

1400 Coliseum Blvd. 36110-2400 • Post Office Box 301463 Montgomery, Alabama 36130-1463 (334) 271-7700 • FAX (334) 271-7950

FINDING OF NO SIGNIFICANT IMPACT

North Marshall Utilities Marshall County

SRF Project No. FS010230-03 March 4, 2021

The Alabama Department of Environmental Management has made \$1,164,000 in financial assistance available to North Marshall Utilities from the Drinking Water State Revolving Fund (DWSRF) loan program. In accordance with State and Federal regulations that govern the program, the Alabama Department of Environmental Management has conducted a review to assess the potential impacts upon the environment that may result from implementation of these sanitary sewer improvements.

North Marshall Utilities proposes a project to provide potable drinking water to residents in the Bishop Mountain community. The proposed project will consist of the construction of approximately 22,500 linear feet of new water main, construction of a 50,000 gallon elevated water storage tank, and a new booster pumping station with related appurtenances for all facilities, including installation of remote monitoring equipment. Completion of this project will address a public health concern by eliminating the use of contaminated residential wells, thus providing safe drinking water for the citizens that reside on Bishop Mountain.

The Department has determined that the proposed projects will not have a significant adverse impact on the environment and consequently is herewith issuing a Finding of No Significant Impact (FONSI) to support the use of SRF funds for the construction of the proposed projects. However, this determination may be reconsidered if significant adverse information concerning the potential environmental impacts of the proposed projects is discovered. Attached is an Environmental Assessment that details the proposed projects and their impact upon the environment.

Comments relative to these projects should be submitted in writing to Ms. Corynella L. Price, SRF Section, Permits and Services Division, Alabama Department of Environmental Management, P.O. Box 301463, Montgomery, Alabama 36130-1463, no later than 30 days after the date of public notice. The Department will not take formal action to proceed with the proposed projects without carefully evaluating any public comments concerning funding of the proposed projects.

Sincerely,

Lance R. LeFleur Director

LRL/EJR/CLP/kbh

Attachments



ENVIRONMENTAL ASSESSMENT Grant, Alabama FS0100230-03

A. Proposed Facilities and Actions

North Marshall Utilities proposes a project to provide potable drinking water to residents in the Bishop Mountain community. The proposed project will consist of the installation of approximately 22,500 linear feet of new water main, construction of a 50,000 gallon elevated water storage tank, and a new booster pumping station with related appurtenances for all facilities, including installation of remote monitoring equipment. Completion of this project will address a public health concern by eliminating the use of contaminated residential wells, thus providing safe drinking water for the citizens that reside on Bishop Mountain.

B. Existing Environment

North Marshall Utilities is located in the Town of Grant (Marshall County), Alabama (Huntsville-Decatur Combined Statistical Area), which is approximately twelve (12) miles north of Guntersville, Alabama. Grant is located on top of the plateau of Gunter Mountain at an elevation of 1,310 feet. It is also approximately thirty-one (31) miles east of Huntsville, Alabama and eighty-two (82) miles northeast of Birmingham, Alabama. The Town has a total area of 1.8 square miles (4.7 km²), all land. The soil composition of Marshall County is classified as Appalachian Plateau. A historical cave, Cathedral Caverns, lies just north of Grant near Kennamer Cove. The Town is concentrated along CR (County Road) 5 (Cathedral Caverns Highway (signed as Main Street in Grant) near the northern edge of Gunters Mountain, though The Town includes corridors along CR 5 southward across the mountain to the shore of Guntersville Lake and eastward along Baker Mountain Road to the edge of the mountain (per the US Census Bureau).

C. Existing Wastewater Treatment Facilities/System

North Marshall Utilities' water system includes a 3.0 million gallons per day (MGD) surface water treatment plant (WTP) supplied from Guntersville Lake (Honeycomb Creek). The WTP has two (2) clearwells with a combined capacity of 500,000 gallons. One (1) clearwell is 200,000 gallons with three (3) baffles and the other clearwell is 300,000 gallons with 3 baffles. Potable water is sold to the Swearingen Water System in addition to an emergency connection to Jackson County's water system. NMU's water system serves approximately 4,025 customers with the average demand posed by this customer base of 63,540 gallons per day (GPD), as of 2018. Per this information, an average of 15.0 GPD per customer was sold by NMU, which is in its expected range.

