



ENVIRONMENTAL ASSESSMENT – MONOLITH OLIVE CREEK EXPANSION FACILITY

Department of Energy Loan Program Office – Title XVII Program

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TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS	iii
CHAPTER 1 - PURPOSE AND NEED	1
1.1 Purpose and Need for Agency Action.....	1
1.2 Background	1
1.3 Scope of Environmental Assessment	2
CHAPTER 2 - DESCRIPTION OF THE PROPOSED ACTION.....	3
2.1 Project Description.....	3
CHAPTER 3 – Environmental Consequences.....	4
3.1 AIR QUALITY	4
3.2 BIOLOGICAL RESOURCES	8
3.3 CULTURAL RESOURCES	10
3.4 NOISE	11
3.5 PUBLIC AND OCCUPATIONAL HEALTH AND SAFETY	12
3.6 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE	15
3.7 SOILS AND PRIME FARMLANDS	17
3.8 TRANSPORTATION	18
3.9 UTILITIES.....	20
3.10 WASTE MANAGEMENT	21
3.11 WATER RESOURCES.....	23
CHAPTER 4 – FINDING.....	26
CHAPTER 5 – LIST OF AGENCIES CONTACTED.....	27
CHAPTER 6 – LIST OF PREPARERS	28
APPENDIX A – AGENCY AND TRIBAL CORRESPONDENCE	29
A-1 U.S. Fish and Wildlife Service.....	29
A-2 Nebraska State Historic Preservation Office.....	35
A-3 Tribal Consultation.....	38
A-4 Nebraska Department of Environment & Energy	43
A-5 USDA Natural Resource Conservation Service.....	50
APPENDIX B – FIGURES	55

ACRONYMS AND ABBREVIATIONS

BAU	business-as-usual case
BMPs	best management practices
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CH ₄	methane
CO	Carbon Monoxide
CO ₂	(primarily) Carbon Dioxide
CO _{2e}	Carbon Dioxide Equivalents
CPA	Crete-Princeton-Adams Groundwater
DOE	U.S. Department of Energy
EA	environmental assessment
EPAAct 2005	Energy Policy Act of 2005
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
GHGs	greenhouse gases
HFCs	hydrofluorocarbons
IPaC	Information for Planning and Consultation
IPCC	Intergovernmental Panel on Climate Change
kg	kilogram
LLCHD	Lincoln-Lancaster County Health Department
LPSNRD	Lower Platte South Natural Resources District
Monolith	Monolith Nebraska LLC
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NCCPI	National Commodity Crop Productivity Index
NDEE	Nebraska Department of Environment and Energy's
NDNR	Nebraska Department of Natural Resources
NDOT	Nebraska Department of Transportation
Nebraska SHPO	Nebraska State Historic Preservation Office
NEPA	National Environmental Policy Act of 1969
NFPA	National Fire Protection Association
NGPC	Nebraska Game and Parks Commission
NHPA	National Historic Preservation Act
NNG	Northern Natural Gas
NOI	Notice of Intent
Norris	Norris Public Power District
NO _x	Oxides of Nitrogen
NPDES	National Pollutant Discharge Elimination System
NPPD	Nebraska Public Power District
NRHP	National Register of Historic Places
NSRs	noise sensitive receivers
OC1	Initial Olive Creek Facility
OC2	Olive Creek Facility Expansion

OSHA	Occupational Safety and Health Administration
Pb	Lead
RCRA	Resource Conservation and Recovery Act
PFCs	Perfluorocarbons
PM ₁₀	Particulate matter <10 micrometers in diameter
PM _{2.5}	Particulate matter <2.5 micrometers in diameter
PSD	prevention of significant deterioration
PSM	Process Safety Management
RMP	Risk Management Plan
QRA	Quantitative Risk Analysis
SF ₆	Sulfur Hexafluoride
SO ₂ , SO ₃ , and combinations	Oxides of Sulfur
the Project	Olive Creek carbon black manufacturing plant
tpy	tons per year
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGCRP	U.S. Global Change Research Program
VOCs	Volatile Organic Compounds

CHAPTER 1 - PURPOSE AND NEED

1.1 Purpose and Need for Agency Action

The proposed action evaluated by the U.S. Department of Energy (DOE) in this environmental assessment (EA) is to issue a loan guarantee in the amount of \$969 million to Monolith Nebraska LLC (Monolith) to support expansion construction and start-up of its natural gas to carbon black manufacturing plant in Hallam, Nebraska.

The Energy Policy Act of 2005 (EPAAct 2005) established a Federal loan guarantee program for eligible energy projects that employ innovative technologies. Title XVII of EPAAct 2005 authorizes the Secretary of Energy to make loan guarantees for a variety of types of projects, including those that “avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases; and employ new or significantly improved technologies as compared to commercial technologies in service in the United States at the time the guarantee is issued.”

The two principal goals of the loan guarantee program are to encourage commercial use in the United States of new or significantly improved energy-related technologies and to achieve substantial environmental benefits. The purpose and need for agency action is to comply with DOE’s mandate under EPAAct 2005 by selecting eligible projects that meet the goals of the Act. DOE is using the NEPA process to assist in determining whether to issue a loan guarantee to Monolith to support the proposed project.

Section 1703 (b) of EPAAct 2005 lists the categories of projects that are eligible for guarantees under Section 1703. The proposed project qualifies under category (9) pollution control equipment and category (7) efficient end-use energy technologies.

Monolith is proposing to expand its existing Olive Creek carbon black manufacturing plant (the Project) to increase production of carbon black and anhydrous ammonia that would reduce air emissions such as ozone precursors, particulate matter, and greenhouse gases (GHGs) that contribute to global warming, as is consistent with the primary goal of the Title XVII Program. Financially supporting the Monolith Project would help bring carbon black and ammonia to market and into greater use, thereby reducing overall national emissions of air pollutants and human-caused GHGs.

1.2 Background

EPAAct 2005 established a Federal loan guarantee program for eligible energy projects that employ innovative technologies. DOE believes that commercial use of these technologies would help sustain and promote economic growth, produce a more stable and secure energy supply and economy for the United States, and improve the environment. DOE published a Final Rule that establishes the policies, procedures, and requirements for the loan guarantee program (10 Code of Federal Regulations [CFR] Part 609). In June 2008, DOE issued a solicitation announcement inviting interested parties to submit proposals for projects that employ energy efficiency, renewable energy, and advanced transmission and distribution technologies that constitute New or Significantly Improved Technologies (as defined in 10 CFR Part 609).

Monolith began construction of the initial phase of the Olive Creek facility (OC1) in December 2018 and completed construction in June 2020.¹ The existing OC1 phase is a smaller version of the Olive Creek facility expansion (OC2) and is primarily being used to test Monolith's technological components. Monolith submitted a loan guarantee application to DOE on September 11, 2020. Since that time, the private applicant has continued work on the Olive Creek facility, utilizing non-federal funds. While Monolith completed all of the needed OC1 permits during the development of the initial phase of the Project, some of the permits overlap and include OC2. For purposes of evaluating the potential impacts of the proposed project, DOE has analyzed the environmental effects of the OC2 phase of the project through the facility's proposed operation. Since the existing OC1 phase of the project is complete, it is not included in this assessment. If issued any loan guarantee, funds would be limited to eligible project costs as defined by 10 CFR Part 609.12.

1.3 Scope of Environmental Assessment

This EA presents information on the potential impacts associated with guaranteeing a loan to Monolith and covers the construction and operation of the completed Olive Creek manufacturing facility. DOE has prepared this EA to comply with the National Environmental Policy Act of 1969 (NEPA), Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR Parts 1500–1508), and DOE NEPA Implementing Procedures (10 CFR Part 1021). If no significant impacts are identified during preparation of this EA, DOE would issue a Finding of No Significant Impact (FONSI). If potentially significant impacts are identified, DOE would prepare an environmental impact statement.

Monolith proposes to construct all phases of the Project on the same site location outside Hallam, Nebraska (see Figure 1). The OC1 phase of the Project was constructed prior to the development of the EA and will not be included in the overall discussion. However, Monolith obtained all relevant permits associated with OC1, and in doing so, included many aspects of the OC2 workspaces. Since construction of OC2 would be adjacent to or overlap the existing OC1 workspaces, separate permits were not needed for some resource areas (see Section 3).

This EA describes the proposed expansion and its potential impacts on multiple resource areas due to the construction and operation of OC2. The resource areas assessed include:

- Air quality and GHG analysis
- Biological resources, including vegetation and wildlife/birds
- Cultural resources, including Native American interests
- Noise
- Public and occupational health and safety
- Socioeconomics, including environmental justice
- Soils and Prime Farmlands
- Transportation

¹ Monolith initially broke ground in October 2016, but delayed construction for 15 months to work on technology development.

- Utilities
- Waste management
- Water resources, including wetlands, groundwater and surface water

These resource areas were identified as potentially being impacted by the expansion, and each was assessed to determine the nature, extent, and significance of those impacts (see Section 3). The assessment combined desktop research and analysis of existing available information with select field studies, including site assessments related to the presence/absence of wetlands, waterbodies, and cultural resources. Resources not included in this EA include geology, land use, and recreation. Due to the facility being located away from centers of urban development and adjacent to an existing manufacturing facility within a previously disturbed property, impacts on these resources are not anticipated and therefore not included in the scope of this EA.

CHAPTER 2 - DESCRIPTION OF THE PROPOSED ACTION

2.1 Project Description

Monolith is proposing to expand its existing Olive Creek manufacturing plant in Hallam, Nebraska, which uses a high temperature plasma torch and electricity to convert natural gas and nitrogen to carbon black with an ammonia byproduct. Monolith expects to produce approximately 198,000 tons of carbon black per year and 319,000 tons of ammonia per year. Monolith's carbon black would mainly be used in the production of tires and other rubber products, and the ammonia would be used in the production of fertilizer for farm application. The existing facility was commissioned in 2018 and is located at 27077 SW 42nd Street, Hallam, Lancaster County, Nebraska. Monolith plans to expand the existing OC1 facility with the construction of the adjacent OC2 on its existing property (see Figure 1).

The Project would include additional manufacturing buildings, parking lot, stormwater retention basin, evaporation pond, truck/worker access roads, and a railroad spur on the Site. The workspaces would include a minor amount of tree clearing and general grading and planting. Due to Monolith's prior development of the existing facility, infrastructure to support the Project within and surrounding the facility already exists, including natural gas, water, sewer, and power connections. The Site has been previously disturbed by agricultural operations and construction of the existing facility.

The Project would permanently affect approximately 37 acres of the Site, and an additional 38 acres would be temporarily impacted due to general construction activities, laydown, staging, and parking areas. The temporary areas will be returned to agricultural use after construction. The proposed Project footprint and the existing facility are shown in Figure 1. The processes within the proposed facility would mirror and expand those within the existing facility.

CHAPTER 3 – Environmental Consequences

3.1 AIR QUALITY

Air Quality

All counties within the state of Nebraska are in attainment with the National Ambient Air Quality Standards (NAAQS) for all criteria pollutants based on monitoring results for 2017 through 2019. Monolith is located within this attainment area and is thus considered to be in attainment with established NAAQS.²

The Project’s technology used in the manufacturing facility would produce carbon black and hydrogen, the latter of which would be converted into anhydrous ammonia, would result in significantly lower emissions of carbon dioxide, sulfur dioxide, and nitrogen oxides than are produced from traditional production methods. The Project’s existing facility is currently permitted³ and undergoing start-up in preparation for commercial operation, and the Project’s proposed expansion would have approximately 12 times the estimated production of the existing facility. The existing facility and the Project’s proposed expansion would be considered a single source under the Clean Air Act.

The Project is subject to the federal New Source Review preconstruction permitting program, which includes prevention of significant deterioration (PSD). PSD is intended to prevent deterioration of air quality in regions that are in attainment with the NAAQS. The Project is considered part of the “chemical process plant” category of stationary sources per the Nebraska Department of Environment and Energy’s (NDEE) Title 129 Chapter 2 and Lincoln Lancaster County Air Pollution Control Program Regulations and Standards Article 2, Section 2, but does not have the potential to emit any single hazardous air pollutant in excess of the 10 tons per year (tpy) threshold, any combination of hazardous air pollutants in excess of the 25 tpy threshold, or any criteria air pollutant in excess of the 100 tpy threshold to be considered a major source under the PSD program. The facility owner thus anticipates being considered a minor source but not a major source of air pollutants under the PSD program.

The Lincoln-Lancaster County Health Department (LLCHD) approved a minor source air quality construction permit for the Project.⁴ The permit included a description of the Project and process, a description of emissions units to be installed, emissions calculations, regulatory applicability analysis including Toxic Best Applicable Control Technology analysis, and air quality impact modeling analysis on particulate matter emissions to demonstrate compliance with NAAQS.

² Nebraska Department of Environment and Energy. 2020. Document #20-007 – 2020 Ambient Air Monitoring Network Plan and 5-Year Assessment.

³ Minor Source Air Construction Permit No. 185A, effective January 10, 2020.

⁴ LLCHD. 2021. Air Quality Program Construction Permit Number 215, effective July 21, 2021.

During construction, the Project would generate fugitive dust emissions due to clearing ground, vehicles traveling on unimproved roads, and ground-disturbing activities such as grading and facility/infrastructure construction. The operation of construction vehicles and equipment would generate limited air emissions during the construction period because construction vehicles and equipment utilize diesel fuel or gasoline. Watering and any other dust suppression measures will be conducted in accordance with the best management practices (BMPs). The air quality effects of emissions from fugitive dust, construction vehicles, and equipment would be temporary and minimal because the effects would only occur during construction.

The Project’s operations would generate emissions of nitrogen oxides, volatile organic compounds, sulfur oxides, carbon monoxide, particulate matter, hazardous air pollutants and greenhouse gases. However, Monolith obtained the air quality operating permit through the LLCHD, ⁵ and would ensure that the Project is operating in compliance with NAAQS. The permit will allow for emissions of the following regulated air pollutants in the allowed quantities listed in Table 1.

