



**Federal Energy
Regulatory
Commission**

**Office of
Energy Projects**

April 2017

ANR Pipeline Company

Docket No. CP17-9-000

Wisconsin South Expansion Project

Environmental Assessment

Washington, DC 20426

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICE OF ENERGY PROJECTS

In Reply Refer To:
OEP/DG2E/Gas Branch 2
ANR Pipeline Company
Docket No. CP17-9-000

TO THE PARTY ADDRESSED:

The staff of the Federal Energy Regulatory Commission (Commission or FERC) prepared this environmental assessment (EA) to assess the environmental effects of the Wisconsin South Expansion Project (Project) involving replacement and expansion of existing aboveground facilities by ANR Pipeline Company (ANR) in Illinois and Wisconsin. The Project would enable ANR to expand delivery by 230,950 dekatherm per day (Dth/d) into the Northern Illinois and Wisconsin market areas to meet growing natural gas demand.

The EA assesses the potential environmental effects of the construction and operation of the proposed Project in accordance with the requirements of the National Environmental Policy Act (NEPA). The FERC staff concludes that approval of the proposed Project, with appropriate mitigating measures, would not constitute a major federal action significantly affecting the quality of the human environment.

ANR proposes to install one new 6,130-horsepower (HP) Solar Centaur 50 compressor unit at ANR's existing Sandwich Compressor Station in Kendall County, Illinois; increase capacity of the existing Hampshire Meter Station in Kane County, Illinois from the current 320 million cubic feet per day (MMCFD) to 500 MMCFD; replace the existing 0.54-mile-long Line 332 Lateral located in Kane County, Illinois; increase capacity of the existing Tiffany East Meter Station in Rock County, Wisconsin from the current 118 MMCFD to 237 MMCFD; and re-stage an existing Saturn 10 turbine compressor unit at ANR's Kewaskum Compressor Station in Sheboygan County, Wisconsin.

The FERC staff mailed copies of the EA to federal, state, and local government representatives and agencies; elected officials; environmental and public interest groups; Native American tribes; potentially affected landowners and other interested individuals and groups; and newspapers and libraries in the Project area. In addition, the EA is

available for public viewing on the FERC's website (www.ferc.gov) using the eLibrary link. A limited number of copies of the EA are available for distribution and public inspection at:

Federal Energy Regulatory Commission
Public Reference Room
888 First Street NE, Room 2A
Washington, DC 20426
(202) 502-8371

Any person wishing to comment on the EA may do so. Your comments should focus on the potential environmental effects, reasonable alternatives, and measures to avoid or lessen environmental impacts. The more specific your comments, the more useful they will be. To ensure that the Commission has the opportunity to consider your comments prior to making its decision on this Project, it is important that we receive your comments in Washington, DC on or before **May 30, 2017**.

For your convenience, there are three methods in which you can use to file your comments to the Commission. In all instances, please reference the project docket numbers (CP17-9-000) with your submission. The Commission encourages electronic filing of comments and has expert staff available to assist you at (202) 502-8258 or efiling@ferc.gov.

- (1) You may file your comments electronically using the [eComment](#) feature on the Commission's website (www.ferc.gov) under the link to [Documents and Filings](#). This is an easy method for submitting brief, text-only comments on a project;
- (2) You may also file your comments electronically using the [eFiling](#) feature on the Commission's website (www.ferc.gov) under the link to [Documents and Filings](#). With eFiling, you can provide comments in a variety of formats by attaching them as a file with your submission. New eFiling users must first create an account by clicking on "[eRegister](#)." You must select the type of filing you are making. If you are filing a comment on a particular project, please select "Comment on a Filing"; or
- (3) You may file a paper copy of your comments by mailing them to the following address:

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First St., NE, Room 1A
Washington, DC 20426;

Any person seeking to become a party to the proceeding must file a motion to intervene pursuant to Rule 214 of the Commission's Rules of Practice and Procedures (18 CFR 385.214).¹ Only intervenors have the right to seek rehearing of the Commission's decision. The Commission grants affected landowners and others with environmental concerns intervenor status upon showing good cause by stating that they have a clear and direct interest in this proceeding which no other party can adequately represent. **Simply filing environmental comments will not give you intervenor status, but you do not need intervenor status to have your comments considered.**

Additional information about the Project is available from the Commission's Office of External Affairs, at **(866) 208-FERC**, or on the FERC website (www.ferc.gov) using the eLibrary link. Click on the eLibrary link, click on "General Search," and enter the docket number excluding the last three digits in the Docket Number field (i.e., CP17-9). Be sure you have selected an appropriate date range. For assistance, please contact FERC Online Support at FercOnlineSupport@ferc.gov or toll free at (866) 208-3676, or for TTY, contact (202) 502-8659. The eLibrary link also provides access to the texts of formal documents issued by the Commission, such as orders, notices, and rulemakings.

In addition, the Commission offers a free service called eSubscription which allows you to keep track of all formal issuances and submittals in specific dockets. This can reduce the amount of time you spend researching proceedings by automatically providing you with notification of these filings, document summaries and direct links to the documents. Go to www.ferc.gov/docs-filing/esubscription.asp.

¹ See the previous discussion on the methods for filing comments.

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ACRONYMS AND ABBREVIATIONS

| | |
|------------------|---|
| ANR | ANR Pipeline Company |
| ACHP | Advisory Council on Historic Preservation |
| BACT | Best Available Control Technology |
| CAA | Clean Air Act |
| CEQ | Council on Environmental Quality |
| Certificate | Certificate of Public Convenience and Necessity |
| CFR | Code of Federal Regulations |
| CH ₄ | methane |
| CO | carbon monoxide |
| CO ₂ | carbon dioxide |
| CO _{2e} | carbon dioxide equivalent |
| Commission | Federal Energy Regulatory Commission |
| DOT | U.S. Department of Transportation |
| dB | decibel |
| dBA | A-weighted decibel |
| dth/d | dekatherms per day |
| EA | Environmental Assessment |
| EI | environmental inspector |
| ESCP | Erosion and Sediment Control Plan |
| FERC | Federal Energy Regulatory Commission |
| HAP | hazardous air pollutants |
| HP | horsepower |
| FDCP | Fugitive Dust Control Plan |
| FWS | U.S. Fish and Wildlife Service |
| GHG | greenhouse gas |
| GWP | global warming potential |
| HDD | horizontal directional drill |
| IEPA | Illinois Environmental Protection Agency |
| LDC | local distribution company |
| Ldn | day-night level |
| Leq | equivalent sound level |
| MP | milepost |
| MMCFD | million cubic feet per day |
| MW | megawatts |
| NAAQS | National Ambient Air Quality Standards |

| | |
|------------------|---|
| NESHAP | National Emissions Standards for Hazardous Air Pollutants |
| Nicor | Nicor Gas Company |
| NSPS | New Source Performance Standards |
| NO | nitrogen oxide |
| NO ₂ | nitrogen dioxide |
| NO _x | nitrogen oxides |
| NNSR | Non-attainment New Source Review |
| NSA | noise sensitive area |
| NEPA | National Environmental Policy Act of 1969 |
| NGA | Natural Gas Act |
| NHPA | National Historic Preservation Act |
| NOI | <i>Notice of Intent to Prepare an Environmental Assessment for the Wisconsin South Expansion Project and Request for Comments on Environmental Issues</i> |
| N ₂ O | nitrous oxide |
| NRCS | National Conservation Resources Service |
| NRHP | National Register of Historic Places |
| O ₃ | Ozone |
| OEP | Office of Energy Projects |
| PEM | palustrine emergent |
| Pb | Lead |
| Project | Wisconsin South Expansion Project |
| PM | particulate matter |
| PSD | Prevention of Significant Deterioration |
| Plan | <i>FERC Upland Erosion Control, Revegetation, and Maintenance Plan</i> |
| Procedures | <i>FERC Wetland and Waterbody Construction and Mitigation Procedures</i> |
| RECE | Riverside Energy Center Expansion |
| Secretary | Secretary of the Commission |
| SHPO | State Historic Preservation Officer |
| SIP | State Implementation Plan |
| SO ₂ | sulfur dioxide |
| SPCC Plan | ANR's Spill Prevention, Control and Countermeasure Plan |
| TPY | tons per year |
| USEPA | United States Environmental Protection Agency |
| VOC | volatile organic compounds |
| WDNR | Wisconsin Department of Natural Resources |
| WPL | Wisconsin Power and Light Company |

A. PROPOSED ACTION

1.0 Introduction

The staff of the Federal Energy Regulatory Commission (Commission or FERC) prepared this environmental assessment (EA) to assess the environmental effects of the Wisconsin South Expansion Project (Project) involving replacement and expansion of existing aboveground facilities by ANR Pipeline Company (ANR) in Illinois and Wisconsin.

We¹ prepared this EA in compliance with the requirements of the National Environmental Policy Act of 1969 (NEPA), Title 40 of the Code of Federal Regulations (CFR), Parts 1500–1508 (40 CFR 1500–1508), and FERC’s implementing regulations at 18 CFR Part 380. On November 3, 2016, ANR filed an application for a Certificate of Public Convenience and Necessity (Certificate) and authorization in Docket No. CP17-9-000 under Sections 7(c) and 7(b) of the Natural Gas Act (NGA) and Part 157 of FERC’s regulations to add, modify, and improve five existing facilities on ANR’s Pipeline System.

2.0 Purpose and Need

ANR states that its purpose and need is to modify the infrastructure at ANR’s existing Sandwich Compressor Station, Hampshire Meter Station, Tiffany East Meter Station, and Kewaskum Compressor Station to enable ANR to expand delivery by 230,950 dekatherm per day (Dth/d) into the Northern Illinois and Wisconsin market areas to meet growing natural gas demand.

Under section 7(c) of the NGA, the Commission determines whether interstate natural gas transportation facilities are in the public convenience and necessity and, if so, grants a Certificate to construct and operate them. The Commission bases its decisions on technical competence, financing, rates, market demand, gas supply, environmental impact, long-term feasibility, and other issues concerning a proposed project. Section 7(b) of the NGA specifies that no natural gas company shall abandon any portion of its facilities subject to the Commission’s jurisdiction without the Commission first finding that the abandonment will not negatively affect the present or future public convenience and necessity.

3.0 Proposed Facilities

The Project would consist of the following facilities:

- install one new 6,130-horsepower (HP) Solar Centaur 50 compressor unit and appurtenant facilities at ANR’s existing Sandwich Compressor Station in Kendall County, Illinois;
- increase capacity of the existing Hampshire Meter Station in Kane County, Illinois from the current 320 million cubic feet per day (MMCFD) to 500 MMCFD;

¹ “We,” “us,” and “our” refer to environmental staff of the Office of Energy Projects.

- abandon by removal the existing 0.54-mile-long, 16-inch-diameter Line 332 Lateral located in Kane County, Illinois, and replace in the same ditch with a new 24-inch-diameter pipeline to increase flow capacity from the Hampshire Meter Station to Nicor Gas Company (Nicor); one new permanent pig² launcher pad and one new permanent pig receiver pad would be installed at the south and north end of the Line 332 Lateral replacement to allow connections for portable launcher/receiver piping;
- increase capacity of ANR’s existing Tiffany East Meter Station in Rock County, Wisconsin from the current 118 MMCFD to 237 MMCFD; and
- re-stage an existing Saturn 10 turbine compressor unit at ANR’s Kewaskum Compressor Station in Sheboygan County, Wisconsin.

ANR proposes to begin construction activities in the fourth quarter of 2017, with a projected in-service date of November 2018. Tree clearing would occur during dormant season prior to April 1, 2018, to minimize direct impacts on protected bat species and migratory birds. Figure 1 depicts an overview of the Project area.

4.0 Public Review and Comment

On November 29, 2016, FERC issued a *Notice of Intent to Prepare an Environmental Assessment for the Proposed Wisconsin South Expansion Project and Request for Comments on Environmental Issues* (NOI). The NOI was mailed to interested parties, including federal, state, and local officials; agency representatives; Native American tribes; local libraries and newspapers; and property owners potentially affected by the proposed facilities. This notice opened the scoping period for 30 days. In response to the NOI, the Commission received three comments from citizens supporting the Project. We also received comments from the Miami Tribe of Oklahoma and the Illinois Historic Preservation Agency, indicating that they do not object to the Project. Finally, we received a comment letter from the U.S. Fish and Wildlife Service (FWS) stating that the EA should fully disclose the federally listed species, migratory birds, and wildlife habitat affected by the Project. Wildlife and special status species are discussed in section B.3 of this EA.

5.0 Permits, Approvals, and Regulatory Consultations

ANR would obtain all necessary federal, state, and local permits, licenses, and clearances related to construction of the proposed Project. Table 1 identifies the federal and state agencies that have relevant permitting requirements along with the related permits for the Project.

² A pipeline “pig” is an internal device to clean or inspect the pipeline. A pig launcher/receiver is an aboveground facility where pigs are inserted into or retrieved from the pipeline.



Table 1 - Permits, Approvals, and Regulatory Consultations

| Permit/Approval | Administering Agency | Filing Date (Anticipated) | Receipt Date (Anticipated) |
|---|--|----------------------------------|-----------------------------------|
| Federal | | | |
| Certificate of Public Convenience and Necessity | FERC | November 2016 | Pending |
| Clean Water Act, Section 404 – Regional Permit 8 Joint Permit Application (JPA) | U.S. Army Corps of Engineers—Chicago District | November 2016 | March 2017 |
| Endangered Species Act, Section 7 Consultation | U.S. Fish and Wildlife Service—Rock Island and Green Bay Ecological Services Field Offices | October 17, 2016 | November 17, 2016 |
| State—Illinois | | | |
| State Threatened and Endangered Species Consultation | Illinois Department of Natural Resources (IDNR), Office of Realty and Environmental Permitting | August 23, 2016 | August 23, 2016 |
| Air Quality Permitting | Illinois Environmental Protection Agency (IEPA), Bureau of Air | October 2016 | (July 2017) |
| Clean Water Act, Section 401 Water Quality Certification JPA | IEPA, Bureau of Water | November 2016 | March 2017 |
| Permit to Discharge Hydrostatic Test Waters – One Time Discharge Request | IEPA, Bureau of Water | (November 2017) | (February 2018) |
| Section 106 Cultural Resources Consultation | Illinois Historic Preservation Agency | September 12, 2016 | October 3, 2016 |
| Local—Illinois | | | |
| Stormwater Permit | Kane County Department of Water Resources | (April 2017) | (July 2017) |
| Stormwater Management Permit | Kendall County Planning, Building and Zoning Department | (April 2017) | (July 2017) |
| State—Wisconsin | | | |
| State Threatened and Endangered Species Consultation | Wisconsin Department of Natural Resources (WDNR) | September 7, 2016 | September 7, 2016 |

Table 1 - Permits, Approvals, and Regulatory Consultations

| Permit/Approval | Administering Agency | Filing Date (Anticipated) | Receipt Date (Anticipated) |
|--|---|----------------------------------|-----------------------------------|
| Wisconsin Pollutant Discharge Elimination System (WPDES) Construction Site Stormwater Notice of Intent (General Permit WI-S067831-4) | WDNR | (June 2017) | (August 2017) |
| WPDES Hydrostatic Test Water Discharge (General Permit WI-0057681-04) | WDNR | (November 2017) | (February 2018) |
| WPDES Pit/Trench Dewatering (General Permit WI-0049344-4) | WDNR | (November 2017) | (February 2018) |
| Section 106 Cultural Resources Consultation | Wisconsin Historical Society, Division of Historic Preservation | September 12, 2016 | October 18, 2016 |
| Local—Wisconsin | | | |
| Erosion Control and Stormwater Management Permit | Rock County Land Conservation Department | (April 2017) | (July 2017) |

6.0 Land Requirements

Most of the Project impacts would occur within existing facilities in areas that have been previously disturbed or are currently in agricultural use. A total of 54.2 acres would be used as construction workspace, of which 45.9 acres are existing permanent easement and 7.8 acres would be restored to pre-existing conditions after construction is completed. Approximately 0.2 acre would be converted to new permanent easement at the Hampshire Meter Station and 0.3 acre would be converted to new permanent easement for the Line 332 Lateral Replacement. Land requirements are detailed in Land Use in section B.5 of this EA, and include temporary and permanent land impacts associated with Project workspace.

