Williams |
| Tioga-Elkhorn Creek   | TEC_257                                | 25.9     | Agricultural, Open Land            | 1.4                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_258                                | 25.9     | Agricultural, Open Land            | 0.6                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_241                                | 26.1     | Agricultural, Open Land            | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_238                                | 26.1     | Agricultural, Developed, Open Land | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_240                                | 26.4     | Open Land                          | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_239                                | 26.4     | Open Land                          | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_337                                | 27.3     | Open Land, Open Water              | 0.8                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_341                                | 28.1     | Open Land                          | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_340                                | 28.4     | Open Land                          | 1.5                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_338                                | 28.7     | Open Land                          | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_157                                | 28.7     | Open Land                          | 0.5                                   | McKenzie |

| APPENDIX 8A (cont'd)  |  |          |                                    |                                       |          |
|---|--|----------|------------------------------------|---------------------------------------|----------|
| <b>North Bakken Expansion Project<br/>Additional Temporary Workspaces</b> |  |          |                                    |                                       |          |
| Project Facility  | Additional Temporary Workspaces (ATWS) | Milepost | Existing Land Uses                 | Area Affected by Construction (acres) | County   |
| Tioga-Elkhorn Creek   | TEC_158                                | 28.7     | Open Land                          | 0.1                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_159                                | 28.9     | Open Land                          | 0.4                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_160                                | 28.9     | Open Land                          | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_339                                | 29.2     | Developed, Open Land               | 2.6                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_253                                | 29.7     | Developed, Open Land               | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_252                                | 29.7     | Developed, Open Land               | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_251                                | 29.7     | Open Land                          | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_250                                | 29.8     | Open Land                          | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_248                                | 30.0     | Open Land                          | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_249                                | 30.0     | Open Land                          | 0.2                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_246                                | 30.1     | Open Land                          | 0.4                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_247                                | 30.1     | Open Land                          | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_244                                | 30.6     | Agricultural, Open Land            | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_245                                | 30.6     | Agricultural, Open Land            | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_243                                | 30.7     | Developed                          | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_242                                | 30.7     | Agricultural, Developed            | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_237                                | 34.5     | Agricultural                       | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_236                                | 34.5     | Agricultural, Open Land            | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_235                                | 34.5     | Agricultural                       | 0.5                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_234                                | 34.5     | Agricultural                       | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_232                                | 36.2     | Agricultural, Open Land            | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_233                                | 36.2     | Agricultural                       | 0.1                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_230                                | 36.2     | Agricultural                       | 0.1                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_231                                | 36.3     | Agricultural, Open Land            | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_228                                | 36.7     | Agricultural, Developed, Open Land | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_229                                | 36.7     | Agricultural, Developed            | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_227                                | 36.8     | Open Land                          | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_226                                | 36.8     | Open Land                          | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_155                                | 38.2     | Agricultural, Open Land            | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_156                                | 38.2     | Agricultural, Open Land            | 0.2                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_153                                | 38.4     | Developed, Open Land               | 0.4                                   | McKenzie |

| APPENDIX 8A (cont'd)  |  |          |                                    |                                       |          |
|---|--|----------|------------------------------------|---------------------------------------|----------|
| <b>North Bakken Expansion Project<br/>Additional Temporary Workspaces</b> |  |          |                                    |                                       |          |
| Project Facility  | Additional Temporary Workspaces (ATWS) | Milepost | Existing Land Uses                 | Area Affected by Construction (acres) | County   |
| Tioga-Elkhorn Creek   | TEC_154                                | 38.4     | Developed, Open Land               | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_225                                | 38.6     | Agricultural, Open Land            | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_224                                | 38.6     | Open Land                          | 0.8                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_222                                | 38.7     | Open Land                          | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_223                                | 38.7     | Open Land                          | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_220                                | 39.1     | Agricultural, Developed            | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_221                                | 39.2     | Agricultural, Developed            | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_219                                | 39.2     | Agricultural, Developed            | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_218                                | 39.2     | Agricultural                       | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_216                                | 41.5     | Agricultural, Open Land            | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_217                                | 41.5     | Agricultural, Open Land            | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_215                                | 41.5     | Agricultural, Open Land            | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_214                                | 41.5     | Agricultural                       | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_205                                | 42.6     | Agricultural, Developed, Open Land | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_206                                | 42.6     | Open Land                          | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_203                                | 42.7     | Agricultural, Developed            | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_204                                | 42.7     | Agricultural, Developed            | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_213                                | 43.6     | Open Land                          | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_212                                | 43.6     | Developed, Open Land               | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_211                                | 43.7     | Agricultural                       | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_210                                | 43.7     | Agricultural, Developed            | 0.5                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_208                                | 43.7     | Agricultural                       | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_207                                | 43.8     | Agricultural, Developed            | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_209                                | 43.8     | Agricultural, Developed            | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_202                                | 44.7     | Agricultural, Developed, Open Land | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_201                                | 44.7     | Agricultural, Developed, Open Land | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_199                                | 44.8     | Agricultural                       | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_200                                | 44.8     | Agricultural, Developed            | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_152                                | 46.6     | Agricultural, Open Land            | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_196                                | 46.7     | Agricultural, Open Land            | 0.3                                   | McKenzie |

| APPENDIX 8A (cont'd)  |  |          |                                    |                                       |          |
|---|--|----------|------------------------------------|---------------------------------------|----------|
| <b>North Bakken Expansion Project<br/>Additional Temporary Workspaces</b> |  |          |                                    |                                       |          |
| Project Facility  | Additional Temporary Workspaces (ATWS) | Milepost | Existing Land Uses                 | Area Affected by Construction (acres) | County   |
| Tioga-Elkhorn Creek   | TEC_198                                | 46.7     | Developed, Open Land               | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_197                                | 46.7     | Developed, Open Land               | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_195                                | 46.8     | Agricultural, Developed            | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_331                                | 46.8     | Agricultural, Developed            | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_194                                | 47.7     | Agricultural, Open Land            | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_193                                | 47.7     | Agricultural, Open Land            | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_191                                | 47.8     | Agricultural, Developed            | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_192                                | 47.8     | Agricultural, Developed            | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_189                                | 48.7     | Developed, Open Land               | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_190                                | 48.7     | Developed, Open Land               | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_187                                | 48.8     | Agricultural, Developed            | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_188                                | 48.8     | Agricultural, Open Land            | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_186                                | 49.1     | Agricultural, Open Land            | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_185                                | 49.1     | Agricultural                       | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_183                                | 49.1     | Agricultural, Developed            | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_184                                | 49.2     | Agricultural, Developed            | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_181                                | 49.8     | Agricultural, Developed, Open Land | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_180                                | 49.8     | Agricultural, Developed, Open Land | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_179                                | 49.8     | Developed, Open Land               | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_182                                | 49.8     | Developed, Agricultural            | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_175                                | 51.0     | Agricultural                       | 0.2                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_178                                | 51.0     | Open Land                          | 0.1                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_177                                | 51.1     | Agricultural, Open Land            | 0.7                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_176                                | 51.1     | Agricultural, Developed            | 0.2                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_170                                | 51.2     | Open Land                          | 0.5                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_169                                | 51.2     | Open Land                          | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_168                                | 51.3     | Open Land                          | 0.2                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_167                                | 51.4     | Open Land                          | 0.7                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_166                                | 52.0     | Agricultural, Open Land            | 0.7                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_165                                | 52.0     | Open Land                          | 0.4                                   | McKenzie |

