Federal Energy Regulatory Commission

Office of Energy Projects

December 2025

Magnum Gas Storage, LLC

Docket No. CP25-233-000

2025 Amendment Project

Environmental Assessment

Washington, DC 20426

NEPA Unique ID: EAXX-019-20-000-1750685312

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICE OF ENERGY PROJECTS

In Reply Refer To:
OEP/DG2E/Gas Branch 2
Magnum Gas Storage LLC
2025 Amendment Project
Docket No. CP25-233-000

TO THE INTERESTED PARTY:

The staff of the Federal Energy Regulatory Commission (FERC or Commission) has prepared an environmental assessment (EA) for the 2025 Amendment Project (Amendment Project), proposed by Magnum Gas Storage, LLC (Magnum) in the above-referenced docket.[1] Magnum proposes to modify previously approved natural gas storage facilities, and construct and operate additional facilities in Millard, Juab, and Utah Counties, Utah.

Any person wishing to comment on the EA may do so. To ensure consideration of your comments on the proposal prior to making a decision on the project, it is important that the Commission receive your comments **on or before 5:00pm Eastern Time on January 20, 2026**. Instructions for filing comments are provided on page 3.

The proposed project is an amendment to the Certificate of Public Convenience and Necessity (Certificate) issued by the Commission on March 17, 2011, as amended on November 17, 2016, and on April 23, 2020, in Docket Nos. CP10-22-000, CP16-18-000, and CP20-77-000, respectively. Currently, Magnum is authorized to construct and operate a natural gas storage facility with a total working gas capacity of 21 billion cubic feet (Bcf) consisting of two storage caverns, one brine disposal pond and associated facilities, compression facilities, a 61.6-mile-long, 36-inch-diameter header pipeline, and other related facilities. The proposed modifications consist primarily of changes to the locations of previously approved facilities and utilities at the storage site. Magnum also requests authorization to redesign two authorized caverns for 5.2 Bcf of working gas each and to construct and operate two additional storage caverns with 5.2 Bcf of working gas capacity each, one additional brine disposal pond and related facilities, and two new pipeline interconnections. Magnum's stated purpose is to modify its Certificate to reflect new construction, operational and commercial needs, and provide new competitive firm and interruptible natural gas storage, hub and wheeling services in the Western United States.

[1] For tracking purposes under the National Environmental Policy Act, the unique identification number for documents relating to this environmental review is EAXX-019-20-000-1750685312.

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

The Amendment Project includes the following facilities within the storage site:

- four below-ground, solution mined storage caverns (CW-3, CW-4, CW-25, and CW-26);
- two water supply wells (GS-MH-4 and GS-MH-5);
- compression, substation, and dehydration and metering facilities;
- two large-scale brine evaporation ponds (Pond 3 and Pond 5);
- maintenance and laydown area;
- office/warehouse building;
- site-wide utility corridors containing water, brine and power lines;
- portions of the 4-inch-diameter, about 9-mile-long gas supply line connected to the local gas distribution company;
- portions of the 36-inch-diameter, about 61.5 mile long header pipeline (Header) and associated block valves that extend from the Storage Site near Delta in Millard County to the interstate pipeline system near Goshen in Utah County;
- two interconnection options to the adjacent Kern River Delta Lateral (a recently constructed pipeline located just east of the Amendment Project); and,
- two interconnection options to the Intermountain Power Plant (IPP - a newly constructed hydrogen and natural gas-fired power plant located directly north and adjacent to the Amendment Project).

The Commission mailed a copy of the *Notice of Availability* of the EA to federal, state, and local government representatives and agencies; elected officials; environmental and public interest groups; Native American tribes; potentially affected landowners and other interested individuals and groups; and newspapers and libraries in the Amendment Project area. The EA is only available in electronic format. It may be viewed and downloaded from the FERC's website (www.ferc.gov), on the natural gas environmental documents page (https://www.ferc.gov/industries-data/natural-gas/environment/environmental-documents). In addition, the EA may be accessed by using the eLibrary link on the FERC's website. Click on the eLibrary link (https://elibrary.ferc.gov/eLibrary/search), select "General Search" and enter the docket number in the "Docket Number" field, excluding the last three digits (i.e. CP25-233). Be sure you have selected an appropriate date range. For assistance, please contact FERC Online Support at FercOnlineSupport@ferc.gov or toll free at (866) 208-3676, or for

TTY, contact (202) 502-8659.

The EA is not a decision document. It presents Commission staff's independent analysis of the environmental issues for the Commission to consider when addressing the merits of all issues in this proceeding.

Your comments should focus on the EA's disclosure and discussion of potential environmental effects, reasonable alternatives, and measures to avoid or lessen environmental impacts. The more specific your comments, the more useful they will be. For your convenience, there are three methods you can use to file your comments to the Commission. The Commission encourages electronic filing of comments and has staff available to assist you at (866) 208-3676 or FercOnlineSupport@ferc.gov. Please carefully follow these instructions so that your comments are properly recorded.

(1) You can file your comments electronically using the eComment feature on the Commission's website (www.ferc.gov) under the link to FERC Online. This is an easy method for submitting brief, text-only comments on a project;

(2) You can also file your comments electronically using the eFiling feature on the Commission's website (www.ferc.gov) under the link to FERC Online. With eFiling, you can provide comments in a variety of formats by attaching them as a file with your submission. New eFiling users must first create an account by clicking on "eRegister." You must select the type of filing you are making. If you are filing a comment on a particular project, please select "Comment on a Filing"; or

(3) You can file a paper copy of your comments by mailing them to the Commission. Be sure to reference the Amendment Project docket number (CP25-233-000) in your letter. Submissions sent via the U.S. Postal Service must be addressed to: Debbie-Anne A. Reese, Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Room 1A, Washington, DC 20426. Submissions sent via any other carrier must be addressed to: Debbie-Anne A. Reese, Secretary, Federal Energy Regulatory Commission, 12225 Wilkins Avenue, Rockville, Maryland 20852.

Filing environmental comments will not give you intervenor status, but you do not need intervenor status to have your comments considered. Only intervenors have the right to seek rehearing or judicial review of the Commission's decision. At this point in this proceeding, the timeframe for filing timely intervention requests has expired. Any person seeking to become a party to the proceeding must file a motion to intervene out-of-time pursuant to Rule 214(b)(3) and (d) of the Commission's Rules of Practice and Procedures (18 CFR § 385.214(b)(3) and (d)) and show good cause why the time limitation should be waived. Motions to intervene are more fully described at https://www.ferc.gov/how-intervene.

For public inquiries and assistance with making filings such as interventions, comments, or requests for rehearing, contact the Office of Public Participation at (202) 502-6595 or OPP@ferc.gov. Additional information about the Amendment Project is available from the FERC website (www.ferc.gov) using the eLibrary link. The eLibrary link also provides access to the texts of all formal documents issued by the Commission, such as orders, notices, and rulemakings.

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

Commission Staff Page Limit and Deadline Certifications

I certify that Commission staff has considered the factors mandated by the National Environmental Policy Act (NEPA) and that this environmental document represents a good-faith effort to disclose the most important considerations required by NEPA within the statutory page limit (42 U.S.C. § 4336a(e)) and the statutory deadline (42 U.S.C. § 4336a(g)). This certification reflects staff's expert judgment that the analysis contained within this environmental document is an accurate representation of the potential environmental effects of the proposed action and the analysis is substantially complete. In staff's judgment, any considerations addressed briefly or left unaddressed would not meaningfully inform the assessment of environmental effects.

Gertrude Fernandez Johnson
Director, Division of Gas –
Environment & Engineering

TABLE OF CONTENTS

List of Tables

List of Figures

List of Appendices

Appendix A: Additional Tables

TECHNICAL ABBREVIATIONS AND ACRONYMS

2020 Approved Project	Interstate natural gas storage facility and associated header pipeline authorized under Docket No. CP20-77-000
ACES	Advanced Clean Energy Storage
Amendment Project	2025 Amendment Project
APE	area of potential effects
AQCR	Air Quality Control Region
ATWS	additional temporary workspace
Bcf	billion cubic feet
BLM	United States Bureau of Land Management
bgs	below ground surface
CAA	Clean Air Act
Certificate	Certificate of Public Convenience and Necessity
CFR	Code of Federal Regulations
CH_4	methane
Chevron	Chevron U.S.A, Inc.
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
Commission	Federal Energy Regulatory Commission
CS	Compressor Station
CW	Cavern Well
dB	decibel
dBA	decibels on the A-weighted scale
DOE	Department of Energy
DOGM	Utah Division of Oil, Gas and Mining
DWQ	Utah Division of Water Quality
DWRi	Utah Division of Water Rights
EA	environmental assessment
EGC-EDT	Enterprise Green Communities Criteria-Engineering Design Technologies
EI	environmental inspector
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FONSI	Finding No Significant Impact
GHG	greenhouse gas
gpm	gallons per minute

HUC	hydrologic unit code
IPaC	Information for Planning and Consultation
IPP	Intermountain Power Plant
KRG	Kern River Gas Transmission
L_{eq}	equivalent sound level
Magnum	Magnum Gas Storage, LLC
Memorandum	Memorandum of Understanding on Natural Gas Transportation Facilities
mmbbls	million barrels
MGS	Magnum Gas Storage
MW	megawatt
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NGA	Natural Gas Act
NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NOS	Notice of Scoping
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NSA	Noise Sensitive Area
NSR	New Source Review
OEP	Office of Energy Projects
OPP	Office of Public Participation
Pb	lead
PHMSA	Pipeline and Hazardous Materials Safety Administration
Plan	*Upland Erosion Control, Revegetation, and Maintenance Plan*
PLPCO	Public Lands Policy Coordination Office
$PM_{2.5}$	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
Procedures	*Wetland and Waterbody Construction and Mitigation Procedures*
PSD	Prevention of Significant Deterioration
Secretary	Secretary of the Commission
SHPO	State Historic Preservation Office
SITLA	School and Institutional Trust Lands Administration
SO_2	sulfur dioxide
UIC	Underground Injection Control Program

UDP	*Unanticipated Discoveries Plan*
USACE	U.S. Army Corps of Engineers
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGCRP	U.S. Global Change Research Program
VOC	volatile organic compound

SECTION A – PROPOSED ACTION

1.0 INTRODUCTION

In accordance with the Natural Gas Act (NGA Title 15 United States Code [U.S.C.] Section 717 [15 U.S.C. 717]), the Federal Energy Regulatory Commission (FERC or Commission) is responsible for deciding whether to authorize the construction and operation of interstate natural gas transmission facilities. 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 of Public Convenience and Necessity (Certificate) to construct and operate them. The Commission bases its decisions on both economic issues, including need, and environmental effects.

On April 21, 2025, Magnum Gas Storage, LLC (Magnum) filed an application in Docket No. CP25-233-000 requesting to amend its Certificate issued pursuant to Section 7(c) of the NGA for the Magnum Gas Storage Project. The proposed project is known as the 2025 Amendment Project (Amendment Project) and includes modification of previously approved facilities, and construction and operation of additional facilities in Millard, Juab, and Utah Counties, Utah. We[2] prepared this environmental assessment (EA) in compliance with the requirements of the National Environmental Policy Act of 1969 (NEPA)[3] and the Commission's implementing regulations under Title 18 of the Code of Federal Regulations, Part 380 (18 CFR 380).

An assessment of environmental effects is an integral part of the Commission's decision-making process to determine whether to authorize Magnum's proposal. Our principal purposes in preparing this EA are to:

- identify and assess potential effects on the natural and human environment that could result from the implementation of the proposed action;
- describe and evaluate reasonable alternatives to avoid or minimize adverse environmental effects;
- identify and recommend mitigation measures, as necessary, to avoid or minimize project-related environmental effects; and
- facilitate public involvement in the environmental review process.

The proposal is an amendment to the FERC Certificate issued on March 17, 2011, as amended on November 17, 2016, and April 23, 2020 (2020 Approved Project), under Docket Nos. CP10-22-000, CP16-18-000, and CP20-77-000, respectively. The proposed modifications in this proceeding consist primarily of changes to the locations of previously approved facilities and utilities. Magnum also requests authorization to redesign the two authorized caverns for 5.2 billion cubic feet (Bcf) of working gas each and to construct and operate two additional storage caverns with 5.2 Bcf of working gas capacity each, one additional brine disposal pond and related facilities, and two new pipeline interconnections.

[2] "We," "us," and "our" refer to environmental staff of the Commission's Office of Energy Projects.
[3] National Environmental Policy Act of 1969 amended (Pub. L. 91-190. 42 U.S.C. §§ 4321–4347, as amended by Pub. L. 94-52, July 3, 1975, Pub. L. 94-83, August 9, 1975, Pub. L. 97-258, §4(b), September 13, 1982, Pub. L. 118-5, June 3, 2023, Pub. L. 119-21, July 4, 2025).

2.0 PURPOSE AND NEED

Magnum states that the purpose of the Amendment Project is to serve the strong market demand and support for natural gas capacity, deliverability, and flexibility in the region. This demand has led to a reevaluation of the previously approved project, with minor modifications proposed for certain facilities; to account for recent cavern construction experience involving the affiliated Advanced Clean Energy Storage (ACES) Project, a hydrogen and renewable energy project being developed adjacent to Magnum. The overall project purpose is to provide new competitive firm and interruptible natural gas storage, hub and wheeling services in the Western United States.

Under Section 7(c) of the NGA, the Commission determines whether interstate natural gas transportation facilities are at the public convenience and necessity and, if so, grants a Certificate to construct and operate them. The Commission bases its decisions on both economic issues, including need, and environmental effects.

3.0 SCOPE OF THIS ENVIRONMENTAL ASSESSMENT

The topics addressed in this EA include geology, soil, water resources and wetlands, vegetation, wildlife, species of special concern, cultural resources, land use, visual resources, socioeconomics, air quality, noise, reliability and safety, and cumulative effects, including climate change. This EA describes the affected environment as it currently exists and the environmental consequences of the Amendment Project and compares the Amendment Project's potential effects with that of various alternatives. This EA also presents our conclusions and additional mitigation measures that we recommend the Commission adopt as mandatory conditions of any Certificate it may issue to Magnum.

As the lead federal agency for the Amendment Project, FERC is required to comply with section 7 of the Endangered Species Act (ESA) and section 106 of the National Historic Preservation Act. These statutes have been considered in the preparation of this EA. FERC will use this document to consider the environmental impacts that could result if it authorizes the Amendment Project. In addition to FERC, other federal, state, and local agencies may use this EA in approving or issuing permits for all or part of the Amendment Project. Permits, approvals, and consultations for the Amendment Project are discussed in section A.9.

4.0 PUBLIC PARTICIPATION AND COMMENT

On April 30, 2025, FERC issued its *Notice of Amendment Application and Establishing Intervention Deadline and Request for Extension of Time* for the Amendment Project. The notice announced the receipt of Magnum's application, identified ways for the public to provide comments on the Amendment Project, and established a deadline for submitting a motion to intervene in the proceeding. In response, we received one comment from Steven Andersen on May 20, 2025, and one motion to intervene, on the same date, from Larry Carson of LSC Real Estate.

On June 17, 2025, FERC issued its *Notice of Scoping Period Requesting Comments on Environmental Issues for the Proposed 2025 Amendment Project* (NOS). The NOS was mailed to affected landowners (as defined in the Commission's regulations); federal, state, and local officials; Native American Tribes; federal, state, and local agency representatives; and local libraries. The NOS established a 30-day scoping period and requested comments on specific concerns about the Amendment Project or issues that should be considered during the preparation of the environmental document. We received one comment from landowner Logan Voellinger in response to the NOS, requesting that FERC's EA address concerns regarding caprock integrity, wellbore integrity, redundant shutoff valve capabilities, and sophisticated leak detection both nearby and at remote/distant locations, particularly along fault lines where gas may foreseeably migrate in cases of compromised cavern integrity, in light of the 2016 Aliso Canyon incident. We received another comment from Sindy Smith on behalf of the Utah Public Lands Policy Coordinating Office (PLPCO) regarding the proposed new brine disposal pond. These comments are addressed in sections B.1 and B.3 of this EA.

A notice announcing the EA's issuance will be sent to affected landowners and stakeholders, including anyone who submitted comments to the Commission. The public will have another opportunity to provide comments during the EA comment period. All substantive comments received will be addressed in the Commission's Order.

5.0 PROPOSED FACILITIES

Magnum proposes modifying its approved facilities within the storage site boundary to include:

- four below-ground, solution mined storage caverns (CW-3, CW-4, CW-25, and CW-26);
- two water supply wells (GS-MH-4 and GS-MH-5);
- compression, substation, and dehydration and metering facilities;
- two large-scale brine evaporation ponds (Pond 3 and Pond 5);
- maintenance and laydown area;
- office/warehouse building;
- site-wide utility corridors containing water, brine and power lines;
- portions of the 4-inch-diameter, about 9 -mile-long gas supply line connected to the local gas distribution company;
- portions of the 36-inch-diameter, about 61.5-mile-long header pipeline (Header) and associated block valves that extend from the Storage Site near Delta in Millard County to the interstate pipeline system near Goshen in Utah County;
- two interconnection options to the adjacent Kern River Delta Lateral (a recently constructed pipeline located just east of the Amendment Project); and,
- two interconnection options to the Intermountain Power Plant (IPP - a newly constructed hydrogen and natural gas-fired power plant directly north and adjacent to the Amendment Project).

Magnum proposes minor shifts in the alignment of the gas supply line and Header within the storage site to consolidate utilities into one central corridor; however, there are no changes to the alignments outside of the amended storage site boundary. Table A.5-1 in appendix A provides a list of previously approved and newly proposed facilities and associated dimensions and acreages. Figure A.2-1 identifies the general location of the Amendment Project facilities

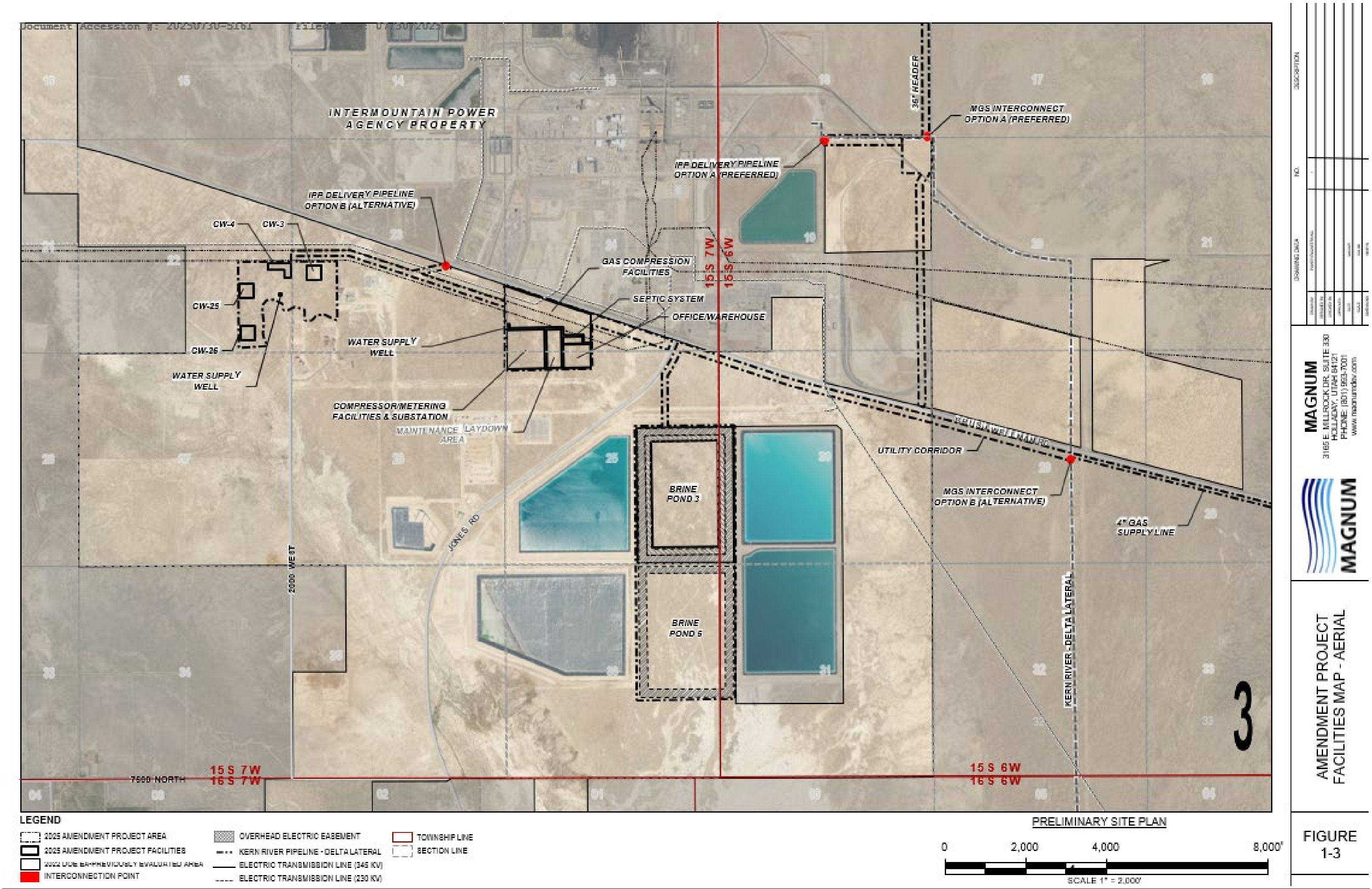

Figure A.2-1: 2025 Amendment Project Vicinity

The proposed facilities and location shifts are either within the 2020 Approved Project boundary or within lands previously evaluated in 2018 and in 2022 for two non-jurisdictional storage facilities: a Compressed Air Energy Storage facility evaluated under the California Environmental Quality Act (was not constructed), and the ACES facility, a hydrogen and renewable energy project evaluated by the Department of Energy (DOE) under NEPA. Magnum does not propose any modifications to result in additional impacts to the environmental resources previously analyzed in the 2010[4] and 2016[5] FERC EAs, the 2018 state and federal evaluations, or the 2022 DOE study.

