

December 2022 version

Environmental Assessment Worksheet

This most recent Environmental Assessment Worksheet (EAW) form and guidance documents are available at the Environmental Quality Board's website at: <https://www.eqb.state.mn.us/> The EAW form provides information about a project that may have the potential for significant environmental effects. Guidance documents provide additional detail and links to resources for completing the EAW form.

Cumulative potential effects can either be addressed under each applicable EAW Item or can be addressed collectively under EAW Item 21.

Note to reviewers: Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the EQB Monitor. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

1. Project title: Farmington Compressor Station Improvements Project

2. Proposer: Northern Natural Gas

Contact Person: Kelly Henry
Title: Division Environmental Specialist
Address: 1120 Centre Pointe Drive, Suite 400
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3. RGU: Department of Natural Resources

Contact Person: Michaela Leach
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4. Reason for EAW Preparation: (check one)

Required:

- EIS Scoping
 Mandatory EAW

Discretionary:

- Citizen Petition
 RGU Discretion
 Proposer initiated

If EAW or EIS is mandatory give EQB rule category subpart number(s) and name(s):

Minn. R. 4410.4300, Subpart 24 (A): For a new appropriation for commercial or industrial purposes of either surface water or ground water averaging 30,000,000 gallons per month; or a new appropriation of either ground water or surface water for irrigation of 540 acres or more in one continuous parcel from one source of water, the DNR is the RGU.

5. Project Location

- County: Dakota
- City/Township: Farmington
- PLS Location ($\frac{1}{4}$, $\frac{1}{4}$, Section, Township, Range): N1/2, NE $\frac{1}{4}$, Section 36, Township 114N, Range 20W
- Watershed (81 major watershed scale): Mississippi River—Lake Pepin, Vermillion River
- GPS Coordinates: 44.643N, -93.162E
- Tax Parcel Number: 140360008019

At a minimum attach each of the following to the EAW:

- County map showing the general location of the project;
- U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries (photocopy acceptable); and
- Site plans showing all significant project and natural features. Pre-construction site plan and post-construction site plan.
- List of data sources, models, and other resources (from the Item-by-Item Guidance: Climate Adaptation and Resilience or other) used for information about current Minnesota climate trends and how climate change is anticipated to affect the general location of the project during the life of the project (as detailed below in item 7. Climate Adaptation and Resilience).

Figures and Attachments

- Figure 1: Project Topography Map
- Figure 2: Project Location Map
- Figure 3: Project Details Map
- Figure 4: Land Cover Map
- Figure 5: Existing Land Use Map
- Figure 6: Parks, Trails, and other Recreational Areas Map
- Figure 7: 2040 Future Land Use Map
- Figure 8: Zoning Map
- Figure 9: Farmland and Soils Classification Map
- Figure 10: Water Resources Map
- Figure 11: Discharge Sites Map
- Figure 12: County Well Index Map
- Figure 13: MPCA Potentially Contaminated Sites
- Attachment A: FEMA FIRMette
- Attachment B: MDH Well Log Reports
- Attachment C: Phase I ESA
- Attachment D: DNR NHIS and USFWS IPaC
- Attachment E: SHPO Query
- Attachment F: GHG Calculations
- Attachments G-H: Dewatering Plan and Analysis

6. Project Description

- a. Provide the brief project summary to be published in the EQB Monitor, (approximately 50 words).

The Farmington Compressor Station Improvements project proposes several phased maintenance and equipment improvements at the existing facility located at 4685 212th Street West in Farmington, Dakota County, Minnesota. Project construction would include building removals, equipment maintenance and replacement, and other improvements. The proposed improvements would be constructed in phases over the next ten years, beginning in 2023.

- b. Give a complete description of the proposed project and related new construction, including infrastructure needs. If the project is an expansion include a description of the existing facility. Emphasize: 1) construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes, 2) modifications to existing equipment or industrial processes, 3) significant demolition, removal or remodeling of existing structures, and 4) timing and duration of construction activities.

Background

The Farmington Compressor Station (the Facility) is located at 4685 212th Street West/ Country State Aid Highway (CSAH) 50 in the City of Farmington, Dakota County, Minnesota in Section 36, Township 114 North, Range 20 West. The site consists of Parcel ID No. 14-03600-08-019 and is owned by Northern Natural Gas (the Proposer). The site encompasses about 70 acres and is bound by 212th Street West to the south, wetlands agricultural land and substation facility to the north, Akin Road to the east, and industrial development to the west. Figure 1 (Project Location USGS Topography) and Figure 2 (Project Location Aerial Map) illustrate the project location.

Operations at the Facility consist of pressurizing natural gas to facilitate its transmission through the pipeline system. The Facility has been in operation since 1961. The Facility consists of a natural gas-fired stationary combustion turbine to drive the pipeline compressors and other operational equipment. In 2021, the five natural-gas reciprocating engines were decommissioned and replaced with three new natural gas-fired turbines. Additionally, a diesel-fired emergency engine was decommissioned and replaced with a natural gas-fired emergency engine during the same period.

Northern Natural Gas proposes to conduct seven station improvement actions (the Project) over the course of ten years beginning in 2023, with each construction season running from May through August. The Proposer anticipates that each proposed action would require dewatering during construction to ensure safe conditions during construction activities. It is assumed that these individual projects would be considered phased actions, which is defined pursuant to Minnesota Rules 4410.0200, Subpart 60 as: “two or more projects to be undertaken by the same proposer that a RGU determines:

- A. Will have environmental effects on the same geographic area; and
- B. Are substantially certain to be undertaken sequentially over a limited period of time.”

The following paragraphs summarize each of the proposed projects. Figure 3 identifies the building locations associated with these projects and the temporary disturbance boundary. The temporary disturbance boundary associated with the proposed projects is primarily limited to the southern portion of the site that has been previously disturbed. The individual projects included in this EAW are presented chronologically in the order in which the Proposer anticipates being constructed.

Farmington Station Gas Cooler Addition (2023)

In 2021, gas turbine unit 8 (Taurus 60), unit 9 (Centaur 40), and unit 10 (Saturn 20) were added to existing unit 7 (Taurus 60) and unit 6 (Electric/Ariel). The original reciprocal engine units 1 through 5 were decommissioned. During final commissioning of the new turbine units, it was determined that there was a shortage of gas cooling during high horsepower recycling activities. A bypass valve within the cooling process has been employed as a temporary solution to reduce pressure differential across the existing new cooler. The purpose of this project is to provide adequate gas cooling to accommodate summer power plant loads that may require high recycle during daily off-peak periods.

The Project proposes to install a new station gas cooler fin/fan section adjacent to the existing gas cooler section. Installation would include mechanical cooling assembly with interconnecting piping/isolation valves, cooling fans, all related civil supports and foundations, electrical motor control center (MCC)/variable-frequency drive (VFD) components and wiring, and system integration. The proposed gas cooler would be sized similar to the existing cooler system to allow for ease of interconnecting the inlet/outlet head assemblies. The existing header piping end caps would be removed for interconnection.

Mainline Odorizer Replacement (2023)

The Project would include replacing the odorizer equipment that odorizes the M500A and M451B at the Farmington compressor station. The Project would replace the existing failing odorizer inside the Farmington compressor station yard. The existing odorizer building is failing and multiple odorant call-outs occur yearly. New insertion meters would be installed at the existing locations. Existing odorant tanks would be reused with new steel sleeves installed on the support saddles for above grade cathodic inspections.

M451B Farmington to Portland Mainline Replacement (2023)

This project would replace portions of the M451B Farmington to Portland Mainline. The estimate is designed to replace portions of pipe that operate at over 50 percent specified minimum yield strength (SMYS) starting at Milepost 0.023 and ending at Milepost 0.040.

Compressor Building #1 Removal (2025)

This project would include removal of Compressor Building No. 1, Auxiliary Building 1, and Control Room 1. The Project may include removing the basement or leaving the basement in-place, which would be determined as the project design develops. The existing connection to the city sewer would be abandoned. All existing piping associated with Building No. 1 would be removed. It is estimated that the construction would require approximately three to four months to complete.

Farmington Compressor Drive through Parking for Building #2 (2028)

The existing parking stall in Building No. 2 is located between two buildings and experience vehicle queuing as vehicle enter and exit the parking stall. To prevent traffic backups, Northern would install an overhead door. The Installation would require removing the existing exterior steel panels and wood framing.

Farmington C-Line Chromatograph Insertion Sampling Probe Replacement (2030)

In 2019, the C-line chromatograph insertion sampling probe at the Facility became bent-over inside the 30-inch pipe resulting from mainline piping maintenance activities. Attempts to extract the probe have been unsuccessful. As a result, the two-inch pipeline tap servicing the sampling probe on the 30-inch C-line cannot be closed because of the probe obstruction. It is necessary to remove and replace the existing damaged sampling probe given that in the event that the sampling unit assembly were to leak or be damaged requiring removal, there is currently no means to close the two-inch tap valve.

The C-Line Chromatograph Insertion Sampling Probe Replacement Project proposes to install a new two-inch full open tap assembly on the Farmington C-line close to the existing tap and install a new chromatograph insertion sampling probe hardware. Construction activities would primarily involve vacuum truck excavating. It is anticipated that a trench box and dewatering would likely be required during construction. An approximately 900-foot section of the 30-inch pipe would be isolated during construction to allow for the removal of the existing chromatograph insertion probe. If needed, the existing two-inch tap valve assembly would also be removed or potentially re-used. Construction is planned for 2030.

Farmington Unit 9 Electronic Guide Vane and Bleed Valve Actuators Update (2031)

Northern proposes to install new electronic guide vane and bleed valve actuators on Unit 9 (Solar Centuar 40) the Farmington Compressor Station to improve reliability and efficiency. The Project would also reduce hydraulic oil hardware exposure for maintenance and reduce the potential for leaks to occur. Other project components include installation of a new exhaust collector to accommodate the larger bleed hose assembly, skid and to/from skid control/power circuits, battery backup considerations, and supports. The existing hydraulic guide vane/bleed valve actuators and related tubing/hoses would be removed.

c. Project Magnitude

Table 1. Project Magnitude

Description	Number
Total Project Acreage	Approximately 7 acres
Linear project length	N/A
Number and type of residential units	N/A
Residential building area (in square	N/A
Commercial building area (in square	N/A
Industrial building area (in square	N/A
Institutional building area (in square	N/A
Other uses – specify (in square feet)	N/A
Structure height(s)	N/A

d. Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.

The purpose of the Project is to construct several maintenance and facility improvements at the existing Facility.

e. Are future stages of this development including development on any other property planned or likely to happen? Yes No

If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.

f. Is this project a subsequent stage of an earlier project? Yes No

If yes, briefly describe the past development, timeline and any past environmental review.

The Facility has been in operation since 1961. Several maintenance and equipment improvements have occurred over the past several years. In the past three years, improvements constructed at the Facility have included modifying existing pipeline facilities, constructing new compressor and auxiliary buildings with concrete foundations, and extending plant roads from Akin Road and 212th St. West.

7. Climate adaptation and resilience:

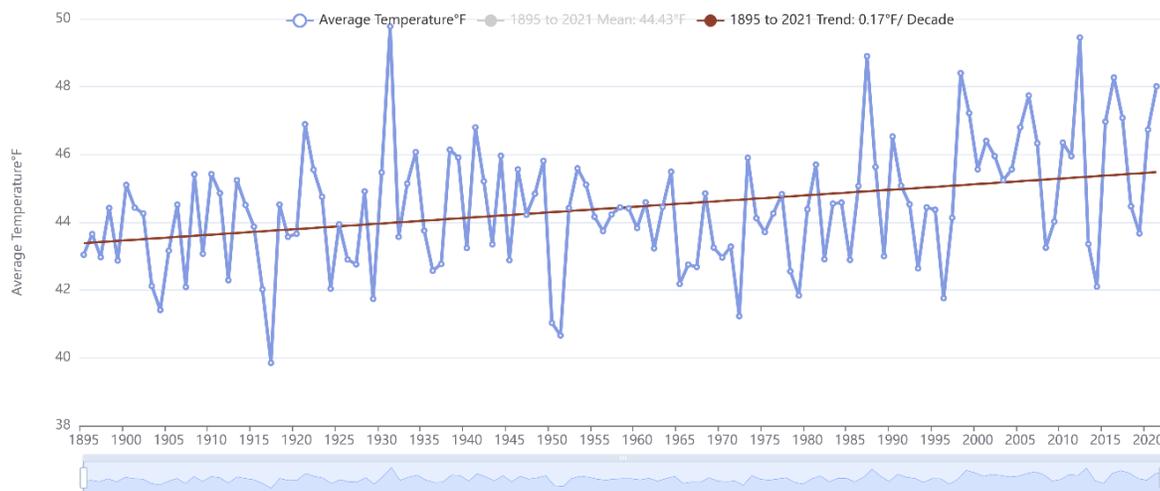
- a. Describe the climate trends in the general location of the project (see guidance: *Climate Adaptation and Resilience*) and how climate change is anticipated to affect that location during the life of the project.

In general, Minnesota is expected to experience an increase in temperature, precipitation, and more frequent extreme precipitation events resulting from climate change. In Minnesota, annual average temperatures have risen two degrees over the past century and up to three degrees in the northern part of the state. The highest average temperature increases have occurred during the winter. Since 1895, temperatures during the winter have increased at a rate two to three times higher than during the summer. Winter warming rates have risen more sharply in recent decades.¹ Current climate warming trends, most notably during the winter, are anticipated to continue.²

Heavy rain events have become more frequent in Minnesota and more intense. From 1973 to 2020, Minnesota experienced 17 mega-rain events³ with a notable increase since 2000. Of these 17 events, three occurred in the 1970s, two in the 1980s, one in the 1990s, six mega-rain events occurred in the 2000s, four in the 2010s, and one in 2020. Thus, in the past 21 years (2000 to 2020), almost two times as many mega rain events occurred compared to the prior 27 years (1973 to 1999).⁴ The following paragraphs describe the historical and projected climate trends for the Dakota County, in which the Project is located.

Climate trends for the county parallel the overall statewide trends, indicating Minnesota's climate is becoming warmer and wetter. Exhibits 1 and 2 illustrate historical average annual temperature and precipitation trends for the County from 1895 to 2021. During this period, the County experienced an average annual temperature increase of 0.17 degrees Fahrenheit (°F) per decade and average annual precipitation increase of 0.44 inches per decade.