Regulated Air Pollutant	Quantity (tpy)
Particulate matter <10 micrometers in diameter (PM ₁₀)	28.22
Particulate matter <2.5 micrometers in diameter (PM _{2.5})	22.01
Oxides of Nitrogen (NO _x)	85.06
Oxides of Sulfur (SO ₂ , SO ₃ , and combinations thereof)	0.85
Volatile Organic Compounds (VOC)	6.46
Carbon Monoxide (CO)	54.01
Lead (Pb)	3.35E ⁻⁰⁴
Greatest Individual Hazardous Air Pollutant	8.95
Total Combined Hazardous Air Pollutants	13.03
Carbon Dioxide Equivalent (CO ₂ e)	121,753

Because the Project is considered a minor source under the New Source Review permitting program and air quality would be protected through the Project’s compliance with the LLCHD minor source construction and operating permits, impacts to air quality are not anticipated to be significant.

Greenhouse Gas Emissions and Climate Change

The current science and study of the earth’s climate now shows with 95 percent certainty that human activity is the dominant cause of observed global warming since the mid-20th century.⁶

⁵ LLCHD. 2021 Air Quality Source Number 00373, effective July 21, 2021.

⁶ Intergovernmental Panel on Climate Change (IPCC). 2013. Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the IPCC. [Stocker, T.F., D. Qin, G.-K. Plattner,

Since the beginning of the industrial era circa 1750, human activities have increased the concentration of GHGs, primarily carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆) in the atmosphere. The increased concentrations of GHGs in the atmosphere results in global warming caused by the incoming solar radiation that passes through the atmosphere to the earth's surface. The rising global temperatures have been accompanied by changes in weather and climate, e.g. changes in rainfall, resulting in more floods, droughts, or intense rain; rising sea levels, Arctic sea ice decline, as well as more frequent and severe heat waves. It is now well established that rising atmospheric GHG emission concentrations are significantly affecting the earth's climate.⁷

Impacts Associated with Greenhouse Gas Emissions and Climate Change

DOE completed a life cycle analysis that quantifies the potential GHG emissions associated with the proposed project and a no action alternative (e.g a business-as-usual case (BAU)). The life cycle analysis quantified the emissions associated with the proposed project (production of carbon black and ammonia) from the local natural gas supplies and 100% wind-derived electricity. The BAU reviewed production of carbon black with fuel oil and electricity from a regional specific grid mix. The life cycle analysis factors in both indirect (e.g. upstream natural gas supply and electricity generation) and direct (e.g. project specific).

Table 2 shows the results of the life cycle analysis for each direct and indirect emission source. The emissions are based on a production of 180,000,000 kilograms (kg) per year of carbon black (198,416 tons per year), and 289,694,000 kg per year of ammonia (319,333 tons per year).

M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)). Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 1535 pp.

⁷ CEQ. 2016. Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews. August 1. 33 pp.

Table 2 Direct and Indirect Green House Gas Emissions		
Direct Emissions	Monolith	Business As Usual
	kg of CO₂e per kg of product	kg of CO₂e per kg of product
Monolith Production of Carbon Black, Ammonia, and coke	0.19	0
Conventional Ammonia Production	0	1.52
Conventional Carbon Black Production	0	2.53
Conventional Coke Production	0	0.1
Total (direct emissions)	0.19	4.15
Indirect Emissions (upstream and supply)		
Fuel Oil	0	1.43
Electricity - Grid Mix	0	0.32
Electricity - Solar PV	0.17	0
Natural Gas	1.0	0.97
Additives and other consumables	0.02	0
Total (indirect emissions)	1.19	2.72
Total of Direct and Indirect	1.38	6.87
Monolith percent CO₂e reduction over BAU	80%	

The results of the life cycle analysis show that the BAU case would generate 6.87 kg of CO₂e per kg of carbon black produced, while the proposed action would generate 1.38 kg of CO₂e per kg of carbon black produced (almost 5 times less than the BAU). In terms of direct emissions, the Project would result in approximately 38,000 tons of CO₂e emissions per year, compared with approximately 823,000 tons of CO₂e from the BAU case. Comparing the total CO₂e emissions between the proposed action and the BAU, the BAU case would emit 80% more CO₂e than the Project.

Project related CO₂e emission impacts

In general, rising greenhouse gas concentrations result in increases in atmospheric temperature, changes in precipitation, increases in the frequency and intensity of some extreme weather events, and rising sea levels. These climate change impacts endanger our health by affecting our food and water sources, the air we breathe, the weather we experience, and our interactions with the built and natural environments. As the climate continues to change, the risks to human health continue to grow. Across the United States, people and communities differ in their exposure, their inherent sensitivity, and their adaptive capacity to respond to and cope with climate change related health threats. Vulnerability to climate change varies across time and location, across communities, and among individuals within communities.⁸

⁸ U.S. Global Change Research Program (USGCRP). 2016. The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment. [Crimmins, A., J. Balbus, J.L. Gamble, C.B. Beard, J.E. Bell, D. Dodgen,

Specific regional impacts in the project area related to rising greenhouse concentrations include rising temperatures and extreme weather events, which are leading to increased demand for water and energy. In parts of the region, this will constrain development, stress natural resources, and increase competition for water among communities, agriculture, energy production, and ecological needs. Changes to crop growth cycles due to warming winters and alterations in the timing and magnitude of rainfall events have already been observed; as these trends continue, they will require new agriculture and livestock management practices. A highly fragmented landscape will hinder adaptation of species when climate change alters habitat composition and timing of plant development cycles. Communities that are already the most vulnerable to weather and climate extremes will be stressed even further by more frequent extreme events occurring within an already highly variable climate system. Major flooding across the basin in 2011 was followed by severe drought in 2012, representing new and unprecedented variability that is likely to become more common in a warmer world.⁹

Climate Change Impacts on the Project

The regional climate change impacts in the Northern Great Plains (rising temperatures, extreme weather events, increased demand for water and energy, changes to crop growth cycles, and alterations in the timing and magnitude of rainfall events) may impact various elements of the proposed project.

3.2 BIOLOGICAL RESOURCES

Vegetation

The existing vegetation at the Project site is generally comprised of alfalfa (*Medicago sativa*) with small areas of species common to disturbed land within agricultural fields. Prior to development of the Project, corn (*Zea mays*), soybeans (*Glycine max*), and alfalfa (*Medicago sativa*) were the typical crops found on the Project site. Currently the site is dominated by native herbaceous species and common weeds such as annual ragweed (*Ambrosia artemisiifolia*) and fox-tail barley (*Hordeum jubatum*).

The permanent impacted footprint due to the proposed expansion would be approximately 37 acres. Within these 37 acres, areas outside the footprint of permanent buildings, parking lots, or areas subject to vehicular traffic, would be revegetated with typical landscaping grasses and plants.

During the construction period, an additional approximate 38 acres would be temporarily impacted due to the construction-related activities. The specific use of this area is for temporary

R.J. Eisen, N. Fann, M.D. Hawkins, S.C. Herring, L. Jantarasami, D.M. Mills, S. Saha, M.C. Sarofim, J. Trtnanj, and L. Ziska, (eds.)). USGCRP, Washington, DC, 312 pp. Available at: <http://dx.doi.org/10.7930/J0R49NQX>

⁹ USGCRP. 2014. Climate Change Impacts in the United States: The Third National Climate Assessment., 841 pp. doi:10.7930/J0Z31WJ2. Available at: <http://nca2014.globalchange.gov/>; and,

USGCRP. 2018. Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment., 1515 pp. doi:10.7930/NCA4.2018. Available at: <https://nca2018.globalchange.gov/downloads/>

laydown, staging, and parking, all of which would be returned to agricultural use once construction is completed.

Invasive Non-Native Species and Noxious Weeds

As noted above, much of the Project site is comprised of agricultural land with small areas of species common to disturbed land. Several of those species are classified as invasive, non-native species, including chufa (*Cyperus esculentus*), Japanese brome (*Bromus japonicus*), Kentucky blue grass (*Poa pratensis*), large barnyard grass (*Echinochloa crus-galli*), prickly lettuce (*Lactuca serriola*), smooth brome (*Bromus inermis*), spotted lady's thumb (*Persicaria maculosa*), red clover (*Trifolium pretense*), and yellow sweet clover (*Melilotus officinalis*).

In addition to invasive and non-native species, the Nebraska Department of Agriculture's Noxious Weed Program maintains a list of noxious weeds in Nebraska. One noxious weed, common reed (*Phragmites australis*), was identified on the Project site during the field investigations for the wetland delineations. Construction activities have the potential to increase the proliferation of noxious and invasive weeds on the Project site. Pursuant to the Nebraska Noxious Weed Control Act, it is the responsibility of the landowner to effectively control noxious weeds on their property.

To reduce the establishment of noxious and invasive species on disturbed land, post-construction, disturbed areas would be revegetated with landscaping grasses and plants. Monolith, currently and going forward, would continue to monitor and treat areas of noxious weed infestations through a combination of chemical and mechanical control as needed both during construction and operation. Grassed areas around the Project site would be mowed regularly to aid in weed prevention. Aquatic safe herbicides would be used to treat noxious and invasive species located in wetland areas or stormwater detention basins to protect aquatic life and water quality. Additionally, grading associated with construction of the Project would reduce common reed.

Wildlife

The Project site is located within the Western Corn Belt Plains – Loess and Glacial Drift Hills ecoregion of Nebraska. Historically, this ecoregion has been characterized by low, rolling hills with extensive tallgrass prairie habitat and floodplains dominated by cottonwood forest habitat. Tallgrass prairies provide habitat for more than 300 species of birds, 55 mammal species, 75 species of fish, 53 species of amphibians and reptiles, and numerous species of insects. However, the fertile soils and sufficient precipitation in the area led to the extensive conversion of tallgrass prairies to the agricultural land that is present today.¹⁰ The lack of vegetative diversity that currently exists on the site, and historical use of pesticides in the agricultural fields, has severely limited the potential to support wildlife in and surrounding the Project site.

¹⁰ Chapman, S.S. et. al. 2001. Ecoregions of Nebraska and Kansas. U.S. Geological Survey, Reston, Virginia. U.S. Fish and Wildlife Service. 2019. Information for Planning and Consultation.

Threatened and Endangered Species and Migratory Birds

To determine potential threatened and endangered species at the Project site, the Nebraska Game and Parks Commission (NGPC) Nebraska Conservation and Environmental Review Tool and the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) databases were reviewed and consultation with the agencies was conducted (see Appendix A). The NGPC determined that the Project would have “No Effect” on state-listed endangered or threatened species.¹¹ The USFWS determined that the Project is not likely to adversely affect federally listed species.¹² IPaC identified bald eagle (*Haliaeetus leucocephalus*) and red-headed woodpecker (*Melanerpes erythrocephalus*) as species of migratory birds with the potential to occur at the Project site. However, the habitat necessary to support these species does not exist at the Project Site.

Given the limited biological resources at the Project site and the conclusions reached by the NGPC and USFWS related to threatened and endangered species, as well as the treatment and control activities that Monolith would implement to combat invasive species and noxious weeds, impacts on biological resources by the Project are not anticipated to be significant.

3.3 CULTURAL RESOURCES

Historic property, as defined by the National Historic Preservation Act (NHPA) (54 U.S.C. § 300101 et seq.), is any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP). Regulations implementing the NHPA (36 CFR Part 800) provide for protection of historic properties. Section 106 of the NHPA requires federal agencies to consider the impacts of their actions on historic properties. The purpose of Section 106 is to ensure that these agencies consult with state, local, or tribal government officials to identify historic properties potentially affected by their undertaking, assess impacts on cultural resources, and seek ways to avoid, minimize, or mitigate any adverse effects on historic properties.

Initial consultation with the Nebraska State Historic Preservation Office (SHPO) indicated that the Project could have the potential to impact historic properties eligible for listing on the National Register of Historic Places if present.¹³ The Nebraska SHPO requested that areas of ground disturbance be surface surveyed and subsurface tested. Monolith completed this survey, and no cultural or archeological resources were identified.¹⁴ Monolith submitted the results of the survey to the Nebraska SHPO and received concurrence with the determination of “no

¹¹ The NGPC provided a determination in a letter dated August 15, 2019.

¹² USFWS provided the determination in a response dated October 10, 2019, project FWS NE 2020-026.

¹³ The Nebraska SHPO provided a request for archaeological survey on May 17, 2019 for project HP#1905-183-01.

¹⁴ Bear Creek Archeology, Inc. 2019. Archeological Survey for a Proposed Industrial Manufacturing Facility North of the Village of Hallam, Buda Township, Lancaster County, Nebraska, Section 30 T7N, R6E. August.

historic properties affected.¹⁵ In addition, on July 2, 2021, the SHPO concurred that DOE's obligations under Section 106 of the National Historic Preservation Act were met as a result of their prior review of the proposed project (see Appendix A). No effects to cultural resources are anticipated as a result of the proposed project. Should unexpected archeological resources be discovered during construction, activities would be halted in the immediate area of the discovery, until the resources have been evaluated for NRHP eligibility criteria (36 CFR 60.4) in consultation with the Nebraska SHPO in accordance with 36 CFR 800.13. Appropriate mitigation would be determined during SHPO consultation.

Consultation letters were also sent to the Cheyenne and Arapaho Tribes, Oklahoma; Apache Tribe of Oklahoma; Otoe-Missouria Tribe of Indians, Oklahoma; Pawnee Nation of Oklahoma; and Ponca Tribe of Nebraska. with an invitation to consult on the Project (see Appendix A).¹⁶ No substantive responses were received from the Tribes.

Because there were no cultural or archeological resources identified during the archeological survey, the Project would have no significant impact on known cultural or archeological resources.

3.4 NOISE

Noise is any unwanted sound that penetrates the environment or interferes with normal communication or activities. Noise would be expected from sound sources arising from both construction and operation of the Project. The Project site is located approximately 0.5 mile from the Village of Hallam and is under the jurisdiction of the Village of Hallam Planning Commission. Monolith received a special use permit from the Village of Hallam and will comply with noise limits as regulated by the Village of Hallam's zoning ordinance.¹⁷

Construction activities would generate noise during site preparation, civil grading, foundation construction, steel erection, and installation of equipment. Safety devices such as horns and alarms on mobile construction equipment would also contribute to construction noise. The magnitude and frequency of noise may vary considerably depending on the construction phase and the type of activities. Noise impacts from construction would be temporary (i.e., limited to the construction phase) and would be controlled to the extent practicable by the following:

- Construction activities with high-noise output would be limited to daytime, between 7:00 a.m. and 5:00 p.m., Mondays through Saturdays;

¹⁵ The Nebraska SHPO provided concurrence on September 26, 2019 for project HP#1905-183-01; Survey Report# 19-0190: Archeological Survey for a Proposed Industrial Manufacturing Facility North of the Village of Hallam, Buda Township, Lancaster County, Nebraska – BCA 2584.

