

Bureau of Reclamation, Native American and International Affairs Office:
Technical Assistance to Tribes for Fiscal Years 2020 & 2021
BOR-DO-20-F013

Project Title: Additional Water Supply for the City of Lone Grove

Applicant: The Chickasaw Nation
520 E. Arlington
Ada, Oklahoma 74820

Project Manager: _____
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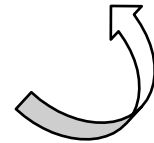
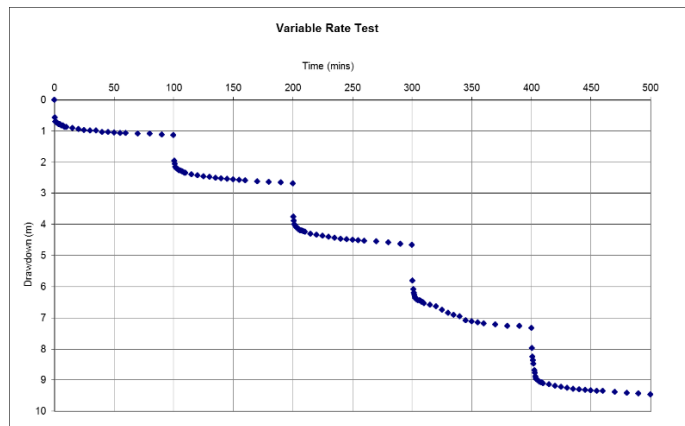
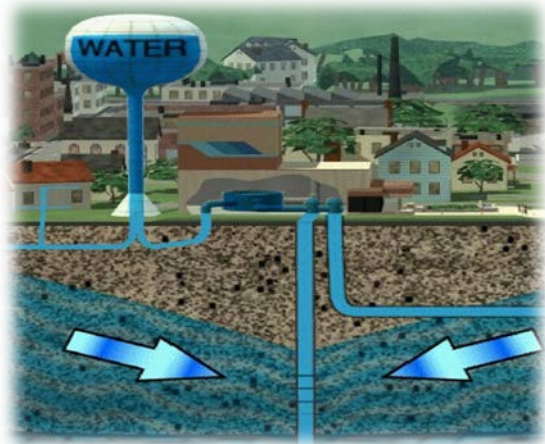


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Executive Summary

The Chickasaw Nation (CN) is interested in helping the City of Lone Grove, Oklahoma expand and improve the reliability of its water supply. Limitations of the city's existing municipal water supply has resulted in a moratorium on new home construction since 2009. While the region around Lone Grove has been growing steadily, in part due to the CN investments, growth and development, new commercial and home construction in Lone Grove has been at a halt for over a decade, and is unable to grow until a reliable source of additional water supply can be found. Currently, the water supply for Lone Grove comes from six groundwater water wells near the city; the wells are operating at an estimated 85 percent capacity to meet existing water use and cannot accommodate any additional demand. Lone Grove is working on an expansion for the water supply that involves adding two new supply wells to the city's water distribution system. This proposal would fund the critical preliminary steps of drilling test wells to evaluate the productivity and water quality of potential locations for the new supply wells, followed by an engineering design study of how to best integrate the new wells into Lone Grove's water supply network.

The applicant is: The Chickasaw Nation
 520 E. Arlington
 Ada, Oklahoma 74820

The CN headquarters is located in the City of Ada, Pontotoc County, but the Nation's jurisdiction covers a 13-county area, including the City of Lone Grove, which is located in Carter County. This proposal was submitted prior to the deadline, on October 28, 2020. Mandatory federal forms are included in with this application.

The CN and City of Lone Grove have recently been collaborating to find a reliable source of additional water that will enable the lifting of the construction moratorium and provide the capacity for the city to grow both in the near term and over the next 50 years. In addition to the moratorium on any type of residential or commercial development, due to the limited supply of water, Lone Grove also has issues with community-wide fire suppression and water supply during low precipitation periods. Funding for the project proposed herein involves the development of two test wells near Lone Grove. The test wells will provide essential information about the productivity and water quality of two proposed supply well locations. This data will provide the necessary information for water managers to determine whether the planned well locations can provide a safe, clean and reliable source of water for the City of Lone Grove.

The project, as proposed, can be completed within two years. In fact, a conservative estimate of the time required is 18 months, with final report anticipated to be submitted prior to September 2022. This project will not take place on a Federal facility.

Background Data

Long-term protection and sustainability of water resources within the Chickasaw Nation

The Chickasaw Nations (CN) tribal jurisdiction spans a region that has a relative abundance of water resources. Today, the CN territory is located within the south central portion of the State of Oklahoma, an area that spans roughly 13 counties (Figure 1). Live springs and creeks, as well as strong flowing rivers are characteristic of the territory. Clean and plentiful water resources are essential to the regional economy, culture, and way of life, and critically support community stability, economic development and environmental health. The CN considers the health and sustainability of these water systems, both natural and man-made, as integral to the long-term economic, environmental and cultural health of their treaty territory.