Pipeline Facilities

The Line 332 Lateral Replacement would be located in close proximity to a residential area along the west side and north end of its workspace. A more detailed discussion about all residential and commercial structures within 50 feet of the construction workspace, the type and number of structures, and distance from construction and operational workspace is provided in the Land Use in section B.5 of this EA.

Aboveground Facilities

Modifications at the existing Sandwich Compressor Station, Tiffany East Meter Station, and Kewaskum Compressor Station would occur within the existing facility fence line. Construction at the Tiffany East Meter Station would utilize temporary workspace adjacent to the facility within ANR's fee-owned property.

Expansion of the Hampshire Meter Station would include extending the existing fence boundary to the south and west. All new permanent facilities would be installed on existing ANR-fee-owned property. Temporary workspace and staging areas for Hampshire Meter Station may include areas adjacent to or within ANR's fee-owned property and existing pipeline easements north of the existing facility.

One new permanent pig launcher pad and one new permanent receiver pad (aboveground piping with flange) would be installed at the south and north end of the Line 332 Lateral Replacement; respectively and would include the installation of a fenced enclosure. The south launcher pad would be located within ANR's existing fee-owned property. ANR would work with the landowners at the north end to identify appropriate screening for the new receiver pad to address potential visual impacts at that location. The Line 332 Lateral Replacement would utilize the same temporary workspaces and staging areas as described above for the Hampshire Meter Station.

Access Roads

No new permanent access roads would be required at the Sandwich Compressor Station, Hampshire Meter Station, Tiffany East Meter Station, and the Kewaskum Station. ANR would utilize its existing access roads during construction activities at these locations. One new permanent access road would extend from the right-of-way to the north end of Line 332 Lateral Replacement to allow access to the new receiver pad. Temporary access pads would be installed from existing paved roadways to access temporary workspace for Tiffany East Meter Station, Hampshire Meter Station and Line 332 Lateral Replacement.

7.0 Construction, Operation, Maintenance, and Abandonment Procedures

ANR's proposed facilities would be designed, constructed, tested, operated, and maintained in accordance with the U.S. Department of Transportation's (DOT) Minimum Federal Safety Standards presented in 49 CFR Part 192. The DOT's regulations are intended to ensure adequate protection for the public and to prevent natural gas facility accidents and failures. Part 192 specifies material selection and qualification, minimum design requirements, and protection from internal, external, and atmospheric corrosion.

ANR would construct and abandon the Project in accordance with FERC's *Upland Erosion Control, Revegetation and Maintenance Plan* (Plan) (FERC 2013a) and *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures) (FERC 2013b). At this time, no alternative measures have been identified during construction or restoration activities. In the event that ANR identifies individual provisions that are technically infeasible or unsuitable due to local conditions,

ANR would coordinate with the Commission to request a variance and provide details for alternate measures at that time. Best Management Practices would include FERC's Plan and Procedures, ANR's Spill Prevention, Control, and Countermeasure (SPCC) Plan, a Project Storm Water Pollution and Prevention Plan, if required, and a site-specific Erosion and Sediment Control Plan (ESCP). A site-specific ESCP would be developed for the National Pollutant Discharge Elimination System Construction Site Storm Water Runoff Permit and Wisconsin Pollutant Discharge Elimination System Construction Site Storm Water Runoff General Permit.

To ensure that appropriate erosion and sediment control measures are maintained until the construction workspace is fully stabilized, an Environmental Inspector (EI) would inspect areas disturbed by construction (e.g., right-of-way, contractor staging areas, temporary contractor yards) on a regular basis. The EI has the authority to stop work for activities that violate requirements of Project approval (FERC Certificate or other authorizations) or that violate environmental regulations or otherwise impact sensitive environmental resources, including fugitive dust mitigation compliance.

ANR would develop Project-specific environmental documents that would be part of the overall construction contract documents. The environmental documents would include applicable permits; the Plan and Procedures; FERC's certificate conditions; a SPCC Plan; and other environmental requirements, including those required by state and local agencies. ANR would communicate the environmental requirements for the Project to the contractor, conduct environmental training, and provide routine monitoring during construction, clean-up, and restoration. If, during construction, the contractor is in violation of an environmental requirement, ANR would require immediate correction of the problem, issue a stop work order if necessary, and resolve any discipline issue with the contractor.

A minimal amount of branch trimming and tree clearing is anticipated during expansion of the Hampshire Meter Station and along the Line 332 Lateral Replacement. If the Project is approved, ANR proposed to begin construction in the fourth quarter of 2017 to achieve an overall Project in-service date of November 2018.

The Project would employ a temporary workforce of approximately 30 to 60 people during various phases of the construction, totaling 150 persons over the length of the Project. Construction activities would occur 6 days per week, 10 hours per day, and be limited to daytime hours. No hiring of additional personnel for operations and maintenance activities is anticipated.

8.0 Non-Jurisdictional Facilities

Non-jurisdictional facilities are facilities related to the Project that are constructed, owned, and operated by others that are not subject to FERC jurisdiction. These are facilities that are related to the Project for the purpose of delivering, receiving, or using the proposed natural gas volumes, and include facilities to be owned by other companies, that are not subject to FERC jurisdiction.

Currently, the non-jurisdictional facilities associated with the Project would include work being conducted by Nicor and the Riverside Energy Center Expansion (RECE) planned by

Wisconsin Power and Light Company (WPL), Alliant Energy's Wisconsin utility. The increased capacity proposed at the existing Tiffany East Meter Station would serve both the existing Riverside Energy Center and the RECE.

RECE will be a natural gas-fired, combined-cycle generating facility capable of generating 650 megawatts (MW) of power. RECE will be owned and operated by WPL adjacent to the location of the existing Riverside Energy Center³ and would utilize the existing utilities and infrastructure, including an existing 20-inch-diameter natural gas pipeline lateral owned and operated by WPL. The RECE would be constructed in response to the anticipated retirement of several WPL coal-fired power plants and to meet its projected market demand by 2019. On September 22, 2016, the RECE commenced construction and commercial operations are anticipated to take place in early 2019⁴.

The Hampshire Meter Station resides on a 1.81-acre site owned by ANR and shared with Nicor. ANR's Hampshire Meter Station and Line 332 Lateral currently supplies natural gas to an existing Nicor 22-inch-diameter pipeline. The Nicor project is being developed to receive the increased capacity at the Hampshire Meter Station. Nicor would install a liquid drain trap on its existing pipeline, a mainline valve, and replace a monitor valve and odorizer as part of the work associated with the capacity increase at the station. This work would occur simultaneously with ANR's construction.

From the Tiffany East Meter Station, gas would be delivered through WPL's existing 5.5-mile, 20-inch-diameter lateral pipeline west to the RECE. Alliant is proposing the installation of approximately 1,500 feet of new, 20-inch-diameter lateral gas transmission line extending from the existing 20-inch-diameter Riverside Energy Center pipeline. The new pipe would proceed generally southwest to a new pig receiver, metering facility, and a supervisory control and data acquisition and electronics building located approximately 250 feet west of the existing RECE fence line. ANR already provides gas supply to the existing WPL lateral.

Additionally, Alliant proposes to construct a pressure and flow control station located approximately 200 feet east of ANR's existing Tiffany East Meter Station fence line. This project would include three new gas pipelines (one 12-inch and two 20-inch) that would extend from the southern boundary of Alliant's proposed station and tie into new valve assemblies located within ANR's fence line on the west side of the property. The valve assemblies tie into Alliant's existing 20-inch-diameter pipeline. A new, 20-inch pig launcher and odorizer would also be installed on the north end of Alliant's facilities within ANR's Tiffany East Meter Station fence line. Alliant is also considering replacing an existing 12-inch-diameter pipe within ANR's property with a larger diameter pipe that would extend to Alliant's new proposed pig launcher. The environmental impacts of the non-jurisdictional facilities are considered in Cumulative Impacts, section B.8. In addition, we considered cumulative emissions impacts of these non-jurisdictional facilities in Air Quality, section B.6.

³ Riverside Energy Center is an existing electrical power station located north of Beloit, Wisconsin in the town of Beloit at 1401 W B R Townline Road (West Beloit Rock) just west of the Rock River. The facility is owned and operated by Alliant Energy.

⁴ <http://www.alliantenergy.com/AboutAlliantEnergy/CompanyInformation/Riverside/>

B. ENVIRONMENTAL ANALYSIS

This analysis describes the condition of the existing natural and human environment and the potential impacts on it resulting from installation and operation of the proposed facilities. In general, the modifications at the existing aboveground facilities would occur within established fence lines or immediately adjacent to the existing facility.

1.0 Geology and Soils

Geology

The site elevation would range from approximately 1,015 feet to 1,025 feet above mean sea level at the Kewaskum Compressor Station, 893 feet to 844 feet above mean sea level at the Tiffany East Meter Station, 939 feet to 994 feet above mean sea level at the Hampshire Meter Station and Line 332 Lateral Replacement, and 637 feet to 648 feet above mean sea level at the Sandwich Compressor Station. The majority of the Project would occur in previously disturbed areas; therefore, impacts to potential exploitable mineral resources is not anticipated. No blasting would be required.

No active or abandoned coal mines are present in the Northern Illinois or Wisconsin counties containing the Project areas (WDNR 2012, ISGS 2013). As a result, the Project would not be impacted by land subsidence due to coal mining activities. Considering that most of the Project would be located within existing facility boundaries, land subsidence is not anticipated to occur due to karst topography in the Project area. We do not anticipate significant impacts or risk of damage to the Project facilities from geologic hazards.

All work associated with the Line 332 Lateral abandonment and replacement proposed to occur within the floodplain would be temporary, and the pipeline trench would be restored to pre-construction grade. As a result, the facilities would not be impacted due to flooding.

Because of the minimal ground disturbance associated with the Project, impacts on paleontological resources are not expected. If paleontological resources are discovered during construction, ANR would report findings to the Wisconsin Historical Society, the Illinois State Geological Survey and Illinois State Historical Society as appropriate, as well as the United States Geological Survey for proper documentation.

We conclude that construction and operation of the Project would not result in any significant impact on geologic resources in the Project area.

Soils

The regional soils associations identified for the Project include generally silty and silty clay loams developed from windblown (loess glacial material) and larger sized glacial till parent materials. Drainage classes range from poorly-drained to well-drained.

Most of the Project's poorly-drained soils are collocated with hydric soils found at the

proposed Sandwich Compressor Station site and at the northern end of the Line 332 Lateral Replacement pipeline. Except for two soil series located in the Sandwich Compressor Station and Kewaskum Compressor Station, all other soil map units associated with the Project are rated as having high water erosion potential. Soils at the Sandwich Compressor Station Project are especially prone to compaction impacts.

Prime farmland soils are those that have the best combination of physical and chemical characteristics for economically producing sustained high yields of food, feed, forage, fiber, and oilseed crops when treated and managed according to acceptable farming methods. Prime farmland soils can be cropland, pastureland, forest land, or other land, but not urban built-up or water. Nearly all of the areas within the Project contain prime farmland soils (NRCS 2016b). See table 2 below for the acreage of prime farmland soils impacted by the Project.

The Project would occur on 45 acres of prime farmland, 40 acres of which is already occupied by the Project facilities, and 5 acres of which would be temporarily used for construction. All construction work areas would be returned to pre-construction use following Project restoration, a total of 0.1 acre of prime farmland would be converted to permanent pipeline right-of-way, and no prime farmland would be permanently converted to industrial use by aboveground facilities.

Table 2 - Acreage of Prime Farmland Soils Impacted by the Project

| Facility | Operation | | Construction | |
|------------------------------|---|--------------------------------------|---|---------------------------------|
| | Acres within Existing Permanent Workspace | Acres within New Permanent Workspace | Acres within Temporary Construction Workspace | Total Acres within Project Site |
| Line 332 Lateral Replacement | 4.0 | 0.1 | 2.3 | 6.4 |
| Sandwich Compressor Station | 30.7 | 0 | 0 | 30.7 |
| Hampshire Meter Station | 0.15 | 0 | 1.2 | 1.4 |
| Tiffany East Meter Station | 1.3 | 0 | 1.6 | 2.9 |
| Kewaskum Compressor Station | 3.8 | 0 | 0 | 3.8 |
| Total | 40 | 0.1 | 5 | 45 |

Most of the soils along the Project are being used in an industrial land use setting (35 acres for 64 percent of the Project total acreage). Approximately 12 acres (22 percent) of the Project's soils are under agricultural use (virtually all of which is within the Line 332 Replacement Lateral). Construction within the Project work limits would disturb the following amounts of soils of various characteristics: approximately 11.8 acres (21 percent) as poorly drained soils; 4 acres (7 percent) as hydric soils, 9.6 acres (17 percent) as shallow-to-bedrock soils; and 9.1 acres (16 percent) as relatively steep-sloped soils. Most of the shallow-to-bedrock soils are located at the Tiffany East Meter Station and Kewaskum Compressor Station sites. Percentages of soil characteristics found along the proposed Line 332 Lateral Replacement

include but are not limited to 13 percent as poorly-drained soils, 9 percent as hydric soils, 19 percent as shallow-to-bedrock soils, and 46 percent as soils on steep slopes.

Given that most of the pipeline replacement is on soils that are being actively tilled, the most important potential construction-related impacts on soils would include: 1) erosion in steep areas; 2) compaction; 3) mixing of topsoils with less fertile subsoils/rock substrate from working in excessively wet conditions; and 4) permanent disruption of the vertical profile of hydric soils in wetlands. Disruption or breakage of drainage tile systems by movement of heavy equipment at the surface and by trenching could occur. Additional potential impacts to soils include contamination with equipment fuels and lubricants.

Impacts on soils from construction activities would be reduced by ANR's use of measures contained in FERC's Plan and Procedures, which includes measures for avoiding, minimizing, and mitigating the above-mentioned potential soil impacts. There include: 1) control erosion by using temporary erosion control devices such as trench plugs, slope breakers, hay bales and silt fences; 2) segregate and protect topsoil from subsoils during trenching; 3) postpone work in excessively wet conditions in upland soils; 4) use low ground-weight equipment, soil stabilization materials such as timber mats, or minimal equipment passage when wetland soils are saturated or standing water is present; 5) complete final grading, topsoil replacement and installation of permanent erosion control structures within 20 days after backfilling the trench (10 days in residential areas); and 6) inspect the right-of-way and maintain erosion and sediment controls as necessary until final stabilization is achieved.

Additional agricultural mitigation measures employed by ANR after backfilling include separating excessively large stones from the upper tillable surface of soils and decompacting topsoils and subsoils in agricultural (and residential) right-of-way, if necessary. ANR would provide temporary subsurface drainage in cultivated crop fields during construction, and would repair or replace damaged agricultural drain tiles. ANR would ensure long-term protection of disturbed non-agricultural soils by revegetating cleared right-of-way with native vegetation according to the wishes of landowners and local soil conservation experts.

Our Plan requires ANR to conduct follow-up inspections of all disturbed areas after the first and second growing seasons to determine the success of revegetation. ANR is required to monitor and repair, as needed, actively cultivated agricultural right-of-way for drainage problems until restoration is successful. Therefore, we believe that with the implementation of these measures, ANR should be able to minimize soil impacts during construction and successfully restore soils to pre-construction conditions.

2.0 Water Resources and Wetlands

No surface water resources would be affected by the Project, and therefore, are not addressed further in this analysis.