¹⁶ Consultation letters were sent on April 30, 2021 with follow up phone calls and emails on June 11, 2021.

¹⁷ The Village of Hallam Board of Directors sent the Special Exception Permit #21-01-SU to Monolith on June 15, 2021.

- Nighttime construction operations would be limited to low-noise output activities such as cable pulling and terminations, welding, and material staging;
- Nearby residents located approximately 0.5 mile away would be advised of significant noise-causing activities and these would be scheduled to create the least disruption;
- Construction site road speed limits would be established and enforced during the construction period; and
- The use of noise-producing signals, including horns, whistles, alarms, and bells, would be for safety warning purposes only. White noise back-up alarms would be implemented on mobile construction equipment to reduce noise travel of required safety devices, and alarms or horns on cranes would be limited to daytime activities.

A noise assessment was conducted for the Project to evaluate noise impacts from future operations.¹⁸ An objective of the assessment was to determine the feasibility of the Project to operate in compliance with local noise ordinances. Field measurements of existing noise levels including noise from the Project's existing facility at nearby noise sensitive receivers (NSRs) were conducted to characterize the baseline environmental noise conditions. The NSRs are residences located approximately 0.5 mile from the Project site. The Project's expected operating noise output from process equipment was then modeled to characterize the anticipated noise conditions during Project operation.

From the analysis of the modeled noise levels, it was determined that elevated sound levels due to operation of the Project would occur in proximity to the Project's proposed expansion. The noise model was further updated to include engineered noise control measures such as acoustic enclosures, barriers, and low-noise output equipment selection to reduce noise levels in the vicinity of the Project to be compliant with the Village of Hallam zoning ordinance. These measures would be incorporated by Monolith.

Because construction and operational noise control measures would ensure compliance with the Village of Hallam zoning ordinance, impacts from Project noise are not anticipated to be significant.

3.5 PUBLIC AND OCCUPATIONAL HEALTH AND SAFETY

Emergency medical services for the Project site would largely be provided from Lincoln, Nebraska, which is located approximately 25 miles to the north of the Project site. First response would come from the Hallam, Nebraska volunteer fire department which is located about 0.5 mile from the Project site. The fire department has the capabilities to triage injuries until the emergency personnel from Lincoln arrive to provide transportation to the most appropriate medical services location.

The existing facility has full 24-hour controlled access including permanent fencing installed around the perimeter with badge-entry access points to enter. In addition, nighttime security

¹⁸ Kiewit Engineering Group. 2020. Monolith OC2 Noise Impact and Mitigation Study. December 15. Kiewit Engineering Group. 2020. Monolith OC2 Noise Impact and Mitigation Study, Addendum 1. December 16.

lighting can be found throughout the existing facility. To protect the public during the construction phase of the Project, additional temporary fencing would be erected to enclose the temporary construction areas, with additional permanent fencing to be added to surround the expanded facilities once construction would be completed. Public access to the site would be restricted to the gated main entrance. In addition, nighttime security lighting would be installed, and the Project would be under 24-hour surveillance with on-site security personnel.

Once the Project is fully operational, the manufacturing facility would produce carbon black and hydrogen, the latter of which is converted into anhydrous ammonia. Carbon black dust is a combustible dust that can be explosive at high concentrations. However, carbon black dust requires a relatively high minimum ignition energy to ignite, and the risk of explosion is low when compared to other dusts like epoxy resin, aluminum, sulfur, magnesium, sugar, polyethylene, and wheat flour. Carbon black is not a respiratory irritant and does not produce respiratory or dermal sensitivity. Consisting almost entirely of carbon, carbon black is not metabolized in the body and remains inert. Safe work practices for carbon black include the elimination of potential ignition sources in proximity to carbon black dust, good housekeeping to avoid accumulations of dust on all surfaces, appropriate exhaust ventilation design and maintenance to control airborne dust levels to below the applicable occupational exposure limit, and appropriate employee hazard training. The Project has undertaken a Dust Hazard Analysis per National Fire Protection Association (NFPA) requirements, and has included dust control measures, ignition hazard elimination, fire protection systems, and explosion isolation equipment to mitigate the risks of handling carbon black dust.

The EPA requires a Risk Management Plan (RMP) to be developed for chemical accident prevention when facilities have more than a threshold quantity of a regulated substance in a process, including storage of that substance. The Project would have quantities of anhydrous ammonia and liquid hydrocarbons that exceed these threshold quantities. An RMP would be developed for the Project that includes precautionary, preventative, and emergency response information regarding the potential release of these regulated substances. As part of the RMP, Monolith would develop and provide training for all workers who work in the production of anhydrous ammonia, and in the handling of the liquid hydrocarbon, and workers would be required to wear the necessary personal protective equipment, have access to necessary response supplies in the event of accidental release, and know how to respond in an emergency. Safe work practices are important for all individuals working with these substances to understand the potential risks, necessary safety precautions, and proper response in the event of accidental contact/release. Monolith would develop and maintain emergency response plans to address injuries, fires, spills, hazardous material leaks, and operational safety. The plans would be used by personnel to minimize both human health and safety concerns, and environmental impacts. The details of emergency response plans would be developed in conjunction with the public emergency response services and neighboring community as part of the RMP.

Occupational Safety and Health Administration (OSHA) Standard 1910.119 for Process Safety Management (PSM) of highly hazardous chemicals contains requirements for preventing or minimizing the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals. The PSM requirements are applicable to the ammonia production facility, and liquid

hydrocarbon storage systems at the Project. The Project would be developed and operated per these requirements to help ensure a safe and healthy workplace. A Quantitative Risk Analysis (QRA) performed as part of a Building Siting Study¹⁹ identified and evaluated the annual risk for fire radiation, flammable and toxic gas infiltration, and vapor cloud explosion hazards on the occupants in the Project's proposed buildings. The QRA results showed that the risk to occupants of buildings in proximity to the ammonia production and storage facilities exceed acceptable levels, due to the potential impacts of ammonia toxic vapor infiltration. The risk from the other evaluated hazards was found to be acceptable at all occupied buildings. The study recommended system modifications and procedural mitigations to aid in reducing the risk of ammonia toxic vapor infiltration on building occupants, which would be implemented before operation of the Project. These mitigations include additional leak detection devices that would be installed throughout the facility and would be connected to the automated control system so that warning alarms and emergency shutdown of processes can be initiated without requiring operator intervention.

Prior to construction, contractors would develop and implement site-specific occupational health and safety plans for construction activities. Employee health and safety plans and emergency plans would also be developed and implemented for operation of the expanded Project. These plans would build upon the existing plans already in place which include regular required safety training for all employees, employee wellness programs, and monitoring programs to track work-related injuries and near miss trends. It is anticipated that potential worker accidents would remain within the national averages for construction activities.

The Project would be constructed and operated in accordance with all applicable company, local, state, and federal standards and requirements. By meeting the requirements of NFPA for dust hazards and the requirements of OSHA PSM, and by developing and implementing a RMP that includes BMPs to increase operational safety, the operation of the Project would represent a minimum increase in risk to the nearby businesses and communities and maintain a safe and healthy workplace.

Because of the controls and plans in place during construction, mitigation plans to manage the risks of handling carbon black during operations, system modifications to aid in reducing the risk of ammonia toxic vapor infiltration, and safety practices such as fencing and lighting to protect the public, impacts on workers as a result of construction and operation activities, and impacts on the nearby communities due to the potential accidental release of regulated substances and exposure to hazardous dust, are not anticipated to be significant.

¹⁹ Quest Consultants Inc. 2021. Monolith OC2 Quantitative Risk Analysis Study. API RP 752 & 753 Building Siting Study for the Monolith OC2 Carbon Black Facility. Prepared for the Kiewit Engineering Group Inc. January 15, 2021.

3.6 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

Socioeconomics

The Project site is in Lancaster County, the second most populous county in the state of Nebraska with a population of approximately 319,090. Towns and villages near the Project site include Hallam (0.5 miles from the Project site, population of 246), Cortland (6.5 miles, population of 472), Clatonia (9 miles, population of 226), and Sprague (9 miles, population of 145). Persons under 5 years of age is 6.2 percent, under 18 years is 22.6 percent, over 65 years is 14.4 percent, and the percent of females is 49.8. The median household income in Lancaster County is \$60,527, and the average commute time is 19 minutes.²⁰ The number of people below the poverty threshold in Lancaster County is 10.7 which is greater than the 10.5 percent poverty level for the entire United States.²¹

Construction and operation of the Project would require skilled workforces. It is estimated that the construction phase would require about 800 temporary high-skilled construction workers over an estimated 24-30-month construction period, and operations would require approximately 60 permanent workers on-site, many of which are considered highly skilled jobs. With approximately 90 percent of the County population residing in the greater Lincoln area, it is anticipated that some of the temporary construction workers may come from Lincoln, but many may come from other counties and states.

A study was done to determine the annual impact of Monolith on the Nebraska economy.²² The study examined both the current economic impact as well as the potential future economic impact from the planned expansion of Monolith facilities and use of Nebraska based-renewable energy. Currently, the estimated annual economic impact of Monolith as of the first quarter of 2021 is \$54.6 million in business activity, including an annual labor income impact of \$25.9 million spread over an estimated 247 jobs. Part of that economic activity and employment occurs at the Monolith facilities, and part is due to the multiplier impact supporting activity at other Nebraska businesses. When the planned expansion is complete, the annual economic impact of Monolith statewide would be an estimated \$338.9 million, including \$88.4 million in labor income spread over an estimated 848 jobs resulting in a benefit to the economy of Lancaster County, the State of Nebraska, and the local rural businesses. This impact includes the operating activities of Monolith as well as the multiplier impact on the Nebraska economy. The permanent manufacturing employees would largely be recruited from various communities near the Project site, either from the Lincoln area, or neighboring rural areas.

²⁰ Population averages and demographics for Lancaster County and the State of Nebraska provided by the U.S. Census Bureau and by TownCharts for the Village of Hallam. July 1, 2019.

²¹ Median household income data and poverty level data for 2019 provided by the U.S. Census Bureau.

²² Thompson, Eric. 2020. Economic Impact Memo. The Annual Impact of Monolith on the Nebraska Economy, Current Conditions (Q1 2021) and After A Planned Expansion. Bureau of Business, Research Department of Economics, College of Business, University of Nebraska—Lincoln. April 13, 2021.

Environmental Justice

Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” directs federal agencies to address environmental and human health conditions in minority and low-income communities. The evaluation of environmental justice is dependent on determining if high and adverse impacts from the proposed project would disproportionately affect minority or low-income populations in the affected community.

Table 3 summarizes the ethnic composition of Lancaster County and the state of Nebraska. In accordance with the EPA’s Environmental Justice Guidelines, minority populations should be identified when either: 1) the minority population of the affected area exceeds 50 percent; or 2) the minority population of the affected area is meaningfully greater than the minority population percentage in the general population or another appropriate unit of geographic analysis.

Ethnicity	Hallam, NE	Lancaster County, NE	State-wide Nebraska
Total population	246	317,272	1,929,268
White	99%	81%	78%
Black	<1%	4%	5%
Native American	<1%	1%	1%
Hispanic/Latino	<1%	7%	11%
Asian or Pacific Island	<1%	5%	3%
Two or more races	<1%	3%	2%

The ethnic composition of the populations of the town of Hallam and Lancaster County is less than 50 percent and is not meaningfully different than the state of Nebraska. The incidence of poverty based on the percentage of persons below the poverty level for Lancaster County is not meaningfully different than the state of Nebraska. There are no anticipated impacts that could give rise to disproportionate impacts on minority or low-income populations in the affected area.

Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks requires that the analysis of Environmental Justice also include a protection of children component to determine if the Project would place an undue burden on children. Since construction and operation of the Project is not located near any schools, daycare facilities, playgrounds, or other places where children would frequent, and due to security procedures (e.g., perimeter fencing, lighting, and 24-hour surveillance) for the Project, children trespassing on the site are not expected. Therefore, children would not suffer disproportionately from environmental health and safety risks.

Because the Project would result in an increase of \$284.3 million in business activity, including an increase of \$62.5 million in labor income and spread over an estimated increase of 601 jobs, it

²³ Population averages and demographics for Lancaster County and the State of Nebraska provided by the U.S. Census Bureau and by TownCharts for the Village of Hallam.

would be a beneficial impact to the statewide economy. Because of the low percentage of minority and low income population in the Village of Hallam and Lancaster County, and the economic benefits the Project is expected to bring to County residents, impacts on environmental justice communities from construction and operation of the Project would not be expected to be significant.

3.7 SOILS AND PRIME FARMLANDS

The historical and current land use on the site has been crops (corn, soybeans, and alfalfa) and grass pasture. Prime farmland, as defined by the U.S. Department of Agriculture (USDA), is land that has the best combination of characteristics for producing food, feed, forage, fiber, and oilseed crops. The Project site is classified as prime farmland or farmland of statewide importance. Post construction, the Project would convert 37 acres of land from farming to its expanded production facility. Of the total 75 acres affected during construction, 38 acres to be used for the temporary laydown, staging, and parking area (see Figure 1) would be returned to agricultural use, post-construction. Lancaster County has over 420,000 acres of farmland.²⁴ Therefore, the Project would represent a negligible reduction (<0.01%) in total farmland for the county.

Based on information obtained from the USDA Natural Resources Conservation Service (NRCS), there are five soil associations within the Project site.²⁵ These soil associations are shown in Table 4.

