

Reuse Water System Storage Tank Project

WaterSMART: Drought Resiliency Project Grants FY 2016

PREPARED FOR:

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EXECUTIVE SUMMARY

| DATE: | April 11, 2016 |
|------------------------------|----------------------------------|
| APPLICANT NAME: | Town of Little Elm, Texas |
| POPULATION: | 34,209 |
| CITY, COUNTY, STATE: | Little Elm, Denton County, Texas |
| PROJECT LENGTH OF TIME: | 18 months |
| PROJECT ON FEDERAL FACILITY: | No |

In an effort to build long-term resilience to the frequent, prolonged drought events in North Texas, the Town of Little Elm requests \$200,000 to add a 100,000-gallon wastewater reuse storage tank at the Town's wastewater treatment plant (WWTP). The project will provide a consistent supply of treated wastewater available for irrigation and other municipal uses, saving our imported, potable water for our growing population. The existing WWTP is the terminus for the Town's wastewater. Currently, the water is treated and then dumped back into Lewisville Lake. The Town installed recycled water piping that will connect to the WWTP, but the reuse system has no storage area; thus is completely dependent on residential effluent flows, which are not consistent. One problem is that the Town's preferred time to irrigate is overnight, when the water can more efficiently soak into the roots of the plants before evaporating and protect the plants during the daytime Texas heat. There is minimal residential activity overnight, so only a small amount of wastewater flows to the WWTP and will be available for irrigation with the existing infrastructure.

Because of our <u>more than 700% population growth in the last 15 years</u>, the Town is increasing the WWTP's capacity from 3 million to 4 million gallons. Design and engineering are 60 percent complete for the overall expansion project, including the wastewater storage tank as a secondary possibility. Reclamation funding will allow the Town to include the proposed storage tank for water reuse while mobilizing for the WWTP expansion. The tank will hold up to 100,000 gallons of wastewater, providing a consistent supply of recycled water for municipal, commercial, and residential use estimated at up to 3,024.4 acre feet per year. The Town's existing recycled infrastructure will connect directly to the storage tank to allow reuse-irrigation immediately for medians, public lawns and landscaping, and McCord Park. The next near-term goal is to provide a portion of this reuse water for purchase to local homeowners associations, Little Elm Independent School District (letters of support included), and finally to other commercial and institutional organizations, and residents. The proposed project will improve efficiency in the use of water, contribute to the sustainability of our current water supplies, and bolster our community against cyclical droughts.

BACKGROUND DATA

Geographic Location Map



Water Supply. The Town of Little Elm is located on the shores of Lewisville Lake in Denton County, Texas and is a part of the Dallas-Fort Worth Metroplex. The Town has experienced significant, sustained population growth over the last decades, making it one of the fastest growing municipalities in Texas. According to the U.S. Census Bureau, the Town has a total area of 18.6 square miles of which 14.6 square miles is land and 4.1 square miles is Lewisville Lake. Lewisville Lake is an Army Corps of Engineers lake providing potable water to the City of Dallas. This water is not available as drinking or irrigation water for Little Elm.

5 TECHNICAL PROPOSAL BOR DROUGHT RESILIENCY PROJECT

The Town of Little Elm's Public Works Department is responsible for water utility and water quality. The Department also has water-delivery authority of the Town's 1.108 billion annual total gallons, or approximately 3,400 acre-feet per year (AFY), of total water supply and water managed. The Town obtains its water from three different sources: 1) surface water from the North Texas Municipal Water District (NTMWD); 2) groundwater from its own wells; and 3)

contracts from NTMWD. By far, the NTMWD is the largest source of potable water for the City. NTMWD supplies clients with a majority of its water from Lavon Lake, 30 miles east of Little Elm. Groundwater for the Town is drawn from the Paluxy and Woodbine Aquifers. The Town also owns and operates the 3 million gallons per day Activate Sludge Wastewater



Figure 1. The 3 million gallon Wastewater Treatment Plan (WWTP), above, is being expanded to 4 million gallons due to our population growth. The WWTP currently treats 2.5 to 2.7 million gallons of effluent per day.

Treatment Plant (WWTP), mentioned earlier. The treated effluent is discharged into an unnamed creek which discharges into Lewisville Lake.

Water Demand. It is estimated that the Town's population will grow to a total of 70,478 at build-out.¹ Current water demand is 3,468 AFY. This demand is partially met by our neighboring water supplier. Projected demand in 2020 is anticipated to be 7,921 AFY, an increase of 128% of today's demand in the next four years.² Meeting this future demand with the knowledge that droughts are common and cyclical in North Texas requires that we aggressively implement recycled water projects to help offset our potable water demand. The Texas Water Development Board has estimated that 24 percent of the future water supply should come from municipal and agricultural conservation projects. Little Elm's storage tank/reclaimed irrigation project specifically helps meet the State's objectives.