NMU's water system serves a geographical area of approximately 113 square miles (mi²). The system contains polyvinyl chloride (PVC), ductile iron (DI) and asbestos cement pipe varieties ranging in size from 1.0 inch to 12.0 inches in diameter. The system is also comprised of ten (10) storage tanks, three (3) elevated storage tanks, six (6) ground tanks and one (1) pressure tank of varying volumes (ranging from 500 gallons to 500,000 gallons). There are also eight (8) booster pump stations with capacities ranging from 70 gallons per minute (GPM) to 700 GPM.

Water treatment for NMU's water system is performed both chemically and mechanically. Chemical treatment consists of adding alum (for coagulation), chlorine dioxide and chlorine (for disinfection), lime and caustic soda (for pH adjustment), powdered activated carbon (for taste and odor problems), and *Calciquest* (for corrosion inhibition). Mechanical treatment consists of aeration, coagulation, flocculation, sedimentation, membrane filtration (per three 1.0 MGD skids) with conventional filtration (4 gpm/sq ft).

D. Need for Proposed Wastewater Improvements

Bishop Mountain is located south of Alabama Highway 1/U.S. Highway 431 and north of Guntersville Lake (Tennessee River) in Marshall County. There are approximately fifteen (15) residential homes located on the mountain. These residences do not have access to North Marshall's water system. North Marshall Utilities has an existing 6-inch water line on Alabama Highway 1/U.S. Highway 431. However, there are no water lines that serve customers residing on the mountain. Historically, these residences have been served by private, residential wells. In June of 2017, the Marshall County Health Department conducted a sanitary well survey of the fifteen (15) residential homes. Approximately fifty percent (50%) of the samples tested positive for fecal coliform or E. coli. Two (2) of the residences had no water available for testing in their well due to water outage. These two (2) residences were dependent upon bottled water at the time. Residents in this area are simply in serious need of reliable, potable water, as existing wells are no longer sustainable. Connecting to NMU's water system is the most reasonable option to serve the people with clean drinking water and water to perform daily household functions, as the circumstances in this area have become desperate.

E. Alternative Analysis

a. No Action – No Solution Implemented.

(Not Chosen) This alternative is not recommended as it proposes to continue to allow the residents on Bishop Mountain to continue in the condition described, saddled with contaminated wells and many utilizing bottled water for sanitary drinking water needs due to inaction regarding implementing a solution. These residents would continue to face a public health crisis with little to no water available from their private wells; most of which have become (or are increasingly becoming) contaminated with various water-borne pathogens. North Marshall Utilities has historically supplied water to meet drinking water needs in these types of difficult areas. Not to do so for the Bishop Mountain residents would be a departure from the precedence set with previous areas with similar challenges. Therefore, this is not considered a viable option.

b. Installation of Ductile Iron (DI) Pipe, Booster Pump Station, Elevated Storage Tank and SCADA to connect the Bishop Mountain Community to the NMU Water System.

(Not Chosen) This alternative is not recommended as it proposes the use of ductile iron pipe for the water transmission mains, which is not cost-effective for NMU. DI pipe is ideal to attain the desired alignment route up Bishop Mountain (a rocky terrain), as the road will likely meander from one direction to another in progressing upward. It is also the preferred pipe material when pipe construction is in rocky areas, as it resists damage to the pipe wall from rocks consistently. Specifically, having iron bends with typical DI water mains provide strength and ductility in the pipelines at the pipe bends, where pressure increases occur with the points of directional change along the pipeline. Labor costs for DI water main construction are much higher than that of PVC (polyvinyl chloride) pipe, though repair costs for DI pipe are comparatively lower than that of PVC pipe due to its durability while in use. PVC pipe is a flexible, plastic pipe that is commonly used in a wide variety of applications due to construction and connection ease as well as strength, durability and low cost, particularly with a water distribution application. NMU currently possesses the equipment and materials necessary to repair PVC pipe.

