



Alabama Department of Environmental Management
adem.alabama.gov

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

The Alabaster Water Board
Shelby County

DWSRF#: FS010261-01

November 25, 2019

The Alabama Department of Environmental Management has made \$10,125,000 in financial assistance available to the Alabaster Water Board using funds 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 potential impacts upon the environment that may result from implementation of these drinking water system improvements.

The Alabaster Water Board proposes improvements to its existing water production, storage, and distribution system. Improvements will include development of a new water production well, water storage tank rehabilitation, well and water plant rehabilitation, booster pumping station capacity upgrade and rehabilitation, installation of new water mains that are adequately sized to handle the demand and pressure surges throughout the system, installation of a backup generator, SCADA and security improvements, water meter replacement with smart meters and smart meter registers, a new office, operations, and future water treatment plant facility. Proposed improvements will insure continued provision of quality drinking water to all service area customers.

The Department has determined that proposed projects will not have significant adverse impact upon the environment and consequently is herewith issuing a Finding of No Significant Impact (FONSI) in support of the use of SRF funds for construction of proposed projects. However, this determination may be reconsidered if significant adverse information concerning the potential environmental impacts of 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 Mr. William Lott, SRF Section, Permit 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,

A handwritten signature in black ink that reads "Lance R. LeFleur".

Lance R. LeFleur
Director

LRL/DKB/WAL/kbh



ENVIRONMENTAL ASSESSMENT
Alabaster Water Board
FS010261-01

A. Proposed Facilities and Actions

The Alabaster Water Board proposes improvements to its existing water production, storage, and distribution system. Improvements will include development of a new water production well, water storage tank rehabilitation, well and water plant rehabilitation, booster pumping station capacity upgrade and rehabilitation, installation of a backup generator, SCADA and security improvements, water meter replacement with smart meters and smart meter registers, a new office, operations, and future water treatment plant facility. Proposed improvements will insure continued provision of quality drinking water to all service area customers.

B. Existing Environment

The Alabaster Water Board was established in 1955 and operates a potable water distribution system that has been continuously updated over that time. The Alabaster Water Board's distribution currently serves an area of approximately 52 square miles within western Shelby County, Alabama.

C. Existing Drinking Water Facilities/System

Existing Water Production Facilities

Supply for the Board's system is provided by three wells which are owned and operated by the Board and with water purchased from the Shelby County, Alabama and the City of Bessemer, Alabama water systems. The combined capacity of the three wells is 4.52 million gallons per day. Water from both Well No. 1 and Well No. 2 is filtered and chlorinated at a water treatment facility located at the Well No. 1 site. Water from Well No. 3 is filtered and chlorinated at a water treatment facility located at the Well No. 3 site. Water is delivered to the system by service pumps at the treatment facilities. The combined capacity of the service pumps is 10.38 million gallons per day. Service pumps are operated intermittently to allow the wells to restore the water levels in the chlorine contact basins at the treatment plants. The Board purchases water from the Shelby County water system under a contract which may provide up to 2 million gallons per day. The Board also purchases water from the Bessemer Utilities under a contract.

Existing Water Storage Facilities

Water supply and pressure is comprised of five different pressure zones. Water storage is provided by eleven reservoirs or storage tanks with a combined capacity of 10.7 million gallons.

Existing Water Distribution Facilities

The Board's distribution system consists of 2-inch to 24-inch diameter water mains. Most of the mains 8 inches or larger are cement lined cast iron or ductile iron pipe. A large portion of the 6 inch and smaller lines are PVC. The distribution system provides service to approximately 13,328 customer connections.

D. Need for Proposed Improvements

In an effort to be proactive and address needs within the water system various projects have been identified by the Alabaster Water Board as necessary for the continued provision of quality drinking water to the service area customers.