Water Delivery and Distribution System. The NTMWD Regional Water System, created in 1954, provides treated drinking water supplies to over 1.6 million people in the 55 cities, towns, special utility districts, and water supply corporations served through voluntary contracts. The NTMWD receives raw water from Lavon Lake for treatment at the Wylie Water Treatment Plants. NTMWD provides water treatment and delivery at the water treatment plants, and

¹ Town of Little Elm Comprehensive Plan 2008

² Town of Little Elm Water Conservation, Drought Contingency and Water Emergency Response Plan

owns and operates the transmission pipelines, pumps, and storage reservoirs necessary to deliver the treated water to customers. As stated above, Little Elm is a NTMWD customer.

The Town of Little Elm owns and operates the local water distribution system and the Public Works Department's Water Utility provides day-to-day management and oversight of the entire system. The Water Utility serves the current population (34,209 residents) with 10,246 meter connections, including municipal, domestic, and agricultural users, one industrial user, two wholesale customers, and numerous irrigation systems for landscape and green spaces. Water is pumped from two of NTMWD's transfer stations in the Cities of Frisco and Richardson (eight and 30 miles away, respectively) to Little Elm's distribution system, which includes:

- 113.4 miles of potable water mains;
- 93 miles of gravity wastewater lines and 12.4 force mains;
- Four ground storage tanks (five million gallon; two million gallon, 68,000 gallon; and 101,000 gallon tanks);
- Three elevated storage tanks (two million gallon and one million gallon tanks); and
- Four booster pumps (three pumps at 2,650 gallons per minute and one pump at 1,500 gallons per minute).

Reclamation Relationships. We currently do not have a Reclamation facility or contract/agreement within our jurisdiction. However, we are anxious for such an opportunity and desire to begin a relationship with the Bureau of Reclamation (BOR). This grant request would be our first work with the BOR. In February of 2013, we applied for BOR funding through the Water Conservation Field Services Program Great Plains Region, Oklahoma-Texas to install recycled water lines (purple pipe). That application was unfortunately not selected for funding and we advanced the project using local funds. The recycled water transmission lines we installed using local funds will be the same ones used to connect to the storage tank proposed herein. In addition, we have reached out to and spoken with BOR staff to learn more about how to be competitive for BOR funding. Each time we speak with BOR staff in our region, we are encouraged to apply for funding despite not having a prior relationship or nexus to a specific BOR facility, like the Colorado River Aqueduct or other large-scale BOR facilities. We hope that this application will be viewed favorably by the BOR and thus start the relationship-building with the BOR.

TECHNICAL PROJECT DESCRIPTION

Technical Project Description. We propose to construct a 100,000-gallon water reuse storage tank adjacent to our wastewater treatment plant (WWTP). The proposed project will leverage the planned mobilization to expand the WWTP from 3 million to 4 million gallons and will not be possible without Reclamation funding. The Town has developed 'stand-by' design plans that include the proposed storage tank in the event that grant or other funding should become available. The timing could not be better to implement this important drought resiliency

project. All work will be conducted in existing, previously-disturbed Town-owned land at the WWTP site. The project is expected to be completed well within 24 months upon grant award (please see Figure 7 for schedule on page 18). The following tasks will be accomplished:

Task 1. Project Management. The Town will assign a Project Manager (PM) and Fiscal Project Manager to the proposed project upon award notification. The PM will be responsible for day-to-day oversight of the project, maintain contact with the BOR and provide updates, and hold monthly check-in meetings to ensure the project remains on-task and on-schedule. The PM will also be responsible for capturing Performance Measures data, as specified in this application. Performance Measure data will be included in the project's final evaluation and report, and submitted to the BOR within six months of the performance period. The Fiscal Project Manager will ensure all BOR required reporting documents are correctly submitted and on-time including quarterly reports, requests for reimbursement, and records retention.

Deliverables: Meeting minutes from monthly check-ins, quarterly program performance reports, requests for reimbursement, financial reports including SF-435 federal forms, final fiscal report, Project Evaluation, and Final Project Report.

Task 2. Execute Agreement. Upon notification from the BOR of a grant award, the PM will work with the BOR program officer to negotiate the grant agreement and deliverables.

Deliverable: Executed grant agreement.

