City of Eufaula
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WaterSMART Grant Application
October 3, 2019

Eufaula Water System Improvements

Part B & C Includes:
Replacement and installation of water lines.
Replacement and installation of service connections.
Replacement and installation of gate & pressure valves.
Replacement and installation of fire hydrants.

Grant Project Manager
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City of Eufaula WaterSMART Application

Table of Contents.

Executive Summary:

The City of Eufaula WaterSMART grant application, October 3, 2019. The City of Eufaula is located in southeastern Oklahoma on the shore of Lake Eufaula in McIntosh County and is the county seat. Eufaula is approximately 30 miles north of McAlester and 32 Miles south of Muskogee. The name "Eufaula" comes from the Eufaula Tribe, part of the Muscogee Creek Confederacy. The population was 2,813 according to the 2010 census and is projected to be over 4,300 by the year 2050.

Eufaula Water System Improvements Part B & C Includes: Replacement and installation of water lines, Replacement and installation of service connections, Replacement and installation of gate & pressure valves and Replacement and installation of fire hydrants. Part A of this project is already under construction. This application includes only construction funds for the above improvements to the water system. All other costs including, Engineering, Inspection and Grant Administration is over and above the project costs of this grant and will be paid by the City of Eufaula with either funds on hand or an approved Oklahoma Water Resource Board (OWRB) Loan. The match portion of this request will also be provided with the approved OWRB Loan for this project. In 2015-2017 The Eufaula water system experienced a 37%-53% water loss rate. The system has numerous line breaks due to the condition of the lines, lack of isolation valves to shut of sections when needed and lack of adequate fire flow due to existing small diameter lines. The system also experiences pressure fluctuations too high in some areas and too low in other. Eufaula Public Works realized they had a severe problem with their system and had a City-Wide Water Analysis Report performed to identify, plan and address the issues. The request for assistance for parts B&C of this project will enable Eufaula to take out a smaller OWRB for the project and help reduce the amount of water fees increase to the water customers. A map of the project is included the Left half of the map is Part B and the right side of the map is Part C. Part A is under construction and not included with this request includes automation and updating of water system improvements and lines improvements for another section of the City.

The entire project is DEQ permitted and Parts B & C are in the process of being bid out according to OWRB rules and regulations including Davis Bacon wage rates. Part A is already under construction and includes the water valve and line improvements as well as automatic flushing devises, ground storage tank pump station, pressure reducing valves and Altitude valve at elevated storage tank. Parts B&C was put are currently being bid out and are scheduled to begin construction in spring of 2020 and is expected to be completed within 2 years which would be spring of 2022. The bid documents for B & C show a 420 day project timeline.

All of the proposed project is in the City of Eufaula's Public Works system and is not located on a Federal facility.

Background Data

The City of Eufaula Public Works retains 1,683 acre-feet/year in water rights granted to them by the Oklahoma Water Resources Board (OWRB). This equates to an available annual flow of 548 million gallons per year available for the City to supply to its customers, or approximately 1.5 million gallons per day (MGD). At the time of a November 2018 analysis report, Eufaula owned a total of 1807 water meters which use a drive-by automatic meter reading system that is 2 years old. The meters are classified as follows: Residential 1,335; Commercial 232 and Outside of City Limits 240. The current water demand statistics are: daily average flow of 550,000 per day; maximum day demand is 990,000 per day; peak hour demand rate of 1.8 for commercial and 2.05 for residential. The estimated 2050 meter growth is approximately 1,000 additional meters. The water demand in 2050 is estimated at 820,000 per day. The overall distribution system for the City of Eufaula is in fair to poor condition. The main issues impacting the performance of the existing system include: 1. numerous line breaks that result in significant water loss and system down time, during which many customers are without services. 2. Water loss is a critical issue due to the cost of treatment and lack of revenue generation from the water that is lost during a line break. From 2015 to 2017, the City experienced 37% to 53% unaccounted water production. 3. Lack of isolation valves to shut off sections or areas of the system to repair waterlines or perform routine maintenance. 4. Areas within the system are not capable of providing adequate fire flow due to existing small diameter lines.

Eufaula's water delivery system includes approximately 5,250 linear feet of 10" raw water line from Eufaula Lake to the water treatment plant. The water system has 125,000 linear feet of water distribution lines to the customers ranging from 1" to 10" in diameter, some of which are 50 or more years old. The City utilizes 2 different water storage facilities total capacity of these two storage facilities is 930,000 gallons. The City also has 3 independent booster pump stations located within the distribution system. The system uses a SCADA system for communications within the components of the system.

The City of Eufaula has not worked with Reclamation in the past.

Project Location

The City of Eufaula is located in southeastern Oklahoma on the shore of Lake Eufaula in McIntosh County and is the county seat. Eufaula is approximately 30 miles north of McAlester and 32 Miles south of Muskogee. Project Latitude is 35°17'14.0"N and longitude is 95°34'57.0"W.

Technical Project Description

Also see attachment A Project Map.

Part B of Construction itemized list of items to be installed.

ITEM #	ITEM	UNIT	QUANTITY	UNIT COST
1.1	MOBILIZATION/ DEMOBILIZATION	LS	1	$ 35,000.00
1.2	CLEARING AND GRUBBING	LS	1	$ 10,000.00
1.3	EROSION CONTROL	LS	1	$ 10,000.00
1.4	STORMWATER POLLUTION PREVENTION PLAN	LS	1	$ 5,000.00
1.5	SOLID SLAB SODDING AND SEEDING	SY	2016	$ 3.00
1.6	4" PVC C900 WATERLINE	LF	209	$ 35.00
1.7	6" PC 250 DIP WATERLINE	LF	921	$ 45.00
1.8	6" PVC C900 WATERLINE	LF	9703	$ 30.00
1.9	6" PVC C900 WATERLINE, FOR BORED CASING	LF	231	$ 25.00
1.10	8" PC 250 DIP WATERLINE	LF	75	$ 60.00
1.11	8" PVC C900 WATERLINE	LF	4831	$ 35.00
1.12	8" PVC C900 WATERLINE, FOR BORED CASING	LF	100	$ 30.00
1.13	12" STEEL CASING, BORED	LF	231	$ 150.00
1.14	18" STEEL CASING, BORED	LF	100	$ 175.00
1.15	10" X 6" TAPPING SLEEVE AND VALVE	EA	3	$ 2,500.00
1.16	6" GATE VALVE AND BOX (RJ)	EA	50	$ 1,250.00
1.17	8" GATE VALVE AND BOX (RJ)	EA	11	$ 1,500.00
1.18	10" GATE VALVE AND BOX (RJ)	EA	2	$ 2,000.00
1.19	6" PRESSURE REDUCING VALVE AND VAULT	EA	1	$ 2,500.00
1.20	8" PRESSURE REDUCING VALVE AND VAULT	EA	1	$ 2,500.00
1.21	FIRE HYDRANT ASSEMBLY	EA	35	$ 5,500.00
1.22	CONNECTION TO EXISTING WATERLINE	EA	7	$ 2,000.00
1.23	LONG SERVICE CONNECTION	EA	90	$ 2,000.00
1.24	SHORT SERVICE CONNECTION	EA	61	$ 1,500.00
1.25	2" LONG SERVICE CONNECTION	EA	7	$ 3,000.00
1.26	SAWCUT, REMOVE, AND REPLACE CONCRETE SIDEWALK	SY	535	$ 100.00
1.27	SAWCUT, REMOVE AND REPLACE CONCRETE PAVEMENT	SY	312	$ 100.00
1.28	SAWCUT, REMOVE AND REPLACE ASPHALT PAVEMENT	SY	1962	$ 100.00
1.29	REMOVE AND RESET STONE CHANNEL	LF	534	$ 100.00
1.30	REMOVE AND REPLACE GRAVEL DRIVE	SY	275	$ 30.00
1.31	REMOVE AND REPLACE 15" CORRUGATED METAL PIPE (CMP)	LF	119	$ 60.00
1.32	REMOVE AND REPLACE 24" X 18" CORRUGATED METAL ARCH CU	LF	20	$ 100.00
1.33	CONSTRUCTION STAKING	LS	1	$ 15,000.00
1.34	CONSTRUCTION SIGNING AND TRAFFIC CONTROL	LS	1	$ 15,000.00
1.35	PRESSURE AND LEAKAGE TESTING	LS	1	$ 7,500.00
1.36	DISINFECTION	LS	1	$ 7,500.00

Part C of Construction itemized list of items to be installed.

