

PHMSA NGDISM PROJECT NARRATIVE 2024

Greenville Utilities Commission
20 June 2024

Updated 27 December 2024



256.773.9420



magnolia-river.com

TABLE OF CONTENTS

1. COVER LETTER.....	1
NAME AND TITLE OF NOFO	1
ORGANIZATION/SYSTEM NAME.....	1
CONTACT INFORMATION	1
2. APPLICANT ELIGIBILITY AND STATEMENT OF AUTHORITY AND PIPELINE INFRASTRUCTURE SAFETY AND MODERNIZATION CAPABILITIES.....	2
3. PROJECT SUMMARY	2
SUMMARY	2
PROJECT PRIORITIZATION	2
PROJECT LOCATION	4
PROJECT SCHEDULE.....	6
PROJECT FUNDING	7
PROJECT ELIGIBILITY	7
4. DETAILED PROJECT DESCRIPTION	7
PROJECT 1	7
PROJECT 2	8
SAFETY RISK PROFILE	8
JOB CREATION	8
ENVIRONMENTAL REVIEW	8
TITLE VI OF THE CIVIL RIGHTS ACT	8
5. PROJECTED OUTPUTS AND OBJECTIVES	8
6. PROJECT IMPLEMENTATION AND MANAGEMENT	10
7. STATEMENT CERTIFYING COMPLIANCE WITH EQUITY REQUIREMENT	10
8. DOMESTIC PREFERENCE / BUY AMERICA	10

1. COVER LETTER

Name and Title of NOFO

Notice of Funding Opportunity (NOFO) - Natural Gas Distribution Infrastructure Safety and Modernization Grant Program for Fiscal Year (FY) 2024 – NOFO 693JK324NF0013.

Organization/System Name

The mission of Greenville Utilities Commission (GUC) is dedicated to enhancing the quality of life for those GUC serves by safely providing reliable utility solutions at the lowest reasonable cost, with exceptional customer service, in an environmentally responsible manner.

Since 1905, GUC has been an integral part of Greenville, Pitt County, and eastern North Carolina, growing and progressing along with its expanding service area. GUC provides electric, water, sewer and natural gas services to the City of Greenville and 75% of Pitt County. GUC serves a combined total of nearly 165,000 customer connections. GUC is owned by the citizens of Greenville but operates under a separate charter issued by the North Carolina General Assembly.

GUC is governed by an eight-member Board of Commissioners. The Board is responsible for approving rates, development plans, and the annual budget, as well as setting operating and extension policies. Policies are implemented by the General Manager/CEO. At the June 9, 2022 meeting, the Board of Commissioners adopted a resolution authorizing the General Manager to apply for grant funds from the Natural Gas Distribution Infrastructure Safety and Modernization Grant Program (refer to attached Resolution for additional information).

GUC has experienced many successes in implementing their mission. GUC's highly experienced Management Team is dedicated to working together to operate GUC in the best interest of their customers. GUC's staff has extensive experience working with State and Federal Grants, such as US Economic Development Agency and North Carolina State Revolving Fund.

Contact Information

Greenville Utilities Commission
PO Box 1847; Greenville, NC 27835

<i>Project Coordinator of Funded activities:</i>	<i>Authorized Representative for accepting grant document:</i>	<i>Representative for submission of Federal financial reports and progress reports:</i>
Francis D. Tyson, Jr., P.E. <i>Assistant Director of Gas Systems</i> tysonfd@guc.com (252) 551-2048	Anthony C. Cannon <i>General Manager / CEO</i> cannonac@guc.com (252) 551-1500	Jeff W. McCauley, CPA <i>Chief Financial Officer</i> mccaulyjw@guc.com (252) 551-1532

2. APPLICANT ELIGIBILITY AND STATEMENT OF AUTHORITY AND PIPELINE INFRASTRUCTURE SAFETY AND MODERNIZATION CAPABILITIES

GUC is a municipality-owned utility located in Greenville, North Carolina. GUC operates and maintains a gas distribution system that serves customers in the cities of Greenville, Winterville, and Ayden, and surrounding areas in Pitt County. GUC has a total of 750 miles of main, 490 miles of service pipe, and a riser count of 26,280. GUC operates under the North Carolina Utilities Commission (NCUC) General Statutes Chapter 62 and under the Rules and Regulations of Chapter 6 for Natural Gas in addition to meeting the requirements of 49 CFR Parts 191, 192, 193, and 199. GUC has the legal authority and capability to perform pipeline infrastructure repairs, rehabilitation, and replacement in accordance with 49 CFR § 192, and has the legal authority and capability to purchase equipment. In addition, GUC was awarded APGA's 2024 SOAR Gold status award due to worker safety, workforce development, system integrity and system improvement.