Table A.5-2 in appendix A provides a summary of the proposed modifications to the 2020 Approved Project.

6.0 LAND REQUIREMENTS

As stated previously, the Amendment Project would primarily consist of minor locational changes within the storage site, including changes to the locations of the storage caverns, as well as two additional storage caverns, one additional brine disposal pond and related facilities, and new pipeline interconnections. The amended storage site is located on property controlled by Chevron U.S.A., Inc. (Chevron), of which Magnum is a subsidiary. Construction of the proposed facilities would disturb about 603.6 acres of land. Following construction, Magnum would maintain about 446.8 acres for permanent operation of the Amendment Project's facilities; the remaining acreage would be restored and reverted to former uses.[6] The temporary and permanent land required for each of the proposed facilities is summarized in table B.6-1.

A portion of the Header alignment crosses federally managed lands by the Bureau of Land Management (BLM) and Magnum has received the necessary permits from BLM to construct the project.

7.0 CONSTRUCTION SCHEDULE AND PROCEDURES

Magnum anticipates beginning construction in 2026 and placing the facilities in service within 54 months of the Commission's order, subject to receiving necessary permits and approvals.[7] The Amendment Project facilities would be designed, constructed, tested, operated, and maintained in accordance with applicable regulations, including U.S. Department of Transportation (DOT) regulations at 49 CFR Part 192, "Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards," and Commission regulations at 18 CFR Section 380.15, "Siting and Maintenance Requirements." In addition, Magnum would follow its

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[4] Environmental Assessment for Magnum Gas Storage Project under CP10-22. November 23, 2010, FERC Accession # 20101123-4001

[5] Environmental Assessment Report Magnum Gas Storage, LLC's Section 7(c) Amendment of Facilities under CP16-18. November 16, 2015, FERC Accession # 20160729-4003

[6] Magnum, August 29, 2025, Data Response, FERC Accession # 20250829-5083

[7] As part its Amendment Project application, Magnum is requesting an extension of time by which the facilities must be constructed and placed in service. Currently, Magnum is required to construct and place the authorized facilities in service by May 17, 2025. Magnum requests that the Commission suspend the applicability of the current required in-service date and grant Magnum four and one-half years to construct and place facilities in-service from the date of the order authorizing the proposed amendment.

Environmental Plan for the Amendment Project, that incorporates FERC's *Upland Erosion Control, Revegetation and Maintenance Plan* (Plan). Magnum also developed a *Groundwater Monitoring, Mitigation and Protection Plan*; a *Brine Evaporation Pond Management Plan*; *Weed Management Plan*; *Reclamation Plan*; *Fugitive Dust Control Plan*; and plans to develop and implement a *Spill Prevention and Response Procedures* and *Procedures Guiding the Discovery of Unanticipated Cultural Resources and Human Remains (*Unanticipated Discovery Plan*).*

8.0 NON-JURISDICTIONAL FACILITIES

As part of the decision to approve facilities under its jurisdiction, the Commission considers all factors bearing on the public interest. Occasionally, proposed projects have associated facilities that do not come under the jurisdiction of the Commission. Magnum did not identify any new or modified non-jurisdictional facilities that would be required to construct and operate the proposed Amendment Project.

However, there are two overlapping and adjacent non-jurisdictional facilities located on Chevron lands within the Amendment Project area, ACES (DOE 2022) and Sawtooth Caverns. The proposed Amendment Project adjustments are due to site conflicts with the ACES non-jurisdictional renewable hydrogen storage cavern projects on land within and adjacent to the Storage Site. During their review, DOE evaluated the 2022 ACES Phases I & II and a newly constructed natural gas liquids storage facility (Sawtooth Caverns, formerly known as Magnum NGLs) as non-jurisdictional facilities, which included the land within and adjacent to the Amendment Project. The ACES Project would use electrolysis to convert renewable energy into hydrogen and would utilize solution-mined salt caverns for seasonal, dispatchable storage of the energy. The ACES Project, designed to convert and store up to 100 metric tons per day of hydrogen, is under construction and is expected to enter commercial-scale operations by the end of 2025 to support Intermountain Power Agency (IPA) in its "IPP Renewed" initiative. The Sawtooth caverns store petroleum liquid products in their underground salt cavern terminal near Delta, UT and offer a wide range of product storage from pressurized NGL products such as Butanes, and Propane, to un-pressurized refined products such as Gasoline, Diesel, Jet Fuel, and other refinery feedstocks. Both non-jurisdictional facilities completed evaluations for the construction and operation of similar sized storage caverns and are currently being authorized under the same Class III Underground Injection Control Program (UIC) blanket permit that authorized cavern construction for the 2020 Approved Project. Cumulative effects of these projects are discussed in section B.10 of this EA.

9.0 PERMITS AND APPROVALS

Magnum has contacted federal, state, and local agencies that may have regulatory approval or interest in the Amendment Project and would obtain all necessary permits and approvals relating to the Amendment Project prior to the start of construction. Appendix A - Table A.9-1 provides a list of required permits and consultations. Copies of correspondence are available in the docket and application materials for the Amendment Project.

SECTION B – ENVIRONMENTAL ANALYSIS

The following sections discuss the Amendment Project's potential effects on environmental resources. When considering the environmental consequences of the Amendment Project, the duration and significance of any potential effects are described below according to the following four levels: temporary, short-term, long-term, and permanent. Temporary effects generally occur during construction, with the resources returning to approximate pre-construction conditions almost immediately. Short-term effects could continue for up to three years following construction. Long-term effects would require more than three years to recover but eventually would recover to approximate pre-construction conditions. Permanent effects are defined as activities that modify resources to the extent that they may not return to pre-construction conditions, such as with the construction of an aboveground facility. When determining the significance of an effect, we consider the duration of the effect; the geographic, biological, and/or social context in which the effect would occur; and the magnitude and intensity of the effect.

The analysis contained in this EA is based upon Magnum's application and supplemental filings, and our experience with the construction and operation of natural gas infrastructure. In addition, we incorporate by reference our previous analyses in the 2010 FERC EA[8] and 2016 FERC EA.[9] If the Amendment Project is approved and proceeds to the construction phase, it is not uncommon for a project proponent to require modifications (e.g., minor changes in workspace configurations). These changes are often identified by a company once on-the-ground implementation work is initiated. Any Project modification would be subject to review and approval from FERC's Director of the Office of Energy Projects (OEP) and any other permitting/authorizing agencies with jurisdiction.

Based on our review of the Amendment Project, the following resources are either not present or would not be affected by construction:

- surface water;
- floodplains;
- coastal zone management areas;
- wetlands; and
- fisheries.

1.0 GEOLOGY

The geology and hydrology of the 2020 Approved Project is described in detail in Sections 2.1 of the 2010 FERC EA and Section B.1 of the 2016 FERC EA, as well as the potential effects on mineral resources, groundwater, and geologic hazards from construction and

[8] Environmental Assessment for Magnum Gas Storage Project under CP10-22. November 23, 2010, FERC Accession # 20101123-4001

[9] Environmental Assessment Report Magnum Gas Storage, LLC's Section 7(c) Amendment of Facilities under CP16-18. July 29, 2016, FERC Accession # 20160729-4003

operation of Amendment Project facilities, and the mitigation measures to minimize these effects.

Geological Setting

The Amendment Project is in the Sevier Desert, the northern portion of a large intermountain basin along the eastern margin of the Basin and Range physiographic province, which covers much of the western U.S. and is characterized by isolated, nearly parallel, north-south trending mountain ranges formed by uplifted fault blocks. The intermountain basin is bounded on the east by the Canyon and Gilson Mountain ranges, on the north by the Sheep Rock, Simpson and Keg Mountains, and on the west by the House Range, Drum and Little Drum Mountains. The southern portion of the basin is known as the Black Rock Desert.

The Amendment Project facilities within the amended Storage Site and the first 24 miles of the Header would be constructed on Quaternary and recent valley fill deposits of the Sevier Desert. The amended Storage Site is comprised of three main areas connected by a centralized utility corridor that runs along Brush Wellman Road/SR 174 on the property controlled by Chevron; the valley fill deposits consist primarily of sand, silt, and clay.[10] The gas storage caverns within the natural gas storage facility site would be constructed in a salt formation of Tertiary age that lies beneath the Sevier Desert.

Mineral Resources

The mineral resources in the vicinity of the Amendment Project area are geothermal, limestone, and sand and gravel. The Amendment Project would be located approximately 10 miles southeast of Crater Springs, a known geothermal area. Small gravel mining operations and a limestone quarry are present in the Champlin Point area of the Gilson Mountains. The Amendment Project area would not intersect any coal deposits, and coal mines are not located in the vicinity of the Amendment Project area (FERC 2010). Given the lack of mineral resources in the Amendment Project site area and the limited potential for future mineral resource development, we conclude significant effects from the construction and operation of the Amendment Project are not anticipated.

Facilities

<u>Storage Caverns</u>

The four storage caverns would be constructed in tectonically thickened bedded salt using standard solution mining technology. The salt structure is located directly beneath the area that was reviewed for the 2010 EA Storage Site and is overlain by approximately 3,000 feet of unconsolidated basin deposits. The salt is capped by an approximate 300-foot-thick anhydrite layer. Engineering studies completed in 2010 defined the following cavern geometry: the approximate tops of the caverns are anticipated to be located a minimum of 500 feet below the top of the salt structure, between 3,800 and 4,200 feet below ground surface (bgs); the approximate base of the caverns is anticipated to be between 4,900 and 5,200 feet bgs; the caverns are anticipated to be roughly cylindrical in shape and approximately 1,200 to 1,300 feet

[10] Magnum April 4, 2025, Application, Resource Report 6, at 2, eLibrary Accession # 20250421-5041

tall with a 300 foot diameter; and, the caverns should have a minimum pillar spacing of 600 feet apart when constructed to a size of 10 million barrels (mmbbls) as it is the equivalent of a 2:1 pillar to storage cavern diameter ratio.[11] Magnum would maintain the criteria to ensure the structural integrity of both the individual caverns and the salt structure between the caverns.

Geologic Hazards

The previously identified geologic hazards in the area included: seismicity; collapse due to area faulting; subsidence; soil liquefaction; and landslides. Therefore, to mitigate the potential effects, Magnum developed an acceptable Subsidence and Seismic Monitoring Plan[12] which has been reviewed and approved by the FERC and other cooperating local, state and federal agencies (FERC 2017). Magnum proposes implementing this plan during construction and operation of the Amendment Project storage caverns. Given these mitigation measures, we conclude the potential of geologic hazards to cause significant effects to the Amendment Project are low.

We received comments from Logan Voellinger on what actions Magnum would take regarding the caprock and wellbore integrity, redundant shutoff valve capabilities, and sophisticated leak detection both nearby and at remote/distant locations, particularly along fault lines where gas may foreseeably migrate in cases of compromised cavern integrity, in light of the 2016 Aliso Canyon incident. Magnum restated there are no fault lines in vicinity to the Amendment Project. The final integrated engineering design for the storage caverns and surface facilities would also include a sophisticated leak detection program and other safety design aspects to meet the applicable state and federal safety and design codes, rules and regulations.[13]

Magnum worked with the jurisdictional state and federal agencies to develop an approved typical design for storage cavern wells that meets both caprock and wellbore integrity requirements under these federal and state regulations, and to ensure that additional design requirements in API RP 1170,[14] which was developed in response to the Aliso Canyon incident, were already included in the approved design. The Magnum natural gas storage caverns are not the same type of underground storage design used at Aliso Canyon, which employed depleted oil and gas fields for gas storage. Further, the Aliso Canyon natural gas production wells that were repurposed for gas storage were not constructed to modern regulatory requirements that require fully cemented casing strings, which the Amendment Project includes, to safeguard from the type of failure encountered at Aliso Canyon.

Geological Analysis

The proposed changes to the scope of facilities primarily involve location changes to the storage caverns and other previously approved facilities or facility types. The effects from the inclusion of four storage caverns were previously found to have no significant effects in both 2010 and 2016 FERC EAs (FERC 2010 and 2016).

The proposed change in storage cavern locations is to avoid conflicts with the recently

[11] Magnum April 4, 2025, Application, Resource Report 6, at 3, eLibrary Accession # 20250421-5041
[12] Magnum August 21, 2017, Appendix L, eLibrary Accession # 20170821-5094
[13] Magnum July 30, 2025, Data Response, eLibrary Accession # 20250730-5161
[14] Magnum April 21, 2025, Application, Resource Report 6, at 4, eLibrary Accession # 20250421-5041

constructed non-jurisdictional facilities that overlap with the 2020 Approved Project. The cavern locations were moved to maintain compliance with the approved design criteria for cavern size and spacing, as well as the other engineering requirements in the FERC Certificate, Utah Division of Water Quality (DWQ) Class III UIC Permit, and associated Utah Division of Oil, Gas and Mining permit, and Board of Oil, Gas and Mining Order to be issued. When sitting the storage cavern locations included in the Amendment Project (CW-3, CW-4, CW-25 and CW-26), Magnum would maintain the required minimum 600-foot pillar spacing, assuming a 300 feet wide cavern diameter for a 10 mmbbls cavern size even though the proposed caverns would only be constructed up to 5.5 mmbbls in size. Further, Magnum would ensure the new proposed storage cavern locations maintain the minimum spacing requirements between the adjacent existing caverns, to safeguard against the physical influence between caverns.

Given that Magnum's proposed modifications to the Amendment Project cavern locations and quantity would be consistent with the analyses in the 2010 and 2016 FERC EAs, we conclude that there would be no new effects to geological or mineral resources and there would not be significant effects on these resources.

2.0 SOILS

Soils information for the Amendment Project application was gathered from the Web Soil Survey available from the United States Department of Agriculture Natural Resources Conservation Service (NRCS, 2025). Amendment Project soils are developed from slowly permeable, lake-deposited sediments that are silty, clayey or both. These characteristics indicate erosion, revegetation, and corrosion challenges to the Amendment Project. These challenges are like those previously identified.

Silt, a dominant component of many Amendment Project soils, is the most erodible soil constituent. Given the droughty climate, flat local topography and slightly displaced mountains, wind-based erosion would tend to be the dominant erosion form. The effects of wind erosion and fugitive dust are very similar. As described in the 2010 EA (FERC 2010) Magnum would use water application, chemical suppressants and mulches to minimize the effects of fugitive dust. These artificial means and the natural means of vegetation re-establishment would limit the occurrence and effects of wind erosion of Amendment Project soils.

While revegetation would minimize the effects of wind erosion long-term, revegetation would be severely challenged in the Amendment Project due to the dry climate and (water-hungry) clays that occur in Amendment Project soils. To increase the rate of revegetation, Magnum would segregate topsoil, thereby preserving the native seedbank which is better adapted for post-construction conditions. Magnum would also apply a seed mix of drought-tolerant species. As described in section B.4, constructing the Project would result in short- to long-term effects on vegetation. Similarly, soils would be susceptible to increased erosion until revegetation, which is weather dependent, is complete.

Low permeability, clayey textures, frequent drought, input of windborne salts and parent materials derived from inland lakes have introduced salt to many Amendment Project soils, none of which are important farmland. High salt concentrations give Amendment Project soils the potential of being highly corrosive of steel and therefore corrosive of below-ground Amendment

Project infrastructure. To protect against corrosion, Magnum would utilize cathodic protection.

The currently proposed storage facility occupies the same soils identified and analyzed in previously approved iterations of the Amendment Project. Because the soils are no different and the project activities remain similar, we conclude the Amendment Project would not result in significant effects on soils.

3.0 WATER RESOURCES

Groundwater

Groundwater underneath the Amendment Project includes basin-fill aquifers associated with the Sevier Desert Basin, which is part of the larger Basin and Range aquifer system. Basin-fill aquifers in the Sevier Desert Basin occur in depressions formed by faulting and/or erosion, can contain multiple confining layers, and are suitable for a variety of uses including drinking water, agricultural, and industrial uses.

Groundwater in the basin is generally found between the shallow unconfined water table aquifer at less than 150 feet bgs and approximately 2,500 feet bgs in the basement artesian aquifer.[15] It has been estimated that 200-million-acre feet of water may be contained in the unconsolidated basin-fill of the Sevier Desert; groundwater quality varies by location, and ranges from pristine to saline. Surface infiltration and subsurface inflow from the northeastern mountains are primarily responsible for groundwater recharge into the Sevier Desert Basin, which has been estimated to occur at a rate of 92,000 acre-feet per year. Groundwater flow generally occurs from the northeast to the west and southwest.

The 2010 and 2016 FERC EAs evaluated the potential effects of water drawdown on existing aquifers and water supply wells, volumes, and rates (FERC 2010 and 2016). Current proposed facilities for the 2025 Amendment Project are discussed in Groundwater Analysis below.

Table B.3-1 below summarizes the four distinct aquifers that have been identified through exploration drilling within the vicinity of the initial 2010 Storage Site.

Table B.3-1: Aquifers Underlying the Storage Site

Start Depth (ft. bgs)	End Depth (ft. bgs)	Aquifer Definition	Water Quality	Usage
0	50-150	Shallow Unconfined Water Table	Poor – High Salinity	Developed springs for Livestock
50-150	300-700	Shallow Artesian	Suitable for drinking other limited uses	Primary regional water supply
700	1,400	Deep Artesian[1]	Suitable for drinking other limited uses	Primary regional water supply
1,400	3,000-3,500	Basement Artesian	Fresh to saline, suitable for drinking other limited uses	Magnum water supply

Summary of results from Magnum's 2009 exploratory groundwater well MH-1, water quality, and estimated volume.
[1] Principal source of groundwater in the vicinity of the 2020 Approved Project Storage Site (FERC 2010 and 2016).

