

CITY OF ELK CITY PUBLIC WORKS AUTHORITY

320 W 3RD STREET

PO BOX 1100

ELK CITY, OK 73648

ELK CITY PUBLIC WORKS AUTHORITY

CONTINUING AMR PROJECT

PROJECT MANAGER:

ELESIA L. CHURCH

320 W. 3RD STREET

ELK CITY, OK 73644

churchl@elkcity.com

580-225-3230

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EXECUTIVE SUMMARY:

April 17, 2019

City of Elk City Public Works Authority (ECPWA)

Elk City

Beckham County

Oklahoma

The City of Elk City is located in western Oklahoma in Beckham County. The Elk City Public Works Authority owns and operates a public water supply system that provides drinking water and fire protection to the city. The purpose of this project is to continue to replace existing water meters with AMR water meters. This project has been an ongoing project since 2016 and to date we have replaced 3,550 of our 5200 water meters.

This project will start January 1, 2020 with anticipated completion in one year or by December 31, 2020. This project is located within the City of Elk City and is not located on a Federal facility.

BACKGROUND DATA:

The City of Elk City has a population of 11,555 as of 2017 Census Bureau Estimates. Elk City's economy has historically been sustained by the oil and gas industry and fluctuates with oil prices. Unemployment has increased 67% and was at a record high of 7.9% in the fall of 2016 but have now levelled off at 3.1% in May of 2018.

Beckham County and most of Western Oklahoma has experienced some level of drought conditions since early 2011. This area is just now recovering from these conditions, but still feeling the effects. Drought Monitor results showing from April 2011 to April 2013 this area went from D2 Severe Drought to D3 Extreme Drought conditions. This carried through April 2014 and April 2015 with D4 Exceptional Drought conditions. Then the area started to improve in April 2016 and April 2017 showing D1 Moderate Drought and D0 Abnormally Dry conditions. Water tables in existing well fields dropped during this period of time anywhere from 3 feet to 20 feet. This has had an impact on our water production—but to date we have not had to ration water use. We have had to raise our water rates due to building a new water plant which replaced the existing 75 year old plant.

The City of Elk City's water supply is solely dependent on water wells supplied by Alluvium Terrace Deposits (composed of unconsolidated sand and gravel deposits) of the North Fork of the Red River. Currently the City has 68 operating wells with an additional 9,093 acres of water rights. The water rights are protected for future use by the Well Head Protection Program whereby surface rights are managed in order to restrict pollutants.

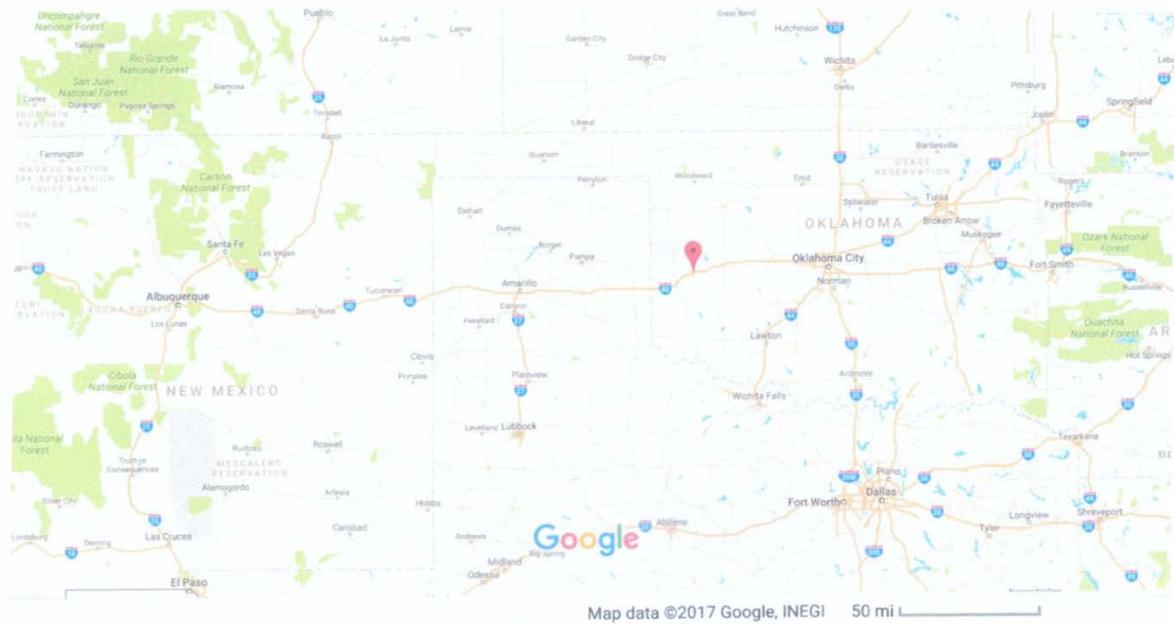
Once the water has reached the water plant Chlorine is added. We have a 500,000 Gallon ground storage tank and a 500,000 gallon clear well. The plant has the capability of pumping 8,400 GPM (Gallons per Minute) with backup capabilities. We also have three generators that run portions of the well field and the pumps at the plant. This will allow us to keep water flowing to Elk City in case of power outages or many types of natural disasters.