Exhibit1. Historical Annual Average Temperature in Dakota County (1895-2021)



¹ [MDNR. Climate Trends.](#)

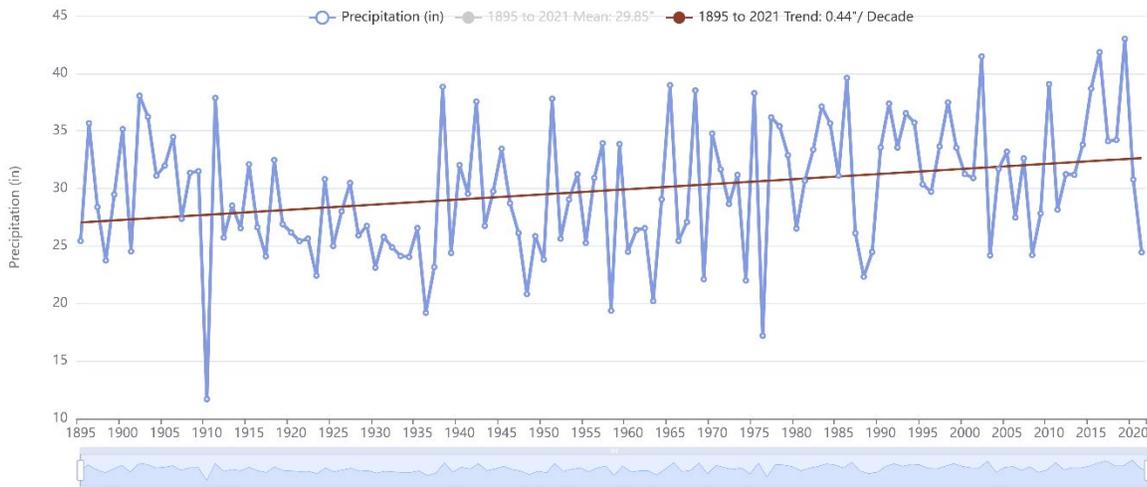
² [MnDOT. Minnesota Go Climate Change Report. 2021.](#)

³ Mega-rain events are defined as events in which six inches of rain covers more than 1,000 square miles and the core of the event tops eight inches.

⁴ [Minnesota Department of Natural Resources. Historic Mega-Rain Events in Minnesota.](#)

Source: Minnesota Department of Natural Resources.

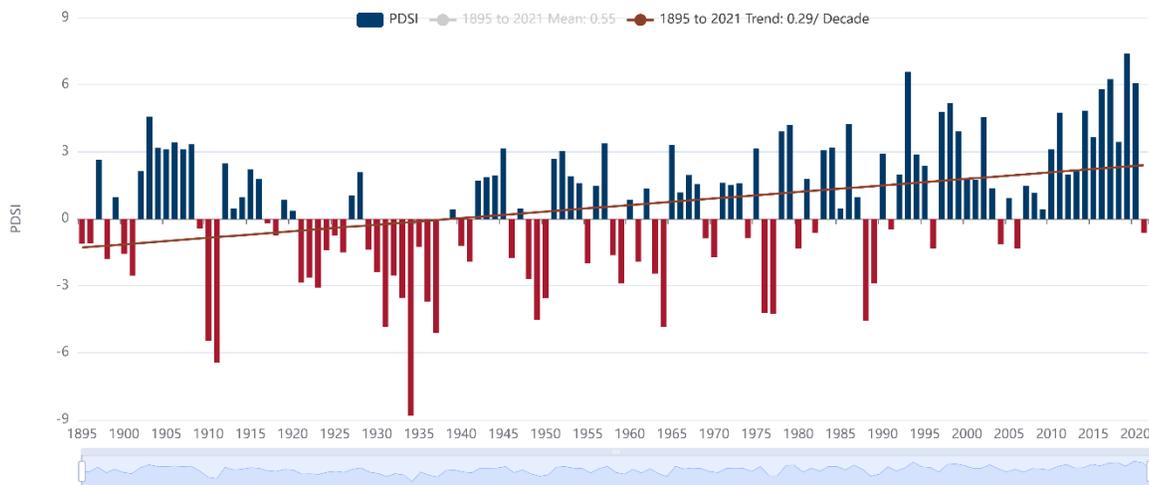
Exhibit 2. Historical Annual Average Precipitation in Dakota County (1895-2021)



Source: Minnesota Department of Natural Resources.

The Palmer Drought Severity Index (PDSI) utilizes temperature and precipitation data to estimate relative soil moisture conditions and serve as an indicator of long-term drought conditions. The index ranges from -5 to +5 indicating dry and wet conditions, respectively. PDSI values are reported monthly. Exhibit 3 shows historic PDSI values for the month of August from 1895 to 2021 for the County, which indicates an increase of 0.29 per decade. Generally, the PSDI historical data indicates that the region is experiencing a wetter climate.

Exhibit 3. Historical PDSI Values for Dakota County (1895 – 2021)



Projected climate trends indicate that temperatures within the county will continue to increase. Exhibit 4 illustrates projected temperatures for the county. Several climate models are shown in the projected temperature analysis. The model mean, shown in blue, illustrates the average of all models included in the analysis. Exhibit 4 shows the modeled present condition, mid-century (2040-2059) at Representative Concentration Pathway (RCP) 4.5, late-century (2080-2099) at RCP 4.5, and late-century (2080-2099) at RCP 8.5. RCP is a greenhouse gas concentration scenario used by the Intergovernmental Panel on Climate Change in the fifth assessment report. RCP 4.5 is an intermediate scenario in which emissions decline after peaking around 2040 and RCP 8.5 represents a worst-case scenario in which emissions continue rising through the 21st century.

Under the RCP 4.5 scenario, the annual temperature is anticipated to increase within the county from a modeled present mean of 45.4°F (1980-1999) to a mid-century (2040-2059) model mean of 49.0°F and a late-century (2080-2099) model mean of 51.4°F. Under the RCP 8.5 worst-case scenario, the county would experience a late-century (2080-2099) model mean temperature of 55.1°F.

Exhibit 4. Projected Temperatures for Dakota County

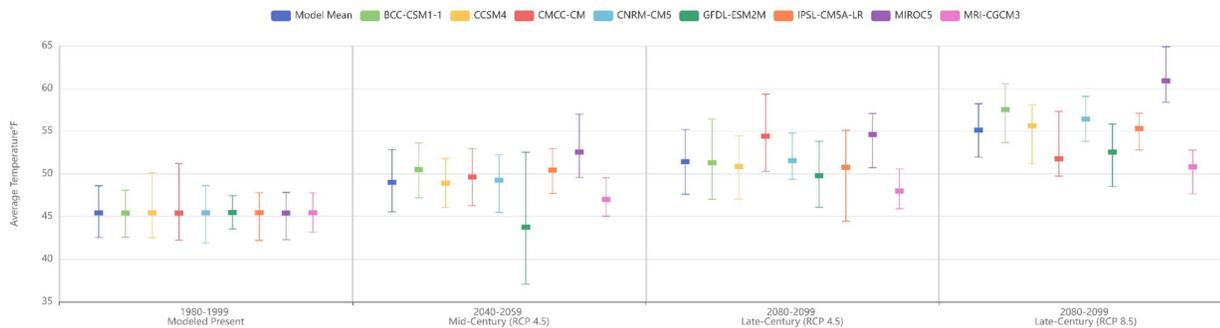
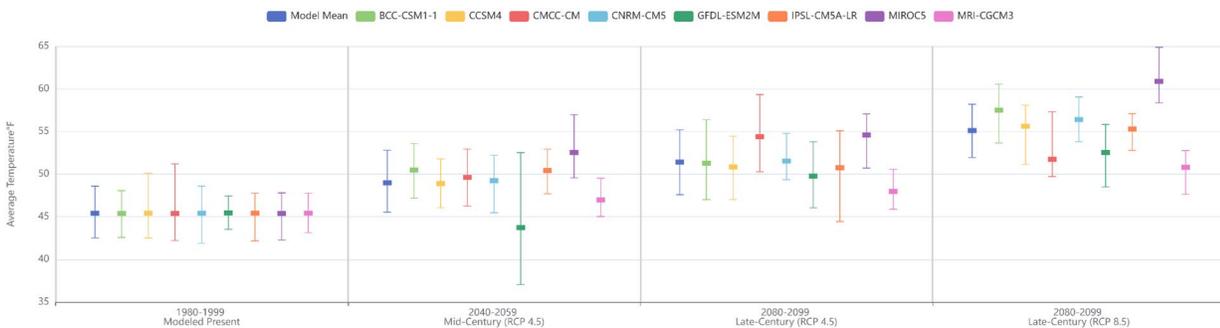


Exhibit 5 presents projected average annual precipitation for Dakota County. Under the RCP 4.5 scenario, the annual precipitation is anticipated to increase within the County from a modeled present mean of 32.0 inches (1980-1999) to a mid-century (2040-2059) model mean of 32.3 inches and a late-century (2080-2099) model mean of 32.6 inches. Under the RCP 8.5 worst-case scenario, the County would experience a late-century (2080-2099) model mean precipitation of 35.3 inches. In comparison to the modeled present mean (1980-1999), the late century (2080-2099) modeled mean annual precipitation would increase by approximately 1.8 percent under the RCP 4.5 scenario and increase by approximately 10.2 percent under the RCP 8.5 scenario.

Exhibit 5. Projected Precipitation for Dakota County



Projected Storm Intensification

The U.S. Environmental Protection Agency’s (EPA) Climate Resilience Evaluation and Awareness Tool (CREAT)⁵ was reviewed to evaluate projected storm intensification for the local Area which includes portions of Dakota and Hennepin Counties. The future conditions evaluated in the CREATE tool include a “Stormy” Scenario, the highest intensity models, and “Not as Stormy” Scenario, the lowest intensity models, for two time periods, 2035 and 2060. Based on the CREATE tool, the 100-year storm intensity under the Not as Stormy Scenario is projected

⁵ U.S. EPA. CREATE Climate Scenarios Projection Map. Accessed January 2023.

to increase 2.9 percent in 2035 and 5.6 percent in 2060 for the local area. The 100-year storm intensity under the Stormy Scenario is project to increase 13.7 percent in 2035 and 26.6 percent in 2060 for the local area.

- b. For each Resource Category in the table below: Describe how the project’s proposed activities and how the project’s design will interact with those climate trends. Describe proposed adaptations to address the project effects identified.

Table 2. Climate Considerations and Adaptations

Resource Category	Climate Considerations	Project Information	Adaptations
Project Design	Increased heavy rainfall and flooding.	Project is appropriately sited with the recent construction of a stormwater pond and construction outside the floodplain boundary. Project necessitates a DNR Water Appropriation Plan, that requires adherence to drought response plan and that all practical and feasible water conservation methods and practices are employed, including reuse and recycling of water.	Existing stormwater management and adherence to existing Facility and Project-associated permits already in effect. EAW Item 12.b.ii describes recent stormwater management improvements implemented at the site. Additionally, Project would not include new buildings nor increase impervious surfaces. Maintenance and equipment improvements would occur within the existing Facility.
Land Use	Heavier rainfall expected to increase risk of localized flooding.	Project does not change existing land use or include new buildings.	The Facility currently manages stormwater and is located outside the floodplain. Existing stormwater management and adherence to existing Facility and Project-associated permits already in effect.
Water Resources	Address in Item 12	Address in Item 12	Address in Item 12
Contamination/ Hazardous Materials/Wastes	Protection of water resources from soil and water contamination.	Project involves building removals, equipment maintenance and replacement, and other improvements.	Spill prevention measures are currently in place (SPAR and SPCC already in effect). Hazardous materials storage is located outside of the floodplain boundary. Construction plans will address soil (soil testing) and water management as needed.

Resource Category	Climate Considerations	Project Information	Adaptations
Fish, wildlife, plant communities, and sensitive ecological resources (rare features)	Address in Item 14.	Address in Item 14.	Address in Item 14.

8. Cover types:

Table 3 summarizes the existing and proposed cover types. Figure 4 illustrates the existing land cover for the site.⁶

Estimate the acreage of the site with each of the following cover types before and after development:

Table 3. Cover Types

Cover Types	Before (acres)	After (acres)
Wetlands and shallow lakes (<2 meters)	24.6	24.6
Deep lakes (>2 meters deep)	N/A	N/A
Wooded/forest	8.5	8.5
Rivers and streams	N/A	N/A
Brush/Grassland	N/A	N/A
Cropland	N/A	N/A
Livestock rangeland/pastureland	N/A	N/A
Lawn/landscaping	21.6	21.6
Green infrastructure TOTAL (from table)	N/A	N/A
Impervious surface	14.8	14.8
Stormwater Pond (wet sedimentation)	0.5	0.5
Other (describe)	N/A	N/A
TOTAL	70.0	70.0

**Acreages are approximate and based on DNR MLCCS land cover geospatial data, aerial photography, and wetland delineation data.*

⁶ Figure 4 is based on the DNR's Minnesota Land Cover Classification System (MLCCS) geospatial data. Data presented in Table 2 has been refined to align with the wetland delineation data.

Table 4. Green Infrastructure

Green Infrastructure*	Before (acreage)	After (acreage)
Constructed infiltration systems (infiltration basins/infiltration trenches/ rainwater gardens/bioretention areas without underdrains/swales with impermeable check dams)	N/A	N/A
Constructed tree trenches and tree boxes	N/A	N/A
Constructed wetlands	N/A	N/A
Constructed green roofs	N/A	N/A
Constructed permeable pavements	N/A	N/A
Other (describe)	N/A	N/A
TOTAL*	N/A	N/A

Table 5. Tree Canopy

Trees	Percent	Number
Percent tree canopy removed or number of mature trees removed during development	None*	None*
Number of new trees planted	None	None

**Based on preliminary design information, it is not anticipated that construction of the projects included in this EAW would require tree removal. Limited trees are present within the developed portion of the site.*

9. Permits and approvals Required:

List all known local, state and federal permits, approvals, certifications and financial assistance for the project. Include modifications of any existing permits, governmental review of plans and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing and infrastructure. *All of these final decisions are prohibited until all appropriate environmental review has been completed. See Minnesota Rules, Chapter 4410.3100.*

Table 6. Permits and Approvals

Unit of Government	Type of Application	Status
State		
Minnesota Department of Natural Resources (DNR)	Water Appropriation permit	To be completed
Minnesota Pollution Control Agency (MPCA)	Construction Stormwater Permit, Stormwater Pollution Prevention Plan, Groundwater Pump-Out General Permit	To be completed
MPCA	Spill, Prevention, Control, and Countermeasure (SPCC) Plan. Spill Prevention and Response Plan.	To be completed
MPCA	Groundwater Pump-Out General Permit	To be completed, if required
Minnesota Department of Health (MDH)	Notification of permit for Well Construction or Alteration, Asbestos Abatement/removal, Well sealing/abandonment	To be completed, if required
County		
Dakota County	Dakota County Water Resources Department Dewatering Well Construction and Sealing Permit	To be completed, if needed
Local		
City of Farmington	Demolition Permit	To be completed

Cumulative potential effects may be considered and addressed in response to individual EAW Item Nos.10-20, or the RGU can address all cumulative potential effects in response to EAW Item No.22. If addressing cumulative effect under individual items, make sure to include information requested in EAW Item No. 21.

