

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

Owens Cross Roads Water Authority
Madison County

SRF Project No. FS010039-02
July 10, 2020

The Alabama Department of Environmental Management has made \$3,607,000 in financial assistance available to the Owens Cross Roads Water Authority 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.

The Owens Cross Roads Water Authority proposes a project to upgrade its water treatment system. The Owens Cross Roads WTP (Water Treatment Plant) will be expanded to meet existing water supply demands, increasing its treatment capacity from 1.0 MGD (million gallons per day) to 2.0 MGD. Proposed improvements include the construction of a new filter building (with new filters and energy efficient lighting) as well as the construction of a new clear well. New high service pumps (with VFD (variable frequency drive) controls) will be installed, as the existing high service pumps will be converted to backwash pumps for the new filters. Additionally, a water softening system, filter backwash pond and an auxiliary generator will be installed to reduce hard water and calcium issues, eliminate monthly sewer use charges, as well as maintain system operation during power outages, respectively. The Authority successfully completed phases one and two of its three-phase water system master plan. Completion of the proposed improvements (phase three) will allow the system to meet current and future water supply demands, thus eliminating the costs of purchasing supplemental water from neighboring water systems. Moreover, the proposed project will increase treatment and system reliability, while reducing overall operational costs with optimized equipment and facilities.

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 this FONSI. 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

Attachment



ENVIRONMENTAL ASSESSMENT
Owens Cross Roads, Alabama
FS0100039-02

A. Proposed Facilities and Actions

The Owens Cross Roads Water Authority (The Authority) proposes a project to upgrade its water treatment system. The Owens Cross Roads WTP (Water Treatment Plant) will be expanded to meet existing water supply demands, increasing its treatment capacity from 1.0 MGD (million gallons per day) to 2.0 MGD. Proposed improvements include the construction of a new filter building (with new filters and energy efficient lighting) as well as the construction of a new clear well. New high service pumps (with VFD (variable frequency drive) controls) will be installed, as the existing high service pumps will be converted to backwash pumps for the new filters. Additionally, a water softening system, filter backwash pond and an auxiliary generator will be installed to reduce hard water and calcium issues, eliminate monthly sewer use charges, as well as maintain system operation during power outages, respectively. The Authority successfully completed phases one and two of its three-phase water system master plan. Completion of the proposed improvements (phase three) will allow the system to meet current and future water supply demands, thus eliminating the costs of purchasing supplemental water from neighboring water systems. Moreover, the proposed project will increase treatment and system reliability, while reducing overall operational costs with optimized equipment and facilities.

B. Existing Environment

Owens Cross Roads Water Authority is located in the Town of Owens Cross Roads (Madison County), Alabama, which is approximately fourteen (14) miles southeast of Huntsville, Alabama (Huntsville-Decatur Combined Statistical Area) and twenty-four (24) miles northwest of the City Guntersville, in north-central Alabama (Cumberland Plateau Physiographic Section). The project site (Owens Cross Roads WTP) is also located in the Town of Owens Cross Roads (The Town), directly behind The Authority's business office. The Town's topography is characterized by flat plains and low-lying areas within the Flint River basin. Mountains surrounding the area include Green Mountain to the west and Keel Mountain to the east. It has an elevation of approximately 571 Feet. Ground water in the area is contained primarily in the solution-enlarged fractures, bedding planes, and in cavities within the limestone and regolith covering these strata. Fort Payne Chert and Tusculmbia Limestone are the principal, water-bearing units in Madison County. The Tusculmbia-Fort Payne aquifer is essentially composed of ramifying solution features, which constitute arteries for ground-water movement, bounded by large masses of dense, poorly permeable carbonate rock. Solution cavities in these formations supply water to all the major wells and springs in the county.

C. Existing Wastewater Treatment Facilities/System

The Owens Cross Roads WTP (PWSID Number AL000058) is a packaged-type water treatment facility (constructed in 1999), owned and operated by the Owens Cross Roads Water Authority. It has a treatment and distribution design capacity of 1.0 MGD and is sourced by two (2) adjacent, ground water wells (700 GPM (gallons per minute) - (1960s) and 1,400 GPM (2017)). The WTP also consists of two (2) well pumps, two (2) transfer pumps, two (2) - 0.5 MGD filter units (with up-flow clarifiers), alum addition (for coagulation), chlorine injection (for disinfection), high service pumps and a backwash pump. The existing treatment process consists of pumping raw water from the wells to a holding tank, followed by pumping again to the treatment plant via transfer pumps. The WTP serves 3,100 residential and commercial customers, approximately 1,510 and 1,590, respectively. It has been well-maintained and operational since being placed into service in 1999.