The water is then pumped through three main redundant transmission lines, two 24" and a 20" line. The transmission lines are tied in with the distribution system to keep a constant supply of water to the city. The lines are also tied to three ground storage tanks capable of storing 9 million gallons of water. This allows us to have a sufficient supply of water in case of any emergencies or natural disasters and also allows us to shut off pumps at the plant to conserve electricity. Elk City has long been a supporter of conserving electrical usage and working with the Rural Electric Cooperative.

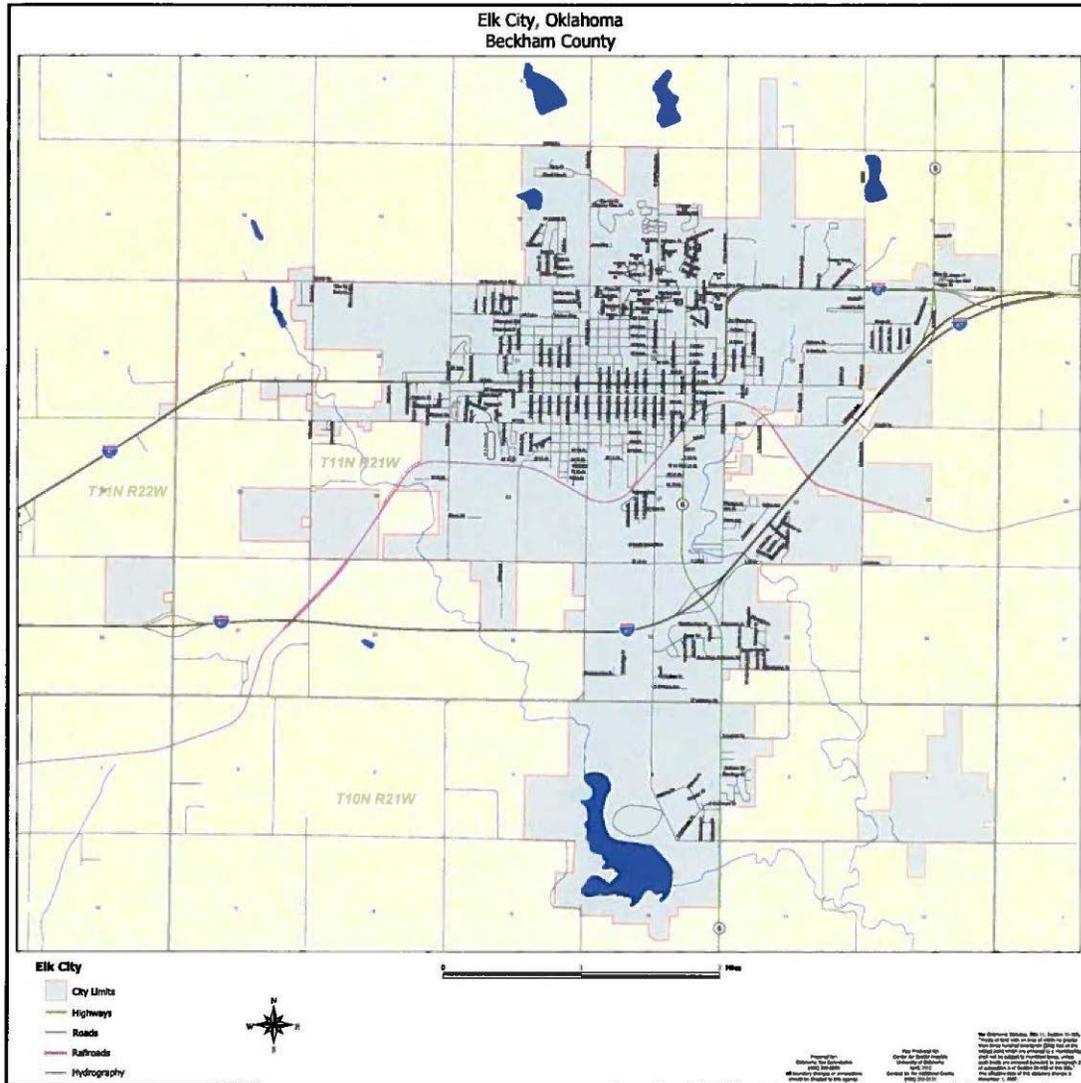
Currently the City of Elk City supplies water to approximately 5,200 (this numbers varies month to month) water meters including both residential and commercial customers. Water usage can vary depending on the time of the year, low volume is at 2 million gallons per day and high volume has been as high as 7 million gallons per day. The city