Soil Unit Symbol	Soil Association	Acres	Percent of Total Acres	Farmland Classification
3820	Butler silt loam, 0 to 1% slopes	4	5%	Prime farmland if drained
3824	Crete silt loam, 0 to 1% slopes	27	36%	All areas are prime farmland
7501	Pawnee clay loam, 4 to 8% slopes, eroded	2	3%	Farmland of statewide importance
7681	Wymore silty clay loam, 1 to 3% slopes	12	16%	All areas are prime farmland
7684	Wymore silty clay loam, 3 to 6% slopes, eroded	30	40%	All areas are prime farmland
Total		75	100%	

In Nebraska, farmland is given a National Commodity Crop Productivity Index (NCCPI) rating as a relative value of the farmland. The NCCPI, version 2.0, rates soil according to its inherent

²⁴ USDA, National Agricultural Statistics Service, Census of Agriculture, Lancaster County, 2017.

²⁵ USDA NRCS Web Soil Survey maintains information on soil type, soil descriptions, and series classifications.

capacity to produce dryland (non-irrigated) commodity crops. Most of the NCCPI criteria relate directly to the ability of soils, landscapes, and climates to foster crop productivity. A few criteria relate to factors that can limit use of the land (e.g., surface boulders). All criteria used in the index affect crop culture and production and are referred to as factors affecting inherent productivity. The value of ranges is from 0 to 100, 100 being the best.²⁶

The Farmland Protection Policy Act (FPPA) regulations²⁷ state that project sites receiving a total score of 160 or greater need further consideration for protection.²⁸ In determining a project site's score, the FPPA requires the use of a site's relative value (NCCPI rating) [[§ 658.5\(a\)](#)], and the site assessment criteria, which are set forth in § 658.5 (b) and (c). See Appendix A.

A combined score of up to 260 points, made from up to 100 points for relative value (NCCPI rating) and up to 160 points for the site assessment (Title 7 Chapter VI Part 658.1 – 7. Site Assessment Criteria) is used to assess the suitability of each proposed site or design alternative for protection. The site assessment for the Project is 57 points and when combined with the NCCPI rating of 63 (the northern portion of the site), the site has a score of 120, which is below the threshold for further protection considerations.

During construction, 75 acres of soils would be impacted, 37 acres of which would be impacted over the long-term due to the Project's permanent facilities (e.g., plant, roads, parking, and other support facilities). Short-term impacts include soil loss through erosion, compaction, and loss of structure in soils that are disturbed or driven on during construction. After construction, surface-disturbed or compacted areas not needed for operation would be regraded, loosened, and revegetated.

Impacts to soils during the operational phase of the Project would largely be associated with limited soil erosion induced by vehicle traffic on existing unpaved roads, but soil erosion from this source is expected to be negligible. Monolith would monitor and repair any areas of erosion or soil instability.

Since the overall footprint of the Project would be small, erosion at the site would be minimal, and approximately half of the impacts on the farmland would be returned to agricultural use after construction, the overall impacts on soils and prime farmland by the Project are not anticipated to be significant.

3.8 TRANSPORTATION

The Project site is bordered on the west by an existing Union Pacific Railroad line, on the north by W Pella Road, on the east by SW 42nd Street, and to the south by the village of Hallam, Nebraska (see Figure 1). The Project would primarily affect the county road network of SW 42nd Street, West Pella Road, and W Hallam Road, and their relevant intersections. Both SW 42nd

²⁶ USDA NRCS User Guide for the National Commodity Crop Productivity Index (NCCPI) Version 2.0, 2012.

²⁷ U.S. CFR Title 7 Chapter VI Part 658.1 - 7 - Farmland Protection Policy Act.

²⁸ U.S. CFR Title 7 Chapter VI Part 658.4(c)(2)

Street and West Pella Road are rural two-lane, gravel roadways. The segment of W Hallam Road is a rural two-lane, paved roadway that is also identified as State Spur 55H, connecting to U.S. Highway 77 (US-77) approximately 3.5 miles east of SW 42nd Street. Both intersections are characterized by single-lane approaches. Anticipated construction activities at the Project site include 800 personnel driving to the site each day over two shifts and an average of 20-25 deliveries related to construction per day.

A traffic impact analysis was conducted for the Project access points along SW 42nd Street and along W Pella Road.²⁹ These roads are anticipated to serve a varying mix of access for the required truck deliveries, Project's operations, and basic employee traffic circulation. In addition to these site drives, two public road intersections, SW 42nd Street and W Hallam Road, and SW 42nd Street and W Pella Road, were evaluated as part of the traffic impact analysis. The traffic impact analysis was conducted to evaluate the loading of anticipated traffic, including truck deliveries, to and from the Project site and anticipated impact to existing traffic volumes and patterns, during both the construction and post-construction periods.

The traffic impact analysis did not identify any operational deficiencies associated with the proposed expansion Project. However, the traffic impact analysis found that the existing daily traffic volumes along SW 42nd Street are near the threshold assumed by Lancaster County for paving an existing unpaved roadway. Per Lancaster County Engineering, the planning for paving a road begins when daily traffic volume is near or exceeds 300 vehicles per day with the requirement to pave the road once volume reaches 400 vehicles per day. Combining existing traffic volumes with those volumes expected with the Project, especially initial construction traffic volumes, the impact of the proposed vehicle mix would require hard surfacing of SW 42nd Street. Therefore, SW 42nd Street from W Hallam Road through the W Pella Road intersection and a small section of W Pella Road would be paved (see Figure 2). The road paving is a joint effort under a state economic development program offered by the Nebraska Department of Transportation (NDOT), between NDOT, Lancaster County, and Monolith.

In addition, based on a review of internal site circulation, anticipated traffic volumes, and updated site roadway plans, the traffic impact analysis recommended that all driveways exiting the Project site and accessing the public road network be controlled by stop signs. Furthermore, as the site plan is further developed, the general nature of traffic control and pavement markings needed at internal intersections would be updated to avoid anticipated vehicle conflicts due to sight restrictions and turning envelopes of both passenger vehicles and large trucks.

Because Monolith would account for increases in traffic from Project construction and operation by paving roads, installing stop signs at intersections, and managing traffic flows at internal intersections with pavement markings, transportation impacts by the Project are not anticipated to be significant.

²⁹ JEO Consulting Group. 2020. Monolith OC2 Site, Traffic Impact Analysis. Hallam, Nebraska. December 22.

3.9 UTILITIES

Electricity

Electrical power would be supplied to the Project site by the Norris Public Power District (Norris), a distribution utility providing electric power to approximately 24,500 customers in various counties in southeast Nebraska. Norris obtains their power from Nebraska Public Power District (NPPD) under a wholesale arrangement between the two entities.

During construction, temporary power provided by Norris would be accessed via the existing infrastructure that borders the Project site. For operation of the Project, NPPD and Norris intend to design and build additional transmission and distribution capacity to serve the Project's expanded operations. This added capacity would also provide a benefit to the broader infrastructure network in the Southwest Power Pool by increasing overall reliability. Potential disruption of service during construction for existing customers is expected to be minimal and temporary, and operation of the project is expected to be beneficial in the long term.

Natural Gas

Natural gas would be supplied to the Project site by Northern Natural Gas (NNG), a subsidiary of Berkshire Hathaway Energy based in Omaha, Nebraska. Main natural gas supply lines are already in place and are currently serving the existing facility. The expanded facility would require additional natural gas capacity; however, the specific amount is not yet fully known. Depending on the amount of natural gas needed, NNG would take one of two paths to meet this need: (1) tie-over two lines which run adjacent to the Project site; or (2) install a compression loop off-site. Both options are to ensure that NNG can provide the needed natural gas to the Project while minimizing or eliminating disruption to their existing customer base.

Potable Water

Drinking water for the Project site would be provided by either the existing potable water well or by the Village of Hallam, Nebraska. The exact path forward would be determined during final design, and it is anticipated that the Project would proceed with the former of these two options. If connections to the Village of Hallam are needed, the potential disruption on the existing water supply is expected to be temporary and minimal.

Sanitary Wastewater

Sanitary wastewater would be treated with an on-site septic system, which was installed for the existing facilities, but sized for the expanded operations.³⁰

³⁰ NDEE Permit Number NE0212236 issued on June 28, 2019.

Fiber Communications

Most of the required fiber communications’ infrastructure is already in place to serve the existing facility; therefore, only additional entry points to the Project would need to be installed from the existing main branches located adjacent to the Project site. Potential disruption to existing customer services is expected to be temporary and minimal.

The existing utility providers are currently capable of handling the utility needs for Project construction and operation. NPPD and Norris are planning to expand their service for the Project, and the added capacity would benefit the broader infrastructure network by increasing overall reliability. NNG also is planning to provide additional natural gas facilities or tie-overs to ensure that added demand by the Project would not disrupt the existing customer base. Because any additional demand by the Project would be met by existing or planned additional capacity by utility providers, impacts on utilities by the Project are not anticipated to be significant.

3.10 WASTE MANAGEMENT

Project construction waste (general waste, non-hazardous waste, and hazardous waste) quantities and disposal methods expected to be generated and disposed of from 2021 through 2024 are listed in Table 5.

Table 5 Project Construction Waste Management			
Waste Type	Estimated Quantity Generated (pounds)	Disposal Method	Notes
General Waste	4,027,309	Landfill	Nearby landfills have the capacity to accept all solid waste generated onsite.
Metal	2,649,711	Recycled	Scrap metal would be cut into manageable pieces and shipped offsite to be recycled.
Wood	3,191,413	Recycled or Landfill	Suitable recycling options in the area would be used or if needed nearby landfills with the capacity to accept this waste would be used.
Concrete	10,821,600	Recycled or Landfill	Suitable recycling options in the area would be used or if needed nearby landfills with the capacity to accept this waste would be used.
Other	9,866,657	Certified Waste Facility or Service	Includes concrete wash water and vehicle wash water that would be disposed of at an approved wastewater treatment facility. Used oil would be disposed of through a licensed waste disposal service.
Hazardous Waste	1,446	Certified Waste Facility or Service	Includes batteries, waste paint, aerosols, and solvents. To be disposed of through a licensed waste disposal service.

Project operational waste (general waste, non-hazardous waste, and hazardous waste) quantities and disposal methods expected to be generated and disposed of during a typical production year are listed in Table 6.

Table 6 Project Operational Waste Management		
Waste type	Estimated Annual Quantity Generated (pounds)	Disposal Method
Non-Hazardous Waste		
Solid Waste/Trash	117,000	Landfill
Off Quality Carbon Black/Coke	107,500	Landfill*
Cardboard	39,000	Recycled
Used Oil	4,500	Recycled
Metal	52,575	Recycled
Hazardous Waste		
Lab waste	3,399	Certified Waste Facility
Pit Pump-Out (Sludge)	1,750	Certified Waste Facility
*A special waste disposal permit may be needed for disposal of this product at some landfills		

During construction activities, diesel fuel, lubricants, and hydraulic fluids may be transported to, stored on, and used at the site. Typical of most construction projects, the storage and use of these materials may result in minor, incidental spills of diesel fuel or oil on the ground during fueling of equipment, filling of fuel storage tanks, and handling lubricants. Other incidental spills may be associated with equipment failures such as ruptured hoses. Proper handling, storage, and disposal of hazardous materials, hazardous/regulated wastes, and solid wastes by all activities in conformance with federal and state regulations would minimize soil, groundwater, or surface water impacts and the effects associated with these materials.

The existing Project is a Small Quantity Generator under the Resource Conservation and Recovery Act (RCRA) generating more than 220 pounds (100 kg) but less than 2,204 pounds (1,000 kg) of hazardous waste per month.³¹ Once the expanded Project is fully operational, the Project site is anticipated to continue to be designated as a Small Quantity Generator under RCRA.

Hazardous waste would be handled in compliance with NDEE RCRA regulations to minimize and eliminate impacts to the environment. Solid and other nonhazardous wastes would be disposed of in accordance with NDEE Title 132 – Integrated Solid Waste Management Regulations, to ensure proper management and disposal of solid waste and minimize and eliminate impacts to the environment.

Similar to the practice for existing operations, all new potentially recyclable wastes generated by the Project would be recycled. General waste from the Project would be recycled or reused to the

³¹ NDEE RCRA Permit Number NER000514364 issued on June 4, 2020.

maximum extent possible. If needed, a potential landfill located near the Project site has a 52-year capacity to handle waste.

Because of planned waste management practices that are aligned with those of the existing facility, including recycling and the existing solid and liquid waste authorizations and controls that are in place, impacts from waste management activities are not anticipated to be significant.

3.11 WATER RESOURCES

Surface Water

The Project site is located on the drainage divide between the Wittstruck Creek-Salt Creek watershed on the east and the Blue Stem watershed on the west. The Project site is not located in a federally designated floodplain, per Federal Emergency Management Agency's Flood Insurance Rate Map panel 31067C0050C. Surface water runoff from the Project site drains into three streams: two unnamed tributaries to Spring Branch, and one unnamed tributary to Olive Branch (see Figure 3). All surface water from the site eventually drains to Olive Branch, approximately 5 miles north of the Project site.

An existing evaporation pond receives non-contact cooling water and other non-process waters from the existing OC1 facility. Monolith submitted a Notice of Intent (NOI) to the NDEE for coverage under the National Pollutant Discharge Elimination System (NPDES) Industrial Stormwater General Permit for operation of the existing facility and received a No Exposure Certification.³² A No Exposure Certification is an exemption to the NDEE NPDES Industrial Storm Water General Permit for an industrial facility with its industrial materials and activities protected by a storm-resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff.

A second on-site evaporation pond lined with a high-density polyethylene geomembrane would be constructed adjacent to the existing on-site evaporation pond and would receive stormwater runoff from floor drains within the Project site where there is a potential for exposure to carbon black product. The evaporation pond would allow the material to settle and be removed during pond maintenance. Discharges to surface water from the Project site would include stormwater runoff, non-contact cooling water, and other non-process wastewater discharged during construction and operation. The Project's site grading would drain sheet flow away from buildings and structures. Potential impacts include increased sediment in stormwater runoff from construction activities, including site grading, drainage, and the installation of stormwater detention basins, roadways, pavements, site fencing, and railroad spurs. The Project includes one existing and two planned stormwater detention basins that could be used during construction as sediment basins.