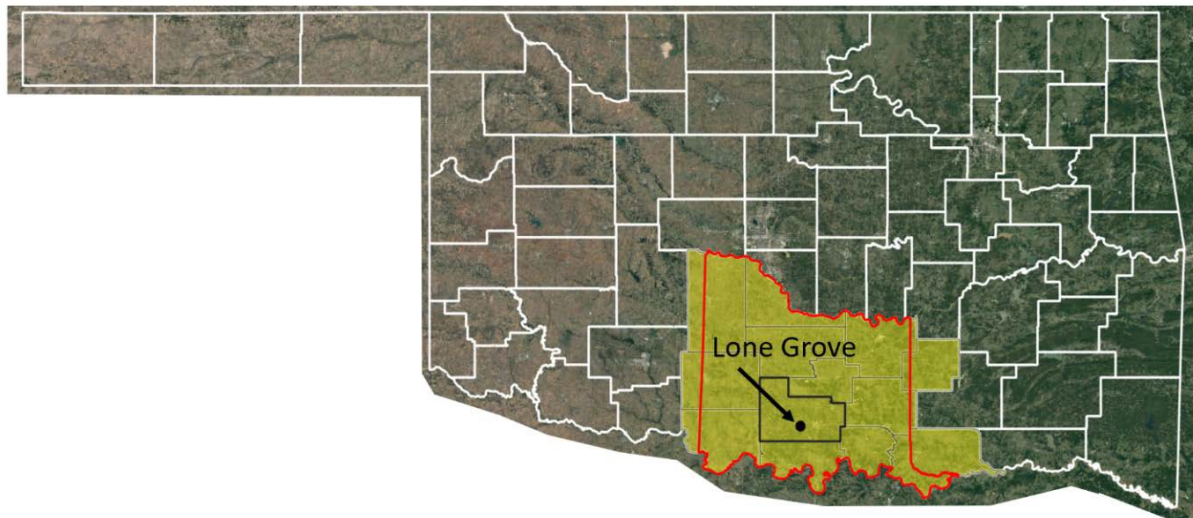


Figure 1: Chickasaw Nation Tribal Jurisdiction (red outline), 13 associated counties (yellow), City of Lone Grove and Carter County (black outline).

Water resource sustainability requires development and management of water resources so that they are put to both consumptive and non-consumptive beneficial use in a manner that serves present needs without compromising the ability of future generations to meet their needs. Sustainable development and management of water resources requires consideration and balancing of a region's social, environmental *and* economic needs. Ultimately, finding such common ground requires collaboration between and among communities and interest groups, and such efforts are best made based on sound science and technically competent planning efforts that examine needs of the region (consumptive and non-consumptive) and the available resources (natural, technical and infrastructure).

The CN is concerned that the current water resource management challenges, if not properly addressed and appropriately managed, pose a real and direct threat to their homeland's health

and future viability. To address these concerns, the CN and Choctaw Nation of Oklahoma (CNO) embarked on an effort to develop the Chickasaw-Choctaw Regional Water Plan (CCRWP). The CCRWP builds on available water resources data to perform a careful review and science-based assessment of policy alternatives that will ensure that water resources are developed in a sustainable way.

The foundation of any water plan is a water supply and demand analysis, gap study and the development of water management strategies to address identified needs. In developing the CN analyses and water management strategies, the focus will be on scientific credibility and responsiveness to local community priorities. Both of these factors are important in ensuring that the resulting plan is workable—for the CN and CNO as well as the community and region as a whole.

Starting in 2011, the CN and CNO began to visit water and wastewater treatment plants across their jurisdictional area to get a better understanding of the challenges faced by small rural communities in meeting the needs of their customers – residents of the CN and CNO jurisdictional territory. Discussions covered a spectrum of issues, from water supply shortfalls during drought conditions, to deteriorating infrastructure and water quality violations. Since the initial visits, the CN has been working closely with the City of Lone Grove. Lone Grove had water supply issues in 2011 and although solutions have been identified, these have still not been fully resolved, as described in this proposal.



Lone Grove water quality issues as viewed from a residential faucet in 2017

Water supply needs for the City of Lone Grove

The City of Lone Grove is located in Carter County within the jurisdictional area of the CN (see Figure 1). Lone Grove has the potential to grow rapidly, partly because of proposed nearby developments by the CN and increased economic growth in the Carter County region. The

Oklahoma Department of Commerce anticipates that the population of Lone Grove will grow 20 percent by 2060, increasing from 5,000 residents in the 2010 census to 6,000 by 2060. This estimate, however, is a projection based on Carter County population growth and is not specifically for the City of Lone Grove. Additionally, the housing and development moratorium in place since 2009 makes it hard to gauge the potential growth rate for Lone Grove if sufficient water supplies were available. Local county projections indicate even higher rates of growth. The proportion of Native American (NA) households on the Lone Grove water distribution system is approximately 35 percent, based on the most recent surveys. With the growing population and economy, water demand is projected to increase from 420 to 620 AFY by 2060, which equates to about a 48 percent increase from current average annual demands [Mears Engineers, 2020].