| APPENDIX 8A (cont'd)  |  |          |                                    |                                       |          |
|---|--|----------|------------------------------------|---------------------------------------|----------|
| <b>North Bakken Expansion Project<br/>Additional Temporary Workspaces</b> |  |          |                                    |                                       |          |
| Project Facility  | Additional Temporary Workspaces (ATWS) | Milepost | Existing Land Uses                 | Area Affected by Construction (acres) | County   |
| Tioga-Elkhorn Creek   | TEC_163                                | 52.1     | Agricultural, Developed, Open Land | 0.4                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_164                                | 52.2     | Agricultural                       | 0.7                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_336                                | 54.8     | Developed, Open Land               | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_335                                | 54.8     | Developed, Open Land               | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_333                                | 54.8     | Developed, Open Land               | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_334                                | 54.8     | Open Land                          | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_150                                | 56.7     | Agricultural                       | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_149                                | 56.7     | Agricultural                       | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_144                                | 56.7     | Open Land                          | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_148                                | 56.8     | Open Land                          | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_147                                | 56.9     | Open Land                          | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_145                                | 56.9     | Open Land                          | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_151                                | 56.9     | Agricultural                       | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_146                                | 56.9     | Agricultural                       | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_138                                | 57.9     | Forested, Open Land                | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_139                                | 57.9     | Forested, Open Land                | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_136                                | 58.0     | Open Land                          | 0.4                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_137                                | 58.0     | Open Land                          | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_142                                | 59.7     | Developed, Open Land               | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_143                                | 59.7     | Developed, Open Land               | <0.1                                  | McKenzie |
| Tioga-Elkhorn Creek   | TEC_141                                | 59.8     | Agricultural, Developed, Open Land | 0.3                                   | McKenzie |
| Tioga-Elkhorn Creek   | TEC_140                                | 59.8     | Agricultural, Open Land            | <0.1                                  | McKenzie |
| Line Section 25 Loop  | NOL_104                                | 0.5      | Open Land                          | 0.1                                   | Williams |
| Line Section 25 Loop  | NOL_105                                | 0.6      | Developed, Open Land               | 0.3                                   | Williams |
| Line Section 25 Loop  | NOL_106                                | 0.6      | Developed, Open Land               | 0.1                                   | Williams |
| Line Section 25 Loop  | NOL_103                                | 0.6      | Open Land                          | 0.2                                   | Williams |
| Line Section 25 Loop  | NOL_118                                | 0.6      | Open Land                          | 0.1                                   | Williams |
| Line Section 25 Loop  | NOL_070                                | 0.7      | Open Land                          | 1.7                                   | Williams |
| Line Section 25 Loop  | NOL_117                                | 0.7      | Open Land                          | 0.1                                   | Williams |
| Line Section 25 Loop  | NOL_069                                | 0.8      | Open Land                          | 0.2                                   | Williams |
| Line Section 25 Loop  | NOL_116                                | 0.8      | Open Land                          | 0.1                                   | Williams |
| Line Section 25 Loop  | NOL_068                                | 1.0      | Developed, Open Land               | 0.1                                   | Williams |

| APPENDIX 8A (cont'd)  |  |          |                         |                                       |           |
|---|--|----------|-------------------------|---------------------------------------|-----------|
| <b>North Bakken Expansion Project<br/>Additional Temporary Workspaces</b> |  |          |                         |                                       |           |
| Project Facility  | Additional Temporary Workspaces (ATWS) | Milepost | Existing Land Uses      | Area Affected by Construction (acres) | County    |
| Line Section 25 Loop  | NOL_067                                | 1.0      | Open Land               | 0.2                                   | Williams  |
| Line Section 25 Loop  | NOL_115                                | 1.1      | Open Land               | 0.2                                   | Williams  |
| Line Section 25 Loop  | NOL_066                                | 1.1      | Open Land               | 0.2                                   | Williams  |
| Line Section 25 Loop  | NOL_101                                | 2.1      | Agricultural, Developed | 0.7                                   | Williams  |
| Line Section 25 Loop  | NOL_102                                | 2.2      | Agricultural, Developed | 1.3                                   | Williams  |
| Line Section 25 Loop  | NOL_097                                | 3.1      | Agricultural            | 0.2                                   | Williams  |
| Line Section 25 Loop  | NOL_099                                | 3.1      | Agricultural            | 0.3                                   | Williams  |
| Line Section 25 Loop  | NOL_098                                | 3.2      | Agricultural            | 0.5                                   | Williams  |
| Line Section 25 Loop  | NOL_100                                | 3.2      | Agricultural            | 0.7                                   | Williams  |
| Line Section 25 Loop  | NOL_079                                | 4.1      | Agricultural            | 0.2                                   | Williams  |
| Line Section 25 Loop  | NOL_078                                | 4.1      | Agricultural, Open Land | 0.3                                   | Williams  |
| Line Section 25 Loop  | NOL_076                                | 4.2      | Open Land               | 0.3                                   | Williams  |
| Line Section 25 Loop  | NOL_077                                | 4.2      | Open Land               | 0.2                                   | Williams  |
| Line Section 25 Loop  | NOL_062                                | 5.2      | Open Land               | 0.2                                   | Williams  |
| Line Section 25 Loop  | NOL_065                                | 5.2      | Open Land               | 0.1                                   | Williams  |
| Line Section 25 Loop  | NOL_064                                | 5.2      | Agricultural, Open Land | <0.1                                  | Williams  |
| Line Section 25 Loop  | NOL_063                                | 5.2      | Agricultural, Open Land | 0.3                                   | Williams  |
| Line Section 25 Loop  | NOL_114                                | 6.2      | Agricultural            | 0.1                                   | Williams  |
| Line Section 25 Loop  | NOL_061                                | 6.2      | Developed, Open Land    | 0.2                                   | Williams  |
| Line Section 25 Loop  | NOL_059                                | 6.3      | Agricultural            | <0.1                                  | Williams  |
| Line Section 25 Loop  | NOL_060                                | 6.3      | Agricultural            | 0.4                                   | Williams  |
| Line Section 25 Loop  | NOL_075                                | 6.6      | Agricultural, Open Land | 0.6                                   | Williams  |
| Line Section 25 Loop  | NOL_072                                | 6.6      | Agricultural, Developed | 0.1                                   | Williams  |
| Line Section 25 Loop  | NOL_073                                | 6.8      | Agricultural            | 0.1                                   | Mountrail |
| Line Section 25 Loop  | NOL_074                                | 6.8      | Agricultural            | 0.1                                   | Mountrail |
| Line Section 25 Loop  | NOL_058                                | 7.3      | Agricultural            | 0.1                                   | Mountrail |
| Line Section 25 Loop  | NOL_057                                | 7.3      | Agricultural            | 0.3                                   | Mountrail |
| Line Section 25 Loop  | NOL_055                                | 7.4      | Agricultural, Open Land | 0.3                                   | Mountrail |
| Line Section 25 Loop  | NOL_056                                | 7.4      | Agricultural            | 0.1                                   | Mountrail |
| Line Section 25 Loop  | NOL_053                                | 8.3      | Agricultural            | 0.3                                   | Mountrail |
| Line Section 25 Loop  | NOL_054                                | 8.3      | Agricultural            | 0.1                                   | Mountrail |
| Line Section 25 Loop  | NOL_052                                | 8.4      | Agricultural            | 0.1                                   | Mountrail |
| Line Section 25 Loop  | NOL_051                                | 8.4      | Agricultural            | 0.3                                   | Mountrail |
| Line Section 25 Loop  | NOL_050                                | 9.3      | Agricultural            | 0.1                                   | Mountrail |
| Line Section 25 Loop  | NOL_049                                | 9.3      | Agricultural            | 0.3                                   | Mountrail |
| Line Section 25 Loop  | NOL_048                                | 9.4      | Agricultural            | 0.1                                   | Mountrail |

| APPENDIX 8A (cont'd)  |  |          |                                    |                                       |           |
|---|--|----------|------------------------------------|---------------------------------------|-----------|
| <b>North Bakken Expansion Project<br/>Additional Temporary Workspaces</b> |  |          |                                    |                                       |           |
| Project Facility  | Additional Temporary Workspaces (ATWS) | Milepost | Existing Land Uses                 | Area Affected by Construction (acres) | County    |
| Line Section 25 Loop  | NOL_047                                | 9.4      | Agricultural                       | 0.3                                   | Mountrail |
| Line Section 25 Loop  | NOL_046                                | 10.3     | Open Land                          | 0.2                                   | Mountrail |
| Line Section 25 Loop  | NOL_045                                | 10.3     | Open Land                          | 0.5                                   | Mountrail |
| Line Section 25 Loop  | NOL_113                                | 10.4     | Agricultural, Developed            | 0.2                                   | Burke     |
| Line Section 25 Loop  | NOL_044                                | 10.4     | Agricultural                       | 0.3                                   | Burke     |
| Line Section 25 Loop  | NOL_043                                | 11.3     | Agricultural, Developed            | 1.1                                   | Burke     |
| Line Section 25 Loop  | NOL_042                                | 11.4     | Agricultural                       | <0.1                                  | Burke     |
| Line Section 25 Loop  | NOL_040                                | 11.5     | Agricultural                       | 0.5                                   | Burke     |
| Line Section 25 Loop  | NOL_041                                | 11.5     | Agricultural, Developed            | 0.2                                   | Burke     |
| Line Section 25 Loop  | NOL_039                                | 11.6     | Agricultural                       | 0.1                                   | Burke     |
| Line Section 25 Loop  | NOL_038                                | 11.6     | Agricultural, Developed            | 0.5                                   | Burke     |
| Line Section 25 Loop  | NOL_037                                | 12.5     | Agricultural                       | 0.3                                   | Burke     |
| Line Section 25 Loop  | NOL_036                                | 12.5     | Agricultural                       | 0.6                                   | Burke     |
| Line Section 25 Loop  | NOL_035                                | 12.6     | Agricultural, Open Land            | 0.1                                   | Burke     |
| Line Section 25 Loop  | NOL_112                                | 12.6     | Agricultural                       | 0.3                                   | Burke     |
| Line Section 25 Loop  | NOL_096                                | 13.4     | Open Land                          | 0.3                                   | Burke     |
| Line Section 25 Loop  | NOL_095                                | 13.4     | Open Land                          | 0.3                                   | Burke     |
| Line Section 25 Loop  | NOL_110                                | 13.7     | Agricultural, Developed            | 0.7                                   | Burke     |
| Line Section 25 Loop  | NOL_111                                | 13.7     | Agricultural, Developed, Open Land | 1.4                                   | Burke     |
| Line Section 25 Loop  | NOL_091                                | 14.8     | Developed, Open Land               | 0.1                                   | Burke     |
| Line Section 25 Loop  | NOL_092                                | 14.8     | Open Land                          | 0.3                                   | Burke     |
| Line Section 25 Loop  | NOL_093                                | 15.0     | Open Land                          | 0.2                                   | Burke     |
| Line Section 25 Loop  | NOL_094                                | 15.0     | Open Land                          | 1.2                                   | Burke     |
| Line Section 25 Loop  | NOL_089                                | 16.3     | Agricultural                       | 0.3                                   | Burke     |
| Line Section 25 Loop  | NOL_071                                | 16.3     | Agricultural                       | 0.2                                   | Burke     |
| Line Section 25 Loop  | NOL_088                                | 16.5     | Open Land                          | 0.4                                   | Burke     |
| Line Section 25 Loop  | NOL_090                                | 16.5     | Agricultural, Developed, Open Land | 0.8                                   | Burke     |
| Line Section 25 Loop  | NOL_087                                | 17.1     | Agricultural                       | 0.6                                   | Burke     |
| Line Section 25 Loop  | NOL_086                                | 17.1     | Agricultural                       | 0.1                                   | Burke     |
| Line Section 25 Loop  | NOL_085                                | 17.2     | Agricultural                       | 0.3                                   | Burke     |
| Line Section 25 Loop  | NOL_084                                | 17.2     | Agricultural                       | 0.6                                   | Burke     |
| Line Section 25 Loop  | NOL_083                                | 17.4     | Agricultural, Open Land            | 0.5                                   | Burke     |
| Line Section 25 Loop  | NOL_082                                | 17.4     | Agricultural, Open Land            | 1.0                                   | Burke     |
| Line Section 25 Loop  | NOL_081                                | 17.6     | Agricultural, Developed            | 0.3                                   | Burke     |
| Line Section 25 Loop  | NOL_080                                | 17.6     | Agricultural                       | 0.1                                   | Burke     |