[15] Magnum May 2, 2016, Data Response, eLibrary Accession # 20160502-5216

Magnum, in coordination with the FERC and other cooperating local, state and federal agencies, developed the *Groundwater Monitoring, Mitigation and Protection Plan* to monitor and address potential groundwater impacts for the 2020 Approved Project (FERC 2017). As part of the Amendment Project, Magnum would adhere to the same *Groundwater Monitoring, Mitigation and Protection Plan* during cavern construction, and to assess for any long-term, and/or permanent effects to the Basement Artesian Aquifer, basin-fill aquifer system, and adjacent groundwater users.[16]

Facilities

Storage Caverns

Potential groundwater effects would include the crossing of three groundwater aquifers, which consist of two potable groundwater source protection zones associated with the IPP, during drilling of the cavern wells for the four approved storage caverns. Magnum developed cavern well design criteria in consultation with the Utah Division of Water Quality (DWQ) as part of the state permitting process for a Class III UIC blanket permit for the construction of the 2020 Approved Project storage caverns. The casing design is approved by DWQ Class III UIC Permit and includes four casing strings cemented to the surface with two of those four strings cemented directly into the salt. This approved cavern well design protects from the migration of groundwater between aquifers and isolates the storage cavern and its contents (brine and natural gas) from direct contact with any of the aquifers (FERC 2010 and 2016).

Brine Evaporation Ponds

The potential for groundwater effects was based on concern that the ponds would be constructed directly above the shallow unconfined aquifer. Magnum would minimize effects with the development of a brine evaporation pond design that included a double liner with in-between and below-liner leak detection systems, and a network of shallow unconfined water table aquifer monitoring wells adjacent to the pond berms (FERC 2010 and 2016). The double liner and leak collection systems were combined with a leak recovery system that recycled any leakage between or below the liners back into the ponds from sumps located at the southwest corner of each pond. The design is essentially a closed system that has three levels of protection to prevent leakage of brine into the shallow unconfined water table aquifer and a proactive monitoring approach to provide immediate warning if one of the three levels of protection becomes compromised.

Additionally, Magnum would implement the monitoring and reporting requirements in Section 7 of its *Groundwater Monitoring, Mitigation and Protection Plan*, and Section 3 of its *Brine Evaporation Pond Management Plan*, which provide acceptable measures to further minimize effects.

[16] The latest version of the Groundwater Plan was filed in the Implementation Plan under CP16-18-000. We have reviewed this Plan and find it acceptable.

We received comments from Sindy Smith representing the PLPCO regarding the environmental advantages multiple smaller ponds or containment cells could offer, Magnum's coordination with State of Utah agencies, and alternatives to the proposed pond design concerning long-term management implications. Magnum stated they are currently working with DWQ on determining an appropriate design for Pond 3 that would also provide guidance on the future design of Pond 5. Magnum has been in communication with the Utah Division of Water Rights (DWRi) who previously approved the original Pond 3 design as presented in the Amendment application.[17] Both state agencies have jurisdiction over pond construction and operations and would issue respective permits once the final design has been reviewed and approved in accordance with the individual agency's permitting process.

Further, Magnum states the areas currently allocated for Pond 3 and Pond 5 in the application would be sufficient to accommodate ponds that have either multiple cells or one large reservoir. Magnum would update its IP upon completion of the final pond designs to incorporate any measures required from state permitting processes.

The reduction in cavern size from 10 mmbbls to 5.5 mmbbls would result in an estimated 45 percent reduction depending upon the final engineering design. Further, this reduction in cavern size would decrease the amount of groundwater withdraw wells needed from five to two.[18] Additionally, while the Amendment Project is adding back a second brine evaporation pond to the scope of facilities, the previous 2010 and 2016 FERC EA evaluations determined no significant effects would occur to groundwater quality from the inclusion of two brine evaporation ponds of similar size. Magnum would implement its Groundwater Monitoring, Mitigation and Protection Plan during construction and operations of the 2025 Amendment Project (FERC 2017). Therefore, we conclude that due to the reduced scope of the proposed Amendment Project, there are no new effects on groundwater resources not previously identified and the project would not result in significant effects on groundwater resources.

4.0 VEGETATION, WILDLIFE AND SPECIAL STATUS SPECIES

The Amendment Project would encompass previously analyzed areas. Magnum updated two resource categories (U.S. Fish and Wildlife Service (USFWS) Threatened, Endangered, Candidate or Proposed Species and Utah State Sensitive and BLM Sensitive Wildlife) however, the conclusions of the additional analyses did not change the previous findings of no significant effect to biological resources. The potential effects of the Amendment Project for each of the biological resource categories are provided below.

Vegetation

The Amendment Project would mostly be within and adjacent to the 2020 Approved Project in the northern portions of the Sevier Desert in the Central Basin and Range physiographic ecoregion of Utah. However, due to the addition/relocation of a previously analyzed brine evaporation pond and addition of two previously analyzed cavern wells to the Amendment Project, the total permanent effect to vegetation would be less than those reviewed

[17] Magnum August 14, 2025, Data Response, eLibrary Accession # 20250814-5022
[18] Magnum April 21, 2025, Application Filing, eLibrary Accession # 20250421-5041

in 2010 EA. Vegetation communities identified within the amended Storage Site include scrub/shrub and grass/open land vegetation cover types. Vegetation types affected by the Header remain unchanged for the Amendment Project.

Construction of the Amendment Project would disturb 603.6 acres of land (including scrub/shrub, open space and grassland, evergreen forest, and pasture) and permanently convert 446.8 acres[19] to industrial use for operation. See section B.6.0 for a breakdown of the acreage for each vegetation type. The permanent loss and conversion of this vegetation to developed land would reduce and alter the amount and quality of available wildlife habitat, increase erosion potential and the potential for wind dispersal of dust/soil. In addition, the possibility of introduction and establishment of noxious weeds would increase. Operation of the proposed brine evaporation ponds could result in the airborne dispersal of sand and salt which could dedicate or increase stresses on adjacent vegetation. Revegetation of the closed brine evaporation ponds could result in roots penetrating or causing stress on the plastic sheet covering the stored salt deposits.

To minimize the potential effects resulting from the loss and long-term conversion of vegetation, and to facilitate the successful revegetation of impacted lands, Magnum would coordinate with the FERC and the other local, state and federal cooperating agencies and would comply with: the FERC Plan, Weed Management Plan, Reclamation Plan, Brine Evaporation Pond Management Plan, and Fugitive Dust Control Plan to address vegetation specific impact reducing measures. Since the majority of the area occurs within an existing industrial setting, we conclude that the Amendment Project's effects on vegetation would not be significant.

Wildlife

Typical wildlife found in the Amendment Project area includes a variety of common mammals, birds, reptiles, amphibians, and invertebrates. Since the majority of the area occurs within an existing industrial setting, diverse habitats that would support a variety of wildlife species are not found within the Amendment Project area. Construction of the Amendment Project could impact local wildlife primarily due to increased noise, increased human activity, and habitat loss. Less mobile wildlife could suffer mortality; however, mobile wildlife is expected to avoid the Amendment Project area and could be displaced into the surrounding area. For the 2020 Approved Project, Magnum proposed to conduct pre-construction surveys of suitable habitat, place escape ramps in open trench every 0.5 mile during construction activity, apply project-specific construction procedures and mitigation measures related to sediment control and reclamation practices which are included in its Plan to mitigate potential temporary construction and operations impacts. After construction is completed and temporary workspaces are restored, wildlife is expected to return to the area. Due to minor modifications to the 2020 Approved Project, we conclude that the Amendment Project would not have a significant effect on wildlife.

Migratory Birds

Migratory birds are protected under the Migratory Bird Treaty Act (16 U.S Code 703-

[19] Magnum, September 17, 2025, Data Response, Recourse Report 3 at 13, FERC Accession #: 20250917-5019

711); bald and golden eagles are additionally protected under the Bald and Golden Eagle Protection Act (16 U.SC. 668-668d). Executive Order 13186 (66 FR 3853) directs federal agencies to identify where unintentional take is likely to have a measurable negative effect on migratory bird populations and to avoid or minimize adverse impacts on migratory birds through enhanced collaboration with the USFWS. On March 30, 2011, the USFWS and the Commission entered into a Memorandum of Understanding that focuses on avoiding, minimizing, or mitigating adverse impacts on migratory birds and strengthening migratory bird conservation through enhanced collaboration between the Commission and the USFWS.

Due to the existing industrial setting of the proposed Amendment Project and the lack of preferred resources (coast, bays, rivers, lakes, or other bodies of water) in and around the Amendment Project, bald eagles are not anticipated to be impacted by the Amendment Project. General impacts on migratory birds from construction and operation of the Amendment Project would be like those described for wildlife above. Magnum also would monitor evaporation ponds regularly to detect avian that uses the pond for potential food sources and would report the result to UDWR and USFWS. Magnum would maintain continuously moving, brightly colored "floats" in brine ponds to break up salt cake/crust and deter birds from remaining on the pond surface long enough to become "trapped" as the result of brine saturation of flight feathers. If migratory birds are observed during monitoring that have been "trapped" in the brine ponds, Magnum would work with UDWR to humanely capture and remove from pond. If monitoring and reporting finds the ponds are attracting birds, an additional deterrent plan would be developed, which may include a noise deterrent. However, individuals potentially present in the Amendment Project area during construction may temporarily relocate to similar adjacent areas due to increased noise but are expected to return. Magnum used the USFWS Information for Planning and Consultation (IPaC) system which identified no birds of conservation concern. We conclude that the Amendment Project would not result in population-level impacts or measurable negative impacts on migratory birds.

Threatened, Endangered and Special Status Species

The Commission is required by Section 7 of the Endangered Species Act to ensure that the Amendment 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. The U.S. Environmental Protection Agency (USEPA) recommended that the EA summarize all coordination undertaken with the regarding the potential for impacts to state or federally listed or candidate species.

Magnum, acting as our nonfederal designee (18 CFR 380.13(b)(1)), used USFWS's IPaC system to obtain an official species list. Of the 15 USFWS-listed species identified as potentially occurring in the area, three species were recorded in the vicinity of the Amendment Project's amended Storage Site and previously approved Header. The list includes one proposed threatened species, the monarch butterfly (*Danaus plexippus*), one proposed endangered species, the Suckley's cuckoo bumble bee (*Bombus suckleyi*) and one threatened species, the Ute ladies'-tresses (*Spiranthes diluvialis*).

The monarch butterfly is often found in open areas where there is milkweed (for caterpillars to feed on) and other flowering plants to feed on nectar. This species could occur as a migratory visitor in the Amendment Project area, however due to lack of preferred habitat in the amended Storage Site, this species has not been documented in the Amendment Project area and is not expected to occur. Therefore, we conclude that the Amendment Project *would not jeopardize the continued existence* of the species.

The Suckley's cuckoo bumble bee can be found in open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows. None of this species' host habitat occurs in the amended Storage Site although the Header might have suitable habitat for this species. Due to limited area of impact by construction and the fact that this species host, the western bumble bee, has not been documented in or near the Amendment Project, we conclude that the Amendment Project *would not jeopardize the continued existence* of the species.

The Ute ladies'-tresses occur in moist environments including alkaline wetlands, moist meadows, floodplains, flooded river terraces, sub irrigated, or spring-fed abandoned stream channels and valleys, lakeshores, irrigation canals, berms, levees, or irrigated meadows. There is no suitable habitat within the Amendment Project area, therefore, we have determined that the Amendment Project would have *no effect* on this species.

We have reviewed the life and habitat characteristics and requirements of these species as described by the USFWS IPaC System and other publicly available sources. Based on this information, the scope of the project, land requirements, and the absence of suitable habitat and species observed during surveys, we have determined that installing and operating the Amendment Project would result in no effect on federally listed threatened and endangered species.

State Listed Species and BLM Sensitive Wildlife

Magnum identified 19 species,[20] including 7 newly listed Utah State Sensitive and BLM Sensitive Wildlife, with potential to occur within the Amendment Project area (Appendix A-table B.4-1). The new species include American white pelican, Columbia sharp-tailed grouse, flammulated owl, pinyon jay, snowy plover, monarch butterfly (as discussed above), and the western bumble bee. Habitat in the Amendment Project area does not support 8 of the identified species including the newly added Columbia sharp-tailed grouse, flammulated owl and pinyon jay, therefore, we have determined that the Amendment Project would have no effect on these species. The Amendment Project includes potential habitat for 11 species in this list including the newly added American pelican, snowy plover, monarch butterfly and western bumble bee. Magnum would protect bird species through the general avian protection measures addressed above. Magnum didn't record any western bumble bees in the Amendment Project area. Magnum would adopt the identical mitigation measures previously authorized as part of the 2020 Approved Project to offset potential impacts to these species. No significant effect on these species or their habitats is expected to occur due to the Amendment Project. Therefore, we conclude that the Amendment Project would not significantly affect any state or BLM sensitive species.

[20] Magnum, July 30, 2025, Data Response, Recourse Report 3, table 3.4-3 at 17, FERC Accession #: 20250730-5161

5.0 CULTURAL RESOURCES

Section 106 of the National Historic Preservation Act (NHPA), as amended, requires FERC to consider the effects of its undertakings on properties listed, or eligible for listing on the National Register of Historic Places (NRHP),[21] and afford the Advisory Council on Historic Preservation an opportunity to comment. Magnum, as a non-federal party, is assisting FERC in meeting our obligations under Section 106 and its implementing regulations at 36 CFR 800.

Cultural Resources Investigation

The area of potential effect (APE) for the Amendment Project was previously assessed in the *Programmatic Agreement Among the Federal Energy Regulatory Commission, USDI Bureau of Land management, the Utah School and Institutional Trust Lands Administration, and the Utah State Historic Preservation Officer, for the Magnum Gas Storage Project* (and amended on November 17, 2016, and April 23, 2020)[22] (PA) was executed to satisfy FERC's responsibilities under Section 106 of NHPA. This PA was further amended to include the findings from the CP16-18-000 filing.

Magnum has completed a series of additional Class III cultural resource pedestrian surveys on all Chevron controlled lands adjacent to the 2010 Storage Site to support the development of 3 additional non-jurisdictional storage facilities,[23] these additional surveys for non-jurisdictional facilities encompass areas included under the current Amendment Project.

Pedestrian inventories conducted in Docket No. CP10-22-000 identified 84 previously recorded and newly recorded archeological sites within the direct impact area for the Amendment Project. Of those 84 sites, 26 are within the boundary for the storage site, 53 are within the survey corridor for the Header, one is within the direct impact area for the 4-inch-diameter gas pipeline, and 5 are within the direct impact area for project access roads. One linear site crosses the direct impact area for both the Header and 4-inch-diameter gas pipelines. Another linear site also crosses the direct impact area for the Header and Access Road 5.[24]

Investigation Results for Storage Area

Of these 26 sites identified, 14 are recommended to be eligible for the NRHP, while 12 are considered ineligible for listing on the NRHP. Of the 14 recommended eligible sites, 13 are prehistoric camps and lithic scatters, while one is an historic canal. The 100-foot buffer for one NRHP eligible site would be crossed by storage cavern 4 (CW-4). Magnum acknowledges that they would only encroach approximately 50 feet into the 100-foot buffer. In order to ensure the protection of the NRHP cultural resource Magnum would employ a full-time archaeological

[21] In accordance with 36 CFR 800.16(l)(1), a historic property is any prehistoric or historic district, site, building, structure, object, or property of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization, included in, or eligible for inclusion in, the NRHP. This term includes artifacts, records, and remains that are related to and located within such properties.

[22] Previous analysis can be found in eLibrary under Docket No. CP16-18-000 under Accession Number 20160729-4003 and Docket No. CP20-77-000 under Accession No. 20200327-3031.

[23] Id. at 5.

[24] Id. at 17.

monitor during construction activities, as well as flagging and/or temporarily fencing the site off.[25]

Investigation Results for the Header and 4-inch Gas Pipeline

This investigation identified 53 archaeological sites within the potential workspace. Of the identified 53 sites, 23 were recommended as eligible, 16 are prehistoric open camps and lithic scatters, two historic railroad segments, a historic highway, a historic irrigation ditch, and three are multi-component sites containing both prehistoric and historic components.

During the initial filing (Docket No. CP10-22-000), four of the recommended sites were determined to be adversely affected by the Amendment Project. The remaining 19 recommended eligible sites are either located outside the proposed construction right-of-way or will be avoided during project development. Of the 19 sites Magnum recommends as eligible that will not be impacted by project development, 9 sites are not within the planned construction right-of-way. Magnum would avoid one site by restricting the construction right-of-way width to avoid the site entirely, three sites would be avoided by a horizontal directional drill underneath the resources, and the intact portions of six sites would be avoided by restricting the construction right-of-way to stay within the extent of a previously disturbed area.

To date, Magnum has not filed updated cultural resource surveys or consulting parties' comments for the Header or the 4-inch-diameter gas pipeline. Magnum asserts that the previous 2020 Approved project determinations and provisions established in the *Unanticipated Discoveries Plan* (UDP), *Historic Properties Treatment Plans,* and the PA are still relevant. However, Magnum states that UPD, the *Historic Properties Treatment Plans*, and the PA would be updated to reflect the Amendment Project.

Tribal Outreach

Magnum and the FERC contacted the same federally recognized Indian tribes (Tribes) previously consulted in Docket No. CP10-22-000 and relative to the 2020 Approved Project: the Confederated Tribes of the Goshute Reservations, the Hopi Tribe, the Kaibab-Paiute Indian Tribe, the Navajo Nation, the Paiute Tribe of Indians, the Cedar Band of Paiute Indians, the Indian Peaks band of Paiute Indians, the Kanosh Band of Paiute Indians, the Koosharem Band of Paiute Indians, the Shivwits Band of Paiutes, the Skull Valley Goshute Tribe, and the Unita and Ouray Ute Tribe. Since the 2010 and 2016 EAs and the subsequent 2020 Approved Project, Magnum has provided periodic updates on the status of the project to the interested Tribes.[26] On June 17, 2025, FERC sent out copies of the NOS to the Tribes. No responses have been received to date.

Unanticipated Discoveries Plan

Magnum has stated that it will file its updated UDP, as well as updated *Historic Properties Treatment Plans* for both the Storage Site and Header upon completion of final

[25] Id.

[26] Magnum June 12, 2025 Revised Resource Report 4 at 3; FERC Accession No. 20250612-5150

engineering designs.

Cultural Resources Summary

Previously, the FERC, in consultation with the SHPO, SITLA and the BLM, determined that the project activities would have an adverse effect on historic properties and as noted above a PA was executed. Magnum has not provided an updated Historic Properties Treatment Plan for eligible sites along the Header and associated access roads for review by consulting parties. Consultations are still ongoing to comply with the PA.

Because the PA needs to be amended to address the effects on historic properties for the Amendment Project and consultations are ongoing, **we recommend that the Commission's Order include a mandatory condition requiring that Magnum not begin construction activities until all pending treatment plans are filed and the PA is amended** (see section D, recommended condition no. 6). Furthermore, Magnum will file an updated *Historic Properties Treatment Plan*, as well as an UPD to address effects to eligible sites within the Amendment Project area.

6.0 LAND USE, RECREATION, AND VISUAL RESOURCES

The Amendment Project would affect 603.6 acres of land during construction; during operation, 446.8 acres would be permanently maintained for access to pipeline, aboveground facilities, utilities, workspaces, and access roads.[27] The Amendment Project area existing land use types consist of undeveloped (Low Intensity, Medium Intensity, and Open Space), Evergreen Forest, Grassland/Herbaceous, Pasture/Hay, Scrub/Shrub, and Barren Land. The land is primarily used for cattle and sheep grazing with no residences within one mile of the Amendment Project area. The Amendment Project activities would occur within Magnum's existing right-of -way and workspaces.

The Project's natural gas storage, compression and solution mining facilities would be sited within a 2,050-acre site area comprised of private land subleased by Magnum and school trust land administered through the SITLA and subleased by Magnum north of the town of Delta in Millard County, Utah. There is an existing 1,800-megawatt (MW) coal-fired generating station owned by Intermountain Power Agency (IPA) northeast of the site that is currently being decommissioned and replaced with a hydrogen and natural gas-fired power generation plant.