3. PROJECT SUMMARY

Summary

Project 1: GUC intends to remove all steel mains and vintage plastic pipes that are joined together with Dresser couplings. These mains total 3.23 miles of pipe, along with steel and PVC services. These facilities have been identified in GUC's Distribution Integrity Management Program (DIMP) as threats and risks to their system.

~~**Project 2:** GUC intends to acquire cross compression / vacuum purging equipment. This equipment will reduce exposures by capturing greenhouse gases and preventing them from being released into the atmosphere, ultimately eliminating the need for venting and flaring.~~

Project Prioritization

Project 1: This project addresses a major source of emissions as identified in both the DIMP and USDOT Gas Distribution System Annual Report (2022 GDAR included with this application). Eliminating existing and future sources of methane emissions will 1) reduce the risk of incidents, injuries, and possible fatalities from accidental ignition, 2) protect the environment and climate, and 3) reduce the economic losses. These grant funds will be used to address items identified in the DIMP that otherwise would be funded through GUC's ratepayers.

Based on the Economic Policy Institute calculation standards for the utility industry, the total estimated cost of \$3,182,650 for project 1 as described above indicates the following potential jobs:

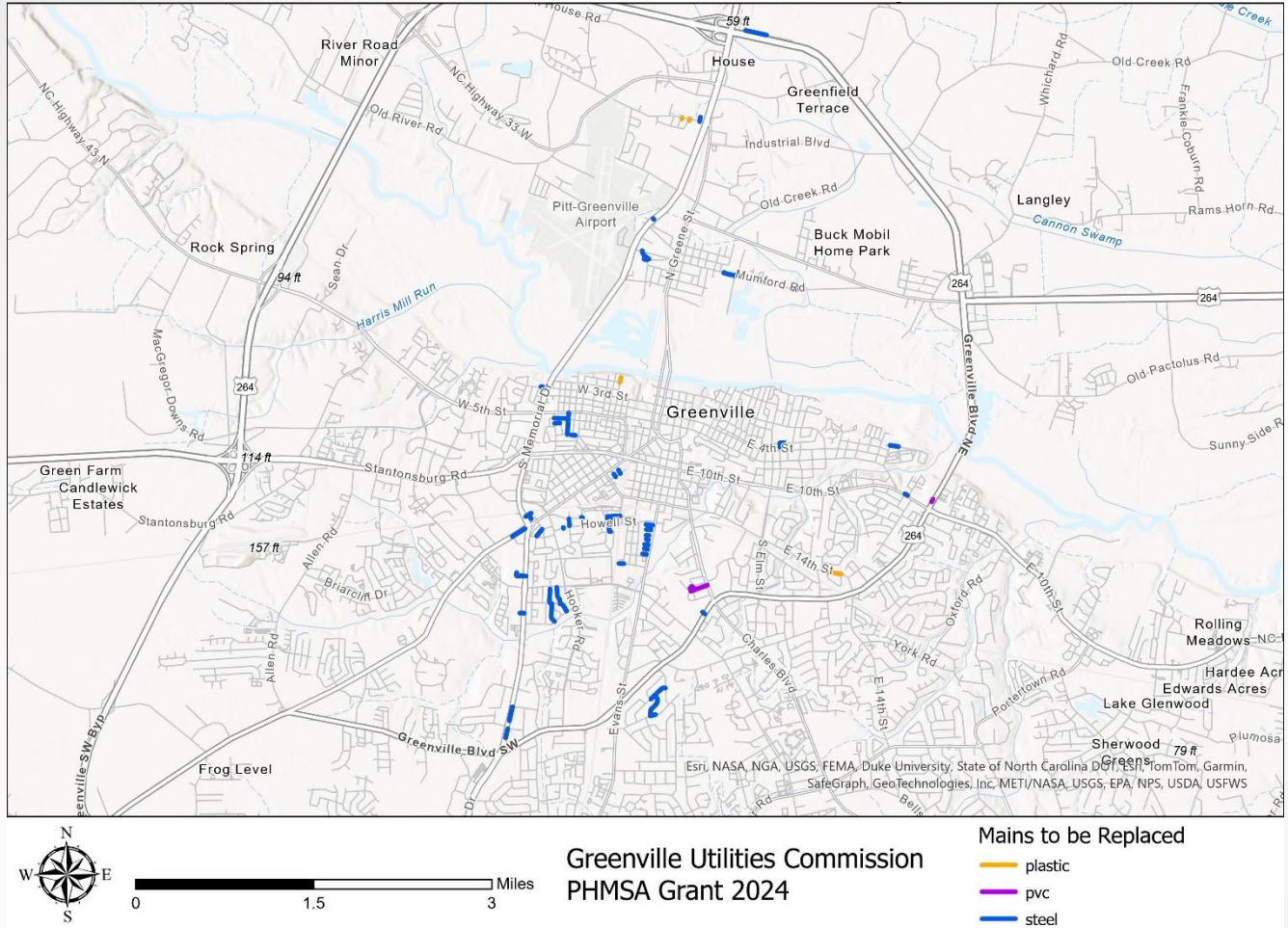
Direct Jobs	Supplier Jobs	Induced Jobs	Total Indirect Jobs
3.2	14.4	18.8	33.1