| APPENDIX 8A (cont'd)  |  |          |                                    |                                       |          |
|---|--|----------|------------------------------------|---------------------------------------|----------|
| <b>North Bakken Expansion Project<br/>Additional Temporary Workspaces</b> |  |          |                                    |                                       |          |
| Project Facility  | Additional Temporary Workspaces (ATWS) | Milepost | Existing Land Uses                 | Area Affected by Construction (acres) | County   |
| Line Section 25 Loop  | NOL_108                                | 19.3     | Open Land                          | 0.3                                   | Burke    |
| Line Section 25 Loop  | NOL_109                                | 19.3     | Open Land                          | 0.1                                   | Burke    |
| Line Section 25 Loop  | NOL_107                                | 19.4     | Developed, Open Land               | 1.1                                   | Burke    |
| Line Section 30 Loop  | NLL_007                                | 3.1      | Agricultural                       | 0.2                                   | Williams |
| Line Section 30 Loop  | NLL_009                                | 3.1      | Agricultural                       | 0.3                                   | Williams |
| Line Section 30 Loop  | NLL_008                                | 3.2      | Agricultural, Developed            | 0.3                                   | Williams |
| Line Section 30 Loop  | NLL_006                                | 3.2      | Agricultural, Developed            | 0.2                                   | Williams |
| Line Section 30 Loop  | NLL_003                                | 4.1      | Agricultural, Developed            | 0.5                                   | Williams |
| Line Section 30 Loop  | NLL_005                                | 4.1      | Agricultural                       | 0.0                                   | Williams |
| Line Section 30 Loop  | NLL_002                                | 4.2      | Agricultural, Developed            | 0.5                                   | Williams |
| Line Section 30 Loop  | NLL_004                                | 4.2      | Agricultural                       | <0.1                                  | Williams |
| Line Section 30 Loop  | NLL_010                                | 5.1      | Agricultural, Developed            | 0.1                                   | Williams |
| Line Section 30 Loop  | NLL_011                                | 5.1      | Agricultural, Developed            | 0.4                                   | Williams |
| Line Section 30 Loop  | NLL_013                                | 5.2      | Agricultural                       | 0.4                                   | Williams |
| Line Section 30 Loop  | NLL_012                                | 5.2      | Agricultural, Developed            | 0.2                                   | Williams |
| Line Section 30 Loop  | NLL_014                                | 6.2      | Agricultural, Developed            | 0.2                                   | Williams |
| Line Section 30 Loop  | NLL_016                                | 6.2      | Agricultural, Developed, Open Land | 0.3                                   | Williams |
| Line Section 30 Loop  | NLL_015                                | 6.3      | Agricultural                       | 0.2                                   | Williams |
| Line Section 30 Loop  | NLL_017                                | 6.3      | Agricultural                       | 0.3                                   | Williams |
| Line Section 30 Loop  | NLL_019                                | 7.4      | Agricultural, Developed            | 0.3                                   | Williams |
| Line Section 30 Loop  | NLL_018                                | 7.4      | Agricultural, Developed            | 0.2                                   | Williams |
| Line Section 30 Loop  | NLL_023                                | 7.5      | Agricultural                       | 0.4                                   | Williams |
| Line Section 30 Loop  | NLL_020                                | 7.5      | Agricultural                       | 0.2                                   | Williams |
| Line Section 30 Loop  | NLL_025                                | 7.6      | Agricultural                       | 0.4                                   | Williams |
| Line Section 30 Loop  | NLL_022                                | 7.6      | Agricultural                       | 0.3                                   | Williams |
| Line Section 30 Loop  | NLL_021                                | 7.7      | Agricultural, Developed            | 0.4                                   | Williams |
| Line Section 30 Loop  | NLL_024                                | 7.7      | Agricultural, Developed            | 0.3                                   | Williams |
| Line Section 30 Loop  | NLL_026                                | 8.6      | Agricultural                       | 0.4                                   | Williams |
| Line Section 30 Loop  | NLL_027                                | 8.6      | Agricultural                       | 0.6                                   | Williams |
| Line Section 30 Loop  | NLL_029                                | 8.7      | Agricultural, Open Land            | 0.8                                   | Williams |
| Line Section 30 Loop  | NLL_028                                | 8.7      | Agricultural, Open Land            | 0.4                                   | Williams |
| Line Section 30 Loop  | NLL_030                                | 9.1      | Agricultural                       | 0.2                                   | Williams |
| Line Section 30 Loop  | NLL_031                                | 9.1      | Agricultural, Developed            | 0.4                                   | Williams |
| Line Section 30 Loop  | NLL_033                                | 9.2      | Open Land                          | 0.2                                   | Williams |
| Line Section 30 Loop  | NLL_032                                | 9.2      | Developed, Open Land               | 0.3                                   | Williams |

| APPENDIX 8A (cont'd)  |  |          |                         |                                       |           |
|---|--|----------|-------------------------|---------------------------------------|-----------|
| <b>North Bakken Expansion Project<br/>Additional Temporary Workspaces</b> |  |          |                         |                                       |           |
| Project Facility  | Additional Temporary Workspaces (ATWS) | Milepost | Existing Land Uses      | Area Affected by Construction (acres) | County    |
| Tioga Compressor Lateral  | AGF_122                                | 0.0      | Open Land               | <0.1                                  | Williams  |
| Tioga Compressor Lateral  | AGF_119                                | 0.0      | Agricultural            | 0.1                                   | Williams  |
| Tioga Compressor Lateral  | AGF_120                                | 0.4      | Open Land               | 0.2                                   | Williams  |
| Tioga Compressor Lateral  | AGF_121                                | 0.4      | Open Land               | 0.1                                   | Williams  |
| Tioga Compressor Lateral  | AGF_135                                | 0.5      | Open Land               | <0.1                                  | Williams  |
| Uprate Line Section 25  | UPR_127                                | 0.0      | Agricultural, Open Land | 0.7                                   | Burke     |
| Uprate Line Section 25  | UPR_125                                | 0.0      | Developed, Open Land    | 2.1                                   | Burke     |
| Uprate Line Section 25  | UPR_131                                | 0.0      | Developed, Open Land    | 0.8                                   | Burke     |
| Uprate Line Section 25  | UPR_129                                | 0.1      | Developed, Open Land    | 1.4                                   | Burke     |
| Uprate Line Section 25  | UPR_123                                | 0.1      | Agricultural, Open Land | 0.9                                   | Burke     |
| Uprate Line Section 25  | UPR_130                                | 0.1      | Agricultural, Open Land | 0.1                                   | Burke     |
| Uprate Line Section 25  | UPR_128                                | 0.1      | Developed, Open Land    | 1.5                                   | Burke     |
| Uprate Line Section 25  | UPR_126                                | 0.1      | Open Land               | 0.8                                   | Burke     |
| Uprate Line Section 25  | UPR_124                                | 0.2      | Agricultural, Open Land | 2.5                                   | Burke     |
| Uprate Line Section 25  | UPR_342                                | 20.3     | Agricultural            | 0.7                                   | Burke     |
| Robinson Lake Tract   | AGF_034                                | 0.0      | Agricultural            | 0.8                                   | Mountrail |
| Elkhorn Creek Compressor Station  | AGF_134                                | 0.0      | Agricultural, Developed | 1.1                                   | McKenzie  |
| Northern Border Interconnect  | AGF_133                                | 0.3      | Agricultural, Open Land | 0.6                                   | McKenzie  |
| Northern Border Interconnect  | AGF_132                                | 0.3      | Agricultural, Open Land | 0.6                                   | McKenzie  |
| Springbrook Plant Receipt Station   | AGF_001                                | 0.0      | Agricultural            | 0.6                                   | Williams  |