Task 3. Final Design, Review, and Approval. Sixty percent design is complete for the proposed project. It is expected that minimal design work will be needed to bring this task to completion. Final designs and construction drawings will be developed by an engineering consultant and provided to the PM and Town Council for review and subsequent approval. The proposed engineering consultant is already contracted via a prior, competitive Request for Qualifications. This task will be added to the existing contract as a change order, assuming BOR approves of this process.

Deliverables: 100% complete and approved design drawings and documents, including construction drawings.

Task 4. Environmental Compliance including NEPA and Permitting. The PM will work with the BOR to follow all environmental compliance protocols including completion of the National Environmental Policy Act (NEPA) requirements. In addition, all required permits will be obtained, as required by Town, State and Federal laws and regulations.

Deliverable: Completed NEPA documentation and permits obtained.

Task 5. Develop Construction RFP, Advertise and Review Construction Bids. The PM will develop the construction Request for Proposal (RFP), and advertise according to Town of Little Elm and BOR procurement policies, and review all received bids.

Deliverables: RFP and bid tally sheets.

Task 6. Construction Notice to Proceed. The PM will negotiate the contract with the qualified construction agency according to BOR regulations and procurement practices, award the contract, and issue Notice to Proceed with the successful contractor. The PM will conduct a kick-off meeting with the Construction Manager to agree on deliverables and timeline, and set-up monthly check-in meetings with both parties.

Deliverables: Executed construction contract, meeting notes from kick-off meeting.

Task 7. Construction. Construction will include the following sub-tasks and will take approximately six months to complete:

7a. Excavate and dispose of native expansive soil at the storage tank and pump building locations and backfill with select material.

7b. Prepare subgrade and pour concrete for storage tank foundation ring and pump building slab. The building floor slab and roof will be constructed of poured concrete and the existing concrete roadway will be extended to the building for access by the operation staff. The storage tank will also have a concrete foundation.

7c. Install water supply piping to the storage tank and discharge piping to the Town's reuse system. Install electrical conduit for lighting and equipment.

7d. Construct steel storage tank and pump building. The pump building will be an enclosed building constructed of masonry unit walls with a concrete floor slab and roof. Its dimensions are 18'L x 11'W x 8'H, and is sized to contain only the pumps and the pump electrical/control panels.

7e. Install reuse pump equipment and associated piping. The reuse pumps and the storage tank will be added to the treatment facility's existing supervisory control and data acquisitions (SCADA) system so that the operator can monitor and keep a record of the pump and storage tank status, including pump runtime, pump failure alarms, reuse water flowrate, tank high, and low level alarms.

7f. Pour concrete access driveway and prepare finished grade.

Please also see **Preliminary Design Drawings** in **Appendix A** of this application.

Deliverables: Itemized invoices for expenses, on-site weekly walk through reports, photographs of work completed, and punch list.

Task 8. Testing, Notice of Completion Filed, Storage Tank Fully Operational. The Construction Manager will conduct the industry-standard required testing of the completed storage tank and reuse system, and file a notice of completion with the PM.

Deliverables: Test records and filed notice of completion.

EVALUATION CRITERIA

Evaluation Criterion A—Project Benefits

Please describe how the proposed project will improve drought resiliency, including:

• Will the project make additional water supplies available? If so, what is the estimated quantity of additional supply the project will provide and how was this estimate calculated?

Additional Water Supplies.

The proposed wastewater storage tank will make up to 3,024.4 AFY of new water supplies available. The reuse water storage tank will have the capacity to hold 100,000 gallons of treated wastewater. The current WWTP facility treats 2.5 to 2.7 million gallons of effluent per day, or 3,024.4 AFY, which will be captured and reused as a new water supply if the project is approved. The estimate was calculated by multiplying the daily intake of effluent (2.7 million gallons per day) by 365 days per year (2,700,000 X 365 = 98,550,000) and converting it to acre feet (98,550,000 gallons / 325,851 = 3,024.4 AFY). The storage tank will be used to help irrigate the following in the near-term and longer-term.

| Figure 2 Recycled Water Use Portfolio and Nexus to Proposed Storage Tank | | | | | | | | | | | | |
|--|--------------------------------------|-----------------------------------|---|--|--|--|--|--|--|--|--|--|
| User/Customer | Use | Estimated Use AFY ³ | Timeframe for Connection to Water Storage Tank | | | | | | | | | |
| Town of Little Elm (Totals from McCord Park, Witt Road, and Brent Elementary) | Landscaping and Medians, Parks | 255 | Immediately, system is on line and can connect on day one | | | | | | | | | |
| Villages of Woodlake Residential Development | Landscaping | 7.6 | Near-term, within 12 months of storage tank being constructed | | | | | | | | | |
| Little Elm Independent School District | Landscaping | 31.8 | Near-term, within 12 months of storage tank being constructed | | | | | | | | | |
| Residential Connections | Landscaping | TBD | Longer-term, within 60 months of storage tank being constructed | | | | | | | | | |
| Total | | 294.4 | | | | | | | | | | |

³ Calculations were based on 2015 water meter usage, and projected acreage of parkland and medians that are connected to recycled water infrastructure considering the irrigation water allowance.