The City of Lone Grove has historically relied solely on groundwater for the water needs of its residents and businesses. The water supply for the city has been sourced from six wells that are located within a few miles of the city center (Figure 2). Presently, only five of the wells are in operation because of the appearance of an unknown contaminant in one of the wells. This has further stretched the capability of the already strained water supply for the City of Lone Grove to meet the needs of its residents. City Managers are very concerned that the next drought may result in water shortages and emergency restrictions, and if an adequate water supply cannot be secured, they fear that it could harm the long-term prosperity of Lone Grove.

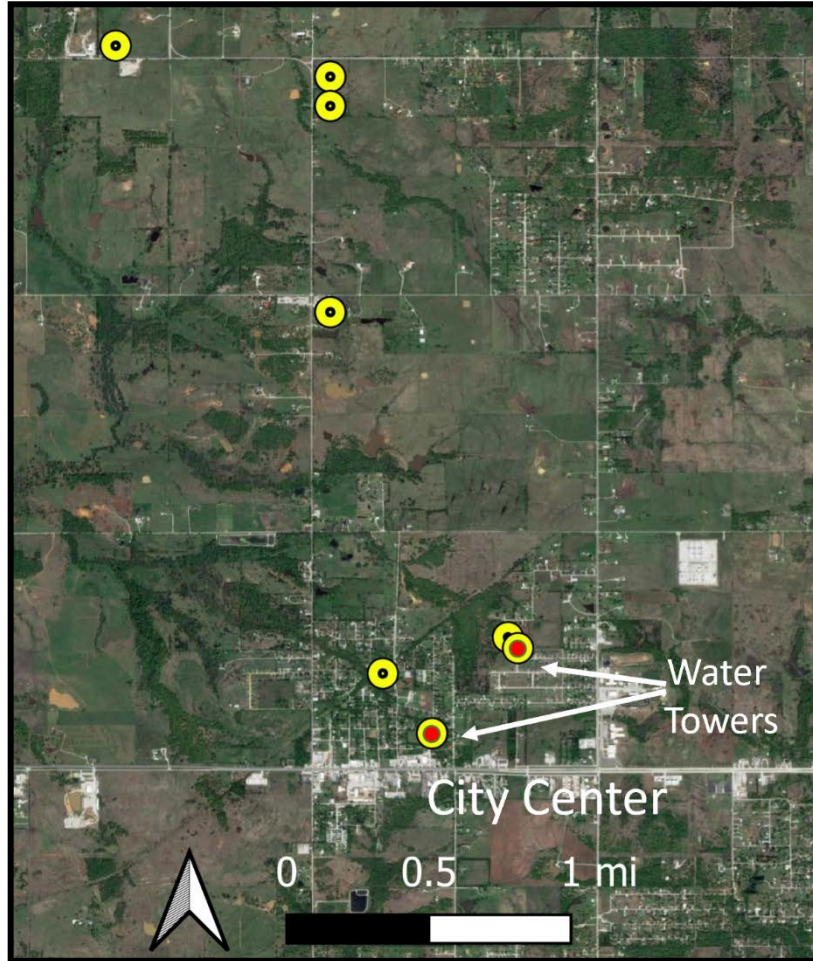


Figure 2. Overview of the City of Lone Grove and existing water infrastructure. Supply wells in yellow and the two water towers are yellow with red centers.

Housing Permit Denials

Since 2014, The City of Lone Grove has enforced a housing and development moratorium within the city limits. Within this timeframe Lone Grove has had to deny applications for housing developments of more than 600 residential homes within the City of Lone Grove and areas within the Lone Grove Public Works Authority jurisdiction.

Fire Suppression Concerns

Like many towns and cities in Oklahoma, Lone Grove has adopted the International Fire Code. New fire hydrants in single-family residential areas are required to be on circulating mains that are no smaller than 6 inches in diameter and be capable of delivering 1,000 gallons per minute (gpm) fire flow over and above average maximum demands at the farthest point of installation. Lone Grove cannot meet these requirements at any of its hydrants during dry summer months, when demand is high and the likelihood of fire is also elevated.

Technical Project Description

Overview

The City of Lone Grove has six groundwater wells in its water supply system; currently only five wells are in operation because of the appearance of an unknown contamination in one of the wells. The five wells in operation listed in order from highest-to-lowest average pumping rate are: Huckersmith Well (168,000 gallons/day), Hail Well (104,000 gallons/day), Clifton Well (99,900 gallons/day), Well #1 (72,500 gallons/day) and Well #4 (58,000 gallons/day). The sixth well that is currently not in operation is the Martin Well. The water distribution system of Lone Grove uses two water towers with a combined storage capacity of 175,000 gallons to store and distribute water according to demands on the system.