The Header pipeline would begin at the gas storage site and extend east and north approximately 61.5 miles, terminating at the existing Kern River Gas Transmission (KRG) and Questar Pipeline Company interstate natural gas pipeline facilities near Goshen, Utah (Goshen Interconnect). The Header would extend east and north along a 50-foot-wide permanent right-of-way to the BLM proposed West Wide Energy Corridor (WWEC), continuing east through the Gilson Valley to the intersection with the two existing KRG pipelines in Dog Valley. The Header would continue north within a reduced, 30-foot-wide permanent right-of-way parallel to the west side of the KRG pipelines to the Goshen Interconnect. Three mainline block valves would be located at approximately 15-mile intervals within the Header ROW at mileposts 21, 40,

[27] Magnum August 29, 2025 Data Response, FERC Accession No. 20250829-5083

and 52.[28] Magnum would use two temporary workspaces within the gas storage site boundaries for centrally located field construction offices, pipe and material storage, and parking for Project workers. Magnum would also use additional workspace areas within the 17.8-acre Goshen Interconnect site for equipment staging, pipe, and materials storage related to construction of the metering station and Header Pipeline. Additional alternate temporary workspace would be needed for sensitive resource crossings and steep slopes.

No planned residential or commercial areas are located within 0.25 miles of construction and operation activities. The nearest residence is located 1.5 miles east of the Amendment Project area.[29] There are no houses or other buildings located within 50 feet of the edge of the Amendment Project's proposed construction work area.

Public Land, Recreation, and Special Interest Areas

The project would cross federal (including recreation areas), state, and private land. The Header pipeline would primarily cross BLM and SITLA land previously allotted for grazing as well as some private land used for cattle grazing. Magnum would coordinate with BLM to install measures to minimize the effects in grazing areas, such as stocking watering reservoirs, repairing damage to watering facilities, installing and monitoring temporary fencing to limit livestock access to hazardous areas, checking for livestock trapped in trenches, installing temporary fencing to aid livestock access to grazing areas, and weed management for grazing. Magnum would also work with landowners, grazing permittees, and land agencies to develop a grazing deferment plan to minimize grazing disturbance. The Header Pipeline would also cross a small portion of the WWEC southeastern boundary and Little Sahara Recreation Area (LSRA)which is primarily used for off-road vehicle recreation in open and limited designated trail areas. During construction, there would be short-term limited closures for nearby designated trail areas and restricted access to the public right-of-way. Magnum would work with recreation specialists and BLM to schedule construction activities that minimize effects on recreational users affected in the LSRA. Most recreational use in open and designated areas would be restored upon construction completion, except for off-road vehicle use on the permanent Header Pipeline right-of-way. Magnum would implement measures to control public off-road vehicle use on the permanent right-of-way. Magnum would work with BLM and other landowners to install and maintain measures to control unauthorized vehicle access to the right of way on BLM-managed and private lands. Magnum would also coordinate with the BLM to implement measures on other public lands that may include: 1) Installation of signs; 2) Installation of fencing with locking gates; and 3) Slash and timber barriers, pipe barriers, berms, a line of boulders across the right-of-way; and 4) appropriate trees or shrubs across the right-of-way. There are no special interest areas, parks, scenic rivers, scenic roads, scenic areas, or other specially designated areas at the federal, state, and local level in the vicinity or within 0.25 miles

[28] Environmental Assessment CP16-18-000, July 29, 2016, FERC Accession #: 20160729-4003
[29] Magnum data response July 29, 2025, FERC Document Accession #: 20250730-51610

of the facilities.[30] The Amendment Project would not affect any special interest in construction and operational activities.

Additionally, no wetlands or waterbodies would be affected during the construction and operation of the Amendment Project. The Amendment Project is in Utah, a state which possesses no coastal zone mapped areas or tideland jurisdictions. No known landfills registered with natural landmarks, or other specialty land uses would be affected by the Amendment Project.

Given absence of special land uses in or near the Amendment Project area and the mitigation measures described in the FERC Plan, we conclude that the Amendment Project would not result in significant effects on public land, recreation, or special interest areas.

Visual Resources

Construction of the access road, pipeline, and temporary and permanent workspaces are not anticipated to affect visual resources. The components are in a rural industrial area, which located is between deciduous forests, approximately 0.6 mile from Brush Well Man Road, which reduces visual impacts. The Amendment Project would not have visual effects on cultural resources, including historical sites or structures. No scenic areas are within 0.25 miles of the Amendment Project area. The construction activities would not be visible during construction due to deciduous trees more than 5 meters tall surrounding the Amendment Project area, regardless of the season and stage of crop growth. Based on the scope and scale of the facilities and the proposed mitigation, we conclude the Amendment Project would not significantly affect visual resources.

7.0 SOCIOECONOMICS

Construction and operation of the Amendment Project could affect socioeconomic conditions in the Amendment Project area. Potential socioeconomic effects of construction and operation of the Amendment Project include changes in population levels or local demographics, increased employment opportunities, increased demand for housing and public services, transportation impacts, and an increase in government revenue associated with sales, payroll, and property taxes. The socioeconomic study area considered for the analysis of the Amendment Project includes Millard, Juab and Utah Counties, Utah.

Population and Housing

Millard County, Utah has an estimated population of 13,572; Juab County, Utah has an estimated population of 13,897 and Utah County, Utah has an estimated population of 752,138. Construction of the Project would temporarily increase the population in the socioeconomic study area. Construction of the Amendment Project is estimated to begin in 2026. The majority of site work is expected to be completed in about 24 months, while Magnum has requested 54 months from the Commission's order to place the entire facility into service. Construction of the

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[30] (Google Earth 2025; ODNR 2025a; National Conservation Easement Database 2025; NWSRS 2025; NPS 2025a; NPS 2025b; USDOT Federal Highway Administration 2025.

Amendment Project would require a peak workforce of about 275 workers.[31] Magnum estimates that 20 permanent employees would be hired for operation of the Amendment Project.[32]

Population effects on the socioeconomic study area are expected to be minor. Given the duration of construction, we expect that most non-local workers would not travel with their families to the study area. We estimate that additional people temporarily relocating to the study area would represent an increase in population of less than one percent. Based on the populations within the study area, the temporary addition of the non-local workforce to the study area for the duration of construction would not result in significant population change. Additionally, the temporary increase in population would be distributed throughout the study area and would have no permanent effect on the population.

Housing characteristics for Millard, Juab, and Utah counties in the socioeconomic study area are presented in table B.7.1.

Table B.7.1: Available Housing in the Amendment Project Study Area[33]

Location	Total Housing Units [a]	Occupied Housing Units [a]	Vacant Housing Units [a]	Rental Vacancy Rate (%) [b]	Number of Hotels and Motels/Campgrounds and RV Parks [b]
Utah	1,283,206	1,094,896	98,186	19.6	46,968
Millard County	4,918	4,267	723	2.6[c]	309
Juab County	3,972	3,756	216	8.3	35
Utah County	220,652	195,602	7,706	22.4	1411

Source: [a] U.S. Census Bureau (2023) Table #B25002. [b] American Community Survey, 5-year Table#B25004. Accessed November 2025. [c] Millard County rental vacancies are at zero percent; value reflects margin of error.

Temporary housing availability varies geographically within the counties near the proposed facilities and is available in the form of daily, weekly, and monthly rentals in motels, hotels, campgrounds, and rental housing units. The demand for temporary housing in the study area may increase during summer months from tourism. Construction of the Project would not affect the availability of short-term housing in the study area. The Project is likely to have a short-term positive impact on the rental and accommodation industry in the area through increased demand and higher rates of occupancy. Given the number of hotels, motels, and other temporary housing available in the study area, sufficient housing exists in the project area and project effects on the local housing market would not be significant.

Public Services

A wide range of public services are found in the study area. Services and facilities include hospitals, law enforcement, fire departments, and schools. Table B.7-2 provides an overview of selected public services available by county in the study area. Each county has its

[31] Environmental Assessment for Magnum Gas Storage Project under CP10-22. November 23, 2010, FERC Document Accession #20101123-400.
[32] Id.

own sheriff's or police department, numerous fire departments and at least one hospital or medical facility. Additionally, each county has multiple school districts and many public kindergarten-through-12th grade (K-12) schools.

Table B.7-2: Public Services Available in the Project Study Area

Location	Number of Police / Sheriff Departments	Number of Fire Departments	Number of Hospitals and Medical Facilities	Number of K-12 Schools
Utah	152	24	185	1,124
Millard County	1	12	2	10
Juab County	2	6	1	10
Utah County	17	32	5	184

Source: Homefacts (2025). Accessed July 2025.

The Amendment Project workforce is a small number relative to the current population of the study area (a negligible population increase of less than one percent in Millard, Juab, and Utah Counties. This would result in minor, temporary, or no effects on local community facilities and services, such as police, fire, medical services, and schools. The counties in the study area have adequate infrastructure and services to meet the need of any non-local construction workers entering the study area.

Short-term effects on public services could include the need for localized police assistance to control traffic flow or respond to emergencies during construction activities. Also, construction-related injuries could occur because of unanticipated accidents or emergencies. In the event of an accident, Magnum could require police, fire, and emergency services. The anticipated demand for these services is not expected to exceed the existing capability of the services. Magnum would work with local services to coordinate effective emergency response during construction and operation of the Amendment Project. Because we expect that most of the non-local workers would not travel with their families during the construction period, we conclude the Amendment Project would not increase demand for school-related services.

The small number of new employees hired for operation of Amendment Project (20 workers[34]) would have negligible permanent effects on public services.

Economy, Employment, and Income

The non-local workforce would most likely spend a portion of their pay in local communities on items such as housing, food, automobile expenses, entertainment, and other miscellaneous items. The number of temporary, indirect jobs in the study area could increase as purchases for goods and services would increase along with the influx of the construction workforce to the area. Indirect employment, including hiring additional staff in the retail and service industries to accommodate the increase in demand for food, clothing, lodging, gasoline, and entertainment, along with an increased demand for goods and services would have a temporary stimulating effect on local economies. Indirect jobs would represent a temporary, minor increase in employment opportunities in the study area.

[34] Id.

As previously stated, construction of the Amendment Project would require a peak workforce of about 275[35] workers. A small decrease in unemployment rates in the study area could occur because of hiring of local workers for construction and increased demand for the local economy. A negligible decrease in unemployment would arise from the hiring of 20 permanent employees.

Construction and operation of the Amendment Project would result in additional state and local tax revenues related to retail sales and payroll. Non-local construction workers would spend money on housing, transportation, food, and entertainment. In addition, equipment fuel and construction materials, such as gravel and fencing materials, would likely be purchased from local or regional vendors. These revenues would result in minor short-term beneficial impacts on local businesses by generating additional revenues and contributing to the tax base. Construction of the Amendment Project would result in increased county property tax revenues in the counties where compressor stations are located, which would result in a short-term beneficial impact on local governments in Millard, Juab and Utah Counties in Utah. Once operational, property taxes would be assessed on the value of the project facilities. As such, the increased tax base during project operations would have a minor long-term beneficial effect on local governments in the project area.

Transportation and Traffic

The local road and highway system in the study area and vicinity consists of interstate highways, U.S. highways, state highways, secondary state highways, county roads, and private roads. Most local public roads in vicinity of the project facilities are paved. Construction of the Amendment Project could result in minor, short-term affects primarily along Interstate Highway 15 and U.S. 50 with minor use of some state routes, county roads, and private roads due to the movement and delivery of equipment, materials, and workers.

Workers commuting to and from the work sites every day would result in a short-term temporary increase in traffic during construction. At peak workforce, about 275[36] workers would be driving to construction sites using the local road network, spread out over 50 miles. In addition to the construction workforce, the delivery of construction equipment and materials to the project facility sites could temporarily congest existing transportation networks. Traffic associated with the delivery of materials and equipment to the project sites would result in short-term temporary increases in traffic and traffic congestion on the roads near the project facilities for the duration of construction.

8.0 AIR QUALITY AND NOISE

Air Quality

This section summarizes federal and state air quality regulations that are applicable to the proposed facilities; characterizes the existing air quality; describes potential impacts the facilities may have on air quality; and identifies proposed mitigation measures. The term air quality refers

[35] Id.
[36] Id.

to relative concentrations of pollutants in the ambient air. Air quality would be affected by emissions from construction and operation of the Amendment Project. During construction, short-term emissions would be generated from the usage of equipment, increased traffic from workers and delivery vehicles. Once completed, the Amendment Project would transition to operational phase emissions, which would include fugitive emissions from the new pipeline interconnections.

Permitting/ Regulatory Requirements

The Clean Air Act (CAA) is the basic federal statute governing air pollution in the United States. The major New Source Review (NSR) program applies to new major sources in attainment/unclassified and nonattainment areas. Permits for new major sources located in attainment or unclassified areas fall under the Prevention of Significant Deterioration (PSD) program and sources located in nonattainment areas come under the nonattainment NSR program. The PSD major source threshold for most criteria pollutants is 100 tons per year (tpy) for 28 specifically listed source categories and 250 tons per year for unlisted sources. The nonattainment NSR, and the PSD programs are not applicable to the Amendment Project. Based on Amendment Project activities, we have reviewed the following federal requirements and determined that they are not applicable to the proposed Amendment Project:

- New Source Review;
- Prevention of Significant Deterioration;
- New Source Performance Standards;
- Title V;
- Greenhouse Gas Reporting Rule; and
- National Emissions Standards for the Hazardous Air Pollutants

Existing Air Quality

Ambient air quality is protected by federal and state regulations. Under the CAA and its amendments, USEPA has established the National Ambient Air Quality Standards (NAAQS) for criteria pollutants, including carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter smaller than 10 microns and smaller than 2.5 microns (PM_{10} and $PM_{2.5}$ respectively), and sulfur dioxide (SO_2). The Utah Department of Environmental Quality has the authority to implement permit programs under the CAA for the proposed Amendment Project facilities. These standards incorporate short-term (hourly or daily) levels and long-term (annual) levels to address acute and chronic exposures to pollutants, as appropriate. NAAQS includes primary standards, which are designed to protect human health, including the health of sensitive subpopulations such as children and those with chronic respiratory problems. The NAAQS also includes secondary standards designed to protect public welfare, including economic interests, visibility, vegetation, animal species, and other concerns not related to human health. The NAAQS are listed in table B.8.1, in appendix A.

Volatile organic compounds (VOC) are also regulated by the USEPA 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 nitrogen oxides (NO_x), in the atmosphere in the presence of sunlight. NO_x and VOCs are referred to as ozone precursors. Hazardous air pollutants are also emitted during fossil fuel combustion and are chemicals known to cause cancer and other serious health impacts.

Fugitive dust is particulate matter that arises from the mechanical disturbance of soil or rock material and is lifted into the air. It typically is comprised of particles of various sizes and results from activities such as the physical movement of soil, vehicles traveling over unpaved surfaces, heavy equipment operation, blasting, and wind. Fugitive dust typically contains a mix of particle sizes ($PM_{2.5}$, PM_{10} and larger particulates). Smaller particulates can be health hazards while larger particulates may be a public nuisance (visibility impacts, deposition, and physical irritation). Fugitive methane emissions are unintentional releases of methane and other VOCs from leaks in natural gas equipment.

The USEPA defines air pollution to include the mix of the following six long-lived greenhouse gases (GHGs), carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. GHGs produced by fossil-fuel combustion are CO_2, CH_4, and N_2O generally non-toxic and non-hazardous at normal ambient concentrations. Emissions of GHGs are quantified and regulated in units of carbon dioxide equivalent (CO_2e). The CO_2e unit of measure factors in the global warming potential (GWP) of each GHG over a specified timeframe.[37] There are no NAAQS for GHGs.

Regional Climate and Air Quality

All construction activities and operations of the Amendment Project would occur in Millard County, Juab County, and Utah County, Utah. The regional climate of Utah is generally warm with precipitation year-round and cold winters. The average minimum temperature ranges from 13.5 to 57.3 degrees Fahrenheit (°F). The maximum temperatures for the area ranges from 38.5°F to 94.3°F. With the exception of snowfall in the winter, rainfall averages 7.9 inches annually, May and October being the wettest months.

Air quality control regions (AQCR) are areas established by the USEPA and local agencies for air quality planning purposes, in which State Implementation Plans describe how the NAAQS would be achieved and maintained. The AQCRs are intra- and interstate regions such as large metropolitan areas where improvement of the air quality in one portion of the AQCR requires emission reductions throughout the AQCR. Each AQCR, or smaller portion within an AQCR (such as a county), is designated, based on compliance with the NAAQS, as attainment, unclassifiable, maintenance, or nonattainment, on a pollutant by-pollutant basis. Areas in compliance or below the NAAQS are designated as attainment, while areas not in compliance or above the NAAQS are designated as nonattainment. Areas previously designated as nonattainment that have since demonstrated compliance with the NAAQS are designated as maintenance for that pollutant. Areas that lack sufficient data to determine attainment status are designated unclassifiable and treated as attainment areas. Millard County, Utah and Juab County, Utah are classified as attainment or unclassifiable for all criteria pollutants. Utah County is nonattainment for the 2015 ozone and 2006 $PM_{2.5}$ standards and a maintenance area for PM_{10}.

[37] CO_2 has a GWP of 1, CH_4 has a GWP of 28, and N_2O has a GWP of 265 on a 100-year timescale.

General Conformity of Federal Actions

The General Conformity Rule is codified in 40 CFR 93, Subpart B and was developed to ensure that federal actions in nonattainment and maintenance areas do not impede states' attainment of the NAAQS. A conformity determination must be conducted by the lead federal agency if a federal action's construction and operation activities are likely to result in generating direct and indirect emissions that would exceed the conformity applicability threshold level of the pollutant(s) for which a county is designated as nonattainment or maintenance. Conforming activities or actions should not, through additional air pollutant emissions:

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

Millard County, Utah and Juab County, Utah are classified as attainment or unclassifiable for all criteria pollutants with the exception of classifications for marginal nonattainment for 2015 ozone and serious nonattainment for 2006 $PM_{2.5}$ standards and a maintenance area for PM_{10} in Utah County. General Conformity applies in designated nonattainment or maintenance areas on a pollutant-by-pollutant basis. To determine if a General Conformity determine is required, Amendment Project emissions from construction and operation (excluding emission sources covered by the New Source Review permitting program) are compared to the applicability thresholds[38] in the General Conformity Rule. The General Conformity applicability threshold for 8-hour ozone nonattainment outside an ozone transport region and PM_{10} maintenance areas is 100 tpy. For a serious nonattainment area for $PM_{2.5}$, the applicability threshold is 70 tpy. Only temporary construction-related emissions would occur in the Utah counties. All other Project activities would occur within attainment or classified/attainment areas. The estimated construction emissions from the Project are under the applicability thresholds for the duration of when the Project would be constructed. Therefore, the General Conformity Determination is not required.

Construction Emissions

The Project would result in air quality impacts associated with construction, including engine emissions from construction equipment, vehicles traveling to and from the construction site, emissions from generators, and fugitive dust. Emissions from construction equipment would depend on the duration, horsepower, number, and type of vehicles/equipment. Construction emissions include combustion-related air pollutants (NOx, CO, VOC, SO_2, PM_{10}, $PM_{2.5}$, CO_2e, and HAPs) as well as fugitive dust.

To reduce emissions, Magnum would implement measures outlined in its *Fugitive Dust Control Plan* from their 2010 Magnum Gas Storage Project application which we have reviewed and find acceptable. These include properly maintaining construction vehicles and equipment, applying water to all affected unpaved roads and access roads, reducing vehicle speed, cleaning up track-out and/ carry out areas, covering truck loads, and installing gravel pads adjacent to paved roadways.

[38] *See* 40 C.F.R. § 93.153(b)(1), (2) (setting *de minimis* thresholds for Conformity determinations)

Construction emissions would be temporary in nature, short term and localized at the Project work areas. Magnum's estimated Project construction emissions are summarized in table B.8.2.