ITEM #	ITEM	UNIT	QUANTITY
1.1	MOBILIZATION/ DEMOBILIZATION	LS	1
1.2	CLEARING AND GRUBBING	LS	1
1.3	TEMPORARY EROSION AND SEDIMENT CONTROL	LS	1
1.4	STORMWATER POLLUTION PREVENTION PLAN	LS	1
1.5	SOLID SLAB SODDING	SY	2424
1.6	6" DIP PC 250 WATERLINE	LF	1561
1.7	6" PVC C900 WATERLINE	LF	18691
1.8	8" DIP PC 250 WATERLINE	LF	89
1.9	8" PVC C900 WATERLINE	LF	1731
1.10	8" PVC C900 WATERLINE, FOR BORED CASING	LF	100
1.11	18" STEEL CASING, BORED	LF	100
1.12	4" X 4" TAPPING SLEEVE AND VALVE (RJ)	EA	1
1.13	10" X 6" TAPPING SLEEVE AND VALVE (RJ)	EA	3
1.14	1" AIR RELEASE VALVE AND BOX	EA	3
1.15	6" GATE VALVE AND BOX (RJ)	EA	69
1.16	8" GATE VALVE AND BOX (RJ)	EA	3
1.17	FIRE HYDRANT ASSEMBLY	EA	44
1.18	CONNECTION TO EXISTING WATERLINE	EA	14
1.19	LONG SERVICE CONNECTION	EA	119
1.20	SHORT SERVICE CONNECTION	EA	134
1.21	2" LONG SERVICE CONNECTION	EA	1
1.22	SAWCUT, REMOVE, AND REPLACE CONCRETE SIDEWALK	SY	106
1.23	SAWCUT, REMOVE, AND REPLACE CONCRETE PAVEMENT	SY	872
1.24	SAWCUT, REMOVE, AND REPLACE ASPHALT PAVEMENT	SY	1883
1.25	REMOVE AND REPLACE GRAVEL DRIVE	SY	191
1.26	REMOVE AND REPLACE 18" CORRUGATED METAL PIPE (CMP)	LF	155
1.27	REMOVE AND REPLACE 24" CORRUGATED PLASTIC PIPE (CPP)	LF	19
1.28	REMOVE AND REPLACE 12" CAST IRON PIPE (CIP)	LF	20
1.29	REMOVE AND REPLACE 18" REINFORCED CONCRETE PIPE (RCP)	LF	18
1.30	REMOVE AND RESET STONE CHANNEL	LF	586
1.31	REMOVE AND REPLACE GUARDRAIL	LF	4
1.32	8" PRESSURE REDUCING VALVE AND VAULT	EA	1
1.33	CONSTRUCTION STAKING	LS	1
1.34	CONSTRUCTION SIGNING AND TRAFFIC CONTROL	LS	1
1.35	PRESSURE AND LEAKAGE TESTING	LS	1
1.36	DISINFECTION	LS	1

Evaluation Criteria

E.1.1.A Quantifiable Water Savings

These substantial upgrades to the water system will immediately reduce the water loss and increase the ability for the City to provide adequate pressure for fire safety and allow for the increase of population that is projected.

The following chart is from a November 2018 Water Analysis Report done in preparation for this project.

Table 8 City of Eufaula Water Flow Balance			
	Total Water Inflow/Outflow (Gallons)		
	2015	2016	2017
Total Production (Inflow)	220,668,000	162,447,000	203,315,000
Eufaula Utility Billing (Consumption)	103,452,016	102,410,054	122,367,274
Unaccounted Water Production	117,215,984	60,036,946	80,947,726

The above chart yearly average for water loss is 265 acres per year. As demand is expected to increase with the growth that Eufaula is experiencing, the 265 acre savings per year would be a conservative figure.

It is expected with the improvements that the water loss rate will be minimal, without these improvements the water loss rate will continue to rise as the system further deteriorates and more meters are placed on the aged system.

According to the report, possible explanations for the apparent water loss are due to water lost during water line breaks, water used to fight fire, other system leakage, errors in measurement and unmetered water distribution throughout the City. Most of this loss will be running on the ground and eventually into the lake.

Municipal Metering Questions.

a. How has the estimated average yearly water savings been determined?
   The unaccounted water production ranges from 37% to 53% in the analyzed calendar years above. The average unaccounted for water production for the 3 years is 86,066,885. 86,066,885 divided by 325829 to convert from gallons to acre feet = 265 acre feet loss per year.

b. How have current distribution system losses &/or potential for reductions in water by individual users been determined? The current distribution losses were figured on actual

figures from 2015, 2016 and 2017 which was the most current full year figures at the time of the November 2018 City-wide Water Analysis report. The Cities rate structure increase according to gallons used to encourage water conservation.

c. For installing individual water meters loss determination. Loss through meter reading is not likely as the cities current water meters were all installed 2 years ago and are the drive by reading type. Which would make the 2017 billing figures very accurate.

d. The Intake and distribution main meters currently being used are accurate.

e. The city is not installing new meters in this project as it has already been done.

f. How will actual water savings be verified upon completion of the project? This project was initiated to minimize the water loss, increase the capacity of the system and provide a stable water pressure system wide. The City will use the same method for figure water losses as used for the current water loss. The City will also try to meter or estimate water loss whenever possible, for example better documentation of water used by the fire department and line breaks.

E.1.2.B Water Supply Reliability

1a Will the project address a specific water reliability or concern? Yes

This project address several issues in regards to water reliability. The replacement of old water lines that are consistently breaking and replacing with larger lines will take care of a large portion of the water loss and will have less down time due to breaks. Adding additional control valves will allow the system to be turned off in smaller sections in order to prevent water loss and impact fewer customers when lines are down. The pressure control valves will regulate the pressure to ensure that the system pressure is at a more even rate, as currently some areas are way too high and others are too low. Dead ends on the system will also be eliminated to increase reliability and pressure throughout the system. One of the main problems with the current system is not enough psi in many areas for fire emergencies, the above improvement along with new fire hydrants in the project will stabilize and increase the pressure needed throughout the system, while allowing for future growth.

1b How will the project address the water reliability concern? Most of the water loss is due to line breaks. The line replacement, looping, valves and fire hydrants will prevent the water loss, which will enable the City of Eufaula to use up to 45% less water from the lake. Lake Eufaula serves many communities as it is the largest lake in the state and supplies many communities with water.

1c. The mechanism used to put the conserved water where to its intended use is not applicable as the water conserved will be left in the lake.

1d. Indicate the quantity of conserved water that will be used for the intended purpose. At the current data of a 3 year average it is estimated that 265 foot acre per year will be saved. This will remain in Lake Eufaula for other water users and for recreation.

1e. Quantity of conserved water that will be used for the intended purpose is 265 foot acre

2. Will the project make water available to achieve multiple benefits or to benefit multiple users? Yes the water savings will benefit many as it will remain in Lake Eufaula.

The water will be available for agriculture, municipal and industrial, environmental and recreation as Lake Eufaula covers a big area in Oklahoma. Many of the area endangered species will benefit the whooping crane, many fish specifies, shell species and bird species. Not only will they benefit from the City of Eufaula not pumping the 45% loss out of the lake it will not be putting that loss back into the lake as treated water which is a double win for the environment.