Our current irrigation needs are 262,823 gallons per day (294.4 AFY = 95,930,512 gallons per year / 365 days) (see Figure 2 above).

While the new storage tank will provide the capacity to develop a new irrigation supply of recycled water in the amount of 3,024.4 AFY, the Town will not use this amount to its full capacity under later phases of our reuse infrastructure are built. We are estimating that we will meet our current irrigation needs of **294.4 AFY** with treated, reclaimed water from the new storage tank with infrastructure at its current status.

Please also see the **Project Map** in **Appendix B** for further visuals of the project area and proposed irrigation sites.

• What percentage of the total water supply does the additional water supply represent? How was this estimate calculated?

The Town's total water supply is 1,107,942,000 gallons per year, or approximately 3,400 acrefeet per year (AFY), of water supply. The percentage of the total water supplied with this project is estimated as follows:

> Estimated Amount of Water Supplied Average Annual Water Supply

> > 294.4 AFY 3,400 AFY

= 11.55%

• Provide a brief qualitative description of the degree/significance of the benefits associated with the additional water supplies.

The wastewater storage tank will provide the following qualitative benefits:

Saving/Freeing up Imported Potable Water Supplies. The proposed project will free up 294.4 AFY of water for irrigation. Using lower quality, treated effluent for irrigation means we use the potable water we buy from NMWTD once, then treat it as it flows through the WWTP and use it a second time. While we have recycled pipelines in place, we do not have the infrastructures to store treated effluent for alternative use, and thus are losing thousands of acre feet per year of water that could be used to beautify our town and stretch our potable water supplies. Freeing up this potable water means we have more resiliency in recurring drought. This new water supply is dependable, consistent, and sustainable, and will be a new source of income in the future.

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Reduces energy costs by reducing the energy needed to move water longer distances or pump water from deep within an aquifer. Little Elm receives most of its water from Lavon Lake, which is over 25 miles away. Using wastewater that is of lower quality for uses that don't require high-quality water saves energy and money by reducing treatment requirements. Energy is required first in collecting, extracting, conveying, and distributing water to end users and second in treating and disposing of the wastewater once the end users have finished with it. Although it requires additional energy to treat wastewater for recycling, the amount of energy required to treat and/or transport other sources of water is generally much greater.⁴

Improves water supply/delivery, reliability, and flexibility because the wastewater will always be available for irrigation, even in times of drought. The storage tank is designed so that recycled water will be available when the treatment facility is experiencing low flow (usually at night and early morning). Without the proposed project, reclaimed water will be diverted to irrigation needs, but only as flows allow. For example, because there is no capacity to store the wastewater for future use, irrigation could only occur in real-time, as effluent is flowing to the WWTP, which is very low overnight and early morning. The Town would not be able to guarantee a consistent supply of this new water to potential irrigation customers. When the sprinklers turn on, customers want to know that water will come out. This project guarantees the consistency of the supply. Additionally, wastewater sometimes contains higher levels of nutrients such as nitrogen, phosphorus and oxygen, which may help fertilize landscape plants when used for irrigation.

• How will the project build long-term resilience to drought? How many years will the project continue to provide benefits?

The expected useful life of the wastewater storage tank is 50 years. That means that it will conserve approximately 14,720 AF until it needs to be replaced (at the Town's current reuse infrastructure level. We expect far greater savings in the future as more sites become available for reuse irrigation.

The project builds resiliency to drought by stretching potable water supplies while developing a new source of water for irrigation that is not dependent on climatic conditions or imported sources. The wastewater flow is consistent 365 days a year, which means that this new source of water will remain consistent, year-in and year-out even in drought conditions. The Town has an obligation to water landscaping, trees, and parks to sustain our tourism and property values – a large source of our income as out town continues to grow. The Town uses drought resistant and tolerant species and water-wise irrigation wherever possible, and will utilize this new source of reclaimed water to irrigate – replacing nearly 300 AFY of existing landscaping needs

⁴ California Energy Commission's 2005 Report: California's Water - Energy Relationship (CEC#700-2005-011-SF

within the first year of its life. The storage tank's capacity will be far greater than 300 AFY, and thus allows room for the recycled infrastructure to continue to grow throughout the Town.