The objective of the well test study is to identify at least two new well locations that combined can provide, at a minimum, an additional 126 gallons per minute (181,500 gallons per day) to the water supply. The lower limit of at least 126 gallons per minute is based on estimated water needs for Lone Grove by 2060, which by then could have an additional 1,000 or more residents.

Test wells

A previous engineering review has determined two potential locations for two test wells to be evaluated under this proposal. The first location is approximately 1.75 miles to the northeast of the city center and the second location is 1.25 miles to the southeast of the city center [Figure 3].

The City of Lone Grove and nearby surrounding area encompassing existing water supply wells do not overlay any major alluvial or bedrock aquifers. However, minor formations do provide for current water supply. The nearest major aquifer is the Antlers aquifer that lies ~ 3.5 miles to the south of the city center. As evident by the modest pumping rates of the existing supply wells (by municipal supply well standards), the Wellington and Oscar Formations are characterized as productive but not prolific. The highest yield for a nearby well is 180 gpm for a well about 2 miles southeast of the test well Location #2 (Figure 3) [Enviro Clean Cardinal, 2020]. Thus, it is anticipated that two new wells may be needed to provide the additional 126 gpm to the city water supply.



Figure 3: Proposed test well locations north and south of the town center and existing groundwater wells (teal).

The test wells will be drilled into the Oscar Formation, which is one of the primary aquifers in the region. Based on drilling logs from nearby wells, the Oscar Formation is estimated to occur at depths from 250 to 750 feet below ground surface. [Enviro Clean Cardinal, 2020]. The Oscar Formation is composed of a variety of sedimentary rocks, including sandstones, limestones and conglomerates. Some of the existing wells for the City of Lone Grove tap into the Oscar Formation at depths ranging from 360 to 380 feet [Enviro Clean Cardinal, 2020]. Groundwater quality data from the Oklahoma Regional Water Development Board indicates that supply wells should not be drilled deeper than 400 feet because of high salinity water in excess of 10,000 mg/l total dissolved solids beyond that depth.

Two six inch diameter test wells will be drilled to a depth of 400 feet, Casing water quality testing, pump testing and capacity evaluation will be included within the project. Well closure and plugging will occur upon completion of the work if the test well is not successful. An engineering evaluation will be provided for each test well drilled. This work will be contracted, with a firm that has yet to be chosen.

Outcome: two test wells drilled in the Oscar Formation aquifer, one at each of the specified study locations, analyzed for productivity, including a final summary report for each well.

Additional support and data collection at the well sites:

An electro-resistivity survey will be conducted at each site to determine potential areas of higher water availability within the area and to determine the exact drilling site. Water quality data will be collected from the test wells and tested at a certified lab to confirm that the water quality complies with state standards for municipal water quality.

Outcome: Additional data collected at each of the test well sites.

Engineering design and costing

The project scope involves the drilling of two test wells – one at each site – and preparation of a high-level engineering analyses to determine which well location is most feasible at providing at least 126 gpm from both cost and design perspectives. The CN will work with Lone Grove and a water development team to evaluate this process.

Outcome: High level engineering design and costing for incorporating new wells into Lone Grove's water supply system from the two proposed supply well locations.

Next steps upon completion of this project

If the test wells prove to be suitable for municipal use, the next step following the test well study and engineering evaluation would be to obtain the water rights and permission to construct one or more municipal wells. This process will require the development of detailed engineering plans for both the wells and the pipeline. It is expected that once suitable well locations are identified, the City of Lone Grove and the CN will work together to conduct these next steps of water rights acquisition and municipal well installation. Ultimately, this project sets the stage for Lone Grove to address their water supply and water quality issues impacting their community. Increased water supply from these wells will provide significant improvements to not only health issues from poor water quality but within fire suppression efforts.

Evaluation Criteria

The following sections address each evaluation criterion in the order presented in the Funding Opportunity Announcement (FOA) to assist in review and evaluation of the proposal for meeting the goals of the Native American Affairs, Technical Assistance to Tribes program. There are three main criteria by which this proposal will be evaluated: A. Priority, B. Viability and C. Capability.

Evaluation Criterion A – Project Need

Reclamation will evaluate the extent to which the proposal demonstrates the project or activity is intended to address the water and water-related priorities identified by the tribe or tribal organization.

a) How does federal funding assist in developing the project?

Federal funds will enable the first phase of the water supply expansion for Lone Grove. The first phase includes the drilling and analysis of up to two test wells, followed by an engineering assessment of which well location(s) offer the best combination of reliable water supply and most efficient cost of implementation.

b) What is the magnitude of the impacts if the proposed project is not funded (e.g., public health and safety, regulatory, and social risk etc.)?