Will the project benefit a larger initiative to address water reliability? Yes the City of Eufaula is in the process of developing a conservation district area for storm water drainage to naturally treat storm water before it goes into the lake, this area is also to be a visitor friendly area and destination to teach water conservation. The conservation area is in the project location.

Will the project benefit Indian tribes? Yes the Muskogee Creek Nation has a large presence in the area, they have a large hospital that they just expanded, and several rental housing additions, Tribal Offices, Tribal entertainment center and a large part of the City's population are tribal members.

Will the project benefit rural or economically disadvantaged communities? Yes the City of Eufaula is a rural area and has many economically disadvantaged persons in the area. The receipt of this grant will enable the City to keep water rates lower to be able to save in treating water, repairs and obtaining a smaller loan to complete the project.

Describe how the project will help to achieve these multiple benefits. The conserved water will remain in Lake Eufaula to benefit other communities that use the water which can keep them from using ground water, will be there for shortages, for the environment and for the tourism of the lake that supports most of the area.

3. Does the project promote and encourage collaboration among parties in a way that helps increase the reliability of the water supply? Yes this project is in collaboration with The City Eufaula and Eufaula Public Works Authority, Eufaula Fire Department, Corp of Engineers, Oklahoma Water Resources Board, local businesses, Lake Eufaula Tourism department, Creek Nation and many other interested parties.

Is there widespread support for the project? Yes this project has been discussed, planned and implemented through public meetings and on the Cities Website, the community is very excited to put an end to the water line breakage and inconvenience, they also look forward to lower insurance rates with the Fire Department getting improved ISO ratings from the improved pressure control.

What is the significance of the collaboration/support? The residents, business owners and Tribal governments are all willing to cooperate with the construction phase of the project and are very excited to get to the construction phase.

Is the possibility of future water conservation improvements by other water users enhanced by the completion of this project? Yes the new conservation area for storm drainage is in the area and will greatly benefit from fewer water leaks putting treated water through the sensitive environmental area.

Will the project help to prevent a water-related crisis or conflict? Yes the lack of dependable pressure for fires is of great concern throughout the system. Is there frequently tension or litigation over the water in the basin? Not to our knowledge it is closely monitored by the OWRB, DEQ & Corp of Engineers.

Describe the roles of any partners in the process. Please attach any relevant supporting documents. A DEQ Permit and OWRB loan acknowledgement is attached.

4. Will the project address water supply reliability in other ways not described above? Yes the City of Eufaula water system is also the emergency backup to a neighboring water district.

E.1.3C Implementing Hydropower-N/A

E.1.4D Complementing On-Farm Irrigation Improvements-N/A

E.1.5E Department of Interior Priorities.

1. Creating a conservation stewardship legacy second only to Teddy Roosevelt. As previously discussed the newly constructed conservation area that filters storm water before it goes into the lake is a visitor destination to educate the public on environmental conservation. This project will dramatically decrease the amount of treated water that is lost and will be going into this environmental sensitive area. This area is used as a living classroom for studies of the effective use of storm drainage to benefit the environment and pertains to the following items under this category.
   a. Utilize Science to identify best practices to manage land and water resources and adapt changes in the environment.
   b. Examine land use planning processes and land use designations that govern public use and access.

   d. Review Department water storage, transportation and distribution systems to identify opportunities to resolve conflicts and expand capacity.

   e. Foster relationships with conservation organizations advocating for balanced stewardship of use of public lands;

   f. Identify and implement initiatives to expand access to department lands for hunting and fishing.

   g. Shift the balance towards providing greater public access to public lands over restrictions to access. (The increase water capacity will allow the tourism trade to continue to grow in the fast rate it is currently growing.)

2. Utilizing our Natural resources

   a. Ensure American Energy is available to meet our security and economic needs: Eufaula Lake Dam is a power supply and the water conserved is left in Eufaula Lake.

3. Restoring trust with local communities

   a. Be a better neighbor to those closest to our resources by improving dialogue and relationships with persons and entities bordering our lands; The City of Eufaula is surround by many smaller communities that also depend on the Lake's water supply, the City of Eufaula welcomes the sharing of information on projects, practices and plans with these neighbors. The City of Eufaula also works hand in hand with the Creek Nation Tribal Government on a regular basis.

   b. Expand the lines of communications with Governors, state natural resource offices, Fish and Wildlife offices, water authorities, county commissioners, Tribes and local communities. This project will expand communications with all of the above. The City of Eufaula is unique that is located and the largest community on the shores of Lake

Eufaula, is the home of the County Seat, Has a working relationship with the natural resource officers, Corp of Engineers, Fish and Wildlife other water authorities, tribes and County Commissioners. As the project are is in the larges tourism area on the lake, it is the focal point of many tourism related agendas.

4. Striking a regulatory balance.

b. Ensure that endangered species act decisions are based on strong science and thorough analysis, as stated above the reducing of treated water loss in the conservation area is going to assist with helping the living classroom of the conservation area to thrive without having treated water influencing the natural filtration system.

5. Modernizing our infrastructure.

c. Prioritize Department infrastructure needs to highlight; This whole project was based on a City-Wide Water Analysis Report dated November of 2018. Most of the questions responded to in this application were from that report. The report not only identified the loss rates, problem areas and priorities; it also created a Capital Improvement Plan to correct and increase the system to accommodate the current needs and issues and to keep ahead of the tremendous growth in the area. It meets the following points of this category.

1. Construction of infrastructure:
2. Cyclical maintenance.
3. Deferred maintenance.

E1.6F1 Implementation and Results Project Planning

Does the applicant have a Water Conservation Plan and/or System Optimization Review in place? Yes the plan is online at the following location. The plan is too many pages to be included in the application, but most questions and some of the charts have been inserted directly from the report. https://www.cityofeufaulaok.com/wp-content/uploads/2018/12/Eufaula-Water-Model-Report-for-City-Water-Anyalysis-Report-2018.pdf.

The above report was the basis for starting part A of the system upgrades and helped to secure the OWRB Loan Agreement for part of the project, which enabled the City to proceed with the large project of upgrading so much of the system at once. The funding of this grant will enable the City to fund this project sooner without as much debt to help keep the cost of the project from affecting the water customers as much.

E.1.6.2 F2 Performance Measures-The City of Eufaula will measure the performance of this project by a combination of water saved, number of line breaks, better pressure and increased capacity. The Fire Department and City will continue to keep good records of water usage, breaks and pressure fluctuations. They will also strive to locate, document and correct any other sources of unmetered usage. These will be documented in a monthly report and yearly report to the Board of Trustees, your agency, the OWRB and any other interested parties.

E.1.6.3 F3 Readiness to Proceed-Part B & C are both in the bidding process. The planning and environmental are completed and DEQ has issued a permit for the projects. The OWRB loan has been approved by both parties and cleared for construction. Part B & C are both in the bidding process and are expected to award contracts & issue notice to proceed by the 1st of the year, with the construction ready to begin upon notification of this grant. The bid package includes a 420-day construction time frame.

Project Budget

D.2.2.5 Project Budget:

This application is for Part B and C of a larger overall plan to upgrade the Eufaula Water System. Both are for Construction & Contingencies only. Engineering, Design, Permits, Environmental and all other preconstruction items have already been performed. The project is at the bidding out for construction stage for both parts B & C.

The total estimates for each part are as follows;

Part B	$1,794,757.67
Part C	$2,237,814.15
Total	$4,032,571.21
Less $ over grant limits	- 1,032,471.21
Grant Project Amount	$3,000,000.00
Grant Portion	$1,500,000.00
Match Portion	$1,500,000.00

The match portion and amount over the grants limit is to be paid by an Oklahoma Water Resource Loan that is already approved and in place.

The following pages has the cost estimates and OWRB documentation.