10. Land use:

a. Describe:

- i. Existing land use of the site as well as areas adjacent to and near the site, including parks and open space, cemeteries, trails, prime or unique farmlands.

Existing Land Use

The existing land use at the site is identified as industrial in the City of Farmington's 2040 Comprehensive Plan.⁷ Operations at the Facility, consist of pressurizing natural gas to facilitate its transmission through the pipeline system. The Facility has been in operation since 1961.

Land uses adjacent to the site include Akin Road and baseball fields to the east, 212th Street West and a lightly developed commercial area to the south, an industrial area to the west, and agricultural fields and substation to the north. Figure 5 illustrates existing land uses in the vicinity of the site.

Parks and Trails

Local parks and trails are located near the site. Rambling River Park is located east of Akin Road and Middle Creek Park is located north of an unnamed stream. Existing and planned greenways are present south of the Facility adjacent to the Vermillion River. Local trail facilities are present along 212th Street West along the southern boundary of the site. DNR snowmobile trails extend along Akin Road, along the eastern boundary of the site. Figure 6 illustrates parks and trails within the vicinity of the site.

Farmland

Approximately 28 acres of the site includes soils classified as prime farmland or farmland of statewide importance based on the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey data. Since operation began in 1961, none of the land within the site boundary has been used for agricultural purposes. Surrounding land uses to the north and south of the site include agricultural land. Figure 9 shows the NRCS farmland classifications.

- ii. Plans. Describe planned land use as identified in comprehensive plan (if available) and any other applicable plan for land use, water, or resources management by a local, regional, state, or federal agency.

Figure 7 shows the City of Farmington's 2040 Future Land Use Plan. The site and the surrounding areas to the north and west, are planned for continued industrial land uses. To the south, commercial and mixed-use (commercial/industrial) is planned. Future land uses to the east include park/open space and public/semi-public institutional land uses. These areas include existing ball fields and school facilities.

- iii. Zoning, including special districts or overlays such as shoreland, floodplain, wild and scenic areas critical area, agricultural preserves, etc.

The site is within the Industrial (I) Zoning District and the northern portions of the site are included within the Floodplain Overlay District. It is anticipated that temporary disturbance area from the Project would not

⁷ [City of Farmington. 2040 Comprehensive Plan. December 2019.](#)

occur within the floodplain. The majority of the properties to the west and north of the site are also within the I Zoning District. Properties east of Akin Road are within the Low Density Residential (R-1) Zoning District and Park/Open Space (P/OS) Zoning District. Properties south of 212 Street West are within the Spruce Street Mixed-Use (SSMU) Zoning District, Spruce Street Overlay District, and P/OS Zoning District. Figure 8 shows the zoning districts within and in the vicinity of the site.

- iv. If any critical facilities (i.e. facilities necessary for public health and safety, those storing hazardous materials, or those with housing occupants who may be insufficiently mobile) are proposed in floodplain areas and other areas identified as at risk for localized flooding, describe the risk potential considering changing precipitation and event intensity.

Not applicable.

- b. Discuss the project's compatibility with nearby land uses, zoning, and plans listed in Item 9a above, concentrating on implications for environmental effects.

The Project is compatible with the existing nearby land uses and the City of Farmington's 2040 Future Land Use Plan. The 2020 Comprehensive Plan envisions the site and surrounding land uses west of the site will continue to consist of industrial uses. The Facility is allowed in the "I" Zoning District.

- c. Identify measures incorporated into the proposed project to mitigate any potential incompatibility as discussed in Item 10b above and any risk potential.

There is no incompatibility or risk potential from the Project.

11. Geology, soils and topography/landforms:

- a. Geology - Describe the geology underlying the project area and identify and map any susceptible geologic features such as sinkholes, shallow limestone formations, unconfined/shallow aquifers, or karst conditions. Discuss any limitations of these features for the project and any effects the project could have on these features. Identify any project designs or mitigation measures to address effects to geologic features.

According to the Minnesota Geological Survey⁸ conducted through the University of Minnesota, the surficial geology across the site is mapped as consisting of sediments that were deposited by mixed outwash of the Des Moines lobe. These deposits consist of sand, loamy sand, and gravel.

Dakota County is within the St. Croix Horst subprovince. The site falls within the Lower Ordovician, which includes the Shakopee Formation and the Oneota Dolomite of the Prairie du Chien Group. The bedrock here consists of dolostone, sandy to silty dolostone, and sandstone^{9,10}. The depth to bedrock is approximately 151 feet to 250 feet¹¹.

⁸ [University of Minnesota. Minnesota Geological Survey – Surficial Geology PDF. 1990.](#) Accessed October 2022.

⁹ [University of Minnesota. Minnesota Geological Survey – Minnesota Bedrock Geology ArcGIS Map. 2022.](#) Accessed October 2022.

¹⁰ [University of Minnesota. Minnesota Geological Survey – Geologic Map of Minnesota Bedrock Geology PDF. 2011.](#) Accessed October 2022.

¹¹ [University of Minnesota. Minnesota Geological Survey – Depth to Bedrock and Bedrock Topography PDF. 1990.](#) Accessed October 2022.

The most extensive aquifer that underlies most of Dakota County is the Prairie du Chien-Jordan bedrock aquifer. Additional aquifers present in the county include the St. Peter aquifer, the Platteville aquifer, and additional drift aquifers. The sensitivity of the Prairie du Chien-Jordan aquifer to pollution is rated as high within the site, meaning that it would take weeks to years for contaminants to reach the aquifer. This is a result of the surficial geology in the area having minimal drift protection¹².

The Prairie du Chien Group bedrock is more susceptible to the formation of karst features; however, to present conditions for karst/sinkholes, the Prairie du Chien Group must usually be within 50 to 100 feet of the land surface with the top of the water table occurring within the Prairie du Chien Group. Review of a water well log (for a well located approximately 1,300 feet west of the site) demonstrates that the Prairie du Chien Group is approximately 155 feet below the land surface/grade, has a static water level of 15 feet below grade and is nearly fully saturated. Based on this, conditions for karst/sinkholes are not present at the site. A review of available geospatial data did not identify geologic features such as sinkholes, shallow limestone formations, unconfined/ shallow aquifers, or karst conditions within the site.¹³

- b. Soils and topography - Describe the soils on the site, giving NRCS (SCS) classifications and descriptions, including limitations of soils. Describe topography, any special site conditions relating to erosion potential, soil stability or other soils limitations, such as steep slopes, highly permeable soils. Provide estimated volume and acreage of soil excavation and/or grading. Discuss impacts from project activities (distinguish between construction and operational activities) related to soils and topography. Identify measures during and after project construction to address soil limitations including stabilization, soil corrections or other measures. Erosion/sedimentation control related to stormwater runoff should be addressed in response to Item 12.b.ii.

USDA NRCS Web Soil Survey data indicate that soils within the temporary disturbance area boundary are primarily comprised of fine-loamy glaciofluvial deposits over sandy and gravelly outwash. Most of the mapped soil types feature water tables at or near the surface for prolonged periods if not artificially drained. Table 7 lists hydrologic soil groups within the site. Soils within the site are primarily classified as Hydrologic Group B (drained condition) or Group D (undrained condition). The four hydrologic soil groups are:

- **Group A:** Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.
- **Group B:** Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained, or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.
- **Group C:** Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.
- **Group D:** Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high-water table, soils that have a

¹² [University of Minnesota. Minnesota Geological Survey – Sensitivity of the Prairie Du Chien-Jordan Aquifer to Pollution..](#) Accessed October 2022.

¹³ [DNR. Karst Feature Inventory.](#) Accessed November 2022.

claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Topography within the site is relatively flat, sloping northwards towards the wetland complex and stream along the northern edge of the site. Drainage is generally to the north towards the wetlands.

Table 7. Soil Survey Map Units within the Investigation Area

Map Symbol	Name	Percent Slopes	Hydrologic Soil Group	Acres	Approx. Percent of Site
208	Kato silty clay loam	0 – 1	B/D	20.0	28.7
411A	Waukegan silt loam, 0 to 1 percent slopes	0 – 1	B	15.4	22.1
255	Mayer silt loam	0 – 2	B/D	14.1	20.2
129	Cylinder loam, 0 to 2 percent slopes	0 – 2	B/D	13.0	18.7
540	Seelyeville muck	0 – 1	A/D	5.2	7.5
318	Mayer loam, swales	0 – 2	B/D	2.0	2.9

Source: USDA Natural Resources Conservation Service (NRCS) Dakota County Soil Survey

The Web Soil Survey data for the site do not accurately reflect all current conditions. The investigation area has been disturbed repeatedly over the lifespan of the Facility from activities such as drainage, grading, building construction, subsurface utility installation, and various ongoing physical improvements. Some inherent properties of the soil map units listed above, such as slope, permeability, and erosion potential, have been irreversibly altered.

Prior to development, the site was a mix of wetlands and cropped fields. Five of the six soil map units feature poorly drained soils with high water tables, factors that can only be manipulated by artificial drainage. Seasonal water tables within 0-24 inches of the surface would continue to be a potential limitation.

Onsite soils may have limited infiltration capacity due to compaction and disturbance to soil structure. The graded, flat topography limits runoff potential and therefore limits erodibility. There is increased ponding potential if adequate surface drainage is not provided.

During construction activities, soil disturbance would be limited to that which is necessary to execute the construction objectives. Standard erosion control BMPs would be utilized to keep soil within the work area and out of any receiving waters. For erosion control, BMPs would be utilized that do not contain plastic (e.g., hydro mulch). Bio-Netting or natural netting type erosion control blankets would be used to the extent possible, with the overarching goal of avoiding the use of plastic mesh netting or other plastic components. Additionally, soil

stabilization would be accomplished with seeding, dust control, and overall vegetation preservation. Sediment controls such as silt fencing, stockpile protection, and/or slope breakers are anticipated. There would be no alteration to overall site topography.

After a construction activity is complete, open space would be seeded to re-establish a turfgrass cover and would remain as open lawn. There would be no soil disturbances related to ongoing post-construction operations.

12. Water Resources

- a. Describe surface water and groundwater features on or near the site in a.i. and a.ii. below.
 - i. Surface water - lakes, streams, wetlands, intermittent channels, and county/judicial ditches. Include any special designations such as public waters, shoreland classification and floodway/floodplain, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include the presence of aquatic invasive species and the water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 mile of the project. Include DNR Public Waters Inventory number(s), if any.

Surface Waters

A review of Minnesota geospatial data determined that no lakes¹⁴, wildlife lakes¹⁵, migratory waterfowl feeding/resting lakes¹⁶, outstanding resources value waters¹⁷, or infested waters¹⁸ are located on or within one mile of the site. An unnamed intermittent stream M-049-010-001-002 extends along the northern edge of the site and is identified as a drainage feature within the Farmington Drainage District in the City's 2040 Comprehensive Plan and Local Surface Water Management Plan. Figure 10 and Table 8 below lists the surface waters identified in the Minnesota Public Water Inventory¹⁹, Minnesota DNR Hydrography, Minnesota DNR State Designated Trout Streams²⁰ databases located within one mile of the Project.

Table 1. Surface Waters within One Mile of the Site

Waterway	Flow Regime	Kittle No.	Special Designation
Unnamed Stream	Intermittent	M-049-010-001-002	None
Unnamed Stream (Middle Creek)	Perennial	M-049-010-001	None

¹⁴ DNR 2022. [DNR Hydrography Dataset](#). Accessed September 2022.

¹⁵ [DNR. 2016. Designated Wildlife Lakes](#). Accessed September 2022.

¹⁶ [DNR. 2016. Migratory Waterfowl Feeding and Resting Areas](#). Accessed September 2022.

¹⁷ [DNR. 2020. Lakes of Biological Significance](#). Accessed September 2022.

¹⁸ DNR 2022. [Listed Infested Waters](#). Accessed September 2022.

¹⁹ DNR [Public Waters \(PW\) Basin and Watercourse Delineations](#). Accessed September 2022.

²⁰ [DNR. 2020. State Designated Trout Streams, Minnesota](#). Accessed September 2022.

Waterway	Flow Regime	Kittle No.	Special Designation
Unnamed Stream (Middle Creek)	Perennial	M-049-010-001	Trout Stream
Unnamed Stream	Intermittent	M-049-010-001-001	Trout Stream
Vermillion River	Perennial	M-049	Trout Stream
Unnamed Stream	Perennial	M-049-012	None
Unnamed Stream	Intermittent	M-049-010-001-003	None
Unnamed	Wetland	19035300	None
Unnamed	Wetland	19035400	None
Unnamed	Wetland	19035500	None

DNR Public Waters

No DNR Public Waters are located within the site. Several DNR Public Waters and watercourses are located within one mile of the site. Table 9 identifies DNR Public Waters and Public Water Watercourses within one mile of the site.

Table 2. DNR Public Waters within One Mile of the Site

Waterway	Public Water ID	Type
Unnamed stream (tributary to the North Branch of Vermillion River)	N/A	Public Water Watercourse
Vermillion River	N/A	Public Water Watercourse
Unnamed	19035300	Public Water Wetland
Unnamed	19035400	Public Water Wetland
Unnamed	19035500	Public Water Wetland

Wetland Resources

A wetland delineation was completed in June 2016 for the entire property and two wetlands were identified within the site. None of these wetlands occur within the approximate temporary disturbance area. The City of Farmington, the Local Governmental Unit (LGU) and the administrator for of the Minnesota Wetland conservation Act (WCA), approved the wetland boundaries on November 9, 2017. In April 2018, a desktop review and site visit within the southern portion of the site to confirm wetland boundaries and conditions prior to planned construction activities. Table 10 summarizes wetlands delineated within the site. Figure10, depicts the locations of delineated wetlands.

Table 3. Wetlands within the Site

Wetland ID	Circular* 39	Cowardin	Dominant Vegetation	Acres (within Site)
Wetland 1	Type 2	PEM1B	Reed canary grass, river bulrush, sandbar willow, bebb's willow, meadow willow, common buckthorn, red osier dogwood, cottonwood, and quaking aspen	23.0
Wetland 2	Type 6	PSS1B	Reed canary grass, river bulrush, sandbar willow, bebb's willow, meadow willow, common buckthorn, red osier dogwood, cottonwood, and quaking aspen	1.6

MPCA 303d Impaired Waters List

No impaired waters are located on the Site. Several impaired waters are present within one mile of the site.²¹ Table 11 identifies impaired waters within one mile of the site. Figure 10 shows the locations of impaired waters in the vicinity of the site.