Construction of the Project would not require excavation to depths below groundwater elevations (between 103 and 198 feet below ground surface); however, several perched water tables were encountered during construction of the Project's existing facility. Accordingly, dewatering of the

³² NDEE NPDES Permit Number NER910936 issued on August 14, 2020.

perched groundwater tables during construction activities for the Project's proposed expansion is anticipated and would be directed to the stormwater detention basins.

The Project intends to employ BMPs during construction, including the use of silt fences, silt socks, fiber rolls, erosion control blankets, sediment basins, and seeding to control any potential impacts on surface water. These BMPs would control erosion of embankments, temporary material stockpile(s), and limit sediment runoff.

Stormwater runoff, non-contact cooling water, and other non-process wastewater would be discharged in accordance with Monolith's NPDES permits. Monolith would submit an NOI to the NDEE for coverage under the NPDES Construction Stormwater General Permit prior to the expanded facility's construction initiation and would develop and maintain a construction Stormwater Pollution Prevention Plan to provide surface water contamination and erosion control at the Project site during construction. Monolith would apply for a modification to their existing NPDES Industrial Stormwater General Permit following the construction of the Project's expansion. The Project also has an existing NPDES Industrial Wastewater Permit³³ to discharge non-contact cooling water and other non-process wastewater to an undesignated tributary to Spring Branch in the Lower Platte River Basin, and that permit would cover the expansion.

Wetlands

Boundaries were delineated for wetlands on and adjacent to the Project site pursuant to the U.S. Army Corps of Engineers (USACE) wetland permitting process³⁴ (see Figure 4). Impacts to on-site wetlands, which were present on the northern portion of the site, were permitted and mitigated as part of the USACE permitting process. No Project surface water outflows would impact wetlands adjacent to the Project site. The adjacent wetlands and waterways would continue to have adequate hydrology to support wetland and aquatic vegetation.

Groundwater

The Project site is located above the Crete-Princeton-Adams Groundwater (CPA) aquifer, as designated by the Lower Platte South Natural Resources District (LPSNRD).

Groundwater wells in the area typically supply industrial, municipal, domestic, and irrigation uses, and some are used for groundwater monitoring. Monolith registered two on-site production and two monitoring wells with the Nebraska Department of Natural Resources (NDNR).³⁵

Monolith plans to construct two more production wells for a total of four production wells: one for the Project's existing facility and three for the Project's proposed expansion. These wells would supply all the industrial water needed for Project construction and operation. The

³³ NDEE NPDES Permit Number NE0139769 issued on March 26, 2021.

³⁴ The USACE issued a Nationwide Permit for wetland impact on December 27, 2019.

³⁵ Nebraska regulations require that all wells be registered with NDNR. Preliminary well construction permits are obtained from the LPSNRD.

LPSNRD issues preliminary well construction permits for groundwater wells to ensure the protection of groundwater and existing water users. As required, Monolith obtained final well permits for each of the wells from the LPSNRD³⁶ and will register them with the NDNR following installation. Per LPSNRD's permit, water meters are used to monitor water usage, which is reported to LPSNRD annually. LPSNRD's permit may also include other requirements to aid in the management of groundwater in the CPA aquifer.

The CPA aquifer is constantly renewed through rainfall, snowmelt, and other inflows. Monolith expects up to 9 feet of drawdown in the immediate vicinity of the Project wells during operation. At 1 mile from the site, groundwater modeling results show approximately 3 feet of drawdown in water level, and negligible drawdown beyond 10 miles from the site. Aquifer recharge was evaluated by the LPSNRD and is deemed to be sufficient to ensure adequate availability for future uses in the area.

Because the Project would employ BMPs during construction and operation and direct stormwater runoff from buildings, parking areas, and other impervious surfaces under Monolith's NPDES permits to the proposed detention basins, stormwater runoff would be contained. Any increase in impervious surfaces resulting from the Project would not result in an increase in peak stormwater flows leaving the Project site. Discharges of non-contact cooling water and other non-process wastewater would be in accordance with Monolith's NPDES permit. Considering both drawdown and aquifer recharge, operating the Project in accordance with the LPSNRD water well permits would control impacts to groundwater. Consequently, impacts to surface water, wetlands, and groundwater by the Project are not anticipated to be significant.

³⁶ Monolith received final approval from the LPSNRD to construct the OC2 wells with Well Construction Permit Numbers: LPSP-200412, LPSP-201423, and LPSP-210422; effective July 2, 2021.

CHAPTER 4 – FINDING

Based on this Final EA, DOE has determined that providing a federal loan to Monolith to expand carbon black and hydrogen manufacturing operations at their Hallam, Nebraska, facility will not have a significant effect on the human environment. The preparation of an environmental impact statement is therefore not required, and DOE is issuing this Finding of No Significant Impact.

This Finding of No Significant Impact should not be construed as a final decision about the issuance of a loan guarantee.

12/27/2021

Todd Stribley
LPO NEPA Compliance Officer
Director, Environmental Compliance
DOE Loan Programs Office

Date

CHAPTER 5 – LIST OF AGENCIES CONTACTED

USDA Natural Resources Conservation Service
Nebraska Department of Environment & Energy
Nebraska State Historic Preservation Office

CHAPTER 6 – LIST OF PREPARERS

U.S. Department of Energy

Kara J. Harris, M.P.A., Environmental Science and Policy, 20 years' experience

Matt McMillen, M.S. Natural Resource Development, 39 years' experience

EA Engineering, Science, and Technology, Inc. PBC

Dan Bigbee, Senior Scientist

Jayne Aaron, Senior Scientist

Tracy Layfield, Senior Scientist

Sunhee Park, Senior Engineer

Kristen Rigney, Senior Scientist

APPENDIX A – AGENCY AND TRIBAL CORRESPONDENCE

A-1 U.S. Fish and Wildlife Service

May 9, 2019



Eliza Hines
US Fish and Wildlife Service
9325 South Alda Road
Wood River, Nebraska, 68883

RE: Hallam, Nebraska Manufacturing Plant Construction
Monolith Nebraska, LLC
Federal Endangered Species Consultation

U.S. FISH AND WILDLIFE SERVICE	
<input checked="" type="checkbox"/> NO CONCERNS	
<input type="checkbox"/> CONCUR NOT LIKELY TO ADVERSELY AFFECT	
<input type="checkbox"/> NO COMMENT	
<i>Eliza Hines</i>	<i>6/24/19</i>
ELIZA HINES	DATE
NEBRASKA FIELD SUPERVISOR	

Dear Ms. Hines:

Monolith Nebraska, LLC (Monolith) is designing a carbon black manufacturing plant on a 65-acre parcel of land north of the Village of Hallam, Lancaster County, Nebraska. The manufacturing plant will be located at the intersection of West Pella Road and SW 42nd Street in Section 30, Township 6 N, Range 7 E Lancaster County, approximately one half-mile north-northeast of the Village of Hallam, Nebraska (Figure 1). The present land use at the parcel is row crop agricultural.

Proposed Project – Phase 1

Phase 1 of the proposed project includes the construction of one carbon black manufacturing plant, which will consume approximately 25 MWe of electricity and 125 thousand cubic feet per hour of natural gas while producing 14,000 metric tons (14 kMT) per year of carbon black. The project will employ a clean, innovative, and cost-effective technology solution to produce carbon black with negligible air emission compared to traditional methods and will help bring back valuable manufacturing jobs to Nebraska and the United States. Construction for Phase 1 is currently underway with no impacts to existing wetlands.

Proposed Project – Phase 2

Phase 2 of the proposed includes the construction of a second carbon black manufacturing plant. Construction is proposed to start within three to five years. A conceptual design is currently being developed.

Existing Conditions

The property is currently used for row crops and contains three grassed swales. A wetland delineation was completed by LakeTech Consulting at the property in September 2015, which identified two PEMA wetlands totaling approximately 0.322 acres. Wetland #1 (0.246 acres) boundary was fairly evident, following an apparent swale area which was distinct in aerial photographs. The wetland was mostly dominated by common reed, barnyard grass, common waterhemp, and tall scouring-rush. Wetland #2 (0.076 acres) was not associated with a waterway and was considered isolated. The wetland was mostly dominated by common reed and small patches of narrow-leaf cattail. Soils at the property consist of silt loam, clay loam, and silty clay loam according to the Natural Resources Conservation Service (NRCS) websoil survey.

Coordination

Monolith is requesting a project review to supplement the Section 404 permit from the U.S. Army Corps of Engineers. USFWS's online project review was conducted for the proposed project on May 8, 2019. The IPaC project review package, enclosed, is being submitted for further review. Monolith

requests concurrence from USFWS that no federally listed species will be impacted by the project. The enclosed project review package provides information about the species, critical habitat, and bald eagles which were considered in our review. The species conclusions table, also included in the package, identifies our determinations for the resources that may be affected by the project. If you have any questions or require additional background materials, please feel free to contact me at matthew.rhodes@monolithmaterials.com or 319-541-1554.

Sincerely,



Matthew Rhodes, CHMM
Safety, Health & Environmental Manager

Figure
IPaC Project Review Package

Petersen, Jamie

From: Matthew Rhodes <matthew.rhodes@monolithmaterials.com>
Sent: Wednesday, July 31, 2019 3:34 PM
To: Nebraskaes, FW6
Cc: Petersen, Jamie; Suing, Jamie; Bigbee, Dan
Subject: RE: [EXTERNAL] Service Review
Attachments: Fig1_SiteLocation.pdf

Mindee-

Thank you for the clearance letter for our proposed project. This email is to inform you that we have had a slight change in project footprint and the area of potential disturbance has increased (see attached site map). There will continue to be no planned tree removal, and the overall project impacts will be the same, we are simply increasing the project footprint area to give us greater project siting flexibility. Can you please confirm that there continues to be no concerns from the USFWS on this project and its associated impacts?

Please feel free to give me a call or shoot me an email with any questions/concerns.

Thank you!

Matt

Matthew Rhodes, CHMM
Safety, Health & Environmental Manager

MONOLITH

134 S. 13th Street, Suite 700, Lincoln, NE 68508
matthew.rhodes@monolithmaterials.com
m: 319-541-1554 mobile

From: mindee_thagard@fws.gov <mindee_thagard@fws.gov> **On Behalf Of** Nebraskaes, FW6
Sent: Friday, June 28, 2019 6:59 AM
To: Matthew Rhodes <matthew.rhodes@monolithmaterials.com>
Subject: [EXTERNAL] Service Review

Matthew,

The Service has reviewed the following project and has no concerns; it has been stamped and signed as such. Please see attached. If you have any questions or concerns, please let us know.

Hallam, Nebraska Manufacturing Plant Construction in Lancaster County, NE (FWS NE 2019-158)

Thanks,
Mindee Thagard
Nebraska ES Field Office

----- Forwarded message -----

From: **US Fish and Wildlife Svc** <FW6Scan2Email@fws.gov>

Date: Thu, Jun 27, 2019 at 4:55 PM

Subject: 6GRI-Canon5250 Attached Scanned Document

To: nebraskaes <nebraskaes@fws.gov>



Harms, Robert <robert_harms@fws.gov>

[EXTERNAL] Monolith Materials

1 message

Matthew Rhodes <matthew.rhodes@monolithmaterials.com>

Thu, Oct 10, 2019 at 1:47 PM

To: "robert_harms@fws.gov" <robert_harms@fws.gov>

Cc: "Petersen, Jamie" <jpetersen@eaest.com>, "Bigbee, Dan" <dbigbee@eaest.com>, "Suing, Jamie" <jsuing@eaest.com>

Bob-

Per our conversation today, Monolith Materials is requesting concurrence of that our proposed project (OC2) may affect, but not likely to adversely affect any threatened or endangered species.

As we discussed, the two species that could be of potential concern are the:

Salt Creek Tiger Beetle

Northern Long Eared Bat

As we discussed, there is no planned tree removal and/or no suitable habitat present for these two species and as such, there will be no adverse effect to them.

At your earliest convenience can you please provide concurrence?

Please feel free to give me a call or shoot me an email if you have questions.

Thanks!

Matt

Matthew Rhodes, CHMM

Safety, Health & Environmental Manager

FWS NE 2020-026

U.S. FISH AND WILDLIFE SERVICE	
<input type="checkbox"/>	TECHNICAL ASSISTANCE ONLY - NO CONCERNS
<input type="checkbox"/>	CONCUR NOT LIKELY TO ADVERSELY AFFECT
<input type="checkbox"/>	NO COMMENT
<i>[Signature]</i>	
ELIZA HINES	DATE
NEBRASKA FIELD SUPERVISOR	

MONOLITH

134 S. 13th Street, Suite 700, Lincoln, NE 68508

matthew.rhodes@monolithmaterials.com



Preserving the past. Building the future.

Matthew Rhodes, CHMM
Safety, Health & Environmental Manager
Monolith
134 South 13th St., Suite 700
Lincoln, Nebraska 68508

September 26, 2019

RE: HP#1905-183-01; Survey Report# 19-0190: Archeological Survey for a Proposed Industrial Manufacturing Facility North of the Village of Hallam, Buda Township, Lancaster County, Nebraska - BCA 2584.

Dear Mr. Rhodes:

Thank you for submitting the cultural resource survey report for the above referenced project for Nebraska State Historic Preservation Office (NeSHPO) review and comment under Section 106 of the National Historic Preservation Act of 1966, as amended in 2014 (Title 54 U.S.C. § 306108 [formerly 16 U.S.C. § 470f]), and its implementing regulations at 36 CFR§800.

This report, submitted by Bear Creek Archeology on behalf of Monolith Nebraska, LLC, documents the results of a Phase II intensive cultural resources survey investigation to identify and document cultural resources listed on the National Register of Historic Places or eligible for such a listing that may be impacted by the construction of a new carbon black manufacturing plant near Hallam, Nebraska.

The report thoroughly documents that no prehistoric or historic properties were identified in the area of potential effect. Based on the information provided, the proposed undertaking is unlikely to impact any cultural resources listed on the National Register of Historic Places or eligible for such a listing. Thus, the Nebraska State Historic Preservation Office concurs with the determination that "**No Historic Properties Affected**" is appropriate for this undertaking and the project should proceed as planned.

However, there is the possibility that currently buried or otherwise obscured cultural or human remains may be discovered during the undertaking. If any such discovery is made or if the project area becomes expanded in any way, please contact this office immediately for further instruction.

