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Tuscarora Gas Transmission Company

Docket No. CP20-486-000

Tuscarora XPress Project

Environmental Assessment

Washington, DC 20426

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TECHNICAL ABBREVIATIONS AND ACRONYMS

BLM	Bureau of Land Management
BGEPA	Bald and Golden Eagle Protection Act
BMP	Best Management Practices
CAA	Clean Air Act
Certificate	Certificate of Public Convenience and Necessity
CFR	Code of Federal Regulations
CO	carbon monoxide
CO ₂	carbon dioxide
CO _{2e}	carbon dioxide equivalents
CS	compressor station
dB(A)	decibels on the A-weighted scale
Dth/d	dekatherms per day
HP	horsepower
EA	environmental assessment
ECS	Environmental Construction Standards
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FERC	Federal Energy Regulatory Commission; <i>also</i> Commission
GHG	greenhouse gases
HAP	Hazardous Air Pollutant
HP	horsepower
IPaC	Information for Planning and Consultation
L _{dn}	Day-night sound level
NAAQS	National Ambient Air Quality Standards
NRCS	Natural Resources Conservation Service
NEPA	National Environmental Policy Act of 1969
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NGA	Natural Gas Act
NHPA	National Historic Preservation Act
NBMG	Nevada Bureau of Mines and Geology
NDOW	Nevada Department of Wildlife
NNHP	Nevada Natural Heritage Program
NOI	<i>Notice of Intent to Prepare an Environmental Assessment for the Proposed Tuscarora XPress Project and Request for Comments on Environmental Issues</i>
NO _x	nitrogen oxide
NSA	noise sensitive area
OEP	FERC's Office of Energy Projects

PM _{2.5}	particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to 10 microns
Project Secretary	Tuscarora Gas Transmission Company's Tuscarora XPress Project Secretary of the Commission
SO ₂	sulfur dioxide
Tuscarora XPress	Tuscarora XPress Gas Supply Corporation
TWS	temporary workspace
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Society
USFWS	U.S. Fish and Wildlife Service

SECTION A – PROPOSED ACTION

A.1 INTRODUCTION

The staff of the Federal Energy Regulatory Commission (Commission or FERC) prepared this environmental assessment (EA) to assess the environmental impacts of the Tuscarora XPress Project (Project). On June 24, 2020, Tuscarora Gas Transmission Company (Tuscarora) filed an application in Docket No. CP20-486-000 requesting a Certificate of Public Convenience and Necessity pursuant to Section 7(c) and 7(b) of the Natural Gas Act to construct, replace, and operate certain interstate natural gas transmission pipeline facilities. Tuscarora proposes to upgrade and replace an existing reciprocating compressor unit (foundation and building) and construct a new skid-mounted compressor unit at the same location within the existing Wadsworth Compressor Station (CS) in Washoe County, Nevada. Additionally, Tuscarora would upgrade an existing meter, replace the existing meter bypass line with a new meter piping run, and install a second new meter within the existing compressor station site. Tuscarora is seeking authorization to increase the certificated capacity of its natural gas pipeline by 15,000 dekatherms per day (“Dth/d”) from Malin, Oregon to an existing interconnection with Paiute Pipeline Company’s pipeline system in Washoe County, Nevada.

We¹ prepared this EA in compliance with the requirements of the National Environmental Policy Act (NEPA); the Council on Environmental Quality’s (CEQ) regulations for implementing NEPA (Title 40 Code of Federal Regulations (CFR), Parts 1500-1508 [40 CFR 1500-1508])²; and the Commission’s regulations at 18 CFR 380.

The FERC is the lead federal agency for authorizing interstate natural gas transmission facilities under the NGA, and the lead federal agency for preparation of this EA, in accordance with NEPA (40 CFR 1501) and the Energy Policy Act of 2005. No other agencies elected to become cooperating agencies for the preparation of this EA. The assessment of environmental impacts is an integral part of the Commission’s decision-making process to determine whether to issue Tuscarora a Certificate and

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

² On July 16, 2020, CEQ issued a final rule, *Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act* (Final Rule, 85 Fed. Reg. 43,304), which was effective as of September 14, 2020; however, the NEPA review of this project was in process at that time and was prepared pursuant to the 1978 regulations.

Authorization to replace and operate the proposed facilities. We prepared this EA to assess the environmental impacts that would likely occur as a result of construction of the Project. Our principal purposes in preparing this EA are to:

- identify and assess potential impacts on the natural and human environment that could result from implementation of the proposed action; and
- identify and recommend reasonable alternatives and specific mitigation measures, as necessary, to avoid or minimize Project-related environmental impacts.

A.2 PROJECT PURPOSE AND NEED

The purpose of the Project is to abandon and replace compression facilities in order to provide 15,000 Dth/d of incremental firm transportation capacity on Tuscarora's interstate natural gas pipeline system from its interconnection with Gas Transmission Northwest LLC's pipeline system in Malin, Oregon to an existing interconnection with Paiute Pipeline Company's pipeline system in Washoe County, Nevada.. According to Tuscarora, this increase in transportation capacity is necessary to meet the growing market demand for natural gas in the Reno, Nevada area. Tuscarora has executed a twenty-year binding precedent agreement with the Project shipper, Southwest Gas Corporation, for the full Tuscarora XPress Project capacity.

Section 7(b) of the NGA specifies that no natural gas company shall abandon any portion of its facilities subject to the Commission's jurisdiction without the Commission first finding that the abandonment would not negatively affect the present or future public convenience and necessity.

Under Section 7(c) of the NGA, the Commission determines whether interstate natural gas transportation facilities are in the public convenience and necessity and, if so, grants a Certificate to construct and operate them. The Commission bases its decisions on economic issues, including need, and environmental impacts. Approval would be granted if, after consideration of both environmental and non-environmental issues, the Commission finds that the Project is in the public convenience and necessity.

A.3 SCOPE OF THIS ENVIRONMENTAL ASSESSMENT

The topics addressed in section B of this EA include geology and soils; land use, recreation, and visual resources; vegetation, wildlife, and special status species; cultural resources; air quality and noise; and reliability and safety. Based on our review of the Project, the following resources would not be affected and therefore, are not addressed further in this analysis:

- water resources;
- wetlands; and

- fisheries.

The EA describes the affected environment as it currently exists, discusses the environmental consequences of the proposed Project, identifies measures proposed by Tuscarora to reduce impacts, and presents our additional recommended mitigation measures, which are summarized in section D.

As the lead federal agency for the Project, FERC is required to comply with Section 7 of the Endangered Species Act, as amended (ESA) and Section 106 of the National Historic Preservation Act (NHPA). These statutes have been considered in the preparation of this EA. In addition to FERC, other federal, state, and local agencies may use this EA in approving or issuing any permits necessary for all or part of the proposed Project. Permits, approvals, and consultations for the Project are discussed in section A.9 of this EA.

A.4 PUBLIC REVIEW AND COMMENT

On August 4, 2020, the Commission issued in Docket No. CP20-486-000 a *Notice of Intent to Prepare an Environmental Assessment for the Proposed Tuscarora XPress Project and Request for Comments on Environmental Issues* (NOI). The NOI was sent to affected landowners; federal, state, and local government agencies; elected officials; environmental and public interest groups; Native American tribes; other interested parties; and local libraries and newspapers. In response to the NOI, the Commission received comments from the U.S. Environmental Protection Agency (EPA) identifying criteria for review as part of this analysis, such as alternatives, range of effects/impacts, air quality, ecological connectivity, environmental justice, community involvement, source water protection areas for drinking water, water quality, and protected species. These issues were considered in our analysis, and as applicable, are addressed in the relevant sections of this EA.

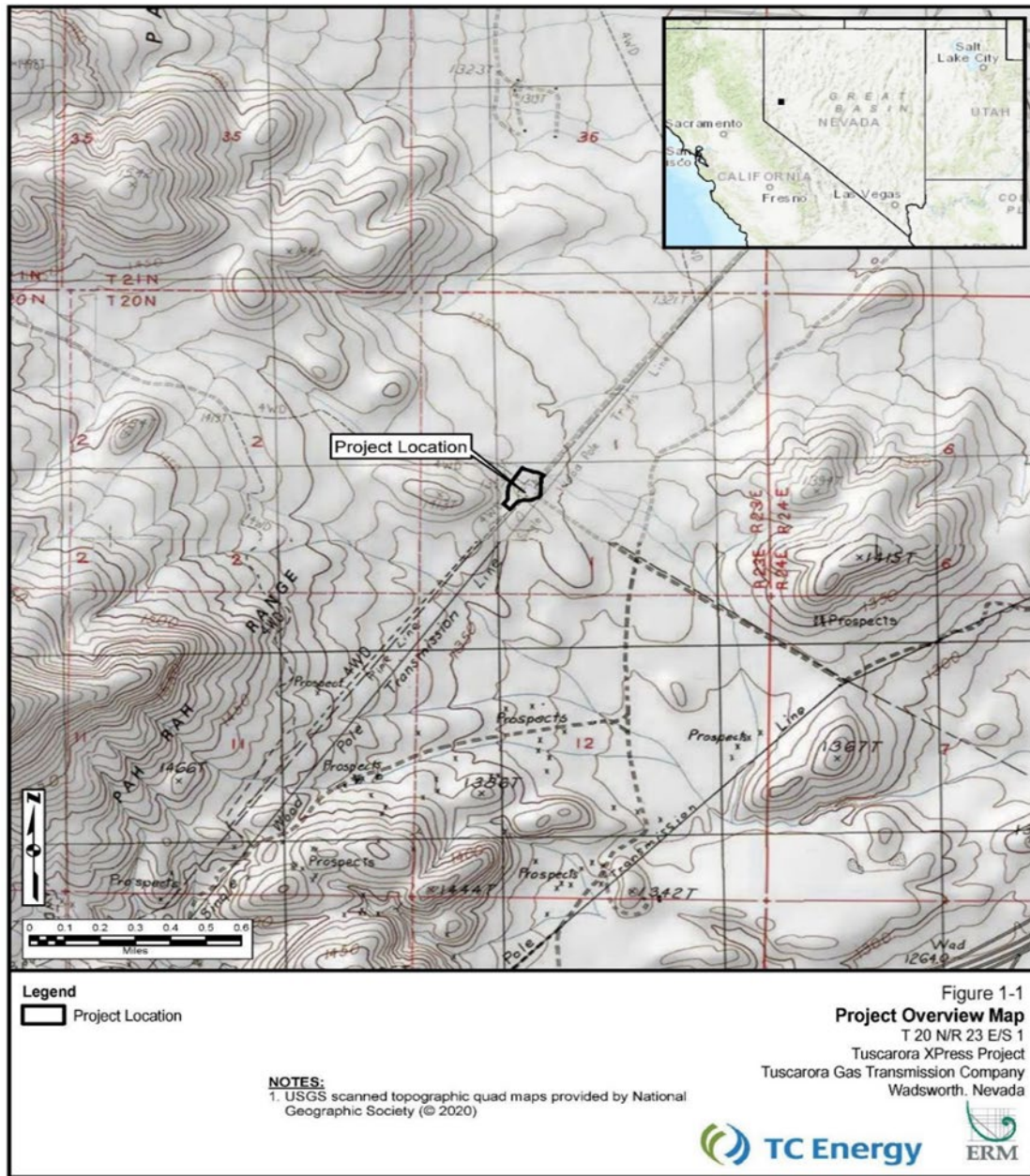
A.5 PROPOSED FACILITIES

Tuscarora proposes the following facilities in Washoe County, Nevada:

- demolish an existing CAT 3412TA engine and Ariel 2 throw reciprocating compressor, rated at 600 horsepower and replace it with a new CAT G3516J driver and an Ariel KBT/4 reciprocating compressor, rated at 1380 horsepower (compressor building unit and foundation);
- replace existing metering facilities; and
- install new station piping.