Table B.8-2: Project Construction Emissions (tons per year)											
Emissions Source									**GHG**		
	NOx	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**	**VOC**	**N_2O**	**HAPs**	**CH_4**	**CO_2**	**CO_2e[a]**
Heavy Duty Construction Equipment	41.75	39.57	15.03	2.29	0.35	2.98	0.26	0.059	0.23	9,734.38	9,809.72
General Construction Emissions	--	--	--	26.65	2.66	--	--	--	--	--	--
Generator Emissions	4.22	0.91	0.28	0.30	0.30	--	0.00	0.01	0.00	156.88	156.88
Road Fugitives	-	-	-	69.75	6.97	- -	-	-	-	-	-
TOTAL	**45.97**	**40.48**	**15.31**	**98.99**	**10.28**	**2.98**	**0.26**	**0.069**	**0.23**	**9,891.26**	**9,966.6**
General Conformity Threshold	100	--	--	100	70	100	--	--	--	--	--
Below De Minimis Threshold	Yes	N/A	N/A	Yes	Yes	Yes	N/A	N/A	N/A	N/A	N/A

Notes:
a. CO_2 has a GWP of 1, CH_4 has a GWP of 28, and N_2O has a GWP of 265 on a 100-year timescale. Used to calculate CO_2e
Data Source: Magnum November 24, 2025, Data Response, Accession No. 20251124-5234

Given the temporary and intermittent nature of construction emissions, and with construction emissions below general conformity applicability thresholds, we find that emissions from construction-related activities for the Project would not be expected to cause or significantly contribute to a violation of any applicable ambient air quality standard or have a significant effect on local or regional air quality.

Operational Emissions

The Amendment Project includes a redesign of the Storage Site to a total of four storage caverns, one additional brine disposal pond and two new pipeline interconnections. No additional operational emissions would result from the proposed new structures.

The 2010 and 2016 EAs analyzed operational impacts from the Storage Site. The previous analyses found that a Small Source Exemption air permit was issued August 2010 and would need a minor modification prior to operation of the Amendment Project. We concluded that the proposed Project would not have significant effects on air quality.

Because Magnum proposes no new stationary combustion sources, pig launchers and receivers, pneumatic devices, or associated aboveground facilities, there would be no new or additional natural gas blowdowns or other sources of operational emissions. Fugitive emissions from pipeline leaks would not be significant.

Therefore, the 2025 Amendment Project would result in no change to operational air effects at the site, and we conclude that effects on air quality would not be significant.

Noise

Construction and operation of the Amendment Project would affect the local noise environment. The ambient sound level of a region, which is defined by the total noise generated within the specific environment, is usually composed of sounds emanating from both natural and artificial sources. At any location, both the magnitude and frequency of environmental noise may vary considerably over the course of the day and throughout the week, in part due to changing weather conditions and the impacts of seasonal vegetative cover.

In 1974, the USEPA published its Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. Two measurements used to relate the time-varying quality of environmental noise to its known effects on people are the 24-hour equivalent sound level (L_{eq}) and the day-night average sound level (L_{dn}). The L_{eq} is an A-weighted sound level containing the same sound energy as the instantaneous sound levels measured over a specific time period. Noise levels are perceived differently depending on length of exposure and time of day. The L_{dn} considers the duration and time the noise is encountered. Specifically, in the calculation of the L_{dn}, late night to early morning (10:00 p.m. to 7:00 a.m.) noise exposures are penalized +10 decibels (dB) to account for people's greater sensitivity to sound during the nighttime hours. Due to the 10 dBA nighttime penalty added prior to calculation of the L_{dn}, for a facility to meet the 55 dBA L_{dn} limit established by the USEPA to protect the public from indoor and outdoor activity interference, a facility must be designed such that the constant 24-hour noise level does not exceed an L_{eq} of 48.6 dBA at any noise sensitive area (NSA). The A-weighted scale (dBA) is used because human hearing is less sensitive to low and high frequencies than mid-range frequencies. For an essentially steady sound source that operates continuously over a 24-hour period and controls the environmental sound level, the L_{dn} is approximately 6.4 dB above the measured L_{eq}.

As indicated above, an L_{dn} of 55 dBA protects the public from indoor and outdoor activity interference. We have adopted the USEPA's criterion and use it to evaluate the potential noise impacts from the Amendment Project at NSAs, such as residences, schools, or hospitals. Also, in general, a person's threshold for a perceivable change in loudness on the A-weighted sound level is about 3 dBA, whereas a 6 dBA change is clearly noticeable, and a 9 dBA change is perceived as twice as loud.

Construction Noise

Noise would be generated during the addition of the two storage caverns, one brine disposal pond and the two new pipeline interconnections. Noise levels would be highest in the immediate vicinity of construction activities and would diminish with distance from the site. These impacts would be localized and temporary. Changes to noise levels 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. Construction equipment and worker vehicles generally operate intermittently and may change depending on project activity and phase.

The Storage Site area is rural in nature and adjacent to other non-jurisdictional storge facilities and a coal-fired power generation plant that is currently being decommissioned and replaced with a hydrogen and natural gas-fired power generation plant. Magnum reports there is on-going 24-hour construction and operations in the immediate vicinity of the Project. Additionally, the Project is located over a mile away from any noise sensitive areas (NSA).[39] Millard County has not established any noise abatement levels for residential, commercial, or industrial use beyond those specific to Wind Energy Systems.

The Amendment Project would not result in additional noise-related impacts relative to those previously identified in our 2010 and 2016 EAs. To mitigate construction noise at noise sensitive areas (NSA), Magnum would generally limit construction to daytime hours of 7:00AM to 10:00PM except for operations that may require continuous work to occur 24 hours per day such as cavern and well drilling, solution mining activities, hydrostatic testing and drying activities, commissioning, and outage tie-ins, as necessary. Based on our previous analyses and the scope of facility additions proposed, we conclude that construction of the Amendment Project would not significantly affect noise levels in the Amendment Project vicinity.

Operational Noise

There are no new sources of operational noise associated with the proposed amendment; therefore, we conclude there would be no significant effects on noise. The 2010 EA examined noise levels during operations that would be generated from gas compressors, electric generators, and associated auxiliary equipment, all of which would be housed in protective buildings. March 17, 2011, Order in Docket No. CP10-22-000 included a condition requiring Magnum to file a noise survey 60 days after placing the proposed compressors into operation. If levels exceed the FERC requirements at any nearby NSAs, Magnum would install additional noise controls to meet the noise level requirements and follow up with a second noise survey within 60 days. This requirement would continue to apply to ensure that noise effects from the previously approved facilities are not significant.

9.0 RELIABILITY AND SAFETY

The injection and withdrawal of natural gas from storage caverns involves some incremental risk to the public due to the potential for accidental release of natural gas. The greatest hazard is a fire or explosion following a major rupture. Methane, the primary component of natural gas, is colorless, odorless, and tasteless. It is not toxic, but is classified as a simple asphyxiate, possessing a slight inhalation hazard. If breathed in high concentration, oxygen deficiency can result in serious injury or death. Methane has an auto-ignition temperature of 1,000°F and is flammable at concentrations between 5.0 and 15.0 percent in air. An unconfined mixture of methane and air is not explosive; however, it may ignite and burn 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 the air.

Under a Memorandum of Understanding on Natural Gas Transportation Facilities dated

[39] Magnum August 19, 2025, Data Response; FERC Accession No. 20250819-5055.

January 15, 1993, between the U.S. Department of Transportation (USDOT) and 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 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. FERC accepts this certification and does not impose additional safety standards. If the Commission becomes aware of an existing or potential safety problem, there is a provision in the 1993 memorandum to promptly alert 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.

Safety Standards

The USDOT is mandated to prescribe minimum safety standards to protect against risks posed by natural gas facilities under 49 U.S.C. 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 natural gas facilities. Many of the regulations are written as performance standards, which set the level of safety to be attained and allow the operator to use various technologies to achieve safety. The PHMSA's safety mission is to ensure that people and the environment are protected from the risk of incidents. This work is shared with state agency partners and others at the federal, state, and local level.

Emergencies

The USDOT prescribes the minimum standards for operating and maintaining pipeline and aboveground natural gas facilities, including the requirement to establish a written plan governing these activities.[40] Each operator is required to establish an emergency plan that includes procedures to minimize the hazards of a natural gas emergency. Key elements of the plan include procedures for:

- receiving, identifying, and classifying emergency events, gas leakage, fires, explosions, and natural disasters;
- establishing and maintaining communications with local fire, police, and public officials, and coordinating emergency response;
- emergency system shutdown and safe restoration of service;
- making personnel, equipment, tools, and materials available at the scene of an emergency; and

[40] Title 49, USC Chapter 601.

- protecting people first and then property and making them safe from actual or potential hazards.

The USDOT requires that each operator establishes and maintain liaison with appropriate fire, police, and public officials to learn the resources and responsibilities of each organization that may respond to a natural gas pipeline or facility emergency, and to coordinate mutual assistance. Magnum must also establish a continuing education program to enable customers, the public, government officials, and those engaged in excavation activities to recognize a gas emergency and report it to the appropriate public officials. Magnum would provide the appropriate training to local emergency service personnel before the Amendment Project is placed in service.

10.0 CUMULATIVE EFFECTS

We evaluated the Amendment Project's potential for cumulative effects. Cumulative effects are the incremental environmental effects of the proposed action when added to other past, present, and/or reasonably foreseeable future actions/projects regardless of what agency or person undertakes such other actions. Although the individual effect of each project may be minor, the additive or synergistic effects of multiple projects could be significant. In this analysis, we consider the proposed Amendment Project's potential effects on resource areas of concern where incremental contributions could be potentially significant when added to the potential effects of other actions. To be included in the cumulative analysis, an action must first meet the following criteria:

- affects a resource also potentially affected by the Amendment Project;
- causes this effect within all, or part of, the Amendment Project area defined by the resource-specific geographic scope; and
- causes this effect within all, or part of, the time span of the proposed Amendment Project's estimated effects.

Geographic Scope of Cumulative Effects

The geographic scope for each resource is unique and is generally more localized for somewhat stationary resources such as geological and soil resources; more expansive for resources with a large distribution, such as visual impacts and air emissions; and based on natural boundaries for resources such as wetlands, vegetation, and wildlife. In general, the closer another action is to the Project, the greater the potential for cumulative impacts. Table B.10-1 summarizes the resource-specific geographic scopes that were considered in this analysis, and the justification for each. Actions occurring outside these geographical boundaries were generally not evaluated because their potential to contribute to a cumulative effect in a significant way diminishes with increasing distance from the Project.

The proposed Amendment Project is not anticipated to affect waterbodies, wetlands, fisheries, and recreation during construction or operation. Therefore, these resource areas are not included in the cumulative effects analysis below. In addition, the amendment involves no new stationary combustion sources or other sources of operational emissions or noise; therefore, these resources areas are not addressed further below.

TABLE B.10-1: Geographic Scope for Cumulative Effect Analysis	
Environmental Resource	**Cumulative Effect Assessment Area**
Groundwater, Wildlife, and Vegetation	Watershed boundary Hydrologic Unit Code (HUC) 12 – 041000111004 Plum Run-Wolf Creek
Cultural Resources	Overlapping effects within the Area of Potential Effect (APE); 0.25-mile
Socioeconomics	Millard, Juab, and Utah Counties
Geological Resources and Soils	Construction workspace
Land Use and Visual Resources	1-mile radius
Air Quality – Construction	0.25-mile from Project workspace
Noise – Construction	0.5-mile from aboveground facilities

Projects within the resource-specific geographic scopes of the Amendment Project are described in table B.10-2 and depicted in figure B.10-1 in appendix A. These projects include the Intermountain Power Agency's decommissioning of the IPP and constructing the new hydrogen and natural gas-fired power plant (IPP conversion); Sawtooth Caverns; ACES Phase 1 & 2 green hydrogen and storage facility; Kern River Pipeline; and the EGC-EDT Solar, BayWa Solar and Hanwha Solar fields (Solar projects).

In addition to the geographic relationship between the Amendment Project and other projects in the area, we also considered temporal relationships. If the Commission authorizes the Amendment Project, Magnum anticipates beginning construction in 2026, subject to receiving necessary permits and approvals. These cumulative effects analysis considers current and other reasonably foreseeable future projects that may be constructed within the geographic scope through 2026. Actions occurring outside these temporal boundaries were not evaluated because of their diminished potential to contribute to a cumulative impact. Past completed actions (more than five years old) are considered in the baseline environmental conditions of the affected environment, as discussed throughout section B.

Geology and Soils

Chevron, of which Magnum is now a subsidiary, has constructed the remaining Sawtooth non-jurisdictional storage cavern facility and the IPP conversion and ACES project are in progress. The potential effects of the construction and operation of the non-jurisdictional facilities were evaluated in the context of the IPP conversion in the 2022 DOE EA. As a result of the additional storage caverns being completed, Magnum has shifted the location of the two new storage caverns to comply with the spacing requirements for storage cavern integrity. Construction and operation of the non-jurisdictional Sawtooth and ACES storage caverns and the Magnum storage caverns would reduce the total available capacity in the underlying salt dome and would increase the amount/size of surface evaporation ponds. This reduction of capacity and increase in surface facilities are cumulative effects; however, based on the surface area and size of the salt dome, we have determined that these cumulative effects would not be significant. Therefore, we conclude that the Amendment Project is not anticipated to result in cumulative effects on geological and mineral resources as the scope of the Amendment Project remains similar, and as long as the Amendment Project and adjacent industrial non-jurisdictional facilities are in compliance with previously approved mitigation plans.

Groundwater

Chevron has constructed the remaining Sawtooth non-jurisdictional storage cavern facility and the IPP conversion is in progress. Other projects identified within the geographic scope for groundwater within the HUC-12 are ACES Phase 1 & 2, Kern River Pipeline; and the three Solar projects. The potential effects of the construction and operation of the non-jurisdictional storage facilities were evaluated in the context of the IPP conversion in the 2022 DOE EA. As noted in Section 3.4.2 of the 2022 DOE EA, the transition of the IPP would result in a significant reduction in annual surface and groundwater usage. The Sawtooth and ACES projects were determined to have no significant cumulative effects based on the 2020 Approved Project as groundwater usage would decrease with time if the approved mitigation measures were implemented. The Kern River Pipeline and the three Solar Projects would have shallow ground excavations that would not affect groundwater and runoff from construction of these projects would be minor and mitigated with erosion controls. Therefore, we conclude that construction and operation of the Amendment Project would not result in significant cumulative effects on groundwater resources due to the reduction of groundwater usage by the proposed Amendment Project and the adjacent industrial non-jurisdictional facilities compliance with previously approved mitigation plans.

Vegetation and Wildlife

The geographic scope established for wildlife, vegetation, and threatened and endangered species is the HUC-12 sub-watersheds crossed by the Amendment Project. Other projects identified within the geographic scope are the IPP conversion, Sawtooth Caverns, ACES Phase 1 & 2, Kern River Pipeline, and Solar projects. The design of the gas storage facility site as described in the Amendment Project when combined with the existing industrial operations activities by Chevron to construct an additional non-jurisdictional facility and the IPP conversion does not add an incremental impact. This determination is based on the static nature of the IPP industrial operations with limited environmental impacts. The IPP conversions are anticipated for initial operational start up in fall 2025, therefore there should be no overlap in construction activity. Sawtooth Caverns is complete and ACES Phase 1 & 2 have been under construction since 2018 and would be considered baseline conditions for vegetation and wildlife. The Kern River Pipeline project is a FERC-jurisdictional buried pipeline that is currently in operation; restoration to previous conditions would be buried by our Plan. Therefore, cumulative effects are not expected to affect vegetation and wildlife.

Currently, no temporal overlap of construction activities with the three proposed solar projects is expected as there are no published construction schedules. In the event any of the construction schedules for the solar projects were expedited, no significant cumulative effects would result due to the implementation of standard mitigation plans and measures.

In addition, the ESA prohibits the take of any threatened and endangered species except under federal permit of take statement. Any other federal development projects in the cumulative effects area would be required to comply with Section 7 of the ESA to ensure construction and operation of the facilities would not jeopardize the continued existence of federally listed species. Non-federal projects would also adhere to Section 10 of the ESA. Given the scope and location of the Amendment Project and implementing the approved mitigation measures, we conclude that the construction and operation of the Amendment Project would not result in any significant cumulative effects to biological resources.

Cultural Resources

With respect to cumulative effects on cultural resources, the Amendment Project, as well as the other projects identified within the geographic scope (Sawtooth Caverns ACES Phase 1 & 2, Kern River Pipeline, and solar projects) would not necessarily add incrementally to cumulative effects within the Project Area. The plans provided for the storage areas, as well as the Header Pipeline would avoid affecting identified NRHP-listed or eligible sites. Similarly, cultural resources have not been negatively affected by the completed Sawtooth Caverns and Kern River Pipeline, as well as the ongoing ACES Phase 1 & 2. Assuming proper survey, mitigation, and/or avoidance of cultural resources for the three proposed solar projects, would also not create a cumulative effect on cultural resources. The updated *Historic Properties Treatment Plan* and UPD the design and proposed mitigation measures of the Amendment Project, when combined with the cultural resources mitigation effects of the projects listed above does not result in an incremental cumulative effect on cultural resources.

Construction Air Quality

With respect to cumulative construction air quality effects, the Amendment Project would have short-term effects. Other projects identified within the geographic scope for construction air quality are the IPP conversion, Sawtooth Caverns, and ACES Phase 1 & 2. The IPP is nearing its anticipated completion date and Sawtooth Caverns are complete; therefore, we expect no temporal overall of construction emissions with the Amendment Project. The ACES Phase 1 & 2 has been under construction since 2018 and uses renewable energy for hydrogen production. If construction schedules are simultaneous, there would be cumulative emission increases due to overlapping of the Amendment Project construction with ACES project in the geographic scope. This would primarily be from emissions from the combustion engines used to power construction equipment, vehicle emissions, and fugitive dust emissions from equipment movement on dirt roads and earth disturbing activities as well as commissioning activities. The Amendment Project's contribution to cumulative emissions would be temporary in nature and would not significantly affect local or regional air quality. While there may be overlap in construction emissions, given the low level of Amendment Project emissions and the variability of construction emission intensity, we conclude that there would be no reasonably foreseeable significant effects.

Construction Noise

The operation of the existing IPP and its conversion, Sawtooth Caverns, and ACES Phase 1&2 projects are within the geographic scope for cumulative noise effects during construction. The IPP conversion is occurring immediately north of the Amendment Project site, and the Sawtooth and ACES projects share utility corridors and portions of the Amendment Project storage site. Noise levels resulting from Amendment Project construction activities and the other projects in the geographic scope would vary over time and would depend on the nature of the construction activity, the number and type of equipment operating, and the distance between sources and receptors. Construction of the ACES project would likely overlap the Amendment Project's construction. However, Sawtooth Caverns is complete and the IPP conversion is anticipated to be complete this year; therefore, we do not expect a temporal overlap in construction noise from these projects. Based on the low projected noise levels, distance to NSAs, and construction noise and mitigation measures Magnum would implement, the Amendment Project would not result in significant construction noise effects on local residents but could contribute minor cumulative impacts to noise if construction periods overlap.

Land Use and Visual Resources

With respect to land use and visual resources, the IPP conversion, Sawtooth Caverns, ACES Phase 1 & 2, Kern River Pipeline, and Solar projects were identified within the geographic scope for land use and visual resources. The caverns and pipeline would contribute to minor visual effects, as they are primarily underground facilities. Cleared trees and brushes would be managed on site or disposed of at an authorized commercial disposal facility with debris and organic refuse unsuitable for right-of-way use. Sensitive vegetation areas, such as wetlands, agricultural areas with drainage tiles, and areas with penstemon found within the Header right-of-way would be marked with required buffers to prevent vehicle or materials effects. There would be longer term visual effects in the construction corridor because of slow sagebrush growth re-establishment. The facilities at the storage site associated with the Amendment Project would be similar in industrial nature and location to the other project facilities within the geographic scope. The Amendment Project would have a minor, but less than significant effects on land use and visual resources through the installation of the pipeline, aboveground facilities, and appurtenances. Given the short-term and temporary nature of the construction activities, Magnum's commitment to restore all land, and Magnum's compliance with the FERC's Plan and Procedures, the Amendment Project would not cause significant cumulative effects on land use and visual resources in consideration with other projects.