Be advised that this opinion does not necessarily reflect that of any Native American Tribes that might have an interest in the area, nor does it pertain to Traditional Cultural Properties, if they exist in the area.

If required, please submit this letter to the project's lead federal agency to fulfill the statutory obligation of Section 106 consultation with the Nebraska State Historic Preservation Office. Should you have any questions regarding this determination, please contact this office by phone at 402-471-2609 or by email at John.Rissetto@Nebraska.Gov.

Sincerely,


John Rissetto, Ph.D, Preservation Archeologist

PLEASE NOTE
ADDRESS CHANGE
History NEBRASKA
1500 R Street
Lincoln, Nebraska 68508-1651

From: [Swigart, John](#)
To: [Harris, Kara](#)
Subject: [EXTERNAL] Monolith Nebraska, LLC, Proposed Manufacturing Facility North of the Village of Hallam, Buda Township, Lancaster County, Nebraska
Date: Friday, July 02, 2021 3:11:53 PM
Attachments: [1905-183-01.pdf](#)

Ms. Harris,

Thank you for contacting the Nebraska State Historic Preservation Office regarding the details of the above referenced project. As we discussed, our concurrence with the determination of no **historic properties affected** submitted on September 26th, 2019 (see attachment), remains valid and the project should proceed as planned. Please let me know if you have any questions or would like additional information.

Thank you again,

John

John Swigart
Preservation Archeologist



1500 R Street
Lincoln, Nebraska 68508-1651

t . 402-560-0574 | f . 402-471-3100
john.swigart@nebraska.gov | history.nebraska.gov

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A-3 Tribal Consultation

From: [Harris, Kara](#)
To: janc@poncatribene.org
Cc: [Harris, Kara](#)
Subject: Government to Government Consultation for the Monolith Olive Creek Facility in Hallam, Nebraska
Date: Friday, April 30, 2021 10:10:42 AM
Attachments: [Monolith Site Location Map.pdf](#)
[image001.png](#)
[image002.png](#)

Department of Energy

Washington, DC 20585

April 30, 2021

Chairman Larry Wright
Ponca Tribe of Nebraska
P.O. Box 288
Niobrara, OK 68760

SUBJECT: Proposed Federal loan guarantee to Monolith Nebraska LLC, for a new gas-to-carbon black facility in Hallam, Lancaster County, Nebraska

Dear Chairman Wright:

The U.S. Department of Energy (DOE) is preparing an Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA) for a potential Federal loan guarantee to Monolith Nebraska LLC (Monolith) to support the expansion of its Olive Creek natural gas-to-carbon black facility in Hallam, Nebraska (see attached Site Location Map). As part of this environmental review process, DOE is also conducting a historic resources review in compliance with Section 106 of the National Historic Preservation Act (NHPA).

Monolith's Olive Creek facility uses a high temperature plasma torch and electricity to convert natural gas and nitrogen to carbon black and ammonia. Monolith expects to produce approximately 192,000 tons of carbon black per year and 307,000 tons of ammonia per year. Monolith's carbon black would mainly be used in the production of tires and other rubber products, and the ammonia would be used in the production of fertilizer for farm application. The permanent facility site and the temporary laydown yards and workspaces would be located on 136 acres north of the village of Hallam.

This letter is intended to provide you with the opportunity to comment and engage DOE in government to government consultation on the proposed natural gas-to-carbon black facility in Hallam, Nebraska. Any comments or concerns you provide will help ensure that DOE considers Tribal interests and complies with its NEPA and NHPA Section 106 responsibilities. We want to give you the opportunity to raise any issues or concerns you may have regarding the site.

I would greatly appreciate receiving any comments or concerns you may have by June 1,

2021. Please provide comments by email to Kara.Harris@hq.doe.gov, or I can also be reached by telephone at 202-586-8716.

Respectfully,

Kara Harris
NEPA Document Manager

Kara J. Harris
Environmental Protection Specialist
Loan Programs Office, LP-1
U.S. Department of Energy | 1000 Independence Ave., SW | Washington, DC 20585
Office: 202-586-8716 | Kara.Harris@hq.doe.gov

From: [Harris, Kara](#)
To: ["janc@poncatribene.org"](mailto:janc@poncatribene.org)
Cc: [Kara Harris \(Kara.Harris@hq.doe.gov\)](mailto:Kara.Harris@hq.doe.gov)
Subject: RE: Government to Government Consultation for the Monolith Olive Creek Facility in Hallam, Nebraska
Date: Friday, June 11, 2021 12:51:00 PM
Attachments: [image001.png](#)
[image003.png](#)

Chairman Wright,

I am reaching out to ensure you have had time to consider government to government consultation in regards to the Monolith carbon black and ammonia facility located in Hallam, Lancaster County, Nebraska. I could not reach you by phone, so I wanted to give you my phone number (202-586-8716) in case you would prefer to discuss this with a phone call.

Respectfully,

Kara Harris
NEPA Document Manager

[Kara J. Harris](#)
[Environmental Protection Specialist](#)
[Loan Programs Office, LP-1](#)
[U.S. Department of Energy | 1000 Independence Ave., SW | Washington, DC 20585](#)
[Office: 202-586-8716 | \[Kara.Harris@hq.doe.gov\]\(mailto:Kara.Harris@hq.doe.gov\)](#)

From: Harris, Kara
Sent: Friday, April 30, 2021 10:11 AM
To: janc@poncatribene.org
Cc: Kara Harris (Kara.Harris@hq.doe.gov) <Kara.Harris@hq.doe.gov>
Subject: Government to Government Consultation for the Monolith Olive Creek Facility in Hallam, Nebraska

Department of Energy

Washington, DC 20585

April 30, 2021

Chairman Larry Wright
Ponca Tribe of Nebraska
P.O. Box 288
Niobrara, OK 68760

SUBJECT: Proposed Federal loan guarantee to Monolith Nebraska LLC, for a new gas-to-carbon black facility in Hallam, Lancaster County, Nebraska

Dear Chairman Wright:

The U.S. Department of Energy (DOE) is preparing an Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA) for a potential Federal loan guarantee to Monolith Nebraska LLC (Monolith) to support the expansion of its Olive Creek natural gas-to-carbon black facility in Hallam, Nebraska (see attached Site Location Map). As part of this environmental review process, DOE is also conducting a historic resources review in compliance with Section 106 of the National Historic Preservation Act (NHPA).

Monolith's Olive Creek facility uses a high temperature plasma torch and electricity to convert natural gas and nitrogen to carbon black and ammonia. Monolith expects to produce approximately 192,000 tons of carbon black per year and 307,000 tons of ammonia per year. Monolith's carbon black would mainly be used in the production of tires and other rubber products, and the ammonia would be used in the production of fertilizer for farm application. The permanent facility site and the temporary laydown yards and workspaces would be located on 136 acres north of the village of Hallam.

This letter is intended to provide you with the opportunity to comment and engage DOE in government to government consultation on the proposed natural gas-to-carbon black facility in Hallam, Nebraska. Any comments or concerns you provide will help ensure that DOE considers Tribal interests and complies with its NEPA and NHPA Section 106 responsibilities. We want to give you the opportunity to raise any issues or concerns you may have regarding the site.

I would greatly appreciate receiving any comments or concerns you may have by June 1, 2021. Please provide comments by email to Kara.Harris@hq.doe.gov, or I can also be reached by telephone at 202-586-8716.

Respectfully,

Kara Harris
NEPA Document Manager

[Kara J. Harris](#)
[Environmental Protection Specialist](#)
[Loan Programs Office, LP-1](#)
[U.S. Department of Energy | 1000 Independence Ave., SW | Washington, DC 20585](#)
[Office: 202-586-8716 | \[Kara.Harris@hq.doe.gov\]\(mailto:Kara.Harris@hq.doe.gov\)](#)

From: [Harris, Kara](#)
To: jim.macy@nebraska.gov
Subject: Notification of USDOE's review of the Monolith Carbon Black Facility
Date: Wednesday, May 05, 2021 5:02:00 PM
Attachments: [Monolith Site Location Map.pdf](#)
[USDOE Letter to State of Nebraska for the Monolith Project.pdf](#)
[image001.png](#)
[image002.png](#)

Department of Energy

Washington, DC 20585

May 5, 2021

Jim Macy, Director
Nebraska Department of Environment and Energy
State of Nebraska
P.O. Box 98922
Lincoln, NE 68509-8922

SUBJECT: Intent to Prepare an Environmental Assessment (EA) for a proposed Federal Loan Guarantee to Monolith Nebraska LLC for a new natural gas-to-carbon black and ammonia facility in Hallam, Lancaster County, Nebraska

Dear Director Macy:

Title XVII of the Energy Policy Act of 2005 (EPAct) established a Federal loan guarantee program for certain projects that employ innovative technologies and authorizes the Secretary of Energy to make loan guarantees available for those projects. Monolith Nebraska LLC (Monolith) has applied for a loan guarantee pursuant to the U.S. Department of Energy's (DOE's) Advanced Fossil Energy Projects Solicitation (Solicitation Number: DE-SOL-0006303) under Title XVII, Innovative Energy Loan Guarantee Program, authorized by EPAct, (Advanced Fossil Energy Projects). DOE is evaluating whether to provide a Federal loan guarantee to Monolith to support the expansion and start-up of a gas-to-carbon black and ammonia production facility in Hallam, Nebraska (Olive Creek facility – see attached map). The decision to prepare an EA was made in accordance with the requirements of the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations for implementing the procedural provisions of NEPA (40 CFR Parts 1500-1508), and DOE's implementing procedures for compliance with NEPA (10 CFR Part 1021).

The purpose and need for agency action is to comply with the DOE mandate under Title XVII of the EPAct to select projects for loan guarantees that are consistent with the goals of the Act. The DOE Loan Programs Office (LPO) has determined that the gas-to-carbon black and ammonia facility as proposed by Monolith is eligible pursuant to Section 1703 of EPAct, and that it complies with DOE's mandate as defined in the Act. DOE is using the NEPA process to

assist in determining whether to issue a loan guarantee to Monolith for their proposed facility. The primary goal of the Advanced Fossil Energy Projects program is to finance projects and facilities located in the United States that employ innovative and advanced fossil energy technologies that avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases.

Monolith's proposed expansion of their Olive Creek facility encompasses approximately 136 acres near the village of Hallam, Nebraska. The process at the Olive Creek facility would transform a natural gas feedstock to carbon black with an ammonia byproduct. Carbon black is mainly used in the manufacturing of tires and other rubber products, and serves as a color pigment in plastics, paints, and inks. Approximately 400 jobs will be created for construction and expansion of the facility, and 60 jobs for facility operation. Once completed, Monolith expects to produce a total of 192,000 tons per year of carbon black and 307,000 tons per year of ammonia.

The DOE NEPA regulations provide for the notification of host states of NEPA determinations and for the opportunity for host states to review EAs prior to DOE approval. This process is intended to improve coordination and to facilitate early and open communication. DOE will provide the draft EA to you for your review and comment.

If you or your staff would like to receive further information concerning this project or DOE's NEPA process for Advanced Fossil Energy Project loan guarantees, please contact me at 202-586-8716, or email at Kara.Harris@hq.doe.gov.

Sincerely,

Kara Harris
NEPA Document Manager

[Kara J. Harris](#)
Environmental Protection Specialist
Loan Programs Office, LP-1
U.S. Department of Energy | 1000 Independence Ave., SW | Washington, DC 20585
Office: 202-586-8716 | Kara.Harris@hq.doe.gov

From: [Harris, Kara](#)
To: [Johnson, Laura R](#)
Cc: [Matthew C Mcmillen \(Matthew.Mcmillen@hq.doe.gov\)](#)
Subject: For Your Review: USDOE's Environmental Assessment for the Monolith Carbon Black Facility
Date: Tuesday, August 03, 2021 5:17:00 PM
Attachments: [DRAFT DOE - Environmental Assessment - 8-3-2021.pdf](#)

Laura,

As previously discussed, the U.S. Department of Energy is evaluating whether to provide a Federal loan guarantee to Monolith Nebraska LLC to support the expansion and start-up of a gas-to-carbon black and ammonia production facility in Hallam, Nebraska (Monolith's Olive Creek facility). The decision to prepare an EA was made in accordance with the requirements of the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations for implementing the procedural provisions of NEPA (40 CFR Parts 1500-1508), and DOE's implementing procedures for compliance with NEPA (10 CFR Part 1021).

The primary goal of the Advanced Fossil Energy Projects program is to finance projects and facilities located in the United States that employ innovative and advanced fossil energy technologies that avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases. Monolith's process at the Olive Creek facility would transform a natural gas feedstock to carbon black with an ammonia byproduct.

The DOE NEPA regulations provide for the notification of host states of NEPA determinations and for the opportunity for host states to review EAs prior to DOE approval. This process is intended to improve coordination and to facilitate early and open communication. I am providing the draft EA as an attachment to this email for.

Please review and provide your comments by August 19, 2021.

Please contact me at 202-586-8716 or email at Kara.Harris@hq.doe.gov if you have any questions or concerns.

Thank you,

Kara

Kara J. Harris
Environmental Protection Specialist
Loan Programs Office, LP-1
U.S. Department of Energy | 1000 Independence Ave., SW | Washington, DC 20585
Office: 202-586-8716 | Kara.Harris@hq.doe.gov

From: [Boss, Alicia](#)
To: [Harris, Kara](#)
Cc: [Johnson, Laura R](#)
Subject: [EXTERNAL] NEPA Review USDOE's Environmental Assessment for the Monolith Carbon Black Facility
Date: Thursday, August 19, 2021 4:31:36 PM
Attachments: [USDOE's Environmental Assessment for the Monolith Carbon Black Facility.pdf](#)

Attached is NDEE's review of the above mentioned project. Thank you and have a good day.