Proposed Water Production Improvements

1. Update the chemical feed systems, pumps, electrical components, building ventilation, valves, and backwash systems at the water treatment facilities.
2. Drill a new water production test well and if deemed satisfactory develop as a new water production well with the goal of producing 3000 gallons per minute or greater.
3. Construction of a new Alabaster Water Board operations and maintenance facility.
4. In addition to the new test/source well the Alabaster Water Board will construct a new 350,000 gallon clearwell to allow for proper disinfection of the water supply.

Proposed Water Storage Improvements

Paint and rehabilitate existing water storage tanks, and update the electrical/ SCADA instrument and control components.

Proposed Water Distribution Improvements

1. Install new water mains that are adequately sized to handle the demand and pressure surges throughout the system. Adequate isolation valves will also be installed to minimize service disruptions.
2. Replace the existing meter registers with new smart meters and smart meter registers to match existing meter manufacturer equipment to more accurately measure water provided to customers.
3. Install new pumps with VFD's to meet demands and minimize pressure surges and optimize energy consumption. Install emergency generators, SCADA, and up to date electrical components.

E. Alternative Analysis

Consideration was given to various viable and potential alternative solutions to proposed projects.

1. New Water Mains

- a. No Action: The existing water system piping is past its useful life and cannot withstand pressure surges. Without the necessary work the issues will persist and cause compliance issues, therefore the no action alternative was not selected.
- b. Ductile Iron Pipe: An alternative for using ductile iron pipe was considered in the improvements to the new water mains. Due to the affordable costs of ductile iron piping, this alternative was found to be economically feasible and the best option for the project.
- c. PVC Pipe: An alternative for using PVC pipe was considered in the improvements to the new water mains. Due the costs of PVC piping, this alternative was found to be economically infeasible.
- d. HDPE Pipe: An alternative for using HDPE pipe was considered in the improvements to the new water mains. Due the costs of HDPE piping, this alternative was found to be economically infeasible.

2. Replace Existing Meter/Registers

- a. No Action: The existing water meter registers are nearing the end of their useful life. By not replacing the existing water meters/registers, the system will continue to have an increase in water loss, and decreases in the volume of billable water entering the distribution system, therefore this alternative was not feasible.
- b. Existing Manufacturer Meter/Register Replacement: Using the existing manufacturer for meter/register replacement was found to be the most affordable option and thus was selected.
- c. Manufacturer 2 Full Meter Replacement: Using manufacturer 2 for a full meter replacement was considered. The cost to replace the selected meters within the distribution system with complete meter assemblies from manufacturer 2 makes this option economically infeasible:
- d. Manufacturer 3 Full Meter Replacement: Using manufacturer 3 for a full meter replacement was considered. The cost to replace the selected meters within the distribution system with complete meter assemblies from manufacturer 3 makes this option economically infeasible:

3. Existing Water Storage Tanks Rehabilitation

- a. No Action: The existing water storage tanks have reached the time to perform necessary rehabilitations. Without the necessary rehabilitation, the water storage tanks will continue to deteriorate to the point of disrepair, therefore this alternative was not selected.
- b. Rehabilitation of Existing Water Storage Tanks: Rehabilitating the existing tanks was found to be the most affordable option, therefore this alternative was selected.
- c. New Water Storage Tanks: The construction and installation of new water storage tanks makes this option economically infeasible, therefore this alternative was not selected.
- d. New Water Storage Tanks with Booster Stations: The construction and installation of new water storage tanks with booster stations makes this option economically infeasible, therefore this alternative was not selected.

4. Existing Booster Station Rehabilitation

- a. No Action: The existing booster stations are in need of pump upgrades, electrical upgrades, and building upgrades. If the rehabilitation to the booster stations are not completed the current issues will persist and cause compliance issues, therefore the no action alternative was not selected.
- b. Rehabilitation of Existing Booster Stations: Rehabilitating the existing booster station was found to be the most affordable option, therefore this alternative was selected.
- c. New Booster Stations: The construction and installation of new booster stations makes this option economically infeasible, therefore this alternative was not selected.
- d. Control Valves: The construction and installation of control valves makes this option economically infeasible, therefore this alternative was not selected.

