

# CITY OF ELEPHANT BUTTE WATER SAFETY AND PRESERVATION 2017



May 2017

May 9, 2017

City of Elephant Butte- Sierra County- New  
Mexico

103 Water Street (PO Box 1080)

Elephant Butte, NM 87935

Completed by:

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**TABLE OF CONTENTS BY PAGE**

- 1. Table of Contents**
- 2. Executive Summary**
- 3-4 Background Data**
- 5-7. Project Description & Evaluation Criteria**
- 8-9. Environmental & Cultural Resources Compliance**
- 10. Required Permits or Approvals**
- 11-12. Project Budget, Tables & Narrative**
- 13. Letter of Commitment**
- 14. Unique Entity Identifier**

# Executive Summary-

**MAY 9, 2017**

**CITY OF ELEPHANT BUTTE- SIERRA COUNTY-  
NEW MEXICO**

## **CITY OF ELEPHANT BUTTE WATER SAFETY AND PRESERVATION 2017-**

A function of the City of Elephant Butte's water system to ensure accurate measurement of water. We will be preserving our water credits with accurate reporting of water production vs. reported water consumption within the system. We will also be utilizing certified lead free products to ensure that our customer's health is of the utmost concern. We will also be protecting our customers from cross contamination during the project, using a double-check valve meter setter to prevent backflow. Financially, we will be reducing operator costs by implementing an electronically read meter. All of these items will be traceable in an asset management system to provide future knowledge and updated needs.

This Project is estimated to take 1 year to complete. Proposed dates are from October of 2017 thru October of 2018. All of the funds from this grant would go towards the purchase of equipment associated with the replacement of water meters and water meter setters.

Project is not located on a federal facility.

# Background Data-

State of New Mexico

County of Sierra

We are on the I-25 Corridor, comfortably nestled on the banks of New Mexico's largest lake, namely Elephant Butte Lake

One hour North of Las Cruces, and 2 hours south of Albuquerque, both in NM



The City of Elephant Butte operates and maintains 2 wells that are approximately 300 feet deep. The well sites are roughly 1/2 mile apart and each has storage tanks and 3 booster pumps on site. One of our tanks is 100K gallons and the other is 203K gallons. We pump raw groundwater up and into 1 of 2 storage tanks where it is then treated with chlorine. The water is pumped from the storage tanks through 1 of 2 booster stations, each have 3 booster pumps and then to the distribution system and to the customers. We maintain approximately 15 miles of distribution mains. We serve water to customers at 476 locations within the area in the yellow boundary. We are supplying during the peak times of year 100,000 GPD to said customers, and during the slow times of the year around 60,000 GPD. The system is primarily residential customers and a handful of businesses. The majority of the water lines were installed in the 60's and 70's with a couple of areas having been upgraded to C900 PVC pipe. We have a mixed bag of piping materials in the ground, as well as a mixed bag of water meters and setters.

I don't have a lot of information as to install dates and that which I do have is in handwritten notes. We have a decently stocked warehouse that stores most appurtenances that may be needed to address water system issues. We staff 2 full time operators and 3 apprentices that are available for leaks and other water related response. We maintain our chlorine residual at 0.6 throughout the water system and check it on a daily basis for consistency. Our water meters are all very aged as are all of the setters that are installed with them. Some of the existing setters don't have check valves present. BOR maintains the reservoir that we have acquired our namesake from. We rely directly on BOR for the tourist attraction to maintain our GRT to keep the area stabilized. I work directly with BOR on a professional basis as well as on a personal level. One of our employees' spouse works for BOR, and one of our contract employees has direct ties to BOR as well. We have never received any funding from BOR that I'm aware of, but would love the opportunity to begin a professional relationship with BOR on this project.