The general location of the Project is shown on figure A.5-1.

Figure A.5-1 Project Location



A.6 LAND REQUIREMENTS

Replacing and modifying the proposed facilities would require the temporary use of approximately 4.6 acres of land. Temporary workspace would facilitate staging, vehicle maintenance and parking, and material storage, all of which would be located immediately adjacent to the existing Wadsworth Compressor Station site. Existing county roads would be used to access the site. As described previously, the new compressor unit would be installed in the same location as the existing compressor unit.

The existing compressor station fenceline would be extended to accommodate replacement of the compressor unit. The fenceline extension would be approximately a 10-foot-wide by 123-foot-long area resulting in the expansion (less than 0.1 acre) of the station's permanent footprint. The existing metering facilities are also located within the permanent facility site, and all metering upgrade work would occur within the existing fenceline boundaries.

A.7 CONSTRUCTION PROCEDURES

The Project would be designed, constructed, removed, tested, operated, and maintained in accordance with the U.S. Department of Transportation (DOT) Minimum Federal Safety Standards in 49 CFR 192, Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards, and other applicable federal and state regulations. Project facilities would be marked and identified in accordance with applicable regulations.

Tuscarora has prepared a Spill Prevention, Containment, and Control Plan (SPCC); Environmental Construction Standards (ECS) which incorporates and adopts our *Upland Erosion Control, Revegetation, and Maintenance Plan* (Plan) and *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures)³; and other environmental requirements, including those required by state and local agencies for the Project.

Tuscarora would prepare a site-specific construction plan depicting the planned locations for erosion and sediment controls in construction work areas. The erosion and sediment controls would be based on Tuscarora's ECS and state and local regulations or guidelines applying the strictest applicable standards. Tuscarora would comply with permit conditions issued for the Project by federal, state, and local agencies.

Testing of newly constructed natural gas facilities is required by the DOT regulations codified at 49 CFR 192. The aboveground facilities would be hydrostatically tested in accordance with these standards to verify integrity and ability to withstand the designed maximum operating pressures. Hydrostatic test water would utilize clean water from a local municipality. Tuscarora has stated it plans to re-use hydrostatic test water for fugitive dust mitigation in accordance with the ECS and applicable permits.

³ The FERC Plan and Procedures are a set of construction and mitigation measures developed to minimize the potential environmental impacts of the construction of pipeline projects in general. The FERC Plan and Procedures can be viewed on the FERC website at www.ferc.gov/industries/gas/enviro/plan.pdf and <http://www.ferc.gov/industries/gas/enviro/procedures.pdf>.

A.7.1 Mobilization

Mobilization would include erecting a construction trailer/office, as well as delivery of equipment and materials needed to complete Project work. Construction mobilization for expansion projects often includes the transport of equipment (e.g., temporary fencing, construction materials, and power supplies) to create a workspace that can be utilized until proposed Project completion.

Limited clearing and grading activities required for the construction of the Project would be conducted in accordance with Tuscarora's ECS. The Wadsworth Compressor Station site and temporary workspace would be cleared of existing vegetation and graded, as necessary, to create a level surface for the movement of construction vehicles and to prepare the area for constructing pads and foundations. The associated temporary workspace would be used primarily for staging vehicles and equipment and would involve minimal ground disturbance beyond surface grading.

A.7-2 Compressor Building and Equipment

Once the erosion and sediment controls are in place, demolition of existing facilities would commence. The existing skid-mounted reciprocating compressor building, unit, and foundation would be demolished and removed from the site. Materials removed from the site would be disposed of in accordance with applicable federal, state, and local regulations.

After demolition of the existing compressor facility and foundation, excavation would begin for the installation of the new building foundation and pipe supports. Generally, the foundation for the compressor building requires a significant mass of reinforced concrete to provide a stable support for the operating machinery. Once the ground surface area has been prepared, forms and reinforcing bars would be installed and high-strength concrete would be poured to the appropriate design levels.

Various underground piping systems would be installed to accommodate the installation of the new compressor unit. Installation of the various piping systems will begin at approximately the same time as the foundation work. Trenches will be excavated for the underground portions of the piping. The pipe would be welded, radiographed, coated, placed in the trench, and backfilled. Some portions of the station piping would occur above ground. Any aboveground piping would be installed on concrete or metal pipe supports and painted. As major parts of the piping are completed, each would be tested either hydrostatically or pneumatically to verify its integrity.

Once the foundations have been completed and have cured sufficiently, installation of the station machinery and building may begin. Tuscarora's pipeline system utilizes a distributed cathodic protection system with multiple rectifiers, anodes,

and circuits. New cathodic protection equipment would be added and balanced with the existing cathodic protection system as necessary, after equipment is installed as part of the Project. Inspections, calibrations, and modifications would be completed in accordance with best design practices and 49 CFR 192 requirements. After the completion of piping and mechanical work, the new Project facilities would be operated on a trial basis to verify the operation of the safety and protective devices.

A.7.3 Environmental Compliance Inspection and Monitoring

Prior to construction, Tuscarora would conduct environmental training for the construction personnel. Construction contractors would receive environmental training applicable to their job duties, and construction management and environmental inspectors (EI) would receive all Project-specific information.

Tuscarora would also conduct post-construction monitoring to document restoration and revegetation of disturbed areas. Tuscarora would monitor upland areas after the first and second growing seasons following restoration or until revegetation is successful in accordance with the Plan and Procedures. Tuscarora would also submit quarterly monitoring reports to FERC to document the status of revegetation in disturbed areas. These reports would describe the results of post-construction inspections, any problem areas, landowner/agency concerns, and corrective actions taken.

In addition, FERC staff would maintain compliance oversight of the Project throughout construction to ensure compliance with the environmental conditions of the Certificate. FERC staff would continue to monitor restoration and revegetation until it is deemed successful by FERC staff.

Tuscarora is targeting November 2021 to put the Project in-service.

A.9 PERMITS, APPROVALS, AND REGULATORY CONSULTATIONS

Table A.9-1 lists the major federal, state, and local permits, approvals, and consultations for construction and operation of the Project, respectively, and provides the current status of each associated permit, approval, and consultation. Tuscarora would be responsible for obtaining and abiding by all permits and approvals required for construction and operation of the Project regardless of whether they appear in the table or not.

Table A.9 -1		
Permits, Approvals, and Consultations for the Project		
Administering Agency	Permit or Approval	Status
Federal		
FERC	Certificate of Public Convenience and Necessity Under Section 7(c) of the Natural Gas Act	Application filed June 2020
U.S. Fish and Wildlife Service - Northern Nevada Field Office	Section 7 of the Endangered Species Act Bald and Gold Eagle Protection Act Migratory Bird Treaty Act	Consultation complete
State Nevada		
Nevada Department of Conservation and Natural Resources, Division of Environmental Protection, Bureau of Air Pollution Control	Construction and Operation Permits	Application filed June 2020
Nevada State Historic Preservation Office	National Historic Preservation Act, Section 106 Consultation	Consultation Complete
Nevada Division of Forestry, State Threatened and Endangered Species Program; Department of Wildlife; and Department of Conservation and Natural Resources, Natural Heritage Program	Consultations on sensitive species and habitats; Permit to Take Protected Plants under State Statutes (Consultation Complete
Nevada Department of Conservation and Natural Resources, Division of Environmental Protection, Bureau of Water Pollution Control	Construction Stormwater Discharge General Permit (National Pollution Discharge Elimination System Permit	Application to be filed February 2021
	Section 402 of the Clean Water Act, Temporary Discharge Permit	Application to be filed February 2021
Local		
Washoe County Health District, Air Quality Management Division	Authority to Construct /Modify and Permit to Operate Dust Control Permit	Application to be filed February 2021
Washoe County, Planning and Building Division Washoe County Planning Department	Demolition Permit Building Permit under State Statutes and Local Ordinances Conditional Use Permit Under State Statutes and Local Ordinances	Application to be filed February 2021

SECTION B - ENVIRONMENTAL ANALYSIS

The Project is within Washoe County, Nevada. As of the 2010 United States Census, the population density in the county was 66.9 inhabitants per square mile. The largest employment sectors are health care and social assistance, retail trade, and manufacturing. The summer high temperature is in July (89 degrees Fahrenheit (F)) and the winter low is in January (23 degrees F). The county gets about 11 inches of rain a year and about 38 inches of snow. On average, 8 months of the year have significant snowfall.

The specific project area lies within the Great Basin south of Pyramid Lake, north of Interstate-80, east of the Pah Rah Range, and west of Wadsworth. This part of Nevada is generally characterized as a sagebrush environment, unpopulated or sparsely populated, and contains a mix of federal (Bureau of Land Management) and private land ownership, commonly referred to as “checkerboard”.