**NORTH BAKKEN EXPANSION PROJECT**

**Resource Report 8**

**APPENDIX 8B  
Access Roads**

| APPENDIX 8B                                     |          |                        |                            |                      |                 |                                    |               |              |                                       |                                     |
|---|----------|------------------------|----------------------------|----------------------|-----------------|------------------------------------|---------------|--------------|---------------------------------------|-------------------------------------|
| North Bakken Expansion Project<br>Access Roads  |          |                        |                            |                      |                 |                                    |               |              |                                       |                                     |
| Access Road Name                                | Milepost | Existing Road Type     | Modification Required      | Use (Temp. or Perm.) | Existing or New | Existing Land Uses                 | Length (feet) | Width (feet) | Area Affected by Construction (acres) | Area Affected by Operations (acres) |
| <b>Tioga-Elkhorn Creek</b>                      |          |                        |                            |                      |                 |                                    |               |              |                                       |                                     |
| Access 1  | 0.6      | Gravel                 | None                       | Temp.                | Existing, New   | Agricultural, Open Land            | 829           | 30           | 0.6                                   | 0.0                                 |
| Access 2  | 1.1      | Dirt/Vegetation        | None                       | Temp.                | Existing        | Agricultural, Developed            | 2,593         | 20           | 1.8                                   | 0.0                                 |
| Access 3_R1                                     | 2.0      | Dirt/Vegetation        | None                       | Temp.                | Existing, New   | Agricultural, Developed            | 183           | 20           | 0.1                                   | 0.0                                 |
| Access 4_R1                                     | 2.0      | Dirt/Vegetation        | None                       | Temp.                | Existing, New   | Agricultural, Developed            | 298           | 20           | 0.2                                   | 0.0                                 |
| Access 5  | 4.9      | Gravel                 | None                       | Temp.                | Existing        | Agricultural, Developed            | 1,790         | 30           | 1.7                                   | 0.0                                 |
| Access 6  | 5.8      | Gravel                 | None                       | Temp.                | Existing        | Agricultural, Developed            | 1,310         | 30           | 0.9                                   | 0.0                                 |
| Access to 104 <sup>th</sup> Ave NW Pig Launcher | 6.1      | Dirt/Vegetation        | Remove Topsoil, add gravel | Perm.                | Existing, New   | Developed                          | 38            | 20           | <0.1                                  | <0.1                                |
| Access 7  | 7.0      | Vegetation             | None                       | Temp.                | Existing        | Agricultural, Developed            | 35            | 20           | <0.1                                  | 0.0                                 |
| Access 8  | 8.4      | Dirt/Vegetation        | None                       | Temp.                | Existing        | Agricultural, Developed            | 44            | 20           | <0.1                                  | 0.0                                 |
| Access 9  | 10.4     | Gravel/Dirt/Vegetation | Remove/Replace Topsoil     | Temp.                | Existing        | Agricultural, Developed, Open Land | 2,137         | 20           | 1.5                                   | 0.0                                 |
| Access 10                                       | 12.0     | Vegetation             | None                       | Temp.                | Existing, New   | Agricultural, Developed, Open Land | 1,663         | 20           | 1.2                                   | 0.0                                 |
| Access 10a                                      | 12.2     | Gravel/Dirt/Vegetation | Remove/Replace Topsoil     | Temp.                | Existing        | Agricultural, Developed, Open Land | 2,766         | 20           | 1.9                                   | 0.0                                 |

| APPENDIX 8B (cont'd)                           |          |                        |                                     |                      |                 |                                    |               |              |                                       |                                     |
|--|----------|------------------------|-------------------------------------|----------------------|-----------------|------------------------------------|---------------|--------------|---------------------------------------|-------------------------------------|
| North Bakken Expansion Project<br>Access Roads |          |                        |                                     |                      |                 |                                    |               |              |                                       |                                     |
| Access Road Name                               | Milepost | Existing Road Type     | Modification Required               | Use (Temp. or Perm.) | Existing or New | Existing Land Uses                 | Length (feet) | Width (feet) | Area Affected by Construction (acres) | Area Affected by Operations (acres) |
| Access 11_R1                                   | 13.1     | Gravel/Dirt/Vegetation | Remove/Replace Topsoil              | Temp.                | Existing        | Agricultural, Developed, Open Land | 3,641         | 20           | 2.5                                   | 0.0                                 |
| Access 12                                      | 14.1     | Gravel/Dirt/Vegetation | None                                | Temp.                | Existing, New   | Agricultural, Developed            | 266           | 20           | 0.1                                   | 0.0                                 |
| Access 13                                      | 17.5     | Gravel/Dirt/Vegetation | None                                | Temp.                | Existing, New   | Agricultural, Open Land            | 3,842         | 20           | 2.6                                   | 0.0                                 |
| Access 14                                      | 19.2     | Gravel/Dirt            | None                                | Temp.                | Existing        | Developed, Agricultural            | 796           | 20           | 0.5                                   | 0.0                                 |
| Access 15                                      | 19.7     | Dirt/Vegetation        | None                                | Temp.                | Existing, New   | Developed                          | 110           | 20           | 0.1                                   | 0.0                                 |
| Access 16                                      | 19.7     | Dirt/Vegetation        | None                                | Temp.                | New             | Developed, Open Land               | 71            | 20           | <0.1                                  | 0.0                                 |
| Access 17                                      | 19.7     | Vegetation             | None                                | Temp.                | Existing, New   | Agricultural, Developed            | 254           | 20           | 0.1                                   | 0.0                                 |
| Access 18                                      | 19.8     | Vegetation             | None                                | Temp.                | New             | Developed                          | 81            | 20           | 0.1                                   | 0.0                                 |
| Access 19                                      | 20.7     | Gravel/Dirt/Vegetation | Remove/Replace Topsoil              | Temp.                | Existing        | Developed                          | 80            | 20           | 0.1                                   | 0.0                                 |
| Access 20                                      | 21.4     | Vegetation             | None                                | Temp.                | Existing        | Agricultural                       | 46            | 20           | 0.1                                   | 0.0                                 |
| Access 21                                      | 21.9     | Vegetation             | None                                | Temp.                | Existing        | Agricultural, Developed            | 74            | 20           | 0.1                                   | 0.0                                 |
| Access 22                                      | 22.3     | Gravel                 | None                                | Temp.                | Existing, New   | Agricultural, Developed, Open Land | 4,251         | 20           | 3.0                                   | 0.0                                 |
| Access 23                                      | 22.9     | Dirt                   | Remove Topsoil, add gravel, restore | Temp.                | Existing        | Agricultural, Open Land            | 114           | 30           | 0.1                                   | 0.0                                 |
| Access 24                                      | 25.9     | Dirt/Vegetation        | Remove Topsoil, add gravel, restore | Temp.                | Existing, New   | Agricultural, Developed, Open Land | 1,640         | 30           | 1.1                                   | 0.0                                 |