# Project Description-

Project scope would be to replace all of the meters, meter setters, and all connecting components. More than 90% are beyond the effective life of the meters. Some of the more seasoned items may be of health concerns due to inadequate materials and changes in law surrounding items that are approved for potable water use. With the new meter setters we would also be preventing source contamination potential by going to a double check meter setter. All hardware would be certified lead free, which is something that I cannot guarantee at this point in time. We have not had any of our lead and copper samples test above the MCL or action limit, but lead and copper tests are fairly limited in retrospect, to how likely they will test above MCL or action levels. We would also be using a meter that would more accurately dispense water to the customers and would be an upgrade for the system and infrastructure.

## **E.1.1. Evaluation Criterion A—Planning Efforts Supporting the Project (35 points)**

Based on our most current ICIP plan, water infrastructure is listed on this list as our second priority, only behind sewer line construction. Our water infrastructure faces a lot of unknowns due to its age and lack of project documents. This project would ensure our water supply would safely and effectively convey water to our residential and business customers. It would also serve as an opportunity to begin properly documenting some of the unknown's in the water system so that we can properly evaluate and identify other areas of concern to be addressed and corrected if deficiencies are found. By replacing the meters we would also more accurately be measuring our water consumed by our customers which would have a direct impact financially on the water system to fund future improvements.

### Infrastructure Capital Improvement Plan FY 2018-2022

Elephant Butte Project Summary														
ID	Year	Rank	Project Title	Category	Funded to date					Total Project Cost	Amount Not Yet Funded	Phases?		
					2018	2019	2020	2021	2022					
15784	2017	001	Construct Wastewater Collection Lines	Wastewater	435,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	12,935,000	12,500,000	Yes	
10388	2017	002	Water System Capital Improvements	Water Supply	517,000	550,000	550,000	540,000	640,000	740,000	3,537,000	3,020,000	Yes	
15790	2017	003	Storm and Surface Water Control	Storm/Surface Water Control	964,750	1,900,000	1,200,000	1,000,000	1,000,000	1,000,000	7,064,750	6,100,000	Yes	
22022	2017	004	City Facilities Improvements	Adm/Service Facilities (local)	55,000	355,000	500,000	100,000	0	0	1,010,000	955,000	Yes	
13840	2017	005	City Streets Improvements	Hiways/Roads/Streets/Bridges	114,000	500,000	500,000	500,000	500,000	500,000	2,614,000	2,500,000	Yes	
11492	2017	006	Parks and Walking Paths	Public Parks (local)	0	75,000	150,000	150,000	150,000	150,000	675,000	675,000	Yes	
26585	2017	007	Regional Animal Shelter	Other	200,000	500,000	0	0	0	0	700,000	500,000	No	
24304	2017	008	Construct New Regional Hospital	Health-Related Cap Infra	1,400,000	1,000,000	24,000,000	0	0	0	26,400,000	25,000,000	Yes	
22025	2017	009	BLM Land Improvement	Other	0	95,000	80,000	80,000	80,000	80,000	415,000	415,000	No	
22023	2017	010	Land Aquisition	Other	0	200,000	200,000	200,000	200,000	200,000	1,000,000	1,000,000	No	
Number of projects:					10									
Grand Totals					Funded to date:	Year 1:	Year 2:	Year 3:	Year 4:	Year 5:	Total Project Cost:	Total Not Yet Funded:		
Grand Totals					3,685,750	7,675,000	29,680,000	5,070,000	5,070,000	5,170,000	56,350,752	52,665,000		

**E.1.2. Evaluation Criterion B—Project Benefits (35 points)**

Going to an electronic read water meter would allow for us to utilize more operator time on maintaining and inspecting core, critical areas of the water system, including isolation valves, piping materials and remediation, installation of new pipe and PRV's to proper materials, depths and specs. I can see this project paying for itself in a 3-5 year period. Just recovering man hours doing manual reads will save us approximately \$960 per month. Those recovered man hours plus the unaccounted for low-flow water loss that passes through existing meters would come out to \$50,000 over a three year period ROI. Double-check valves would ensure the utmost safety to customers from any cross contamination. Ensuring that lead free components would be used would increase the safety implementation of the project that would be immediately passed on to the customers of the system. With all new meters we would also be able to properly give life expectancy and resource management through the public works office. Also gaining accuracy from well to taps, I think that a 2% water loss would be very attainable if we were able to do this project. Accurately measuring water loss can be beneficial information as to the rate of drawdown on the local aquifer. That measurement can ensure water quality and availability for future years while working with other entities to determine areas of improvement.