Replacing and modifying the proposed facilities would have temporary, short-term, long-term, and permanent impacts on the environment. As discussed throughout this EA, temporary impacts are defined as occurring only during the construction phase. Short-term impacts are defined as lasting between two to five years. Long-term impacts would eventually recover but require more than five years. Permanent impacts are defined as lasting throughout the life of the Project, such as with the construction of an aboveground facility. An impact would be considered significant if it would result in a substantial adverse change in the physical environment.

In its comments on the range of effect/impacts, the EPA recommended the consideration of impacts that may not be managed through existing regulations, particularly impacts related to project-related emissions. We concur that not all environmental impacts may be regulated and have in our subsequent analysis considered and disclosed to the best of our abilities all project-related impacts. The EPA also commented on ecological connectivity, specifically citing the example of a pipeline impeding wildlife movement and recommended that this analysis examine not only wildlife connectivity, but broader ecological connections including interactions between land and water. Lastly, the EPA recommended we assess avoidance and minimization measures that would address impacts on ecological connectivity. We considered the EPA’s ecological connectivity comments and have concluded that the replacement and modification of facilities at an existing compressor station site would not further affect ecological connections.

Based on our review of the Project, the use of existing and disturbed lands for project-related workspace, the characteristics of other lands that would be used for workspace including the absence of waterbodies within workspace boundaries, and the nature of the work to be performed, we conclude that water resources, wetlands, and

fisheries, would not be affected; and therefore, are not addressed further in this analysis. In its comments, the EPA expressed concerns about water quality and source water protections areas; however, because no waterbodies would be affected, there would be no impacts on water quality and no impacts on source waters.

The analysis contained in this EA is based upon Tuscarora's application and supplemental filings and our experience with the abandonment, construction and operation of natural gas infrastructure. However, if the Project is approved and proceeds, it is not uncommon for a project proponent to require minor modifications (e.g., minor changes in workspace configurations). These changes are often identified by a company once on-the-ground implementation of work is initiated. Any Project modifications would be subject to review and approval by FERC and any other applicable permitting/authorizing agencies with jurisdiction.

B.1 GEOLOGY

B.1.1 Physiographic Settings and Geologic Conditions

The proposed facilities would be located within the Great Basin section of the Basin and Range Physiographic Province (National Park Service, 2020). The Basin and Range Physiographic Province stretches east to west from central Utah to eastern California, and north to south from southern Idaho to Sonora, Mexico. This area is characterized by a thin, fault-heavy crust caused by the east-to-west stretching of the earth's crust by tectonic plate movement. An alternating pattern of steep mountain ranges and low valleys has been formed as mountain ranges emerge from north-to-south trending faults. This region showcases a variety of topographic features, including alluvial fans, bajadas, playas, mud flats, salt flats, sand dunes, and canyons. The elevation of the Basin and Range Province varies greatly between valley and mountain range, ranging from 100 feet below sea level in Death Valley to more than 10,000 feet at mountain summits (National Park Service, 2020). Major bedrock units crossed by the Project include unconsolidated Pleistocene and Pliocene-aged alluvium and alluvial fan deposits.

Based on an analysis of the Natural Resources Conservation Service's Soil Survey Geographic Database, approximately 2.0 acres of the Project workspace has shallow lithic bedrock (i.e., bedrock within 60 inches of the surface). Should blasting be necessary, Tuscarora would implement appropriate precautions and methods (e.g., blasting mats) where necessary to avoid injury or damage to persons, livestock, property, and sensitive resources as outlined in its ECS.

B.1.2 Mineral Resources

Based on a review of the Nevada Bureau of Mines and Geology (NBMG) database, no oil or gas wells were identified within 0.25 mile of the Project area. The proposed Project is within the Olinghouse mining district. The major commodities mined in the Olinghouse mining district are gold and fluorite (NBMG, 2019). Based on a review of the U.S. Geological Survey (USGS) Active Mines and Processing Plants Database and the USGS Mineral Resource Data System, no pre-production mineral deposit sites, active or formerly active mines, or mineral processing plants are within 1 mile of the proposed Project (USGS, 2005a, 2005b). Therefore, we do not anticipate the Project affecting exploitable mineral resources.

B.1.3 Geologic Hazards

Geologic hazards are natural physical conditions that can, when active, result in damage to land or structures, or injuries to people. Potential geologic hazards present in the Project areas include seismic hazards and pseudo-karst terrain.

Seismic hazards include earthquakes, surface faulting, and soil liquefaction. Depending upon its size and location, an earthquake can cause ground shaking, surface fault rupture, and ground failure. The Project lies within the Walker Lane Seismic Belt which is located along an active tectonic boundary between the Pacific and North American plates. The Walker Lane Seismic Belt takes up 15 to 25 percent of the boundary motion between the Pacific Plate and the North American Plate and has experienced earthquakes with magnitudes of 6.0 and greater. Based on a query of available USGS earthquake data, five earthquake epicenters with magnitudes between 2.5 and 3.8 were documented within a 10-mile radius of the Project site between January 1, 2000 and April 15, 2020 (USGS, 2020).

Seismic risk can be quantified by the motions experienced by the ground surface or structures during a given earthquake. The USGS Hazard Mapping Program produced probabilistic seismic hazard maps that show an estimate of the probability that ground motion would exceed a certain value, the peak ground acceleration (PGA), in 50 years (Rukstales and Petersen, 2019). The predicted PGA for the proposed Project area is 50 percent of gravity for the 2,500-year return period. Earthquake ground shaking resulting from the predicted PGA of 50 percent of gravity could be expected to result in severe perceived shaking and moderate to heavy potential damage (Wald et al., 2006).

Surface faulting is the offset or tearing of the ground surface by differential movement along a fault during an earthquake. Three geologically young (late Pleistocene to Holocene-age) active fault zones are located within the Project area. The Olinghouse fault zone approximately 2.5 miles to the west; the Pyramid Lake fault zone approximately 2.5 miles to the east, and an unnamed fault zone in the Virginia Range

approximately 1.3 miles south of the Project (NBMG, 2020b). None of these faults are shown to intersect the Wadsworth Compressor Station or Project workspaces.

Soil liquefaction is a phenomenon associated with seismic activity in which saturated, non-cohesive soils temporarily lose their strength and behave like a viscous liquid when subjected to forces such as intense and prolonged ground shaking. Soils in the Project area are characterized by the Webb Soil Survey (2020) as well drained to excessively well drained soils. The Project area is also characterized by arid to semi-arid climatic conditions where most precipitation is lost to evapotranspiration accounting for the largest natural discharge component. As such, the Project area lacks a shallow water table, and the three conditions necessary for soil liquefaction to occur are not present.

Pseudokarst is a landscape feature analogous to karst that arises from other processes in geologic materials susceptible to the formation of voids, such as lava flows in relatively young volcanic flow rocks (e.g., basalts). Sinkhole features, which are formed in volcanic pseudo-karst by the collapse of volcanic tunnels, can present a risk of ground collapse that can potentially damage structures. If pseudo-karst features are encountered during Project construction, Tuscarora would implement the best management practices in its ECS, including:

- monitoring karst features intercepted during construction to assess the potential for impacts on the subsurface karst environment and for changes in appearance, drainage, siltation, or structure;
- monitoring features that form during construction to assess the potential for impacts on the subsurface karst environment;
- implementing remedial actions to stabilize or mitigate impacts on karst features that are intercepted during construction (e.g., by plugging an “open throat” sinkhole using graded rock fill);
- prohibiting construction-related water discharges within 300 feet of an identified karst feature; and
- prohibiting construction-related water discharges directly into sinkholes, and verifying that discharged water is directed away from known karst features with a direct connection to the phreatic zone of the karst.

The Project would be designed to provide adequate protection from seismic activity, unstable soils, and other hazards that may cause infrastructure to move or to sustain abnormal loads. The overall effects of Project construction and operation on potential geologic hazards would be minor. Primary impacts would be limited to construction activities within previously disturbed/developed land within the Wadsworth Compressor Station. As discussed, the Project would be located in an area of elevated seismic risk. However, due to the lack of existing seismic damage to any equipment at the existing Wadsworth Compressor Station facility, it is anticipated that the proposed

facilities would be adequately protected from seismic activity. Tuscarora states that based on investigations by its engineering firm, no additional seismic mitigation would be required for facility design. We concur.

In conclusion, we find that the Project would not affect mineral resources in the Project area or be affected during construction or operation of the proposed natural gas facilities by natural geologic hazards.

B.2 SOIL RESOURCES

Soil descriptions and characteristics were obtained from the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) Soil Survey Geographic Database. The NRCS uses soil map units and soil series descriptions to describe and depict soil characteristics for a particular area. These descriptions and depictions can include slope, rock content, acidity, and depth to bedrock.

The proposed facilities would be located within the Fallon-Lovelock Area Major Land Resource Area (MLRA) (NRCS, 2006). This MLRA is characterized by isolated mountain ranges separated by broad desert plains and valleys. As previously stated, soils in the Project area are characterized as well drained to excessively well drained soils. The dominate soil orders in the Fallon-Lovelock Area MLRA are Entisols and Aridisols. Soil resource concerns for this area include highly wind erodible soils and excessive levels of soluble salts and sodium (NRCS, 2006).

B.2.1 Soil Erosion and Revegetation Potential

Highly erodible soils were identified based on land capability class, slope, and wind erodibility group. About 0.6 acre of the Project workspace is highly wind erodible and 3.7 acres of Project workspace are highly water erodible soils. The potential for erosion exists during grading, excavation activities, and periods of heavy rainfall or high winds. Tuscarora has committed to implementing the erosion control measures outlined in its ECS. Approximately 3.0 acres are identified as having a poor revegetation potential based on surface texture, drainage class, and slope. Any topsoil segregated during construction, would be used to cover areas to be revegetated. Upon completion of the Project, temporary workspace would be restored to its preconstruction condition and stabilized in accordance with Tuscarora's ECS.

Given the characteristics of Project area soils and the impact minimization and mitigation measures that would be implemented through adopting the FERC Plan and Procedures and Tuscarora's ECS, we conclude that impacts on soils would be minor.

B.3 LAND USE, RECREATION, AND VISUAL RESOURCES

Land use types in the Project area would consist of open land with a mix of sagebrush shrubland and salt desert scrub and developed land. The Project would not affect any forested land, agricultural land, residential land, wetlands, or open water. The total proposed acreage to be disturbed for temporary construction of all Project facilities is 4.6 acres of which 4.0 would be for temporary workspace. The temporary workspace would be located on land that is privately owned. The total permanent acreage required for operation of all Project facilities is 0.6 acres.