Table 4. Impaired Waters within One Mile of the Site

Water Body Name	Section	AUID	Affected Designated Use	Pollutant or Stressor	TMDL ID
Unnamed creek (Middle Creek)	Unnamed CR to T114 R20W S25, east line	07040001-668	Aquatic Recreation	Fecal coliform	PRJ07701-001

²¹ [MPCA Impaired Waterbodies 2022](#). Accessed September 2022.

Water Body Name	Section	AUID	Affected Designated Use	Pollutant or Stressor	TMDL ID
Unnamed creek (Middle Creek)	Unnamed CR to Unnamed CR	07040001-721	Aquatic Life	Benthic macroinvertebrates bioassessments	N/A
Unnamed creek (Middle Creek)	Unnamed CR to Unnamed CR	07040001-721	Aquatic Life	Fish bioassessments	N/A
Vermillion River	T113 R20W S9, west line to T114 R19W S31, north line	07040001-517	Aquatic Consumption	Mercury in fish tissue	PRJ07770-001
Vermillion River	T113 R20W S9, west line to T114 R19W S31, north line	07040001-517	Aquatic Life	Benthic macroinvertebrates bioassessments	N/A
Vermillion River	T113 R20W S9, west line to T114 R19W S31, north line	07040001-517	Aquatic Life	Dissolved oxygen	N/A
Vermillion River	T113 R20W S9, west line to T114 R19W S31, north line	07040001-517	Aquatic Life	Fish bioassessments	N/A
Vermillion River	T113 R20W S9, west line to T114 R19W S31, north line	07040001-517	Aquatic Life	Turbidity	PRJ07701-001
Vermillion River	T113 R20W S9, west line to T114 R19W S31, north line	07040001-517	Aquatic Recreation	Fecal coliform	PRJ07701-001
Unnamed creek	Unnamed CR to Vermillion River	07040001-527	Aquatic Life	Benthic macroinvertebrates bioassessments	N/A
Unnamed creek	Unnamed CR to Vermillion River	07040001-527	Aquatic Life	Dissolved oxygen	N/A
Unnamed creek	Unnamed CR to Vermillion River	07040001-527	Aquatic Life	Fish bioassessments	N/A
Unnamed creek	Unnamed CR to Vermillion River	07040001-527	Aquatic Life	Total suspended solids (TSS)	N/A

Water Body Name	Section	AUID	Affected Designated Use	Pollutant or Stressor	TMDL ID
Unnamed creek	Unnamed CR to Vermillion River	07040001-527	Aquatic Recreation	Fecal coliform	PRJ07701-001

Floodway/Floodplain

A FIRMette was generated through the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) mapping tool²², which indicates that the northern portion of the site is located within Zone A, the regulated 100-year floodplain associated with the unnamed stream to the north. The majority of the site is identified as Zone X, area of minimal flood hazard. It is not anticipated that the proposed improvements would encroach within the portions of site identified within the regulated floodplain. Attachment A includes the FEMA FIRMette for the site.

- ii. Groundwater – aquifers, springs, seeps. Include: 1) depth to groundwater; 2) if project is within a MDH wellhead protection area; 3) identification of any onsite and/or nearby wells, including unique numbers and well logs if available. If there are no wells known on site or nearby, explain the methodology used to determine this.

Based on a review of domestic water wells located within the site, the depth to static water level ranges from 2 feet to 12 feet with an average depth to static water levels of 5 feet.

The site is not within a Minnesota Department of Health (MDH) Wellhead Protection Area (WHPA). The Farmington SE Wellhead Protection Area is 150 feet to the southeast of the site. The site is within the Farmington SE Drinking Water Supply Management Area (DWSMA) with the vulnerability ranking classified as moderate.

The Minnesota Well Index was reviewed for the site and the surrounding area. Two active wells are present within the site which include one domestic and one monitoring well. There are seven sealed monitoring wells within the site. One active monitoring well is approximately 500 feet south of the site. Table 12 provides a summary of these wells. Attachment B includes the well log reports. Figure 12 illustrates the locations of known wells within the vicinity of the site.

Table 5. Verified Wells within 500 feet of the Site

Well ID	Use Type	Location from Site	Status	Depth (ft.)	Static Water Level (ft.)
519265	Monitor	Within the Site	Sealed	11	2

²² [FEMA. 2022. National Flood Hazard Layer FIRMette](#). Accessed September 2022.

Well ID	Use Type	Location from Site	Status	Depth (ft.)	Static Water Level (ft.)
207728	Domestic	Within the Site	Active	85	12
533365	Monitor	Within the Site	Sealed	14	4.3
533366	Monitor	Within the Site	Sealed	38	3.5
501775	Monitor	Within the Site	Sealed	10	5
501774	Monitor	Within the Site	Sealed	10	5.3
501772	Monitor	Within the Site	Active	17	8.7
533308	Monitor	Within the Site	Sealed	18	2.3
501773	Monitor	Within the Site	Sealed	10	3.2
639314	Monitor	500 feet south of the Site	Active	10	4.7

b. Describe effects from project activities on water resources and measures to minimize or mitigate the effects in Item b.i. through Item b.iv. below.

i. Wastewater - For each of the following, describe the sources, quantities and composition of all sanitary, municipal/domestic and industrial wastewater produced or treated at the site.

- 1) If the wastewater discharge is to a publicly owned treatment facility, identify any pretreatment measures and the ability of the facility to handle the added water and waste loadings, including any effects on, or required expansion of, municipal wastewater infrastructure.

The existing operations and proposed facility improvements would not generate industrial wastewater. Water is not utilized in the Facility processes. Wastewater generated by the Facility is domestic strength sewage from staff and visitors. This wastewater is discharged to the Metropolitan Council Empire Wastewater Treatment Plant in Empire Township, which discharges to the Mississippi River. Pre-treatment is not necessary for domestic wastewater. The proposed improvements would not increase staffing or visitor levels and no additional capacity would be needed within public infrastructure. Periodically, the Facility may need to wash vehicles or equipment. This activity would be conducted within designated wash bays. The wastewater would be captured in subsurface holding tanks, treated, and tested before being delivered to the municipal wastewater treatment plant via tanker truck. Testing requirements would be provided by the wastewater treatment plan and met by Northern.

- 2) If the wastewater discharge is to a subsurface sewage treatment systems (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system. If septic systems are part of the

project, describe the availability of septage disposal options within the region to handle the ongoing amounts generated as a result of the project. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency, intensity and amount with this discussion.

Not applicable.

- 3) If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate impacts. Discuss any effects to surface or groundwater from wastewater discharges, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects.

Not applicable.

- ii. Stormwater - Describe changes in surface hydrology resulting from change of land cover. Describe the routes and receiving water bodies for runoff from the project site (major downstream water bodies as well as the immediate receiving waters). Discuss environmental effects from stormwater discharges on receiving waters post construction including how the project will affect runoff volume, discharge rate and change in pollutants. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency, intensity and amount with this discussion. For projects requiring NPDES/SDS Construction Stormwater permit coverage, state the total number of acres that will be disturbed by the project and describe the stormwater pollution prevention plan (SWPPP), including specific best management practices to address soil erosion and sedimentation during and after project construction. Discuss permanent stormwater management plans, including methods of achieving volume reduction to restore or maintain the natural hydrology of the site using green infrastructure practices or other stormwater management practices. Identify any receiving waters that have construction-related water impairments or are classified as special as defined in the Construction Stormwater permit. Describe additional requirements for special and/or impaired waters.

Runoff at the site is governed by the National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) permit number MNR100001. The MPCA issued the permit on August 1, 2018, which expires on July 31, 2023. A stormwater pollution prevention plan (SWPPP) was developed on April 14, 2022, for the projects constructed in 2022 at the Farmington Compressor Station. A new plan shall be amended to reflect any changes for the proposed projects included in this EAW. Approximately 13 acres of impervious area is present at the site under existing conditions. The proposed projects are not anticipated to increase impervious area. Removal of Building # 1 facilities would potentially reduce impervious surfaces at the site.

Five waterbodies are anticipated to receive stormwater: the Vermillion River, an unnamed intermittent stream/ditch north of the site, and three wetlands. Both the river and ditch were designated as special and impaired waters. Additional requirements to discharge to these special and impaired waterbodies are outlined in requirements 23.9-23.12 of the NPDES/SDS permit number MNR100001 and include the following:

- Immediate initial stabilization of exposed soil areas and complete stabilization within seven calendar days after construction activity in that area temporarily or permanently ends
- Provide temporary sediment basin for common drainage locations that serve an area with five or more acres disturbed at one time
- Provide an undisturbed buffer zone of not less than 100 linear feet from a special water which must be maintained at all times during and post-construction

- Provide a permanent stormwater system such that the discharge from the Project minimizes any increase in temperature of trout streams resulting from one and two year 24-hour precipitation events

It is anticipated that the Project would require dewatering, which is described in further detail in EAW Item 12.b.iii. Discharge generated by dewatering activities would be directed to a dewatering structure, such as a vegetative filter, straw bale structure, and/or dewatering filter bag would be used. Typically, the volume of dewatering requires discharging to a straw bale structure lined with Geotech fabric. The dewatering structure is usually placed at the northern fence line of the site to minimize exposure of the discharge prior to discharging into the ditch to maintain the temperature of the discharged water. These materials would be placed in upland areas and monitored for flow rate. A combination of BMPs identified in the SWPPP would be utilized for future proposed projects. For erosion control, BMPs would be utilized that do not contain plastic (e.g., hydro mulch). Bio-Netting or natural netting type erosion control blankets (category 3N or 4N in the 2016 and 2018 MnDOT Standards Specifications) would be used to the extent possible, with the overarching goal of avoiding the use of plastic mesh netting or other plastic components. Additionally, soil stabilization would be accomplished with seeding, dust control, and overall vegetation preservation. Sediment controls such as silt fencing, stockpile protection, and/or slope breakers are anticipated.

According to the DNR, the State of Minnesota has been experiencing heavier rains and has seen a 5.62-inch increase in annual precipitation between 1895 and 2020 due to climate change (utilizing DNR Historical Precipitation Trend Data). Since 2000, mega rainfall events have become more frequent, and it is anticipated that they will continue to increase.²³ Stormwater controls for the Project would need to be considered during design. The recently constructed stormwater pond was design to accommodate stormwater runoff associated with planned improvements at the Facility. Given that the Project would not increase permanent impervious surface area at the site, it is not anticipated that the Project would exacerbate the impacts of increased precipitation and mega rainfall events associated with climate change.

- iii. Water appropriation - Describe if the project proposes to appropriate surface or groundwater (including dewatering). Describe the source, quantity, duration, use and purpose of the water use and if a DNR water appropriation permit is required. Describe anywell abandonment. If connecting to an existing municipal water supply, identify the wells to be used as a water source and any effects on, or required expansion of, municipal water infrastructure. Discuss environmental effects from water appropriation, including an assessment of the water resources available for appropriation. Discuss how the proposed water use is resilient in the event of changes in total precipitation, large precipitation events, drought, increased temperatures, variable surface water flows and elevations, and longer growing seasons. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation. Describe contingency plans should the appropriation volume increase beyond infrastructure capacity or water supply for the project diminish in quantity or quality, such as reuse of water, connections with another water source, or emergency connections.

The Project does not propose installation of permanent wells or changes to operational water use. Construction of the proposed improvements would require temporary dewatering to ensure safe working conditions.

²³ [Minnesota Department of Natural Resources \(MDNR\). 2022. Climate Trends.](#) Accessed October 2022.

Temporary Dewatering Activities

Construction would require temporary dewatering due to high groundwater at the site, which is approximately 6.5 feet below the surface within the disturbance area. Northern has prepared annual dewatering plans for past construction plans to support DNR Water Appropriation Permits. Temporary dewatering activities during construction would involve installation of dewatering wells around the perimeter of the excavation areas. Dewatering wells would be installed to a depth not to exceed 25 feet, with 5-horsepower pumps with a maximum pumping rate of 250 gallons per minute (gpm). Typically, groundwater pumping occurs at a maximum rate of 250 gpm for the first week of construction and is then reduced to approximately 100 gpm for the remainder of construction duration depending on the specific conditions of the excavation area. It is anticipated that dewatering depth would extend to a maximum of approximately 12 feet and approximately 150 to 200 million gallons of groundwater would be pumped during the construction season which typically extends from May through August to comply with timing restrictions related to the nearby designated trout streams. The total dewatering volume and pumping rate would be confirmed based on the specific project and site conditions at the time that construction occurs. It is anticipated that monthly dewatering volumes may approach or exceed 30 million gallons per month. Temporary dewatering would require a DNR Water Appropriations Permit and preparation of a dewatering plan. Dewatering and discharge activities would adhere to the conditions established in the DNR Water Appropriation Permit. Attachment G includes the most recent dewatering plan (dated March 11, 2022) which provides additional details on the dewatering and discharge activities.

Temporary Dewatering Discharge Sites

A dewatering header system would be installed to direct discharge water from each dewatering well system to a specific discharge location. Due to the proximity of the Project to a designated trout stream, dewatering discharge would be limited to May through August and would be discharged directly into the ditch on the north side of the site (Discharge Site A) or directly adjacent to the Vermillion River (Discharge Site B). Total discharge volume would vary based on the specific project and site conditions. During the 2022 construction season the total discharge volume during the construction season approached 200 million gallons. Estimated discharge volume would be identified in the Water Appropriation Permit and dewatering plan prepared prior to construction. Figure 11 identifies the discharge sites. All dewatering and discharging would occur within the Vermillion River watershed (HUC 0704000102).

Avoidance, Minimization, and Mitigation Measures

Northern would dewater and discharge the volume of water needed to safely work within the excavated areas. Whenever possible, the pumping rate would be minimized. Discharge would only occur at approved locations. Discharge sites may be rotated as needed. If, at any time, flooding conditions occur downstream of the Project, the discharge volume would be reduced and/or relocated. If necessary, pumping and discharging activities would be temporarily halted if flood conditions continue.

Water would be discharged into a straw bale structure located at the discharge sites. Within the straw bale structure, a baffle device with an upward 90-degree bend would be installed on the discharge pipe. This design would allow the discharge water to flow upward into the air before falling into the straw bale structure, which would minimize the potential for scouring and sediment transport. An environmental inspector (EI) would be present at the site to monitor for scouring on banks of the ditch during dewatering and would modify the location as necessary. Temperature of the water extracted would be maintained, as

near practical, from withdrawal to discharge at the ditch. Additionally, the dewatering hose would be covered in light-colored fabric to minimize thermal absorption and maintain the temperature of the water.