5. Water Treatment Facility Projects

- a. No Action: The existing facilities have outdated chemical feed systems, pumps, electrical components, building ventilation, valves, and back wash systems. If the rehabilitation to the facilities are not completed the current issues will persist and cause compliance issues, therefore the no action alternative could not be selected.
- b. Rehabilitation of Existing Water Treatment Facilities: Rehabilitating the existing water treatment facilities was found to be the most affordable option, therefore this alternative was selected.
- c. New Water Treatment Facilities at Current Sites: The construction and installation of a new water treatment facility at a current site makes this option economically infeasible and therefore was not selected.
- d. New Water Treatment Facility at New Site: The construction and installation of a new water treatment facility at a new site makes this option economically infeasible and therefore was not selected.

6. Operations and Maintenance Facility Project

- a. No Action:
- b. New Operations and Maintenance Facility: Constructing a new operations and maintenance facility was found to be the most affordable option, therefore this alternative was selected.
- c. Rehabilitation of the Existing Operations and Maintenance facilities: Rehabilitation the existing operations and maintenance facilities was found to be economically infeasible and therefore was not selected.
- d. Replacement of the Existing Operations and Maintenance Facilities on Current Sites: Replacing the existing operations and maintenance facilities was found to be economically infeasible and therefore was not selected.

7. New Test/Production Well and Clearwell

- a. No Action:
- b. Purchase more water in the future from the Bessemer Water system. The source of this water is the Black Warrior River and requires much more treatment than ground water which results in higher cost for production and therefore purchase of water from this system and therefore this alternative was not selected.
- c. Purchase more water in the future from the Shelby County Water System. The source of this water is the Coosa River and requires much more treatment than ground water which results in higher cost for production and therefore purchase of water from this system and therefore this alternative was not selected.
- d. Drill and develop a new well with a clearwell for disinfection. This is the most cost effective alternative and therefore it was selected.

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.

While Environmental Justice maps for proposed project locations reveal an overall area greater than 50% minority and of low to moderate income, proposed water system improvements will benefit all service area customers and ensure continued provision of safe quality drinking water. Various proposed alternatives were carefully evaluated in terms of their effect upon all citizens within the service area, as well as, upon the environment with respect to health benefit, cost, and time efficiency, if implemented.

G. Environmental Consequences; Mitigative Measures

Proposed project activities represent no overall or lasting adverse environmental impact except as normally and minimally associated with construction activities. Some short term effects including increased noise levels, dust, exhaust emissions, increased stream turbidity and/or the disruption of normal traffic flow maybe of minimal impact and occur during actual construction. While all such effects cannot be totally avoided, adherence to Best Management Practices (BMPs) during the course of the project will significantly minimize such conditions. Traffic disruptions will be greatly lessened by conformance to an approved traffic maintenance plan.

Endangered Species and Critical Habitat

Project description was submitted to the U.S. Fish & Wildlife Service (USF&WS) for review, comment, and concurrence. In response, USF&WS issued their concurrence with the project on July 10, 2019, and stated that there are no federally listed species/critical habitat known to occur in the project area. They also recommended that Best Management Practices (BMPs) specific to project/construction activities (as presented) are implemented for these projects.

Historical and Archaeological

On July 10, 2019, the Alabama Historical Commission (AHC) gave concurrence of overall project scope and nature, upon condition that all construction activities occur within either the highway right-of-way or in previously disturbed areas. Further, the AHC stipulated that should artifacts or archaeological features be encountered during the project activities, work shall cease and the AHC office shall be consulted immediately. This stipulation shall be placed on the construction plans to insure contractors are aware of it.

Wetlands and Floodplains

U.S. Army Corps of Engineers (USACOE) was also solicited for review of proposed project work. USACOE concluded their review and determined that COE permits were not required for the proposed work as stated in the USCOE letter dated September 4, 2019

Project concurrence dated July 16, 2019, was also received on from the Regional Planning Commission of Greater Birmingham.