The Project would not affect any federally designated or recognized natural, recreational, or scenic areas. However, the Project is located within 1 mile of federally owned land managed by the U.S. Bureau of Land Management (BLM). Additionally, the Project would not be located within any federal, state, or locally designated scenic areas, such as National Wild and Scenic Rivers and scenic roads/highways. Impacts on visual and/or aesthetic resources would primarily occur as a result of the presence of construction equipment. Most impacts on visual resources would be temporary. The closest residence is 1.9 miles away from the Project area.

We conclude that the Project would not have a significant impact on land use, visual resources, recreational areas, or other designated or special uses.

B.3.1 Environmental Justice

We received comments from the EPA stating that impacts to environmental justice communities should be assessed. The following addresses the EPA's comment.

In accordance with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, we address the potential for disproportionately high and adverse health or environmental effects of the Project on minority and low-income populations. The affected environment was established in accordance with guidance from the CEQ's Environmental Justice Guidance Under NEPA (1997), and the Federal Interagency Working Group's Promising Practices for Environmental Justice Methodologies in NEPA Reviews (2016).

To determine if the Project would result in disproportionately high and adverse impacts on minority or low-income populations, we used the following criteria (recommended by the *Promising Practices for Environmental Justice Methodologies in NEPA Reviews* (EPA 2016)) to identify potential environmental justice communities:

- a) census block groups that have a minority population of more than 50 percent or a minority population that is 10 percentage points higher than their respective county; and

- b) census block groups that have a household poverty rate of more than 20 percent or a household poverty rate that is 10 percentage points higher than their respective county.

Low-income populations are populations where the percent low income population in the identified block group is equal to or greater than that of the county. According to U.S. Census Bureau information, low income and minority populations do not exist within 1-mile of the project area.

Based on our analysis, we conclude that since low income and minority populations do not exist within the Project area, the Project would not result in disproportionately high and adverse impact on environmental justice populations within the study area.

B.4 VEGETATION AND WILDLIFE

B.4.1 Vegetation

Vegetation in the Project area can be generally classified as a scrub/shrub-sagebrush community. As observed by Tuscarora representatives, this includes cheatgrass (*Bromus tectorum*), Indian ricegrass (*Oryzopsis hymenoides*), sagebrush (*Artemisia sp.*), four-wing saltbush (*Atriplex canescens*), winterfat (*Krascheninnikovia lanata*), and ephedra (*Ephedra sp.*). Cheatgrass is a non-native, invasive grass. Scrub/shrub-sagebrush communities are common to western Nevada.

Replacing and modifying the proposed facilities would require clearing vegetation across 3.1 acres of land. Existing industrial compressor station land would not require clearing. Clearing vegetation would result in short- and long-term loss of vegetation due to the arid conditions in the Project area and the subsequent time for natural revegetation to occur. Furthermore, ground disturbance and the increase in vehicular traffic to and from the site could increase the potential for the introduction and spread of non-native, invasive plant species. To reduce this potential increase and other impacts related to vegetation clearing, Tuscarora would adhere to measures described in its ECS which addresses erosion control and invasive plant species.

Based on our review of the Project, the amount of vegetation cleared, and the impacts of clearing this vegetation, we conclude that replacing and modifying the proposed facilities would not significantly affect this resource.

B.4.2 Wildlife

Wildlife occupying the Project area includes species that are accustomed to the scrub/shrub-sagebrush community present and tolerant of existing natural gas transmission infrastructure. These species include burrowing mammals, reptiles, raptors,

and other birds. Abandoning and replacing the proposed facilities would result in the loss of wildlife habitat and the displacement and avoidance of wildlife. Project-related activities could also affect predation rates and other wildlife behaviors. Collectively, these impacts would increase the rates of stress, injury, and mortality experienced by wildlife. However, given the scope of the Project, the duration of impacts, and the availability of similar habitat in the vicinity of the Project, we conclude these effects would not be significant. We also conclude the Project would not result in population level impacts on migratory birds.

B.4.3 Protected Species

Protected species include federally-listed threatened and endangered species, species protected by the Bald and Golden Eagle Protection Act, (BGEPA) and State of Nevada-protected species. In its comments, the EPA recommended that we evaluate potential impacts on federally-listed threatened and endangered species and outline several items typically found in a Section 7 Endangered Species Act (ESA) consultation. This section of the EA is responsive to the EPA's comments.

The Commission is required by Section 7 of the ESA to ensure that the Project would not jeopardize the continued existence of a federally-listed threatened or endangered species or result in the destruction or adverse modification of the designated critical habitat of a federally listed species. Using the U.S. Fish and Wildlife Services' (USFWS) Information for Planning and Consultation (IPaC) tool, we found no occurrences of federally-listed threatened or endangered species in the Project area; and therefore, we have determined that the Project would result in *no effect* on federally-listed threatened or endangered species.

Tuscarora concluded, based on its review of the IPaC tool and in consultation with the USFWS, that golden eagles could potentially occur at the Project site. The BGEPA prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald or gold eagles, including their parts, nests, or eggs. According to Tuscarora, in Nevada golden eagles generally inhabit open and semi-open landscapes and avoids forests, large agricultural areas, and urban areas. Golden eagles nest on rock ledges of cliffs and occasionally in large trees, steep hillsides, or the ground. Golden eagles prey on small to medium-sized mammals, but are also known to eat carrion, reptiles, birds, fish, insects, and sometimes large mammals. Tuscarora also concluded that suitable foraging habitat is present within Project workspace. Furthermore, in correspondence with the USFWS, Tuscarora representatives were informed that golden eagles inhabit the nearby Pah Rah Range.

Although suitable foraging habitat is present, no nesting habitat was identified by Tuscarora representatives during field surveys, and the Project site can generally be characterized as disturbed due to the presence of existing natural gas transmission

infrastructure. At the request of the USFWS which expressed concern about potential impacts on golden eagles within a 1.0-mile radius of Project workspace, Tuscarora representatives conducted an additional survey of the project area and found no suitable habitat present.

Based on the scope of the Project, the presence of existing infrastructure, the duration of impacts, the mobility of golden eagles, the presence of suitable foraging in the vicinity of the Project, and the absence of golden eagle sightings and suitable nesting habitat, we conclude that abandoning and replacing the proposed facilities would not likely impact golden eagles and any impacts would be temporary, minor, and not significant.

Tuscarora representatives in consultation with Nevada Natural Heritage Program identified one State of Nevada-protected plant species: sand cholla (*Grusonia pulchella*) as potentially occurring in the Project area. However, this species was not observed during field surveys of the Project area and in correspondence with Tuscarora representatives dated September 9, 2020 (entered into the Commission's administrative record on November 25, 2020), the Nevada Department of Conservation and Natural Resources stated that the Project "*will not likely impact any special status plant species*". Other State of Nevada-protected species including three mammals and three birds were identified as potentially occurring in the Project area. However, suitable habitats for these species were not observed during field surveys of the Project area and based on the scope of the Project and the general mobility of these species, we have concluded that impacts on them would not be significant.

B.5. CULTURAL RESOURCES

Section 106 of the National Historic Preservation Act (NHPA), as amended, requires the FERC to take into account the effects of its undertakings on properties listed in or eligible for listing in the National Register of Historic Places (NRHP) and afford the Advisory Council on Historic Preservation an opportunity to comment on the undertaking. Tuscarora, as a non-federal party, is assisting the Commission in meeting these obligations under Section 106 and the implementing regulations at 36 CFR 800 by preparing the necessary information, analyses, and recommendations, as authorized by 36 CFR Part 800.2(a)(3).

Tuscarora conducted historic research and a cultural resources survey of the temporary workspace outside the existing Wadsworth Compressor Station. Nine previously recorded archaeological sites were identified within one mile of the Project area. Only one, a portion of the Nevada Railroad, is located adjacent to the area of potential effect. No historic structures were identified within the viewshed of the project, and the project facilities to be abandoned are not fifty years old or older and are not eligible for listing in the NRHP. Tuscarora recommended that the portion of the Nevada

Railroad adjacent to the project area is not eligible for listing in the NRHP. On November 10, 2020 the Nevada State Historic Preservation Office (SHPO) concurred with Tuscarora's recommendation that no historic properties would be affected by the proposed Project. We also concur.

On May 18, 2020 Tuscarora wrote to 19 federally recognized Indian tribes who may have an interest in the project area to request their comments on the project. The FERC sent its NOI (issued August 4, 2020) to the same tribes to provide them an opportunity to comment on the project. Neither Tuscarora nor the FERC have received any responses to date.

B.5.1 Unanticipated Discoveries Plan

Tuscarora has prepared a plan in the event any unanticipated cultural resources or human remains were encountered during construction. We requested minor revisions to the plan. Tuscarora made the requested revisions. We find the revised plan to be acceptable. Therefore, we have determined in consultation with the SHPO that the Project as proposed would have no effect on any properties listed in or eligible for listing in the NRHP.

B.6 AIR QUALITY AND NOISE

B.6.1 Existing Air Quality

Federal and state air quality standards are designed to protect human health. The U.S. Environmental Protection Agency (EPA) has developed National Ambient Air Quality Standards (NAAQS) for criteria air pollutants such as oxides of nitrogen (NO_x) and carbon monoxide (CO), sulfur dioxide (SO_2), and inhalable particulate matter ($\text{PM}_{2.5}$ and PM_{10}). $\text{PM}_{2.5}$ includes particles with an aerodynamic diameter less than or equal to 2.5 micrometers, and PM_{10} includes particles with an aerodynamic diameter less than or equal to 10 micrometers. The NAAQS were set at levels the EPA believes are necessary to protect human health and welfare. Volatile organic compounds (VOC) are regulated by EPA mostly to prevent the formation of ozone, a constituent of photochemical smog. Many VOCs form ground-level ozone by reacting with sources of oxygen molecules such as NO_x in the atmosphere in the presence of sunlight. NO_x and VOCs are referred to as ozone precursors. Hazardous air pollutants (HAP) are also emitted during fossil fuel combustion and are suspected or known to cause cancer or other serious health effects; such as reproductive effects or birth defects; or adverse environmental effects.