~~Project 2: This equipment purchase request would eliminate the need for venting and flaring during daily construction activities for facility replacement, thus preventing future greenhouse gas emissions.~~

Project Prioritization Table								
Priority #	Project Type	Project Name	Pipe Material Replaced	Miles Replaced	Infrastructure Age	Estimated Reduction in Annual Methane Emissions (kg/year)	Estimated Number of Jobs	Total Project Cost
1	Construction	Vintage Main Replacement	Steel, PE 3306, PVC	3.23	60+ years	4,090	61	\$3,182,650
2	Equipment Only	Cross Compression Equipment						\$44,704

Project Location

Greenville is located in eastern North Carolina. The proposed project is spread throughout the City of Greenville, representing a large portion of the gas system.



Confidentiality Disclaimer:

The information contained in this document is confidential, privileged and only for the use of the named client, and may not be used, published or redistributed without the prior written consent of Magnolia River.



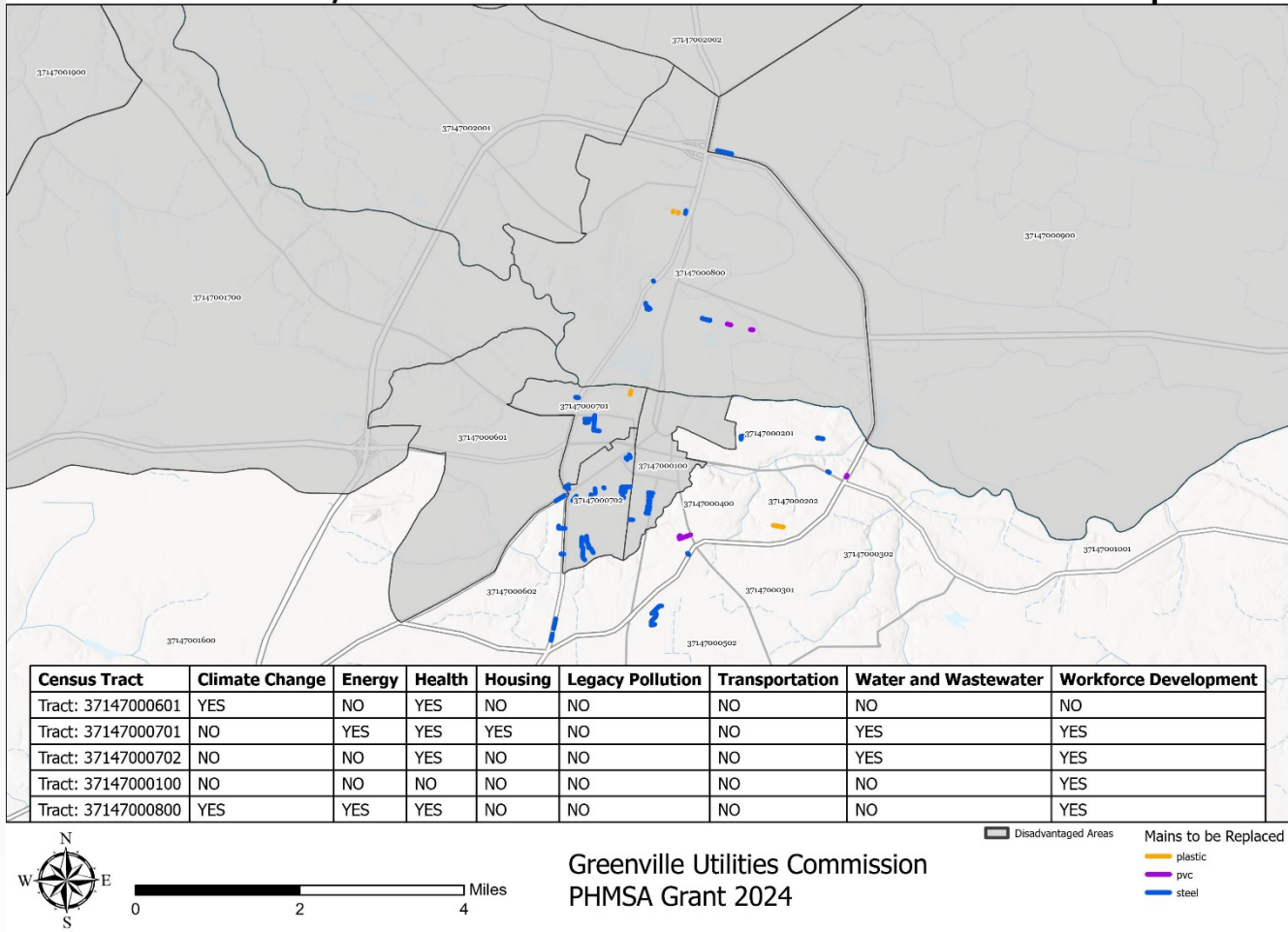
256.773.9420



www.magnolia-river.com

Most of the project area is within disadvantaged urban communities. Refer to the map below:

Greenville, NC Climate and Economic Justice Map



Confidentiality Disclaimer:

The information contained in this document is confidential, privileged and only for the use of the named client, and may not be used, published or redistributed without the prior written consent of Magnolia River.



256.773.9420



www.magnolia-river.com

Project Schedule

Greenville Replacement Schedule																
Event	Week															
	1	2	3	4	5	6	7	8	9	10	11	12	13 - 37	38	39	
Environmental Tier 2 Questionnaire	X															
Project Management	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Kickoff Meeting	X															
Horizontal Alignment	X	X														
Engineering		X	X	X	X	X										
Environmental Assessment		X	X													