If this proposal is not funded, it would mean delaying the critical first phase of the water supply expansion for Lone Grove until adequate funds are secured through the combined efforts of the city and the CN. Any delay would further extend the timeline for when the City of Lone Grove will have adequate water supply to allow further development, which has already been at a halt for over a decade because of the limited capacity of the existing supply. This step will enable the water economic expansion and development needing to alleviate its current issues.

c) Does the project assist in addressing health and safety of the tribe and its members, and if so, how?

Yes, the water supply for the City of Lone Grove is currently stretched to its maximum capacity during peak demand periods and needs to address additional capacity before any further development can occur in the community. This project will find suitable locations for new supply wells and evaluate how the new wells will be incorporated into Lone Grove's water distribution system – a key step toward the ultimate goal of securing a new

source of clean and reliable water for the current and future residents of Lone Grove. The City of Lone Grove is composed of about 35 percent Native Americans. Additionally, during the peak water use hours, the fire system is compromised and may not be able to adequately suppress a fire leading to potential loss of life and property for residents in Lone Grove.

d) What is the timeframe for completing the critical action?

If funded, the test wells and engineering analysis can be performed conservatively within 18 months from the date of funding.

e) Does project assist in complying with regulatory requirements related to water and water resources, and if so, how?

Nothing described in this scope of work will involve permits or permissions that are difficult to obtain. Test well drilling efforts will be reported to the Oklahoma Water Resources Board as required by state law.

f) What is the status of the tribe's capacity to manage, develop and protect its water and related resources?

The CN is economically strong, culturally vibrant, and dedicated to the preservation of family, community and heritage. Since the 1980s, tribal government has focused most of its efforts on building an economically diverse base to generate funds that will support programs and services to its citizens. Business has flourished, programs and services have grown, and the quality of life for all Chickasaws has been greatly enhanced, which is key to the CN's efforts to pursue self-sufficiency and self-determination which in turn helps ensure that Chickasaws stay a united and thriving people. The CN's guidance on water resource management is laid out in the "Seven Essentials". This short document summarizes the CN's principles on water issues and is consistent with their desire to develop water resources in a sustainable way, to protect the environment as well as the economy, and to work with small towns as well as large cities and local, state and federal agencies in a collaborative fashion.

The CN has future development plans in Lone Grove that cannot be realized until the city has additional water supply allowing for growth and safety of the community. However, the reliability of water supply is a major concern and needs to be addressed prior to development. In order to remedy the water supply shortage, the CN has been working with the City of Lone Grove for over a year in an effort to evaluate ways to assist Lone Grove with modernizing water pipeline infrastructure and increase water storage capacity within the community. The CN will be providing both financial and technical resources to Lone Grove as part of this project.

Evaluation Criterion B – Project Benefits

Describe the expected benefits and outcomes of the project. In doing so, please answer all the questions applicable to the project. It is not necessary to answer all these questions in the affirmative to score well on this criterion and points will be allocated based on the degree to which the project provides water resource benefits as a whole.

1) Include a brief explanation of how the tribe or tribal organization has:

a) Does the project improve development, management, and/or protection of tribal water and related resources, and if so, how?

The project directly relates to the development of additional water supply capacity for the City of Lone Grove. The proposed test wells and engineering assessment will provide the City of Lone Grove and the CN the necessary data to make informed decisions about how to best move forward with installing supply wells and integrating the new wells into the water supply system. The test well data will estimate how productive the supply wells will be (i.e. how much water they will be capable of producing). This information will allow water managers to determine how many wells will be needed to meet current demand and accommodate future supply by obtaining accurate estimates of the costs associated with the water supply expansion.

b) Does the project build or enhance the tribe's internal capacity to manage, develop and protect its water and related resources, and if so, how?

The test wells study and engineering analysis will provide both Lone Grove leadership and CN water planners necessary data/information to make informed decisions about how to best proceed with the water supply expansion for the City of Lone Grove.

c) Does the project include data collection related to water quality? How will it be analyzed and used to benefit the tribe? How will data analysis inform management decisions?

Water samples will be collected from each test well that will be analyzed by a certified laboratory to confirm water quality meets required state drinking water standards. Water sample results will allow for selection of prospective well location based on any identified water quality issues. Water quality determination is especially relevant for supply wells being added to the system as Lone Grove does not have a water treatment plant requiring that water supply from wells needs to be potable without additional treatment beyond chlorination.

d) Does the project include data collection related to water supply? How will it be analyzed and used to benefit the tribe? How will data analysis inform management decisions?