Socioeconomics

With respect to cumulative socioeconomic effects within the geographic scope, the Magnum project construction and operation would have temporary, short-term effects. The IPP conversion, Sawtooth Caverns, ACES Phase 1 & 2, Kern River Pipeline, and Solar projects, were identified within the geographic scope. The Kern River Pipeline and Sawtooth Caverns projects have been completed, and no additional construction is expected. In addition, no current schedules are set for the Solar projects which are still under development. While construction activities associated with the IPP decommissioning are no longer in effect, the IPP conversion and ACES Phase 1 & 2 projects are currently ongoing. These projects are expected to be completed in 2025 and are not likely to overlap with the proposed Magnum project. This Amendment project would not represent a significant demand for housing, infrastructure, or community services. Although the Magnum project may have temporary, short-term impacts overall, all projects would have minor beneficial positive effects on employment, housing, and the local economy. Amendment Project effects would be negligible with no significant adverse effects on Millard, Juab and Utah Counties population, housing, public services, traffic, and transportation during project construction and facilities operation. Therefore, we conclude the

Amendment Project, in combination with the other projects, would not result in, or contribute to, discernible cumulative socioeconomic effects.

Climate Change

Climate change is the variation in the Earth's climate (including temperature, precipitation, humidity, wind, and other meteorological variables) over time. Climate change is driven by accumulation of GHG in the atmosphere due to the increased consumption of fossil fuels (e.g., coal, petroleum, and natural gas) since the early beginnings of the industrial age and accelerating in the mid- to late-20th century.[41] The GHGs produced by fossil-fuel combustion are CO_2, methane, and N_2O.

In 2017 and 2018, the U.S. Global Change Research Program (USGCRP)[42] issued its *Climate Science Special Report: Fourth National Climate Assessment*, Volumes I and II.[43] This report and the report by the Intergovernmental Panel on Climate Change, *Climate Change 2021: The Physical Science Basis*, states that climate change has resulted in a wide range of impacts across every region of the country and the globe. Those impacts extend beyond atmospheric climate change alone and include changes to water resources, agriculture, ecosystems, human health, and ocean systems.[44] According to USGCRP's Fourth Assessment Report, the United States and the world are warming; global sea level is rising, and oceans are acidifying; and certain weather events are becoming more frequent and more severe.[45] These impacts have accelerated throughout the end of the 20th and into the 21st century.[46]

GHG emissions do not result in proportional local and immediate impacts; it is the combined concentration in the atmosphere that affects the global climate. These are fundamentally global impacts that feed back 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 GHG would contribute to climate change in a similar manner as a project 2,000 miles distant also emitting 1 ton of GHG.

Climate change is a global phenomenon; however, for this analysis, we would focus on the existing and potential climate change impacts in the general Amendment Project area. The

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[41] Intergovernmental Panel on Climate Change (IPCC), United Nations, Summary for Policymakers of Climate Change 2021: The Physical Science Basis (Valerie Masson-Delmotte et al., eds.) (2021), https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf (IPCC Report) at SPM-5. Other forces contribute to climate change, such as agriculture, forest clearing, and other anthropogenically driven sources.
[42] The USGCRP comprised representatives from 13 federal departments and agencies and issued reports every 4 years that described 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.
[43] USGCRP, Climate Science Special Report, Fourth National Climate Assessment | Volume I (Donald J. Wuebbles et al. eds) (2017), (USGCRP Report Volume I), available at https://repository.library.noaa.gov/view/noaa/19486. U.S. Global Change Research Program, Fourth National Climate Assessment, Volume II Impacts, Risks, and Adaptation in the United States (David Reidmiller et al. eds.) (2018) (USGCRP Report Volume II), available at https://repository.library.noaa.gov/view/noaa/19487.
[44] IPCC Report at SPM-5 to SPM-10.
[45] USGCRP Report Volume II at 73-75.
[46] See, e.g., USGCRP Report Volume II at 99 (describing accelerating flooding rates in Atlantic and Gulf Coast cities).

USGCRP's Fourth Assessment Report notes the following observations of environmental impacts attributed to climate change in the Southwest region (which includes the Amendment Project in Utah):[47]

- annual average temperatures across Colorado have increased about 2 degrees Fahrenheit since the beginning of the 20th century;
- an increase in heat and 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 Southwest with a high or very high level of confidence:[48]

- under the higher emissions scenario, climate models project an 8.6 °F (4.8 °C) increase in Southwest regional annual average temperature by 2100;
- a decrease in precipitation of up to 10 percent 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 percent 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 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.[49]

The GHG emissions associated with the Amendment Project were identified and quantified in sections B.8 of this EA. Emissions of GHG are typically expressed in terms of

[47] USGCRP Report Volume I and II.
[48] USGCRP Report Volume II.
[49] USGCRP Report Volume II.

CO_2e.[50] Construction of the 2025 Amendment Project may result in emissions of about 9,966.6 tons per year (9,042 metric tons per year) of CO_2e.[51] There are no new stationary combustion sources associated with the proposed amendment; thus, no new operational emissions because off the Amendment Project. In addition, there are no downstream GHG emissions associated with the Amendment Project given its function to provide gas service to contracting parties through the availability of storage service rather than providing new sources of natural gas to the market.

Construction of the Amendment Project facilities would increase the atmospheric concentration of GHG in combination with past, current, and future emissions from all other sources globally, and would contribute incrementally to future climate change impacts. To assess impacts on climate change associated with the Amendment Project, Commission staff considered whether it could identify discrete physical impacts resulting from the Amendment Project's GHG emissions or compare the Amendment Project's GHG emissions to established targets designed to combat climate change.

To date, Commission staff have not identified a methodology to attribute discrete, quantifiable, physical effects on the environment resulting from the Amendment Project's incremental contribution to GHGs. Without the ability to determine discrete resource impacts, Commission staff are unable to assess the Amendment Project's contribution to climate change through any objective analysis of physical impact attributable to the Amendment Project. Additionally, Commission staff have not been able to find an established threshold for determining the Amendment Project's significance when compared to established GHG reduction targets at the state or federal level. Ultimately, this EA is not characterizing the Project's GHG emissions as significant or insignificant.[52] However, as we have done in prior NEPA analyses, we disclose the Amendment Project's GHG emissions in comparison to national and state GHG emission inventories.

In order to provide context of the Project GHG emissions on a national level, we compare the Project GHG emissions to the total current GHG emissions inventory for the United States as a whole. At a national level, 5,489.0 million metric tons of CO_2e were emitted in 2022 (including CO_2e sources and sinks) (USEPA, 2024). Construction emissions from the Project could potentially increase CO_2e emissions based on the national 2022 levels by 0.0002 percent.

To provide context on a state level, we compare the Amendment Project's estimated GHG emissions to the state emission inventories. The Amendment Project's construction emissions occur in Utah. At a state level, Utah energy related CO_2 emissions in 2023 were 55.0 million metric tons (inclusive of CO_2 sources and sinks) (U.S. Energy Information

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[50] GHG gases are converted to CO2e by means of the GWP; the measure of a particular GHG's ability to absorb solar radiation; and its residence time within the atmosphere, consistent with the USEPA's established method for reporting GHG emissions for air permitting requirements that allows a consistent comparison with federal regulatory requirements.

[51] See table B.8.1. Values presented here are converted from U.S. tons to metric tons. A ton is about equal to 0.90718474 metric ton

[52] See e.g., Driftwood Pipeline LLC, 183 FERC ¶ 61,049, at P 63 (2023) ("…there currently are no accepted tools or methods for the Commission to use to determine significance, therefore the Commission is not herein characterizing these emissions as significant or insignificant.)

Administration, 2025). Amendment Project construction in Utah could potentially increase CO_2 emissions based on statewide 2023 levels by 0.02 percent.

When states have GHG emissions reduction targets, we compare the proposed action's operational and downstream emissions in the context of state GHG reduction goals.[53] There are no new operational emissions or downstream emissions associated with the Amendment Project. Furthermore, Utah has not set statewide goals for GHG emissions reduction targets.

SECTION C – ALTERNATIVES

We considered alternatives to the proposed action, including the no-action alternative and two alternative interconnection sites, to determine whether an alternative would be environmentally preferable to the proposed action while meeting the Amendment Project objective. Our evaluation criteria for developing and reviewing alternatives were:

- ability to meet the Amendment Project's stated objective;
- technical and economic feasibility and practicality; and
- significant environmental advantage over the proposed action.

Our evaluation of alternatives for the 2025 Amendment Project is based on information provided by Magnum, a review of publicly available information, and our independent research, taking into consideration the specific environmental impacts described and evaluated in section B of this EA.

1.0 NO-ACTION ALTERNATIVE

Under the no-action alternative, the Amendment Project would not be approved. It is possible that if the Amendment is not approved (the no-action alternative), Magnum could instead construct the 2020 Approved Project as previously authorized by the Commission. Thus, although the environmental effects associated with the proposed Amendment would not occur under the no-action alternative, the environmental effects as described in the 2020 EA could occur. However, this alternative would not allow Magnum to adjust its project design to resolve site conflicts with the ACES renewable hydrogen storage cavern project nor could Magnum consolidate utilities into one central corridor.

Based on our review, we have not identified any effects that would lead us to recommend the no-action alternative. We have prepared this EA to inform the Commission and stakeholders about the expected environmental effects that would occur if the Amendment Project were constructed and operated. The Commission will ultimately determine the project needs and could choose the No-Action Alternative.

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[53] We reviewed the U.S. State Greenhouse Emission Targets site for individual state requirements at: https://www.c2es.org/document/greenhouse-gas-emissions-targets/.

2.0 INTERCONNECTION ALTERNATIVES

We analyzed two alternative interconnection locations (one for each interconnect) because Magnum indicated that the final selection of the interconnections would be completed in cooperation with the owner of the third-party pipeline (IPP and Kern River Gas Transmission Company) and may be subject to change based on the needs of the customer.[54] Magnum provided site information for two potential lateral tie-in alternative interconnection locations, identified as MGS Interconnection Option B and IPP Delivery Pipeline Option B. Magnum stated that the interconnections have the potential to provide flexibility and optionality to better meet the stated market needs for the reliability and deliverability features as part of storage service. We are reviewing the interconnect alternative locations to disclose potential effects in the event that the customers require a change during final Amendment Project design. However, both the preferred and alternative interconnection locations are considered proposed facilities for purposes of our NEPA analysis, and we included both interconnect options in the affected area that is analyzed in this EA.

MGS Interconnection Option B Alternative

The MGS Interconnection Option B includes a 135-foot-wide utility corridor segment that extends adjacent to the previous utility corridor containing the approved 4-inch-diameter gas supply line. Both the preferred MGS Interconnection and the MGS Interconnection Option B affect the same general resources and are located within the overall Amendment Project facility (see figure A.2-1) and as shown in figures C.1 and C.2.[55]

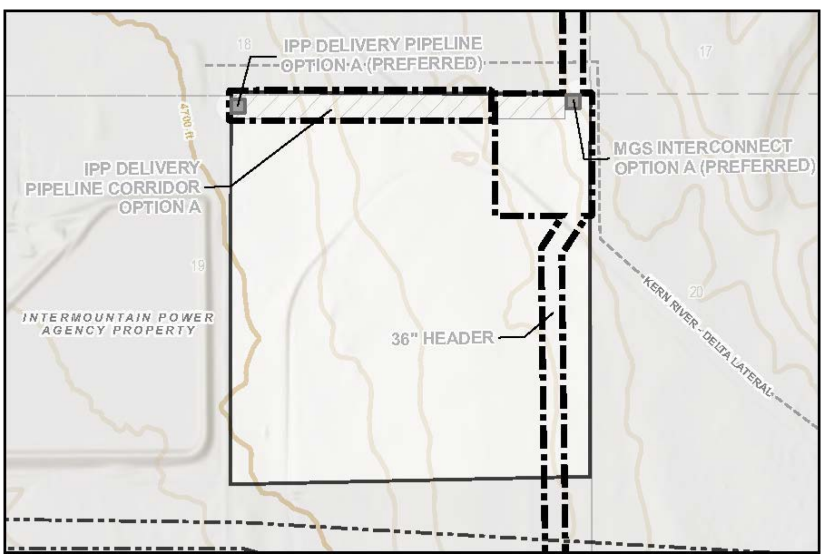

Figure C.2-1: Preferred locations for MGS Interconnect and IPP Delivery Pipeline

[54] Magnum July 30, 2025, Data Response at 4, eLibrary Accession # 20250730-5161
[55] Magnum August 29, 2025, Data Response at 6 and 8, eLibrary Accession # 20250829-5083

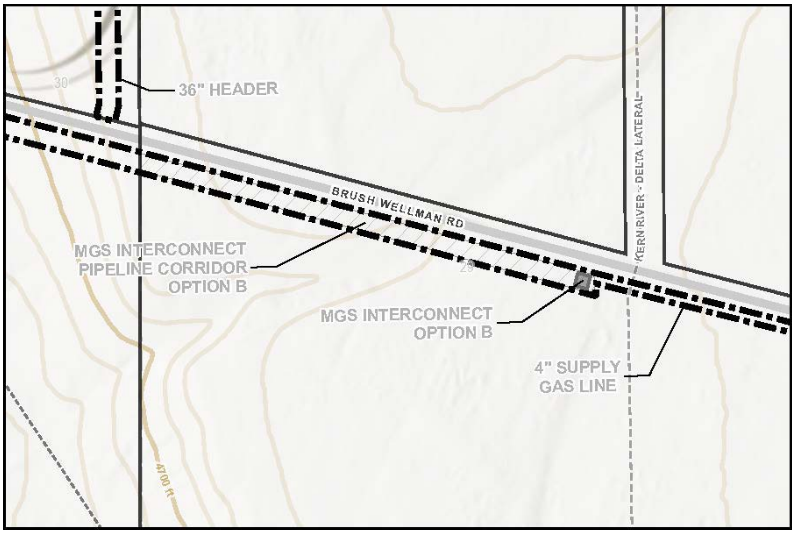

Figure C.2-1: Location for MGS Interconnect Option B

The preferred MGS Interconnection would permanently convert 13.9 acres of scrub shrub vegetation to open land; MGS Interconnection Option B would temporarily affect 11.0 acres of scrub shrub vegetation during construction and permanently convert 0.23 acre to open land. [56] All temporary workspaces would be restored upon completion of construction. While the preferred location would convert an additional 13.7 acres of land to open land, we note that a portion of the 200-foot-wide utility corridor would functionally cross the 13.9-acre MGS Interconnect aboveground metering and equipment area regardless of which alternative is selected. Our analysis finds no significant difference in the effects between the preferred and alternative locations. Both interconnect locations pose acceptable levels of effects to the environment.

IPP Delivery Pipeline Option B

The IPP Delivery Pipeline Option B includes a 95-foot-wide utility corridor that comes off the main site-wide utility corridor, as shown in figure C-2-3.[57]

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[56] Magnum August 29, 2025, Data Response, at 12, eLibrary Accession # 20250829-5083
[57] Magnum August 29, 2025, Data Response at 7, eLibrary Accession # 20250829-5083

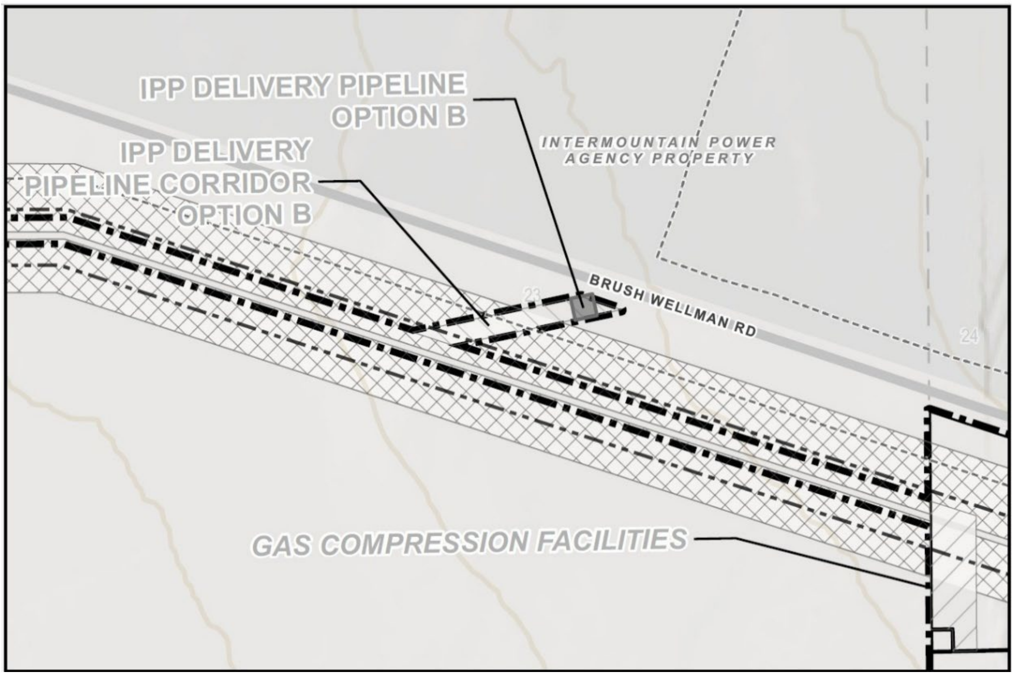

Figure C.2-3: Location for IPP Delivery Pipeline Option B

The preferred IPP Delivery Pipeline would temporarily affect 8.8 acres of scrub shrub vegetation during construction and permanently convert 0.23 acre to open land; IPP Delivery Pipeline Option B would temporarily affect 1.67 acres of scrub shrub vegetation during construction and permanently convert 0.23 acres to open land.[58] Our analysis finds no significant difference in the effects between the preferred and alternative locations. Both interconnect locations pose acceptable levels of effects to the environment.

3.0 CONCLUSIONS

Our review of the Amendment Project found no significant environmental effects that would drive further evaluation of alternative sites for the proposed Amendment Project, nor did we receive any comments on aboveground facility site alternatives. We conclude that no alternative would provide a significant environmental advantage over the Amendment as proposed. Therefore, we conclude that the proposed Amendment, with our recommended mitigation measures, is the preferred alternative to meet the Amendment Project objectives.

[58] Magnum August 29, 2025, filing at 12, eLibrary Accession # 20250829-5083

SECTION D – CONCLUSIONS AND RECOMMENDATIONS

Based upon the analysis in this EA, we have determined that if Magnum constructs and operates the proposed facilities in accordance with its application, supplements, Amendment Project-specific plans, and the staff's recommended mitigation measures below, approval of the Amendment Project would not constitute a major federal action significantly affecting the quality of the human environment. The staff recommends that the Commission Order contains a finding of no significant impact and the following mitigation measures be included as conditions of any Certificate the Commission may issue. In addition, we recommend that all applicable environmental conditions of the Commission's March 17, 2011, Order in Docket No. CP10-22-000 and November 17, 2016, Order in Docket No. CP16-18-000, not repeated here, shall apply to the amended facilities.

1. Magnum shall follow the 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. Magnum must:

    a. request any modification to these procedures, measures, or conditions in a filing with the Secretary of the Commission (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 and operation of the Amendment 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 effect resulting from project construction and operation.

3. The authorized facility locations shall be as shown in the EA, as supplemented by filed alignment sheets. **As soon as they are available, and before the start of construction**, Magnum shall file with the Secretary any detailed revised survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for all facilities approved by the Order. All requests for modifications of environmental conditions of the Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

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

4. Magnum shall comply with all applicable environmental conditions of the Commission's March 17, 2011, Order in Docket Nos. CP10-22-000 and November 17, 2016, Order in CP16-18-000 for the Magnum Gas Storage Project.