Public Participation: Sources Consulted

A Public Meeting was held at 5:30 p.m. on Thursday, September 12, 2019, in the Alabaster Water System Board Room at 213 1st Street North, in Alabaster, Alabama. The meeting provided an open forum for public discussion of information and concerns related to the nature, scope, and justification of improvements proposed for funding by the DWSRF loan. No objections or adverse comments to proposed project work were expressed.

Sources to be consulted about this project for information or concurrence include the following:
Alabama Department of:

- Agriculture and Industries
- Conservation and Natural Resources
- 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

TA/EL

2019-TA-1108

Wm



June 18, 2019

Wm

Mr. William J. Pearson
U.S. Department of the Interior
Fish and Wildlife Service
1208-B Main Street
Daphne, Alabama 36526

Dear Mr. Pearson;

My name is Timothy Rylee, P.E., and I work for InSite Engineering, LLC. We are consulting engineers for the Alabaster Water Board.

The Alabaster Water Board has proposed the following projects: water main improvements, water storage tank rehabilitation, well and water plant rehabilitation, new water supply well, booster pumping station upgrade and rehabilitation, installation of a backup generator, SCADA and security improvements, water meter/register replacements with smart meters/registers, a new office, operations, and future water treatment plant facility, and will be in accordance with ADEM regulations and standards.

LOCATION

Please find attached a vicinity map of the existing water system network, water treatment plant and raw water pumping station. The locations for each corner are as follows: NW corner: Township 20S, Range 4W, Section 8; SW corner: Township 22S, Range 4W, Section 17; SE corner: Township 24N, Range 15E, Section 5; and NE corner: Township 20S, Range 1E, Section 18. For reference, the Alabaster Water Board's water treatment plants are located in Township 21S, Range 3W, Section 2.

SUMMARY

In accordance with ADEM DWSRF funding procedures we are requesting concurrence of this modification from your agency. According to the DWSRF Applicants Instructions a response from your agency is required to meet all standards and guidelines for all applicants. Your help in this matter is greatly appreciated.

Please respond to care of Tim Rylee, InSite Engineering, LLC or via email at tim@insiteengineering.org

Sincerely,
InSite Engineering, LLC

T. Rylee

Timothy R. Rylee, P.E.

File 19015.00/2019DWSRF/FWS Letter



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
William J. Pearson, Field Supervisor

JUL 10 2019

Date

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ALABAMA HISTORICAL COMMISSION

468 South Perry Street
P.O. Box 300900
Montgomery, Alabama 36130-0900
334-242-3184 / Fax: 334-240-3477

Lisa D. Jones
Executive Director
State Historic Preservation Officer

July 10, 2019

Timothy R. Rylee
Insite Engineering
5800 Feldspar Way
Hoover, AL 35244

Re: AHC 19-1041
Water Distribution system and Water Treatment Facilities upgrades
Jefferson County

Dear Mr. Rylee:

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



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, MOBILE DISTRICT
218 SUMMIT PARKWAY, SUITE 222
HOMEWOOD, ALABAMA 35209

September 4, 2019

North Branch
Regulatory Division

SUBJECT: Department of the Army Jurisdictional Determination, File Number SAM-2019-00578-JDC, Alabaster Water Board

Alabaster Water Board
% InSite Engineering, LLC
Attention: Mr. Tim Rylee
5800 Feldspar Way
Hoover, Alabama 35244

Transmitted electronically to: tim@insiteengineering.org

Dear Mr. Rylee:

This is in response to your June 18, 2019, letter requesting Department of the Army (DA), U.S. Army Corps of Engineers (USACE) review of the Alabaster Water Board's proposed water distribution system improvement projects at multiple locations throughout the distribution system. The projects are centered near Latitude N 33.236053, Longitude W 86.829038 in Section 2, Township 21 South, Range 3 West, Alabaster, Shelby County, Alabama. This project has been assigned file number **SAM-2019-00578-JDC**, which should be referred to in all future correspondence regarding this project.