| APPENDIX 8B (cont'd)                           |          |                    |                            |                      |                 |                                    |               |              |                                       |                                     |
|--|----------|--------------------|----------------------------|----------------------|-----------------|------------------------------------|---------------|--------------|---------------------------------------|-------------------------------------|
| North Bakken Expansion Project<br>Access Roads |          |                    |                            |                      |                 |                                    |               |              |                                       |                                     |
| Access Road Name                               | Milepost | Existing Road Type | Modification Required      | Use (Temp. or Perm.) | Existing or New | Existing Land Uses                 | Length (feet) | Width (feet) | Area Affected by Construction (acres) | Area Affected by Operations (acres) |
| Access 24_R1                                   | 26.1     | Dirt/Vegetation    | Remove Topsoil, add gravel | Perm.                | New             | Agricultural, Developed, Open Land | 712           | 30           | 0.5                                   | 0.5                                 |
| Access 24b                                     | 27.7     | Dirt/Vegetation    | Remove/Replace Topsoil     | Temp.                | Existing, New   | Agricultural, Open Land            | 262           | 20           | 0.2                                   | 0.0                                 |
| Access 24c                                     | 28.6     | Dirt/Vegetation    | Remove/Replace Topsoil     | Temp.                | Existing, New   | Open Land                          | 225           | 20           | 0.2                                   | 0.0                                 |
| Access 24d                                     | 30.6     | Dirt/Vegetation    | Remove/Replace Topsoil     | Temp.                | Existing, New   | Developed, Open Land               | 926           | 20           | 0.6                                   | 0.0                                 |
| Access 24e                                     | 32.2     | Dirt/Vegetation    | Remove/Replace Topsoil     | Temp.                | Existing        | Agricultural, Developed, Open Land | 1,280         | 20           | 0.9                                   | 0.0                                 |
| Access 25_R1                                   | 34.6     | Gravel             | None                       | Temp.                | Existing        | Agricultural, Open Land            | 2,964         | 30           | 2.0                                   | 0.0                                 |
| NO NAME - 40 <sup>th</sup> Street              | 36.7     | Dirt/Vegetation    | Remove/Replace Topsoil     | Temp.                | New             | Developed, Open Land               | 120           | 20           | 0.1                                   | 0.0                                 |
| Highway 10 Block Valve                         | 36.7     | Dirt/Vegetation    | Remove Topsoil, add gravel | Perm.                | Existing, New   | Developed, Open Land               | 212           | 20           | 0.1                                   | 0.1                                 |
| Access 26                                      | 36.7     | Dirt/Vegetation    | None                       | Temp.                | Existing        | Agricultural, Developed            | 114           | 20           | <0.1                                  | 0.0                                 |
| Access 27                                      | 38.2     | Dirt/Vegetation    | Remove/Replace Topsoil     | Temp.                | New             | Developed, Open Land               | 509           | 20           | 0.4                                   | 0.0                                 |
| Access 28                                      | 39.1     | Gravel             | None                       | Temp.                | Existing        | Agricultural, Developed            | 814           | 20           | 0.6                                   | 0.0                                 |
| Access 29                                      | 40.4     | Dirt               | None                       | Temp.                | Existing        | Agricultural                       | 424           | 20           | 0.3                                   | 0.0                                 |
| Access 30                                      | 41.5     | Gravel             | None                       | Temp.                | Existing        | Agricultural                       | 2,698         | 30           | 1.9                                   | 0.0                                 |
| Access 31                                      | 45.7     | Dirt/Vegetation    | None                       | Temp.                | Existing        | Agricultural, Developed, Open Land | 290           | 20           | 0.2                                   | 0.0                                 |
| Access 32                                      | 48.7     | Gravel             | None                       | Temp.                | Existing        | Developed                          | 419           | 20           | 0.3                                   | 0.0                                 |

| APPENDIX 8B (cont'd)                           |          |                                      |   |                      |                 |                                    |               |                       |                                       |                                     |
|--|----------|--------------------------------------|---|----------------------|-----------------|------------------------------------|---------------|-----------------------|---------------------------------------|-------------------------------------|
| North Bakken Expansion Project<br>Access Roads |          |                                      |   |                      |                 |                                    |               |                       |                                       |                                     |
| Access Road Name                               | Milepost | Existing Road Type                   | Modification Required                     | Use (Temp. or Perm.) | Existing or New | Existing Land Uses                 | Length (feet) | Width (feet)          | Area Affected by Construction (acres) | Area Affected by Operations (acres) |
| Access 33                                      | 50.2     | Gravel                               | Remove/Replace Topsoil                    | Temp.                | Existing, New   | Developed, Agricultural, Open Land | 1,951         | 20                    | 1.3                                   | 0.0                                 |
| Access 34                                      | 51.1     | Gravel                               | None                                      | Perm.                | Existing        | Developed, Open Land               | 1,590         | 20                    | 1.1                                   | 1.1                                 |
| Access 35_R1                                   | 56.1     | Dirt                                 | None                                      | Temp.                | Existing        | Agricultural, Open Land            | 2,878         | 20                    | 2.0                                   | 0.0                                 |
| NO NAME - 122 <sup>nd</sup> Street             | 57.9     | Dirt/Vegetation                      | Remove/Replace Topsoil                    | Temp.                | New             | Open Land                          | 292           | 20                    | 0.2                                   | 0.0                                 |
| Access 36                                      | 59.2     | Dirt/Vegetation                      | None                                      | Temp.                | New             | Agricultural, Open Land            | 122           | 20                    | 0.1                                   | 0.0                                 |
| <b>Elkhorn Creek-Northern Border</b>           |          |                                      |   |                      |                 |                                    |               |                       |                                       |                                     |
| Unk_1-Elkhorn Crk CS                           | 0.1      | Dirt/Vegetation                      | New construction, grade/level, add gravel | Perm.                | Existing, New   | Agricultural, Developed, Open Land | 1,685         | 30                    | 1.2                                   | 1.2                                 |
| Unk_2-Elkhorn Crk CS                           | 0.0      | Dirt/Vegetation                      | New construction, grade/level, add gravel | Perm.                | Existing, New   | Agricultural                       | 341           | 30                    | 0.2                                   | 0.2                                 |
| <b>Line Section 25 Loop</b>                    |          |                                      |   |                      |                 |                                    |               |                       |                                       |                                     |
| Access Road B                                  | 0.3      | Gravel (Well Pad Access)             | None                                      | Temp.                | Existing        | Developed, Open Land               | 382           | 30                    | 0.3                                   | 0.0                                 |
| Access Road D                                  | 1.0      | Dirt/Vegetation (Existing two-track) | None                                      | Temp.                | Existing        | Developed, Open Land               | 1,205         | 20                    | 0.8                                   | 0.0                                 |
| Access Road F                                  | 1.5      | Gravel (Well Pad Access)             | None                                      | Temp.                | Existing        | Agricultural, Open Land            | 934           | 30/20 (through field) | 0.6                                   | 0.0                                 |

| APPENDIX 8B (cont'd)                           |          |  |  |                      |                 |                         |               |                                      |                                       |                                     |
|--|----------|--|--|----------------------|-----------------|-------------------------|---------------|--------------------------------------|---------------------------------------|-------------------------------------|
| North Bakken Expansion Project<br>Access Roads |          |  |  |                      |                 |                         |               |                                      |                                       |                                     |
| Access Road Name                               | Milepost | Existing Road Type   | Modification Required  | Use (Temp. or Perm.) | Existing or New | Existing Land Uses      | Length (feet) | Width (feet)                         | Area Affected by Construction (acres) | Area Affected by Operations (acres) |
| Access Road G                                  | 2.1      | Dirt/Vegetation (Existing approach + farmed field)                           | Use existing approach/may need to blade clear of vegetation (if planted) to right-of-way (ROW) | Temp.                | New             | Agricultural, Developed | 223           | 20                                   | 0.1                                   | 0.0                                 |
| Access Road H                                  | 2.1      | Dirt/Vegetation (Existing approach + farmed field)                           | Use existing approach/may need to blade clear of vegetation (if planted) to ROW                | Temp.                | New             | Agricultural, Developed | 493           | 20                                   | 0.3                                   | 0.0                                 |
| Access Road I                                  | 2.7      | Gravel/Dirt/Vegetation (Well Pad Access + Existing two-track + farmed field) | Use existing approach/may need to blade clear of vegetation (if planted) to ROW                | Temp.                | Existing        | Agricultural, Developed | 1,178         | 30 (well pad)/20 (two-track & field) | 0.7                                   | 0.0                                 |
| Access Road K                                  | 3.1      | Dirt/Vegetation (Existing approach + farmed field)                           | Use existing approach/may need to blade clear of vegetation (if planted) to ROW                | Temp.                | New             | Agricultural            | 996           | 20                                   | 0.6                                   | 0.0                                 |
| Access Road M1                                 | 4.3      | Gravel (Well Pad Access)   | None   | Temp.                | Existing        | Open Land               | 2,586         | 30                                   | 1.8                                   | 0.0                                 |
| Access Road N                                  | 5.2      | Gravel/Dirt/Vegetation (Existing approach & two-track + farmed field)        | Use existing approach/may need to blade clear of vegetation (if planted) to ROW                | Temp.                | New             | Agricultural            | 525           | 20                                   | 0.3                                   | 0.0                                 |