Cost Estimate B

COWAN GROUP ENGINEERING, LLC
5416 S. YALE AVE., SUITE 210
TULSA, OK 74135
918.949.6171 O
918.949.6174 F

Project Description: Eufaula Water Distribution Improvements
Project Number: 18-704
Phase: BID PACKAGE B
Date: August 20, 2019

ITEM #	ITEM	UNIT	QUANTITY	UNIT COST	INSTALLATION FACTOR	UNIT COST x FACTOR	TOTAL COST
1.1	MOBILIZATION/ DEMOBILIZATION	LS	1	$ 35,000.00	1	$ 35,000.00	$ 35,000.00
1.2	CLEARING AND GRUBBING	LS	1	$ 10,000.00	1	$ 10,000.00	$ 10,000.00
1.3	EROSION CONTROL	LS	1	$ 10,000.00	1	$ 10,000.00	$ 10,000.00
1.4	STORMWATER POLLUTION PREVENTION PLAN	LS	1	$ 5,000.00	1	$ 5,000.00	$ 5,000.00
1.5	SOLID SLAB SODDING AND SEEDING	SY	2016	$ 3.00	1	$ 3.00	$ 6,047.33
1.6	4" PVC C900 WATERLINE	LF	209	$ 35.00	1	$ 35.00	$ 7,315.00
1.7	6" PC 250 DIP WATERLINE	LF	921	$ 45.00	1	$ 45.00	$ 41,445.00
1.8	6" PVC C900 WATERLINE	LF	9703	$ 30.00	1	$ 30.00	$ 291,090.00
1.9	6" PVC C900 WATERLINE, FOR BORED CASING	LF	231	$ 25.00	1	$ 25.00	$ 5,775.00
1.10	8" PC 250 DIP WATERLINE	LF	75	$ 60.00	1	$ 60.00	$ 4,500.00
1.11	8" PVC C900 WATERLINE	LF	4831	$ 35.00	1	$ 35.00	$ 169,085.00
1.12	8" PVC C900 WATERLINE, FOR BORED CASING	LF	100	$ 30.00	1	$ 30.00	$ 3,000.00
1.13	12" STEEL CASING, BORED	LF	231	$ 150.00	1	$ 150.00	$ 34,650.00
1.14	18" STEEL CASING, BORED	LF	100	$ 175.00	1	$ 175.00	$ 17,500.00
1.15	10" X 6" TAPPING SLEEVE AND VALVE	EA	3	$ 2,500.00	1	$ 2,500.00	$ 7,500.00
1.16	6" GATE VALVE AND BOX (RJ)	EA	50	$ 1,250.00	1	$ 1,250.00	$ 62,500.00
1.17	8" GATE VALVE AND BOX (RJ)	EA	11	$ 1,500.00	1	$ 1,500.00	$ 16,500.00
1.18	10" GATE VALVE AND BOX (RJ)	EA	2	$ 2,000.00	1	$ 2,000.00	$ 4,000.00
1.19	6" PRESSURE REDUCING VALVE AND VAULT	EA	1	$ 2,500.00	1	$ 2,500.00	$ 2,500.00
1.20	8" PRESSURE REDUCING VALVE AND VAULT	EA	1	$ 2,500.00	1	$ 2,500.00	$ 2,500.00
1.21	FIRE HYDRANT ASSEMBLY	EA	35	$ 5,500.00	1	$ 5,500.00	$ 192,500.00
1.22	CONNECTION TO EXISTING WATERLINE	EA	7	$ 2,000.00	1	$ 2,000.00	$ 14,000.00
1.23	LONG SERVICE CONNECTION	EA	90	$ 2,000.00	1	$ 2,000.00	$ 180,000.00
1.24	SHORT SERVICE CONNECTION	EA	61	$ 1,500.00	1	$ 1,500.00	$ 91,500.00
1.25	2" LONG SERVICE CONNECTION	EA	7	$ 3,000.00	1	$ 3,000.00	$ 21,000.00
1.26	SAWCUT, REMOVE, AND REPLACE CONCRETE SIDEWALK	SY	535	$ 100.00	1	$ 100.00	$ 53,500.00
1.27	SAWCUT, REMOVE AND REPLACE CONCRETE PAVEMENT	SY	312	$ 100.00	1	$ 100.00	$ 31,200.00
1.28	SAWCUT, REMOVE AND REPLACE ASPHALT PAVEMENT	SY	1962	$ 100.00	1	$ 100.00	$ 196,200.00
1.29	REMOVE AND RESET STONE CHANNEL	LF	534	$ 100.00	1	$ 100.00	$ 53,400.00
1.30	REMOVE AND REPLACE GRAVEL DRIVE	SY	275	$ 30.00	1	$ 30.00	$ 8,250.00
1.31	REMOVE AND REPLACE 15" CORRUGATED METAL PIPE (CMP)	LF	119	$ 60.00	1	$ 60.00	$ 7,140.00
1.32	REMOVE AND REPLACE 24" X 18" CORRUGATED METAL ARCH CU	LF	20	$ 100.00	1	$ 100.00	$ 2,000.00
1.33	CONSTRUCTION STAKING	LS	1	$ 15,000.00	1	$ 15,000.00	$ 15,000.00
1.34	CONSTRUCTION SIGNING AND TRAFFIC CONTROL	LS	1	$ 15,000.00	1	$ 15,000.00	$ 15,000.00
1.35	PRESSURE AND LEAKAGE TESTING	LS	1	$ 7,500.00	1	$ 7,500.00	$ 7,500.00
1.36	DISINFECTION	LS	1	$ 7,500.00	1	$ 7,500.00	$ 7,500.00
				CONSTRUCTION SUBTOTAL			$ 1,631,597.33
				CONTINGENCY (10%)			$ 163,159.73
				TOTAL ESTIMATED COST			$ 1,794,757.07

Cost Estimate C

COWAN GROUP ENGINEERING, LLC
5416 S. YALE AVE., SUITE 210
TULSA, OK 74135
918.949.6171 O
918.949.6174 F

Project Description	Eufaula Water Distribution Improvements
Project Number	18-704
Phase	BID PACKAGE C
Date	August 20, 2019