Based on our review of the project information submitted by your office on behalf of the Alabaster Water Board and mapping resources available to our office, we have determined that the existing water storage tanks, water plants, booster pumping stations, water meters, existing water wells, and the new water well project areas consist of non-jurisdictional upland or dry land areas. Be advised, this determination is based primarily on information provided by you regarding the specific project locations, scope of work, and environmental settings.

With regard to the proposed water main improvements, you have stated that the Alabaster Water Board will ensure directional bore installation techniques will be utilized to install replacement pipeline at locations that would require crossings of potential waters of the United States (U.S.), including wetlands, thereby avoiding Section 404 regulated discharges of dredged or fill material into waters of the U.S. Be advised,

the Alabaster Water Works will need to coordinate with us further if the construction of future water system improvement projects would require the discharge of dredged and/or fill material into areas that potentially contain waters of the U.S., including wetlands.

The proposed project was reviewed pursuant to Section 404 of the Clean Water Act, which requires that a DA permit be obtained for the placement or discharge of dredged and/or fill material into "waters of the United States", including wetlands, prior to conducting the work (33 U.S.C. 1344). For regulatory purposes, the USACE defines wetlands as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

This letter contains an approved jurisdictional determination (JD) for the above-referenced upland/dry land project areas. If you object to this determination, you may request an administrative appeal under USACE Regulations at 33 CFR Part 331. Attached you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the USACE, South Atlantic Division Office at the following address:

Administrative Appeals Review Officer
Telephone: (404) 562-5137, Fax: (404) 562-5138
60 Forsyth Street Southwest, Room 9M15
Atlanta, Georgia 30303-8801

In order for an RFA to be accepted by the U.S Army Corps of Engineers (USACE), the USACE must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by November 4, 2019. It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this letter.

This approved JD is based on current policy and regulation and is valid for a period of five years from the date of this letter. If by the end of the five-year period the proposed work has not been implemented and this JD has not been specifically revalidated by the USACE, it shall automatically expire.

The statements contained herein do not convey any property rights or any exclusive privileges, and do not authorize any injury to property nor shall it be construed as excusing you from compliance with other Federal, State, or local statutes, ordinances, or regulations that may affect proposed work at this site. Furthermore, this determination has been conducted to identify the limits of the USACE Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the FSA of 1985, as amended. If you

are a U.S. Department of Agriculture (USDA) program participant, or anticipate

participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

If you intend to sell property that is part of a project that requires DA authorization, it may be subject to the Interstate Land Sales Full Disclosure Act. The Property Report, required by Housing and Urban Development Regulation, must state whether or not a permit for the development has been applied for, issued or denied by the U.S. Army Corps of Engineers (USACE), (Part 320.3(h) of Title 33 of the Code of Federal Regulations).

Based on our findings regarding the proposed activities, a DA permit pursuant to Section 404 of the Clean Water Act **will not be required at this time** to implement the projects as currently proposed.

We appreciate your cooperation with the USACE Regulatory Program. If the project location or scope of work changes, you are urged to contact this office for a verification of this determination.

You may contact me at (205) 290-9096 or at jevon.d.coleman@usace.army.mil, if you have questions concerning this matter. For additional information about our Regulatory Program, visit our website at www.sam.usace.army.mil/Missions/Regulatory.aspx. Also, while you are there please take a moment to complete our regulatory customer survey located near the bottom of the webpage. Your responses are appreciated and will help us improve our services.

Sincerely,

COLEMAN.JEVO

N.D.1555630910

Digitally signed by
COLEMAN.JEVON.D.1555630910
Date: 2019.09.04 10:51:43 -05'00'

Jevon D. Coleman
Regulatory Specialist
North Branch

Attachments



July 16, 2019

Mr. Timothy R. Rylee, P.E.
InSite Engineering, LLC
5800 Feldspar Way
Hoover, AL 35244

RE: Alabaster Water Board Improvements

Mr. Rylee:

This letter is in response to your request for concurrence for the subject project. The Regional Planning Commission of Greater Birmingham (RPCGB) does not know of any reason to oppose, and therefore concurs with the project. Thank you for giving us the opportunity to comment.