There is no regulatory requirement indicating that DI pipe is favored over PVC pipe (or alternatively) with water transmission applications. Therefore, to reap some of the benefits of ductile iron pipe and flexible pipe, a hybrid construction of HDPE (High-Density Polyethylene) pipe and DI pipe was also considered. HDPE pipes are similar to PVC pipes, in being commonly used, flexible, plastic pipe; yet, of a different chemical composition and installation process. The HDPE pipe was thought to be advantageous; given NMU also has the equipment and materials necessary to repair this type of piping, just as with the PVC pipe. However, HDPE has special requirements for anchoring this piping in the ground, particularly when the desire is to maintain specific slopes for a steep construction route. The overall cost of using HDPE pipe is approximately \$11.00 more per linear foot than the price of PVC pipe. In addition, ductile iron pipe is approximately \$15.00 more per linear foot than that of PVC pipe. A cost estimate incorporating the use of DI Pipe alone for the estimated 22,500 linear feet of water line needed, could easily be more than \$2.02M. A hybrid combination of HDPE/DI pipe will be of a similar cost or more. The basic considerations for extending water service to an area can be summarized in two main categories, distribution and storage.

The piping cost (as the main element to distribution of the water) only represents one-third of the "distribution" category of the necessary improvements. Yet, its singular cost far outweighs the other two-thirds remaining to consider, which is pumping/water pressure (i.e., a booster pumping station) and remote operational monitoring (i.e., SCADA - Supervisory Control and Data Acquisition) system modifications. However, the "storage" category remains a category to address with any would be solution. A water storage tank is essential to having an ample water supply readily available to pump up the mountain to the residents. Therefore, this alternative has the desired operational efficacy per the materials and facilities proposed with this alternative. Yet, it is not the most cost-effective approach when considering construction and maintenance costs.

c. Installation of Polyvinyl Chloride Pipe, Booster Pump Station, Elevated Storage Tank and SCADA to connect the Bishop Mountain Community to the NMU Water System.

(Chosen Alternative) This alternative addresses the needs expressed herein by proposing the same facilities identified in the first action alternative, yet with PVC pipe proposed for the water main construction instead of DI pipe, HDPE pipe or a combination pipeline (consisting of these two pipe materials). The proposed solution will consist of the construction of approximately 22,500 linear feet of new 6-inch PVC water main to connect the Bishop Mountain residents to a proposed 50,000 gallon elevated water storage tank. Suitable pressure will also have to be added to this new water line in order to reach residents. Therefore, a new booster pumping station (with related appurtenances) will be necessary to move the water over an approximate 480 feet elevation change (from the base of the mountain at the proposed pumping station site on US Highway 431) to the top of the mountain. SCADA modifications will also be utilized to provide timely correction of water quality and/or water supply issues. With this option, Bishop Mountain residents will be afforded safe, reliable drinking water in the most cost-effective approach for North Marshall Utilities. Therefore, this alternative is deemed a feasible solution.

F. Environmental Justice

As defined by the Environmental Protection Agency (EPA), environmental justice is the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

Presidential Executive Order 12898, "General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.

Low Income EJ (environmental justice) populations are significantly located in and around the Town of Grant, which includes the service area of North Marshall Utilities' water system. However, as presented in the alternative analysis, proactive measures are selected to address the current and future water supply demands, while meeting permit requirements. The alternatives presented were evaluated for their environmental effect within the service area and their effect on all citizens with respect to health benefit, cost and time efficiency, if implemented.

G. Environmental Consequences; Mitigative Measures

The proposed project should not have an adverse environmental impact except for minimal impact during construction, which will take place in areas, which have been previously disturbed. Construction will result in a measurable amount of noise and dust and will be minimized through the development and implementation of Best Management Practices (BMPs).