As discussed in EAW Item 13, the groundwater around the Project site is known to be contaminated with Volatile Organic Compounds (VOCs). Before water could go to the discharge sites, testing for VOCs would be necessary. If VOCs were detected, Northern could have to complete additional treatment measures (such as activated carbon processing, air stripping, biological treatment, etc.) to ensure contaminated water would not be introduced into the Vermillion River, a designated trout stream. Monitoring and discharge requirements would be addressed in any future NPDES/SDS permits, including but not limited to the Industrial Stormwater General Permit, The Groundwater Pump-out General Permit, or via enforceable permit conditions, such as SWPPPs or other required plans.

Northern would coordinate closely with the DNR during preparation of future dewatering plans to incorporate additional avoidance, minimization, and mitigation measures as warranted.

Dewater Analysis

A drawdown analysis was completed to evaluate the potential for dewatering activities to impact wells in the vicinity of the site. The following paragraphs summarize the findings of this analysis. Attachment H includes a memorandum summarizing the findings of this analysis.

The dewatering analysis estimated the Radius of Influence (Ro) or the extent (distance) resulting from planned dewatering activities. The analysis determined that the extent at which drawdown could be observed due to groundwater extraction during dewatering activities would be less than 700 feet from dewatering locations. The North Branch of the Vermillion River and the Vermillion River are likely in hydraulic connection with the water table aquifer and are expected to represent groundwater boundary conditions (i.e., hydraulic head remains constant). The Ro is not anticipated to reach either of these boundary conditions, however, if it did, they would be expected to limit further expansion of the Ro.

Unique Well ID 501772, 207728, and 412591 are active wells located within the site and depending on the location of the planned dewatering activities could observe drawdown impacts. According to the well logs on the Minnesota Well Index, Unique Well ID 501772 is identified as a monitoring well, Unique Well ID 207728 is identified as a domestic well, and Unique Well ID 412591 is a remedial well. There are no reported water supply wells located within 700 feet (the estimated Ro distance) of the Site. One monitoring well is within 700 feet (the estimated Ro distance) of the site. Unique Well ID 639314 is located approximately 500 feet south of the site, is an active monitoring well, is 10 feet deep, and is not used for water supply. Depending on the location of the planned dewatering activities, this monitoring well may observe drawdown impacts.

Climate Change and Resilience

Climate change trends may affect surface water and groundwater interactions that may lead to long-term uncertainty regarding surface and groundwater levels, resulting in impacts to groundwater supply

availability, quality, and quantity. Surface and groundwater quantity is driven by the balance of atmospheric input from precipitation and losses due to evapotranspiration.²⁴

Due to the temporary nature of the dewatering, long term effects due to precipitation changes, drought, longer growing season and other climate change attributes are not expected. Contingency plans for acute conditions are described above in the avoidance, minimization, and mitigation measures discussion. Dewatering related to construction activities with similar volumes has occurred at the site in the past without adverse effects to groundwater supply. The DNR Water Appropriation Plan requires that all permittees adhere to the Statewide Drought Plan in accordance with M.S. 103G.293 and that all practical and feasible water conservation methods and practices are employed. Northern would adhere to the requirements established in the DNR Water Appropriation Permit.

iv. Surface Waters

- 1) Wetlands - Describe any anticipated physical effects or alterations to wetland features such as draining, filling, permanent inundation, dredging and vegetative removal. Discuss direct and indirect environmental effects from physical modification of wetlands, including the anticipated effects that any proposed wetland alterations may have to the host watershed, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. Identify measures to avoid (e.g., available alternatives that were considered), minimize, or mitigate environmental effects to wetlands. Discuss whether any required compensatory wetland mitigation for unavoidable wetland impacts will occur in the same minor or major watershed and identify those probable locations.

There are no wetlands within the temporary disturbance area and therefore, no impacts to wetlands are anticipated.

- 2) Other surface waters- Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicial ditches) such as draining, filling, permanent inundation, dredging, diking, stream diversion, impoundment, aquatic plant removal and riparian alteration. Discuss direct and indirect environmental effects from physical modification of water features, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. Identify measures to avoid, minimize, or mitigate environmental effects to surface water features, including in-water Best Management Practices that are proposed to avoid or minimize turbidity/sedimentation while physically altering the water features. Discuss how the project will change the number or type of watercraft on any water body, including current and projected watercraft usage.

The Project would require dewatering and associated discharge of water (discussed in EAW Item 12.b.iii.). Per the NPDES/SDS permit MNR100001, additional requirements to discharge to trout streams, outlined in requirements 23.9-23.12 of the NPDES/SDS permit number MNR100001, would be incorporated into construction plans (refer to requirements summarized in EAW Item 12.b.ii).

²⁴ [DNR. Climate's Impact on Water Availability](#). Updated October 19, 2021.

Temporary dewatering activities are anticipated to occur for four or less months per construction year. EAW Item 12.b.iii describes avoidance, minimization, measures that have been identified to minimize impacts to designated trout streams in the vicinity of the site. The Project is not anticipated to result in long term environmental effects and would not exacerbate the effects of climate trends. The Project does have the potential to have environmental effects during dewatering if contaminated groundwater is discharged.

The Project would not include the addition or change in watercraft use.

13. Contamination/Hazardous Materials/Wastes:

- a. Pre-project site conditions - Describe existing contamination or potential environmental hazards on or in close proximity to the project site such as soil or ground water contamination, abandoned dumps, closed landfills, existing or abandoned storage tanks, and hazardous liquid or gas pipelines. Discuss any potential environmental effects from pre-project site conditions that would be caused or exacerbated by project construction and operation. Identify measures to avoid, minimize or mitigate adverse effects from existing contamination or potential environmental hazards. Include development of a Contingency Plan or Response Action Plan.

Existing Conditions

Northern partnered with Terracon Consultants, Inc. (Terracon) to conduct a Phase I Environmental Site Assessment (ESA) that was completed on March 30, 2016 (2016 Terracon Phase I ESA). The site has operated as a compressor station for natural gas since the area was developed in the 1960s. Structures in the site have consisted of compressor buildings, office space, warehouses, and workshops, while the surrounding area has historically consisted of undeveloped agricultural land and farmsteads as well as commercial properties. Several spills or releases have been documented within the site and were identified as historical recognized environmental conditions (HRECs), controlled recognized environmental conditions (CRECs), and recognized environmental conditions (RECs).

- Small spills with rapid cleanup and closure timeframes between 1979 and 2014 represent HRECs for the site.
- Two leaks (also identified below in the MPCA WIMN review) took place within the site, one in 1990 (#2441) and one in 1991 (#4551). These leaks were granted closure in 1991 and 1994, respectively. Petroleum impacts to soil and groundwater in both scenarios have concentrations above unrestricted land use standards, therefore both leaks represent CRECs.
- One leak (also identified below in the MPCA WIMN review) took place within the site in 2014 (#19643) and was granted regulatory closure in 2015. No groundwater impacts were found and low concentrations of petroleum were found in the soil, therefore this leak represents a HREC. Additionally, non-petroleum impacts to soil gas were identified in excess of 10 times the industrial ISV, representing a REC.

The Terracon 2016 Phase I ESA also noted that past releases may have contained polychlorinated biphenyls (PCB)-laden oils. Any future releases should be assumed to contain this contaminant unless testing shows otherwise. Furthermore, recommendations from Terracon included additional studies to identify the extent of soil vapor impacts associated with leak site #19643. Attachment C includes a summary of the Phase I ESA.

A review of the Minnesota Pollution Control Agency's (MPCA) *What's in My Neighborhood* (WIMN) database²⁵ was conducted to identify documented potentially contaminated sites within or in the vicinity of the site. Five WIMN records are located within the site, one of which contains eight MPCA programs. The database documented three leaks within the site and one within 500 feet of the site. Table 13 summarizes MPCA potentially contaminated sites within the site and within 500 feet of the site. Figure 13 illustrates the locations of these WIMN sites.

Table 13. MPCA WIMN Database Inquiry Results

Site ID	Site Name	MPCA Program	Status	Location
2444	Northern Natural Gas - Farmington	Hazardous waste; small quantity generator (MND060482460)	Active (registered to 12/9/2021)	Within Site
2444	Northern Natural Gas - Farmington	Investigation and cleanup; petroleum remediation leak site (LS0002441)	Inactive (leak reported 1990; site closed 1996)	Within Site
2444	Northern Natural Gas - Farmington	Investigation and cleanup; petroleum remediation leak site (LS0019643)	Inactive (leak reported 2014; site closed 2015)	Within Site
2444	Northern Natural Gas – Farmington	Investigation and cleanup; petroleum remediation leak site (LS0004551)	Inactive (leak reported 1991; site closed 1993)	Within Site
2444	Northern Natural Gas - Farmington	Investigation and cleanup; superfund program non-listed sites (SR0001410)	Active (application complete 2016; technical review completed 2019)	Within Site
2444	Northern Natural Gas – Farmington	Aboveground tanks (TS0001197)	Active (registered 1990, 2004, 2010, 2014)	Within Site
2444	Northern Natural Gas – Farmington	Underground tanks (TS0001197)	Active (registered 1979, 1985, 1990; notice received 1991)	Within Site
187740	Enron Farmington	Investigation and cleanup; brownfield voluntary investigation and cleanup (VP4060)	Inactive (application received 1993; site closed 1997)	Within Site
251406	2022 Farmington Compressor Station Projects	Construction stormwater (C00063551)	Active (coverage issuance 2022-2023)	Within Site
247534	NL21 Farmington Backpressure Regulator Project	Construction stormwater (C00060369)	Active (coverage issuance 2021; coverage termination 2022)	Within Site
234025	Farmington Compressor Station	Construction stormwater (C00056315)	Active (coverage issuance 2020-2023)	Within Site
21463	Dakota County Collision Center	Hazardous waste (MND092794197)	Inactive (application received 1985)	Within 500 ft. of Site
134631	JIT Powder Coating	Hazardous waste (MNS000205633)	Inactive (application received 2014, 2018)	Within 500 ft. of Site

²⁵ [MPCA. 2022. What's in My Neighborhood](#). Accessed. October 2022.

Site ID	Site Name	MPCA Program	Status	Location
134631	JIT Powder Coating	Industrial stormwater (MNRNE33LK)	Inactive (no exposure exclusion 2008-2015)	Within 500 ft. of Site
134631	JIT Powder Coating	Industrial stormwater (MNRNE383X)	Active (no exposure exclusion 2015-2025)	Within 500 ft. of Site
134631	JIT Powder Coating	Water quality; wastewater (SIU000451)	Active (significant industrial user 2009-2055)	Within 500 ft. of Site
251763	Line 0703 KLK-FRM-NOF 69kV Rebuild	Construction stormwater (C00063807)	Active (coverage issuance 2022-2023)	Within 500 ft. of Site
26549	Garvey Construction Inc	Hazardous waste; very small quantity generator (MNR000053413)	Active (application received 1985)	Within 500 ft. of Site
127330	MCI Drywall	Hazardous waste; very small quantity generator (MNS000164533)	Active (application received 2013)	Within 500 ft. of Site
189571	Dakota County Hwy Farmington Shop	Investigation and cleanup; petroleum remediation leak site (LS0013979)	Inactive (leak reported 1997; site closed 2001)	Within 500 ft. of Site
97456	Family Health Medical Clinic Farmington	Hazardous waste; minimal quantity generator (MNS000129536)	Active (application received 2007-2021)	Within 500 ft. of Site
97456	Family Health Medical Clinic Farmington	Construction stormwater (C00018328)	Inactive (coverage issuance and termination 2006-2007)	Within 500 ft. of Site

Areas with past leaks identified in the above reviews should be assumed to have residual soil and groundwater impacts.

Leak site (LS0019643) was closed for petroleum impacts in 2015. Petroleum impacted soil was encountered during a Spring 2021 construction project located within the vicinity of a former burn pit and buried underground storage tank (UST) in the site. Impacted soil encountered during construction was removed and disposed of at SKB Environmental, a Minnesota permitted landfill. Soil samples for chemical analysis were also collected by Terracon. The leak site is listed as inactive. The MPCA indicated that the Site Reopen Review was completed but no closure date is listed.

The WIMN denoted one inactive MPCA Voluntary Investigation and Cleanup (VIC) site (VP4060) within the site. The MPCA received the VIC Application in 1993 and reviewed annual or semi-annual reports from 1994 to 1996. The release was identified as tetrachloroethylene in soil and tetrachloroethylene, vinyl chloride, 1,1-dichloroethane, cis-1, 2-dichloroethylene, benzene, and naphthalene. A Response Action Plan (RAP) Implementation Report was reviewed by the MPCA in 1996 and site closure was granted in 1997. A No Action Letter was issued in 2000.

One MPCA investigation and cleanup site (SR0001410) is open within the site. VOCs in soil vapor were identified at this site beneath Auxiliary Building 1 at concentrations requiring mitigation by the MPCA. In 2018, additional site assessment activities were performed and found that sub-slab vapor concentration for tetrachloroethene (PCE) and trichloroethene (TCE) exceed the 33X Intrusion Screening Values (ISVs) beneath Auxiliary Building 1. As a result, installation of a Sub-Slab Depressurization System (SSDS) was recommended. In August 2018, the SSDS was installed, and post mitigation diagnostic testing and confirmation sampling was performed. Several VOCs were detected but did not exceed regulatory criteria. The confirmation sub-slab results were well below

the concentrations detected in earlier sampling rounds, indicating that the SSDS is performing as intended. MPCA, Northern, and consulting firm Terracon have been in communication regarding sampling, monitoring, and resolution of the site and the identified contamination.

An additional review of the Minnesota Department of Agriculture (MDA) WIMN database²⁶ was conducted to identify potentially contaminated sites documented within or in the vicinity of the site. No records were identified within the site or within a 500-foot buffer.

Project Environmental Hazards

As noted above, soil, groundwater, and soil vapor impacts were identified in the vicinity of Auxiliary Building 1 and Compressor Building 1 in the site and included the active mitigation of sub-slab soil vapors in Auxiliary Building 1. It is assumed that remnant impacts remain in the sub-surface that might be encountered during demolition activities that may require special handling and/or disposal. Buildings in the vicinity of the site have been previously tested for VOCs in the sub-slabs and/or indoor air to assess vapor intrusion (Compressor Building, Auxiliary Building 1, Control Room), of which only the Auxiliary Building required mitigation. Additionally, shallow groundwater within the site has been documented to contain VOCs that might require testing and/or special management as part of the Project. As mentioned in EAW Item 12, if dewatered groundwater discharge contains contamination, further treatment or permitting may be necessary.