ITEM #	ITEM	UNIT	QUANTITY	UNIT COST	TOTAL COST
1.1	MOBILIZATION/ DEMOBILIZATION	LS	1	$ 40,000.00	$ 40,000.00
1.2	CLEARING AND GRUBBING	LS	1	$ 10,000.00	$ 10,000.00
1.3	TEMPORARY EROSION AND SEDIMENT CONTROL	LS	1	$ 10,000.00	$ 10,000.00
1.4	STORMWATER POLLUTION PREVENTION PLAN	LS	1	$ 5,000.00	$ 5,000.00
1.5	SOLID SLAB SODDING	SY	2424	$ 3.00	$ 7,271.50
1.6	6" DIP PC 250 WATERLINE	LF	1561	$ 45.00	$ 70,245.00
1.7	6" PVC C900 WATERLINE	LF	18691	$ 30.00	$ 560,730.00
1.8	8" DIP PC 250 WATERLINE	LF	89	$ 60.00	$ 5,340.00
1.9	8" PVC C900 WATERLINE	LF	1731	$ 35.00	$ 60,585.00
1.10	8" PVC C900 WATERLINE, FOR BORED CASING	LF	100	$ 30.00	$ 3,000.00
1.11	18" STEEL CASING, BORED	LF	100	$ 175.00	$ 17,500.00
1.12	4" X 4" TAPPING SLEEVE AND VALVE (RJ)	EA	1	$ 2,000.00	$ 2,000.00
1.13	10" X 6" TAPPING SLEEVE AND VALVE (RJ)	EA	3	$ 2,500.00	$ 7,500.00
1.14	1" AIR RELEASE VALVE AND BOX	EA	3	$ 2,500.00	$ 7,500.00
1.15	6" GATE VALVE AND BOX (RJ)	EA	69	$ 1,250.00	$ 86,250.00
1.16	8" GATE VALVE AND BOX (RJ)	EA	3	$ 1,500.00	$ 4,500.00
1.17	FIRE HYDRANT ASSEMBLY	EA	44	$ 5,500.00	$ 242,000.00
1.18	CONNECTION TO EXISTING WATERLINE	EA	14	$ 2,000.00	$ 28,000.00
1.19	LONG SERVICE CONNECTION	EA	119	$ 2,000.00	$ 238,000.00
1.20	SHORT SERVICE CONNECTION	EA	134	$ 1,500.00	$ 201,000.00
1.21	2" LONG SERVICE CONNECTION	EA	1	$ 3,000.00	$ 3,000.00
1.22	SAWCUT, REMOVE, AND REPLACE CONCRETE SIDEWALK	SY	106	$ 100.00	$ 10,600.00
1.23	SAWCUT, REMOVE, AND REPLACE CONCRETE PAVEMENT	SY	872	$ 100.00	$ 87,200.00
1.24	SAWCUT, REMOVE, AND REPLACE ASPHALT PAVEMENT	SY	1883	$ 100.00	$ 188,300.00
1.25	REMOVE AND REPLACE GRAVEL DRIVE	SY	191	$ 30.00	$ 5,730.00
1.26	REMOVE AND REPLACE 18" CORRUGATED METAL PIPE (CMP)	LF	155	$ 70.00	$ 10,850.00
1.27	REMOVE AND REPLACE 24" CORRUGATED PLASTIC PIPE (CPP)	LF	19	$ 85.00	$ 1,615.00
1.28	REMOVE AND REPLACE 12" CAST IRON PIPE (CIP)	LF	20	$ 55.00	$ 1,100.00
1.29	REMOVE AND REPLACE 18" REINFORCED CONCRETE PIPE (RCP)	LF	18	$ 70.00	$ 1,260.00
1.30	REMOVE AND RESET STONE CHANNEL	LF	586	$ 100.00	$ 58,600.00
1.31	REMOVE AND REPLACE GUARDRAIL	LF	4	$ 50.00	$ 200.00
1.32	8" PRESSURE REDUCING VALVE AND VAULT	EA	1	$ 22,000.00	$ 22,000.00
1.33	CONSTRUCTION STAKING	LS	1	$ 15,000.00	$ 15,000.00
1.34	CONSTRUCTION SIGNING AND TRAFFIC CONTROL	LS	1	$ 15,000.00	$ 15,000.00
1.35	PRESSURE AND LEAKAGE TESTING	LS	1	$ 5,000.00	$ 5,000.00
1.36	DISINFECTION	LS	1	$ 2,500.00	$ 2,500.00
				CONSTRUCTION SUBTOTAL	$ 2,034,376.50
				CONTINGENCY (10%)	$ 203,437.65
				TOTAL ESTIMATED COST	$ 2,237,814.15

**THE EUFAULA PUBLIC WORKS AUTHORITY,
MCINTOSH COUNTY, OKLAHOMA,
SERIES 2019 DRINKING WATER
SRF PROMISSORY NOTE TO
OKLAHOMA WATER RESOURCES BOARD**

June 19, 2019 $6,185,000.00

KNOW ALL MEN BY THESE PRESENTS that The Eufaula Public Works Authority, a public trust duly organized and existing under the laws of the State of Oklahoma (hereinafter, the "Borrower"), for value received, promises to pay from the sources and as hereinafter provided, to the order of the Oklahoma Water Resources Board (hereinafter, the "OWRB"), a body corporate and politic and an instrumentality, agency and department of the State of Oklahoma, the principal sum of SIX MILLION ONE HUNDRED EIGHTY FIVE THOUSAND AND NO/100 DOLLARS ($6,185,000.00) or so much thereof as is advanced hereunder, together with interest and an administrative fee thereon from the date of each respective advance hereunder at rates as set forth and defined hereinafter, payable in the manner and on the dates set forth herein, in lawful money of the United States of America at the principal office of BOKF, NA, Tulsa, Oklahoma (hereinafter, the "Local Trustee"), for deposit into the debt service fund to be established with and held by the Local Trustee for the payment of this Note pursuant to the Indenture (as hereinafter defined). The Local Trustee shall promptly remit payment to the OWRB, Oklahoma City, Oklahoma, or the OWRB's Trustee Bank (as directed by the OWRB) for deposit into the Drinking Water Treatment Revolving Loan Account (the "DWTRLA").

The proceeds of this Note will be used by the Borrower to construct improvements to the Borrower's water system benefiting the City of Eufaula, Oklahoma (the "Project").

This Note is issued pursuant to and secured by and entitled to the protection of a Loan Agreement for Drinking Water SRF Loan dated as of June 1, 2019 (the "Drinking Water SRF Loan Agreement"), by and between the Borrower and the OWRB. The security for the Note includes a pledge and assignment of revenues derived by the Borrower from its operation of the water, sanitary sewer, and garbage and trash collection systems of the Borrower serving the City of Eufaula, Oklahoma (hereinafter, collectively the "System") and a year-to-year pledge of certain sales tax revenue of the City of Eufaula, Oklahoma pursuant to a Sales Tax Agreement dated as of August 1, 2014 (the "Sales Tax Agreement"). The Note is further secured by a Mortgage with Power of Sale and Security Agreement dated June 19, 2019 (the "Mortgage"), by the Borrower to the OWRB, and the provisions of the Trust Agreement dated as of June 1, 2019, by and between the Borrower and the Local Trustee (referred to herein as the "Indenture"). The referenced pledge of System revenue and revenue derived from the Sales Tax Agreement is on a parity in all respects to the lien on said revenues securing the Borrower's Existing Indebtedness, as defined in Section 1.11 of the Drinking Water SRF Loan Agreement. Reference is made to the Mortgage, the Drinking Water SRF Loan Agreement, the Indenture, and to all agreements supplemental thereto for a complete description of the provisions, among others, with respect to the nature and extent of the security, the rights, duties and obligations of the Borrower and the Local Trustee, the rights of the OWRB and the terms upon which this Note

or additional indebtedness are or may be issued and secured, and to all the provisions of which the OWRB by the acceptance of this Note assents.

The Borrower shall not redeem this Note in part or in full without the prior written consent of the OWRB, which consent shall not be unreasonably withheld, and any such redemption authorized by the OWRB shall provide for the payment of a sum sufficient to pay the principal and interest requirements of the Loan and/or principal, interest, premium, if any, and any fees to be paid upon the redemption by the OWRB of the appropriate amount of the Bonds (as defined in Section 1.5 of the Drinking Water SRF Loan Agreement) represented by the outstanding balance of the Loan at the time of such redemption. Partial prepayments shall be applied first to accrued interest and administrative fees and then in reduction of principal.

This Note shall bear interest at a rate of 2.04% per annum plus an administrative fee at the rate of 0.5% per annum on the outstanding balance of disbursed loan proceeds. Interest and the administrative fee shall be computed on the basis of a year of 360 days and the number of actual days elapsed. In the event the Borrower defaults in the payment of any amounts due hereunder, such defaulted amount shall bear interest at the rate of fourteen percent (14%) per annum from the date of default until the date of payment thereof.

The Borrower shall make semi-annual payments of principal, interest, and administrative fee directly to the OWRB or the OWRB's Trustee Bank (as directed by the OWRB), in such amounts and at such times as described below, until the Project is complete and the Amortization Table is provided to the Borrower and the Local Trustee as provided for below. Upon commencement of the semi-annual payment cycle beginning the March 15 or September 15 following completion of the Project and provision of the Amortization Table, the Borrower shall be required to commence monthly payments of principal, interest, and administrative fee to the Local Trustee, and the Local Trustee shall remit semi-annual payments as provided for below.