**E.1.3. Evaluation Criterion C—Project Implementation (15 points)**

After financial assistance is granted to fund this project we would then start with one street at a time and with our current employees we would be able to begin working on replacing the setters first. Setters would vary in duration of time to be replaced but we are planning on having 3-5 done per day with a total of 15-25 per week. At that rate it would take us approximately 20 to 30 weeks to replace all of the meter setters. During an initial phase of installing the new meter setters, which would be the most time consuming, we would be reinstalling the existing meters back into the new setters until we have all of the setters done. After the 20-30 weeks of getting those installed then we would go back and in a 2 week period would install the new meters for every home. After the new meters are installed then we would do a system analysis and verify that everything is functioning properly and that all of the meters are leak free. All in all I would say that by October of 2018 this project would be done and wrapped up.

October 1st 2017- Project begins-Order parts  
 November 1st 2017- Meter setters acquired  
 November 15<sup>th</sup> 2017- Begin Installation of new meter setters  
 May 1<sup>st</sup> 2018- Order new water meters  
 July 1<sup>st</sup> 2018- Receive new water meters  
 July 18<sup>th</sup> 2018- Meter Setters all installed  
 August 1<sup>st</sup> 2018- Begin meter installation  
 October 30<sup>th</sup> 2018- Finish project and final report to BOR

**E.1.4. Evaluation Criterion D—Nexus to Reclamation(15 points)**

This project would ensure accuracy at the home taps. In turn this would increase revenues due to unaccounted for water now being accounted for and sold. New meters have a much higher degree of

accuracy than the ones that are currently installed. Having accurate meters would also allow us to better project our water consumption to federal and state agencies for the purpose of water credits. It would also allow us to better understand the importance of making sewer available to certain parts of town and outside of our town as well. If we can accurately report these numbers then we would be able to project future water needs in the area and how they will impact our aquifer.

The City of Elephant Butte does have a relationship with BOR. We have a common interest in the state's largest lake. This kind of project would ensure that a committed relationship is developed so that we can both inherently benefit from the lake and the citizens that it serves.

# Environmental & Cultural Resources

## Compliance-

1. *Will the proposed project impact the surrounding environment?*

In short the answer is very minimally. The only ground to be disturbed would be directly surrounding already existing water meter cans that were previously installed by the water system. Impact are would be a roughly 4 foot area at each of the 476 locations that water is supplied. There is no animal habitats that will be impacted. We will be sure that any animal encounters will be handled sensitively to ensure life is preserved.

2. *Are you aware of any species listed or proposed to be listed as a deferral threatened or designated critical habitat in the project area?*

We are not aware of any such species. Nor is there any habitat that would be directly impacted by such a project.

3. *Are there wetlands or other surface waters inside the project boundaries that potentially fall under the Clean Water Act jurisdiction as "Waters of the United States"?*

The project will not impact any Clean Water Act affected bodies of water or any other jurisdiction of the project area.

4. *When was the water delivery system constructed?*

I have accounts that date back to the early 60's. It was then called Lakeshore Sanitation district. The City of Elephant Butte took over the water system in August of 2008. At which point it was renamed City of Elephant Butte Water.

5. *Will the proposed project result in any modification of or effects to, individual features of an irrigation system?*

Our water system is not used for irrigation purposes.

6. *Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the national register of historic places?*

No.

7. *Are there any known archeological sites in the proposed project area?*

No.

8. *Will the proposed project have a disproportionately high and adverse effect on low income or minority populations?*

No.