Groundwater

The Line 332 replacement would occur above a surficial aquifer system that provides groundwater for domestic, commercial, agricultural, and other uses. Groundwater in the area is generally considered adequate. Three private water supply wells have been identified within 200 feet of Line 332 workspace. Additionally, one private water supply well was identified within 200 feet of the Sandwich Compressor Station.

Installing the Line 332 replacement could affect groundwater and nearby wells. Specifically, construction activities could increase turbidity in shallow groundwater and affect groundwater flow, resulting in temporary and localized adverse effects on groundwater. Additionally, an inadvertent release of equipment fluids during construction (at any location) could also affect groundwater quality.

To avoid and minimize impacts on groundwater, ANR would implement numerous measures as described in our Plan and Procedures and its project-specific SPCC Plan. These measures include prohibiting fuel storage and refueling activities near private wells; and implementing spill response materials and procedures. To further minimize potential impacts on nearby wells, ANR with landowner permission would conduct pre- and post-construction testing of potable water supply wells within 150 feet of construction workspace and address any Project-related impacts on these wells.

Based on ANR's construction procedures and its implementation of impact minimization measures, we conclude that the Project would not significantly affect groundwater.

Wetlands

Line 332 is currently located within two palustrine emergent (PEM) wetlands. ANR would complete the replacement using the construction methods described previously. These wetlands would be cleared and trenched during construction, restored, and then permitted to return to pre-construction conditions. Replacing Line 332 would temporarily impact a total of 0.3 acre of PEM wetland. To ensure impacts on wetlands would be minimized, ANR would implement measures described in our Procedures. Therefore, based on the type and amount of wetlands affected and ANR's implementation of impact minimization measures, we conclude that the Project would not significantly affect wetlands.

3.0 Aquatic Resources, Vegetation, and Wildlife

Vegetation and Wildlife

Line 332 would be located across wooded, wetland, herbaceous (disturbed/managed), and agricultural vegetation which provide habitats for a variety of commonly occurring wildlife species and may support migratory birds. Although, the aboveground facility modifications would generally occur on disturbed lands within existing fenced boundaries, the disturbance created by the activities could affect adjacent wildlife. Replacing Line 332 would require the temporary clearing of about 14 acres of vegetation. Of these 14 acres, less than one acre is classified as wooded. The loss of vegetation, could affect soils, surface water flow, groundwater, and increase the potential for the introduction of exotic and invasive species. The loss of

vegetation would also reduce the amount of habitat available to wildlife. Furthermore, the general use of construction equipment to install the pipeline and modify the aboveground facilities could alter wildlife behavior, resulting in avoidance and/or displacement. Affected wildlife could experience increased rates of mortality, injury and stress. Also, the loss of vegetation and disturbance caused by construction could affect migratory birds; however, given the scope of the project, the availability of similar habitats nearby, and ANR's commitment to clear forested areas prior to April 1st and not conduct vegetation maintenance between April 15 and August 1, we conclude that the Line 332 replacement would not result in population-level impacts or significant measureable negative impacts on migratory birds.

To minimize impacts on vegetation and wildlife, ANR has reduced workspace requirements and would implement measures described in our Plan and Procedures. Once replacement of Line 332 is complete, ANR would revegetate affected lands and periodically maintain vegetation occurring on the permanent easement. Therefore, based on the scope of the Project, the characteristics of the vegetation and wildlife affected, the presence of similar habitats nearby, and ANR's commitment to restore affected lands, we conclude that the Project would not significantly affect vegetation and wildlife.

Protected Species

A review of the FWS Information for Planning and Conservation database which contains information pertaining to federally-listed threatened and endangered species resulted in the identification of seven species that may occur in the Project area: eastern prairie fringed orchid (*Platanthera leucophaea*), pitcher's thistle (*Cirsium pitcheri*), prairie bush-clover (*Lespedeza leptostachya*), northern long-eared bat (*Myotis septentrionalis*), Indiana bat (*Myotis sodalis*), whooping crane (*Grus Americana*), and the eastern massasauga (*Sistrurus catenatus*). ANR submitted to the FWS letters regarding the proposed Project and its surveys which did not identify the presence of threatened and endangered species. To date, the FWS has not replied to ANR's letters. Based on the location and scope of the Project, the habitats affected as described previously, and ANR's construction procedures including its commitment to complete all tree clearing prior to April 1, 2018, we have determined that the installation, modification, and operation of the proposed facilities would result in *no effect* on federally-listed threatened and endangered species. Furthermore, we conclude that the Project would not impact state-listed or protected species.

4.0 Cultural Resources

Section 106 of the National Historic Preservation Act (NHPA), as amended, requires FERC to take into account the effects of its undertakings (including the issuance of Certificates) on properties listed in or eligible for listing in the National Register of Historic Places (NRHP), and to afford the Advisory Council on Historic Preservation (ACHP) an opportunity to comment on the undertaking. ANR as a nonfederal party, is assisting the FERC in meeting our obligations under Section 106 by preparing the necessary information, analyses and recommendations as authorized by 36 CFR 800.2(a)(3).

ANR conducted a cultural resources survey of the existing Sandwich Compressor Station, the 0.54-mile-long Line 332 Lateral Replacement, one new permanent access road, the existing

Hampshire Meter Station, and the existing Tiffany East Meter Station. All proposed work at the Kewaskum Compressor Station would take place within existing facilities, therefore no survey was conducted. No archaeological sites were identified as a result of the survey. ANR also conducted a survey for above-ground historic resources. There is one structure 0.8 mile northeast of the Tiffany East Meter Station that is partially screened by trees. The property has not been evaluated for the NRHP, but since the work at the Tiffany Meter Station would take place within existing facilities, there would be no adverse effect to the resource. In letters dated September 28 and December 21, 2016 the Illinois State Historic Preservation Officer (SHPO) recommended that the Project would have no effect on historic properties. The Wisconsin SHPO recommended on October 17, 2016 that no historic properties would be affected. We concur.

On September 9, 2016, ANR wrote to 21 Indian tribes to introduce them to the Project and request their comments. On November 29, 2016, the FERC sent its NOI to the same tribes. The Forest County Potawatomi Community of Wisconsin requested additional information and ANR provided the Community with the cultural resources reports. The Ho-Chunk Nation indicated they were not aware of any cultural properties affected by the Project but wanted to remain an interested party for the Project. The Red Cliff Band of Lake Superior Chippewa Indians requested a copy of the cultural resources reports, which ANR provided. The Band concurred with the report recommendations. The Stockbridge Munsee Community of Wisconsin responded that the Project is outside their area of interest. The Miami Tribe of Oklahoma responded to ANR that they had no objection to the Project but in a separate letter to the FERC requested copies of the cultural resources reports. On January 6, 2016 ANR provided the Tribe with the reports. No other responses have been received to date.

ANR prepared a plan in the event any unanticipated historic properties or human remains are encountered during construction. We requested changes to the plan which ANR made. We find the revised plan to be acceptable.

Therefore, based on the surveys conducted by ANR and consultations with the SHPO's and interested Indian tribes, we have determined that the Project as proposed would have no effect on any properties listed in or eligible for listing in the NRHP.

5.0 Land Use, Recreation, and Visual Resources

The Project workspace consists predominantly of industrial/commercial and agricultural lands. No open water features were identified. Land use surrounding the Project facilities is comprised mainly of agricultural, residential, and open lands. Table 3 shows the land requirements for Project facilities and table 4 demonstrates the acres of impacts during construction and operation for each land use within the Project area. The proposed 0.54-mile-long Line 332 Lateral Replacement would replace the existing 16-inch-diameter pipe in the same trench with a 24-inch-diameter pipe.

Construction, Permanent, and Existing Rights-of-Way

A 125-foot-wide construction right-of-way for the Line 332 Lateral Replacement would cross industrial/commercial, agricultural, residential, forested upland/woodland, open land,

existing road, and delineated wetland. The 125 construction right-of-way is the existing permanent right-of-way owned by ANR, which is also the right-of-way for three mainline pipelines owned by ANR. There would be no change to the permanent right-of-way (125 feet wide) or alteration to the land use, with the exception of the installation of new permanent launcher and receiver pads at the south and north ends of the lateral. The launcher pad would be located within ANR’s existing fee-owned property on the Line 332 Lateral maintained easement. The receiver pad would be located within the existing, maintained Line 332 Lateral easement, but not within ANR’s fee-owned property. The new launcher and receiver pads would convert 0.2 acre of open land, residential land and upland forest to industrial land use. There would be no new permanent right of way. Temporarily disturbed areas would be restored, revegetated, and reseeded according to the measures outlined in the FERC’s Plan and Procedures.

Temporary Workspaces and Staging Areas

Temporary work space would only be required at the Tiffany East Meter Station, the Hampshire Meter Station, and for the Line 332 Lateral Replacement. For the Sandwich Compressor Station and Kewaskum Compressor Station, work would be contained within the fence line of the existing aboveground facilities. No tree clearing would occur north of the Hampshire Meter Station along the east side of the station access road.

Table 3 - Land Requirements for Project Facilities

| Facility | Temporary Workspace (acres) | Permanent Workspace(acres) | | Total Construction Work Area (acres) ^c |
|------------------------------|-----------------------------|--|-------------------------------------|---|
| | | Existing Permanent Easement ^a | New Permanent Easement ^b | |
| Sandwich Compressor Station | N/A | 30.75 | N/A | 30.75 |
| Hampshire Meter Station | 0.48 | 1.81 | 0.18 | 2.47 |
| Line 332 Lateral Replacement | 5.76 | 7.85 | 0.27 | 13.88 |
| Tiffany East Meter Station | 1.58 | 1.37 | N/A | 2.95 |
| Kewaskum Saturn 10 Restage | N/A | 4.10 | N/A | 4.10 |
| Total Land Affected | 7.82 | 45.88 | 0.45 | 54.15 |

^a Includes areas that are currently permanently maintained for Project operation and maintenance.
^b Includes those areas that will be converted from their existing use to permanent workspace. New permanent impacts along the Line 332 Lateral Replacement include the installation of new permanent launcher and receiver pads within the existing permanent easement.
^c Includes all areas that will be impacted by construction, including the permanent workspace, temporary workspace, and access roads.

Access Roads

No new access roads would be required at the Sandwich Compressor Station, Hampshire Meter Station, Tiffany East Meter Station, and Kewaskum Compressor Station because ANR would utilize its existing access roads during construction activities. One new permanent access road is proposed at the Line 332 Lateral Replacement to allow access to the new receiver pad.

The new permanent road would convert 0.15 acre of residential land to road. The new permanent access road associated with the Line 332 Lateral Replacement receiver pad would be a combination of a paved road and graveled road. The road would be paved where it is currently a driveway and it would be graveled beyond that point to the receiver pad.

Table 4 - Land Use Acreage Affected by Construction and Operation of the Project Facilities

| Facility | Industrial/ Commercial | | Agricultural | | Residential | | Forested Upland/ Woodland | | Open Land | | Existing Road | | Delineated Wetland (PEM) | | Project Total | |
|----------------------|---------------------------|----|--------------|-----------------|-------------|-------------|---------------------------------|-------------|-------------|-------------|---------------|-------|--------------------------------|----|---------------|-------------|
| | C. | O. | C. | O. | C. | O. | C. | O. | C. | O. | C. | O. | C. | O. | C. | O. |
| Sandwich CS | 28.81 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.94 | -- | -- | -- | 30.75 | -- |
| Hampshire MS | 1.33 | -- | 0.82 | -- | -- | -- | 0.26 | 0.14 | 0.04 | 0.04 | 0.02 | -- | -- | -- | 2.47 | 0.18 |
| Line 332 Lateral | 0.04 | -- | 10.76 | <0.01 | 1.33 | 0.21 | 0.60 | 0.03 | 0.66 | 0.03 | 0.21 | <0.01 | 0.28 | -- | 13.88 | 0.27 |
| Tiffany East MS | 1.34 | -- | -- | -- | -- | -- | -- | -- | 1.61 | -- | -- | -- | -- | -- | 2.95 | -- |
| Kewaskum CS | 3.90 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.20 | -- | -- | -- | 4.10 | -- |
| PROJECT TOTAL | 35.42 | -- | 11.58 | <0.01 | 1.33 | 0.21 | 0.86 | 0.17 | 2.31 | 0.07 | 2.37 | -- | 0.28 | -- | 54.15 | 0.45 |

Notes: Land affected during construction (temporary impacts) is inclusive of operation impacts (permanent); land affected during operation consists only of new permanent impacts. PEM = palustrine emergent, C = construction, O = operational, MS = meter station, CS = Compressor Station

Aboveground Facilities

There would be no changes to land use for the Sandwich Compressor Station or Kewaskum Compressor Station. Expansion of the Hampshire Meter Station would extend the existing fence boundary to the south and west, converting 0.15 acre of forested upland and open land to industrial use. One new permanent launcher pad and one new permanent receiver pad would be installed at the south and north end of the Line 332 Lateral Replacement, respectively. The receiver pad would include the installation of a fenced enclosure, converting 0.07 acre of residential land to industrial land use. The launcher pad would be located within ANR's existing fee-owned property.

Alliant would construct additional facilities adjacent to and within the existing Tiffany Meter Station to support development at their RECE. The construction of these facilities would result in a permanent land use change from agricultural land to industrial land use. Temporarily disturbed areas would be restored, revegetated, and reseeded according to FERC's Plan and Procedures.

Facility Abandonment/Replacement

The proposed Line 332 Lateral Replacement would abandon and remove 0.54 mile of the existing 16-inch-diameter pipe and replace in the same trench a 0.54 mile of 24-inch-diameter pipe. Land use would not change as a result of the replacement. At the Tiffany East Meter Station, approximately 50 feet of 16-inch-diameter piping would be abandoned in place, and would occur within the existing facility. Therefore, land use would not change as a result.

Existing Residences and Buildings

Four structures are within 50 feet of the edge of the proposed construction workspaces associated with the Project. Three structures are residential in nature and are discussed further below in table 5. The remaining structure is a small shed that houses a valve assembly owned by Nicor. Negotiations with landowners of the residential structures within 50 feet of the construction workspace are ongoing. ANR provided site-specific construction plans for one structure that would be located within 25 feet of construction; this can be found in appendix A of this EA. We have reviewed this plan and find it acceptable. In addition, ANR would implement appropriate measures to protect existing residential structures and those measures would be established with the respective landowners prior to construction of the Project. Some of these procedures would include the following:

- refrain from removing mature trees and landscaping from within the edge of the construction work area, unless necessary for the safe operation of construction equipment or as specified in landowner agreements;
- restore all lawn areas and landscaping within the construction work area immediately after cleanup operations, or as specified in landowner agreements, consistent with the requirements of the Plan;
- install safety fence along the edge of the construction work area adjacent to the residence for a distance of 100 feet on either side of the residence to ensure that construction

equipment and materials, including the spoil pile, remain within the construction work area;

- maintain fencing, at a minimum, throughout active construction in the area; and
- maintain a minimum of 25 feet between residence and the construction work area for a distance of 100 feet on either side of the residence.

Public or Conservation Land

No public or conservation land would be affected by the Project. The Hampshire Forest Preserve, a county preserve open to the public, is located 0.2 mile east of the Line 332 Lateral Replacement workspace, and is the only such designated public or conservation land located within 0.25 mile of the Project (INDR 2016, and WDNR 2016 a). The Project would not be located within a designated coastal zone management area.

| Type Structure | Distance from Construction Workspace (feet) | Distance from Operational Workspace (feet) | Proposed Mitigation |
|---|---|--|--|
| Line 332 Lateral Replacement—Kane County, IL | | | |
| Residential Shed | 0 ¹ | 0 ¹ | Minimize noise impacts through managed hours of construction Minimize fugitive dust through implementation of Project erosion and sediment control plan |
| Nicor Gas Shed | 0 ¹ | 0 ¹ | |
| Residential Building 1 | 25 | 48 | |
| Residential Building 2 | 34 ² | 59 | |
| ¹ Zero implies that the structure is located within the workspace footprint. ² Residential Building 2 is not depicted on the site specific plan as it is not within 25 feet of the construction workspace. | | | |

Contaminated or Hazardous Waste Sites

No potentially contaminated sites were identified in the vicinity of the proposed Project, including, but not limited to, non-hazardous solid waste sites, brownfield sites, and hazardous waste sites (IEPA 2016, WDNR 2016b).