The interest and administrative fee payments shall be made on a semi-annual basis, commencing on September 15, 2019, and continuing each March 15 and September 15 thereafter for the term of the Loan. The Borrower shall commence repayment of principal on the earlier of (i) the March 15 or September 15 next following the date the Project is completed, as certified to the OWRB by the Borrower, or (ii) March 15, 2021, and shall continue to repay principal semiannually for the term of the Loan according to the Amortization Table to be provided by the OWRB as described hereinbelow; provided, the Borrower shall commence repaying principal to the OWRB as provided in the Preliminary Principal Payment Schedule as set forth on Schedule "A" to the Note, until such time as the OWRB provides the final Amortization Table to the Borrower and the Local Trustee as set forth below. After the Project is completed and the Borrower has certified to the OWRB that all Project Costs have been paid, then the OWRB shall produce and provide to the Borrower and the Local Trustee an Amortization Table which reflects the total amount of principal advanced under the Note less any principal payments already received, plus interest and administrative fees due and payable. [The amortization table will provide to the extent possible for the payment of principal on the Note in a manner consistent with the Preliminary Principal Payment Schedule.] The amortization table will be attached as Schedule "A" to the Note at the time it is provided by the OWRB to the Borrower and the Local Trustee, and shall replace and supersede the Preliminary Principal Payment Schedule in all respects, and will require no further action or approval by the Borrower or the governing body of the City of Eufaula, Oklahoma. The outstanding principal

balance of this Note, together with all accrued, but unpaid, interest and administrative fees shall be due and payable in full on the earlier of (x) the March 15 or September 15 next preceding the date which is thirty (30) years after completion of the Project as certified to the OWRB by the Borrower or (y) September 15, 2050.

Notwithstanding the provisions of the immediately preceding paragraph, should the construction of the Project not be completed within thirty (30) days prior to third anniversary of the Issuance Date of Bonds, the parties agree that the unfunded balance of the Loan may, at the option of the OWRB, be deposited with the Local Trustee in the Project Costs Disbursement Account created under the Indenture, and thereupon the OWRB shall provide the Amortization Table to the Borrower and the Local Trustee and the Borrower shall be required to commence monthly payments of principal, interest, and administrative fee to the Local Trustee as provided for above. The amount so transferred shall be deposited to the credit of the Project Costs Disbursement Account, and disbursed from time to time in the manner provided in Section 2.11 of the Drinking Water SRF Loan Agreement. The Borrower agrees that no disbursement of such amount deposited to the credit of the Project Costs Disbursement Account shall be made without the approval of the Oklahoma Department of Environmental Quality (the "DEQ") and the OWRB as hereinafter provided. The Borrower shall submit to the DEQ and the OWRB certified requests seeking the approval of the disbursement of all or any portion of such amount on DW-271 forms. The requests shall be accompanied by such invoices or other documentation as may be required by the DEQ and the OWRB to demonstrate that such amounts have been incurred by or on behalf of the Borrower for the payment of Project Costs. Upon approval by the DEQ and the OWRB, the OWRB shall authorize the disbursement of the funds held in the Project Costs Disbursement Account by the Borrower for the payment of the approved Project Costs in an expeditious and timely manner. The Borrower covenants and agrees that such disbursements from the Project Costs Disbursement Account shall be immediately and expeditiously transferred or paid out, as appropriate, for payment of Project Costs as specified by the Borrower and approved by the DEQ and the OWRB on the corresponding DW-271 form.

This Note may be eligible for Principal Forgiveness as more fully set forth in Article VI of the Drinking Water SRF Loan Agreement, which may reduce the total amount of principal, interest, and administrative fee due and owing under the Note.

Payments of principal, interest, and administrative fee shall be made via wire transfer in accordance with written wiring instructions from the OWRB to the Borrower and the Local Trustee. In the event any due date for payment of any installment of principal or interest and the administrative fee as stipulated above shall not be a regular business day, then such date for payment of principal, interest, and administrative fee shall be the immediately preceding business day.

This Note is issued pursuant to and in full compliance with the laws of the State of Oklahoma and a resolution duly adopted by the Borrower, which resolution authorizes the execution and delivery of the Drinking Water SRF Loan Agreement, the Mortgage, and the Sales Tax Agreement.

Pursuant to the provisions of the Drinking Water SRF Loan Agreement, payments sufficient for the prompt payment when due of the principal of, interest, and administrative fee on this Note are to be paid by the Borrower to the OWRB from the Revenues of the System.

This Note does not constitute an obligation of the City of Eufaula, Oklahoma, nor the State of Oklahoma, or any subdivision, department or agency thereof other than the Borrower nor does it constitute a personal obligation of any Trustee, officer, or employee of the Borrower or a general obligation of the Borrower, but is a special, limited obligation payable solely from the sources described in the Drinking Water SRF Loan Agreement and the Mortgage. Neither the faith and credit nor the taxing power of the State of Oklahoma or any political subdivision thereof, including the City of Eufaula, Oklahoma, is pledged to the payment of the principal of, premium or penalty, if any, or interest or administrative fee on this Note.

No recourse shall be had for this Note or for any claim based hereon or upon any obligation, covenant, or agreement contained in the Drinking Water SRF Loan Agreement and the Mortgage against any past, present, or future official or employee of the Borrower, or any official or employee of any successor entity, as such, either directly or through the Borrower or any successor thereto, under any rule of law or equity, statute, or constitution or by the enforcement of any assessment or penalty or otherwise, and all such liability of any such officials or employees as such is hereby expressly waived and released as a condition of and consideration for the execution of the Drinking Water SRF Loan Agreement, the Mortgage, and the issuance of this Note.

Modification or alterations of the Drinking Water SRF Loan Agreement, the Mortgage, or of any supplements thereto, may be made only to the extent and under the circumstances specifically permitted by the Drinking Water SRF Loan Agreement or the Mortgage.

[Remainder of Page
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IT IS HEREBY CERTIFIED, RECITED, AND DECLARED that all acts and conditions required to be performed precedent to and in execution and delivery of the Drinking Water SRF Loan Agreement and the issuance of this Note have been performed in due time, form and manner as required by law and that the issuance of this Note does not exceed or violate any constitutional or statutory limitation.

IN WITNESS WHEREOF, the Borrower has caused this Note to be executed for and on its behalf by its Chairman and attested by its Secretary and its official seal to be impressed hereon, all as of the date first appearing hereinabove.

THE EUFAULA PUBLIC WORKS AUTHORITY, MCINTOSH COUNTY, OKLAHOMA

(SEAL)

ATTEST:

SPECIMEN

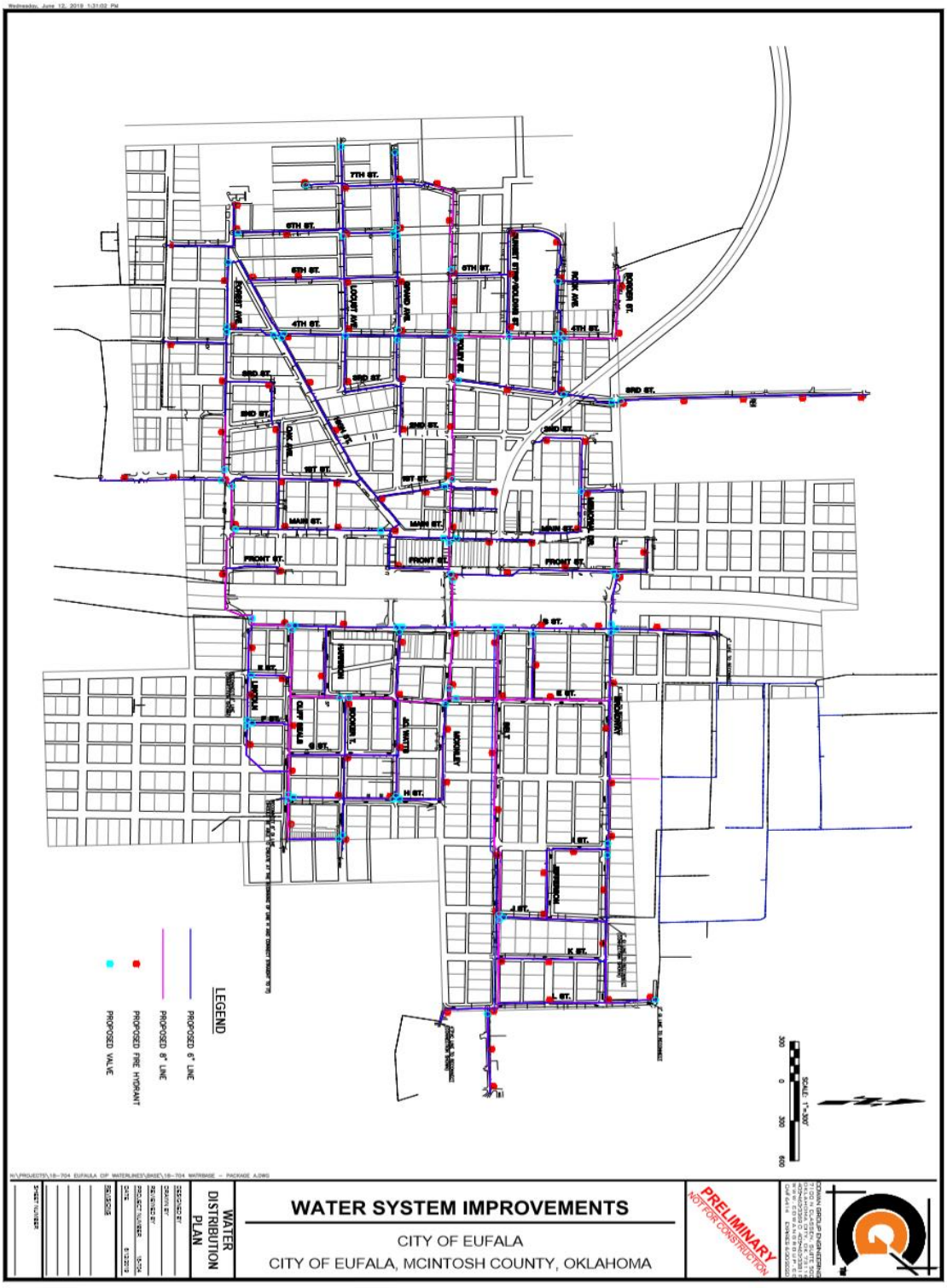
Chairman

Valerie Cox

Secretary

September 15, 2029	92,000.00
March 15, 2030	94,000.00
September 15, 2030	96,000.00
March 15, 2031	96,000.00
September 15, 2031	98,000.00
March 15, 2032	100,000.00
September 15, 2032	102,000.00
March 15, 2033	104,000.00
September 15, 2033	106,000.00
March 15, 2034	108,000.00
September 15, 2034	109,000.00

Part B & C Water Improvements Map
B= Left side C= Right Side
Also uploaded as an attachment to be able to look at it closer



DEQ Permit

SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

KEVIN STITT
Governor

May 08, 2019

Mr. Jacob Foos, City Manager
City of Eufaula
PO Box 684
Eufaula, Oklahoma 74432

Re: Eufaula Public Works Authority-City Wide Water System Improvements
Permit No. WL000046190296
Facility No. P40-1020514-02/Loan No. ORF-19-0012-DWA

Dear Mr. Foos:

Enclosed is Permit No. WL000046190296 for the construction of 6,700 LF of 8-inch PVC potable waterline, 90 LF of 8-inch DIP potable wateline, 29,300 LF of 6-inch PVC potable waterline, 1,600 linear feet of 6-inch DIP potable waterline, 30 linear feet of 4-inch PVC potable waterline, one (1) 100-gpm booster pump station and all appurtenances to serve the City of Eufaula, McIntosh County, Oklahoma.

The project authorized by this permit should be constructed in accordance with the plans approved by this Department on May 08, 2019. Any deviations from the approved plans and specifications affecting capacity, flow or operation of units must be approved, in writing, by the Department before changes are made.

Receipt of this permit should be noted in the minutes of the next regular meeting of the City of Eufaula, after which it should be made a matter of permanent record.

RECEIPT OF THIS PERMIT DOES NOT CONSTITUTE AN AUTHORIZATION TO AWARD A CONSTRUCTION CONTRACT UTILIZING FUNDING UNDER THE DRINKING WATER STATE REVOLVING FUND (DWSRF) PROGRAM. DO NOT AWARD A CONSTRUCTION CONTRACT UNTIL YOU ARE AUTHORIZED TO DO SO.

We are returning one (1) set of the approved plans to you, one (1) set to your engineer and retaining one (1) set for our files.

Respectfully,

Justin Hodge, Environmental Programs Specialist
Drinking Water State Revolving Fund
Water Quality Division

JH/RC/ag

Enclosure

c: Jeff Brents, Regional Manager, DEQ
Cassandra Atwood, McAlester DEQ Office
Ethan J.L. Edwards, P.E., Cowan Group Engineering

707 NORTH ROBINSON, P.O. BOX 1677, OKLAHOMA CITY, OKLAHOMA 73101-1677

SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

KEVIN STITT
Governor

PERMIT No. WL000046190296

WATER LINES

FACILITY No. 1020514

PERMIT TO CONSTRUCT

May 08, 2019

Pursuant to O.S. 27A 2-6-304, the City of Eufaula is hereby granted this Tier I Permit to construct 6,700 LF of 8-inch PVC potable waterline, 90 LF of 8-inch DIP potable wateline, 29,300 LF of 6-inch PVC potable waterline, 1,600 linear feet of 6-inch DIP potable waterline, 30 linear feet of 4-inch PVC potable waterline, one (1) 100-gpm booster pump station and all appurtenances to serve the City of Eufaula, located in Section 1 and Section 2, T9N, R16E; Section 35 and Section 36, T10N, R16E, McIntosh County, Oklahoma, in accordance with the plans approved May 08, 2019.

By acceptance of this permit, the permittee agrees to operate and maintain the facility in accordance with the Public Water Supply Operation rules (OAC 252:631) and to comply with the State Certification laws, Title 59, Section 1101-1116 O.S. and the rules and regulations adopted thereunder regarding the requirements for certified operators.

This permit is issued subject to the following provisions and conditions.

1) This water line provides adequate fire flow in accordance with the 2009 International Fire Code through the approved hydraulic analysis.

2) That the recipient of the permit is responsible that the project receives supervision and inspection by competent and qualified personnel.

3) That construction of all phases of the project will be started within one year of the date of approval or the phases not under construction will be resubmitted for approval as a new project.

4) That no significant information necessary for a proper evaluation of the project has been omitted or no invalid information has been presented in applying for the permit.

5) That the Oklahoma Department of Environmental Quality shall be kept informed on occurrences which may affect the eventual performance of the works or that will unduly delay the progress of the project.

6) That wherever water and sewer lines are constructed with spacing of 10 feet or less, sanitary protection will be provided in accordance with Public Water Supply Construction Standards [OAC 252:626-19-2].

7) That before placing this facility into service, at least two samples of the water, taken on different days, shall be tested for bacteria to show that it is safe for drinking purposes.

707 NORTH ROBINSON, P.O. BOX 1677, OKLAHOMA CITY, OKLAHOMA 73101-1677

PERMIT No. WL000046190296

WATER LINES

FACILITY No. 1020514

PERMIT TO CONSTRUCT

8) That any deviations from approved plans or specifications affecting capacity, flow or operation of units must be approved by the Department before any such deviations are made in the construction of this project.

9) That the recipient of the permit is responsible for the continued operation and maintenance of these facilities in accordance with rules and regulations adopted by the Environmental Quality Board, and that this Department will be notified in writing of any sale or transfer of ownership of these facilities.