| APPENDIX 8B (cont'd)                           |          |  |  |                      |                 |                                    |               |                       |                                       |                                     |
|--|----------|--|--|----------------------|-----------------|------------------------------------|---------------|-----------------------|---------------------------------------|-------------------------------------|
| North Bakken Expansion Project<br>Access Roads |          |  |  |                      |                 |                                    |               |                       |                                       |                                     |
| Access Road Name                               | Milepost | Existing Road Type                                   | Modification Required  | Use (Temp. or Perm.) | Existing or New | Existing Land Uses                 | Length (feet) | Width (feet)          | Area Affected by Construction (acres) | Area Affected by Operations (acres) |
| Access Road O                                  | 6.1      | Dirt/Vegetation (Existing two-track)                 | Use existing approach/may need to blade to ROW                                       | Temp.                | Existing        | Open Land                          | 1,251         | 20                    | 0.8                                   | 0.0                                 |
| Access Road P                                  | 6.6      | Dirt/Vegetation (Existing approach + farmed field)   | Use existing approach/may need to blade clear of vegetation (if planted) to ROW      | Temp.                | Existing        | Agricultural, Developed            | 235           | 20                    | <0.1                                  | 0.0                                 |
| Access Road R                                  | 6.9      | Gravel (Well Pad Access)                             | None   | Perm.                | Existing        | Agricultural, Developed            | 237           | 30                    | 0.1                                   | 0.1                                 |
| Access Road S                                  | 7.5      | Dirt/Vegetation (Existing two-track)                 | May need to blade out ruts and clear of vegetation                                   | Temp.                | Existing        | Developed, Open Land               | 989           | 20                    | 0.7                                   | 0.0                                 |
| Access Road T                                  | 7.9      | Gravel/Dirt/Vegetation (Well pad access + two-track) | Use existing well pad road/May need to blade two-track to ROW to clear of vegetation | Temp.                | New             | Agricultural, Developed, Open Land | 1,457         | 30/20 (through field) | 1.0                                   | 0.0                                 |
| Access Road U                                  | 8.3      | Dirt/Vegetation (Existing approach + farmed field)   | Use existing approach/may need to blade clear of vegetation (if planted) to ROW      | Temp.                | New             | Agricultural, Developed            | 108           | 20                    | 0.1                                   | 0.0                                 |
| Access Road V1                                 | 8.3      | Gravel (Well Pad Access Approach + farmed field)     | Use existing approach/may need to blade clear of vegetation (if planted) to ROW      | Temp.                | New             | Agricultural, Developed            | 253           | 30/20 (through field) | 0.2                                   | 0.0                                 |

| APPENDIX 8B (cont'd)                           |          |  |   |                      |                 |                         |               |                       |                                       |                                     |
|--|----------|--|---|----------------------|-----------------|-------------------------|---------------|-----------------------|---------------------------------------|-------------------------------------|
| North Bakken Expansion Project<br>Access Roads |          |  |   |                      |                 |                         |               |                       |                                       |                                     |
| Access Road Name                               | Milepost | Existing Road Type   | Modification Required   | Use (Temp. or Perm.) | Existing or New | Existing Land Uses      | Length (feet) | Width (feet)          | Area Affected by Construction (acres) | Area Affected by Operations (acres) |
| Access Road V2                                 | 8.5      | Gravel (Well Pad Access Approach + farmed field)           | Use existing approach/may need to blade clear of vegetation (if planted) to ROW | Temp.                | New             | Agricultural            | 1,577         | 30/20 (through field) | 1.0                                   | 0.0                                 |
| Access Road W                                  | 9.4      | Dirt/Vegetation (Existing approach + farmed field)         | Use existing approach/may need to blade clear of vegetation (if planted) to ROW | Temp.                | New             | Agricultural, Developed | 443           | 20                    | 0.3                                   | 0.0                                 |
| Access Road X                                  | 9.4      | Dirt/Vegetation (Existing approach + farmed field)         | Use existing approach/may need to blade clear of vegetation (if planted) to ROW | Temp.                | New             | Agricultural, Developed | 270           | 20                    | 0.2                                   | 0.0                                 |
| Access Road Y2                                 | 10.0     | Dirt/Vegetation (Existing approach + two-track)            | May need to blade out ruts and clear of vegetation                              | Temp.                | Existing        | Developed, Open Land    | 2,085         | 20                    | 1.4                                   | 0.0                                 |
| Access Road Z                                  | 10.4     | Dirt/Vegetation (Existing approach + farmed field)         | Use existing approach/may need to blade clear of vegetation (if planted) to ROW | Temp.                | New             | Agricultural, Developed | 1,111         | 20                    | 0.7                                   | 0.0                                 |
| Access Road BB                                 | 11.2     | Gravel/Dirt/Vegetation (Existing two-track + farmed field) | Use existing approach/may need to blade clear of vegetation (if planted) to ROW | Temp.                | New             | Agricultural, Developed | 1,502         | 20                    | 1.0                                   | 0.0                                 |

| APPENDIX 8B (cont'd)                           |          |   |   |                      |                 |                                    |               |                       |                                       |                                     |
|--|----------|---|---|----------------------|-----------------|------------------------------------|---------------|-----------------------|---------------------------------------|-------------------------------------|
| North Bakken Expansion Project<br>Access Roads |          |   |   |                      |                 |                                    |               |                       |                                       |                                     |
| Access Road Name                               | Milepost | Existing Road Type  | Modification Required   | Use (Temp. or Perm.) | Existing or New | Existing Land Uses                 | Length (feet) | Width (feet)          | Area Affected by Construction (acres) | Area Affected by Operations (acres) |
| Access Road CC                                 | 11.4     | Gravel/Dirt/Vegetation (Existing approach + farmed field) | Use existing approach/may need to blade clear of vegetation (if planted) to ROW | Temp.                | New             | Agricultural, Developed            | 305           | 20                    | 0.2                                   | 0.0                                 |
| Access Road FF                                 | 12.0     | Dirt/Vegetation (Existing approach + farmed field)        | Use existing approach/may need to blade clear of vegetation (if planted) to ROW | Temp.                | New             | Agricultural, Developed            | 759           | 20                    | 0.5                                   | 0.0                                 |
| Access Road GG                                 | 12.5     | Dirt/Vegetation (Existing approach + farmed field)        | Use existing approach/may need to blade clear of vegetation (if planted) to ROW | Temp.                | New             | Developed, Agricultural            | 605           | 20                    | 0.4                                   | 0.0                                 |
| Access Road JJ                                 | 13.4     | Dirt/Vegetation (Existing approach + farmed field)        | Use existing approach/may need to blade clear of vegetation (if planted) to ROW | Temp.                | New             | Agricultural, Open Land            | 2,602         | 20                    | 1.7                                   | 0.0                                 |
| Access Road L                                  | 13.7     | Vegetation  | Remove Topsoil, add gravel  | Perm.                | New             | Developed, Agricultural, Open Land | 423           | 20                    | 0.2                                   | 0.2                                 |
| Access Road MM                                 | 13.8     | Gravel/Dirt/Vegetation (Well pad access + farmed field)   | Use existing road/May need to blade field clear (if planted)                    | Temp.                | Existing        | Agricultural, Developed            | 1,749         | 30/20 (through field) | 1.2                                   | 0.0                                 |

| APPENDIX 8B (cont'd)                           |          |  |   |                      |                 |                                    |               |              |                                       |                                     |
|--|----------|--|---|----------------------|-----------------|------------------------------------|---------------|--------------|---------------------------------------|-------------------------------------|
| North Bakken Expansion Project<br>Access Roads |          |  |   |                      |                 |                                    |               |              |                                       |                                     |
| Access Road Name                               | Milepost | Existing Road Type                                 | Modification Required   | Use (Temp. or Perm.) | Existing or New | Existing Land Uses                 | Length (feet) | Width (feet) | Area Affected by Construction (acres) | Area Affected by Operations (acres) |
| Access Road NN                                 | 14.4     | Dirt/Vegetation                                    | Use existing approach/may need to blade clear of vegetation to ROW, restore     | Temp.                | Existing        | Developed, Open Land               | 1,711         | 20           | 1.2                                   | 0.0                                 |
| Access Road QQ                                 | 15.1     | Dirt/Vegetation                                    | Use existing approach/may need to blade clear of vegetation to ROW, restore     | Temp.                | New             | Agricultural, Developed, Open Land | 928           | 20           | 0.6                                   | 0.0                                 |
| Access Road RR                                 | 15.6     | Dirt/Vegetation (Existing two-track)               | May need to blade out ruts and clear of vegetation                              | Temp.                | Existing        | Agricultural, Developed            | 2,657         | 20           | 1.8                                   | 0.0                                 |
| Access Road SS                                 | 16.3     | Dirt/Vegetation (Existing two-track)               | None  | Temp.                | New             | Developed, Open Land               | 111           | 20           | 0.1                                   | 0.0                                 |
| Access Road TT                                 | 16.7     | Dirt/Vegetation (Existing approach + farmed field) | Use existing approach/may need to blade clear of vegetation (if planted) to ROW | Temp.                | New             | Agricultural, Developed            | 113           | 20           | 0.1                                   | 0.0                                 |
| Access Road UU<br>1                            | 17.2     | Dirt/Vegetation (Existing approach + farmed field) | Use existing approach/may need to blade clear of vegetation (if planted) to ROW | Temp.                | New             | Agricultural, Developed            | 607           | 20           | 0.4                                   | 0.0                                 |