No mining operations, wells, or industrial sand and gravel pits exist within 0.25 mile of the Project area. The Project would not directly cross known contaminated water or sediments; therefore, no resulting adverse impacts are expected to occur. EIs would monitor construction operations to identify potentially contaminated soils by visual inspection for stained soils, groundwater sheen, or open trenches with suspect odors. If suspect soils are encountered, the soil would be tested for contaminated materials. In the unlikely event that contaminated sites are encountered during construction, ANR would cease activities in that area and notify the appropriate state agencies. If the contamination is determined to be hazardous, an experienced hazardous waste contractor would be mobilized to handle the waste; the hazardous waste contractor would follow a site-specific SPCC Plan for working in hazardous environments. Soils

found to be contaminated would be managed properly and disposed at an ANR-approved disposal facility licensed by the state and other entities, as applicable.

The Project would not involve abandonment of facilities believed to have Polychlorinated biphenyls in excess of 50 parts per million.

Visual Resources

The Project would not be located near a designated visually sensitive area. Temporary visual impacts associated with construction of the Project include the introduction of an area of disturbed soil and construction equipment situated around the meter and compressor stations during construction. These impacts would be short-term and temporary and would be reversed once post-construction restoration has been completed.

The modifications proposed to the Sandwich Compressor Station and Tiffany East Meter Station would occur within the existing facility boundaries, resulting in minor permanent changes in the visual appearance of the facilities. Due to the existing agricultural landscapes and the limited number of viewpoints at these facilities, the visual impacts resulting from the minor changes at the existing facilities would be minimal.

Modifications proposed for the Kewaskum Compressor Station would occur inside an existing building within the permanent facility boundary. Consequently, no changes would occur to the visual appearance of the facility.

Modifications at the Hampshire Meter Station would result in an expansion of the facility and new permanent launcher and receiver pads would be installed at the south and north ends of the Line 332 Lateral Replacement. The new launcher pad at the south end would be within the existing right of way. The new receiver pad at the north end would include the installation of a fence. The landowner's residence is located approximately 180 feet from the new receiver pad. Therefore, ANR would work with landowners to identify appropriate screening for the receiver pad to address visual aesthetics for this new facility, such as slatted chain-link fencing or picket fencing. The expansion of the meter station would permanently alter the visual appearance of the facility and a limited number of trees would need to be removed prior to construction. Two sides of the meter station would remain forested.

Based on the existing agricultural land use surrounding the meter and compressor stations and limited number of viewpoints, we believe that the proposed Project would have a minimal impact visual resources.

6.0 Air Quality and Noise

Air Quality

The Project would involve construction and operational emissions from the following facilities:

- installation of the new 6,130 HP Solar Centaur 50 compressor unit and appurtenant facilities at ANR’s existing Sandwich Compressor Station;
- increasing the capacity of the existing Hampshire Meter Station;
- abandoning by removal the existing 0.54-mile 16-inch-diameter Line 332 Lateral, and replaced in the same ditch with a new 24-inch-diameter pipeline;
- increase capacity of ANR’s existing Tiffany East Meter Station; and
- re-staging an existing Saturn 10 turbine compressor unit at ANR’s Kewaskum Compressor Station.

Regional Climate

The Project would be located in Northeast Illinois (Sandwich Compressor Station, Hampshire Meter Station, and Line 332 Lateral Replacement) as well as South Wisconsin (Tiffany East Meter Station) and East Wisconsin (Kewaskum Compressor Station), all in the vicinity of Lake Michigan. The climate in the Project area is generally continental and with some modifications because of Lake Michigan. Due to its location, the Project sites may experience a variety of different temperatures and weather conditions including, droughts, thunderstorms and blizzards. Temperatures in Wisconsin vary from negative 40 degrees Fahrenheit in the winter to an average of 90 degrees Fahrenheit in the summer. Temperatures in Illinois are milder and range from the 40’s in the winter to around 80 degrees Fahrenheit in the summer. Annual precipitation in Wisconsin ranges from 28 to 34 inches, with an average of 40 thunderstorms in the northern area and 30 in southern counties. Snowfall varies from approximately 30 inches in the South to 100 inches in the northern area per year.

Existing Air Quality

Ambient air quality is protected by federal and state regulations. The Clean Air Act (CAA) and its amendments designate six pollutants as criteria pollutants for which the National Ambient Air Quality Standards (NAAQS) are promulgated. The NAAQS for sulfur dioxide (SO₂), nitrogen dioxide (NO₂), particulate matter (PM), including PM less than 10 microns in aerodynamic diameter (PM₁₀) and PM less than 2.5 microns in aerodynamic diameter (PM_{2.5}), carbon monoxide (CO), ozone, and lead were set by the United States Environmental Protection Agency (USEPA) to protect human health (primary standards) and public welfare (secondary standards). The current NAAQS for these criteria pollutants are available on the USEPA’s website.¹

The NAAQS are codified in 40 CFR, Part 50. Areas of the country are designated based on compliance with the NAAQS. Designations fall under three main categories, as follows: “attainment” (areas in compliance with the NAAQS); “nonattainment” (areas not in compliance with the NAAQS); or “unclassifiable.” Unclassifiable areas are treated as attainment areas for

¹ The current NAAQS can be accessed online at <https://www.epa.gov/criteria-air-pollutants/naaqs-table>.

the purpose of permitting a stationary source of pollution. Areas that have been designated nonattainment but have still demonstrated compliance with the ambient air quality standard(s) are designated maintenance for that pollutant. Maintenance areas may be subject to more stringent regulatory requirements to ensure continued attainment of the NAAQS. Below are the designations for the proposed Project areas:

- The Tiffany East Meter Station is located in Rock County, Wisconsin and is designated as attainment for all NAAQS.
- The Kewaskum Compressor Station is located in Sheboygan County, Wisconsin and is designated as a marginal non-attainment area for ozone and attainment for all other NAAQS.
- The Hampshire Meter Station and the pipeline abandonment/replacement is located in Kane County, Illinois which is designated as marginal non-attainment for ozone and attainment for all other NAAQS.
- The Sandwich Compressor Station is located in Kendall County, Illinois which includes a portion of the county that is designated as marginal non-attainment for ozone (Oswego Township). The remainder of Kendall County, Illinois is considered in attainment for all NAAQS. The Sandwich Compressor Station is not located in the Oswego Township and therefore considered to be in attainment status.

The proposed expansion and modifications to each of the proposed facilities, and their associated impacts to potential to emit emissions of criteria air pollutant from each facility, would not exceed their respective non-attainment area major source modification thresholds. Therefore, the proposed Project, including all facility modifications, would not trigger non-attainment new source review air permitting. The Wisconsin Department of Natural Resources (WDNR) and the Illinois Environmental Protection Agency (IEPA) have adopted the NAAQS as promulgated by the USEPA. ANR submitted an air permit application for the Sandwich Compressor Station in January 2016.

Greenhouse Gases

Greenhouse gases occur in the atmosphere both naturally and as a result of human activities, such as the burning of fossil fuels. GHGs are gases that absorb infrared radiation in the atmosphere, and an increase in emissions of these gases has been determined by the USEPA to endanger public health and welfare by contributing to human-induced global climate change. The most common GHGs emitted during fossil fuel combustion and natural gas transportation are carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Emissions of GHGs are typically expressed in terms of CO₂ equivalents (CO₂e), where the potential of each gas to increase heating in the atmosphere is expressed as a multiple of the heating potential of CO₂ over a specific timeframe, or its global warming potential (GWP). The 100-year GWP of CO₂ is 1, CH₄ is 25, and N₂O is 298. During construction and operation of the Project, these GHGs would be emitted from non-electrical construction and operational equipment, as well as from fugitive CH₄ leaks from the pipeline and aboveground facilities.

The USEPA has expanded its regulations to include the emission of GHGs from major stationary sources under the Prevention of Significant Deterioration (PSD) program. The USEPA's current rules require that a stationary source that is major for a non-GHG-regulated New Source Review (NSR) pollutant must also obtain a GHG PSD permit prior to beginning construction of a new or modified major source with mass-based GHG emissions equal to or greater than 100,000 tons per year (tpy) and significant net emission increases in units of CO₂e equal to or greater than 75,000 tpy. There are no NAAQS or other significance thresholds for GHGs.

Air Quality Regulatory Requirements

The Project would be subject to federal and state regulations pertaining to the construction and operation of air emission sources. ANR would adhere to all Illinois and Wisconsin state regulations related to construction and/or operation of the Project.

Federal Air Quality Requirements

The CAA, 42 USC 7401 et seq., as amended in 1977 and 1990, and 40 CFR Parts 50 through 99 are the basic federal statutes and regulations governing air pollution in the United States. The following federal requirements have been reviewed for applicability to the Project:

- New Source Review/Prevention of Significant Deterioration;
- Title V Operating Permits;
- New Source Performance Standards (NSPS);
- National Emission Standards for Hazardous Air Pollutants (NESHAP);
- Greenhouse Gas Reporting; and
- General Conformity.

New Source Review/Prevention of Significant Deterioration

Congress established the NSR preconstruction permitting program as part of the 1977 CAA Amendments. Federal preconstruction review under NSR is conducted under separate procedures for sources in attainment areas and sources in nonattainment areas. Nonattainment New Source Review (NNSR) applies to sources in nonattainment areas. The USEPA usually delegates the NSR/NNSR permitting program to state and/or local air quality agencies that have established permitting thresholds and requirements such as Best Available Control Technology (BACT), emission offsets, and air quality impact analyses (modeling). PSD applies to new major sources or major modifications at existing sources in attainment areas or in areas that are unclassifiable. PSD is intended to keep new air emission sources from causing the existing air quality to deteriorate beyond acceptable levels. The Kewaskum Compressor Station is located in Sheboygan County, Wisconsin, which has been designated as a marginal nonattainment area for ozone and is attainment for all other NAAQS. The Kewaskum Compressor Station is a major source for nitrogen oxides (NO_x) under Non-Attainment NSR guidelines. However, this Project would not trigger any Major Modification thresholds. Thus, NNSR regulatory requirements are not applicable.

Under PSD, any new major source or major modification of an existing source of air pollutants is required to obtain an air quality permit before beginning construction. The definition of a PSD major source of air pollutants as applicable to the Project is any stationary source that emits, or has the potential to emit, 250 tpy of a regulated NSR pollutant (40 CFR 51.166(b)(1)(i)(b)) or is listed as belonging to one of 28 specifically listed industrial source categories under 40 CFR 52.21(b)(1) that have a 100-tpy applicability threshold. The sources proposed as part of the Project are not included on the categorical list; therefore, the potential to emit 250 tpy of an NSR-regulated pollutant is the applicable threshold for determining major source status. If a source emits even one criteria pollutant in major amounts, the source will be considered major.

Under PSD, any new major source or major modification of an existing source of air pollutants is required to obtain an air quality permit before beginning construction. NSR/NNSR permitting requirements vary by state, but new sources or modifications to existing sources are required to obtain an air quality permit prior to construction. The proposed modifications would not trigger any PSD thresholds; therefore, PSD requirements would not be applicable.

On May 13, 2010, the USEPA issued a PSD GHG Tailoring Rule. The rule tailored specific applicability thresholds for GHG stationary sources. However, on June 23, 2014, the Supreme Court ruled that the USEPA cannot require PSD permitting based solely on GHG emissions, striking down a portion of the rule.

The GHG Tailoring Rule specified that as of July 1, 2011, new sources would become subject to PSD with regard to GHGs if the source emits or has the potential to emit greater than 100,000 tpy of CO_{2e}. An existing Title V facility was subject to a 75,000 tpy CO_{2e} significance threshold for any modifications. However, based on the U.S. Supreme Court ruling, in order for PSD permitting requirements to apply, the new or modified source must be subject to PSD for a criteria pollutant in order to be considered a major PSD source for GHGs and, for such sources, only BACT requirements would apply. The proposed Project would not trigger any PSD thresholds, nor would it be subject to any additional NSR permitting requirements.

The CAA Amendments of 1977 designated certain areas of the United States as Mandatory Federal Class I areas, based on their air quality being considered a special feature of the area (e.g., national parks, wilderness areas). No Federal Class I areas would be located within 100 kilometers from the proposed Project area.

Title V Operating Permit Programs

The Part 70 Operating Permit program, as described in 40 CFR 70, requires major stationary sources of air emissions to submit an operating permit application prior to initial facility startup. Part 70 operating permits are more commonly referred to as “Title V” permits. A Title V operating permit is issued for a period of 5 years and governs operation of emission sources at a facility. The Title V permit includes all applicable regulations, emission limits, and reporting and recordkeeping requirements for a facility.

The Kewaskum and Sandwich Compressor Stations have an existing Title V already. The Tiffany and Hampshire Meter Stations do not have a Title V permit because their emissions are considered de minimis and do not trigger Title V operational permit requirements.

New Source Performance Standards (NSPS)

NSPS regulations (40 CFR Part 60) establish popular emission limits and monitoring, reporting, and recordkeeping requirements for various emission sources based on source type and size. These regulations apply to new, modified, or reconstructed sources. The following NSPS requirements were identified as potentially applicable to proposed Project:

Subpart KKKK – Standards of Performance for Stationary Combustion Turbines regulates emissions of NO_x and SO₂ from combustion turbines. The applicability thresholds are a heat input rating (based on the higher heating value of the fuel) at peak load equal to or greater than 10 million British thermal units per hour, and manufactured after February 18, 2005. The proposed turbine at the Sandwich Compressor would be subject to the regulation as it has a peak load greater than 10 million British thermal units per hour (MMBtu/hr) and would be constructed after February 18, 2005. The other facilities in the Project would have no applicability. The Sandwich Compressor Station would comply with the emission standards and other applicable requirements.

Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines provides requirements for stationary spark ignition internal combustion engines that are constructed, modified, or reconstructed after June 12, 2006, and apply to stationary spark ignition combustion engines with horsepower greater than 25 HP constructed after specified dates, dependent on horsepower rating and combustion type. The Project would have applicability as the proposed emergency engine at the Sandwich Compressor Station would be installed on or after January 1, 2009 as outlined in 40 CFR 60.4230(3)(iv); therefore, the proposed emergency engine would be subject to both emission standards and operating requirements in NSPS JJJJ.

Subpart OOOOa – Standards of Performance for Oil and Natural Gas Sector is a recently revised NSPS that regulates emissions of GHGs and volatile organic compounds (VOC) from certain new and modified sources in the oil and natural gas section. The proposed new compressor turbine at the Sandwich Compressor Station would be subject to some of the operational requirements defined in the rule. The re-staging of the existing Saturn 10 turbine at the Kewaskum Compressor Station is not considered a modification per 40 CFR 60 Subpart OOOOa, section 5365a(j), therefore, would not be subject to the regulation. The Hampshire Meter Station and the Tiffany East Meter Station are considered gathering and boosting station per 40 CFR 60 Subpart OOOOa, section 5430(a) and fall under the requirements of compressor stations. However, the Hampshire Meter Station and the Tiffany East Meter Station are not subject to the regulation per 40 CFR 60 Subpart OOOOa, section 5365a(j) because the additions to the meter stations are not considered modifications. ANR would continue to comply with all monitoring and recordkeeping requirements set forth by this regulation.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

NESHAP, codified in 40 CFR 61 and 63, regulate the emissions of hazardous air pollutants (HAP) from new and existing sources. The 1990 CAA Amendments established a list of 189 HAPs, resulting in the promulgation of Part 63, also known as the Maximum Achievable Control Technology standards. Part 63 regulates HAPs from major sources of HAPs and specific source categories emitting HAPs. Some NESHAPs may apply to non-major sources (area sources) of HAPs. Major source thresholds for NESHAPs are 10 tpy of any single HAP or 25 tpy of total HAPs. The Sandwich Station would be considered a major source of HAPs due to potential formaldehyde emissions that exceed 10 tpy and total HAPs that exceed 25 tpy. The Kewaskum Compressor Station, the Hampshire Meter Station and the Tiffany East Meter Station are considered area sources of HAPs since the potential to emit for total HAPs is less than 25 tpy and all individual HAP emissions are below 10 tpy.