• How will the project improve the management of water supplies? For example, will the project increase efficiency or increase operational flexibility (e.g., improve the ability to deliver water during drought or access other sources of supply)? If so, how will the project increase efficiency or operational flexibility?

The project increases operational flexibility and improves the ability to deliver water during drought because it is a consistent supply, as noted earlier. The Town's residents will always produce wastewater, and the ability to store the wastewater to sell and use locally also increases the volume of consistent supply, even in times of drought.

• Will the project make new information available to water managers? If so, what is that information and how will it improve water management?

Yes. The project will improve water management by providing water managers with new data on the amount of wastewater used annually for irrigation. This information will also include the savings of potable water purchased for the same use.

• Will the project have benefits to fish, wildlife, or the environment? If so, please describe those benefits.

Yes, the project enhances aquatic/riparian habitat. Plants, wildlife, and fish depend on sufficient water flows to their habitats to live and reproduce. The lack of adequate flow, as a result of diversion for agricultural, urban, and industrial purposes, can cause deterioration of water quality and ecosystem health. By reusing wastewater to supplement their demands, the Town is freeing considerable amounts of water for the environment and increasing flows to vital ecosystems. A portion of the Town's water comes from Lavon Lake, which is the uppermost impoundment on the East Fork of the Trinity River. During the 2011 to 2015 North Texas drought, NTMWD was unable to use 28% of available water supply due to the presence of



Figure 3. Zebra mussels line the inside of a water pipe. Reducing dependence on Lavon Lake will decrease the likelihood of spreading this invasive species to other water sources.

an invasive species, the zebra mussel, in Lake Texoma. The invasive zebra mussel has the capacity to strip all of the microscopic nutrients from the lake, promoting deadly toxic algae and

leaving little for other species to feed off on.⁵ Zebra mussels spread as microscopic larvae that cannot be filtered. By reducing its reliance on lake water, the Town of Little Elm will reduce the possibility of spreading this species to other water sources nearby, such as Lewisville Lake, thereby helping to protect other aquatic/riparian habitats from this invasion.

• What is the estimated quantity of water that will be better managed as a result of this project? How was this estimate calculated?

The wastewater storage tank will have the capacity to hold, and therefore better manage, 263,823 gallons of treated wastewater per day, resulting in 294.4 AFY of water better managed annually. The total was calculated by first, realizing the actual amount of potential recycled water developed by this project will be far greater than the near-term irrigation needs of 262,823 gallons per day. We then converted gallons per day to AFY (294.4 AFY = 95,930,512 gallons per year / 365 days) for the ending calculation of 294.4 AFY of water better managed.

This means the Town will require 95.9 million gallons less of potable water to be pumped from NTMWD per year, and will be able to better manage the total supply because we are not depending on external supply sources.

• What percentage of the total water supply does the water better managed represent? How was this estimate calculated?

The Town's total water supply is 1,107,942,000 gallons per year, or approximately 3,400 acrefeet per year (AFY), of water supply. The percentage of total water supply better managed with this project is estimated as follows:

| Estimated Amount of Water Better Managed |
|--|
| Average Annual Water Supply |
| |
| 294.4 AFY |
| 3,400 AFY |

= 11.55%

• Provide a brief qualitative description of the degree/significance of anticipated water management benefits.

The wastewater storage tank will provide the following qualitative water management benefits:

Reduces energy costs by reducing the energy needed to move water longer distances or pump water from deep within an aquifer. Little Elm receives most of its water from Lavon Lake, which is over 25 miles away. Using wastewater that is of lower quality for uses that do not require

⁵ Source: Dallasobserver.com, Zebra Mussel Threat to Texas Lakes is Misunderestimated, 01/18/12, by Jim Schutz

high-quality water saves energy and money by reducing treatment requirements. Although it requires additional energy to treat wastewater for recycling, the amount of energy required to treat and/or transport other sources of water is generally much greater.⁶

Improves water supply/delivery, reliability, and flexibility because the wastewater will always be available for irrigation, even in times of drought. Additionally, wastewater sometimes contains higher levels of nutrients such as nitrogen, phosphorus and oxygen, which may help fertilize landscape plants when used for irrigation.

The project does not include salt water barriers or wells.

Evaluation Criterion B—Drought Planning and Preparedness

• Attach a copy of the applicable drought plan, or sections of the plan, as an appendix to your application. These pages will not be included in the total page count for the application.