Endangered Species and Critical Habitat

The U.S. Fish and Wildlife Service (USFWS) was consulted for this project and indicated that no federally listed species/critical habitat are known to occur in the project area. They further indicated that, as described, the project will have no significant impact on fish and wildlife resources. However, if project design changes are made, submittal of new plans is required for further review. Best Management Practices specific to this project were also recommended and provided.

Historical and Archaeological

The Alabama Historical Commission (AHC) was consulted for this project and noted that there are two (2) known archaeological sites in the vicinity of the project area. Therefore, a professional archaeological survey was required to aid their review and determination, investigating all areas of proposed new ground disturbance and identifying any cultural resources that may be present therein.

The archaeological survey was performed and The Commission determined that the project activities will have no effect on cultural resources eligible for or listed on the National Register of Historic Places. Therefore, they concurred with the proposed project activities.

Wetlands and Floodplains

The U.S. Department of the Army Corps of Engineers (USACE) was consulted for this project and indicated that the subject activity may involve work in wetlands/waters of the U.S. and, therefore, a Department of the Army permit pursuant to Section 404 of the Clean Water Act (33 CFR Part 328) may be required. They further stated that they had no objections to this applicant receiving grant funds for the proposal.

Regional Planning Agency

The Top of Alabama Regional Council of Governments (TARCOG) was consulted and indicated that the project will serve a prime regional goal and reason for water services extension. They also indicated that the project serves a tier one goal in a priority regional services need category - upgrading, expanding, and/or optimizing the efficiency of area water system utilities. Therefore, they found the project to be in conformance with and in support of, critical utility service needs recognized in the utility planning efforts within the TARCOG region. Therefore, they concurred with and endorsed this system expansion project.

Tennessee Valley Authority

The Tennessee Valley Authority (TVA) was consulted for this project and indicated that it appears that no TVA property is being requested for the project. It was further stated that activities that do not create new or additional obstruction are not new obstructions and would not require approval under Section 26a of the TVA Act. Therefore, the applicant is not required to seek TVA approval (permitting), unless the applicant determines that this project's proposed activities will create a new obstruction or be located on TVA property.

At that time, a completed application, final plans with detailed drawings and an application fee would be required of the loan applicant for TVA review.

H. Public Participation: Sources Consulted

North Marshall Utilities held a public meeting to discuss the aforementioned improvements proposed for 2019 DWSRF loan funding on February 26, 2019 at the NMU business office. Attendees from the public were present with a detailed project discussion given, inclusive of a project overview and cost estimate, potential funding sources ARC (Appalachian Regional Commission Grant), ADECA (Alabama Department of Economic Development) and The Department (via the DWSRF) as well as the applicability of new rates and fee structures. Concern for future fire protection per the new infrastructure improvements was the only additional concern expressed by community residents.

Sources to be consulted about these projects for information or concurrence include the following:

Alabama Department of:

Agriculture and Industry Conservation – Game & Fish Economic and Community Affairs (ADECA) Public Health

State Soil and Water Conservation
Alabama Forestry Commission
Alabama Historical Commission
US Army Corps of Engineers
US Department of Interior – Fish and Wildlife Service
US Environmental Protection Agency
Marshall County Health Department



ALABAMA HISTORICAL COMMISSION

SRF Section

FEB 19 2020
Permits & Services
Division

468 South Perry Street Montgomery, Alabama 36130-0900 334-242-3184 / Fax: 334-240-3477 Lisa D. Jones Executive Director State Historic Preservation Officer

May 30, 2019

Kelley Keeton Taft Kelley Network 105 W. 2nd Street Tuscumbia, AL 35674

Re: AHC 19-0838

Bishop Mountain Line Marshall County

Dear Ms. Taft:

We concur with the above referenced project provided all construction activities will occur within either the highway right-of-way or in previously disturbed areas. Any area that is to be involved and does not fall into one of the above categories will require a cultural resource assessment by a professional archaeologist. Submit the resulting report to our office for review and determination prior to project initiation.