The Stationary Combustion Turbines Maximum Achievable Control Technology for major sources was promulgated on March 5, 2004, and regulates HAP emissions from newly constructed stationary combustion turbines at major sources of HAP emissions. Subpart YYYYY establishes national emission limitations and operating limitations for HAP emissions from stationary combustion turbines located at major sources of HAP emissions, and requirements to demonstrate initial and continuous compliance with the emission and operating limitations. USEPA then subsequently stayed the rule on August 8, 2004 to consider delisting some types of combustion turbines, including Lean premix gas-fired turbines and diffusion flame gas-fired turbines. The Project has potential applicability to the final revised regulation because the turbine at the Sandwich Compressor Station would be a new stationary combustion turbine and located at a major source of HAP. ANR would comply with these standards.

On December 20, 2012, the USEPA finalized changes to 40 CFR Part 63, Subpart JJJJJJ regulating existing and new industrial, commercial, and institutional boilers located at area source facilities. The final rule applies to boilers located at an area source of HAPs that burn coal, oil, biomass, or non-waste materials. The proposed boiler at the Hampshire Meter Station is natural gas-fired and therefore exempt from all requirements of 40 CFR Part 63, Subpart JJJJJJ per 11195(e).

Greenhouse Gas Reporting

On November 8, 2010, the USEPA signed a rule that finalizes reporting requirements for the petroleum and natural gas industry under 40 CFR 98. Subpart W of 40 CFR 98 requires petroleum and natural gas facilities that emit 25,000 metric tons or more of CO₂e per year to report annual emissions of specified GHGs from various processes within the facility. Emissions of GHGs associated with the construction and operation of the Project, including all direct and indirect emission sources were calculated. In addition, GHG emissions were converted to total CO₂e emissions based on the GWP of each pollutant. The reporting rule does not apply to construction emissions. However, we have included the construction emissions for accounting and disclosure purposes. GHG emissions from the proposed Project may be subject to GHG reporting. If actual GHG emissions from the proposed Project are not equal to or greater than the reporting threshold, ANR would be required to comply with all applicable requirements of 40 CFR Part 98.

General Conformity

The USEPA promulgated the General Conformity Rule on November 30, 1993 to implement the conformity provision of Title I, Section 176(c)(1) of CAA. Section 176(c)(1) requires that the federal government not engage, support, or provide financial assistance for licensing or permitting, or approve any activity not conforming to, an approved CAA implementation plan.

The General Conformity Rule is codified in Title 40 CFR Part 51, Subpart W and Part 93, Subpart B, Determining Conformity of General Federal Actions to State or Federal Implementation Plans. A conformity determination must be conducted by the lead federal agency if a federal action's construction and operational activities is likely to result in generating direct and indirect emissions that would exceed the conformity threshold (*de minimis*) levels of the pollutant(s) for which an air basin is in nonattainment or maintenance. According to the conformity regulations, emissions from sources that are subject to any NNSR or PSD permitting/licensing (major or minor) are exempt and are deemed to have conformed.

Section 176(c)(1) states that a federal agency cannot approve or support any activity that does not conform to an approved State Implementation Plan (SIP). Conforming activities or actions should not, through additional air pollutant emissions:

- cause or contribute to new violations of the NAAQS in any area;
- increase the frequency or severity of any existing violation of any NAAQS; or
- delay timely attainment of any NAAQS or interim emission reductions.

The Tiffany East Meter Station, located in Rock County, Wisconsin is designated as attainment for all NAAQS. The Kewaskum Compressor Station, located in Sheboygan County, Wisconsin is designated as a marginal non-attainment area for ozone and attainment for all other NAAQS. The Hampshire Meter Station and the pipeline abandonment/replacement, located in Kane County, Illinois is designated as marginal non-attainment for ozone and attainment for all other NAAQS. The Sandwich Compressor Station, located in Kendall County, Illinois includes a portion of the county that is designated as marginal non-attainment for ozone (Oswego Township). However, the Sandwich Compressor Station is not located in Oswego Township and therefore considered to be in attainment status. The remainder of Kendall County, Illinois is considered in attainment for all NAAQS. The Sandwich Compressor Station is not located in the Oswego Township and therefore, considered to be in attainment status. As shown in table 6 below, the construction emissions would be below the *de minimis* levels of 100 tpy each for NO_x and VOC. Therefore, a General Conformity analysis is not required.

Construction Impacts and Mitigation

Construction of the proposed Project may result in temporary increases of criteria pollutants due to equipment powered by diesel fuel or gasoline engines and increases in fugitive dust emissions due to disturbance of the ground surface. Additionally, indirect emissions in relation to construction workers commuting to and from the sites may temporarily increase. Although specifics have not been finalized, these sources would not be considered stationary and

their impacts would be generally temporary and localized. The construction emissions are also not anticipated to exceed NAAQS limits.

Construction engine emissions apply to the additional construction equipment brought in during this proposed Project. These emissions would be reliant on hours of operation, types of equipment and the amount of vehicle miles travelled throughout the Project. It is anticipated that the impacts from the construction equipment would be minimal. Commuting emissions refer to the tailpipe emissions from the workers' vehicles and transportation to and from the site. These emissions would be minimal.

Construction activities associated with non-jurisdictional facility construction activities (i.e., distribution pipeline extension, see section A.8 for description of facilities) would result in temporary release of criteria pollutants and fugitive air emissions. Vehicles and construction equipment traveling over unpaved areas of the construction site would result in the intermittent emission of fugitive dust, as well as criteria pollutant from combustion of fuel. A large fraction of fugitive emissions from vehicle traffic in unpaved areas would also be deposited near the unpaved areas. Combustion of gasoline and diesel fuels to power the engines of vehicles and construction equipment would generate local emissions of PM, NO_x, CO, VOCs, and SO₂ during the site preparation and construction period relative to non-jurisdictional facilities. Although specific construction equipment for these non-jurisdictional construction activities are not known to ANR, including sizes, numbers of vehicles, and the hours each piece of equipment would operate, the emissions of these activities would be similar to the same activities for the compressor stations and would be minor. Below in table 7 are the anticipated construction emissions associated with the Project. The non-jurisdictional facilities would be located in the vicinity of the Hampshire Meter Station and their emissions are listed in the fugitive emissions of the Hampshire Meter Station.

Depending on weather conditions, construction of the proposed meter stations, compressor stations, and pipeline may result in intermittent and short-term fugitive dust emissions. These emissions would only last during the construction period and the impact of these emissions would be highly localized to the Project area. Therefore, it is not anticipated that these emissions would have a significant impact on air quality outside of the construction area. ANR prepared a Fugitive Dust Control Plan (FDCP). We reviewed the FDCP and find it acceptable. Through the determination of the EI, ANR has the authority to determine if/when dust suppression measures should be implemented. Some of the measures described in the FDCP include:

- use of water sprays to control dust from heavy construction and earth-moving activities, material stockpiles, unpaved roadways, laydown areas, work areas, and demolition activities;
- paving and/or grading of roadways;
- creating a graded and graveled transition area between paved and unpaved roadways to limit the transport of tracked materials onto paved roads by vehicles;
- cleaning of paved roadways and removal of spilled or tracked materials from paved roadways;
- reducing vehicle speeds when vehicle operation generates fugitive dust (dry days, operation on fine-textured soils); and

- covering open-bodied haul trucks.

Once construction activities in the area are completed, fugitive dust and construction equipment emissions would subside and the Project's related impact on air quality would terminate. Given the relatively small number of facilities to be upgraded, the anticipated construction schedule, the implementation of the mitigation measures described in the FDCP provided by ANR, and the intermittent and temporary nature of construction emissions, we conclude that the emissions from construction-related activities for the Project are not expected to cause or significantly contribute to a violation of any applicable ambient air quality standard or significantly affect local or regional air quality.

Table 6 - Construction Emissions from the Proposed Project

| Station | Emission Source | VOC | CO | NOX | SO ₂ | PM ₁₀ | PM _{2.5} | CO _{2e} | HAP |
|------------------------------|---------------------|------|------|-------|-----------------|------------------|-------------------|------------------|------|
| Sandwich Compressor Station | Fugitive Dust | - | - | - | - | 25.73 | 2.89 | - | - |
| | Construction Engine | 0.52 | 2.07 | 4.92 | 0.01 | 0.22 | 0.22 | 448.17 | 0.25 |
| | Commuting | 0.16 | 1.61 | 0.69 | 0.00 | 0.04 | 0.03 | 182.48 | 0.06 |
| Hampshire Meter Station | Fugitive Dust | - | - | - | - | 6.87 | 0.77 | - | - |
| | Construction Engine | 0.45 | 1.79 | 4.01 | 0.00 | 0.19 | 0.19 | 358.48 | 0.01 |
| | Commuting | 0.04 | 0.41 | 0.22 | 0.00 | 0.01 | 0.01 | 51.04 | 0.00 |
| Line 332 Lateral Replacement | Fugitive Dust | - | - | - | - | 7.12 | 0.79 | - | - |
| | Construction Engine | 0.43 | 1.75 | 3.98 | 0.00 | 0.19 | 0.19 | 355.79 | 0.01 |
| | Commuting | 0.05 | 0.43 | 0.30 | 0.00 | 0.02 | 0.01 | 60.61 | 0.00 |
| Tiffany East Meter Station | Fugitive Dust | - | - | - | - | 6.87 | 0.77 | - | - |
| | Construction Engine | 0.22 | 0.89 | 2.01 | 0.00 | 0.09 | 0.09 | 179.24 | 0.01 |
| | Commuting | 0.04 | 0.41 | 0.22 | 0.00 | 0.01 | 0.01 | 51.04 | 0.00 |
| Kewaskum Compressor Station | Fugitive Dust | - | - | - | - | 0.63 | 0.07 | - | - |
| | Construction Engine | 0.01 | 0.04 | 0.08 | 0.00 | 0.00 | 0.00 | 6.71 | 0.00 |
| | Commuting | 0.00 | 0.02 | 0.02 | 0.00 | 0.00 | 0.00 | 4.42 | 0.00 |
| TOTALS | | 1.92 | 9.42 | 16.45 | 0.01 | 47.99 | 6.04 | 1,697.98 | 0.34 |

Note: Construction emission estimates for on road construction emissions were based on the USEPA's NONROAD model and for the fugitive dust construction emission, the AP-42 was used. For the non-road emission estimates, equipment emission factors from the California south coast air management district were selected as they were the most conservative.

Operational Emissions

The primary operational emissions associated with the Project would be from the proposed turbine, emergency generator, and heater at the Sandwich Compressor Station, the turbine re-staging at the Kewaskum Compressor Station, and the proposed increased capacity at the Hampshire, which are summarized below in tables 7, 8, 9, and 10 in tons per year, which demonstrate that the Project facilities would be below PSD/NNSR major source thresholds.

| Facility | NO _x | CO | VOC | PM | SO ₂ | CO _{2e} | HAP |
|-----------------------------|-----------------|-------|------|------|-----------------|------------------|------|
| Sandwich Compressor Station | 27.00 | 52.71 | 9.40 | 1.71 | 0.83 | 30,354.74 | 0.38 |
| Hampshire Meter Station | 0.13 | 0.13 | 0.08 | 0.02 | 0.00 | 0.00 | 0.02 |
| Tiffany East Meter Station | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Kewaskum Compressor Station | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| TOTAL | 27.13 | 52.84 | 9.48 | 1.73 | 0.83 | 30,354.74 | 0.40 |

Table 9.2-8 of Resource Report 9 shows the emissions at the Tiffany East Meter Station to be zero as the station’s current operation and emission sources, consisting only of fugitive components (valves, flanges, etc.), is exempt from construction and operations air permitting requirements per Wisconsin Administrative Code NR 406.04 and NR 407.03, respectively. The information contained in table 9.2-8 is not intended to reflect actual emissions from existing facilities, nor is it intended to represent there are no emissions from the meter station. We conclude that the Tiffany East Meter Station air emissions are insignificant and well below regulatory air permitting thresholds.

| | VOC | NO _x | CO | SO ₂ | PM ₁₀ | PM _{2.5} | Cumulative HAPs |
|--|--------|-----------------|--------|-----------------|------------------|-------------------|-----------------|
| Current Permitted Emissions ⁽¹⁾ | 194.75 | 1921.44 | 524.61 | 0.50 | 31.25 | 31.25 | 56.76 |
| Project Increase | 9.40 | 27.00 | 52.71 | 0.83 | 1.71 | 1.71 | 0.38 |
| Project Decreases ⁽²⁾ | 20.31 | 59.08 | 36.81 | 0.25 | 4.64 | 4.64 | 11.69 |
| Proposed Permitted Emissions | 183.84 | 1,889.36 | 558.51 | 1.08 | 28.32 | 28.32 | 45.45 |
| Net Project Change | -10.91 | -32.08 | 15.90 | 0.58 | -2.93 | -2.93 | -11.31 |
| Major Source Modification Threshold | 40 | 40 | 100 | 40 | 15 | 10 | -- |

⁽¹⁾ Current Permitted Emissions reflects total permitted emissions at the station at the time of the Wisconsin South Expansion Project certificate application filing. This number includes emissions from the original five certificated compressor units at the station and nine additional units installed in November 2014, to provide horsepower while one of the certificated units was taken out of service for overhaul. All fourteen units were permitted with the Illinois Environmental Protection Agency.

⁽²⁾ Project Decreases reflect the emissions reduction as a result of removing the nine additional units described in footnote 1 above, in October 2016.

| Table 9 - PSD/NNSR Project Analysis - Hampshire Meter Station | | | | | | | |
|--|------------|-----------------------|-----------|-----------------------|------------------------|-------------------------|------------------------|
| | VOC | NO_x | CO | SO₂ | PM₁₀ | PM_{2.5} | Cumulative HAPs |
| Current Permitted Emissions | 3.94 | 6.18 | 6.26 | 0.05 | 1.08 | 1.08 | -- |
| Project Increase | 0.08 | 0.13 | 0.13 | 0.00 | 0.02 | 0.02 | 0.02 |
| Project Decreases | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Proposed Permitted Emissions | 4.02 | 6.31 | 6.39 | 0.05 | 1.10 | 1.10 | 0.02 |
| Net Project Change | 0.08 | 0.13 | 0.13 | 0.00 | 0.02 | 0.02 | 0.02 |
| Major Source Threshold | 250 | 250 | 250 | 250 | 250 | 250 | 25 |
| Major Source/ Project? | No | No | No | No | No | No | No |

| Table 10 - PSD/NNSR Project Analysis - Kewaskum Compressor Station | | | | | | | |
|---|------------|-----------------------|-----------|-----------------------|------------------------|-------------------------|------------------------|
| | VOC | NO_x | CO | SO₂ | PM₁₀ | PM_{2.5} | Cumulative HAPs |
| Current Permitted Emissions | 21.64 | 422.11 | 129.78 | 0.99 | 3.89 | 3.89 | 4.81 |
| Project Increase | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Project Decreases | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Proposed Permitted Emission | 21.64 | 422.11 | 129.78 | 0.99 | 3.89 | 3.89 | 4.81 |
| Net Project Change | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Major Source Modification Threshold | 40 | 40 | 100 | 40 | 15 | 10 | -- |
| Major Source/ Project? | No | No | No | No | No | No | No |

The proposed Project would not incrementally increase the current emissions from the Tiffany East Meter Station and as such the Project would remain below air emissions permitting thresholds as identified in Wisconsin Administrative Code NR 406.04 and NR 407.03.