10) The issuance of this permit does not relieve the responsible parties of any obligations or liabilities which the permittee may be under pursuant to prior enforcement action taken by the Department.

11) That the permittee is required to inform the developer/builder that a DEQ Storm Water Construction Permit is required for a construction site that will disturb one (1) acre or more in accordance with OPDES, 27A O.S. Section 2-6-201 *et seq.* For information or a copy of the GENERAL PERMIT (OKR10) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES, Notice of Intent (NOI) form, Notice of Termination (NOT) form, or guidance on preparation of a Pollution Prevention Plan, contact the Storm Water Unit of the Water Quality Division at P.O. Box 1677, Oklahoma City, OK 73101-1677 or by phone at (405) 702-8100.

12) That any notations or changes recorded on the official set of plans and specifications in the Oklahoma Department of Environmental Quality files shall be part of the plans as approved.

13) That water lines shall be located at least fifteen (15) feet from all parts of septic tanks and absorption fields, or other sewage treatment and disposal systems.

14) That whenever plastic pipe is approved and used for potable water, it shall bear the seal of the National Sanitation Foundation and meet the appropriate commercial standards.

PERMIT No. WL000046190296

WATER LINES

FACILITY No. 1020514

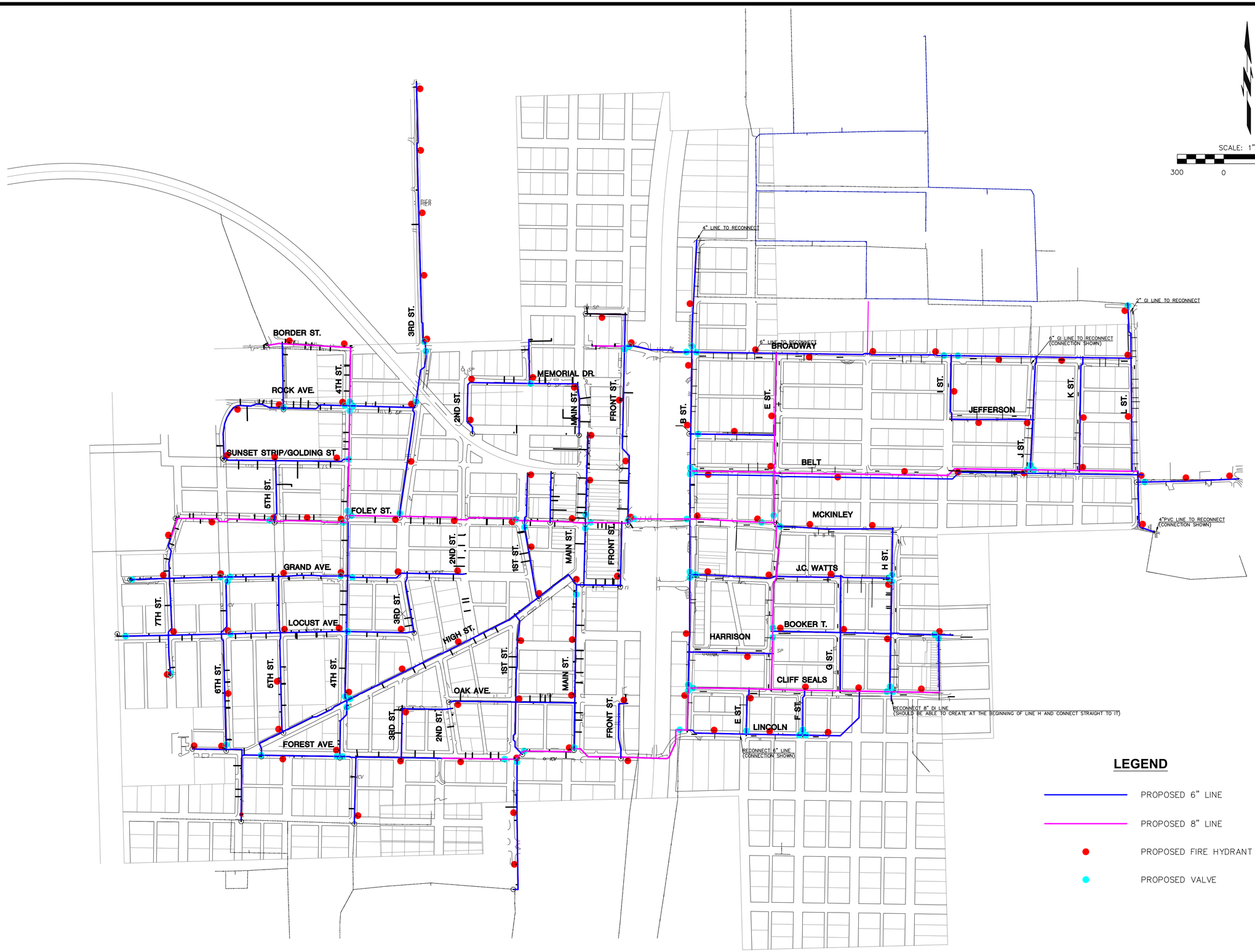
PERMIT TO CONSTRUCT

15) That when it is impossible to obtain proper horizontal and vertical separation as stipulated in Public Water Supply Construction Standards OAC 252:626-19-2(h)(1) and OAC 252:626-19-2(h)(2), respectively, the sewer shall be designed and constructed equal to water pipe, and shall be pressure tested to the highest pressure obtainable under the most severe head conditions of the collection system prior to backfilling.

Failure to appeal the conditions of this permit in writing within 30 days from the date of issue will constitute acceptance of the permit and all conditions and provisions.

Rocky Chen, P.E., Engineering Manager, Construction Permit Section
Water Quality Division

JH



LEGEND

- PROPOSED 6" LINE
- PROPOSED 8" LINE
- PROPOSED FIRE HYDRANT
- PROPOSED VALVE

COWAN GROUP ENGINEERING
7100 N CLASSEN, SUITE 500
OKLAHOMA CITY, OK 73116
405-463-3369 O 405-463-3381 F
WWW.COWANGROUP.CO
CA# 6414 EXPIRES 6/30/2020

PRELIMINARY
NOT FOR CONSTRUCTION

WATER SYSTEM IMPROVEMENTS

CITY OF EUFALA

CITY OF EUFALA, MCINTOSH COUNTY, OKLAHOMA

WATER DISTRIBUTION PLAN

DESIGNED BY	
DRAWN BY	
REVIEWED BY	
PROJECT NUMBER	18-704
DATE	6/12/2019

REVISIONS

SHEET NUMBER

N:\PROJECTS\18-704 EUFAULA CIP WATERLINES\BASE\18-704 WATRBASE - PACKAGE A.DWG

Wednesday, June 12, 2019 11:31:02 PM

RESOLUTION

AUTHORIZING APPLICATION FOR WATERSMART GRANT
FOR UPGRADING WATER SYSTEM
PROJECT PARTS B & C

WHEREAS, The City of Eufaula requires the upgrading of its waterlines and water system, due to an extremely high water loss rate; and

WHEREAS, it is in the best interest of the citizens of the City of Eufaula to expedite the preparation and submission of an application for financial assistance from the Department of Interior, in the form of a grant.

WHEREAS, the City of Eufaula has secured a loan with the Oklahoma Water Resource Board for the match portion of this project.

WHEREAS, the City of Eufaula will work with the Department of Interior, Bureau of Reclamation to meet established deadlines for entering into a grant or cooperative agreement for this project.

NOW THEREFORE, BE IT RESOLVED that a situation is hereby recognized and declared to exist in the City of Eufaula, and by reason thereof, the City Manager, is hereby authorized and directed to sign an application and related documents necessary to file and process a grant application for the Watersmart Grant on behalf of The City of Eufaula & Eufaula Public Works Authority.

PASSED AND APPROVED by the Town Council of the City of Eufaula this 7th day of October, 2019.

City of Eufaula

By_____

Title_____

ATTEST:

_____

(SEAL)