However, should artifacts or archaeological features be encountered during project activities, work shall cease and our office shall be consulted immediately. Artifacts are objects made, used or modified by humans. They include but are not excluded to arrowheads, broken pieces of pottery or glass, stone implements, metal fasteners or tools, etc. Archaeological features are stains in the soil that indicate disturbance by human activity. Some examples are post holes, building foundations, trash pits and even human burials. This stipulation shall be placed on the construction plans to insure contractors are aware of it.

We appreciate your commitment to helping us preserve Alabama's historic archaeological and architectural resources. Should you have any questions, please contact Amanda McBride at 334.230.2692 or Amanda.McBride@ahc.alabama.gov. Have the AHC tracking number referenced above available and include it with any future correspondence.

Sincerely,

Lee Anne Wofford

Deputy State Historic Preservation Officer

LAW/AMH/nw



DEPARTMENT OF THE ARMY CORPS OF ENGINEERS, NASHVILLE DISTRICT WESTERN REGULATORY FIELD OFFICE 2424 DANVILLE ROAD SW SUITE N DECATUR AL 35603

SRF Section
OCT 14 2020
Permits & Services
Division

July 1, 2019

SUBJECT: File No. LRN-2019-00385; Unnamed Tributaries of Tennessee River Mile 349.8, Right Bank, North Marshall Utilities DWSRF Project, Marshall County, Alabama

The Kelley Group Attn: Bartley Taft, P.E. 105 W. 2nd Street Tuscumbia, Alabama 35674

Dear Mr. Taft:

This is in response to your April 4, 2019, request for our comments regarding the subject project.

The U.S. Army Corps of Engineers (USACE) has regulatory responsibilities pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) and Section 404 of the Clean Water Act (33 U.S.C. 1344). Under Section 10, the USACE regulates all work in, or affecting, navigable waters of the U.S. Under Section 404, the USACE regulates the discharge of dredged and/or fill material into waters of the U.S. (33 CFR Part 328).

A review of the information provided indicates the subject activity may involve work in wetlands/waters of the U.S.; therefore, a Department of the Army permit may be required.

We understand the project proposal may not have specific design plans at this time, and this inquiry is an initial review to obtain grant funds. We have no objections to the applicant receiving grant funds for the proposal.

If you have questions regarding this matter, please contact Eric Sinclair at the above address or telephone (256) 350-5620. Thank you for the opportunity to review and comment on this proposed project.

Sincerely,

Timothy C. Wilder Chief, West Branch Regulatory Division

Regulatory Division

U.S. Army Corps of Engineers

TA/JG 2019-TA-0825





April 4, 2019

SRF Section
FEB 19 2020
Permits & Services
Division

THE KELLEY GROUP

105 W. 2nd Street Tuscumbia, AL 35674 www.kelleynetwork.com

P: 256.248.7030 • F: 1.866.225.7488



William J. Pearson U.S. Fish and Wildlife 1208-B Main Street Daphne, Alabama 36526

RE: North Marshall Utilities - DWSRF Project - REQUEST FOR CONCURRENCE

Dear Mr. Pearson:

North Marshall Utilities (NMU) seeks to extend water service to existing residences on Bishop Mountain. These residences have contaminated drinking water wells. NMU is seeking Drinking Water State Revolving Fund (DWSRF) assistance from the Alabama Department of Environmental Management (ADEM). We respectfully request your review of this project for concurrence.

The project includes installing new 6" water lines, a 50,000 gallon elevated storage tank, a booster pump station and SCADA.

All work will be located within previously disturbed areas with existing water lines and pump stations. Project footprint is located within existing road right-of-way and property owned by North Marshall Utilities. We have reviewed the USFWS website for endangered species in the area. No critical habitats are located in the project area. In an effort to expedite the process, we have included project maps depicting the sites for water line replacement.

After review, feel free to email the letter of concurrence to kelley@kelleynetwork.com.

Thank you for your time and consideration of this project.

Respectfully submitted,

Bartley W. Taft, P.E.