HDD/JAB Design				X	X											
Permits (Highway and Railroad)				X	X	X										
Environmental Permitting				X	X	X	X									
Procurement						X	X	X	X	X						
Final Plans/Review/Adjustments						X	X									
Pre-Bid Meeting								X								
Bid Packages/Bid Review									X	X	X					
Pre-Construction Meeting												X				
Construction and inspection													X			
As-builts														X	X	

NOTES: *No right-of-way or easement acquisition is necessary for this project.*

The project schedule includes periods for community input through public comment.

Schedule includes time for all required project approvals.

Project Funding

GUC is requesting \$3,227,354 in federal funding for pipeline replacement and equipment. Please refer to attached SF-424C and 2024 Budget Narrative for detailed project funding information. The proposed project is scalable, and the scope can be adjusted to match funding available.

Project	Federal Funding Requested	Total Project Cost
Vintage Main Replacement	\$3,182,650	\$3,182,650
Cross Compression Equipment	\$44,704	\$44,704
Total		\$3,227,354 \$3,182,650

The first phase of this rehabilitation and repair project was completed between 2020-2022, and there is currently no funding available for additional construction at this time. This grant would expedite the completion of this project.

Project Eligibility

Project 1: This project is for the construction labor and material costs to repair, rehabilitate and replace natural gas pipeline distribution systems, and is eligible for funding under this NOFO.

~~Project 2: In addition, funding is requested for cross compression / vacuum purging equipment that will reduce methane emissions from this construction and on-going operations, thereby reducing potential incidents and avoiding economic losses on GUC's natural gas distribution system.~~

To the best of GUC's knowledge and belief, there are no ineligible grant project expenses included in this application.