Hydrogeological data necessary to estimate water supply capacity will be collected at each test well. This data will include, at a minimum, (1) drilling logs that document the geological composition of the wells, which are useful in identifying the depth ranges for the supply wells, and (2) pump test time-drawdown data at each well. The pump tests record how water levels in each test well respond to pumping at known rates. This data can be analyzed to determine the expected yield of each well – for example, the test well analysis could show that one of the locations would be expected to produce no more than 50 gallons per day, while the other one could produce more than 100 gallons per day. The expected yield can also be used for engineering analysis on how to incorporate the capacity of the new wells into the existing water supply system for Lone Grove.

e) Does the project improve water reliability, and if so, how and to what extent? Does the project assist with addressing current or future water shortages, and if so, how? Will the project build long-term resilience to drought, and if so, how?

The additional supply capacity will increase water reliability during peak demand periods, during extended periods of increased use such as a prolonged drought or an unusually dry summer, and the reliability under future conditions when the population of Lone Grove and its water needs have increased. If the proposed work confirms a sufficient supply of water, the local water providers and CN will work together to bring the project to fruition.

f) Will the project make additional water supplies available, and if so how? What is the estimated quantity of additional supply the project will provide and how was this calculated? What percentage of the total water supply does the additional water supply represent?

Yes, the project will support the addition of two supply wells to the water supply system for Lone Grove. The goal of adding at least 126 gallons per minute (200 AFY) represents a 48 percent increase to the existing annual water supply production of 420 AFY. The additional supply from the wells will be especially beneficial for meeting water demand during high use periods – such as during the hottest and driest summer months. Additionally, increased water quantity will allow for adequate fire suppression water pressures necessary to protect human life and structures. The project will also allow Lone Grove to remove their new construction moratorium based on limited water supply.

g) Does the project improve tribal water system efficiencies and promote water conservation, and if so, how?

Not Applicable

h) Does the project reduce conflicts between water users, and if so, how? Will the project help prevent a water-related crisis or conflict, and if so, how? Are there non-tribal partners in the project and what is their roles? Is there frequently tension or litigation over water in the basin? Does the project address heightened competition for finite water supplies or issues related over-allocation water rights, and if so, how?

Currently, Lone Grove's new construction moratorium has prevented the CN from building residential homes for citizens within the area. This project, once completed, will address that issue resolving current conflicts which include potential legal litigation relating to water development matters.

i) Is the project supported by existing water resource management plans, and if so, how?

The proposed work is a key component to a much larger water supply management plan that has been developed by the City of Lone Grove. The plan has three components that together will increase the water supply capacity of the city to accommodate expected growth through 2060. Along with the addition of new water supply wells, the other two components are adding water storage capacity in the form of elevated storage tank(s) and retrofitting some of the water pipeline infrastructure so the water distribution system can handle the increased flow from the new supply wells.

j) Does the project protect and enhance the environment, and if so, how?

Not Applicable

Evaluation Criterion C – Project Implementation

Point will be awarded based upon the extent to which the proposed project is capable of proceeding upon entering into a financial assistance agreement. Applicants that describe a detailed plan (e.g., estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates) will receive the most points under this criterion.

a) Describe the implementation plan for the project that includes an estimated schedule that shows the stages and duration of the proposed work

The project implementation timeline is shown in the figure below.

	Year 1				Year 2			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Chickasaw Project Management	x	x	x	x	x	x	x	x
Task 1- Project kick-off meeting	x							
Task 2 – Bid construction services			x					
Task 3 – Electro-resistivity Survey and Test Well Drilling			x	x	x			
Task 4 – Pump Testing and Pump Test Analysis						x	x	
Task 6 – Water Quality Analysis and Project Management Reporting			x			x	x	x

b) Describe any plans to contract activities. Describe the procurement standards that will be used to select successful contractors

Upon notification to proceed on this project, the CN will go through a formal procurement process to select firms suitable and qualified to perform the proposed drilling work, electro-resistivity survey, pump testing, water analysis and technical oversight.

c) Describe any permits that will be required, along with the process for obtaining such permits.

No permits are required to drill test wells. Both test well locations are on city property, and Lone Grove has given permission to the CN to drill the test wells on the property owned by the city. Well drilling reports will be provided to the Oklahoma Water Resources Board as required by state law.

Lone Grove has provided the CN with letters of support for this project (see attachments).

d) Identify and describe any engineering or design work performed specifically in support of the proposed project.

Please see the attached – (1) Water System Hydraulic Analysis Report for the City of Lone Grove Carter County, Oklahoma – Cardinal Engineering October 2017 and (2) Engineering Report – Water System Improvement for the City of Lone Grove.

e) Describe any new policies or administrative actions required to implement the project.

None required.

f) Identify staff with appropriate technical and project management expertise and describe their qualifications and roles in the proposed project or activity.