has 140 miles of distribution lines within the city limits and over 50 miles of main lines servicing our water customers.

This project will continue the AMR Project that has been in place since 2016. We currently have over 3500 of our residential meters replaced with AMR meters and the addition of the 970 purchased with this grant will get us very close to replacing all residential meters. We will then start replacing commercial meters with AMR to finish out the AMR Project.

PROJECT LOCATION:

The City of Elk City is located on Interstate 40 in far Western Oklahoma in Beckham County as shown on the map above. We are halfway between Oklahoma City, Oklahoma and Amarillo, Texas.



Technical Project Description:

This project will replace 970 existing residential water meters with AMR water meters to allow for a more efficient allocation of employees, improve employee safety by reducing claims and injuries, and produce more accurate billing statements.

There are no foreseen environmental impacts associated with this project and no permitting is required. The meters in this project are 5/8 x 3/4 inch meters.

These meters will be replaced over a period of one year. Non-Federal cost share is allocated in the 2019-20 budget.

Evaluation Criteria

Evaluation Criterion A—Project Benefits

One of the benefits of the project is that it will allow for more efficient allocation of employees. The Public Works Department of the City of Elk City only has 7 full time employees and a superintendent. With the old water meters it took an average of 10 days to read the water meters, with the addition of the AMR meters this time will be cut down to 2-3 days maximum. This allows for employees to repair the backlog of leaks, eventually perform maintenance on water lines to prevent leaks, and make taps and install new water meter customers timely.

Another benefit is improving employee safety and reducing claims and injuries incurred due to reading each meter monthly. The AMR system is a fixed system that requires employee drive-by visits, because of the drive-by visits, AMR can be much safer for meter readers since readers are not required to enter properties, which in turn reduces the likelihood of injury.

When AMR meters are read monthly the data collected and analysis of the collected data produces the opportunity for both customer-side and utility-side leak detection, which leads to water conservation. With the ability to generate reports of unusual or outstanding events, the data collection and analysis leads to the production of more accurate billing statements.

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Evaluation Criterion B—Planning Efforts Supporting the Project

The City of Elk City Public Works Authority has had the Elk City PWA AMR Project in place since 2016. This project is very simple but costly for the authority, which is why it has had to be accomplished in stages. This grant would supply the next to last stage by providing the last batch of residential meters leaving only the larger commercial meters to be replaced with AMR water meters.

In 2016, this was part of the 5 year plan for the EC-PWA , which will be completed by 2021.