Greenhouse Gases (GHG) produced by fossil-fuel combustion are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). GHGs status as a pollutant is not related to toxicity. GHGs are non-toxic and non-hazardous at normal ambient concentrations, and there are no applicable ambient standards or emission limits for GHG under the

Clean Air Act. Increased atmospheric concentration of GHGs since the industrial age are the primary cause of warming of the climatic system.

During construction and operation of the Project, GHGs would be emitted from construction equipment. Emissions of GHGs are typically expressed in terms of CO₂ equivalents (CO_{2e}).

If measured ambient air pollutant concentrations for a subject area remain below the NAAQS criteria, the area is in attainment with the NAAQS. The Project areas are in attainment for all NAAQS.

The Clean Air Act is the basic federal statute governing air pollution in the United States. We have reviewed the following federal requirements and determined that they are not applicable to the proposed Project:

- New Source Review;
- Title V;
- National Emissions Standards for Hazardous Air Pollutants;
- New Source Performance Standards;
- Greenhouse Gas Reporting Rule; and
- General Conformity of Federal Actions.

B.6.2 Construction Emissions

Project activities are scheduled to begin in spring of 2021 and be completed in the fall of 2021. During construction, a temporary reduction in ambient air quality may result from criteria pollutant emissions and fugitive dust generated by construction equipment. The quantity of fugitive dust emissions would depend on the moisture content and texture of the soils that would be disturbed. Fugitive dust and other emissions due to construction activities generally do not pose a significant increase in regional pollutant levels; however, fugitive dust levels could increase. Dust suppression techniques, such as watering the construction zone may be used as necessary.

Emission Type	CO	NO_x	PM₁₀	PM_{2.5}	SO₂	VOCs	GHG (as CO_{2e})	Total HAPS
Diesel non-road equipment	0.3	0.6	0.1	0.1	0.1	0.1	386	0.02
Diesel and gas on-road equipment	0.6	0.7	0.03	0.03	0.002	0.1	193	0.01
Construction activity fugitive dust	N/A	N/A	0.4	0.1	N/A	N/A	N/A	N/A
Roadway fugitive dust	N/A	N/A	1.1	0.6	N/A	N/A	N/A	N/A
Total	0.9	1.4	1.6	0.8	0.1	0.2	579	0.03

Emissions would occur over the duration of construction activity. As stated, impacts from construction equipment would be temporary and would not result in a significant impact on regional air quality or result in any violation of applicable ambient air quality standard. Potential impacts would be mitigated and minimized.

Based on the short duration of construction activities and our review of the estimated emissions from construction of the proposed Project, we conclude there would not be regionally significant impacts on air quality.

B.6.3 Operations

As described previously, Tuscarora proposes to replace the existing single unit CAT 3412TA engine and Ariel 2 throw reciprocating compressor, rated at 600 horsepower, with a new CAT G3516J engine and an Ariel KBT/4 reciprocating compressor, rated at 1380 horsepower. The Project would result in a total increase of 780 horsepower at the Wadsworth Compressor Station. The NO_x emissions for the modified station would be approximately 7 tons per year (TPY) less than the existing station's emissions, while the other pollutants would increase. Table B.6.3-1 shows the estimated potential-to-emit of the Project.

AERMOD Results and National Ambient Air Quality Standards are shown in table B.6.3-2. The meteorological data necessary for AERMOD was based on hourly surface observation data and upper air sounding data from the Derby Field/Lovelock Airport, Nevada station and the Reno/Tahoe International Airport, Nevada station for meteorological years 2014 through 2018, respectively. The results of the modeling analysis demonstrate that the operation of the Wadsworth Compressor Station would not cause or contribute to an exceedance of the NAAQS.

Emission Type	NO _x	CO	VOC	SO ₂	PM ₁₀	PM _{2.5}	GHG (as CO _{2e})	Total HAPS
Total Existing Facility Emissions	13.5	4.3	0.7	0.01	0.2	0.2	2,797	1.7
Proposed Emission Generating Equipment								
Caterpillar G36161 Engine	6.7	13.3	5.7	0.03	0.4	0.4	5,168	6.5
Space Heaters	0.06	0.05	0.003	0.005	0.005	0.005	74	0.001
Equipment Leaks	N/A	N/A	2.8	N/A	N/A	N/A	5,882	N/A
Total Proposed Emissions	6.7	13.4	8.5	0.03	0.4	0.4	11,050	6.5
Change in Emissions	-6.8	9.1	7.8	0.02	0.2	0.2	8,253	4.8

Pollutant	Averaging Period	Project Impact (µg/m ³)	Background ^a (µg/m ³)	Total (µg/m ³)	NAAQS (µg/m ³)	Percent of NAAQS
NO₂^b	1-hour	26.84	92.87	119.72	188	63.68%
	Annual	0.57	24.82	25.39	100	25.39%
CO	1-hour	73.98	3,055.20	3,129.18	40,000	7.82%
	8-hour	26.45	2,302.80	2,329.25	10,000	23.29%
PM₁₀	24-hour	0.34	77	77.34	150	51.56%
PM_{2.5}	24-hour	0.23	27	27.23	35	77.80%
SO₂	Annual	0.04	7.88	7.92	12	65.99%
	1-hour	12.28	13.1	25.38	196	12.95%
	3-hour	6.61	15.62	22.22	1300	1.71%
	24-hour	2.52	5.66	8.18	365	2.24%

^a Background data for NO₂ came from the Reno, Nevada monitor located approximately 40 km southwest of the Wadsworth Compressor Station. Background data for CO came from the Sparks, Nevada monitor located approximately 35 km south-southwest of the Wadsworth Compressor Station. Background data for PM₁₀ came from the Sparks, Nevada monitor located approximately 35 km south-southwest of the Wadsworth Compressor Station. Background data for PM_{2.5} came from the Sparks, Nevada monitor located approximately 35 km south-southwest of the Wadsworth Compressor Station. Background data for SO₂ came from the Reno, Nevada monitor located approximately 40 km southwest of the Wadsworth Compressor Station.

^b The modeled NO₂ impact represents the EPA Tier 2 method, assuming a default maximum in-stack ratio of 90% NO₂/NO_x and a default minimum in-stack ratio of 50% NO₂/NO_x.

Based on the estimated emissions from operation of the Project, we conclude that there would not be regionally significant impacts on air quality.

B.7 NOISE

The noise environment can be affected both during construction and operation of interstate natural gas transmission infrastructure projects. The magnitude and frequency of environmental noise may vary considerably over the course of the day, throughout the week, and across seasons, in part due to changing weather conditions. Two measures to relate the time-varying quality of environmental noise to its known effect on people are the 24-hour equivalent sound level (L_{eq}) and day-night sound level (L_{dn}). The L_{eq} is the level of steady sound with the same total (equivalent) energy as the time-varying sound of interest, averaged over a 24-hour period. The L_{dn} is the L_{eq} plus 10 decibels on the A-weighted scale (dBA) added to account for people's greater sensitivity to nighttime sound levels during late evening and early morning hours (between the hours of 10:00 p.m. and 7:00 a.m.). The A-weighted scale is used because human hearing is less sensitive to low and high frequencies than mid-range frequencies. The human ear's threshold of perception for noise change is considered to be 3 dBA; 6 dBA is clearly noticeable to the human ear, and 10 dBA is perceived as a doubling of noise.

Construction noise is highly variable. Many construction machines operate intermittently, and the types of machines in use at a construction site change with the construction phase. The sound level impacts on nearby resources would depend on the type of equipment used, the duration of use for each piece of equipment, the number of construction vehicles and machines used simultaneously, and the distance between the sound source and receptor.

B.7.1 Construction Noise

Construction work hours would generally be from 7:00 a.m. to 7:00 p.m. Work activities prior to 7:00 a.m. would be limited to the extent possible to minimize the generation of noise. Activities with low noise levels, such as X-raying, hydrotesting, internal building work, and tie-ins, may also occur during nighttime hours. Construction is anticipated to require up to 5 months.

The nearest noise sensitive area (NSA) is 1.9 miles away. Based on Tuscarora's calculations, noise would be at or below 55 dBA L_{dn} at the closest NSA. Therefore, we do not expect any significant impacts from noise during construction.

B.7.2 Operational Noise

Tuscarora conducted an acoustical analysis which indicated that the noise attributable to the modified Wadsworth Compressor Station would be significantly less than an L_{dn} of 55 dBA at the closest NSAs, which follows FERC's requirements. A summary of the acoustical analysis is shown in table 7.2-1.

Table 7.2-1: Summary of Acoustical Analysis

NSA	Distance and Direction to Wadsworth CS	Estimated Ambient L_{dn} (dBA)	Existing Noise Levels L_{dn} (dBA)	Proposed Noise Levels L_{dn} (dBA)	Potential Increase	Potential Increase Above Existing Ambient Sound Levels
NSA 1	10,000 ft. SE	60	25.9	29.5	3.6	0
NSA 2	11,200 ft. E-SE	60	24.4	28	3.6	0

The Wadsworth CS would be located in the desert with very little natural boundaries to mitigate the sound; therefore, **we recommend that:**

Tuscarora should file noise surveys with the Secretary of the Commission (Secretary) no later than 60 days after placing the authorized unit at the Wadsworth Compressor Station in service. If a full load condition noise survey is not possible, Tuscarora should provide an interim survey at the maximum possible horsepower load and provide the full load survey within 6 months. If the noise attributable to the operation of the modified station under interim or full horsepower load conditions exceeds an L_{dn} of 55 dBA at any nearby NSA, Tuscarora should file a report on what changes are needed and install additional noise controls to meet that level within 1 year of the in-service date. Tuscarora should confirm compliance with this requirement by filing a second noise survey with the Secretary no later than 60 days after it installs the additional noise controls.

There would be no significant increase in ambient noise due to the Project. There would be no perceptible increase in vibration due to the Project. We do not expect any significant impacts from noise emitted during operations.

B.8 RELIABILITY AND SAFETY

The Project would be designed, operated, and maintained in accordance with the U.S. Department of Transportation (USDOT) pipeline safety regulations found in 49 CFR 192 and all applicable permits. Safety guidelines for the design and construction of aboveground facilities, including compressor stations, are established in 49 CFR 192.163 - Compressor stations: Design and construction. Each compressor station must have an emergency shutdown system (except for unattended field compressor stations of 1,000 horsepower or less) that must meet several specifications. Additionally, 49 CFR 192.171 requires that each compressor station be equipped with adequate fire protection facilities that are not impeded by the emergency shutdown system. We conclude that, with the implementation of the standard safety design criteria, the Project would be operated safely.