D. Need for Proposed Wastewater Improvements

The City of Huntsville has been experiencing a growth surge for the past five (5) years of new, single-family home subdivisions near the new Taylor Road School (approximately five (5) miles north of Owens Cross Roads in the Hampton Cove area).

In fact, there have been approximately five hundred (500) new homes built during this time. Water demands on The Authority's WTP have increased such that it is operating at capacity (1.0 MGD) during most months, particularly during the peak summer months. At such times, The Authority cannot adequately supply potable water to all of its customers without purchasing supplemental water from Huntsville Utilities. Therefore, to meet the increased water demands for the existing and future customer base, The Authority must expand its WTP.

The proposed WTP expansion project is the third (3rd) phase of The Authority's master plan to upgrade its water treatment system. Phase One (completed in 2018) consisted of the replacement of filter media in the existing filters, which was originally installed with the construction of the facility and has reached the end of its useful life. The newly installed media is a higher quality anthracite and sand mixture and should produce a higher quality water.

To increase the WTP capacity, an increase in water supply is required. Therefore, Phase Two consisted of drilling and development of a new, higher capacity well (completed in 2017). Phase Two plans further consisted of the installation of a 2.0 MGD pump and a new well building (for the new well), including its connection to the WTP (completed in 2019).

E. Alternative Analysis

a. No Action – No Solution Implemented

(Not Chosen) This alternative is not recommended as it proposes to continue to address the deficiencies identified in the same manner, continuing to purchase additional water from Huntsville Utilities to meet all water demands beyond the WTP's capacity. This is neither a proactive nor a cost-effective way to address the treatment capacity and distribution concerns of The Authority's water treatment system. Therefore, this is not considered a viable option.

b. Purchase Additional Water Demands from Huntsville Utilities

(Not Chosen) This alternative is not recommended; as it does not provide the water quality most preferred by the customers and has the added burden of water organics and disinfection issues (i.e. permit compliance issues and additional treatment costs) in the near future. The Authority's customers have indicated that they prefer its well water sourcing as opposed to Huntsville's river water sourcing. In being sourced by the Tennessee River (a surface water source), the Huntsville WTP intakes raw water that has organic material present, which produces large amounts of disinfection by-products (DBPs) when chlorinated in the water treatment process. Additionally, in having to travel approximately twelve (12) miles to reach The Authority's water system, chlorine levels tend to drop and the potential for DBP formation increases. The Authority paid more than \$65,000 to Huntsville Utilities in 2018 and the cost estimation for 2019 was nearly \$73,000. If this trend remains consistent, the cost estimate over the next twenty (20) years (also the average useful WTP life/DWSRF loan term) is approximately \$2.4M. Therefore, considering the overall efficacy of this alternative (particularly regarding finished water quality, cost and customer satisfaction), this alternative is not an acceptable solution.

c. Shut Down of the Existing Owens Cross Roads WTP and Purchase All Water from Huntsville Utilities

(Not Chosen) This alternative expands upon the first action alternative in that it proposes that The Authority would purchase all water from neighboring Huntsville Utilities, instead of simply purchasing a supplemental supply, as needed. In addition, The Authority would also terminate its own water treatment processing. When formulating their master plan, The Authority deemed it an ideal time to consider this option regarding the existing WTP, as it was scheduled to be paid off in 2019. The purchase rate paid to Huntsville Utilities has been \$1.96 per one thousand (1,000) gallons. To purchase 2.0 MGD (the newly proposed capacity upgrade), would be roughly \$117,600 per month or about \$1.4M per year. It was, ultimately, decided that utilizing this amount toward the construction of their own, new treatment facility would be more cost-effective, where the costs could be recouped in approximately three (3) years.

With this option being a variation of the previous action alternative, the water quality issues remain with respect to customer preferences of well-sourced water over river-sourced water and the issue of likely DBP contamination issues from river water sourcing.