Alicia Boss

Administrative Specialist
Nebraska Department of Environment and Energy
P.O. Box 98922
Lincoln, NE 68509-8922
Direct: 402-471-2867 | Main: 402-471-2186
<http://dee.ne.gov>

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NEBRASKA

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DEPT. OF ENVIRONMENT AND ENERGY



Pete Ricketts, Governor

August 19, 2021

ATTN: Ms. Kara Harris

RE: USDOE's Environmental Assessment for the Monolith Carbon Black Facility

Dear Ms. Harris,

The Environmental Assessment (EA) provided to the Nebraska Department of Environment and Energy (NDEE) by the Department of Energy for the Monolith Olive Creek Expansion Facility documents potential impacts from the construction and operation of the project. NDEE has reviewed EA information associated with air quality and GHG analysis, waste management, and water resources, including wetlands, groundwater, and surface water. Based on the information provided, NDEE concurs, the proposed project is not likely to impact water quality.

The Nebraska Department of Environment and Energy (NDEE) has reviewed the above referenced project. As with any project, permits may be required prior to beginning construction or operation. At a minimum, you should be aware of the possible requirements or permits:

	Contact	Phone
Air Quality	Lindsey Hollmann	(402) 471-4212
Construction Storm Water	Daniel Kroll	(402) 471-4370
Wastewater	Hillary Stoll	(402) 471-4252
Water Quality	Dane Pauley	(402) 471-2875
Waste Disposal	Erik Waiss	(402) 471-8308
Drinking Water	Steve McNulty	(402) 471-1006

Air Quality: Fugitive Dust Title 129 Chapter 32 regulations shall apply to all demolition, grading, and construction activities.

Equipment on site may be subject to federal regulations. Please call the permit hotline at (877) 834-0474 for information and assistance.

Construction Storm Water: The proposed project will require authorization under the Construction Storm Water General Permit (CSW-GP). A Threatened and Endangered Species consultation may be required prior to CSW-GP notice of intent (NOI) approval. The Nebraska Game and Parks Commission, Conservation and Environmental Review Tool (CERT), is used to complete this consultation.

Excavation dewatering requires authorization under a general permit unless comprised entirely of storm water. Notification to the Department is required for excavations encountering contamination, or in areas of known contamination.

Wastewater:

1. Any existing wastewater works, as defined in Title 123, that are disturbed during construction must be returned to their original condition or a Title 123 permit may be required.
2. Per Title 123, Chapter 3, Section 001, "No person shall construct, install, modify, or make additions to a wastewater works until a construction permit is issued authorizing the project." If the proposed project involves any of these activities, a Title 123 construction permit may be required. The only exceptions will be for those activities included in Chapter 3, Section 002 of Title 123.
3. On page 23 of the Environmental Assessment, a second evaporation pond is described. If this pond will receive wastewater, as defined in Title 123, a Title 123 construction permit will be required. If this is the

same pond that was already approved by the Department via Construction Permit 2019-0048, then an extension request for the permit will be required, per Title 123, Chapter 3, Section 003.

Water Quality: (Laura Johnson) It is recommended that during the project planning phase the applicant contact the Section 401 Program Coordinator at NDEE to discuss the project to ensure that it will not violate Nebraska Title 117 Water Quality Standards for Wetlands.

Waste Disposal: No Waste Permit Required. As outlined in the presented overview document, much of the waste management has already been planned. The facility itself will need to conduct waste determinations on all waste streams and all wastes generated or discovered will need to comply with disposal requirements found in NE Titles 128 & 132.

The provided document did mention the disposal of off-spec Carbon Black at a local MSW landfill, and that it may require a special waste permit. I agree that the nature of carbon black powder does require more attention and time for the MSW landfill to properly contain and dispose. While a special waste permit may be required by the landfill, that is a document not issued by the NDEE. We will offer guidance and advise the landfill with any questions they may have about the material(s) or their disposal.

Drinking Water: Should the drinking water source for this project come from the Village of Hallam, please ensure that the cross-connection control program requirements for the Village are met per that noted in Section 004.7 of Title 179 NAC 22.

If you have any other questions, feel free to contact the individuals listed above. For more information, please visit our website at deq.ne.gov

Sincerely,

Alicia Boss

Alicia Boss
Administrative Specialist

From: [Cowsert, Patrick - NRCS, Lincoln, NE](#)
To: [Harris, Kara](#)
Cc: [Villarreal, Carlos - NRCS, Lincoln, NE](#)
Subject: [EXTERNAL] RE: Monolith Nebraska LLC - Carbon Black Facility
Date: Monday, July 26, 2021 3:50:54 PM
Attachments: [Monolith Nebraska LLC AD1006 7-26-21.pdf](#)



Subject: FPPA response for: **Monolith Nebraska LLC – Carbon Black Facility**

Date: 7/26/21

ATTENTION: Kara J. Harris, Environmental Protection Specialist

I have reviewed the project information regarding the **Monolith Nebraska LLC – Carbon Black Facility**, near Hallam, Nebraska, for which you requested review of impacts to prime and important farmlands as per the Farmland Protection Policy Act (FPPA).

This review only covers FPPA concerns and does not include any other environmental concerns such as wetlands or endangered species. For general conservation concerns or questions relating to wetlands under the jurisdiction of the Food Security Act, contact your county Natural Resources Conservation Service office.

The **AD-1006** which you submitted to our office shows that your Part VI section assessment point total is 120. The **AD-1006 Farmland Conversion Impact Rating** form is based on a point system that has 160 points set as the minimum number of “Total Points” that triggers additional in-depth site reviews. The NRCS evaluation portion Part V is on a scale of 0 to 100 points-and the NRCS soil portion was 63 points.

In the case with this project, the “Total Points” equate to 120. **Thus, NRCS has determined that your project was found to be cleared of FPPA significant concerns.**

We encourage you to continue to be aware of prime and important farmlands in general and the role they play in current and future projects.

I am returning the AD-1006 form to you for your records.

Patrick Cowsert
USDA-NRCS
Fed. Bldg. Rm. 152
100 Centennial Mall North
Lincoln, NE. 68508-3866
402.437.4117

From: Harris, Kara <kara.harris@hq.doe.gov>

Sent: Thursday, July 22, 2021 3:26 PM
To: Cowsert, Patrick - NRCS, Lincoln, NE <patrick.cowsert@usda.gov>
Subject: Monolith Nebraska LLC - Carbon Black Facility

Patrick,

As discussed, I am attaching a site map of the Monolith carbon black facility located in Hallam, NE. Monolith is proposing to expand its existing carbon black facility. The majority of the workspaces are located on prime farmland. Of the total 75 acres Monolith plans to use for construction, they would permanently impact 37 acres for operations (structures, parking lots, etc.). Please let me know if additional information is needed.

Thank you,

Kara

Kara J. Harris
Environmental Protection Specialist
Loan Programs Office, LP-1
U.S. Department of Energy | 1000 Independence Ave., SW | Washington, DC 20585
Office: 202-586-8716 | Kara.Harris@hq.doe.gov

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FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request 7/21/21			
Name of Project Monolith Nebraska LLC		Federal Agency Involved USDE			
Proposed Land Use Carbon black facility		County and State county and state Lancaster, NE			
PART II (To be completed by NRCS)		Date Request Received By NRCS		Person Completing Form: Patrick Cowser	
Does the site contain Prime, Unique, Statewide or Local Important Farmland? <i>(If no, the FPPA does not apply - do not complete additional parts of this form)</i>		YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	Acres Irrigated 21,428	Average Farm Size 266
Major Crop(s) Corn	Farmable Land In Govt. Jurisdiction Acres: %	Amount of Farmland As Defined in FPPA Acres: %			
Name of Land Evaluation System Used NCCPI	Name of State or Local Site Assessment System	Date Land Evaluation Returned by NRCS 7/26/21			
PART III (To be completed by Federal Agency)		Alternative Site Rating			
		Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly		37			
B. Total Acres To Be Converted Indirectly					
C. Total Acres In Site		37			
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland		35.6			
B. Total Acres Statewide Important or Local Important Farmland		1.4			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted					
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value					
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)		63			
PART VI (To be completed by Federal Agency) Site Assessment Criteria <i>(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)</i>		Maximum Points	Site A	Site B	Site C
1. Area In Non-urban Use		(15)	1		
2. Perimeter In Non-urban Use		(10)	9		
3. Percent Of Site Being Farmed		(20)	17		
4. Protection Provided By State and Local Government		(20)	0		
5. Distance From Urban Built-up Area		(15)	15		
6. Distance To Urban Support Services		(15)	0		
7. Size Of Present Farm Unit Compared To Average		(10)	2		
8. Creation Of Non-farmable Farmland		(10)	6		
9. Availability Of Farm Support Services		(5)	5		
10. On-Farm Investments		(20)	0		
11. Effects Of Conversion On Farm Support Services		(10)	1		
12. Compatibility With Existing Agricultural Use		(10)	1		
TOTAL SITE ASSESSMENT POINTS		160	57	0	0
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)		100	63	0	0
Total Site Assessment (From Part VI above or local site assessment)		160	57	0	0
TOTAL POINTS (Total of above 2 lines)		260	120	0	0
Site Selected:	Date Of Selection	Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>			
Reason For Selection:					
Name of Federal agency representative completing this form:					Date:

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

- Step 1 - Federal agencies (or Federally funded projects) involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form. For Corridor type projects, the Federal agency shall use form NRCS-CPA-106 in place of form AD-1006. The Land Evaluation and Site Assessment (LESA) process may also be accessed by visiting the FPPA website, <http://fppa.nrcs.usda.gov/lesa/>.
- Step 2 - Originator (Federal Agency) will send one original copy of the form together with appropriate scaled maps indicating location(s) of project site(s), to the Natural Resources Conservation Service (NRCS) local Field Office or USDA Service Center and retain a copy for their files. (NRCS has offices in most counties in the U.S. The USDA Office Information Locator may be found at http://offices.usda.gov/scripts/ndISAPI.dll/oip_public/USA_map, or the offices can usually be found in the Phone Book under U.S. Government, Department of Agriculture. A list of field offices is available from the NRCS State Conservationist and State Office in each State.)
- Step 3 - NRCS will, within 10 working days after receipt of the completed form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland. (When a site visit or land evaluation system design is needed, NRCS will respond within 30 working days.
- Step 4 - For sites where farmland covered by the FPPA will be converted by the proposed project, NRCS will complete Parts II, IV and V of the form.
- Step 5 - NRCS will return the original copy of the form to the Federal agency involved in the project, and retain a file copy for NRCS records.
- Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form and return the form with the final selected site to the servicing NRCS office.
- Step 7 - The Federal agency providing financial or technical assistance to the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

(For Federal Agency)

Part I: When completing the "County and State" questions, list all the local governments that are responsible for local land use controls where site(s) are to be evaluated.

Part III: When completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them or other major change in the ability to use the land for agriculture.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities planned build out capacity) that will cause a direct conversion.

Part VI: Do not complete Part VI using the standard format if a State or Local site assessment is used. With local and NRCS assistance, use the local Land Evaluation and Site Assessment (LESA).

1. Assign the maximum points for each site assessment criterion as shown in § 658.5(b) of CFR. In cases of corridor-type project such as transportation, power line and flood control, criteria #5 and #6 will not apply and will, be weighted zero, however, criterion #8 will be weighed a maximum of 25 points and criterion #11 a maximum of 25 points.
2. Federal agencies may assign relative weights among the 12 site assessment criteria other than those shown on the FPPA rule after submitting individual agency FPPA policy for review and comment to NRCS. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total points at 160. For project sites where the total points equal or exceed 160, consider alternative actions, as appropriate, that could reduce adverse impacts (e.g. Alternative Sites, Modifications or Mitigation).

Part VII: In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, convert the site assessment points to a base of 160.

Example: if the Site Assessment maximum is 200 points, and the alternative Site "A" is rated 180 points:

$$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \times 160 = 144 \text{ points for Site A}$$

For assistance in completing this form or FPPA process, contact the local NRCS Field Office or USDA Service Center.

NRCS employees, consult the FPPA Manual and/or policy for additional instructions to complete the AD-1006 form.