Air Dispersion Modeling

ANR conducted an air dispersion modeling for the additional new proposed unit at the Sandwich Compressor Station using AERSCREEN, the USEPA recommended screening model based on AERMOD. The model produces estimates of “worst case” 1-hour concentrations for a single source. Average background concentrations from the 2014 Illinois Air Quality Reports were added to the modeled maximum ground level concentration. The modeling results are

summarized in table 11 below and show that all total concentrations would be below the NAAQS which demonstrate compliance.

The GHG emissions associated with construction and operation of the Project are identified above. GHG emissions from construction would be short term and cease at the end of construction. Operation of Sandwich and Kewaskum Compressor Stations and the Tiffany and Hampshire Meter Stations would contribute GHGs emissions on a continuing basis once the modifications at those facilities become operational. The Project would also result in additional downstream GHG emissions due to end-use of the natural gas transported by the Project. Assuming that all of the natural gas being transported is used for combustion, downstream end-use would result in about 4.5 million metric tonnes CO₂ per year. As the precise end-uses of the gas that would be transported by the Project are unknown, and the GHG emission figure provided here represents a conservative estimate.

| Pollutant | Averaging Period | Predicted Maximum Ground Level Concentrations (GLC_{max}) (ug/m³) | Background Concentrations (ug/m³) | Total GLC_{max}+ Background (ug/m³) | NAAQS (ug/m³) |
|-------------------|-------------------------|---|---|---|---------------------------------|
| SO ₂ | 3-hour | 0.84 | 0.0 | 0.84 | 1,300 |
| | 1-hour | 0.84 | 172.1 | 172.97 | 196 |
| PM _{2.5} | Annual | 0.16 | 10.5 | 10.66 | 12 |
| | 24-hour | 0.98 | 24.7 | 25.68 | 35 |
| NO ₂ | Annual | 2.46 | 30.1 | 32.56 | 100 |
| | 1-hour | 24.62 | 124.6 | 144.30 | 188 |
| CO | 8-hour | 27.02 | 1110 | 1137.02 | 10,000 |
| | 1-hour | 19.78 | 1940 | 1959.78 | 40,000 |

Once construction activities in the area are completed, fugitive dust and construction equipment emissions would subside and the impact on air quality would diminish. In addition, with the implementation of the FDCP discussed above, operational emissions from the proposed Project would be reduced. Therefore, we conclude that construction and operation of the proposed Project would not have a significant impact on air quality.

Noise

Construction and operation of the proposed Project may affect local noise levels. The ambient sound level of a region is defined by the total noise generated within the specific environment, and usually comprises sounds emanating from natural and artificial sources. At any location, both the magnitude and frequency of environmental noise may vary considerably over the course of a day and through the week. This variation is caused in part by changing weather conditions and the effect of seasonal vegetation cover.

Two measurements used by some federal agencies to relate the time-varying quality of environmental noise to its known effects on people are the equivalent sound level (Leq) and the day-night sound level (Ldn). The Leq is an A-weighted sound level containing the same sound energy as the instantaneous sound levels measured over a specific time period. Noise levels are perceived differently, depending on length of exposure and time of day. The Ldn takes into account the duration and time the noise is encountered. Specifically, in the calculation of the Ldn, late night to early morning (10:00 pm to 7:00 am) noise exposures are penalized +10 decibels (dB), to account for people's greater sensitivity to sound during the nighttime hours. The A-weighted scale is used because human hearing is less sensitive to low and high frequencies than mid-range frequencies. For an essentially steady sound source that operates continuously over a 24-hour period and controls the environmental sound level, the Ldn is approximately 6.4 dB above the measured Leq.

In 1974, the USEPA published its *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*. This document provides information for state and local governments to use in developing their own ambient noise standards. The USEPA has indicated that an Ldn of 55 decibels on the A-weighted scale (dBA) protects the public from indoor and outdoor activity interference. FERC staff has adopted this criterion and use it to evaluate the potential noise impacts from the proposed Project at noise sensitive areas (NSAs), such as residences, schools, or hospitals. Due to the 10 dBA nighttime penalty added prior to calculation of the Ldn, for a facility to meet the Ldn 55 dBA limit, it must be designed such that actual constant noise levels on a 24-hour basis do not exceed 48.6 dBA Leq at any NSA. Also, in general, a person's threshold of perception for a perceivable change in loudness on the A-weighted sound level is about 3 dBA, whereas a 5 dBA change is clearly noticeable, and a 10 dBA change is perceived as either twice or half as loud.

The State of Illinois has a noise ordinance, and the environmental sound level limits, from an industrial source to a residential area, are based upon maximum allowable octave-band sound pressure levels, and not a single dBA value. Kendall County Ordinance No. 13-18 requires that no person shall create a noise at a receiving residential property that exceeds 60 dBA from 7 am to 10 pm, and 55 dBA from 10 pm to 7 am. The Kane County noise ordinance contains maximum permissible octave-band sound pressure levels along Residential, Estate or Farming District Boundaries and along Business and Industry District Boundaries, and there is no overall A-Wt. (i.e., dBA) requirement.

Construction Noise

Noise could affect the surrounding area during construction of the proposed project components. The acoustical analysis of temporary construction activities considers the noise produced by construction equipment that could impact the sound contribution at the nearby NSAs. In general, these activities are minor, temporary, of short duration, and would vary considerably from day to day as construction progresses.

Construction noise may be periodically audible at nearby NSAs; however, long-term impacts are not anticipated and typical construction of the aboveground facilities would be scheduled during daylight hours, thereby making impacts negligible. It is anticipated that the highest level of construction-related noise would occur during site earth work activities, such as site grading and clearing, when the largest amount of construction equipment would be operating.

Construction of the proposed Sandwich Compressor Station and Line 332 Lateral Replacement would result in temporary and short-term impacts to the Project area and immediate surrounding area. ANR would make every effort to minimize impacts from construction activities to nearby residences. In order to minimize potential noise impacts to noise sensitive NSAs, ANR would implement Best Management Practices, such as restricting construction activities to daylight hours; maintaining vehicles and equipment in accordance with manufacturers' recommendations; and properly maintaining and muffling construction equipment to avoid producing excessive noise near NSAs.

Operational Noise

ANR conducted a noise analysis for the Sandwich Compressor Station as well as the Tiffany and Hampshire Meter Stations. The existing noise sound levels, estimated sound levels from the proposed sources, total noise sound levels, and noise increases were calculated. No operational noise is anticipated at the modified Kewaskum Compressor Station since the restaging of the existing Saturn 10 turbine compressor unit would not involve operational noise.

Sandwich Compressor Station

On September 12 and 14, 2016, ANR conducted a pre-construction sound survey and noise impact analysis for the Sandwich Compressor Station. ANR identified six NSAs within ½ mile from the Sandwich Compressor Station. As shown below in table 12, the estimated noise from the modifications at the compressor station is below the FERC's noise criterion of 55 dBA. The new compressor unit would be equipped with a blowdown silencer to control normal unit blowdown noise. However, to ensure that the noise at the Sandwich Compressor Station does not become significant, **we recommend that:**

ANR should file a noise survey with the Secretary of the Commission (Secretary) no later than 60 days after placing the additional compressor unit at the existing Sandwich Compressor Station into service. If a full power load condition noise survey is not possible, ANR should file an interim survey at the maximum possible power load within 60 days of placing the additional compressor unit at the Sandwich Compressor Station in service and file the full load survey within 6 months. If the noise attributable to the operation of the additional compressor unit at maximum flow conditions exceeds 55 dBA L_{dn} at any nearby NSAs, ANR should file a report on what changes are needed and should install the additional noise controls to meet the level within 1 year of the in-service date. ANR should confirm compliance with the above requirement by filing a second full power noise survey with the Secretary no later than 60 days after it installs the additional noise controls.

Table 12 - Noise Assessment at the Sandwich Compressor Station

| NSAs | Distance to Center of Proposed Unit 10 | Calculated L_{dn} of Existing Station at Full Load Operation (dBA) | Estimated L_{dn} of Proposed Unit 10 at Full Load (dBA) | Total Station L_{dn} (Existing Station + Proposed Unit 10) (dBA) | Potential Increase Above Existing Station Sound Level (dBA) |
|-----------------|---|---|--|---|--|
| NSA #1 (House) | 1,100 ft. E | 70.6 | 48.4 | 70.6 | 0.0 |
| NSA #2 (House) | 2,300 ft. E-NE | 61.4 | 39.5 | 61.4 | 0.0 |
| NSA #3 (Houses) | 1,950 ft. E-SE | 62.9 | 41.5 | 62.9 | 0.0 |
| NSA #4 (Houses) | 3,000 ft. SE | 55.9 | 36.0 | 55.9 | 0.0 |
| NSA #5 (House) | 5,000 ft. S | 42.0 | 29.4 | 42.2 | 0.2 |
| NSA #6 (Houses) | 2,750 ft. N-NW | 49.5 | 37.2 | 49.8 | 0.3 |

Tiffany East Meter Station

On September 15, 2016, ANR conducted a pre-construction sound survey and noise impact analysis for the modified Tiffany East Meter Station. Three NSAs were identified within ½ mile from the meter station. During the September 15, 2016 sound survey, the Tiffany East Meter Station was operating at minimal to no flow due to pipeline system constraints and market demand, and the existing sound levels have been estimated. ANR would perform an additional noise preconstruction sound survey during the upcoming winter season when the Tiffany East Meter Station is in operation. ANR indicated that it is anticipated that the power plant would be back in operation in March 2017. As such, ANR would update FERC on the planned preconstruction sound survey for the Tiffany East Meter Station and its ability to perform the survey at that time. On March 3, 2017, ANR stated in a filing that the power plant that the Tiffany East Meter Station provides service to is still down for maintenance and is not anticipated to be back in operation until August 2017. Therefore, ANR would update FERC on the planned preconstruction sound survey for the Tiffany East Meter Station and its ability to perform the survey at that time. The estimated noise assessment of the Tiffany East Meter Station is shown below in table 13. Since the total noise would be above 55 dBA at NSA 1, and to ensure that the noise at the Tiffany East Meter Station does not become significant, **we recommend that:**

ANR should file a noise survey with the Secretary no later than 60 days after placing the modified Tiffany East Meter Station into service. If a full power load condition noise survey is not possible, ANR should file an interim survey at the maximum possible power load within 60 days of placing the modified Tiffany East Meter Station in service

and file the full load survey within 6 months. If the noise attributable to the operation of the modified meter station at full or interim power load conditions exceeds 55 dBA L_{dn} at any nearby NSAs, ANR should file a report on what changes are needed and should install the additional noise controls to meet the level within 1 year of the in-service date. ANR should confirm compliance with the above requirement by filing a second full power noise survey with the Secretary no later than 60 days after it installs the additional noise controls.

Table 13 - Noise Analysis at the Tiffany East Meter Station

| NSAs | Distance Center of Meter Station | Measured Ambient L _{dn} (dBA) | Estimated L _{dn} of Modified Meter Station at Full Capacity (dBA) | Total L _{dn} of Modified Meter Station + Ambient (dBA) | Potential Increase Above Ambient Sound Level (dBA) |
|---------------------------|----------------------------------|--|--|---|--|
| NSA #1 (Houses) | 325 ft. W | 51.6 | 53.8 | 55.9 | 4.3 |
| NSA #2 (Community Center) | 2,200 ft. S | 52.0 | 32.9 | 52.0 | 0.0 |
| NSA #3 (Houses) | 2,300 ft. E | 54.6 | 32.3 | 54.6 | 0.0 |

Hampshire Meter Station

On February 6, 2017, ANR filed a revised ambient/preconstruction sound survey and noise impact analysis of the modifications at existing Hampshire Meter Station, conducted on September 15, 2016 and January 5, 2017. The meter station was not in operation during the September 15, 2016 noise survey but was in operation during the January 5, 2017 noise survey. Three NSAs were identified within ½ mile from the Hampshire Meter Station. As shown in the noise assessment below in table 14, the estimated sound contribution of the existing and modified Hampshire Meter Station would be below the FERC noise criterion of 55 dBA L_{dn} at the closet NSAs.

Noise Mitigation Measures

The noise analysis conducted by ANR assumes that the noise control recommendations and equipment noise requirements for the modified Sandwich Compressor Station and modified Hampshire and Tiffany East Meter Stations have been incorporated. Some of these measures include the following:

- acoustically designed compressor building;
- turbine unit exhaust and air inlet systems;
- low noise lube oil cooler;
- acoustical pipe lagging for the aboveground gas piping where required;
- high performance compressor unit blowdown silencer;
- low noise water bath heater; and

- high performance acoustically designed regulator buildings.

| NSAs | Distance to Meter Station | Measured Ambient L_{dn}⁽¹⁾ (dBA) | Estimated L_{dn} of modified Meter Station at Full Capacity | Total L_{dn} of Modified Meter Station + Ambient (dBA) | Potential Increase Above Ambient Sound Level (dBA) |
|--------------------------|----------------------------------|--|--|---|---|
| NSA #1 (Houses) | 1,300 ft. NW to NE | 49.7 | 44.4 | 50.8 | 1.1 |
| NSA #2 (Forest Preserve) | 2,500 ft. NE | 49.5 | 36.8 | 49.7 | 0.2 |
| NSA #3 (Community Park) | 2,800 ft. S | 49.2 | 35.5 | 49.4 | 0.2 |

The construction and operation of the proposed Project would cause temporary increases in the ambient sound environment in the immediate vicinity of the site. Most construction activities would take place during daytime hours. Construction noises (i.e., operation of equipment, delivery of materials, sheet pilings, road boring, etc.) would be heard in the immediate vicinity of the construction work area. Therefore, based on the discussion above, the noise analysis, and the noise mitigation measures proposed by ANR, the noise generated from the construction activities would not have a significant impact on the nearby NSAs. In addition, our recommendation above would ensure that the noise levels from operation of the Sandwich Compressor Station and the Tiffany East Meter Station would not exceed the FERC’s noise levels of 55 dBA L_{dn} at NSAs.

7.0 Reliability and Safety

The transportation of natural gas by pipeline involves some risk to the public in the event of an accident and subsequent release of gas. The greatest hazard is a fire or explosion following a major pipeline rupture. Methane, the primary component of natural gas, is colorless, odorless, and tasteless. It is not toxic, but is classified as a simple asphyxiate, possessing a slight inhalation hazard. If breathed in high concentration, oxygen deficiency can result in serious injury or death.

The pipeline and aboveground facilities associated with the Project must be designed, constructed, operated, and maintained in accordance with the DOT Minimum Federal Safety Standards in 49 CFR Part 192. The regulations are intended to ensure adequate protection for the public and to prevent natural gas facility accidents and failures.

The DOT pipeline standards are published in Parts 190-199 of Title 49 of the CFR. For example, Part 192 of 49 CFR specifically addresses natural gas pipeline safety issues, prescribes the minimum standards for operating and maintaining pipeline facilities, and incorporates compressor station design, including emergency shutdowns and safety equipment. Part 192 also

requires a pipeline operator to establish a written emergency plan that includes procedures to minimize the hazards in a natural gas pipeline emergency.

The operator must also establish a continuing education program to enable customers, the public, government officials, and those engaged in excavation activities to recognize a gas pipeline emergency and report it to appropriate public officials.

Facilities associated with the proposed Project must be designed, constructed, operated, and maintained in accordance with DOT standards, including the provisions for written emergency plans and emergency shutdowns. ANR would provide the appropriate training to local emergency service personnel before the facilities are placed in service.

ANR's facilities and pipeline construction and operation would represent a minimum increase in risk to the public and we are confident that with the options available in the detailed design of ANR facilities, that they would be constructed and operated safely.