4. DETAILED PROJECT DESCRIPTION

Project 1

As reported in the GDAR, GUC's distribution system contains approximately 2.67 miles (14,100') of steel main that is 3/4" – 1 1/2" in diameter. The system also contains 0.29 miles (1,530') of vintage plastic polyethylene (PE) 3306. These combined 2.96 miles of small diameter steel and PE 3306 mains (15,630') are joined together with approximately 400 Dresser couplings that leak and are prone to further leak as they age. In addition to the above main, the system also has approximately 0.27 miles (1,400') of polyvinyl chloride (PVC) gas mains. This proposed project also includes the replacement of 185 customer services. The service connections on the existing mains were accomplished with bolt-on taps, which are leak prone. These materials were installed in the system between 1962-1979 and have reached the end of their useable life. The proposed project will remove all leaking and/or leak prone materials from the system.

The replacement 2" PE mains (all fused joints) will be installed adjacent to the existing mains within public road or alley rights-of-ways. Once properly pressure tested, the replacement mains will be vacuum purged and put into service. Replacement of PE service lines with fused tapping tees will be installed

and the customers will be transferred to the new mains. The old mains will be purged utilizing cross-compression and abandoned in-place.

~~Project 2~~

~~GUC proposes to purchase cross compression equipment for use on 4" and smaller mains and services. It would be used to cross compress on pipe replacement projects and for vacuum purging for mains and services. GUC's crews complete this kind of work on a daily basis. This equipment would increase safety and decrease the amount of gas released into the atmosphere.~~

Safety Risk Profile

GUC's DIMP ranks compression fittings as the #5 greatest risk. Excavation damages and other outside forces account for Risks 1-4. Material failures also account for the second largest cause of leaks on the system behind excavation damage as reported in the 2022 GDAR. Vintage materials such as PVC and PE 3306 rank as the #19 risk. GUC conducts residential leak surveys on an accelerated three-year cycle (Business Districts are surveyed annually). Recent surveys indicate approximately 5.5 leaks per mile for these pipe sections.

Job Creation

This project will have direct job creation of three construction crews with 12 employees, plus additional support staff. GUC will also employ a full-time project representative, plus associated support staff. The indirect job creation will benefit suppliers, local lodging providers, and restaurants.

Environmental Review

Material failures such as compression couplings are responsible for a significant number of the leaks on both mains and services. Removing these fittings from the system will eliminate both existing and future leaks. One of the largest sources of methane emissions from operations is purging new mains and blowing down existing mains. The ability to cross-compress and vacuum purge the mains will eliminate these releases. Eliminating methane emissions to the atmosphere is beneficial to both the public and the environment.

Title VI of the Civil Rights Act

Title VI of the Civil Rights Act: GUC will comply with Title VI of the Civil Rights Act of 1964 and implementing regulations (49 CFR Part 21), the Americans with Disabilities Act of 1990 (ADA), and Section 504 of the Rehabilitation Act, and all other civil rights requirements and accompanying regulations.

5. PROJECTED OUTPUTS AND OBJECTIVES

1) This project will replace 3.23 miles (17,030') of leaking and leak-prone pipe (small diameter steel, vintage plastic, and PVC) varying in size from ¾" to 2" in diameter.

~~2) ZEVAC Mini LP unit will be purchased for cross compression and vacuum purging. This equipment reduces risk by capturing greenhouse gases and preventing them from being released into the atmosphere, ultimately eliminating the need for venting and flaring. The cost for a ZEVAC Mini LP unit~~

~~is \$40,640 (refer to attached ZVAC price quotation). The SF-424C (copy attached) also includes the material cost for the plastic pipe and appurtenances totaling \$282,192. Material costs are based upon recent purchases through competitive bidding with an allowance for inflation.~~

3) Based on the EPI employee multipliers, this project would create approximately three direct jobs, however GUC anticipates to have a direct job creation of three construction crews with 12 employees, plus additional support staff. GUC will also employ a full-time project representative, plus associated support staff. The indirect job creation will benefit suppliers, local lodging providers and restaurants, for an estimated 33 indirect jobs.