Please see **Drought Plan Section** for Sections 1 (Introductions and Objectives) and Section 8 (Other Conservation Measures) from the Little Elm Water Conservation, Drought Contingency, and Emergency Response Plan.

• Explain how the applicable plan addresses drought.

Like many areas in the State of Texas, the Town of Little Elm experiences severe drought at an alarming frequency. In 2005, the north Texas region entered into a drought that lasted until the spring of 2007. During that time, the NTMWD responded by implementing a Water Conservation and Drought Contingency Plan. Likewise, the Town of Little Elm developed its own Water Conservation, Drought Contingency, and Water Emergency Response Plan (Plan) in 2008, which was updated and adopted in 2011, and is our current plan on file. The Town's Plan was developed according to the requirements and recommendations of the Texas Commission on Environmental Quality (TCEQ). The water conservation sections of this plan include measures that are intended to result in ongoing, long-term water savings. The drought contingency and water emergency response sections of this Plan address strategies designed to temporarily reduce water use in response to specific conditions. The Plan discusses water conservation methods including metering, water use records, control of unaccounted water, leak detection and repair, public education, and various other water conservation measures. Among other actions, the Plan defines different drought stages for the Town. The stages are structured to be initiated in reaction to drought conditions and to limit the methods of water use that are allowed for residents and businesses of Little Elm. Continued droughts, coupled

⁶ Source: California Energy Commission's 2005 report: California's Water - Energy Relationship (CEC#700-2005-011-SF)

with explosive local population growth and an estimated build-out of 70,478 demand immediate water conservation measures.

Explain whether the drought plan was developed with input from multiple stakeholders. Was the drought plan developed through a collaborative process?

Yes. This drought contingency and water emergency response plan is consistent with Texas Commission on Environmental Quality guidelines and requirements for the development of drought contingency plans for public water suppliers, which includes provisions to inform the public and provide opportunity for public input. In the development process of the Plan, the Town provided written notice of the proposed Plan, and the opportunity to comment on the Plan by newspaper, posted notice, and notice on Little Elm web site. The Town also made the draft Plan available on the Little Elm web site, provided the draft Plan to anyone who requested a copy, and held a public meeting to discuss the Plan. Additionally, the Town collaborated with the NTMWD in the development of the Plan.

• Does the drought plan include consideration of climate change impacts to water resources or drought?

Climate change is not mentioned specifically in the Plan; however, the increased frequency and duration of droughts is a direct result of climate change, which the Plan addresses. According to the National Integrated Drought Information System (NIDIS), projections of future climate change suggest that drought may become more common given warmer temperatures and increased depletion of soil and vegetation moisture.

- Describe how your proposed drought resiliency project is supported by and existing drought plan.
 - Does the drought plan identify the proposed project as a potential mitigation or response action?

Yes. The Plan states the following in Section 8.2 Reuse and Recycling of Wastewater (page 8-1):

The Town of Little Elm owns and operates their own wastewater treatment plant and plans to move toward reuse of treated effluent for irrigation purposes at the WWTP site over the next three years. Little Elm will also seek other alternatives for use of the recycled wastewater effluent.

• Does the proposed project implement a goal or need identified in the drought plan?

The Plan lists 'Reuse and Recycling of Wastewater' as an additional measure to meet the following goals listed on page 1-1:

- ✓ To reduce the loss and waste of water.
- \checkmark To improve efficiency in the use of water.

The proposed project will achieve both of the above-listed goals, as well as the following:

✓ To document the level of recycling and reuse in the water supply.

• Describe how the proposed project is prioritized in the referenced drought plan?

The proposed project to secure a consistent supply of recycled water achieves the first and second priority goals of the Plan, as mentioned above. Reuse and recycling of wastewater has long been a goal of the Town, and will help extend the current water supply and position the Town to adequately accommodate future water demands in the face of continuing droughts.

Evaluation Criterion C—Severity of Actual or Potential Drought Impacts to be Addressed by the Project

Past and Potential Impacts

The past and potential drought impacts for North Texas and Little Elm are urgent. El Nino rains

in the last year pulled our region from an extreme, prolonged drought, but it is imperative that we continue to seek measures to diversify our water supply as the population soars and drought promises to return. Eight of the last 10 years in Texas have been consumed by drought. The majority of Texas experienced extreme drought from 2010 to 2015, with North Texas suffering the brunt of the crisis. The Texas Water Development Board's Texas Drought Report stated that "exceptional drought, the worst



Figure 4. Lavon Lake, above, parched from drought in 2014 (the largest source of Little Elm's potable water supply).

category, strengthened its hold on North Texas," with 39 percent of the state in moderate to exceptional drought in 2015. The National Weather Service's Weather Forecast Office reported that some North Texas communities were "within weeks of running out of water."