8.0 Cumulative Impacts

In accordance with NEPA, we considered the cumulative impacts of the Project and other projects or actions in the area. Cumulative impacts represent the incremental effects of a proposed action when added to impacts associated with past, present, and reasonably foreseeable future projects, regardless of what agency or person undertakes such other actions. Although the individual impact of each separate project may be minor, the additive or synergistic effects of multiple projects could be significant.

The purpose of this analysis is to identify and describe cumulative impacts that would potentially result from implementation of the Project. This cumulative impacts analysis uses an approach consistent with the methodology set forth in relevant guidance (Council on Environmental Quality (CEQ), 1997b; CEQ, 2005). The first step in our analysis is to identify a geographic scope for possible cumulative effects, and then to identify other projects that may impact the same resources within the same geographic and temporal scope as the proposed Project. Table 15 lists past, present, and reasonably foreseeable future projects within resource-specific geographic scopes. Table 15 identifies these projects with locations, anticipated impacts, projected permits/authorizations and construction schedules. Actions located outside the geographic scope are generally not evaluated because their potential to contribute to a cumulative impact diminishes with increasing distance from the Project.

As described in the environmental analysis section of this EA, constructing and operating the Project would temporarily and permanently impact the environment. The Project would have no effect on geology, surface water, cultural resources, or special status species; when added to the impacts of other present and reasonably foreseeable future actions the Project would not result in a significant cumulative impact on these resources. Therefore, these resources are not discussed further in the cumulative impacts sections. However, cumulative impacts on groundwater, wetlands, vegetation and wildlife, land use and visual resources, and air quality and noise could occur and are discussed further.

We also conclude that nearly all of the Project-related impacts would be contained within previously disturbed areas. The environmental impacts associated with the proposed Project would be minimized by careful project design and routing, use of the FERC Plan and Procedures to avoid and minimize impacts to some sensitive resources, and implementation of appropriate mitigation measures. Consequently, it is anticipated that the cumulative impact of the proposed Project is insignificant when the impacts of the proposed Project are added to past, present, or reasonably foreseeable future projects in the area.

Based on the impacts of the Project as identified and described in this EA and consistent with CEQ guidance, we have determined that the resource-specific geographic scope described below are appropriate to assess cumulative impacts.

- Potential impacts on soils would be largely limited to the construction areas; therefore, we defined the geographic scope to be within the proposed construction limits.
- Because of the potential for impacts on water resources, wetlands, vegetation, fish, and wildlife to extend outside of the Project's workspaces, we evaluated projects and actions within the Hydrologic Unit Code 12 subwatershed.
- The geographic scope identified for the cumulative impacts on land use is defined as a one-mile radius from construction areas.
- The geographic scope for visual resources is defined as 0.25 mile from the Project area and existing visual access points (e.g., road crossings).
- Impacts on air quality, including fugitive dust, and noise would be largely limited to areas immediately around active construction. We searched for other projects and actions that overlap in time and are located within 0.25 mile of construction activities. Potential cumulative operational air emissions impacts from the Sandwich Compressor Station expansion were evaluated using a 50-kilometer radius. For potential operational noise impacts, a 1-mile radius from the Sandwich Compressor Station and 0.5-mile distance from the Hampshire and Tiffany East Meter Stations were utilized.

Groundwater and Wetlands

Modifications to the Hampshire Meter Station and replacement of Line 332 would temporarily affect 0.3 acre of wetlands. The Nicor modifications located adjacent to the Hampshire Meter Station would not impact wetlands. The residential subdivision does not appear to have affected wetlands or existing surface waters, however the construction of a new lake within the subdivision may have affected groundwater resources and altered surface water movement. Additionally, past, present and reasonably foreseeable future projects that have the potential to affect federally jurisdictional wetlands and waterbodies would have been or would be subject to review and approval under Section 404 of the Clean Water Act, as administered by the U.S. Army Corps of Engineers. Any permanent or long-term impacts to wetlands and waterbodies would require appropriate mitigation through the Section 404 approval.

Localized effects to groundwater resources may have resulted from establishment of the residential subdivision. Since groundwater and wetlands would not be significantly affected, cumulative impacts on water resources and wetlands in the area, resulting from the proposed Project, when combined with the other identified projects are not expected.

Vegetation and Wildlife

Vegetative communities at the Project facilities have been previously cleared. The extent and duration of cumulative impacts to wildlife habitat associated with construction of the proposed Project is minimal due to the minor quantities of forested land proposed to be cleared. Any required tree clearing would occur prior to April 1, 2018 during the dormant season to minimize direct impacts to protected bat species and migratory birds. Vegetation and wildlife impacts associated with the Nicor, Alliant Energy, and residential subdivision projects appear limited to existing facilities and easements, active agricultural land, and previously disturbed open land.

Construction activities would temporarily affect wildlife and would result in minimal habitat loss or conversion. Habitat use and wildlife behavioral patterns are anticipated to return to normal after construction. Therefore, due to the previously disturbed nature of the sites, and minimal impacts to forested areas, we do not anticipate a cumulative significant impact on vegetation and wildlife resources.

Land Use & Visual Resources

The modifications proposed to the Sandwich Compressor Station, Tiffany East Meter Station, and Kewaskum Compressor Station would occur within the existing facilities, resulting in no changes to land use. The Alliant Energy modifications would temporarily disturb approximately 2 acres of predominantly existing facilities and open lands. Of that total, approximately 1 acre would be converted from agricultural to industrial land use through construction of additional facilities adjacent to the Tiffany East Meter Station. The RECE may convert agricultural land to industrial use (land owned by Alliant Energy and leased for agricultural production). Modifications at the Hampshire Meter Station and Line 332 Lateral Replacement would result in conversion of 0.2 acre of forested upland, 0.2 acre residential and 0.07 acre of open land to industrial land use. Work associated with the Nicor modifications would not result in changes to land use, and the residential subdivision converted approximately 83 acres from agriculture to residential land use. Given the amount of agriculture land within the Project area, we do not anticipate significant cumulative impact on land use from the implementation of the Project. Based on reviewing the proposed Project and past, present and reasonably foreseeable future projects, cumulative impacts on land use in the area resulting from the proposed Project are anticipated to be minimized.

The modifications proposed to the Sandwich and Kewaskum Compressor Stations and the Tiffany East Meter Station would occur within the existing facility boundaries, resulting in minor permanent changes in the visual appearance of the facilities. Due to the existing agricultural landscapes and the limited number of viewpoints at these facilities, the visual impacts resulting from the minor changes at the existing facilities would be low. New permanent launcher and

receiver pads would be installed at the south and north ends of the Line 332 Lateral Replacement with visual screening proposed for the new receiver pad. The expansion of the Hampshire Meter Station would permanently alter the visual appearance of the facility; however, two sides of the meter station would remain forested. The residential subdivision located 2.8 miles west would not be visible by the same viewpoints as the proposed Project and therefore, no cumulative impact would occur. Based on the existing agricultural land use surrounding the Project, proposed visual screening for the receiver pad, and limited number of viewpoints, we anticipate minor visual cumulative impacts with construction and operation of the Project.

| Table 15 - Past, Present, and Reasonable Foreseeable Future Projects | | | | | |
|---|--|---|---|---|--|
| Project (location) | Type/Description | Distance from ANR Project Facility | Anticipated Impacts | Projected Permits/Authorizations | Schedule |
| Alliant Energy – Riverside Energy Center (Beloit, Rock County, Wisconsin) | Natural gas-fired combined-cycle generating facility. | 5 miles west of Tiffany East Meter Station | Approximately 82 acres of disturbance (Alliant owned lands), predominantly existing facilities and agriculture land use, no wetland/water impacts. Approximately half of the agriculture land appears prime farmland. | <ul style="list-style-type: none"> • USFWS Federal Threatened/Endangered Species Review; • PSCW Certificate of Public Convenience and Necessity; • WDNR Air Quality permitting; • WDNR State Threatened/Endangered Species Review; • WI SHPO Cultural and Archaeological Resources Review; and • WDNR Construction Stormwater Discharge Permit. | Construction began summer 2016; operation is anticipated in 2019 |
| Alliant Energy (Rock County, Wisconsin) | Natural gas pressure and flow control station and associated piping. | 200 feet east of Tiffany East Meter Station | Approximately 2.0 acre of disturbance, predominantly existing facilities and open land, no wetland/water impacts. Approximately 1.0 acre of land use conversion from agricultural to industrial; prime farmland. | <ul style="list-style-type: none"> • USFWS Federal Threatened/Endangered Species Review; • WDNR State Threatened/Endangered Species Review; • WI SHPO Cultural and Archaeological Resources Review; and | Construction began summer 2016; operation is anticipated in 2019 |

| Table 15 - Past, Present, and Reasonable Foreseeable Future Projects | | | | | |
|---|---|---|--|---|--|
| | | | | <ul style="list-style-type: none"> • WDNR Construction Stormwater Discharge Permit | |
| Nicor (Kane County, Illinois) | Modifications to existing 22-inch-diameter natural gas pipeline/facilities. | Adjacent to Hampshire Meter Station | Approximately 2.0 acres of disturbance, predominantly existing facilities and open land, no wetland/water impacts. | <ul style="list-style-type: none"> • USFWS Federal Threatened/Endangered Species Review; • IDNR State Threatened/Endangered Species Review; • IL SHPO Cultural and Archaeological Resources Review; • IEPA Air Quality permitting; and • Construction Stormwater Permit. | Construction begins 4 th quarter 2017; in-service November 2018 |
| Residential subdivision (Kane County, Illinois) | Single family home lots | 2.8 miles south of Hampshire Meter Station/Line 332 Lateral Replacement | Majority of grading/lot development appears completed in 2015. Conversion of approximately 83 acres of agriculture to residential; majority of acreage is prime farmland. No wetland/surface water impacts based on NWI/NHD review. Potential groundwater resource impacts with construction of new lake within subdivision. | <ul style="list-style-type: none"> • Construction Stormwater Permit | Construction is anticipate in 2011 ² |
| <p>USFWS=United States Fish & Wildlife Service; USACE=United States Army Corps of Engineers; PSCW=Public Service Commission of Wisconsin; WDNR=Wisconsin Department of Natural Resources; SHPO=State Historic Preservation Office; IDNR=Illinois Department of Natural Resources; IEPA=Illinois Environmental Protection Agency; NWI=National Wetland Inventory; NHD=National Hydrography Dataset</p> <p>¹ Due to the larger geographic scope of potential Air Quality-Operational impacts, the surrounding sources identified for analysis are not included in this Table. A table identifying those surrounding sources was within Resource Report 9 Appendix 9D and is provided for reference with this data response.</p> <p>² Temporal overlap with proposed ANR Project environmental resources is limited.</p> | | | | | |

Air and Noise Quality

Air Quality

Because construction activities are temporary, vary considerably from day to day as construction progresses and are typically limited to daylight-hours, it is anticipated that cumulative impacts related to construction air emissions would be negligible.

Potential cumulative operational air emissions impacts from the Sandwich Compressor Station expansion were evaluated using a 50-kilometer radius. A review of state regulatory agency databases (IEPA, WDNR, and USEPA) yielded an inventory of current, proposed, and reasonably foreseeable air emission sources in the Sandwich Compressor Station's air shed. The proposed Sandwich Compressor Station's expansion operation, in conjunction with the shutdown and removal of existing emission units at the facility would result in a net decrease in criteria pollutants and not result in a negative cumulative air quality impact for the county and air shed.

ANR provided the air emissions cumulative impacts data in accordance with the resources and identified impacts for jurisdictional natural gas projects, as well as non-jurisdictional natural gas projects and unrelated projects. The scope of analysis for potential cumulative impacts for air emissions related impacts is described below.

Potential cumulative construction air emissions impact of jurisdictional and other projects from nearby pipeline or aboveground facilities were reviewed and no other jurisdictional projects were identified near the Sandwich Compressor Station, Hampshire Meter Station and Tiffany East Meter Station. The local distribution companies (LDC's) (i.e., Nicor and Alliant) have existing custody transfer facilities at or directly adjacent to the ANR Hampshire and Tiffany East Meter Stations. Because construction activities are temporary, vary considerably from day to day as construction progresses, it is anticipated that cumulative impacts related to construction air emissions would be negligible.

Potential cumulative operational air emissions impacts from the proposed Project were evaluated as quantitative impacts to each facility in the air shed. There is the potential for cumulative operational air emissions impacts related to these same facilities. However, the operational emissions attributed with these facilities result from the operation of piping components and odorant process. These air emissions sources, consisting of fugitive components, are considered de-minimis and insignificant per the IEPA and/or WDNR air permitting regulations.

Potential cumulative operational air emissions impact from the Sandwich Compressor station expansion was evaluated using a 50-kilometer radius. A review of state regulatory agency databases (IEPA, WDNR, and USEPA) yielded an inventory of current, proposed, and reasonably foreseeable air emission sources in the Sandwich Compressor Station's air shed. The proposed Sandwich Compressor Station's operation, in conjunction with the removal of emission units at the facility would not result in a negative cumulative air quality impact for the county and air shed.

Noise

Construction related noise associated with the projects listed in table 15 would similarly be limited in duration, non-temporal with the Project and with the exception of the Alliant Energy project, distant from the Project. Consequently, no cumulative effects would occur.

For potential construction noise impacts, a 0.25-mile distance from pipeline or aboveground facilities was utilized to evaluate potential cumulative noise impacts, for jurisdictional and other projects. There are no other jurisdictional projects within 0.25 mile of the Sandwich Compressor Station, Hampshire Meter Station and Tiffany East Meter Station. The LDC's (i.e., Nicor and Alliant) have existing custody transfer facilities at or directly adjacent to the ANR Hampshire and Tiffany East Meter Stations. Because construction activities are temporary, vary considerably from day to day as construction progresses and are typically limited to daylight-hours, it is anticipated that cumulative impacts related to construction noise would be negligible.

For potential operational noise impacts, a 1-mile radius from the Sandwich Compressor Station and 0.5-mile distance from the Hampshire and Tiffany East Meter Stations were utilized. There are no other jurisdictional projects within 1 mile of the Sandwich Compressor Station, and within 0.5 miles of the Hampshire and Tiffany East Meter Stations. There is the potential for cumulative operational noise impacts related to Nicor and/or Alliant facilities. However, because the ANR Hampshire and Tiffany East Meter Stations include noise control measures and are to be designed in accordance with FERC regulations, it is anticipated that any negative noise impacts reported during operation of the local LDC's would ultimately be addressed by the Illinois Commerce Commission and/or Wisconsin Public Service Commission or applicable state air permitting agencies.

Conclusions

The cumulative impacts review as part of the NEPA process evaluates the incremental effects of a proposed project and multiple similar projects in the same region at the same time, or in a similar timeframe, to determine whether the additive effect of those projects would result in significant deleterious impacts to the regional environment.

Each of the identified projects may result in temporary and generally minor effects during construction and would be designed to avoid or minimize impacts to wetlands, waterbodies, protected and special-status species, and other sensitive resources. Additionally, significant unavoidable impacts to sensitive resources resulting from these projects would be mitigated, and mitigation generally leads to avoidance or minimization of cumulative impacts. The proposed Project would have a minimal impact on the resources discussed. ANR would minimize impacts by utilizing previous cleared/developed land whenever possible and all construction and operating Project areas would be within existing disturbed areas.

In addition, ANR would implement measures consistent with the FERC's Plan and Procedures to minimize environmental impacts to resources. As discussed previously, the Project and other projects in the area would have or have had minimal cumulative impacts

because the other projects are predominately outside the cumulative impact area and those projects in the area are likely to occur in areas that are already developed. As a result, no significant cumulative impacts are anticipated when combining the proposed Project with other identified projects.

C. ALTERNATIVES

In accordance with NEPA, we evaluated alternatives to ANR's proposed action to determine whether they would be preferable to constructing the Project as proposed. Our evaluation criteria for selecting potentially preferable alternatives are:

- technical and economic feasibility and practicality;
- significant environmental advantage over the proposed action; and
- ability to meet the objectives of the proposed action.