In the long term, this alternative presents the least cost-effective solution, as the costs of purchase and treatment of the finished water will be ever-increasing with supply demand. Therefore, this alternative is not deemed a viable solution.

d. Expansion and Upgrade of the existing Owens Cross Roads Water Treatment Plant

(Chosen Alternative) Considering that The Authority desires to maintain autonomy of their water treatment processing and distribution, this alternative is the preferred choice per its long-term efficiency in addressing all concerns. During the planning stage, Phase One was scheduled for the replacement of the existing WTP filter media in order to produce a higher quality water while other upgrades were pursued later. Phase Two continued the improvements with the drilling and development of a new well with a connection made to the existing WTP. Upon completion of those upgrades, The Authority finalized their decision to pursue an expansion of the existing WTP, as this would allow the ability to supply and treat 2.0 MGD of potable water, free of organics and DBPs for approximately 18 years at an aggressive growth rate of 5% per year. Though this alternative has the highest capital cost of approximately \$3.7M, the annual debt service is about \$225,000 and a rate increase is not needed per the anticipated debt retirement of the original WTP in 2019. This alternative allows The Authority to maintain operation of its own treatment and distribution, while serving its customers with the water quality desired. Therefore, it was selected as the most cost-effective, long-term 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 and Minority EJ (environmental justice) populations are significantly located in and around the Town of Owens Cross Roads, which includes the service area of the existing Owens Cross Roads WTP. According to *City-Data.com*, approximately 9.6% of Owens Cross Roads residents had an income below the poverty level in 2017. 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.

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 a Department of the Army permit pursuant to Section 404 of the Clean Water Act may not be required. In addition, they had no objections to this applicant receiving funding for the proposed project.

Regional Planning Agency

The Top of Alabama Regional Council of Governments (TARCOG) was consulted and indicated that the project will serve a priority regional 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 water system upgrade project.

Tennessee Valley Authority

The Tennessee Valley Authority (TVA) was consulted for this project and indicated that this work would not affect any TVA property, if constructed per the information provided. They further offered that the project would also not be considered an obstruction requiring approval by TVA under Section 26a of the TVA Act. Therefore, they have no objection to the Owens Cross Roads Water Authority proceeding with the proposed design in accordance with the plans submitted.

H. Public Participation: Sources Consulted

The Owens Cross Roads Water Authority held a public meeting to discuss the aforementioned improvements proposed for 2020 DWSRF loan funding on June 4, 2019 at The Authority's business office. No attendees from the public were present. Therefore, no public objection was expressed or recorded in the meeting minutes.

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

Madison County Health Department



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

August 23, 2019

Bailey Maier
Spectrum Environmental Services, Inc.
85 Spectrum Cove
Alabaster, AL 35007

Re: AHC 19-1151
CRA
Proposed development in Owens Crossroads
Madison County

Dear Ms. Maier:

Upon review of the cultural resource assessment conducted for the above referenced project, we have determined that project activities will have no effect on cultural resources eligible for or listed on the National Register of Historic Places. Therefore, we concur with the proposed project activities.

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





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



April 17, 2019

SUBJECT: File No. LRN-2019-00301; Owens Cross Roads Water Treatment Plant Expansion, Flint River Mile 11.8 Left Bank, Town of Owens Cross Roads, Madison County, Alabama.

CDG Engineers & Associates, Inc.
Attn: James Chitwood
224 Broad Street
Suite 201
Gadsden, Alabama 35901

Dear Mr. Chitwood:

This is in response to your April 9, 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
U.S. Army Corps of Engineers



Engineering. Environmental. Answers.

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Gadsden, AL 35901
Tel (256) 543-9431
Fax (256) 543-9437

www.cdge.com

TA/SH

2019-TA-0772 WJP

RECEIVED
APR 13 2019

BY: WJP



April 9, 2019

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

Re: **Water Treatment Plant Expansion
Owens Cross Roads Water Authority
Owens Cross Roads, Madison County, Alabama**

Dear Mr. Pearson:

The Owens Cross Roads Water Authority has applied for funding from the Alabama Drinking Water State Revolving Fund (DWSRF) for a loan to upgrade and expand their water treatment plant with the following improvements:

- Construction of two additional filter units.
- Construction of a new clear well storage tank.
- Construction of a new high service pumping station.
- Installation of an emergency diesel fueled generator.
- Construction of a filter backwash storage pond.