Evaluation Criterion C—Project Implementation

Installation of 970 AMR water meters by existing PWA crews.

1st Quarter 2020-install 250 AMR water meters replacing existing residential water meters. Update information in computer system to accommodate the newly installed meters.

2nd Quarter 2020-install 250 AMR water meters replacing existing residential water meters. Update information in computer system to accommodate the newly installed meters.

3rd Quarter 2020-install 250 AMR water meters replacing existing residential water meters. Update information in computer system to accommodate the newly installed meters.

4th Quarter 2020-install 220 AMR water meters replacing existing residential water meters. Update information in computer system to accommodate the newly installed meters.

There is no engineering or design work required and we already have these meters in our system so no policy or administrative actions are required to implement this project.

Evaluation Criterion D—Nexus to Reclamation

This project is not associated to any other Reclamation project or activity and is not associated with any tribe other than we do have a small amount of tribal land within our community.

Evaluation Criterion E—Department of the Interior Priorities

5. c. Prioritize DOI infrastructure: 2: Cyclical maintenance;
Replacing the water meters in our system with AMR water meters is a form of cyclical maintenance. The Elk City Public Works Authority made this a priority project in 2016 to replace these meters as part of continued maintenance of existing infrastructure.

Project Budget:

SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal Funding	\$ 75,000.00
Costs to be paid by the applicant	\$ 75,350.00
TOTAL PROJECT COST	\$150,350.00

BUDGET ITEM DESCRIPTION	\$/UNIT	Quantity	QUANTITY TYPE	TOTAL COST
Equipment				
AMR water meters	\$155.00	970	Each	\$150,350.00
			Total Estimated Project Cost	\$150,350.00

Budget Narrative:

Purchase of 970 5/8 X 3/4 AMR water meters, the grant will only pay for part of the purchase of the meters and the city will part of the cost of the meters and cover the costs of installing the meters. The city has a grant administrator on staff that handles reporting requirements as part of normal duties.

The cities portion of the purchase of the water meters is already built into the 2019/20 budget.

LEE LITTERELL, City Manager
STEVEN L. HOLLOWAY, City Attorney
CHERYL SIPES, City Clerk
ELESIA L. CHURCH, City Treasurer



BILL HELTON, Mayor
CITY COMMISSIONERS
Allen Robinson - Ward 1
Jeff Jackson - Ward 2
Larry Muck - Ward 3
Rick Shelton - Ward 4

Phone (580) 225-3230 • Fax (580) 225-3234 • Website: www.elkcity.com

April 17, 2019

Bureau of Reclamation
Water Resources and Planning Division
PO Box 25007
Denver, CO 80225

Re: BOR-DO-19-F005 Small Scale Water Efficiency Projects for Fiscal Year 2019

The City of Elk City is applying for the Small Scale Water Efficiency Projects for Fiscal Year 2019 for 970 AMR water meters. The city's cash match of \$75,350.00 will be 50% of this grant. Please use this letter as the city's commitment for this cash match from our capital construction budget for the 2019/20 fiscal year.

If you have any additional questions please don't hesitate to contact us.

Sincerely,

A handwritten signature in black ink, appearing to read "Nick Archer".

Nick Archer, Mayor
City of Elk City

RESOLUTION: 2019-4

A resolution of the City Commission of the City of Elk City to provide funds toward and for the completion of the Water SMART Grants application for the Small-Scale Water Efficiency Projects for Fiscal year 2019 for the purchase of electronic water meters.

BE IT RESOLVED, by the City Commission of the City of Elk City to provide the amount of \$ 75,350.00 as Matching Funds towards the Water SMART Grants project.

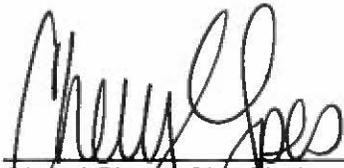
These funds are available as listed:

Capital Construction Fund: \$75,350.00

PASSED, APPROVED AND ADOPTED, by the City Commission of the City of Elk City, Oklahoma this 17th day of April, 2019.



Nick Archer, Mayor



Cheryl Sings, City Clerk