4) This project will be spread out through a large portion of GUC's system. Most project areas include disadvantaged urban communities. Examples include: 1) West Greenville area has two Historically Disadvantaged Indicators (Health and Economy), and 2) North Greenville has four Historically Disadvantaged indicators (Transportation, Health, Economy, and Equity). Refer to attached map for additional information on the Disadvantaged Communities that will benefit from this project. These grant funds will be used to address items identified in the DIMP that otherwise would be funded through the ratepayers. This grant will benefit all GUC customers by allowing rate increases to be delayed that would otherwise be necessary to address these leaking and leak-prone pipes.

5) The service area served by replacing 3.23 miles (17,030') of old steel, vintage plastic, PVC gas main, and appurtenances with new PE gas mains will allow GUC, the City of Greenville, and Pitt County to continue to work to create jobs and investments in the community. More than ever, companies looking to locate in rural eastern North Carolina rely on quality natural gas service. Greenville and Pitt County is home to East Carolina University and East Carolina Health System and Medical Center, both of which serve eastern North Carolina. East Carolina Health System and Medical Center is affiliated with Brody School of Medicine, seven community hospitals, an outpatient facility, home health, etc. East Carolina Health also has more than 500 providers and more than 100 practice locations, many of which rely heavily on the quality service provided by GUC. GUC's natural gas system also supports global companies ranging from advanced manufacturing, pharmaceutical and life science, and various diverse manufacturing industries that provide high quality jobs. Continuous upgrades and expansions are required to continue to sustain, retain, and create jobs in addition to being crucial to growth. The community is currently working on several economic development projects that will benefit from this project. The total number of jobs for active projects has surpassed 600, and would create jobs with wages well above the county's average wage. To continue to compete for these projects, GUC must continue to update their facilities.

6) Quantitative Estimate: According to the Average Emissions Factors for Natural Gas Pipelines, project 1's completion will result in an estimated reduction of 4,090 kg/yr. Based upon previous leak surveys, GUC has observed an average of 5.5 leaks per mile for these mains that will be eliminated by this project. Assuming a Dresser coupling every 50' on average for the PE3306 and steel mains, there are approximately 400 Dresser couplings within this project area. There are also 185 bolt-on service tees within the project scope. More than 700 potential leak sources can be eliminated by the project. ~~Lastly, the ZEVAC equipment captures methane that would be released during blow-downs and purging operations and prevents it from being released into the atmosphere.~~

6. PROJECT IMPLEMENTATION AND MANAGEMENT

GUC utilizes the American Public Gas Association Security and Integrity Foundation’s “Simple, Handy, Risked-based Integrity Management Plan” to develop their DIMP. The North Carolina Utilities Commission performed an inspection of the DIMP program in 2017 and found no violations. The current version of the DIMP was completed in 2020. GUC’s Gas Department staff is in the process of a thorough review and evaluation of their plan. The components planned for replacement with these grant funds have all been identified in the DIMP as threats.

Project design and construction management will be performed by professional firms under the direction of the Assistant Director and Gas Systems Engineer, both registered Professional Engineers in the State of North Carolina. The Systems Engineer will be responsible for monitoring compliance with contract requirements and review of monthly progress payments. A professional Inspector will be responsible for construction inspection and attendance during all required testing.

GUC’s Finance Department will provide financial auditing to ensure compliance with the terms of the grant funding.

7. STATEMENT CERTIFYING COMPLIANCE WITH EQUITY REQUIREMENT

GUC is committed to providing equity for its customers and will comply with EO 13985, Advancing Racial Equity and Support for Underserved Communities Through the Federal Government. Grant funds will be used to improve GUC’s natural gas distribution systems that serve historically underserved communities. Please refer to the Disadvantaged Areas Map for additional information on the Project Areas and the communities that will benefit from this project.

The GUC will comply with Executive Order (EO) 13985, Advancing Racial Equity and Support for Underserved Communities Through the Federal Government. Equity means the consistent and systematically fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous persons, Asian Americans and Pacific Islanders; other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality

8. DOMESTIC PREFERENCE / BUY AMERICA

GUC will use, to the greatest extent practicable, polyethylene, iron, aluminum, steel, cement, and other manufactured products produced in the United States in every contract, subcontract, purchase order, or subaward that is chargeable under this grant. There may be some miscellaneous fittings and appurtenances that do not meet the Buy America provisions. If necessary, GUC will provide those materials from their current stock or annual operating funds. GUC does not anticipate needing any exception or waiver of the Buy America provisions for these grant funds.