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

Methane has an auto-ignition temperature of 1,000 degrees Fahrenheit and is flammable at concentrations between 5.0 percent and 15.0 percent in air. An unconfined mixture of methane and air is not explosive; however, it may ignite if there is an ignition source. A flammable concentration within an enclosed space in the presence of an ignition source can explode. It is buoyant at atmospheric temperatures and disperses rapidly in air.

B.8.1 Safety Standards

The USDOT is mandated to provide pipeline safety under Title 49 USC Chapter 601. The USDOT's Pipeline and Hazardous Materials Safety Administration (PHMSA) administers the national regulatory program to ensure the safe transportation of natural gas and other hazardous materials by pipeline. It develops safety regulations and other approaches to risk management that ensure safety in the design, construction, testing, operation, maintenance, and emergency response of pipeline facilities. Many of the regulations are written as performance standards which set the level of safety to be attained and allow the pipeline operator to use various technologies to achieve safety. PHMSA ensures that people and the environment are protected from the risk of pipeline incidents. This work is shared with state agency partners and others at the federal, state, and local level.

The USDOT provides for a state agency to assume all aspects of the safety program for intrastate facilities by adopting and enforcing the federal standards. A state may also act as USDOT's agent to inspect interstate facilities within its boundaries; however, the USDOT is responsible for enforcement actions. The USDOT pipeline standards are published in Title 49 CFR Parts 190-199. Part 192 specifically addresses natural gas pipeline safety issues.

Under a *Memorandum of Understanding on Natural Gas Transportation Facilities* (Memorandum) dated January 15, 1993, between the USDOT and the FERC, the USDOT has the exclusive authority to promulgate federal safety standards used in the transportation of natural gas. Section 157.14(a)(9)(vi) of the FERC's regulations require that an applicant certify that it would design, install, inspect, test, construct, operate, replace, and maintain the facility for which a Certificate is requested in accordance with federal safety standards and plans for maintenance and inspection. Alternatively, an applicant must certify that it has been granted a waiver of the requirements of the safety

standards by the USDOT in accordance with Section 3(e) of the Natural Gas Pipeline Safety Act. The FERC accepts this certification and does not impose additional safety standards other than the USDOT standards. If the Commission becomes aware of an existing or potential safety problem, there is a provision in the Memorandum to promptly alert the USDOT. The Memorandum also provides for referring complaints and inquiries made by state and local governments and the general public involving safety matters related to pipelines under the Commission's jurisdiction.

The FERC also participates as a member of the USDOT's Technical Pipeline Safety Standards Committee which determines if proposed safety regulations are reasonable, feasible, and practicable.

Tuscarora's construction and operation of the Project would represent a minimum increase in risk to the nearby public and would be constructed and operated safely with implementation of the standard safety design criteria.

B.9 CUMULATIVE IMPACTS

In accordance with NEPA, we analyzed the impacts of the Project and the known impacts of other past, present, and reasonably foreseeable future projects (and actions) to determine the potential for cumulative impacts. Cumulative impacts occur when the incremental impacts of an action are added to the impacts of other past, present, or reasonably foreseeable future projects. The Council of Environmental Quality, states that an adequate cumulative effects analysis may be conducted by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions. In this analysis, we consider the impacts of past projects as part of the affected environment (environmental baseline) which was described and evaluated in the preceding environmental analysis. However, present effects of past actions that are relevant and useful are also considered.

As described in the environmental analysis section of this EA, replacing and modifying the proposed facilities would impact several environmental resources. However, our analysis concludes that these impacts would be minor and not significant.

To determine if cumulative impacts exist, we reviewed the Project area for other projects whose impacts could contribute to a cumulative impact. Understanding the resource-specific variability of impacts, we refer to the areas subject to this cumulative impact analysis as a "geographic scope(s)." Geographic scopes used in our analysis are presented in table B.9-1. Other projects and actions located within a geographic scope or whose impacts occur within a geographic scope may contribute to a cumulative impact. Projects and actions located outside a geographic scope are generally not considered because their potential to contribute to a cumulative impact diminishes with increasing distance from the Project. Resources that are not affected by the proposed action (e.g.,

wetlands, water resources, fisheries, cultural resources, visual resources, and environmental justice) would not contribute to cumulative impacts and are not considered.

Environmental Resource	Area of Impact
Soils and Geology	Construction workspaces ^a
Vegetation and Wildlife	Hydrologic Unit Code (HUC) 12 Watershed ^b
Land Use	1-mile radius
Noise - Operations	Other facilities that would impact any noise sensitive area (NSA) located within 1 mile of a noise emitting permanent aboveground facility
Noise - Construction	0.25 mile from pipeline or aboveground facilities.
Air Quality - Operations	50 kilometers (about 31.1 miles)
Air Quality – Construction	0.25 mile from pipeline or aboveground facilities
^a We generally consider that the FERC Plan and Procedures retain disturbed soils within construction work areas. ^b A different region may be appropriate for threatened and endangered species, migratory birds, or other migratory species. ^c Our review identified no other projects within a 1-mile radius; therefore, land use is not addressed further in this analysis	

The Project lies entirely within the Hydrologic Unit Code (HUC) 12 Derby Dam-Truckee River watershed. This watershed covers an area of about 38,295.8 acres. Tuscarora identified the planned Dodge Flat Solar Energy Center Project (DFSEC) as a project whose impacts when combined with those of the proposed Project could result in a cumulative impact on the environment. The DFSEC is located within an adjacent HUC12 watershed, Dodge Flat, but we include it here based on its proximity and size. According to the BLM which prepared an environmental assessment for the Dodge Flat Utility and Road Crossing Project supporting the DFSEC, the DFSEC is a planned 200-megawatt alternating current, photovoltaic, solar energy and storage facility on approximately 1,632 acres of private land that would be located west of the intersection of State Route 447 and Olinghouse Road, approximately 3.5 miles northwest of the town of Wadsworth, in unincorporated Washoe County. The DFSEC would be located approximately one mile from the Project.

The Dodge Flat Utility and Road Crossing Project will construct and/or improve access roads and construct buried utility lines (e.g., power collection from solar arrays, fiber-optic communications, power distribution to facility equipment) to serve the DFSEC. The proposed activities would impact about 0.23 acres. No other projects potentially contributing to a cumulative impact have been identified by either Tuscarora or Commission environmental staff.

In our analysis, the footprint of a project is often an acceptable metric for evaluating the significance of an impact on a number of resources. In table B.9-2, we provide the footprint (acres) of and the percentage of the HUC-12 watershed affected by each of the projects.

Project Name	HUC-12 Watershed	Area of Watershed (acres)	Project Impact (acres)	Percentage of Watershed(s)
Tuscarora Xpress	Derby Dam-Truckee River	38,295.8	4.6	0.012
DFSEC	Dead Ox Wash-Truckee River and Dodge Flat	40,317.2	1,623	4.1
Dodge Flat Utility and Road Crossing	Dodge Flat	15,025.3	0.23	0.002
Total		78,616	1,627.8	2.1

Soils and Geology

The Proposed Project and the other projects considered in this analysis would all contribute impacts on soils and geology. The DFSEC will impact about 1,600 acres while the proposed Project would affect 4.6 acres. However, as previously stated, the proposed Project would minimize impacts by employing its ECS and our Plan. Further, the other projects identified lie within adjacent HUC-12 watersheds. As our geographic scope for cumulative impacts on soils and geology is limited to the Project's construction workspaces, we conclude that cumulative impacts on soils and geology would not be significant.

Vegetation and Wildlife

The abandonment and replacement of the existing facility would disturb 3.1 acres of vegetation classified as scrub/shrub-sagebrush. The Project consists of temporary impacts with less than 0.1 acre retained as new permanent easement. No tree clearing would occur as part of the Project construction. Based on the minimal and primarily temporary impacts of the Project on vegetation and wildlife resources and the abundance of similar habitat in the Project vicinity, we conclude that the Project's contribution to cumulative impacts in the Project area would be negligible.

Noise

The Project could contribute to cumulative noise impacts. However, the impact of noise is highly localized and attenuates quickly as the distance from the noise source

increases. We have not identified any other projects that could cumulatively add to noise impacts during construction within 0.25 mile.

For operational noise, we have identified an existing highway that could contribute cumulatively with the Wadsworth Compressor Station and affect noise levels at nearby NSAs. As indicated in section B.7, highway I-80 is an existing noise source that currently contributes noise impacts to the NSAs. However, the noise from highway I-80 is accounted for within the existing ambient noise levels and the analysis identified in table B.7.2-1 of Section B.7.2. We have also not found any new or planned facilities that would contribute to noise. As indicated, the noise is not estimated to increase at the NSAs. Therefore, we conclude that cumulative noise impacts would not be significant.

Air Quality

An increase in operational emissions resulting from the Project would occur at the Wadsworth Compressor Station for the majority of pollutants except NO_x. The combined effect of multiple construction projects occurring in the same area and timeframe could temporarily add to the ongoing air quality effects of existing activities; therefore, we reviewed existing and reasonably foreseeable future projects/actions occurring within ¼ mile for construction emissions, and 50 km of the Wadsworth Compressor Station for operational emissions. No other projects are within the geographic scope for construction air quality that would be cumulative with the construction emissions from the proposed Project (e.g., within 0.25 mile of the Wadsworth Compressor Station).

The Project is located directly adjacent to the existing and operational Paiute metering and regulating station (M&R). FERC staff contacted the Washoe County Air Quality Management Division and the Nevada Division of Environmental Protection and confirmed that there are no proposed projects with operational emissions located within 50 km of the proposed Project. Thus, we conclude, after review of the past, present, and reasonably foreseeable future projects/actions occurring within 50 km of the Wadsworth Compressor Station there would be no significant cumulative impact on air quality.

Climate Change

Climate change is the variation in climate (including temperature, precipitation, humidity, wind, and other meteorological variables) over time, whether due to natural variability, human activities, or a combination of both, and cannot be characterized by an individual event or anomalous weather pattern. For example, a severe drought or abnormally hot summer in a particular region is not a certain indication of climate change. However, a series of severe droughts or hot summers that statistically alter the trend in average precipitation or temperature over decades may indicate climate change. Recent research has begun to attribute certain extreme weather events to climate change (U.S. Global Change Research Program [USGCRP], 2018).