If no action is taken, our region will not be prepared for the next prolonged drought event, which is estimated to occur, again, within the next five years. Texas has a long history of catastrophic droughts. The National Climatic Data Center (NCDC) recorded a total of 28 cases of drought between 1996 and 2011. In 1998 the Associated Press reported that "the second drought to hit Texas in three years is leaving farmers in dire straits and taxing the state economy." The dry spell deepened through 1999, when the *New York Times* reported "Worse

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Drought Than in '98 Appears Possible in Texas." In 2000, a spokesman for the Texas Department of Agriculture told the *New York Times*, "we are in the midst of an unmitigated disaster and it has been accumulating in magnitude over the last five years," after strains on water supply since 1996 caused \$5 billion in losses to Texas agriculture.⁷ Extreme drought continued with regular frequency, and wreaked havoc again in 2005, 2006, 2008, 2009, and 2010 – 2015.

During the most recent drought, Lavon Lake (Little Elm's main supply of water) dropped to 50 percent of its capacity, and according to Jerry Cotter, Chief of the Water Resource Branch with

the Army Corps of Engineers, the lake was dropping an inch a day.⁸ The Texas environmental law firm McPherson Law cited that in just the first two years of this extreme drought crisis (2010-2011) "livestock and agricultural losses were estimated at \$5.2 billion, stock tanks dried up, hungry cattle were rushed to market, crops plowed under, junior rights in many rivers were cut off, and wildfires burned more



Fig. 5. In 2011, fires tore through Texas as winds, dry trees, and grass fueled one of the most disastrous wildfires in Texas history.

than 3.4 million acres."⁹ 2011 was the driest year ever for Texas, with an average of only 14.8 inches of rain. Dry conditions fueled a series of wildfires across the state in early September 2011. The most devastating, the Bastrop Complex Fire in Bastrop County, burned over 34,000 acres and leveled more than 1,300 homes. The price of hay increased by 200 percent during the drought, and since the price of feeding cattle skyrocketed, ranchers were culling their herds, selling off large numbers of cattle in auctions to out-of-state buyers. Crops also suffered, as corn outputs fell by 40% in 2011 and peanut production was down as well. The lack of crops created conditions for severe dust storms across the portions of the state. The situation reached a new level of urgency in late January of 2012 when wells in the town of Spicewood Beach, Texas officially ran out of water.

⁷ "Everything You Need to Know About the Texas Drought." State Impact Texas,

< <u>https://stateimpact.npr.org/texas/tag/drought/</u>>. Accessed on March 28, 2016.

⁸ "Record Low Levels at Lake Lavon." CBS DFW, July 8, 2014, < <u>http://dfw.cbslocal.com/2014/07/08/record-low-water-levels-at-lake-lavon/</u>>. Accessed March 28, 2016.

⁹ "Drought." McPherson Law Firm, http://www.texasenvironmentallaw.com/drought. Accessed March 28, 2016.

18 TECHNICAL PROPOSAL BOR DROUGHT RESILIENCY PROJECT

Reservoir levels began to slowly recover in 2014, and the Texoma pipeline project was placed into service during the summer of 2014, restoring NTMWD supply at a critical time during drought. The reservoirs finally filled to full conservation pool levels in 2015, a year when several rainfall records for Texas were exceeded. In May 2015, NTMWD was able to end drought plan restrictions and transition into the NTMWD Water Conservation Plan (February 2014), allowing consumers to irrigate their lawns up to twice per week if needed.

Population Increase and Rising Water Demands

Our population increase demands immediate water conservation measures and local water sustainability. As growing municipalities in North Texas compete for resources, shortages due to drought may occur and rates for purchasing water will likely increase. According to the State Water Plan, the population served by the NTMWD currently stands at over 1.6 million people and is expected to more than double by 2070 to 3.7 million residing inside the NTMWD service area. Even as drought conditions lessen, population growth drives up water demand, increasing water prices and the need to develop further water sources. Sharlene Leurig of the nonprofit sustainability group Ceres says the state's growth will demand conservation whether that comes in the form of conservation measures or high water rates. "If we reverted back to the way we were using water in the past, we would have to invest in some extremely expensive water supply projects just to facilitate that historic high water usage," she says. Additional supplies to meet higher demands will be expensive and difficult to develop and cause major environmental impacts.