The proposed project will increase the capacity of the treatment plant from 1.0 million gallons per day to 2.0 million gallons per day. The Authority is currently constructing a new source water well to provide the additional raw water to the plant.

Enclosed are Location Maps and a Project Map that indicates the project's area of potential impact for all construction activities. The property required for this project is currently owned by the Owens Cross Roads Water Authority.

Please send any concurrence and/or comments concerning this project to my office. We will include your concurrence in our final Environmental Document to be submitted to ADEM.

If you need additional information or have any questions, please do not hesitate to call. Your assistance with this project is greatly appreciated.

Sincerely,

CDG Engineers & Associates, Inc.

James G. (Chuck) Chitwood, P.E.
Team Leader



U.S. Fish and Wildlife Service
1208-B - 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

MAY 15 2019

Date

#3

ALBERTVILLE
ANDALUSIA
AUBURN
DOTHAN
GADSDEN
HOOVER
HUNTSVILLE



TOP OF ALABAMA REGIONAL COUNCIL OF GOVERNMENTS

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

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Nancy D. Robertson – Executive Director

04/26/19

Dan Kelly, Chairman
Owens Cross Roads Water Authority
2949 Old Highway 431
Owens Cross Roads, AL 35763

CLEARINGHOUSE MEMO

RE: Madison County: Town of Owens Crossroads: Owens Cross Roads Water Authority: 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, April 23, 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 upgrade the Town's water system by: 1) Construction of two additional filter units; 2) Construction of a new clear well storage tank; 3) Construction of a new high service pumping station; 4) Installation of an emergency diesel fueled generator; and, 5) Construction of a filter backwash storage pond. 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 ER finds that the execution of the above listed activities all meet ADEM/EPA environmental guidelines. As the project's activities will both upgrade the system's capacity, and enhance public health related responsibilities by providing generator back-up to the system, it is deemed both a desirable, and necessary action.

The project addresses long-term system needs and reliability by increasing the capacity of the treatment plant from 1.0 million gallons per day to 2.0 million GPD, and providing other desired benefits. As such, the Project serves a priority regional 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 upgrade project. If we can be of further assistance, please contact us.

Sincerely,
D. C. Schafer
Area-wide Clearinghouse

Cc: James G. Chitwood, P.E.: CDG Engineering



Tennessee Valley Authority, 4601 N. Access Road, Bldg. B, Chattanooga, Tennessee 37415

November 4, 2019

Mr. James G. Chitwood
Owens Cross Roads Water Authority
CDG Engineers and Associates, Inc.
224 Broad Street, Suite 201
Gadsden, Alabama 35901

Dear Mr. Chitwood:

**OWENS CROSS ROADS CLEAN WATER STATE REVOLVING FUND (CWSRF)
APPLICATION – MADISON COUNTY. ALABAMA**

We have reviewed your October 14, 2019, notification to the Tennessee Valley Authority (TVA) of Owens Cross Roads application for State Revolving Funds to expand their water treatment plant at 188 Strickland Avenue, Owens Cross Roads, Alabama.

Based on the information submitted, it appears that no TVA property is being requested for the project and would not require TVA's Section 26a approval.

We appreciate the opportunity to review the proposed work. If you have any additional questions or concerns, please contact me at (256) 891-6610.

Sincerely,


John Falco
Program Manager
Reservoir Land Use and Permitting



SCALE	IND SCALE
DATE	NO SCALE
DESIGNED BY	NO SCALE
DRAWN BY	NO SCALE
CHECKED BY	NO SCALE
QC REVIEWER	NO SCALE
REVISION	NO SCALE
DWG	NO SCALE
PROJECT NO. R0221826	NO SCALE
SHEET NO. C-102	NO SCALE

DRAFT
 PROJECT LOCATION MAP
 WATER TREATMENT PLANT EXPANSION
 OWENS CROSS ROADS WATER AUTHORITY
 OWENS CROSS ROADS, MADISON COUNTY, ALABAMA

224 BROAD STREET
 SUITE 201
 GADSDEN, AL 35901
 PH: (256) 543-9431
 FX: (256) 543-9437



Engineers Environmental Architects
 GADSDEN, AL
 ALBERTVILLE, AL DOTHAN, AL
 ANDALUSSA, AL HOOVER, AL
 AUBURN, AL HUNTSVILLE, AL

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