The proposed project will be managed by _____. He will facilitate the administrative functions of this grant. Technical oversight will be provided by an outside contractor: M_____ with _____. M_____ has been working with the CN on water and wastewater issues for the past eight years. M_____ has worked in the area of water resources for more than 25 years, specializing in water supply planning, hydrology, hydraulics and environmental flows. In addition to directing a large and diverse group of scientists and engineers, M_____ has managed many large projects and is the former director of the - _____. A_____ will also provide technical expertise and oversee electro-resistivity surveying, water quality sampling and analysis and design efforts to include water wells within the existing system. It is anticipated that a drilling company will be hired to drill the test wells once the CN receives notice to proceed.

g) Describe how the environmental compliance estimate was developed. Has the compliance cost been discussed with the local Reclamation office?

Drilling the proposed test wells will have no significant impacts to environmental or cultural resources, and both proposed well locations are within a close proximity to pipeline right of ways or other utility lines, existing roads and disturbed urban areas. Therefore, it is unlikely that cultural or environmental resources would be impacted from implementation of the project findings.

Evaluation Criterion D – Alignment with Department of the Interior Priorities

Please describe how the project furthers and supports the applicable priorities. It is not necessary to address priorities that are not applicable to your project. Points will be allocated based on the degree to which the project supports one or more of the priorities listed, and whether the connection to the priority(ies) is well supported in the proposal.

1) Creating a conservation stewardship legacy second only to Teddy Roosevelt

- a. Utilize science to identify best practices to manage land and water resources and adapt to changes in the environment;
- b. Review DOI water storage, transportation, and distribution systems to identify opportunities to resolve conflicts and expand capacity;

2) Restoring trust with local communities

- a. Be a better neighbor with those closest to resources by improving dialogue and relationships with persons and entities bordering tribal lands;

- b. Expand the lines of communication with Governors, state natural resource offices, Fish and Wildlife offices, water authorities, county commissioners, tribes and local communities.

3) Modernize our infrastructure

- a. Support the White House Public/Private Partnership Initiative to modernize U.S. infrastructure;
- b. Prioritize DOI infrastructure needs to highlight: i. Construction of infrastructure; ii. Cyclical maintenance; iii. Deferred maintenance.

I. PROJECT BUDGET

Funding Plan and Letters of Commitment

The total cost of the Lone Grove project is \$_____. The total federal request for the proposed Lone Grove project is \$_____.

The leaders of this project hope to address water quality on and leaving tribal properties to ensure good stewardship.

- 1) 6.22 percent of the total project cost, \$_____ is committed by the Chickasaw Nation (CN) in in-kind cash matching.

Budget Proposal

Year 2021 Budget

NAATAP Lone Grove Study Budget Proposal

Budget Item Description		Federal Request	In-kind	Total Project Cost
Salaries and Wages				
Total Salaries and Wages		\$ -		
Travel				
Trips to Lone Grove	\$0.575 per mile x 131 miles round trip x 6 trips			
Total Travel				
Contractual				
Total Contractual				
Total Direct Costs				
Indirect Costs - 19.54%	Calculated on total travel costs			
Total Project Cost				

Budget Narrative

Salaries and Wages (In-kind)

Key Personnel

_____, *Project Manager*

_____, CN water resources planner for the division of natural resources, will be the project manager for this project. M_____ will be responsible for providing technical support to personnel, contractors and consultants in regard to the regulations and requirements that are related to the project. He will also be responsible for sending required reports to the U.S. Bureau of Reclamation. His annual salaries are \$_____ for year 2020 and \$_____ for year 2021. The estimated hours dedicated to the project includes 108 per year which equals a total of 216 hours for the project. M_____’s hourly rate for 2020 is \$_____, totaling \$_____. And his hourly rate for 2021 will be \$_____, totaling \$_____. Fringe benefits are separate from the annual salaries.

Other Personnel

_____, *Water Resources Manager*
_____, CN water resources manager for the division of natural resources, will participate in team meetings to provide technical assistance. The water resources manager will assist with administering and reporting for the project. The water resource manager’s hourly rate for 2021 will be \$_____, totaling \$_____.

_____, *Director of Natural Resources*
_____, CN director of natural resources, will participate in the contractor selection and coordination for the project and will also provide technical assistance to the contractor as well as participating in reporting and project evaluations. The director’s hourly rate for 2021 will be \$_____, totaling \$_____.

Travel

It is anticipated that the Project Manager will make six trips to the Lone Grove area during the course of this project. The costs of travel would therefore be \$452 at the current federal mileage rate.

$$\$0.575 \text{ per mile} \times 131 \text{ miles round trip} \times 6 \text{ trips} = \$452$$

Equipment

All equipment is included in the cost of contracted services.

Material and Supplies

None.

Contractual

The process for selecting the contractor will be based on a competitive bid process where experience, knowledge and understanding of the project will dictate the selection. It is estimated that this process will cost approximately \$_____ over the two-year period based on contractor estimates (attached).