| APPENDIX 8B (cont'd)                           |          |  |   |                      |                 |                                    |               |              |                                       |                                     |
|--|----------|--|---|----------------------|-----------------|------------------------------------|---------------|--------------|---------------------------------------|-------------------------------------|
| North Bakken Expansion Project<br>Access Roads |          |  |   |                      |                 |                                    |               |              |                                       |                                     |
| Access Road Name                               | Milepost | Existing Road Type                                 | Modification Required   | Use (Temp. or Perm.) | Existing or New | Existing Land Uses                 | Length (feet) | Width (feet) | Area Affected by Construction (acres) | Area Affected by Operations (acres) |
| Access Road UU 2                               | 17.2     | Dirt/Vegetation (Existing approach + farmed field) | Use existing approach/may need to blade clear of vegetation (if planted) to ROW | Temp.                | Existing        | Agricultural, Developed            | 542           | 20           | 0.3                                   | 0.0                                 |
| Access Road VV                                 | 17.8     | Dirt/Vegetation (Existing two-track)               | May need to blade out ruts and clear of vegetation                              | Temp.                | New             | Agricultural, Developed, Open Land | 676           | 20           | 0.4                                   | 0.0                                 |
| Access Road WW                                 | 19.3     | Dirt/Vegetation (Existing approach + farmed field) | Use existing approach/may need to blade clear of vegetation (if planted) to ROW | Temp.                | New             | Developed, Open Land               | 333           | 20           | 0.2                                   | 0.0                                 |
| Access Road XX                                 | 19.4     | Dirt/Vegetation (Existing approach + road ditch)   | Use existing approach/No changes to road ditch                                  | Temp.                | New             | Developed, Open Land               | 193           | 20           | 0.1                                   | 0.0                                 |
| <b>Line Section 30 Loop</b>                    |          |  |   |                      |                 |                                    |               |              |                                       |                                     |
| NL Access 1                                    | 0.0      | Gravel/Dirt/Vegetation                             | Remove Topsoil, add gravel  | Perm.                | Existing, New   | Agricultural, Developed            | 187           | 30           | 0.1                                   | 0.1                                 |
| <b>Tioga Compressor Lateral</b>                |          |  |   |                      |                 |                                    |               |              |                                       |                                     |
| Tioga Plant Access Road                        | 0.0      | Dirt/Vegetation                                    | New construction, grade/level, add gravel                                       | Perm                 | New             | Agricultural, Developed            | 315           | 30           | 0.1                                   | 0.3                                 |
| <b>Uprate Line Section 25</b>                  |          |  |   |                      |                 |                                    |               |              |                                       |                                     |
| Access Road YY 2                               | 0.0      | Dirt/Vegetation (Existing approach + farmed field) | Use existing approach/may need to blade clear of vegetation (if planted) to ROW | Temp.                | Existing        | Agricultural, Developed, Open Land | 472           | 20           | 0.3                                   | 0.0                                 |

| APPENDIX 8B (cont'd)  |          |  |   |                      |                 |                                    |               |              |                                       |                                     |
|---|----------|--|---|----------------------|-----------------|------------------------------------|---------------|--------------|---------------------------------------|-------------------------------------|
| North Bakken Expansion Project<br>Access Roads  |          |  |   |                      |                 |                                    |               |              |                                       |                                     |
| Access Road Name  | Milepost | Existing Road Type                                 | Modification Required   | Use (Temp. or Perm.) | Existing or New | Existing Land Uses                 | Length (feet) | Width (feet) | Area Affected by Construction (acres) | Area Affected by Operations (acres) |
| Uprating Access Road 1  | 0.2      | Dirt/Vegetation (Existing approach + farmed field) | Use existing approach/may need to blade clear of vegetation (if planted) to ROW | Temp.                | New             | Agricultural, Developed, Open Land | 644           | 20           | 0.4                                   | 0.0                                 |
| Uprating Access Road 2  | 0.1      | Dirt/Vegetation (Existing approach + farmed field) | Use existing approach/may need to blade clear of vegetation (if planted) to ROW | Temp.                | New             | Developed, Open Land               | 425           | 20           | 0.2                                   | 0.0                                 |
| Uprating Access Road 3  | 0.1      | Dirt/Vegetation (Existing approach + farmed field) | Use existing approach/may need to blade clear of vegetation (if planted) to ROW | Temp.                | Existing        | Developed, Open Land               | 215           | 20           | 0.1                                   | 0.0                                 |
| <p><sup>a</sup> This access road is entirely within the workspaces associated with the pipeline right-of-way and additional temporary workspaces. The area affected by construction of the road is included within those acreages and not counted here.</p> |          |  |   |                      |                 |                                    |               |              |                                       |                                     |

**NORTH BAKKEN EXPANSION PROJECT**

**Resource Report 8**

**APPENDIX 8C  
Road and Railroad Crossings**

| APPENDIX 8C   |          |                                      |                 |                                    |
|---|----------|--------------------------------------|-----------------|------------------------------------|
| <b>North Bakken Expansion Project<br/>Road and Railroad Crossings</b> |          |                                      |                 |                                    |
| Facility/Milepost   | Type     | Name                                 | Crossing Method | Approximate Crossing Length (feet) |
| <b>Tioga-Elkhorn Creek</b>  |          |                                      |                 |                                    |
| 0.3   | Road     | 68 <sup>th</sup> Street NW           | Guided Bore     | 34                                 |
| 0.5   | Road     | Private Road                         | Open Cut        | 29                                 |
| 0.8   | Railroad | BNSF                                 | Guided Bore     | 51                                 |
| 1.8   | Road     | 103 <sup>rd</sup> Ave NW             | Guided Bore     | 29                                 |
| 2.0   | Road     | 67 <sup>th</sup> Street NW           | Guided Bore     | 24                                 |
| 3.1   | Road     | 66 <sup>th</sup> Street NW           | Guided Bore     | 28                                 |
| 4.2   | Road     | 65 <sup>th</sup> Street NW           | Guided Bore     | 25                                 |
| 4.9   | Road     | Private Road                         | Open Cut        | 19                                 |
| 5.2   | Road     | 64 <sup>th</sup> Street NW/Highway 2 | Guided Bore     | 133                                |
| 5.8   | Road     | Private Road                         | Open Cut        | 18                                 |
| 6.1   | Road     | 104 <sup>th</sup> Ave NW             | Guided Bore     | 36                                 |
| 7.0   | Road     | 105 <sup>th</sup> Ave NW             | Guided Bore     | 25                                 |
| 7.4   | Road     | 63 <sup>rd</sup> Street NW           | Guided Bore     | 18                                 |
| 8.4   | Road     | 106 <sup>th</sup> Ave NW             | Guided Bore     | 25                                 |
| 9.1   | Road     | 62 <sup>nd</sup> Street NW           | Guided Bore     | 35                                 |
| 10.5  | Road     | 61 <sup>st</sup> Street NW           | Open Cut        | 19                                 |
| 12.0  | Road     | 60 <sup>th</sup> Street NW           | Guided Bore     | 38                                 |
| 13.1  | Road     | 59 <sup>th</sup> Street NW           | Open Cut        | 11                                 |
| 14.1  | Road     | 58 <sup>th</sup> Street NW           | Guided Bore     | 18                                 |
| 16.1  | Road     | 56 <sup>th</sup> Street NW           | Guided Bore     | 20                                 |
| 18.4  | Road     | 109 <sup>th</sup> Ave NW             | Guided Bore     | 27                                 |
| 19.7  | Road     | 110 <sup>th</sup> Ave NW             | Guided Bore     | 26                                 |
| 19.7  | Road     | 54 <sup>th</sup> Street NW           | Guided Bore     | 30                                 |
| 20.7  | Road     | 53 <sup>th</sup> Street NW           | Guided Bore     | 36                                 |
| 21.4  | Road     | Private Road                         | Open Cut        | 16                                 |
| 22.3  | Road     | 51 <sup>st</sup> Street NW           | Guided Bore     | 37                                 |
| 22.8  | Road     | Private Road                         | Open Cut        | 45                                 |
| 22.9  | Road     | 51 <sup>st</sup> Street NW           | HDD             | 10                                 |
| 25.5  | Road     | Private Road                         | HDD             | 17                                 |
| 25.8  | Road     | Private Road                         | HDD             | 18                                 |
| 26.2  | Road     | Sand Creek Road                      | Guided Bore     | 35                                 |
| 26.7  | Road     | Private Road                         | Open Cut        | 22                                 |
| 26.9  | Road     | Private Road                         | Guided Bore     | 17                                 |
| 27.2  | Road     | (FDR) 8698                           | Open Cut        | 40                                 |
| 27.8  | Road     | Private Road                         | Open Cut        | 16                                 |
| 28.0  | Road     | Private Road                         | Open Cut        | 14                                 |