5. Within 5 days of the final determination of the use of the Programmatic General Permit 10 issued by the United States Army Corps of Engineers, Magnum shall file the complete water quality certification issued categorically by the Utah Division of Water Quality, including all conditions. All conditions attached to the water quality certification constitute mandatory conditions of the Certificate Order. **Prior to construction**, Magnum shall file, for review and written approval by the Director of OEP, or the Director's designee, any revisions to its project design necessary to comply with the water quality certification conditions.

6. Magnum shall **not begin** implementation of any treatment plans/measures (including archaeological data recovery; construction of facilities; and use of any staging, storage, or temporary work areas and new or to-be-improved access roads) **until**:

   a. Magnum files with the Secretary the remaining treatment plans, and SITLA, BLM, and SHPO comments on the plans;

   b. Magnum files with the Secretary an Amended Programmatic Agreement Among the Federal Energy Regulatory Commission, USDI Bureau of Land management, the Utah School and Institutional Trust Lands Administration, and the Utah State Historic Preservation Officer, for the Magnum Gas Storage Project (and amended on November 17, 2016, and April 23, 2020) to include Amendment Project; and

   c. The FERC staff reviews and the Director of OEP approves the cultural resources reports and plans and notifies Magnum in writing that treatment plans/mitigation measures (including archaeological data recovery) may be implemented and/or construction may proceed.

All material filed with the Commission containing l**ocation, character, and ownership information** about cultural resources must have the cover and any relevant pages therein clearly labeled in bold lettering: **"CONTAINS CUI/PRIV – DO NOT RELEASE."**

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SECTION F – REFERENCES

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FERC. 2011. Magnum Gas Storage Project Implementation Plan. Docket No. CP10-22-000. Dated April 2011, Revised November 2011. Office of Energy Projects, Federal Energy Regulatory Commission, Washington, D.C.

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APPENDIX A

Table A.5-1: 2025 Amendment Project Facilities List, Acreage Requirements			
Project Component	**Disturbance (acres)**		**Open Space**
	Perm	**Temp**	
Storage Cavern/Cavern Well 3 (CW-3)	3.67	-	-
Storage Cavern/Cavern Well 4 (CW-4)	3.67	-	-
Storage Cavern/Cavern Well 25 (CW-25)	3.67	-	-
Storage Cavern/Cavern Well 26 (CW-26)	3.67	-	-
Water Well 4 (GS-MH-4)	0.23	-	-
Open Space within the Storage Cavern Field Area	-	-	55.01
Subtotal	**14.91**	**0**	**55.01**
Gas Compression Facilities:			
Compression/ Dehydration Facility & Substation	22.96	-	-
Maintenance and Laydown	9.90	-	-
Office/Warehouse Building	9.64	-	-
Office/Warehouse Septic	-	2.29	-
Water Well 5 (GS-MH-5)	0.23	-	-
Open space within the Gas Compression Facilities Area	-	-	32.19
Subtotal	**42.73**	**2.29**	**32.19**
Brine Evaporation Pond 3	187.71	-	-
Brine Evaporation Pond 5	185.66	-	-
Subtotal	**373.37**	**0**	**0**
Preferred Interconnections and Utilities			
Site-Wide Utility Corridors including portions of the 36-in diameter Header and 4-inch-diameter Supply line within the amended Storage Site 1	-	46.73	-
Utility Corridors within the Storage Cavern Field (less roadway)	-	5.76	-
Roadway within Storage Cavern Field Utility Corridors 2	1.09	-	-
Utility Corridors within the Gas Compression Facilities (less roadway)	-	5.91	-
Roadway within Gas Compression Facilities Utility Corridor 2	0.54	-	-

Table A.5-1: 2025 Amendment Project Facilities List, Acreage Requirements			
Project Component	**Disturbance (acres)**		**Open Space**
	Perm	**Temp**	
IPP Delivery Pipeline Option A above-ground metering and equipment area	0.23	-	-
Utility Corridor to the IPP Delivery Pipeline Preferred/Option A 3	-	8.91	-
MGS Interconnect Preferred/Option A above-ground metering and equipment area 4	13.92	-	-
Subtotal	**15.78**	**67.31**	**0**
Total Acreage by Disturbance	**446.79**	**69.6**	**87.2**
Total 2025 Amendment Project Acreage:	**603.59 acres**		
Alternative Interconnections and Utilities			
IPP Delivery Pipeline Alternative/Option B above-ground metering and equipment area	0.23	8.8	-
Utility Corridor to the IPP Delivery Pipeline Alternative/ Option B	-	1.67	-
MGS Interconnect Option B above-ground metering and equipment area	0.23	-	-
Utility Corridor to MGS Interconnect Alternative/Option B	-	11.01	-
Subtotal	**0.46**	**21.48**	**0**
Total Alternatives Acreage: 13.14			

1. The roadway acreage has been excluded from this utility corridor acreage because access will be achieved through Brush Wellman Rd. or from the existing roadway network of adjacent operators.
2. The area of disturbance for roadways is based on 16 ft wide corridor comprised of a 14 ft. wide traveled way and 1 ft. berms on either edge, but specific locations are not yet defined as final engineering has not been completed.
3. The roadway acreage has been excluded from this utility corridor as access will be achieved through existing IPP roadway infrastructure or from existing roadway network of adjacent operators.
4. There is no associated utility corridor as this is a direct interconnection location between Kern River Delta Lateral and the 36” Header pipeline and entirely within the 13.92-acre ground metering and equipment area.

Table A.5-2: Summary of 2025 Amendment Project Modifications				
Facility	**Approved Location**	**Amendment Location**	**Modification**	**Modification Reason**
Storage Cavern/Cavern Well 3 (CW-3)	500557.65 E 207191.48 N	500608.24 E 207176.48 N	Adjusted ~50' east and 15 south; reduced the proposed storage capacity from the approved maximum of 13.5 Bcf to a maximum of 5.5 mmbbls	Adjusted to avoid conflict with ACES I non- jurisdictional facility boundary; Location maintains permit and geomechanically design requirements
Storage Cavern/Cavern Well 4 (CW-4)	499372.69 E 207005.42 N	499675.55 E 207357.00 N	Adjusted ~303' east and ~352' north; reduced the proposed storage capacity from the approved maximum of 13.5 Bcf to a maximum of 5.5 mmbbls	Adjusted to avoid conflict with ACES I non-jurisdictional facility boundary; Location maintains permit and geomechanically design requirements
Storage Cavern/Cavern Well 25 (CW- 25)	N/A	498879.83 E 206838.03 N	New location; reduced the proposed storage capacity from the approved maximum of 13.5 Bcf to a maximum of 5.5 mmbbls	Added a previously approved third cavern back into the Amendment Project scope as conflicting non-jurisdictional facilities have been constructed; Location maintains permit and geomechanically design requirements
Storage Cavern/Cavern Well 26 (CW-26)	N/A	498764.66 E 205756.47 N	New location; reduced the proposed storage capacity from the approved maximum of 13.5 Bcf to a maximum of 5.5 mmbbls	Added a previously approved fourth cavern back into the Amendment Project scope as conflicting non-jurisdictional facilities have been constructed; Location maintains permit and geomechanically design requirements

Table A.5-2: Summary of 2025 Amendment Project Modifications				
Facility	**Approved Location**	**Amendment Location**	**Modification**	**Modification Reason**
36-inch-diameter Header Pipeline–segment w/in natural gas facility boundary	Located within a separate utility corridor from general utilities running primarily across center of the Storage Site	Located within one central utility corridor running along northern boundary of the amended Storage Site	Adjusted segment up to ~1300' north to parallel the existing Brush Wellman Road/SR 174 highway and high voltage powerline corridors	Adjusted to consolidate all Amendment Project-related utilities into one central corridor; avoid conflict with ACES I non-jurisdictional facility boundary and utility locations
Water Well 1 (GS-MH-1)	503533.97 E 204034.95 N	N/A	Removed	Adjusted to avoid conflicts with ACES I non- jurisdictional facility and utility locations
Water Well 2 (GS-MH-2)	501075.02 E 204056.54 N	N/A	Removed	Adjusted to avoid conflict with ACES I non- jurisdictional facility and utility locations
Water Well 3 (GS-MH-3)	505117.61 E 204058.89 N	N/A	Removed	Adjusted to avoid conflict with ACES I non- jurisdictional facility and utility locations
Water Well 4 (GS-MH-4)	499754.41 E 206654.45 N	499754.41 E 206654.45 N	No change	No change
Water Well 5 (GS-MH-5)	503540.30 E 206160.13 N	507041.33 E 205367.13 N	Adjusted ~3501' east and ~793' south	Adjusted to be within amended Storage Site and avoid conflicts with ACES I non-jurisdictional facility and utility locations
Compression/ Dehydration Facility & Substation	502988.73 E 203577.01 N	505827.77 E 205251.26 N	Adjusted ~2839' east and ~1674'north; maintained previously approved 1000' x 1000' area	Adjusted to be within amended Storage Site and avoid conflicts with ACES I non-jurisdictional facility and utility locations
Brine Evaporation Pond 3 & Associated Monitoring Wells	509757.12 E 201623.63 N	N/A	No change	No change
Brine Evaporation Pond 5 & and Associated Monitoring Wells	N/A	509729.45 E 198167.21 N	New location	Added a previously approved second pond back into the Amendment Project scope as conflicting non-jurisdictional facilities have been constructed

Table A.5-2: Summary of 2025 Amendment Project Modifications				
Facility	**Approved Location**	**Amendment Location**	**Modification**	**Modification Reason**
4-inch-Diameter Gas Supply Line	Portions located within a separate utility corridor from general utilities running primarily across center of the Storage Site	Located within one central utility corridor running along northern boundary of the amended Storage Site	Adjusted segment ~363.3 feet to the north for the entire alignment to parallel the existing Brush Wellman Road/SR 174 highway and high voltage powerline corridors	Adjusted to consolidate the locations for all Amendment Project- related utilities; avoid conflict with ACES I non-jurisdictional facility boundary and utility locations
Maintenance and Laydown Area	503740.75 E 203588.28 N	506539.01 E 205256.65 N	Adjusted ~2798' east and ~1668' north; reduced previously approved area to 431' x 1000'	Adjusted to avoid conflict with ACES I non- jurisdictional facility boundary
Office/Ware-house Building	507247.25 E 203827.05 N	507107.40 E 205064.48 N	Adjusted ~140' west and ~1237' north; reduced previously approved area to 700'x600'	Adjusted to avoid conflict with ACES I non- jurisdictional facility boundary and utility locations
Site-Wide Utilities	Located within a general utility corridor running primarily across center of the Storage Site	Located within one central utility corridor running along northern boundary of the amended Storage Site	Adjusted all major site-wide utilities to be within a corridor north of the Amendment Project along the existing Brush Wellman/SR 174 highway and high voltage powerline corridors	Adjusted to consolidate all Amendment Project-related utilities into one central; avoid conflict with ACES I non-jurisdictional facility boundary and utility locations.
IPP Delivery Pipeline Option A	N/A	513279.81 E 210365.89 N	Added a pipeline interconnection point with metering and other above- ground equipment and 2,559 feet of delivery pipeline within the central utility corridor along the existing Brush Wellman/SR 174 highway and high voltage powerline corridors.	Added interconnection option into Amendment Project scope as preferred delivery location for new potential customers. The interconnections have the potential to provide flexibility and optionality to better meet the stated market needs for the reliability and deliverability features as part of storage service.
MGS Interconnect Option A	N/A	515837.98 E 210432.50 N	Added a pipeline interconnection point with metering and other above- ground equipment and 125 feet of delivery pipeline within the central utility corridor	Added interconnection option into Amendment Project scope as preferred new potential lateral tie-in location. The interconnections have the potential to provide

Table A.5-2: Summary of 2025 Amendment Project Modifications				
Facility	**Approved Location**	**Amendment Location**	**Modification**	**Modification Reason**
			along the existing Brush Wellman/SR 174 highway and high voltage powerline corridors.	flexibility and optionality to better meet the stated market needs for the reliability and deliverability features as part of storage service.

Table A.9-1: Agency Permits, Approvals and Consultations			
Permit or Approval	**Construction / Operations Requirement**	**Status**	**Required Action**
FEDERAL AGENCIES			
Federal Energy Regulatory Commission:			
NGA Certificate of Public Convenience and Necessity	Order granting authority to construct, own, operate, and maintain a new interstate natural gas storage facility and header pipeline.	Issued March 2011; Extension issued in Aug 2014; Amendments issued in Nov 2016 and April 2020	2025 Amendment in Process
Bureau of Land Management:			
Temporary Right of Way Grant (SF299)	Permit authorizing construction of the header pipeline on federal lands.	Issued February 2011; Extension Nov 2014; 10-yr Extension granted Dec 2018	Consultation on 2025 Amendment Project changes; No update needed
Permanent Right of Way Grant (SF299)	Permit authorizing operations and maintenance of the header pipeline on federal lands.	Issued February 2011 for 30-yr term	Consultation on 2025 Amendment Project changes; No update needed
Army Corps of Engineers:			
Section 404 Consultation and Jurisdiction Severance for Storage Site and Permit for Header Pipeline	Construction clearance to determine no impact to Waters of the United States from facilities within the storage site and Header pipeline	Jurisdictional Severance Issued for the Storage Site September 2017; Clearance required for the Header pipeline	Completed for Storage Site; Header pipeline application to be completed upon completion of final engineering design and prior to construction
Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA):			
PHMSA Operator Identification (OPID) Request	Operations registration requirement for an OPID number from PHMSA by each operator of a gas pipeline or gas pipeline facility	Application pending final engineering design and Amendment Project schedule	Prepare and file application 90 days prior to operations
PHMSA Notification and Design Review	PHMSA design review requirement for compliance with 49 CFR192 by OPID holders no later than 60 days in advance of construction of a pipeline or facility that costs more than $10,000,000	Application pending final engineering design and Amendment Project schedule	Prepare and submit design review package at 60-90 days prior to construction
Environmental Protection Agency:			

Table A.9-1: Agency Permits, Approvals and Consultations			
Permit or Approval	**Construction / Operations Requirement**	**Status**	**Required Action**
Risk Management Plan	Operations requirement for a Risk Management Plan that identifies the potential effects of a chemical accident, steps the facility is taking to prevent an accident, and emergency response procedures should an accident occur	Submittal pending final engineering design and Amendment Project schedule	Prepare and file plan with EPA by the date a regulated substance (methane) becomes present above the threshold quantity of 10,000 pounds; revise and re-submitted every 5 yrs
Department of Homeland Security:			
Chemical Facility Anti-Terrorism Standards (CFATS)	Operations requirement to obtain a tier determination and, if applicable, submit Site Security Plan	Submittal pending final engineering design and Amendment Project schedule	Consultation completed; Program currently suspended; Prepare and submit Site Security Plan
STATE AGENCIES			
Central Utah Public Health Department:			
Wastewater System Permit	Operations permit to approve design, construction and operations of septic system	Application pending final engineering design and Amendment Project schedule	Prepare and submit design for approval at same time with Millard County Building Permit application
Public Lands Policy Coordination Office:			
National Historic Preservation Act Consultation	Construction clearance required for facilities within the Storage Site and Header pipeline. PLPCO may choose to participate in Utah SHPO's consultation with FERC regarding protection of cultural resources and may coordinate with SHPO on review of Amendment Project treatment plans	Issued. Utah PLPCO Commented during FERC NEPA analysis and concurred with SHPO determination.	Prepare and submit an update of the approved Treatment Plan for the storage site and Header pipeline prior to construction
Utah Department of Environmental Quality:			
Division of Air Quality			
Small Source Exemption	Construction and operations permit exemption for air quality emissions	Application pending final engineering design and Amendment Project schedule	Prepare and file application 120 days prior to operations
Division of Water Quality			
Underground Injection Control (UIC) 1422 Class III for Salt Cavern Creation	Construction permits to drill and solution mine storage caverns in below ground salt formation	Issued December 2010; Amended 2012, 2014, 2017, 2019, 2020 and 2022	Obtain construction bond and provide required compliance plans for approval prior to start of construction

Table A.9-1: Agency Permits, Approvals and Consultations			
Permit or Approval	**Construction / Operations Requirement**	**Status**	**Required Action**
Construction Approval for Individual Brine Evaporation Ponds	Construction permits to approve the engineering design and construction of brine evaporation ponds 3 and 5	Issued September 2013; amended in 2014, 2020 and 2025 renewal currently in process	Permit renewal application in process for Pond 3; application to be submitted upon final design of Pond 5
Groundwater Discharge Permit (Joint)	Operations permit to approve operation of brine evaporation ponds 3 and 5	Issued September 2013; amended in 2014, 2020 and 2025 renewal for Pond 3 currently in process	Permit renewal application in process for Pond 3; amendment to be submitted upon final design of Pond 5 to include under permit
Stormwater General Permit for Construction Activities	Construction permit for stormwater control	Application pending final engineering design and Amendment Project schedule	Prepare and file application 120 days prior to operations
Utah Department of Natural Resources:			
Division of Oil, Gas and Mining			
Permits to Drill Cavern Wells	Construction permits to drill individual storage cavern wells (CW-3, CW-4, CW-25 and CW-26)	Application pending final engineering design and Amendment Project schedule	Prepare application and submit 180 days in advance of construction
Board Order to Place Caverns into Operation	Operations authorization for natural gas storage facility operations	Application pending final engineering design and Amendment Project schedule	Prepare application and submit 180 days in advance of construction
Division of Water Rights			
Production of Water Well Permits for Drilling	Construction permits to drill individual water wells	Issued March 2013 and renewed annually	Renewal prepared annually and administratively processed by agency
Monitoring Well Drilling Permit (>30 ft bgs)	Construction permits to drill shallow water monitoring wells (GA wells)	Application pending final engineering design and Amendment Project schedule	Prepare application and submit 180 days in advance of construction
Dam Impoundment Construction Permits	Individual construction permits to approve the engineering design, construction and operation of the brine evaporation ponds (Pond 3 and Pond 5)	September 2011; Renewed July 2012	Consultation and permit renewal needed
Stream Alteration Permit	Joint Section 404 Permit with U.S. Army Corps of Engineers, Programmatic General Permit 10, for authorization to alter the bed or banks of a natural stream during construction and operations of Header pipeline	Application pending final engineering design and Amendment Project schedule	Prepare and submit permit application 180 days prior to start of Header pipeline construction

Table A.9-1: Agency Permits, Approvals and Consultations			
Permit or Approval	**Construction / Operations Requirement**	**Status**	**Required Action**
Utah State Historic Preservation Office:			
Cultural Resources Clearance	Construction authorization required to begin construction	Issued December 2010	Completed and consultation update required; Prepare and submit an update of the approved Treatment Plan for the storage site and Header pipeline prior to construction
Utah Department of Transportation:			
State-Wide Utility License Agreement	Operations agreement and performance bond required to install and operate the 36-inch-diameter Header pipeline beneath a state highway	Application pending final engineering design and Amendment Project schedule	Obtain required bond and prepare and submit application 30 days in advance of construction
Encroachment Permits for Header pipeline Crossing of SR 132 in Juab County and SR 174 in Millard County	Construction permit for the Header pipeline crossing within the state right of way	Application pending final engineering design and contractor engagement	No action required; Contractor obtains permit for each crossing for three years to assure proper construction and maintenance of the crossings
LOCAL AGENCIES			
Millard County:			
Map Zone Change of County Zoning Ordinance for the Storage Site	Approval for zoning upgrade to Heavy Industrial required to allow construction and operations of industrial facility type	Issued April 2010 and amended in 2012, 2014, 2016, 2018, 2020 and 2022	Complete. No action needed
Conditional Use Permits (CUP) for the Natural Gas Storage Facility and Header Pipeline	Construction and operations permit to allow facility type	Issued March 2011; Amended 2012, 2015, 2018, and 2024 after 2021 extension	Complete; Annual report after construction starts and compliance with permit conditions
Building Permit for Storage Facility	Construction permit required for any occupied structures within the storage site	Application pending final engineering design and Amendment Project schedule	Prepare application and submit 180 days in advance of construction

Table B.4-1: Utah State Sensitive and BLM Sensitive Wildlife Species Identified as Potentially Occurring in the 2025 Amendment Project			
Species	**Status**	**Habitat**	**Likelihood of Occurring**
American white pelican *Pelecanus erythrorhynchos* [1]	SGCN, SS	Wetlands, lakes, reservoirs, rivers.	The 2025 Amendment Project's supports limited stopover and loafing habitat and may occur as a rare migratory visitor. General avian protection measures developed for Amendment Project and Header pipeline (FERC IP 2017, BLM POD, BLM 2018a).
Bald eagle *Haliaeetus leucocephalus*	SGCN, SS	Generally breeding, nesting, and wintering along rivers, streams, lakes, reservoirs, ponds, and riparian woodlands.	The 2025 Amendment Project does not support his species' habitat. May occur as a rare migratory visitor. General raptor protection measures developed for the 2025 Amendment Project (FERC IP 2017, BLM POD, BLM 2018a).
Burrowing owl *Athene cunicularia*	SGCN, SS	Sparse shrublands, such as sagebrush steppe and desert scrub, with abandoned prairie dog, badger, or ground squirrel burrows.	The 2025 Amendment Project supports this species' habitat, and this species has been documented to occur (UDWR 2025). Mitigation has been developed for this species. (FERC IP 2017, BLM POD, BLM 2018a).
Columbia sharp-tailed grouse *Tympanuchus phasianellus* [1]	SGCN, SS	Occur in grassland associated with transitional zones between sagebrush communities, mountain shrub, and riparian communities. Found in northern Utah in grassland and shrubland areas of Box Elder, Cache, Weber and Morgan counties.	The 2025 Amendment Project is outside this species' known range. This species will not be carried forward for analysis.
Ferruginous hawk *Buteo regalis*	SGCN, SS	Pinyon-juniper, juniper-shrub, and sagebrush-steppe.	The 2025 Amendment Project supports this species' habitat. Mitigation developed for this species (FERC IP 2017, BLM POD, BLM 2018a). Documented as occurring (UDWR 2025).