Attachments



U.S. Fish and Wildlife Service 1208-B Main Street – Daphne, Alabama 36526 Phone: 251-441-5181 Fax: 251-441-6222

No federally listed species/critical habitat are known to occur in the project area. As described, the project will have no significant impact on fish and wildlife resources. IF PROJECT DESIGN CHANGES ARE MADE, PLEASE SUBMIT NEW PLANS FOR REVIEW. We recommend use of best management practices specific to your project (See http://www.fws.gov/daphne/section7/bmp.html).

William J. Pearson, Field Supervisor

JUN 0 3 2019

Date

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TOP OF ALABAMA REGIONAL COUNCIL OF GOVERNMENTS

Area Agency on Aging • Economic Development District • Regional Planning Agency

Mary Caudle President Thornton Stanley, Jr. Vice President

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Nancy D. Robertson - Executive Director

05/29/19

Joe Campbell, Chairman North Marshall Utilities 4141 Cathedral Caverns Highway Grant AL 35747



CLEARINGHOUSE MEMO

RE: Marshall County: North Marshall Utilities: Alabama Drinking Water State Revolving Fund (DWSRF): Loan Application:

The Top of Alabama Regional Council of Governments Board of Directors held its regular Meeting on Tuesday, May 28, 2019; and, in accordance with Executive Order 12372 and State Executive Order Eight, the above-referenced Action was reviewed by the Clearinghouse.

Per the submitted review materials, all of the proposed sites/upgrades and construction appear as in/on previously disturbed areas. The project will extend water service to existing residences on Bishop Mountain whose residences have contaminated drinking water wells. The Project will install new 6" water lines, a 50,000 gallon elevated storage tank, a booster pump station and SCADA. Construction Best Management Practices (CBMPs) will be required to be provided and maintained by the Contractor, and will be included in the Construction Contract Documents.

The project is based on a professionally prepared engineering analysis, and this review assumes the above facts and, that the related ER finds that the execution of the above listed activities all meet ADEM/EPA environmental guidelines. As the project's activities will serve a vital public health related need by providing the newly served area with safe, public, potable water service, and also increase the system's general capacity, it is deemed both a necessary and desirable action.

The projects primary action, removing residences from dependence on contaminated well source water is a prime regional goal and reason for water services extension. As such, the Project serves a tier one goal in a priority regional services need category – upgrading, expanding, and/or optimizing the efficiency of area water system utilities; and, we therefore find that this project to be in conformance with, and support of, critical utility service needs recognized in utility planning efforts within the TARCOG region; and, we concur with, and endorse this system expansion project. If we can be of further assistance, please contact us.

Sincerely,

D. C. Schafer

Area-wide Clearinghouse

Cc: Bartley W. Taft, P.E.: The Kelly Group



Tennessee Valley Authority, Post Office Box 1010, Muscle Shoals, Alabama 35662-1010

May 16, 2019



Mr. Bartley W. Taft, P.E. The Kelley Group On Behalf of North Marshall Utilities 105 W. 2nd Street Tuscumbia, Alabama 35674

Dear Mr. Taft:

NORTH MARSHALL UTILITIES DRINKING WATER STATE REVOLVING FUND (DWSRF) APPLICATION – MARSHALL COUNTY, ALABAMA

We have reviewed your April 04, 2019 letter notifying the Tennessee Valley Authority (TVA) of the North Marshall Utilities application for state revolving funds to extend water service to existing residences on Bishop Mountain. We understand the project will include installing new 6' water lines, elevated storage tank, a booster pump station, and SCADA.

Based on the information submitted, it appears that no TVA property is being requested for the project. Activities that do not create new or additional obstruction are not new obstructions and would not require approval under Section 26a of the TVA Act. If you determine that any of the proposed activities will create a new obstruction or be located on TVA property, then the proposal would require approval from TVA. A completed application, final plans with detailed drawings, and appropriate application fee should be sent to TVA for review.

We appreciate the opportunity to work with you and look forward to working with you in the future. If you have any additional questions or concerns, please feel free to contact me at (256) 386-3456.

Sincerely,

Kenley Austin Program Manager

Reservoir Land Use & Permitting