The leading U.S. scientific body on climate change is the USGCRP, composed of representatives from 13 federal departments and agencies.⁴ The Global Change Research Act of 1990 requires the USGCRP to submit a report to the President and Congress no less than every four years that “1) integrates, evaluates, and interprets the findings of the USGCRP; 2) analyzes the effects of global change on the natural environment, agriculture, energy production and use, land and water resources, transportation, human health and welfare, human social systems, and biological diversity; and 3) analyzes current trends in global change, both human-induced and natural, and projects major trends for the subsequent 25 to 100 years.” These reports describe the state of the science relating to climate change and the effects of climate change on different regions of the United States and on various societal and environmental sectors, such as water resources, agriculture, energy use, and human health.

In 2017 and 2018, the USGCRP issued its *Climate Science Special Report: Fourth National Climate Assessment*, Volumes I and II (Fourth Assessment Report) (USGCRP, 2017; and USGCRP, 2018, respectively). The Fourth Assessment Report states that climate change has resulted in a wide range of impacts across every region of the country. Those impacts extend beyond atmospheric climate change alone and include changes to water resources, transportation, agriculture, ecosystems, and human health. The U.S. and the world are warming; global sea level is rising and acidifying; and certain weather events are becoming more frequent and more severe. These changes are driven by accumulation of GHG in the atmosphere through combustion of fossil fuels (coal, petroleum, and natural gas), combined with agriculture, clearing of forests, and other natural sources. These impacts have accelerated throughout the end of the 20th and into the 21st century (USGCRP, 2018).

GHGs were identified by the EPA as pollutants in the context of climate change. GHG emissions do not result in proportional local impacts; it is the combined concentration in the atmosphere that affects the global climate. These are fundamentally global impacts that feedback to local and regional climate change impacts. Thus, the geographic scope for cumulative analysis of GHG emissions is global rather than local or regional. For example, a project 1 mile away emitting 1 ton of GHGs would contribute to

⁴ The USGCRP member agencies are: Department of Agriculture, Department of Commerce, Department of Defense, Department of Energy, Department of Health and Human Services, Department of the Interior, Department of State, Department of Transportation, Environmental Protection Agency, National Aeronautics and Space Administration, National Science Foundation, Smithsonian Institution, and U.S. Agency for International Development.

climate change in a similar manner as a project 2,000 miles distant also emitting 1 ton of GHGs.

Climate change is a global phenomenon; however, for this analysis, we will focus on the existing and potential cumulative climate change impacts in the Project area. The USGCRP's Fourth Assessment Report notes the following observations of environmental impacts are attributed to climate change in the U.S. Southwest and Nevada region (USGCRP, 2017; USGCRP, 2018):

- increases in annual average temperatures across Nevada has increased about 2 degrees Fahrenheit since the beginning of the 20th century;
- an increase in heat and reduction of snow have amplified recent hydrological droughts (severe shortages of water) in the Colorado River Basin;
- droughts in the Southwest have contributed to declines in traditional Indigenous staple foods, including acorns, corn, and pine nuts;
- climate change has driven the wildfire increase, particularly by drying forests and making them more susceptible to burning; and
- mountain and desert ecosystems are being affected by large changes in a variety of climate-related environmental conditions.

The USGCRP's Fourth Assessment Report notes the following projections of climate change impacts in the Project region (U.S. Southeast and Nevada) with a high or very high level of confidence⁵ (USGCRP, 2018):

- under the higher emissions scenario, climate models project an 8.6°F (4.8°C) increase in Southwest regional annual average temperature by 2100;

⁵ The report authors assessed current scientific understanding of climate change based on available scientific literature. Each "Key Finding" listed in the report is accompanied by a confidence statement indicating the consistency of evidence or the consistency of model projections. A high level of confidence results from "moderate evidence (several sources, some consistency, methods vary and/or documentation limited, etc.), medium consensus." A *very* high level of confidence results from "strong evidence (established theory, multiple sources, consistent results, well documented and accepted methods, etc.), high consensus." <https://science2017.globalchange.gov/chapter/front-matter-guide/>

- a decrease in precipitation of up to 10% under higher emissions pathway;
- higher temperatures would cause more frequent and severe droughts and sharply increase the risk of megadroughts—dry periods lasting 10 years or more;
- projected reductions in water supply reliability, coupled with water agreements that involve selling or leasing tribal water to neighboring communities, could place tribal water supplies at risk during severe shortages;
- under a higher emissions scenario, declines in snowpack and runoff in the Colorado River and a shift of spring runoff to earlier in the year would reduce hydroelectric power potential in the region by up to 15% by 2050;
- under continued climate change, higher temperatures would shift plant hardiness zones northward and upslope; and
- under the higher emissions scenario, the Southwest would experience the highest increase in annual premature deaths due to extreme heat in the country.

It should be noted that while the impacts described above taken individually may be manageable for certain communities, the impacts of compound extreme events (such as simultaneous heat and drought, wildfires associated with hot and dry conditions, or flooding associated with high precipitation on top of saturated soils) can be greater than the sum of the parts (USGCRP, 2018).

The GHG emissions associated with construction and operation of the Project were identified and quantified in Table B.6.2-1 of the EA. Construction and operation of the Project would increase the atmospheric concentration of GHGs in combination with past, current, and future emissions from all other sources globally and contribute incrementally to future climate change impacts. In order to assess impacts on climate change associated with the Project, Commission staff considered whether it could identify discrete physical impacts resulting from the Project's GHG emissions or compare the Project's GHG emissions to established targets designed to combat climate change.

To date, Commission staff has not identified a methodology to attribute discrete, quantifiable, physical effects on the environment resulting from the Project's incremental contribution to GHGs. We have looked at atmospheric modeling used by the EPA, National Aeronautics and Space Administration, the Intergovernmental Panel on Climate Change, and others, and we found that these models are not reasonable for project-level analysis for a number of reasons. For example, these global models are not suited to

determine the incremental impact of individual projects, due to both scale and overwhelming complexity. We also reviewed simpler models and mathematical techniques to determine global physical effects caused by GHG emissions, such as increases in global atmospheric CO₂ concentrations, atmospheric forcing, or ocean CO₂ absorption. We could not identify a reliable, less complex model for this task and thus staff could not determine specific localized or regional physical impacts from GHG emissions from the Project. Without the ability to determine discrete resource impacts, Commission staff are unable to assess the Project's contribution to climate change through any objective analysis of physical impact.

Additionally, we have not been able to find any GHG emission reduction goals established at the federal level that we can use as comparative criteria for project level emissions.⁶ We note that there have been a series of recent administrative changes and we continue to evaluate their impact on our review process. For example, on January 20, 2021, President Biden issued the *Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis* (EO 13990) and on January 27, 2021, the *Executive Order on Tackling the Climate Crisis at Home and Abroad* (EO 14008). Amongst other objectives, the Executive Orders call for a net-zero emission economy and a carbon-free electricity sector. In addition, on January 20, 2021, President Biden announced that the U.S. will rejoin the Paris Climate Agreement (Agreement), enabling the U.S. to be a party to the Agreement on February 19, 2021. The Agreement is a binding international agreement to reduce GHG emissions and impacts on climate change that was signed by 196 parties on December 12, 2015 and entered into force on November 4, 2016. The Agreement aims to limit global warming to well below 2 degrees Celsius, and preferably to 1.5 degrees Celsius, compared to pre-industrial levels.⁷ Prior to the U.S. withdrawal from the Agreement in November 2020, the U.S. initially proposed a 26 to 28 percent domestic reduction in GHG by 2025 compared to 2005.⁸ It is not yet clear if the U.S. would retain or modify these goals upon rejoining the Agreement.

⁶ The national emissions reduction targets expressed in the EPA's Clean Power Plan were repealed, *Greenhouse Gas Emissions From Existing Electric Utility Generating Units; Revisions to Emissions Guidelines Implementing Regulations*, 84 Fed. Reg. 32,250, 32,522-32, 532 (July 8, 2019), and the targets in the Paris Climate Accord were withdrawn (November 2020).

⁷ Additional information is available at <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>

⁸ <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/United%20States%20of%20America%20First/U.S.A.%20First%20NDC%20Submission.pdf>

The State of Nevada, within which the Wadsworth Compressor Station's operational emissions would occur, proposed in June of 2019 to reach a net-zero emissions economy by midcentury (2050) with required annual reports identifying the measures needed to reduce GHG emissions to 28 percent below 2005 levels by 2025, and 45 percent below 2005 levels by 2030.⁹

As indicated in Section B.6, direct GHG emissions from the operation of the Project equipment at the Wadsworth Compressor Station would result in an annual increase in CO₂e emissions of about 8,253 tons (7,485 metric tons).¹⁰ This would represent 0.06 percent and 0.04 percent of Nevada's 2025 and 2030 GHG reduction goals, respectively.¹¹

Conclusions on Cumulative Impacts

Impacts associated with Tuscarora's Project would be relatively minor. Our project-specific and resource-specific (based on appropriate geographic scope) analysis leads us to conclude that the Project would contribute to a negligible cumulative impact when the effects of the proposed Project are added to past, present, and reasonably foreseeable actions.

⁹ We reviewed the U.S. State Greenhouse Emission Targets site for individual state requirements at: <https://trackbill.com/bill/nevada-senate-bill-254-an-act-relating-to-greenhouse-gas-emissions-requiring-the-state-department-of-conservation-and-natural-resources-to-issue-an-annual-report-concerning-greenhouse-gas-emissions-in-this-state-and-providing-other-matters-properly-relating-thereto/1719120/>¹⁰ A metric ton is approximately equal to 1.1 ton.

¹⁰ A metric ton is approximately equal to 1.1 ton.

¹¹ Based on data found at <https://www.eia.gov/environment/emissions/state/>.

SECTION C - ALTERNATIVES

In accordance with NEPA and Commission policy, we identify, consider, and evaluate alternatives to proposed actions. Typically, alternatives are evaluated using a specific set of criteria. The evaluation criteria applied to each alternative include a determination of whether the alternative:

- meets the objective of the proposed Project;
- is technically and economically feasible and practical; and
- offers a significant environmental advantage over the proposed Project.