Table B.4-1: Utah State Sensitive and BLM Sensitive Wildlife Species Identified as Potentially Occurring in the 2025 Amendment Project			
Species	**Status**	**Habitat**	**Likelihood of Occurring**
Flammulated owl *Psiloscops flammeolus* [1]	SGCN	Common in mature, montane forests throughout Utah, though primarily in the north central and southwestern ranges. Nest and roost in old woodpecker holes or other cavities formed by large woodpeckers.	The 2025 Amendment Project supports this species' habitat. The amended Storage Site does not support this species' habitat; however, habitat is present in Header pipeline. Status has changed since evaluation in 2010 EA. No species-specific mitigation developed: however, general raptor protection measures are developed to mitigate potential Effect to this species (FERC IP 2017, BLM POD, BLM 2018a).
Greater sage-grouse *Centrocercus urophasianus*	SPC	Sagebrush vegetation and clearings in	The 2025 Amendment Project supports this species' habitat. The amended Storage Site does not support this species' habitat; however, this species designated habitat occurs in the Header pipeline. Mitigation developed for this species in Header pipeline (BLM POD, BLM 2018a). Documented as occurring (UDWR 2025)
Long-billed curlew *Numenius americanus*	SPC	Arid grasslands, grassy shorelines, and agriculture.	The 2025 Amendment Project supports this species' habitat. Mitigation has been developed for this species (FERC IP 2017, BLM POD, BLM 2018a). Documented as occurring (UDWR 2025).
Pinyon Jay *Gymnorhinus cyanocephalus* [1]	SGCN	Pinyon-juniper woodland, less frequently pine; in nonbreeding season, also occurs in scrub oak and sagebrush. Nests in shrubs or trees (e.g. pine, oak, or juniper), about 1.5-9m above ground.	The 2025 Amendment Project supports this species' habitat. The amended Storage Site does not support this species' habitat; however, this species habitat occurs in the Header pipeline. General avian protection measures developed to mitigate potential impacts to this species (FERC IP 2017, BLM POD, BLM 2018a). Documented as occurring (UDWR 2025).

Table B.4-1: Utah State Sensitive and BLM Sensitive Wildlife Species Identified as Potentially Occurring in the 2025 Amendment Project			
Species	**Status**	**Habitat**	**Likelihood of Occurring**
Short-eared owl *Asio flammeus*	*SGIN, SS*	Nests in marshes, arid grasslands, non-woody cropland. Also, may forage in sagebrush and desert scrub.	The 2025 Amendment Project supports this species' habitat. Mitigation measures are developed to offset potential impacts to this species (FERC IP 2017, BLM POD, BLM 2018a). Documented as occurring (UDWR 2025).
Snowy plover *Charadrius nivosus* [1]	SS, SGCN	Nests on coastal beaches, and inland at salt flats, playas, river sandbars, alkaline lakes, and agricultural ponds. Nest mainly in northern Utah in playa habitats surrounding Great Salt Lake.	The 2025 Amendment Project may support this species' habitat in brine evaporation ponds. Header pipeline does not support this species' habitat. Status has changed since evaluation in 2010 EA. No species-specific mitigation developed: however, general avian protection measures developed and protection measures around brine ponds have been developed to offset potential impacts to this species (FERC IP 2017, BLM POD, BLM 2018a).
Monarch butterfly *Danaus plexippus* [2]	SGCN, SS	This species winters on the California coast as well as equatorial regions of Central and South America and return north into summer breeding ranges in the interior west and British Columbia. This species is dependent upon milkweed (Asclepias sp.) plants for their lifecycle. Habitats include wetlands, prairies, agricultural areas and woodlands where milkweed grow.	This species could occur as a migratory visitor to the 2025 Amendment Project. None of these species preferred habitat occurs in the amended Storage Site but may occur within the Header pipeline. None of these species has been documented as occurring near the 2025 Amendment Project or Header pipeline (UDWR 2025, WMMM 2025). Vegetation in Header pipeline will be reclaimed and revegetated (FERC IP 2017, BLM POD, BLM 2018a).

Table B.4-1: Utah State Sensitive and BLM Sensitive Wildlife Species Identified as Potentially Occurring in the 2025 Amendment Project			
Species	**Status**	**Habitat**	**Likelihood of Occurring**
Western Bumble Bee *Bombus occidentalis* [2]	SGCN, SS	Found in a range of habitats, including mixed woodlands, farmlands, urban areas, montane meadows and into the western edge of the prairie grasslands.	The 2025 Amendment Project supports this species' habitat. The amended Storage Site does not support this species' habitat; however, this species habitat occurs in the Header pipeline. Vegetation in Header pipeline will be reclaimed and revegetated (FERC IP 2017, BLMPOD, BLM 2018a).
Dark kangaroo mouse *Microdipodops megacephalus*	SGCN, SS	Open, sparsely vegetated sagebrush areas with sandy soil in the West Desert of Utah.	The 2025 Amendment Project supports this species' habitat. The amended Storage Site does not support this species' habitat; however, this species habitat occurs in the Header pipeline. Species specific mitigation has been developed to offset potential impacts to this species (FERC IP 2017, BLM POD, BLM 2018a).
Fringed myotis *Myotis thysanodes*	SGCN, SS	Rocky outcrop and canyons within oak, mixed conifer- aspen, desert riparian, and pinyon juniper habitats.	The 2025 Amendment Project does not support this species' habitat.
Kit fox *Vulpes macrotis*	SGCN, SS	Sparsely vegetated, arid shrublands, particularly those dominated by greasewood, shadscale, or sagebrush.	The 2025 Amendment Project supports this species' habitat. Species specific mitigation has been developed to offset potential impacts to this species (FERC IP 2017, BLM POD, BLM2018a). Documented as occurring (UDWR 2025).
Pygmy rabbit *Brachylagus idahoensis*	SGCN, SS	Dense, tall stands of sagebrush, especially big sagebrush	The 2025 Amendment Project supports this species' habitat. The amended Storage Site does not support this species' habitat; however, this species habitat occurs in the Header pipeline. Species specific mitigation has been developed to offset potential impacts to this species (FERC IP 2017, BLM POD, BLM 2018a).

Table B.4-1: Utah State Sensitive and BLM Sensitive Wildlife Species Identified as Potentially Occurring in the 2025 Amendment Project			
Species	**Status**	**Habitat**	**Likelihood of Occurring**
Townsend's big-eared bat *Corynorhinus townsendii*	SGCN	Caves and mines for roosting. Forages over a variety of habitat types near roost sites, including sagebrush steppe, pinyon juniper, mountain shrub, and mixed conifer.	The 2025 Amendment Project does not support this species' habitat.

[1] Utah State or BLM Status Change from Previous EA but Previously Evaluated in the Amendment Project EA as a Utah Partners in Flight Priority Avian Species, USFWS Birds of Management Concern, USFWS Birds of Conservation Concern, UDWR Utah Comprehensive Wildlife Conservation Strategy – Species of Greatest Conservation Need, or UDWR Utah State Species of Concern.

UDWR Status:

SGCN – Species of Greatest Conservation Need,

SGIN – Species of Greatest Information Need,

CS – Utah Conservation Agreement Species. UDWR Species list updated developed form Utah's State Listed Species by County (2021 Update) (UDWR 2021).

BLM – SS Sensitive Species BLM 2018 Update (BLM 2018c). BLM POD – BLM Plan of Development (BLM 2018a). FER IP FERC Implementation Plan (FERC 2017)

2 Not Previously occurring on the Utah State or BLM Sensitive species list

Table B.8-1: Summary of National Ambient Air Quality Standards				
Pollutant	**Primary/ Secondary**	**Averaging Period**	**Level**	**Form**
CO	Primary	Eight-hour	9 ppm	Not to be exceeded more than once per year
		One-hour	35 ppm	
Pb	Primary and Secondary	Rolling three-month average	0.15 µg/m[1]	Not to be exceeded
NO_2	Primary	One-hour	100 ppb	98th percentile of one-hour daily maximum concentrations, averaged over three years
	Primary and Secondary	Annual	53 ppb[2]	Annual Mean
O_3	Primary and Secondary	Eight-hour	0.070 ppm[3]	Annual fourth-highest daily maximum eight-hour concentration, averaged over three years
$PM_{2.5}$	Primary	Annual	9.0 µg/m3	Annual mean, averaged over three years
	Secondary	Annual	15.0 µg/m3	Annual mean, averaged over three years
	Primary and Secondary	24-hour	35 µg/m3	98th percentile, averaged over three years
PM_{10}	Primary and Secondary	24-hour	150 µg/m3	Not to be exceeded more than once per year on average over three years
SO_2	Primary	One-hour	75 ppb[4]	99th percentile of one-hour daily maximum concentrations, averaged over three years
	Secondary	Three-hour	0.5 ppm	Not to be exceeded more than once per year

Units:
ppm = parts per million by volume
ppb = parts per billion by volume
µg/m3 = micrograms per cubic meter
Source: USEPA.

1 In areas designated non-attainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m3) as a calendar quarter average) also remain in effect.

2 The level of the annual NO2 standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.

3 Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O3 standards additionally remain in effect in some areas. Revocation of the previous (2008) O3 standards and transitioning to the current (2015) standards will be addressed in the implementation rule for the current standards.

4 The previous SO2 standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet one year since the effective date of designation under the current (2010) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated non-attainment under the previous SO2 standards or is not meeting the requirements of a State Implementation Plan ("SIP") call under the previous SO2 standards (40 Code of Federal Regulations ("CFR") 50.4(3)). A SIP call is a USEPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the required NAAQS.

Table B.10-2: Past, Present, and Reasonably Foreseeable Actions near the 2025 Amendment Project

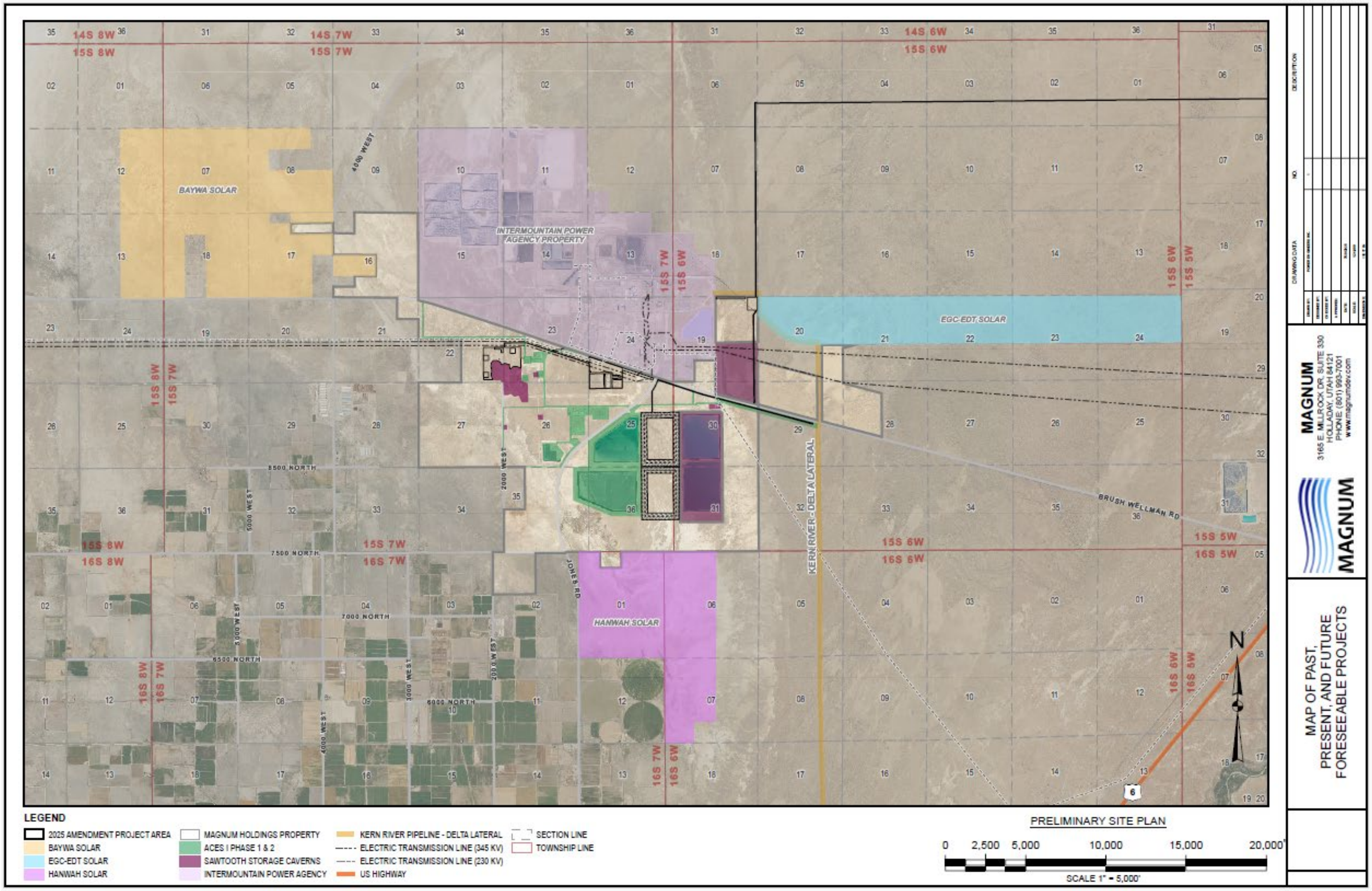
Project Name	Status of Project	Description	Location	Distance/Direction from Project/Nearest Project Facility	Footprint/layout and quantitative impacts	Permits, Authorizations, or Environmental Review	Resources within Geographic Scope
Intermountain Power Agency/ Intermountain Power Plant (IPP)	In operation (1986); conversion anticipated 2025	Coal fired power plant facility, rail system, and cooling ponds in process of being converted from coal to blended fuel of natural gas and hydrogen. Anticipated Initial operational start up is fall 2025.	Delta, UT	Immediately north of Project Storage Site	~ 4,650 acres of facilities and holdings.	Federal, CA and UT State authorizations as power production facility.	Geology and Soils; Groundwater; Vegetation and Wildlife; Air and Noise quality (construction); Land Use and Visual Resources; Socioeconomics,
Sawtooth Storage Caverns	In operation (2014)	Natural gas liquid (NGL) and refined products cavern storage facility with truck and rail loadout	Delta, UT	Adjacent to Amendment Project Storage Site. Shares utility corridors and portions of Storage Site	723 acres.	UT State authorizations for NGL and refined products storage facility including DWQ UIC and Groundwater Discharge Permit, DWRi permits for brine evaporation ponds, and Millard County Conditional Use Permit (CUP).	Geology and Soils; Groundwater; Vegetation and Wildlife; Air and Noise quality (construction); Land Use and Visual Resources; Socioeconomics; Cultural Resources

Table B.10-2: Past, Present, and Reasonably Foreseeable Actions near the 2025 Amendment Project

Project Name	Status of Project	Description	Location	Distance/Direction from Project/Nearest Project Facility	Footprint/layout and quantitative impacts	Permits, Authorizations, or Environmental Review	Resources within Geographic Scope
ACES Phase 1 & 2	In construction (2018)	Green hydrogen production and storage facility. Use renewable energy to produce and store hydrogen.	Delta, UT	Adjacent to Project Storage Site. Shares utility corridors and portions of Storage Site	746-acre green hydrogen production and storage facility	Department of Energy and UT State authorized hydrogen production and storage facility. 2018 DOE EA. Authorizations include DWQ UIC and Groundwater Discharge Permit, DWRi permits for brine evaporation ponds, and Millard County CUP.	Geology and Soils; Groundwater; Vegetation and Wildlife; Air and Noise quality (construction); Land Use and Visual Resources; Socioeconomics; Cultural Resources
Kern River Pipeline – Delta Lateral	In operation (2022)	35.84-mile-long natural gas transmission laterally providing natural gas to IPP	Delta to Holden, UT	Adjacent to Amendment Project Header pipeline and 1.0 mi. east of storage Site.	Buried natural gas pipeline. 35.84-mile-long natural gas lateral from IPP to Holden, UT	FERC (CP21-197) and UT state authorized natural gas lateral (FERC FEIS 2022)	Groundwater; Vegetation and Wildlife; Air and Noise quality (construction); Land Use and Visual Resources; Socioeconomics; Cultural Resources
EGC-EDT Solar- Utah Solar 1	Planning / Future	Renewable Energy, Solar Field	Delta, UT	1.0 mi. NE of Storage Site.	1,730-acre solar site. Amendment Project is located on private land.	Permitting and approvals expected through state lands (UT School and Institutional Trust Land Administration [TLA]), Milard County CUP and other UT State authorizations. No	Groundwater; Vegetation and Wildlife; Land Use and Visual Resources; Socioeconomics; Cultural Resources

Table B.10-2: Past, Present, and Reasonably Foreseeable Actions near the 2025 Amendment Project							
Project Name	**Status of Project**	**Description**	**Location**	**Distance/Direction from Project/Nearest Project Facility**	**Footprint/layout and quantitative impacts**	**Permits, Authorizations, or Environmental Review**	**Resources within Geographic Scope**
						federal nexus known at this time.	
Baywa Solar	Planning / Future	Renewable Energy, Solar Field	Delta, UT	1.0 mi. NW of Storage Site.	2,313-acre solar site. Amendment Project is located on private land.	Permitting and approvals expected through Milard County CUP and UT State authorizations. No federal nexus known at this time.	Groundwater; Vegetation and Wildlife; Land Use and Visual Resources; Socioeconomics; Cultural Resources
Hanwah Solar	Planning/ Future	Renewable Energy, Solar Field	Delta, UT	0.65 mi. south of Storage Site	1,635-acre solar site Amendment Project is located on private land.	Permitting and approvals expected through Milard County CUP and UT State authorizations. No federal nexus known at this time.	Groundwater; Vegetation and Wildlife; Land Use and Visual Resources; Socioeconomics; Cultural Resources

Figure B.10-1: Map of Past, Present and Future Foreseeable Projects



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