Our evaluation of alternatives is based on project-specific information provided by the applicant, publicly available information, our consultations with federal and state resource agencies, and our expertise and experience regarding the siting, construction, and operation of the proposed Project and their potential impact on the environment.

1.0 No-Action Alternative

Under the no-action alternative, modifications to the infrastructure at ANR's existing Sandwich Compressor Station, Hampshire Meter Station and Line 332 Lateral, Tiffany East Meter Station, and Kewaskum Compressor Station would not occur. Accordingly, the no-action alternative would avoid the environmental impacts associated with construction and operation of the proposed Project. However, by not constructing the proposed Project, ANR's ability to provide the necessary transportation service required to meet market demand would be limited. Other natural gas transmission companies would most likely be required to increase their capacity and construct new facilities to meet the demand for the additional capacity. Such actions would likely result in the transfer of impacts from one location to another, but would not eliminate or reduce impacts altogether.

If existing natural gas transmission systems are not enhanced or expanded, energy shortages in times of peak demand may result. Existing natural gas delivery systems are readily expanded to meet increased demand, in many cases with minimal impact on the environment. The no-action alternative was not found to be a feasible alternative since it did not satisfy the purpose and need for the Project. Therefore, the no-action alternative would not offer a significant environmental advantage over the proposed Project.

2.0 System Alternatives

System alternatives to the proposed Project include making use of existing, modified, or already proposed natural gas pipeline systems to meet the objectives of the proposed Project. To be considered viable, such alternatives must provide an equivalent amount of transportation capacity to the customers in the area. The proposed Project includes the modification of existing facilities and expanding the capacity of an existing pipeline lateral with a larger diameter pipe. Existing natural gas systems with the capability to provide transportation service required by the market demand in the region would require some modifications or additions to other existing pipeline systems to increase their respective capability, or another entirely new system may need to

be constructed in order to satisfy the purpose and need for the Project. These modifications or additions would result in environmental impacts that would be similar to, or greater in scope and scale than, those associated with the proposed Project. Therefore, we conclude that there are no viable system alternatives for the Project that would provide a significant environmental advantage over the Project.

3.0 Route Alternatives

We evaluated the locations of the proposed lateral replacement to determine whether environmental impacts would be reduced or mitigated by following a different route or by the installation of a pipeline loop along the easement. ANR's proposed 0.54 mile pipeline lateral replacement represents the most direct and least disruptive alternative to increase flow capacity from the Hampshire Meter Station. Therefore, we did not identify a different route. Installation of a pipeline loop or use of another route would result in acquiring additional easements and temporary workspaces. Therefore, we determined that utilizing a lift and lay technique to replace the existing pipeline with a larger diameter pipe would result in the least environmental impact and looping would not offer a significant environmental advantage over the proposal.

4.0 Site Alternatives

We evaluated the locations of the aboveground facilities to determine whether environmental impacts would be reduced or mitigated by the use of the alternative facility locations. No new major aboveground facilities are proposed as part of the Project. The Project consists of additions, modifications, and improvements to five existing facilities on ANR's pipeline system. All new permanent facility upgrades would be installed on existing ANR fee-owned property. Due to the limited proposed impacts from the modification of the existing aboveground facilities, utilizing alternative sites would increase the overall impacts to the environment, as well as landowners. Consequently, we determined that construction of new compressor and meter stations facilities would not provide an environmental advantage over the proposed modifications at the existing facilities.

In conclusion, we have determined that the proposed Project is the preferred alternative to meet the Project objectives.

D. STAFF CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis presented in this EA, we conclude that if ANR constructs, operates, replaces, and abandons the proposed facilities in accordance with its application and supplements, and our recommended mitigation measures, approval of this proposal would not constitute a major federal action significantly affecting the quality of the human environment. We recommend that the Commission Order contain a finding of no significant impact and include the mitigation measures listed below as conditions to any Certificate the Commission may issue.

1. ANR shall follow the abandonment and construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests) and as identified in the EA, unless modified by the Order. ANR must:
 - a. request any modification to these procedures, measures, or conditions in a filing with the Secretary;
 - b. justify each modification relative to site-specific conditions;
 - c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and
 - d. receive approval in writing from the Director of the Office of Energy Projects (OEP) **before using that modification.**
2. The Director of OEP has delegated authority to take whatever steps are necessary to ensure the protection of all environmental resources during construction of the Project and activities associated with abandonment. This authority shall allow:
 - a. the modification of conditions of the Order; and
 - b. the design and implementation of any additional measures deemed necessary (including stop-work authority) to assure continued compliance with the intent of the environmental conditions as well as the avoidance or mitigation of adverse environmental impact resulting from Project construction and operation.
3. **Prior to any construction**, ANR shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, EIs, and contractor personnel will be informed of the EI's authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs **before** becoming involved with construction and restoration activities.
4. The authorized facility locations shall be as shown in the EA, as supplemented by filed alignment sheets. **As soon as they are available, and before the start of construction**, ANR shall file with the Secretary any revised detailed survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for all facilities approved by the Order. All requests for modifications of environmental conditions of the Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

ANR's exercise of eminent domain authority granted under NGA section 7(h) in any condemnation proceedings related to the Order must be consistent with these authorized facilities and locations. ANR's right of eminent domain granted under NGA section 7(h) does not authorize it to increase the size of its natural gas pipeline to accommodate future needs or to acquire a right-of-way for a pipeline to transport a commodity other than natural gas.

5. ANR shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments or facility relocations, and staging areas, pipe storage yards, new access roads, and other areas that would be used or disturbed and have not been previously identified in filings with the Secretary. Approval for each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use/cover type, documentation of landowner approval, whether any cultural resources or federally listed threatened or endangered species would be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps/sheets/aerial photographs. Each area must be approved in writing by the Director of OEP **before construction in or near that area.**

This requirement does not apply to extra workspace allowed by the *Upland Erosion Control, Revegetation, and Maintenance Plan* and/or minor field realignments per landowner needs and requirements which do not affect other landowners or sensitive environmental areas such as wetlands.

Examples of alterations requiring approval include all route realignments and facility location changes resulting from:

- a. implementation of cultural resources mitigation measures;
 - b. implementation of endangered, threatened, or special concern species mitigation measures;
 - c. recommendations by state regulatory authorities; and
 - d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.
6. **Within 60 days of the acceptance of the Certificate and before abandonment by removal or construction begins**, ANR shall file an Implementation Plan with the Secretary for review and written approval by the Director of OEP. ANR must file revisions to the plan as schedules change. The plan shall identify:
 - a. how ANR will implement the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests), identified in the EA, and required by the Order;
 - b. how ANR will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to onsite construction and inspection personnel;

- c. the number of EIs assigned, and how the company will ensure that sufficient personnel are available to implement the environmental mitigation;
- d. company personnel, including EIs and contractors, who will receive copies of the appropriate material;
- e. the location and dates of the environmental compliance training and instructions ANR will give to all personnel involved with construction and restoration (initial and refresher training as the Project progresses and personnel change);
- f. the company personnel (if known) and specific portion of ANR's organization having responsibility for compliance;
- g. the procedures (including use of contract penalties) ANR will follow if noncompliance occurs; and
- h. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:
 - (1) the completion of all required surveys and reports;
 - (2) the environmental compliance training of onsite personnel;
 - (3) the start of construction; and
 - (4) the start and completion of restoration.

7. ANR shall employ at least one EI for the Project. The EI shall be:

- a. responsible for monitoring and ensuring compliance with all mitigation measures required by the Order and other grants, permits, certificates, or other authorizing documents;
- b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract (see condition 6 above) and any other authorizing document;
- c. empowered to order correction of acts that violate the environmental conditions of the Order, and any other authorizing document;
- d. a full-time position, separate from all other activity inspectors;
- e. responsible for documenting compliance with the environmental conditions of the Order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies; and
- f. responsible for maintaining status reports.

8. **Beginning with the filing of its Implementation Plan**, ANR shall file updated status reports with the Secretary on a **monthly basis** until all abandonment, construction and restoration activities are complete. On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:

- a. an update on ANR's efforts to obtain the necessary federal authorizations;
- b. the construction status of the Project, work planned for the following reporting period, and any schedule changes for waterbody crossings or work in other environmentally-sensitive areas;

- c. a listing of all problems encountered and each instance of noncompliance observed by the EI during the reporting period (both for the conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);
 - d. a description of the corrective actions implemented in response to all instances of noncompliance, and their cost;
 - e. the effectiveness of all corrective actions implemented;
 - f. a description of any landowner/resident complaints which may relate to compliance with the requirements of the Order, and the measures taken to satisfy their concerns; and
 - g. copies of any correspondence received by ANR from other federal, state, or local permitting agencies concerning instances of noncompliance, and ANR's response.
9. **Prior to receiving written authorization from the Director of OEP to commence construction of any Project facilities**, ANR shall file with the Secretary documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof).
10. ANR must receive written authorization from the Director of OEP **before placing the Project into service**. Such authorization will only be granted following a determination that rehabilitation and restoration of the right-of-way and other areas affected by the Project are proceeding satisfactorily.
11. **Within 30 days of placing the authorized facilities in service**, ANR shall file an affirmative statement with the Secretary, certified by a senior company official:
- a. that the facilities have been constructed and/or abandoned in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or
 - b. identifying which of the Certificate conditions ANR has complied with or will comply with. This statement shall also identify any areas affected by the Project where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.
12. ANR shall file a noise survey with the Secretary **no later than 60 days** after placing the additional compressor unit at the existing Sandwich Compressor Station into service. If a full power load condition noise survey is not possible, ANR shall file an interim survey at the maximum possible power load **within 60 days** of placing the additional compressor unit at the Sandwich Compressor Station in service and file the full load survey **within 6 months**. If the noise attributable to the operation of the additional compressor unit at maximum flow conditions exceeds 55 dBA Ldn at any nearby NSAs, ANR shall file a report on what changes are needed and shall install the additional noise controls to meet the level **within 1 year** of the in-service date. ANR shall confirm compliance with the above requirement by filing a second full power noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls.

13. ANR shall file a noise survey with the Secretary **no later than 60 days** after placing the modified Tiffany East Meter Station into service. If a full power load condition noise survey is not possible, ANR shall file an interim survey at the maximum possible power load **within 60 days** of placing the modified Tiffany East Meter Station in service and file the full load survey **within 6 months**. If the noise attributable to the operation of the modified meter station at full or interim power load conditions exceeds 55 dBA L_{dn} at any nearby NSAs, ANR shall file a report on what changes are needed and shall install the additional noise controls to meet the level **within 1 year** of the in-service date. ANR shall confirm compliance with the above requirement by filing a second full power noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls.

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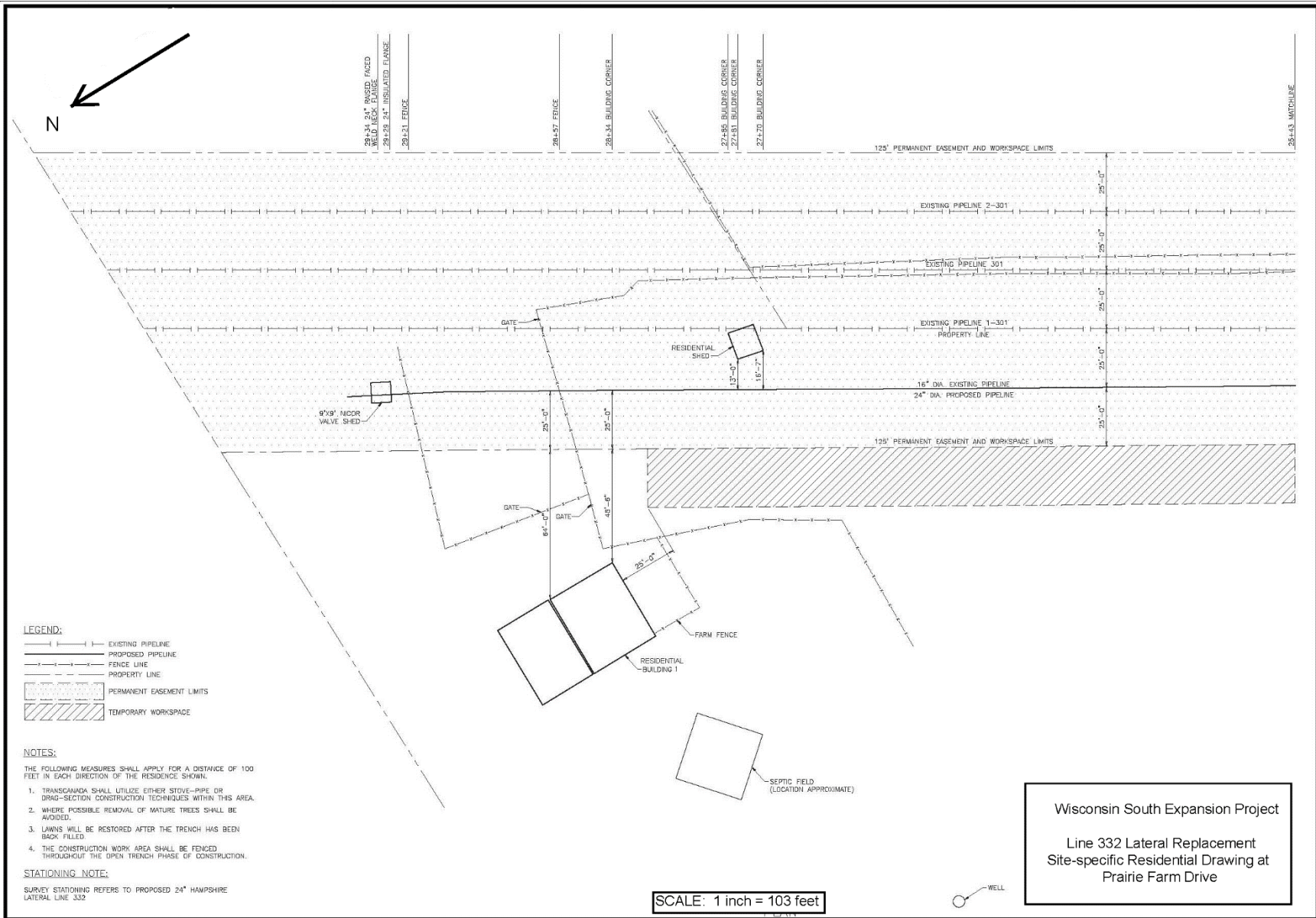
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APPENDIX A

SITE SPECIFIC CONSTRUCTION PLAN



LEGEND:

- |—|— EXISTING PIPELINE
- |—|— PROPOSED PIPELINE
- - - - - FENCE LINE
- - - - - PROPERTY LINE
- [Dotted Pattern] PERMANENT EASEMENT LIMITS
- [Hatched Pattern] TEMPORARY WORKSPACE

NOTES:

THE FOLLOWING MEASURES SHALL APPLY FOR A DISTANCE OF 100 FEET IN EACH DIRECTION OF THE RESIDENCE SHOWN.

1. TRANSCANADA SHALL UTILIZE EITHER STOVE-PIPE OR DRAG-SECTION CONSTRUCTION TECHNIQUES WITHIN THIS AREA.
2. WHERE POSSIBLE REMOVAL OF MATURE TREES SHALL BE AVOIDED.
3. LAWNS WILL BE RESTORED AFTER THE TRENCH HAS BEEN BACK FILLED.
4. THE CONSTRUCTION WORK AREA SHALL BE FENCED THROUGHOUT THE OPEN TRENCH PHASE OF CONSTRUCTION.

STATIONING NOTE:

SURVEY STATIONING REFERS TO PROPOSED 24" HAMPSHIRE LATERAL LINE 332

SCALE: 1 inch = 103 feet



Wisconsin South Expansion Project
 Line 332 Lateral Replacement
 Site-specific Residential Drawing at
 Prairie Farm Drive