Sincerely,

A handwritten signature in blue ink that reads "Charles E. Ball".

Charles E. Ball, AICP
Executive Director



Alabaster Water Board Water Distribution System And Water Treatment Facilities

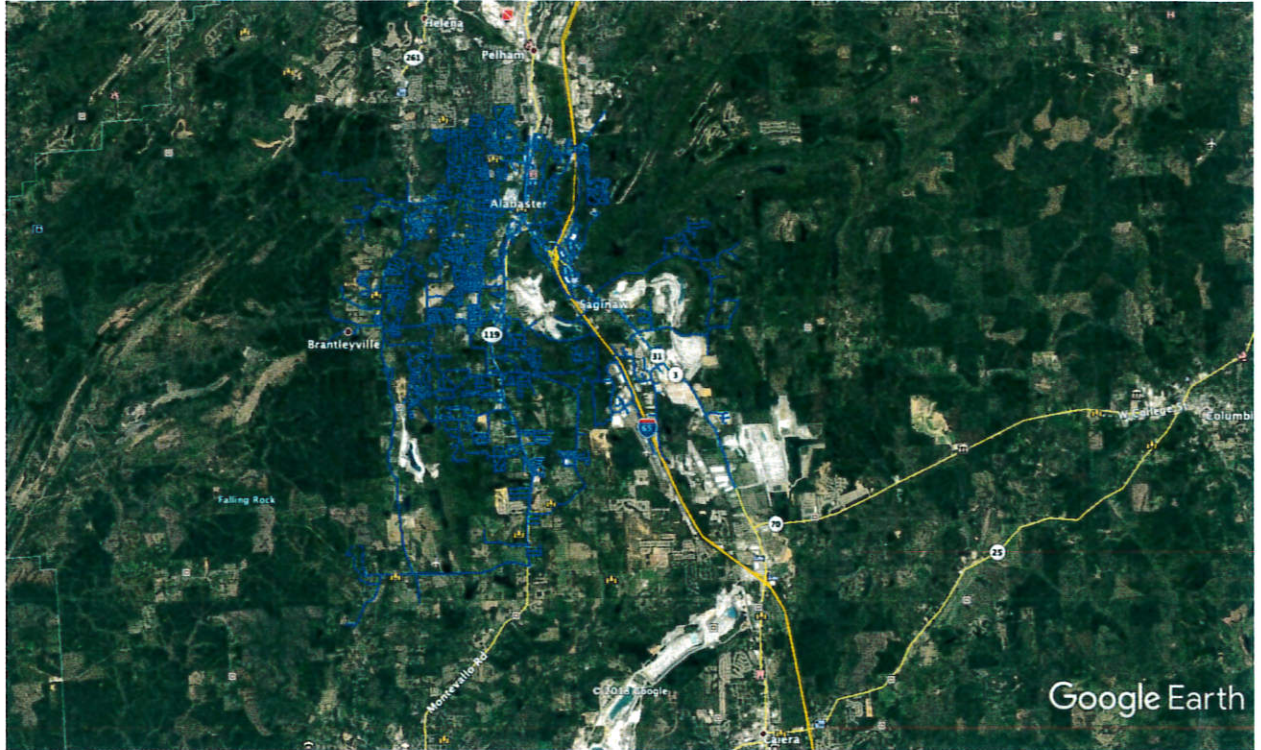


Figure 5 – Alabaster Water Board Distribution System

NAME: ALABASTER WATER BOARD 2019 DWSRF

FACILITY NAMES: WELL NO. 1, WELL NO. 2, AND WELL NO. 3
AND ALABASTER WATER BOARD FACILITY

SCALE: 2000