9. *Will the proposed project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?*

No.

10. *Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?*

No, it is not anticipated that any invasive or otherwise non-native plants would be expected to thrive or be introduced during this project.

# Required Permits or Approvals-

The only approval needed is to be adopted by official resolution. It is on the agenda for the 17<sup>th</sup> of May 2017 for approval. We would like to exercise the extended deadline of 30 days to present the adopted resolution to the table for purposes of this grant application.

# Project Budget, Tables & Budget Narrative-

The non-federal share will be paid out of our annual operating budget. Currently we have a remaining 2016-2017 budget of \$117,000 dollars. Our full operating budget for fiscal year 2017-2018 will be \$257,000 which includes funding for this project as well as remaining operational expenses. This project would include a \$75,000 match that would fulfill the cost obligation of \$150,000 to acquire all materials to implement this project. Since this project consists of materials purchase only it's pretty clear cut. The funding portion would be spent immediately upon final approval of this grant and would within a year be fully implemented and installed. The City of Elephant Butte would then be the only other committed source for funding and a letter of commitment is included as the last page of this grant.

**Table 1.—Summary of Non-Federal and Federal Funding Sources**

<b>FUNDING SOURCES</b>	<b>AMOUNT</b>
<b>Non Federal Entities</b>	
1. City of Elephant Butte	\$75,000
2.	
3.	
<b>Non-Federal Subtotal</b>	\$75,000
<b>Other Federal Entities</b>	
1.	
2.	
3.	
<b>Other Federal Subtotal</b>	\$0.00
<b>REQUESTED RECLAMATION FUNDING</b>	<b>\$75,000</b>

**Table 2.—Budget Proposal**

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity Type	TOTAL COST
	\$/Unit	Quantity		
<b>Supplies and Materials</b>				
Meter Setters and materials	\$130	476	per unit	\$61,880
New Water Meters	\$ 185	476	per unity	\$88,060
<b>TOTAL ESTIMATED PROJECT COSTS</b>				<b>\$ 149,940</b>

**Budget Narrative-**

The budget for this project is 100% dedicated to the purchasing of supplies and materials to replace 476 water meters and setters across the serviceable area. These costs are reflective of direct quotations from vendors to supply such items. All items quoted were priced at a per unit price. We would purchase all items using the NM State Procurement process to determine and evaluate costs to ascertain that best attainable prices are established. Direct quotations can and will be obtained and submitted for approval upon selection and approval of this grant selection process.

# Letter of Commitment-



CITY OF ELEPHANT BUTTE

P. O. Box 1080  
Elephant Butte, New Mexico 87935  
(575) 744-4892  
FAX (575) 744-4493

Title-

BOR WaterSMART Grants Small-Scale Water Efficiency Projects for Fiscal Year 2017

Local Project Title-

City of Elephant Butte Water Safety and Preservation 2017

The following signatures accompanied with a resolution, to be reviewed for approval on May 17<sup>th</sup> 2017, are the City of Elephant Butte's 100% commitment to the above project. Financially monies have been set aside as a co-operative match to make a 100% match if funding is approved, to fulfill an obligatory financial impact of \$75,000, in its scope of work, decidedly an attempt to preserve this most important resource and to assure that it is available for future generations. Local funding will be available immediately available upon approval of said grant.

Funding amount requested through BOR WaterSMART Grants- \$75,000

Funding amount to be committed by the City of Elephant Butte- \$75,000

Total project cost- \$150,000

We will adhere to this decided upon financial amount to the above referenced project in its entirety and will ensure that it will be dedicated to the project 100%.

Name YOVANNE LUCENO Title CITY MANAGER  
Signature [Handwritten Signature] Date 5-11-17

# Unique Entity Identifier-

We currently have a DUNS account set up and are in the final process of obtaining a SAM account. We would like to exercise the 30 day extension to meet this deadline and will submit it within the allowed timeframe for submission.