APPENDIX B – FIGURES

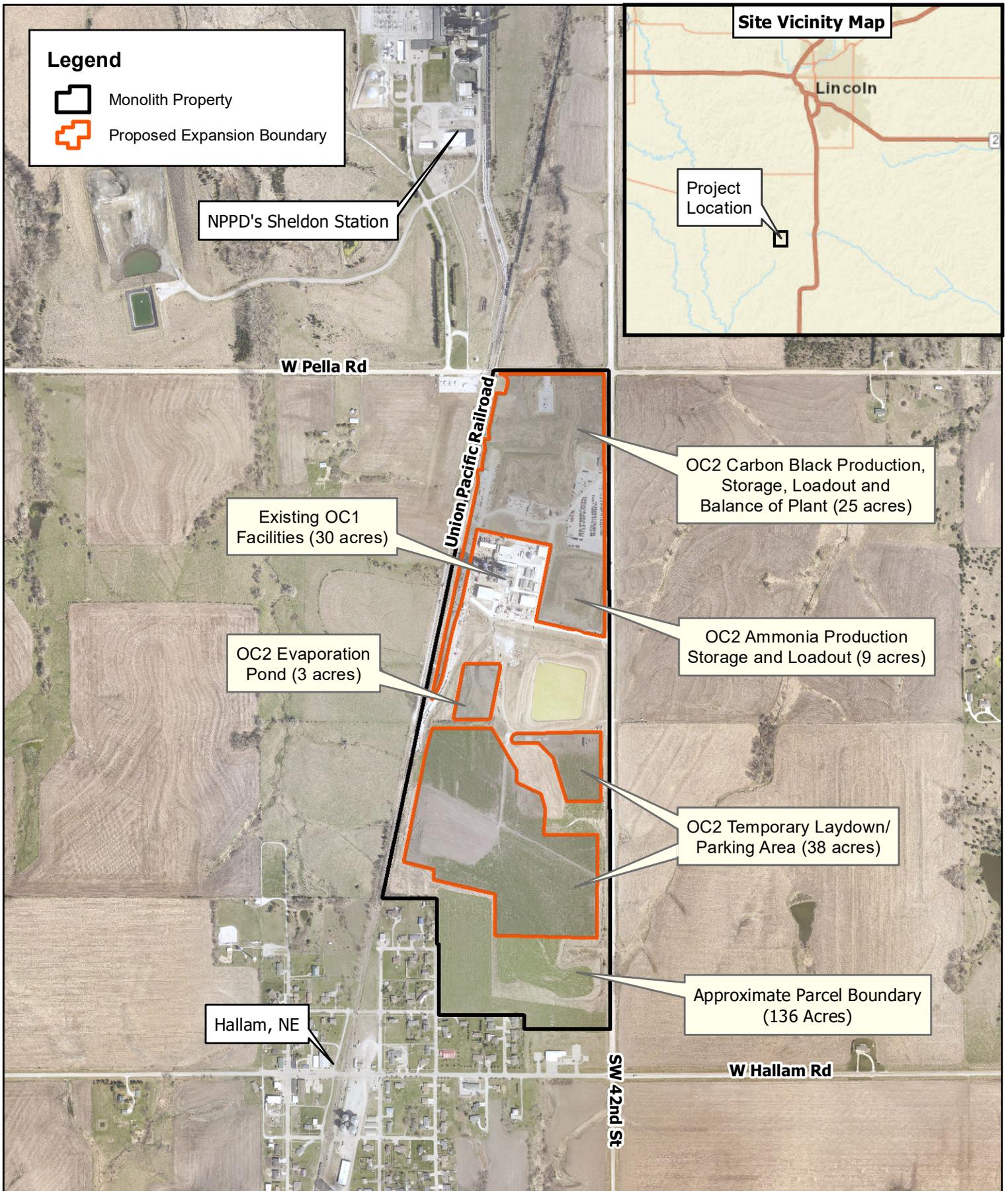
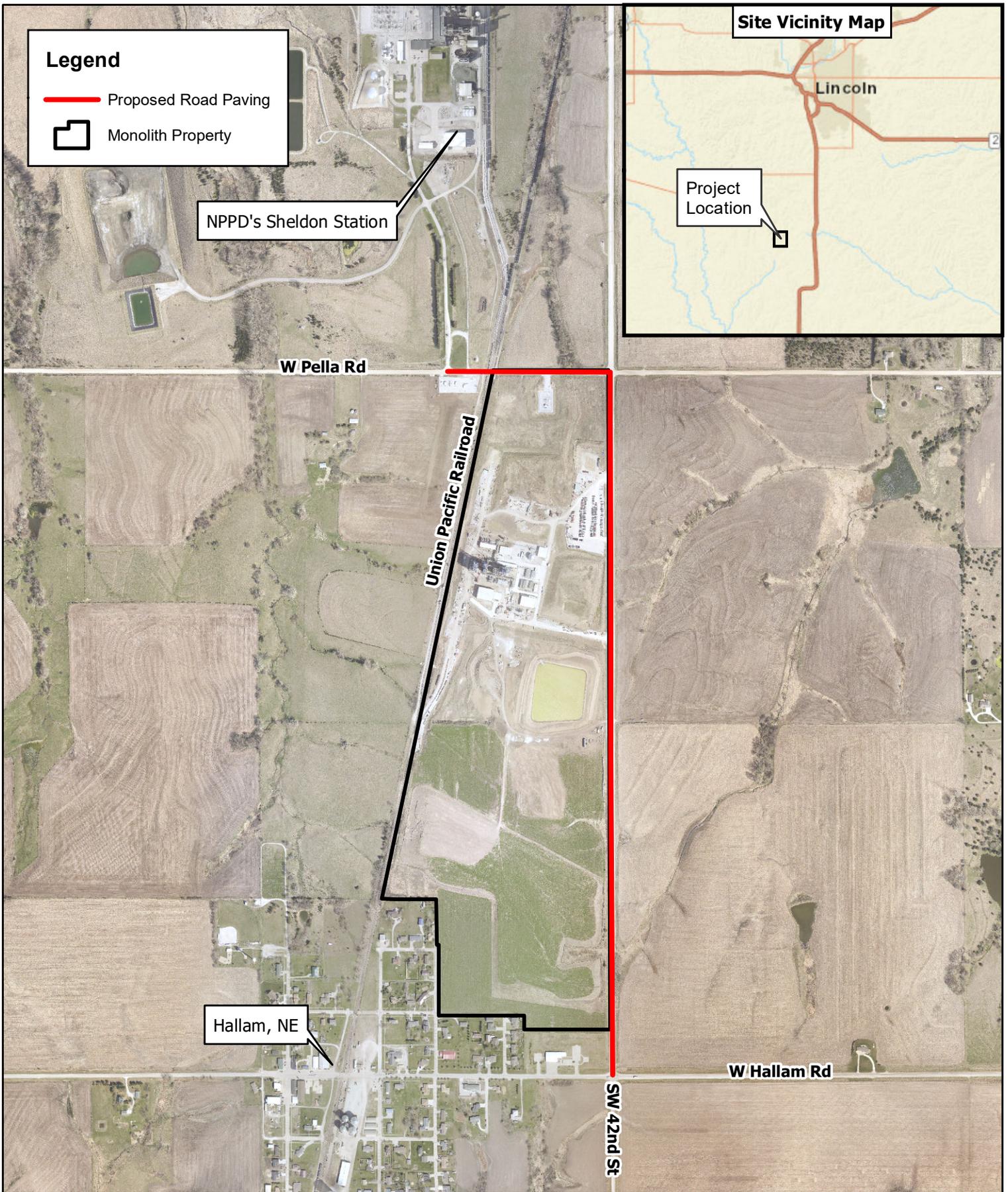


Figure 1: Site Location

Monolith Nebraska, LLC
 Carbon Black and Hydrogen Manufacturing Facility
 Hallam, Lancaster County, Nebraska



Legend

- Proposed Road Paving
- Monolith Property

NPPD's Sheldon Station

W Pella Rd

Union Pacific Railroad

Hallam, NE

SW 42nd St

W Hallam Rd

Site Vicinity Map

Lincoln

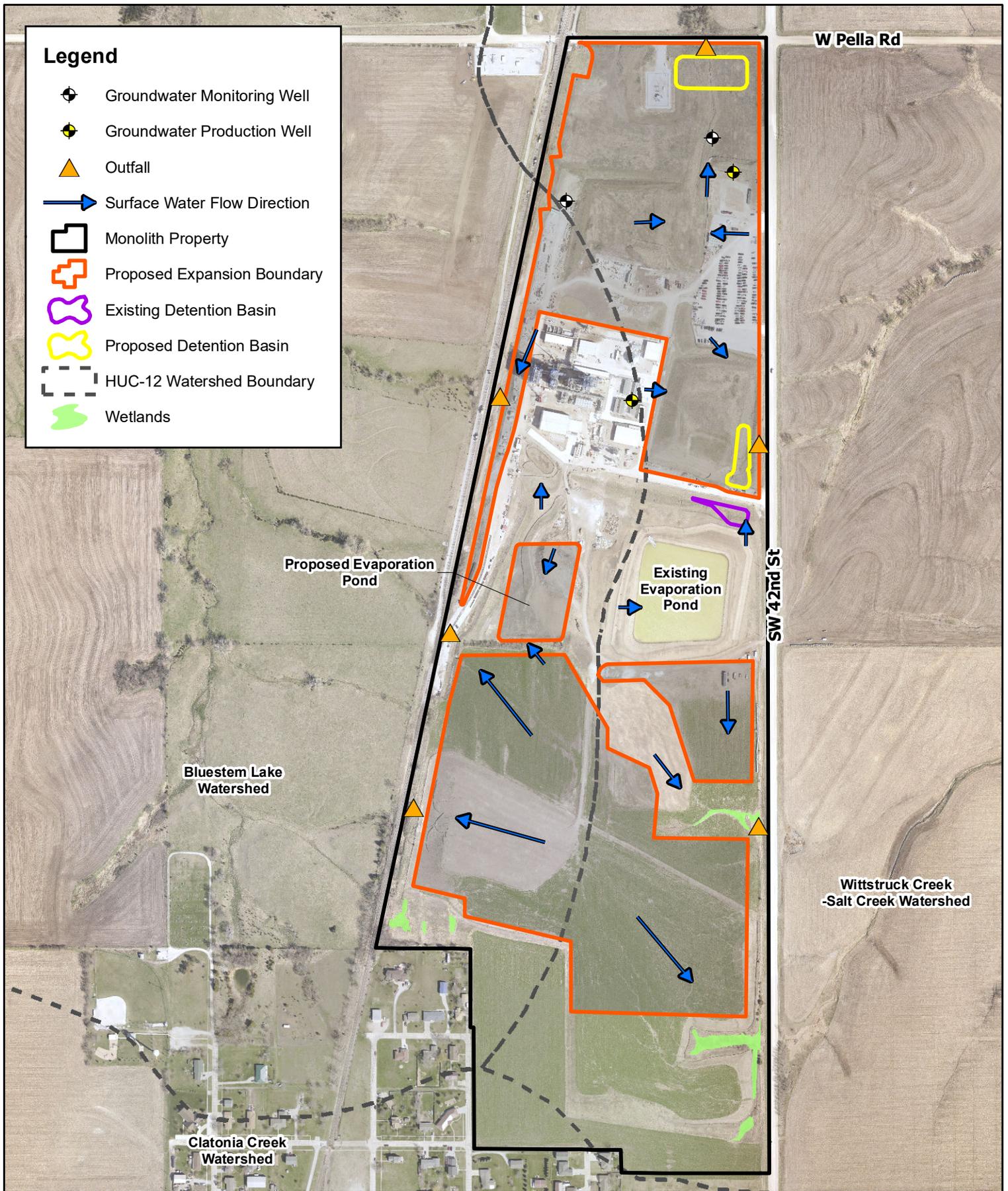
Project Location

0 500 1,000 Feet



Date: 5/3/2021
 Aerial: Nebraska State GIS, 2019

Figure 2: Transportation Site Map
 Monolith Nebraska, LLC
 Carbon Black and Hydrogen Manufacturing Facility
 Hallam, Lancaster County, Nebraska



0 400 800 Feet

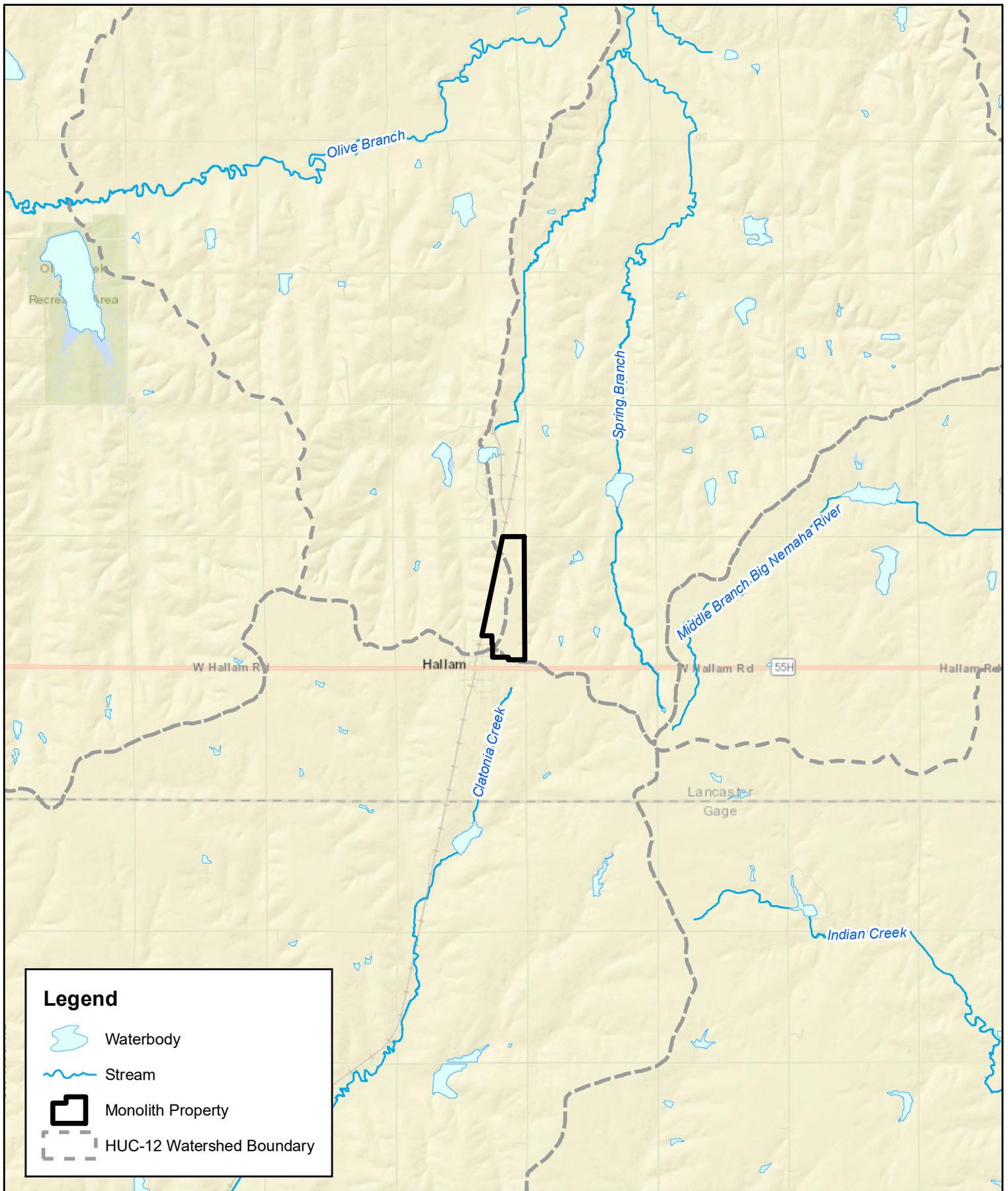


Date: 5/3/2021
 Aerial: Nebraska State GIS, 2019

Figure 3: Water Resources

Site Map

Monolith Nebraska, LLC
 Carbon Black and Hydrogen Manufacturing Facility
 Hallam, Lancaster County, Nebraska



Legend

-  Waterbody
-  Stream
-  Monolith Property
-  HUC-12 Watershed Boundary

0 3,500 7,000 Feet



Date: 5/3/2021
 Aerial: Nebraska State GIS, 2019

Figure 4: Water Resources

Vicinity Map

Monolith Nebraska, LLC
 Carbon Black and Hydrogen Manufacturing Facility
 Hallam, Lancaster County, Nebraska