Avoidance, Minimization, and Mitigation Measures

As noted above, Auxiliary Building 1 has an active SSDS to mitigate VOCs from beneath the slab. Before decommissioning and demolition of Auxiliary Building 1, a notification to the MPCA and the mitigation contractor (Home Safety Solutions) would be completed. Excavation of soils or groundwater in the site should be assumed to contain remnant VOCs.

- b. Project related generation/storage of solid wastes - Describe solid wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from solid waste handling, storage and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of solid waste including source reduction and recycling.

Construction wastes are typical to the construction of utilities, roads, and commercial/industrial structures. Construction wastes would be primarily nonhazardous and managed as municipal solid waste (MSW) or construction/demolition debris.

Upon review of available information, various construction materials that are regulated by the MPCA and the EPA may be present within the Farmington Compressor Station, including the Compressor Building No. 1, the Auxiliary Building No. 1, and the Control Building No. 1.

In accordance with requirements compelled by the MPCA Renovation and Demolition Rule (Minn. R. 7035.0805), EPA National Emission Standard for Hazardous Air Pollutants (NESHAP 40 CFR 61, Subpart M), and EPA Asbestos Hazard Emergency Response Act (AHERA 40 CFR 763, Subpart E), the noted buildings under consideration for demolition require a comprehensive survey conducted by a MDH accredited asbestos building

²⁶ [MDA. 2022. What's in My Neighborhood? - Agricultural](#). Accessed. October 2022.

inspector to identify accessible suspect asbestos-containing material (ACM) and other regulated materials as defined by MPCA.

Homogenous suspect ACM would be identified and documented, including the location, estimated quantity and condition. Samples of each homogenous suspect ACM would be collected and submitted for analysis at an EPA accredited laboratory. In addition, the building survey would include identification and documentation, including the quantity of material inventory or equipment that could contain polychlorinated biphenyls (PCBs), ozone depleting chemicals (ODCs), mercury and/or other regulated metals, hazardous wastes and/or building materials that could be classified as special wastes.

The MPCA allows, without sampling, disposal of demolition debris that may contain Lead Based Paint (LBP) coatings. Therefore, if a building is scheduled for demolition, suspect LBP coatings do not require sampling. In addition, the MPCA allows, without sampling, disposal of demolition debris that may contain PCB-containing caulks, sealants and coatings. Therefore, if a building was constructed after 1979 or is scheduled for demolition, suspect PCB-containing caulks do not require sampling. A final report documenting the findings of the survey shall be completed.

Based on the findings of the building survey, if a project specification is generated, it must be written by an MDH accredited Asbestos Project Designer.

In accordance with the State of Minnesota and federal regulations regarding ACM, all friable and non-friable materials that may become friable, with greater than one percent asbestos which would be disturbed, must be identified and removed prior to renovation or demolition. All rules and regulations would need to be followed, including, but not limited to notification, permit acquisition, abatement and disposal of ACM at a landfill approved to accept asbestos-containing waste.

Asbestos abatement contractors and consultants licensed by the State of Minnesota must be used to perform asbestos related work. Abatement activities shall be completed by MDH accredited workers and supervisors. All air monitoring performed for asbestos abatement activities shall be conducted by personnel who have completed and passed the Minnesota 2-Day Air Sampling course. All air samples shall be analyzed by an EPA accredited laboratory or by consultants with National Institute of Occupational Safety and Health (NIOSH) 582 training and proven efficiencies and acceptable status in the asbestos analyst registry testing program.

Regulated asbestos abatement projects (greater than 160 square feet and/or 260 linear feet) and demolition projects require written notification and payment of applicable permit fees at least five calendar days for MDH and 10 working days for the MPCA prior to the commencement of asbestos abatement activities.

In addition, the demolition contractor must file a separate 10 working day notification to the MPCA prior to the start of demolition. The EPA and MPCA define demolition as the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility. The demolition notification cannot list a start date earlier than the termination date for the asbestos abatement.

Based upon the findings of the survey, an EPA Identification Number for Regulated Waste Activity may need to be obtained for the disposal of regulated materials.

At the conclusion of the abatement and building decommissioning activities, a report summarizing the activities shall be generated and given to the building owner.

- c. Project related use/storage of hazardous materials - Describe chemicals/hazardous materials used/stored during construction and/or operation of the project including method of storage. Indicate the number, location and size of any new above or below ground tanks to store petroleum or other materials. Indicate the number, location, size and age of existing tanks on the property that the project will use. Discuss potential environmental effects from accidental spill or release of hazardous materials. Identify measures to avoid, minimize or mitigate adverse effects from the use/storage of chemicals/hazardous materials including source reduction and recycling. Include development of a spill prevention plan.

According to the Farmington Compressor Station Spill Prevention and Response Plan (SPAR), 45 aboveground storage tanks (AST) are located throughout the Site. Table 14 details these tanks.

Table 14. Storage Tanks Within the Site

Structure ID	Structure Type	Tank size (gal)	Contents
T-12	AST	75	Diesel
T-13	AST	75	Diesel
T-16	AST	4,000	Used Oil
T-17	AST	4,000	Used Oil
PEG-1	Portable emergency generator	100	Diesel
MTA-H	Material transfer area	4,000	Used oil
MTA-I	Material transfer area	75	Diesel
MTA-J	Material transfer area	75	Diesel
MTA-L	Material transfer area	100	Diesel
P-1	Portable tank - AST	55	Lube oil
P-5	Portable tank - AST	336	Used oil
P-3	Portable tank - AST	500	Pipeline liquids
DS-1	Drum storage area	(20) 55	Used and lube oil
DS-2	Drum storage area	(1) 55	Diesel
DS-5	Drum storage area	(7) 55	Oily water
DS-6	Drum storage area	(2) 55	Lube oil
DS-7	Drum storage area	(1) 55	Lube oil
OWS-1	Oil/water separator	3,000	Oily water
OWS-2	Oil/water separator	1,100	Oily water

Structure ID	Structure Type	Tank size (gal)	Contents
TRANS-1	3 rd party transformer	1,565	Non-PCB oil
TRANS-2	3 rd party transformer	291	Non-PCB oil
EU 006 Electric	Compressor – DOT	88	Lube oil
EU 007 Turbine	Compressor – DOT	580	Lube oil
EU 008 Turbine	Compressor – DOT	534	Lube oil
EU 009 Turbine	Compressor – DOT	534	Lube oil
EU 010 Turbine	Compressor – DOT	265	Lube oil
Tank 7	-	3,200	Mercaptan
Tank 8	-	3,200	Mercaptan
Tank 9	-	500	Mercaptan
Tank 10	-	500	Mercaptan
Loading/unloading area	-	-	-

To minimize potential spill effects, such as soil contamination, air and water pollution, and harm to sensitive resources, Northern would comply with the measures identified in the SPAR and Spill Prevention Control and Countermeasure Plan (SPCC). Spill kits are located on site in several locations, including in the auxiliary building, in building 6, and on the compressor building working floor. Additional preventative measures are outlined in the plan, including annual tank integrity testing, routine visual inspections, utilizing secondary containment, concrete dikes, and the use of dip sticks and level gauges to prevent overfill. These plans can be amended as needed to account for the Project.

- d. Project related generation/storage of hazardous wastes - Describe hazardous wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from hazardous waste handling, storage, and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of hazardous waste including source reduction and recycling.

No significant amount of generated or stored hazardous waste is anticipated to result from construction activities. PCBs may be present in areas of the site near the compressors and related equipment. If necessary, wipe sampling or concrete sampling may be warranted to assess potential impacts for disposal and recycling purposes. The contractor would be required to dispose of hazardous waste consistent with applicable laws and regulations. Any hazardous materials or waste would be stored in locked containers during construction. EAW

Item 13.c describes the potential storage and use of hazardous materials during construction and operation of the proposed Project.

14. Fish, wildlife, plant communities, and sensitive ecological resources (rare features):

- a. Describe fish and wildlife resources as well as habitats and vegetation on or in near the site.

An unnamed ditch flows through the site. It has not been evaluated for biological resources or habitat; however, ditched streams inherently have poor aquatic habitat due to the removal of key stream functions of hydraulics and geomorphology often leading to degraded physiochemical and biology functions. Habitat has been identified as a stressor for biological impairments in the streams near the site.²⁷

MPCA biological monitoring site 09LM008 is located northeast of the site, approximately 1,300 feet downstream on a Vermillion River Tributary which is known as Middle Creek at Akin Road. Recent fish surveys at this location occurred in 2019, 2016, 2012, 2011 and 2010 and recent aquatic macroinvertebrates surveys occurred in 2011 and 2010. Table 15 below lists the Index of Biotic Integrity (IBI) scores calculated from each survey. During the most recent survey in 2019 the following fish species were sampled: central mudminnow (*Umbra limi*), green sunfish (*Lepomis cyanellus*), hybrid sunfish (*Lepomis sps*), Iowa darter (*Etheostoma exile*), and northern pike (*Esox lucius*).

MPCA biological monitoring site 09LM005 is located southeast of the Site on the Vermillion River at Denmark Avenue. During the most recent survey in 2020 the following fish species were sampled: black bullhead (*Ameiurus melas*), bluegill (*Lepomis macrochirus*), brown trout (*Salmo trutta*), central mudminnow, common carp (*Cyprinus carpio*), green sunfish, johnny darter (*Etheostoma nigrum*), largemouth bass (*Micropterus salmoides*), northern pike, and white sucker (*Catostomus commersonii*).

Table 15. Summary of IBI scores at Nearby MPCA Sites

Site	Year	Fish IBI score	Fish Rating	Invertebrate IBI Score	Invertebrate Rating
09LM008	2019	75	Good	N/A	N/A
09LM008	2016	73	Good	N/A	N/A
09LM008	2012	71	Good	N/A	N/A
09LM008	2011	75	Good	27	Poor
09LM008	2010	74	Good	32	Fair
09LM005	2020	43	Fair	N/A	N/A

²⁷ MPCA 2022. Vermillion River Watershed Stressor ID Update, January 2022.

Site	Year	Fish IBI score	Fish Rating	Invertebrate IBI Score	Invertebrate Rating
09LM005	2017	38	Fair	N/A	N/A
09LM005	2015	28	Poor	N/A	N/A
09LM005	2014	40	Fair	N/A	N/A
09LM005	2013	38	Fair	N/A	N/A
09LM005	2012	33	Poor	N/A	N/A
09LM005	2011	41	Fair	43/39	Fair
09LM005	2010	36	Poor	44	Fair
09LM005	2009	33	Poor	50	Fair

The site is composed primarily of developed land with buildings, paved parking areas, gravel parking/storage areas and mowed grass. Two wetlands outside the developed areas were identified on site. Dominant vegetation species identified within the wetland areas include reed canary grass (*Phalaris arundinacea*), river bulrush (*Schoenoplectus fluviatilis*), sandbar willow (*Salix interflora*), Bebb's willow (*Salix bebbiana*), meadow willow (*Salix petiolaris*), common buckthorn (*Rhamnus cathartica*), red osier dogwood (*Cornus sericea ssp. sericea*), cottonwood (*Populus deltoides*), and quaking aspen (*Populus tremuloides*). As described in EAW Item 10 (Land Use), surrounding land uses include open space/recreational land, a lightly developed commercial area, highly developed industrial land, and agricultural land. These areas may provide limited habitat for urban wildlife such as deer, coyotes, fox, mice, rabbits, raccoons, chipmunks, squirrels, toads, salamanders, and turtles (DNR 2022a).²⁸

- b. Describe rare features such as state-listed (endangered, threatened or special concern) species, native plant communities, Minnesota Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number (LA-___) and/or correspondence number (MCE__) from which the data were obtained and attach the Natural Heritage Review letter from the DNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe the results.

State – Listed Species

Under Stantec's Limited License to Use Copyrighted Material (LA-1005) related to Rare Features Data, the Minnesota Department of Natural Resources (DNR) Natural Heritage Information System (NHIS) was searched in

²⁸ DNR. 2022a. Minnesota Animals. Available at: <https://www.dnr.state.mn.us/animals/index.html>. Accessed October 2022.

October 2022 to identify species within the site and a one-mile buffer. The NHIS search did not include any known records within the proposed site or one-mile buffer. A DNR NHIS review letter was received through the Minnesota Conservation Explore (MCE) system on October 30, 2022 (MCE # 2022-00736) which indicated that the DNR did not believe that the Project would negatively affect any known occurrences of rare features. Attachment C provides the response received from the DNR.

Native Plant Communities and Sites of Biodiversity Significance

Native plant communities, biodiversity sites, and Regionally Significant Ecological Areas (RSEA) were reviewed within the site and a one-mile buffer using the Stantec's NHIS license LA-1005. No native plant communities, biodiversity sites, or RSEAs were noted within the site. However, one central region regionally significant ecological area of moderate importance was noted within the one-mile buffer of the site.

A central region regionally significant ecological area of moderate importance was identified north and northwest of the site. This site is located outside of the site and would not be impacted upon by the Project.

Federally – Listed Species

The United States Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) tool (USFWS 2022)²⁹ was reviewed to identify federally listed species within the site. Two species were identified that have the potential to occur within the site: the northern long-eared bat (*Myotis septentrionalis*; threatened) and the monarch butterfly (*Danaus plexippus*; candidate).

Northern long-eared Bat (*Myotis septentrionalis*)

Suitable roosting, forage, and travel habitat for northern long-eared bats (NLEB) in the summer consists of a wide variety of forested and wooded habitats. While roosting, NLEB is generally found in deep crevices in areas such as forests and woodlots (i.e., live trees and/or snags greater than or equal to three inches diameter at breast height that have exfoliating bark, cracks, crevices, and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. NLEB roosts in both live trees or snags (Sasse and Perkins 1996, Foster and Kurta 1999, Owen et al. 2003).^{30,31,32} During winter months, NLEB hibernate in caves or abandoned mines (Foster and Kurta 1999). The NLEB is federally listed as threatened due to marked population declines caused by white-nose syndrome.

Dakota County is not listed as a county with documented white-nose syndrome according to the White-nose Syndrome Response Team individual spread maps (White-nose Syndrome Response Team 2021)³³. Stantec also used its MDNR NHIS license agreement (LA-1005), and according to the NHIS database, no known roost trees or hibernaculum are in the site or within the one-mile buffer. The MDNR maintains a list of townships containing

²⁹ [USFWS 2022. IPaC – Information, Planning, and Conservation System](#). Accessed March 2022.

³⁰ Sasse, D.B., and P.J. Pekins. 1996. Summer roosting ecology of northern long-eared bats (*Myotis septentrionalis*) in the White Mountain National Forest. Bats and forests symposium. British Columbia Ministry of Forests Working Paper 23:91-101.