| APPENDIX 8C (cont'd)  |      |  |                 |                        |
|---|------|--|-----------------|------------------------|
| <b>North Bakken Expansion Project<br/>Road and Railroad Crossings</b> |      |  |                 |                        |
| Facility/Milepost   | Type | Name                                       | Crossing Method | Crossing Length (feet) |
| 28.1  | Road | Private Road                               | Open Cut        | 15                     |
| 28.6  | Road | (FDR) Tobacco Garden –<br>West Sand        | Open Cut        | 40                     |
| 29.7  | Road | 115 <sup>th</sup> Ave NW/ (FDR)<br>8000C43 | Guided Bore     | 25                     |
| 30.6  | Road | 45 <sup>th</sup> Street NW                 | Guided Bore     | 23                     |
| 32.2  | Road | Private Road                               | Open Cut        | 17                     |
| 33.2  | Road | Private Road                               | Open Cut        | 11                     |
| 33.5  | Road | 43 <sup>rd</sup> Street NW                 | Open Cut        | 23                     |
| 34.5  | Road | 42 <sup>nd</sup> Street NW                 | Guided Bore     | 25                     |
| 35.0  | Road | Private Road                               | Open Cut        | 12                     |
| 36.7  | Road | 40 <sup>th</sup> Street NW                 | Guided Bore     | 34                     |
| 36.8  | Road | Private Road                               | Open Cut        | 15                     |
| 38.5  | Road | Private Road                               | Open Cut        | 49                     |
| 38.7  | Road | 121 <sup>st</sup> Ave NW                   | Guided Bore     | 20                     |
| 39.2  | Road | 38 <sup>th</sup> Street NW                 | Guided Bore     | 24                     |
| 41.0  | Road | Private Road                               | Open Cut        | 15                     |
| 41.5  | Road | 36 <sup>th</sup> Street NW                 | Guided Bore     | 26                     |
| 41.7  | Road | Private Road                               | Open Cut        | 12                     |
| 42.6  | Road | 35 <sup>th</sup> Street NW                 | Guided Bore     | 8                      |
| 43.6  | Road | 34 <sup>th</sup> Street NW                 | Guided Bore     | 59                     |
| 43.7  | Road | 121 <sup>st</sup> Ave NW                   | Guided Bore     | 35                     |
| 44.7  | Road | 33 <sup>rd</sup> Street NW                 | Guided Bore     | 15                     |
| 45.7  | Road | 32 <sup>nd</sup> Street NW                 | Open Cut        | 24                     |
| 46.7  | Road | 31 <sup>st</sup> Street NW                 | Guided Bore     | 37                     |
| 47.7  | Road | 30 <sup>th</sup> Street NW                 | Guided Bore     | 26                     |
| 48.7  | Road | 29 <sup>th</sup> Street NW                 | Guided Bore     | 25                     |
| 49.1  | Road | 121 <sup>st</sup> Ave NW                   | Guided Bore     | 34                     |
| 49.8  | Road | 28 <sup>th</sup> Street NW                 | Guided Bore     | 33                     |
| 50.8  | Road | Private Road                               | Open Cut        | 14                     |
| 51.0  | Road | State Highway 23                           | Guided Bore     | 33                     |
| 51.1  | Road | Private Road                               | Open Cut        | 19                     |
| 51.9  | Road | Private Road                               | Open Cut        | 18                     |
| 52.1  | Road | Private Road                               | Open Cut        | 42                     |
| 54.6  | Road | Private Road                               | Open Cut        | 15                     |
| 54.8  | Road | 23 <sup>rd</sup> Street NW                 | Guided Bore     | 35                     |
| 56.1  | Road | Private Road                               | Open Cut        | 14                     |
| 56.1  | Road | Private Road                               | Open Cut        | 14                     |
| 56.7  | Road | 122 <sup>nd</sup> Ave NW                   | Guided Bore     | 71                     |

| APPENDIX 8C (cont'd)  |      |                            |                 |                        |
|---|------|----------------------------|-----------------|------------------------|
| <b>North Bakken Expansion Project<br/>Road and Railroad Crossings</b> |      |                            |                 |                        |
| Facility/Milepost   | Type | Name                       | Crossing Method | Crossing Length (feet) |
| 56.9  | Road | 122 <sup>nd</sup> Ave NW   | Guided Bore     | 38                     |
| 57.2  | Road | 22 <sup>nd</sup> Street NW | Open Cut        | 24                     |
| 58.1  | Road | 122 <sup>nd</sup> Ave NW   | Open Cut        | 68                     |
| 59.8  | Road | 21 <sup>st</sup> Street NW | Guided Bore     | 36                     |
| 60.6  | Road | 123 <sup>rd</sup> Ave NW   | Open Cut        | 20                     |
| <b>Line Section 25 Loop</b>   |      |                            |                 |                        |
| 0.3   | Road | Private Road               | Open Cut        | 18                     |
| 0.6   | Road | 103 <sup>rd</sup> Ave NW   | Guided Bore     | 34                     |
| 0.8   | Road | Private Road               | Open Cut        | 23                     |
| 1.0   | Road | Private Road               | Open Cut        | 23                     |
| 1.0   | Road | 69 <sup>th</sup> Street NW | Guided Bore     | 29                     |
| 1.4   | Road | Private Road               | Open Cut        | 19                     |
| 2.1   | Road | 103 <sup>rd</sup> Ave NW   | Guided Bore     | 58                     |
| 2.1   | Road | 70 <sup>th</sup> Street NW | Guided Bore     | 67                     |
| 3.2   | Road | 71 <sup>st</sup> Street NW | Guided Bore     | 32                     |
| 4.2   | Road | 72 <sup>nd</sup> Street NW | Guided Bore     | 24                     |
| 4.6   | Road | Private Road               | Open cut        | 23                     |
| 5.2   | Road | 73 <sup>rd</sup> Street NW | Guided Bore     | 24                     |
| 6.3   | Road | 74 <sup>th</sup> Street NW | Guided Bore     | 32                     |
| 6.7   | Road | 102 <sup>nd</sup> Ave NW   | Guided Bore     | 88                     |
| 6.9   | Road | Private Road               | Open Cut        | 25                     |
| 7.3   | Road | 75 <sup>th</sup> Street NW | Guided Bore     | 22                     |
| 8.3   | Road | 76 <sup>th</sup> Street NW | Guided Bore     | 24                     |
| 9.4   | Road | 77 <sup>th</sup> Street NW | Guided Bore     | 17                     |
| 10.4  | Road | 78 <sup>th</sup> Street NW | Guided Bore     | 21                     |
| 11.4  | Road | 79 <sup>th</sup> Street NW | Guided Bore     | 36                     |
| 11.5  | Road | 101 <sup>st</sup> Ave NW   | Guided Bore     | 25                     |
| 12.6  | Road | Highway 50                 | Guided Bore     | 33                     |
| 13.7  | Road | 81 <sup>st</sup> Street NW | Guided Bore     | 29                     |
| 14.3  | Road | Private Road               | Open Cut        | 19                     |
| 14.9  | Road | 100 <sup>th</sup> Ave NW   | Guided Bore     | 42                     |
| 15.8  | Road | Private Road               | Open Cut        | 19                     |
| 16.4  | Road | 99 <sup>th</sup> Ave NW    | Guided Bore     | 21                     |
| 17.1  | Road | 83 <sup>rd</sup> Street NW | Guided Bore     | 35                     |
| 17.6  | Road | 98 <sup>th</sup> Ave NW    | Guided Bore     | 39                     |
| 18.3  | Road | 84 <sup>th</sup> Street NW | Open Cut        | 17                     |
| 19.3  | Road | County Road 16             | Guided Bore     | 26                     |

| APPENDIX 8C (cont'd)  |          |                            |                 |                        |
|---|----------|----------------------------|-----------------|------------------------|
| <b>North Bakken Expansion Project<br/>Road and Railroad Crossings</b> |          |                            |                 |                        |
| Facility/Milepost   | Type     | Name                       | Crossing Method | Crossing Length (feet) |
| <b>Line Section 30 Loop</b>   |          |                            |                 |                        |
| 1.0   | Road     | 108 <sup>th</sup> Ave NW   | Open Cut        | 9                      |
| 3.2   | Road     | 106 <sup>th</sup> Ave NW   | Guided Bore     | 8                      |
| 4.2   | Road     | 105 <sup>th</sup> Ave NW   | Guided Bore     | 27                     |
| 5.2   | Road     | 66 <sup>th</sup> Street NW | Guided Bore     | 24                     |
| 5.7   | Road     | Private Road               | Open Cut        | 10                     |
| 6.3   | Road     | State Highway 40           | Guided Bore     | 57                     |
| 7.5   | Road     | 67 <sup>th</sup> Street NW | Guided Bore     | 24                     |
| 7.7   | Road     | 103 <sup>rd</sup> Ave NW   | Guided Bore     | 29                     |
| 8.6   | Railroad | BNSF                       | Guided Bore     | 51                     |
| 9.1   | Road     | 68 <sup>th</sup> Street NW | Guided Bore     | 34                     |
| <b>Tioga Compressor Lateral</b>                                       |          |                            |                 |                        |
| 0.5   | Road     | 103 <sup>rd</sup> Ave NW   | Guided Bore     | 25                     |