Through environmental comparison and application of our professional judgment, each alternative is considered (in the sequence identified above) to a point where it becomes clear if the alternative could or could not meet the three evaluation criteria. An alternative that cannot achieve the purpose for the Project cannot be considered as an acceptable replacement for the Project.

Not all conceivable alternatives are technically and economically feasible and practical. Technically feasible alternatives, with exceptions, would generally involve the use of common pipeline construction methods. Economically practical alternatives would result in an action that generally maintains the price competitive nature of the proposed action. An alternative that would involve the use of a new, unique, or experimental construction method(s) may be technically feasible, but not economically practical. Generally, we do not consider the cost of an alternative as a critical factor unless the added cost to design, permit, and construct the alternative would render the project economically impractical.

To determine if an alternative is practicable and would provide a significant environmental advantage over the proposed action, we compare the impacts of the alternative and the proposed action (e.g., number of wetlands/waterbodies affected by the alternative and number of wetlands/waterbodies affected by the proposed action). To ensure consistent environmental comparisons and to normalize the comparison of resources, we generally use “desktop” sources of information (e.g., publicly available data, aerial imagery) and assume the same construction and operation right-of-way widths and general workspace requirements. We evaluate data collected in the field if surveys were completed for both the proposed action and the corresponding alternative. Our environmental comparison uses common factors such as (but not limited to) total amount, length/distance, and acres affected of a resource. Furthermore, our analyses consider impacts on both the natural and human environments.

Where appropriate and available, we also use site-specific information. In comparing the impact between resources, we also consider the magnitude of the impact anticipated on each resource. As applicable, we assess impacts on resources that are not common to the alternative and the proposed action.

Our determinations attempt to balance the overall impacts (and other relevant considerations) of the alternative(s) and the proposed action. Recognizing the often competing interests driving alternatives and the differing nature of impacts resulting from an alternative (i.e., impacts on the natural environment versus impacts on the human environment), we also consider other factors that are relevant to a particular alternative or discount or eliminate factors that are not relevant or may have less weight or significance. Ultimately, an alternative that is environmentally comparable or results in minor advantages in terms of environmental impact would not compel us to shift the impacts from the current set of landowners to a new set of landowners.

One of the goals of an alternatives analysis is to identify alternatives that avoid significant impacts. In this EA, we evaluated each environmental resource potentially affected by the Project and concluded that replacing and modifying the proposed facilities would not significantly impact these resources. Consistent with our conclusions, the value gained by further reducing the (not significant) impacts was also factored into our evaluation.

In its comments on the Project, the EPA provided several recommendations concerning alternatives criteria development, range of reasonable alternatives, and the alternatives analysis. These recommendations are general in nature and are consistent with published NEPA alternatives guidance.

The EPA recommends that we specify the criteria we use to develop a reasonable range of alternatives, eliminate alternatives considered, and select the agency preferred alternative. The EPA further described factors and considerations they deemed appropriate for our analysis including environmental concerns and public input and scoping comments. The preceding discussion which serves as an introduction to our alternatives analysis addresses the EPA's comments concerning alternatives criteria development. The agency preferred alternative is addressed in the conclusion to this section.

The EPA also recommends that our analysis include a range of reasonable alternatives that meet the stated purpose and need for the project and that are responsive to public input and scoping. Our public scoping process did not identify any alternatives.

C.1 NO-ACTION ALTERNATIVE

The No-Action Alternative could be achieved by the Commission deciding to not authorize the proposal. Implementing the No-Action Alternative would maintain the

existing facilities (and operations) at the Wadsworth Compressor Station and would not result in the replacement and modification of the proposed facilities. As a result, the additional compression necessary to facilitate the 15,000 Dth/d of incremental firm transportation capacity to meet the growing market demand for natural gas in the Reno, Nevada area would not be available. The No-Action Alternative would not meet the stated purpose of the Project. The impacts disclosed in this EA would not occur, at the cost of not meeting the purpose, need, and goals of the Project. Further, if the Commission were to deny the Project, it could result in other natural gas companies seeking to increase their respective capacities to meet the market demand. These increases could result in the construction of additional and/or new pipeline/compression facilities in the Project area. Thus, resulting in their own set of specific environmental impacts. Given the minor impacts from construction and operation of the Project, we do not recommend the no-action alternative.

C.2 SITING ALTERNATIVES

As the proposed action involves the replacement and modification of existing facilities at an existing and disturbed site, alternatives utilizing different locations could only result in greater environmental impacts. In addition, we did not receive any comments, or identify any resource issues, that would lead us to seek alternative sites for the proposed Project facilities. Thus, site alternatives were not considered further.

C.3 ALTERNATIVES CONCLUSION

Based on the results of the alternatives analysis discussed in the preceding sections, we find that the Project, as currently proposed and modified by our recommended mitigation measures, is the preferred alternative that can meet the Project's objectives.

SECTION D - STAFF'S CONCLUSIONS AND RECOMMENDATIONS

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

1. Tuscarora shall follow the abandonment and construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests) and as identified in the EA, unless modified by the Order. Tuscarora must:
 - a. request any modification to these procedures, measures, or conditions in a filing with the Secretary;
 - b. justify each modification relative to site-specific conditions;
 - c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and
 - d. receive approval in writing from the Director of the Office of Energy Projects (OEP), or the Director's designee, **before using that modification.**
2. The Director of OEP, or the Director's designee, has delegated authority to address any requests for approvals or authorizations necessary to carry out the conditions of the Order, and take whatever steps are necessary to ensure the protection of environmental resources during construction, abandonment, and operation of the Project. This authority shall allow:
 - a. the modification of conditions of the Order;
 - b. stop-work authority; and
 - c. the imposition of any additional measures deemed necessary to ensure continued compliance with the intent of the conditions of the Order as well as the avoidance or mitigation of unforeseen adverse environmental impact resulting from Project construction, abandonment, and operation.
3. **Prior to any construction**, Tuscarora shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, EIs, and contractor personnel will be informed of the EI's authority and have been or will be trained on the implementation of the environmental mitigation measures

appropriate to their jobs **before** becoming involved with construction and restoration activities.

4. The authorized facility location shall be as shown in the EA, as supplemented by filed plot plans/facility diagrams. **As soon as they are available, and before the start of construction**, Tuscarora shall file with the Secretary any revised detailed plot plans/diagrams for all facilities approved by the Order. All requests for modifications of environmental conditions of the Order or site-specific clearances must be written and must reference locations designated on these plot plans/diagrams.

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

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

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

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

- a. implementation of cultural resources mitigation measures;
- b. implementation of endangered, threatened, or special concern species mitigation measures;

- c. recommendations by state regulatory authorities; and
 - d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.
6. **Within 60 days of the acceptance of the authorization and before construction begins**, Tuscarora shall file an Implementation Plan with the Secretary for review and written approval by the Director of OEP, or the Director's designee. Tuscarora must file revisions to the plan as schedules change. The plan shall identify:
- a. how Tuscarora will implement the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests), identified in the EA, and required by the Order;
 - b. how Tuscarora will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to onsite construction and inspection personnel;
 - c. the number of EIs assigned, and how the company will ensure that sufficient personnel are available to implement the environmental mitigation;
 - d. company personnel, including EIs and contractors, who will receive copies of the appropriate material;
 - e. the location and dates of the environmental compliance training and instructions Tuscarora will give to all personnel involved with construction and restoration (initial and refresher training as the project progresses and personnel change).
 - f. the company personnel (if known) and specific portion of Tuscarora's organization having responsibility for compliance;
 - g. the procedures (including use of contract penalties) Tuscarora will follow if noncompliance occurs; and
 - h. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:
 - (1) the completion of all required surveys and reports;
 - (2) the environmental compliance training of onsite personnel;
 - (3) the start of construction; and
 - (4) the start and completion of restoration.
7. Tuscarora shall employ at least one EI for the Project. The EI shall be:

- a. responsible for monitoring and ensuring compliance with all mitigation measures required by the Order and other grants, permits, certificates, or other authorizing documents;
 - b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract (see condition 6 above) and any other authorizing document;
 - c. empowered to order correction of acts that violate the environmental conditions of the Order, and any other authorizing document;
 - d. responsible for documenting compliance with the environmental conditions of the Order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies; and
 - e. responsible for maintaining status reports.
8. Beginning with the filing of its Implementation Plan, Tuscarora shall file updated status reports with the Secretary on a **monthly** basis until all construction and restoration activities are complete. On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:
- a. an update on Tuscarora's efforts to obtain the necessary federal authorizations;
 - b. the construction status of the project, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally-sensitive areas;
 - c. a listing of all problems encountered, and each instance of noncompliance observed by the EI during the reporting period (both for the conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);
 - d. a description of the corrective actions implemented in response to all instances of noncompliance;
 - e. the effectiveness of all corrective actions implemented;
 - f. a description of any landowner/resident complaints which may relate to compliance with the requirements of the Order, and the measures taken to satisfy their concerns; and
 - g. copies of any correspondence received by Tuscarora from other federal, state, or local permitting agencies concerning instances of noncompliance, and Tuscarora's response.

9. Tuscarora must receive written authorization from the Director of OEP, or the Director's designee, **before commencing construction or abandonment by removal of any project facilities.** To obtain such authorization, Tuscarora must file with the Secretary documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof).
10. Tuscarora must receive written authorization from the Director of OEP, or the Director's designee, **before placing the project into service.** Such authorization will only be granted following a determination that rehabilitation and restoration of areas affected by the project are proceeding satisfactorily.
11. **Within 30 days of placing the authorized facilities in service,** Tuscarora shall file an affirmative statement with the Secretary, certified by a senior company official:
 - a. that the facilities have been constructed/abandoned/installed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or
 - b. identifying which of the conditions in the Order Tuscarora has complied with or will comply with. This statement shall also identify any areas affected by the project where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.
12. Tuscarora shall file noise surveys with the Secretary **no later than 60 days** after placing the authorized unit at the Wadsworth Compressor Station in service. If a full load condition noise survey is not possible, Tuscarora shall provide an interim survey at the maximum possible horsepower load and provide the full load survey **within 6 months.** If the noise attributable to the operation of the modified station under interim or full horsepower load conditions exceeds an L_{dn} of 55 dBA at any nearby NSA, Tuscarora shall file a report on what changes are needed and install additional noise controls to meet that level **within 1 year** of the in-service date. Tuscarora shall confirm compliance with this requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls.

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SECTION F - REFERENCES

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