³¹ Foster, R. W. and A. Kurta. 1999. Roosting ecology of the northern bat. (*Myotis septentrionalis*) and comparisons with the endangered Indiana bat (*Myotis sodalis*). Journal of Mammalogy 80:659–672.

³² Owen, et al. 2003. Homerange size and habitat use by northern *Myotis* (*Myotis septentrionalis*). American Midland Naturalist 150: 352-359.

³³ [White-nose Syndrome Response Team 2021. 2006-2021 Spread Map](#). Accessed September 2022.

documented NLEB maternity roost trees and/or hibernacula entrances. Based on a review of this list, the site is not within 0.25 mile of a known, occupied hibernaculum, or within 150 feet of a known, occupied maternity roost trees (MDNR and USFWS 2021)³⁴.

The disturbance area primarily composed of industrial uses, and it does not contain potentially suitable summer roosting habitat (continuous forested areas) or potentially suitable overwintering habitat (caves or abandoned mines). Additionally, no known maternity roost trees or known hibernacula were identified in the NHIS review or in the MDNR and USFWS joint document. No tree clearing is anticipated to occur within the site. As such, the Project would have *no effect* on the NLEB.

Monarch Butterfly (*Danaus plexippus*)

The monarch butterfly is a migratory butterfly species that lives in a variety of habitats across North America (USFWS 2019b).³⁵ This species generally occurs in areas with high densities of nectar sources, preferably those of native prairies. The presence of milkweeds (genus *Asclepias*) is required for the survival of caterpillars, as it is the only plant that they feed on (North Dakota Game and Fish Undated)³⁶. The monarch butterfly is a candidate for federal listing due to habitat loss, relating mainly to the loss of milkweeds and native prairies.

The site does not contain any prairies that support the feeding behaviors and life cycle of the monarch butterfly, therefore, there is no potentially suitable habitat for the monarch butterfly within the site.

- c. Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the project including how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. Include a discussion on introduction and spread of invasive species from the project construction and operation. Separately discuss effects to known threatened and endangered species.

The site is not anticipated to have impacts or adverse effects on federally threatened and endangered species in the site due to the lack of suitable habitat for the NLEB and monarch butterfly.

No native plant communities, biodiversity sites, or RSEAs were identified within the site. Therefore, the Project is not anticipated to have any impacts on these sites.

The temporary disturbance area encompasses has been extensively disturbed and few trees a present except for a few landscape trees primarily along the edge of the property boundary. The site is unlikely to provide suitable summer habitat for the NLEB. On November 29, 2022 the USFWS announced that the NLEB will be reclassified as endangered, effective March 31, 2023.³⁷ Further consultation with the USFWS may be required but is not expected.

³⁴ [MDNR and USFWS 2021. Townships Containing Documented Northern Long-Eared Bat \(NLEB\) Maternity Roost Trees and/or Hibernacula Entrances in Minnesota](#). Accessed September 2022.

³⁵ [USFWS. 2019b. United States Fish and Wildlife Service - Pollinators](#). Accessed September 2022.

³⁶ [North Dakota Game and Fish. Undated. Monarch Butterfly](#). Accessed September 2022.

³⁷ [USFWS. Press Release: U.S. Fish and Wildlife Service extends effective date to reclassify northern long-eared bat as endangered. January 25, 2023](#). Accessed January 2023.

Construction activities that involve soil disturbance may result in the introduction and spread of invasive species. BMPs should be implemented to minimize the potential spread of invasive species.

- d. Identify measures that will be taken to avoid, minimize, or mitigate the adverse effects to fish, wildlife, plant communities, ecosystems, and sensitive ecological resources.

It is not anticipated that tree removal would be required for the Project. If during final design, it is determined that tree removal is necessary, the removal would be minimized to the extent possible. Removal of vegetation would avoid the NLEB pupping season from June 1 through August 15, when possible.

Noxious weeds and invasive species in Minnesota are managed through the Minnesota Department of Agriculture (MDA) under Minnesota Statutes, Section 18.78 and local ordinances. BMPs during construction activities and operation within the site would be implemented to minimize the introduction or spread of noxious weeds and invasive species. These practices may include removing seeds that attach to clothing or equipment, cleaning dirt or mud off vehicles and other construction equipment and minimizing soil disturbance.³⁸ Guidance provided through the USDA's National Invasive Species Information Center and DNR would be followed to prevent the spread of invasive species.

If rare species are observed during construction, sightings of any rare species would be reported to the DNR Nongame Wildlife specialist. Northern would follow the guidance that is received to avoid impacts.

Northern will consider replanting the disturbed areas with approved, weed free, native pollinator seed mixes where opportunities exist within the site.

15. Historic properties:

Describe any historic structures, archeological sites, and/or traditional cultural properties on or in close proximity to the site. Include: 1) historic designations, 2) known artifact areas, and 3) architectural features. Attach letter received from the State Historic Preservation Office (SHPO). Discuss any anticipated effects to historic properties during project construction and operation. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to historic properties.

Northern has completed Section 106 of the National Historic Preservation Act (NHPA) consultation for previous projects in 2017, 2018, and 2022. According to correspondence received from the Minnesota State Historic Preservation Office (SHPO) on June 14, 2017 (SHPO No. 2017-2052) and April 26, 2022 (SHPO No. 2022-1286), it was determined that no properties listed or eligible in the National Register of Historic Places (NRHP) would be impacted by work within the site. Past reviews by SHPO have encompassed the location of the disturbance area reviewed as part of this EAW; therefore, no impacts to historical structures or other archaeological resources are anticipated. An updated SHPO database query was completed for this EAW. No archaeological records and no new historic properties were identified. If any undocumented archaeological items are found during construction, Northern would consult with SHPO prior to continuing work. Attachment E includes the SHPO database query response completed for this EAW and previous Section 106 consultation responses from SHPO regarding the site.

³⁸ [USDA National Invasive Species Information Center. Undated. Best Management Practices.](#) Accessed September 2022.

16. Visual

Describe any scenic views or vistas on or near the project site. Describe any project related visual effects such as vapor plumes or glare from intense lights. Discuss the potential visual effects from the project. Identify any measures to avoid, minimize, or mitigate visual effects.

The site currently consists primarily of mowed lawn, laydown yards, building structures, and a wooded corridor on the northern half of the parcel. No designated scenic views or vistas are present in the vicinity of the site. The landscape immediately surrounding the site consists of undeveloped agricultural land to the North, outdoor sports complex to the east along Akin Road, 212th Street West to the south, and industrial and commercial buildings to the west. No visual impacts are predicted to occur as a result from the Project. The Facility does emit vapor plumes, and this would remain unchanged following the Project. The site is zoned by the City of Farmington as Industrial. The Project would adhere to the City of Farmington's ordinance requirements including building height and form, landscape screening, and lighting (City of Farmington, MN Code of Ordinances 2022)³⁹. Currently lighting in the area is limited to roadway lighting (assumed to be consistent with MnDOT standards) and down lit lighting at facility doorway entrances. No new lighting would be introduced with the Project. The existing tree lines and vegetation primarily along the perimeter of the site would partially serve as a buffer for nearby residents. It is anticipated that tree removal would be avoided to retain existing vegetation buffers to the extent possible primarily around the edges of the site.

17. Air

- a. Stationary source emissions - Describe the type, sources, quantities and compositions of any emissions from stationary sources such as boilers or exhaust stacks. Include any hazardous air pollutants, criteria pollutants. Discuss effects to air quality including any sensitive receptors, human health or applicable regulatory criteria. Include a discussion of any methods used to assess the project's effect on air quality and the results of that assessment. Identify pollution control equipment and other measures that will be taken to avoid, minimize, or mitigate adverse effects from stationary source emissions.

The Farmington Compressor Station pressurizes natural gas to facilitate its transmission through the pipeline system. The Facility consists of a natural gas-fired stationary combustion turbine to drive the pipeline compressors, a natural gas-fired emergency engine, and other insignificant activities. The Facility is a stationary source for criteria pollutants, such as Nitrogen Oxides (NO_x), Carbon Monoxide (CO), Sulfur Dioxide (SO₂), VOCs, and particulate matter (PM), as well as hazardous air pollutants (HAPs). Greenhouse gas emissions are presented in Item 18 of this EAW.

The Facility operates under Air Individual Permit – Major Amendment (Permit No. 03700014-102), issued September 9, 2014, which authorizes operation of stationary sources including the emission units, control equipment, and emission stacks. Northern complies with the permit conditions and standards established in the air permit.

In 2021, five natural gas reciprocating engines located in Compressor Building #1 were decommissioned and replaced with three new natural gas-fired turbines located in Compressor Building #4, and #5. Additionally, a

³⁹ City of Farmington Code of Ordinances. Available at: [Farmington, MN Laws \(amlegal.com\)](https://www.farmingtonmn.gov/legislation/amlegal.com) Accessed September 2022.

diesel-fired generator was decommissioned and replaced with the natural gas-fired emergency generator. Permanent removal of the reciprocating engines, installation of the three turbines, and replacement of the diesel-fired generator with the natural gas-fired generator will be reflected in the next air permit modification or reissuance.

- b. Vehicle emissions - Describe the effect of the project's traffic generation on air emissions. Discuss the project's vehicle-related emissions effect on air quality. Identify measures (e.g. traffic operational improvements, diesel idling minimization plan) that will be taken to minimize or mitigate vehicle-related emissions.

The site is in a CO maintenance area. In 1999, the U.S. Environmental Protection Agency (EPA) re-designated all of Hennepin, Ramsey, Anoka, and portions of Carver, Scott, Dakota, Washington, and Wright counties as a maintenance area for CO. This area was previously classified as a nonattainment area for CO but was determined to be in attainment at the time it was reclassified as a maintenance area. The 20-year maintenance period for this area ended on November 29, 2019.

The Proposer expects the Project to generate minimal increases in temporary and associated vehicle emissions during the approximately three-to-four-month construction period. The Project would not generate additional operational trips accessing the Facility. Therefore, vehicle emissions associated with the Project would be small.

- c. Dust and odors - Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during project construction and operation. (Fugitive dust may be discussed under item 17a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.

The Facility is adjacent to several other industrial uses to the west. Land uses to the north and south primarily consists of agricultural and limited commercial uses. The nearest sensitive resources include residential development and schools located approximately a half mile east of the site. Residential areas are buffered from the site by Akin Road, wooded areas along the Vermillion River, and open space/park land.

The Proposer does not anticipate the Project will generate substantial dust or odors during construction or operation. Temporary dust and odors may be generated during construction of the Project.

Dust

Pursuant to the conditions of the existing air permit, the Proposer must comply with the requirements of Minn. R. 7011.0150 requiring that all reasonable measures are taken to prevent avoidable amounts of particulate matter from becoming airborne.

The following measures would be utilized, as needed to address fugitive dust emissions during construction:

- Cover or treat surfaces disturbed by construction activities with water from municipal water supply, until completion of activities at each site of disturbance
- Stabilize on-site unpaved roads and off-site unpaved access roads with water from municipal water supply
- Restrict on-road vehicle speeds on unpaved roadways to 15 miles per hour
- Add construction stone to unpaved areas or pave workspaces. Use gravel tracking pads at egress points to remove dirt from tires and tracks

- Restore disturbed areas following construction
- Sweep paved roads

Through the implementation of the work practices described above, and the short duration of the construction activities, the temporary fugitive dust emissions during construction of the Project would be minimal and the impact of these emissions would be localized.

Following construction, dust control measures will be utilized as necessary and include applying water stockpiles, unpaved roads, and handling areas. Additionally, dust control on unpaved roads can be accomplished with a reduction in travel speed.

With these mitigations in place, the quality of life for nearby residences is not anticipated to be affected.

Odors

Potential odors would likely be associated with exhaust from diesel engines and fuel storage. Northern has not received odor complaints regarding the existing Facility. It is not anticipated that the Project would cause substantial odors.

18. Greenhouse Gas (GHG) Emissions/Carbon Footprint

- a. GHG Quantification: For all proposed projects, provide quantification and discussion of project GHG emissions. Include additional rows in the tables as necessary to provide project-specific emission sources. Describe the methods used to quantify emissions. If calculation methods are not readily available to quantify GHG emissions for a source, describe the process used to come to that conclusion and any GHG emission sources not included in the total calculation.

The impacts of this project on climate change were evaluated using the Minnesota Environmental Quality Board's (EQB's) Draft Revised Environmental Worksheet Guidance (January 2022). A carbon footprint was developed for this project that included construction emissions for the proposed Project. There are no operational emissions changes in GHG emissions associated with the proposed Project.

Construction emissions were calculated for mobile source construction equipment, including offroad construction equipment (excavators, bulldozers, etc.) as well as delivery and workers' commute vehicles. The number of vehicles and fuel usage were estimated based on similar construction projects. Emission factors for the construction equipment and vehicles were based on the EPA 420-P-04-009, Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling - Compression Ignition, USEPA, April 2004 - Tier 2 Engines along.⁴⁰ Venting emissions from the proposed construction Projects were also quantified. They are based on the amount vented as part of the construction project and gas analysis. Per the EQB Draft Guidance, construction emissions were annualized over the lifetime of the Project, which was estimated to be 10 years.

⁴⁰ EPA. EPA 420-P-04-009, Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling - Compression Ignition, USEPA, April 2004 - Tier 2 Engines. Accessed November 2022.

A summary of the Project's GHG emissions are provided in Table 16 (Construction Emissions) and Table 17 (Operational Emissions) below. Detailed emission calculations are provided in Attachment F.

Table 16. Construction Emissions

Scope	Type of Emission	EmissionSub-type	Project-related CO ₂ e Emissions (tons/year)	Calculation method(s)
Scope 1	Combustion	Mobile Equipment	5,099	EPA 420-P-04-009, Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling - Compression Ignition, USEPA, April 2004 - Tier 2 Engines
Scope 1	Non-Combustion	Venting Emissions	928	Based on gas analysis and project venting volumes.
Scope 1	Land Use	Conversion	Not applicable	
Scope 1	Land Use	Carbon Sink	Not applicable	
TOTAL			6,146	

Table 17. Operational Emissions

Scope	Type of Emission	Emission Sub-type	Existing facility CO ₂ e Emissions (tons/year)	Project-related CO ₂ e Emissions (tons/year)	Total CO ₂ e Emissions (tons/year)	Calculation method(s)
Scope 1	Combustion	Mobile Equipment	0	0	0	Not applicable
Scope 1	Combustion	Stationary Equipment	95,792	0	95,792	Emission factors from 40 CFR 98 Subpart C, Tables C-1 and C-2

Scope	Type of Emission	Emission Sub-type	Existing facility CO2e Emissions (tons/year)	Project-related CO2e Emissions (tons/year)	Total CO2e Emissions (tons/year)	Calculation method(s)
Scope 1	Combustion	Area	0	0	0	Not applicable
Scope 1	Non-Combustion	Fugitive Sources	69	0	69	Emission estimated using API Compendium, Section 6.0, Tables 6-12 and 6-21
Scope 1	Land Use	Not applicable				
Scope 2	Off-Site Electricity	Not applicable				
Scope 2	Off-site Steam Production	Not applicable				
Scope 3	Off-site Waste Management	Not applicable				
TOTAL			95,862	0	95,862	See above.

b. GHG Assessment

i. Describe any mitigation considered to reduce the project's GHG emissions.