Three contracts will be executed to perform this work:

1. **Technical oversight and design and costing report.** The contractor requirements will be for technical oversight, electro-resistivity surveys, water quality sampling and analysis and water conveyance engineering methods including the development of preliminary designs. Cost of this work is anticipated to be \$_____, including all time, travel and associated expenses.
2. **Test well drilling.** The CN also intends to procure the services of a firm to drill two test wells at two different locations. Contracted services will include two 400-foot 6-inch

diameter test wells, including casing, pump testing and capacity evaluation, well closure and plugging upon completion of the test if not viable, and a summary report for each well. Cost of this work is anticipated to be \$_____ per well, including all equipment, time, travel and associated expenses. The total estimated cost is \$_____.

3. **Line Installation.** Installation of two 20 m spacing lines (1100 m/3,608 ft long with a depth of investigation of ~720 ft) at an estimated cost of \$_____ (or \$_____ per line for the two lines).

It is estimated that this process will cost approximately \$_____ over the eighteen month period based on contractor estimates (attached).

Third-Party In-Kind Contributions

There are no third-party in-kind contributions.

Environmental and Regulatory Compliance Costs

There are no environmental and regulatory compliance costs as the proposed project will conduct non-invasive water quality monitoring and recommend non-destructive best management practices for implementation.

Other Expenses

N/A

Indirect Costs

The indirect costs for the request are \$_____. The currently negotiated IDC rate for the CN is 19.54 percent.

FUNDING SOURCES	AMOUNT
Non-Federal Entities	
1. The Chickasaw Nation *	
2.	
3.	
Non-Federal Subtotal	
Other Federal Entities	
1.	
2.	
3.	
Other Federal Subtotal	0
REQUESTED RECLAMATION FUNDING	

Environmental and Cultural Resources Compliance

This project will comply with all environmental and cultural rules and regulations.

Required Permits or Approvals

At this time and for the purposes of this project, no permits are required to perform the work described. Permission to drill at the sites described have been obtained from the City of Lone Grove.

Official Resolution

See attached.



OFFICE OF THE GOVERNOR

The Chickasaw Nation
Post Office Box 1548 • Ada, Oklahoma 74821
(580) 436-2603 • Fax (580) 436-4287
<http://www.chickasaw.net>

BILL ANOATUBBY
GOVERNOR

September 22, 2020

Mr. DatTen Olson
Bureau of Reclamation
Financial Assistance Support Section
Post Office Box 25007,
MS 84-27815
Denver, CO 80225

Dear Mr. Olson:

Please accept this letter as documentation of tribal authority to allow the governor of the Chickasaw Nation to apply for grants without a tribal resolution. The Chickasaw Nation Constitution, as approved by the secretary of the U.S. Department of the Interior, grants the governor of the Chickasaw Nation authority to apply for grant awards on behalf of the Chickasaw Nation. The authority of the governor is stated in Article X, Section 1 of the Chickasaw Constitution. The excerpt reads- "The Supreme Executive power of this Nation shall be vested in a Chief Magistrate, who shall be styled 'The Governor of the Chickasaw Nation.'" In addition, Article XI, Section 1 of the Constitution of the Chickasaw Nation states "the governor shall perform all duties appertaining to the Office of Chief Executive. He shall sign official papers on behalf of the Nation."

This serves as the approval for the submission of the grant application. The Chickasaw Nation appreciates the opportunity to apply for funding from the Bureau of Reclamation - Native American Affairs: Technical Assistance to Tribes for Fiscal Year 2021. This project will help the community of Lone Grove to improve its water infrastructure to improve growth potential. Currently Lone Grove has a moratorium on new meter installation, which is limiting new homes and businesses being developed in the area. Test wells will be drilled to develop additional water supply to support growth.

The Chickasaw Nation will work with the Bureau of Reclamation to ensure established deadlines are accomplished.

If you have any questions, please contact Ms. Jennifer Bryant, water resources manager, at (580) 399-8052 or at jennifera.bryant@chickasaw.net.

Sincerely,

A handwritten signature in cursive script that reads "Anoatubby".

Bill Anoatu
The Chickasaw Nation

BJA:jjc

City of Lone Grove

POBox304
Lone Grove, OK 73443

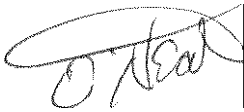
580-657-3111 Phone
580-657-6395 Fax

October 1, 2020

The City of Lone Grove is proud to support the Chickasaw Nation's request for assistance from the Bureau of Reclamation's Native American Technical Assistance Program. This will assist the city to address its long term water needs within the region. Additionally, it will promote greater prosperity for Native Americans in the area.

If you need more information, please contact the City of Lone Grove at lgcityclerk@cablone.net or 580-223-6454.

Sincerely,

A handwritten signature in black ink, appearing to read "Ian O'Neil", is written over a vertical line that serves as a signature separator.

Ian O'Neil

Lone Grove City Manager