Emissions that occur only because of construction activities would be temporary and would not significantly increase ambient air pollutant concentrations. Potential air quality impacts would be mitigated and minimized as described below.

Exhaust emissions from diesel and gasoline-fueled construction equipment and vehicle engines would be minimized by federal design standards imposed at the time of manufacture of the vehicles and would comply with USEPA mobile and non-road emission regulations (40 CFR Parts 85, 86, and 89). Emissions would also be controlled by purchasing commercial gasoline and diesel fuel products whose specifications are controlled by federal and state air pollution control regulations applicable to fuel suppliers and distributors. Contractors and employees would be encouraged to minimize vehicle and equipment idling time to the extent practical during construction activities.

- ii. Describe and quantify reductions from selected mitigation, if proposed to reduce the project's GHG emissions. Explain why the selected mitigation was preferred.

Due to the minimal CO₂e emissions from the Project, the mitigation measures were not quantified in the calculations. Emission totals are presented in Table 17 above.

- iii. Quantify the proposed projects predicted net lifetime GHG emissions (total tons/#of years) and how those predicted emissions may affect achievement of the Minnesota Next Generation Energy Act goals and/or other more stringent state or local GHG reduction goals.

The predicted net lifetime greenhouse gas emissions would be approximately 6,146.2 tons of CO₂e over a 10-year project lifetime. Anthropogenic greenhouse gas emissions would be minimal and would not be substantial sources affecting the Minnesota Next Generation Next Energy Act goals.

19. Noise

Describe sources, characteristics, duration, quantities, and intensity of noise generated during project construction and operation. Discuss the effect of noise in the vicinity of the project including 1) existing noise levels/sources in the area, 2) nearby sensitive receptors, 3) conformance to state noise standards, and 4) quality of life. Identify measures that will be taken to minimize or mitigate the effects of noise.

Existing noise levels/sources in the area

Existing sources include the operation of the Facility, other industrial uses west of the Facility, and traffic along 212th Street West, Akin Road, and other connecting local roadways. Hours of operation at the Facility are 7:30 a.m. to 3:30 p.m. from Monday through Friday. Northern has not received noise complaints associated with the existing operation of the Facility.

Nearby sensitive receptors

The site is in an industrial area and that has been used for industrial purposes since 1961. The nearest sensitive resources include residential development and schools located approximately a half mile east of the site. Residential areas are buffered from the site by Akin Road, wooded areas along the Vermillion River, and open space/park land.

Conformance to State noise standards

Minnesota's noise pollution rules⁴¹ are based on statistical calculations that quantify noise levels over a one-hour monitoring period. The L₁₀ calculation is the noise level that is exceeded for 10 percent, or 6 minutes, of the hour, and the L₅₀ calculation is the noise level exceeded for 50 percent, or 30 minutes, of the hour. There is no limit on maximum noise.

The statutory limits for a residential location are L₁₀ = 65 dBA and L₅₀ = 60 dBA during the daytime (7:00 a.m. – 10:00 p.m.) and L₁₀ = 55 dBA and L₅₀ = 50 dBA during the nighttime (10:00 p.m. – 7:00 a.m.). This means that during the

⁴¹[More information on Minnesota Noise rules, Minn. Rules Ch. 7030](#), may be found at:

one-hour period of monitoring, daytime noise levels cannot exceed 65 dBA for more than 10 percent of the time or 60 dBA more than 50 percent of the time.

Table 18. Noise Area Classifications

NAC	Common land use associated with the Noise Area Classification	Daytime (dBA) L₁₀	Daytime (dBA) L₅₀	Nighttime (dBA) L₁₀	Nighttime (dBA) L₅₀
1	Residential housing, religious activities, camping and picnicking areas, health services, hotels, educational services	65	60	55	50
2	Retail, business and government services, recreational activities, transit passenger terminals	70	65	70	65
3	Manufacturing, fairgrounds and amusement parks, agricultural and forestry activities	80	75	80	75

Noise area classifications (NAC) are based on the land use at the location of the person who hears the noise, which does not always correspond with the zoning of an area. Therefore, noise from an industrial facility near a residential area is held to the NAC 1 standards if it can be heard on a residential property.

Quality of life

The Project would result in temporary elevated noise during the construction period (approximately May through August) and is not anticipated to affect the quality of life for nearby properties. Construction noise would be temporary and would adhere to local ordinance requirements. No construction or operation hours would occur during nighttime hours. Construction equipment would be properly muffled and maintained in working order.

Existing operational noise is typical of industrial uses and would not change because of the proposed maintenance and equipment improvements. By state law, Facility operations must comply with State noise standards. Northern is not aware of any past documented noise complaints associated with the existing operation of the Facility. The Project would not result in changes to operational noise.

20. Transportation

- a. Describe traffic-related aspects of project construction and operation. Include: 1) existing and proposed additional parking spaces, 2) estimated total average daily traffic generated, 3) estimated maximum peak hour traffic generated and time of occurrence, 4) indicate source of trip generation rates used in the estimates, and 5) availability of transit and/or other alternative transportation modes.

Existing and Proposed Additional Parking Spaces

Approximately 50 parking spaces are present near the main entrance from 212th Street West. The Project proposes maintenance and equipment improvements, which would not generate additional trips. No additional parking spaces are proposed as part of the Project.

Estimated Total Average Daily Traffic Generated

Approximately 15 employee vehicles per day access the Facility. Employees and visitors typically enter the Facility from the main access road from 212th Street West.

Approximately five box trucks, five freight tractor-trailer, and three contractor tractor-trailer truck access the Facility's Central Distribution Center (CDC) daily. Truck traffic is not consistent year-round but tends to be reduced during the winter months. Trucks primarily access the Facility using Easter Avenue along the western boundary of the site which connects to 212th Street West.

Estimated maximum peak hour traffic generated and time of occurrence

Employees enter and exit the Facility throughout the day during operational hours from 7:30 a.m. to 3:30 p.m. from Monday through Friday.

Truck deliveries/pickups and contractor trucks enter and existing the Facility between 7:30 a.m. to 3:00 p.m.

Indicate source of trip generation rates used in the estimates

Traffic generation estimates are based on the current number of employees and allowable trucks accessing the Facility. The Project is not anticipated to change the permanent number of truck and employee vehicles accessing the Facility.

Northern plans to relocate the CDC to a new location in the City of Cannon Falls, Minnesota in 2024. Therefore, truck traffic at the Facility is anticipated to decrease.

Availability of transit and/or other alternative transportation modes

No transit and/or other alternative transportation facilities are available near the site.

- b. Discuss the effect on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the project's impact on the regional transportation system. If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW. Use the format and procedures described in the Minnesota Department of Transportation's Access Management Manual, Chapter 5 (available at: <http://www.dot.state.mn.us/accessmanagement/resources.html>) or a similar local guidance.

The Project would not increase operational traffic at the Facility. Existing truck traffic, consisting of approximately 13 trucks per day, would not change because of the Project. The future relocation of the CDC would result in a decrease in truck traffic at the Facility. The CDC and field operations enter the Facility from separate gates from 212th Street West. All construction traffic enters and exists the Facility through the gate from Akin Road. No changes in access from 212th Street West are proposed as part of the Project.

During construction, it is anticipated the temporary increase in construction and contractor trucks would occur for approximately three to four months. Construction would not require traffic detours or traffic disruptions along 212th Street West.

- c. Identify measures that will be taken to minimize or mitigate project related transportation effects.

The Project would not change existing traffic volumes and access from 212th Street West. No traffic minimization or mitigation measures are proposed as part of the Project.

21. Cumulative potential effects:

- a. Describe the geographic scales and timeframes of the project related environmental effects that could combine with other environmental effects resulting in cumulative potential effects.

The Project would include building removals, equipment maintenance and replacement, and other improvements. The Proposer anticipates that the proposed improvements would be constructed in phases over the next ten years, beginning in 2023. Geographic scale and timeframes of project related environmental effects that could combine with other effects are described below.

Hazardous Material Release from Demolition

It is understood that soil and groundwater contamination is near and could be at compressor station #1. Demolition of this building could result in VOC releases as well as asbestos containing material or other regulated materials. The geographic scale of this effect would be limited to the Project area, and the timeframe would be during May-August of 2025. Soil contamination would be confined to the site and appropriately dealt with via a comprehensive survey to be completed before demolition, and an asbestos abatement/removal plan if it is required. Additionally, based on the survey findings, an EPA Identification Number for Regulated Waste Activity may need to be obtained for the proper disposal of regulated materials.

Surface Water Effects from Runoff

The geographic area for these effects would be the Vermillion River, an unnamed stream/ditch, and the three wetlands that receive stormwater runoff from the Facility. Demolition of Compressor building #1 would cause soil disturbance, and projects would require excavation during construction seasons. This could result in accelerated runoff that could lead to soil erosion and movement of sediment. The soil at the site already has high runoff potential, so construction activities and potential rain events have the potential to lead to increased runoff into the five identified water bodies. Because site conditions would be returned to preconstruction conditions upon project completion, the time scale is limited to construction periods.

Drawdown Effects from Dewatering

The temporary dewatering activities taking place from May- August of construction years (2023-2028,2030, 2031) would cause drawdown effects to nearby wells. A drawdown analysis determined the geographic scale of this effect is a 700ft radius around the dewatering wells. The time scale would only be during the construction periods.

Dewatering Effects on Surface Water Quality

As previously stated in section 13, soil and groundwater has been identified at the disturbance area site. Dewatering the contaminated groundwater and discharging it to the wetland in the north and the ditch near the Vermillion River could lead to those contaminants potentially entering the surface water features. This would impact the river and the wetland only during dewatering periods from May-August of planned construction years.

Dewatering Effects on Flooding

Discharging to Site B adjacent to the Vermillion River would increase the flood risk downstream. Previous projects expected 21,168,000 gallons discharged at a pumping rate of 700 GPM, with the maximum rate of 1,750. This level of discharge could cause flooding downstream depending on weather events and other dewatering projects discharging into the river.

Air Quality and Noise

Noise and air pollution are expected to increase slightly from construction equipment during the construction season of May to August between 2023-2031. Air pollutants and greenhouse gases would be expected to increase during construction due to the combustion activities associated with mobile equipment as well as venting emissions from pipeline maintenance. These increases would be temporary. Dust would locally increase temporarily during construction as well. Odors from diesel engines and fuel storage would increase during construction but would not continue into operation. The geographic scale of these effects would be expected to be in the immediate area surrounding the Project site.

- b. Describe any reasonably foreseeable future projects (for which a basis of expectation has been laid) that may interact with environmental effects of the proposed project within the geographic scales and timeframes identified above.

There are foreseeable future projects in both Lakeville and Farmington. The future projects are various housing developments where the environmental effects may overlap with the geographic scale and timeframes identified. The primary environmental effects that could overlap are noise and air quality effects as well as surface water impacts from runoff or dewatering discharge.

The Vita Attiva Development is located a half-mile Southeast of the Farmington compressor station. It is currently in the construction phase. Several plats have been approved, however there will be additional plat applications in the future. The development project is anticipated to take at least 2-3 years to complete.

Vermillion Commons is another housing development in progress located less than a half mile south of the Project. It is a 75.8-acre townhome development that will contain 276 townhomes upon completion.

Sapphire Lake is a 70-acre housing development located roughly two miles west of the Project site with 131 single family homes platted for development. Utilities and infrastructure are complete, houses will be built on the property in the next several years.

Fairhill Estates at North Creek is a 90-acre single family residential development located approximately 2.5 miles northeast of the Facility. It is the first phase of a 1000-acre project. The current development has completed platting, utilities, and infrastructure. Over the next several years homes will be built on the property.

- c. Discuss the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects.

Hazardous Material Release from Demolition

Due to the limited geographic and temporal scales of these environmental effects, and the containment methods described in section 13, there is no reasonable potential for environmental effects to accumulate from soil contamination with nearby future projects.

Surface Water Effects from Runoff

Northern currently has an NPDES/SDS permit (MNR100001) and a SWPPP to protect surface waters from runoff impacts. Several best management practices (BMPs) are in place and would continue during the Project. The Facility also has a stormwater pond to reduce runoff rates and provides adequate volume management in compliance with city guidelines. Any nearby project over an acre would also be subject to an NPDES permit, thus further reducing the potential for measurable cumulative effects.

Drawdown Effects from Dewatering

Due to the limited area and temporary time frame of dewatering in the proposed project, there is little potential for effects accumulating from the current planned projects in the area.

Dewatering Effects on Surface Water Quality

Due to the limited nature of the discharge into the Vermillion River, the potential for accumulation of effects on surface water from groundwater contamination is low. The Facility currently has an NPDES/SDS permit (MNR100001), follows a Stormwater Pollution Prevention Plan, and plans to amend or create a new one to incorporate the Project. Several BMPs referenced in EAW Item 12 would continue to be followed for the Project. These documents contain requirements for discharging water in impaired waters, such as the Vermillion River. If further treatment of the discharge water is necessary, Northern would comply, and/or apply for any additional necessary permits. Compliance with the permit(s) would reduce risk of cumulative environmental effects.

Dewatering Effects on Flooding

Since the dewatering time scale is limited, the Facility follows an NPDES permit and recently installed a stormwater pond at the site, it is unlikely there would be accumulation of environmental effects with nearby developments.

Air Quality and Noise

Depending on construction schedules and site conditions there is a low potential for air emissions, including dust and odors from construction to accumulate from other construction projects in the area. Since no long-term increases to emissions or noise would occur, there risk of cumulative potential effects in this area is low.

22. Other potential environmental effects

If the project may cause any additional environmental effects not addressed by items 1 to 19, describe the effects here, discuss the how the environment will be affected, and identify measures that will be taken to minimize and mitigate these effects.

RGU CERTIFICATION. *(The Environmental Quality Board will only accept **SIGNED** Environmental Assessment Worksheets for public notice in the EQB Monitor.)*

I hereby certify that:

- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minnesota Rules, parts 4410.0200, subparts 9c and 60, respectively.
- Copies of this EAW are being sent to the entire EQB distribution list.

Signature _____

Date _____

Title _____