Impact to Tourism and Local Investments

In addition, recreational business related to Lewisville Lake will be severely impacted as water level drops during drought conditions. Little Elm is a tourism destination whose population doubles on the weekends. We depend on our outdoor amenities and 'lakeside lifestyle' to bring in business and economic growth (e.g., new regional draws Hula Hut and the Alamo Drafthouse Cinema). Recreational activities on Lewisville Lake provide a significant source of revenue and growth, and drought conditions that cause the lake level to decrease resulting in less recreational opportunity and revenue.

As the population of Little Elm continues to increase, the water demand will also increase. As a result, the population that is exposed to drought will continue to grow while also bringing a higher demand for water supply to the Town.

• Describe any projected increases to the severity or duration of drought in the project area resulting from climate change. Provide support for your response (e.g., reference a recent climate change analysis, if available)

In February 2013, the state climatologist told the Texas Legislature that high temperatures related to climate change have exacerbated the drought. He said that the state's average temperature has increased by an average of about 2 degrees Fahrenheit since the 1970s. In Little Elm, the average temperature during the summer is 96 degrees, often rising to triple digits for weeks at a time. The high summer temperatures increase evaporation, further lowering river and lake levels.

19 TECHNICAL PROPOSAL BOR DROUGHT RESILIENCY PROJECT



Fig. 6. Temperatures scorch at 107 degrees in North Texas.

Evaluation Criterion D—Project Implementation

The Town of Little Elm is capable of entering into a financial assistance agreement with the BOR for the proposed project. There are no identifiable reasons why a proposed project would not be feasible or otherwise advisable, including environmental or cultural resources compliance issues, permitting issues, legal issues, or financial position. The project will be managed by Mr. Jason Laumer, Director of Development Services. Mr. Laumer has over fifteen years in project management and over eight years with the Town of Little Elm. Mr. Laumer manages multiple grant-funded projects totaling over \$7 million for the Town, and projects are finished on-time and on-schedule. Mr. Laumer will be assisted by Ms. Karla Stovall, the Chief Financial Officer for the Town. Ms. Stovall has over seven years of experience in financial management and is responsible for accounting, budget, investments, and treasury reports for the Town. Ms. Stovall manages are submitted in an efficient, timely matter. Ms. Stovall manages reporting and budget aspects of over \$7 million in grant funding.

Implementation Plan

Please see the Project Schedule below for the detailed implementation plan.

Figure 7. Project Schedule

| # | Tasks | 2016 | | | | | 2017 | | | | | | | | | | | | 2018 | | | | | | |
|----|--|------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|------|----|------|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|
| | Quarter: | | Q3 | | Q4 | | Q1 | | | Q2 | | ? | Q3 | | | Q4 | | | Q1 | | | Q2 | | | |
| | Month: | ШШ | AUG | CED | OCT | NUN | DEC | IAN | FER | MAR | ΔPR | MAY | ILIN | ШШ | ALIG | SED | DCT | NUN | DEC | IAN | FER | MAR | ΔPR | NUN | DEC |
| 1 | Project Management (22 months) | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Execute Grant Agreement (Anticipated July 2016 – 1 month) | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Final Design Including Review and Approval (3 months) | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Environmental Compliance Including NEPA (3 months) | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Develop Construction RFP, Advertise, and Review Construction Bids (2 months) | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Construction Notice to Proceed (1 month) | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Permitting Process (2 months) | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Construction (6 months) | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Testing, Notice of Completion Filed, Storage Tank Fully Operational (2 months) | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Project Closeout (2 months) | | | | | | | | | | | | | | | | | | | | | | | 1 | ł |

Permits

The Town expects to file for a construction permit (provided by the Town Development Services Department), which will be provided in-kind, and a municipal reclaimed water permit from the Texas Commission on Environmental Quality (TCEQ). The Town will follow state and local procedures to procure the TCEQ permit.

Design Work

The Town holds a contract with TRC Engineering to complete design of the project, which is currently 60% complete. Please see **Preliminary Design Plans** in **Appendix A**. The project is being designed along with the larger WWTP Expansion Project.

Policies

The Town does not anticipate needing any new policies or administrative actions to implement the project.

Evaluation Criterion E—Nexus to Reclamation

There is no nexus between the proposed project and a Reclamation project or activity. The proposed project uses an Army Corps of Engineer lake source (Lavon) and endpoint (Lewisville).

PERFORMANCE MEASURES

Proposed Data Collection Procedures, Schedule, and Reporting

The Town will use a simple 'pre-post' design to quantify project benefits. Calendar year 2015 will serve as the preferred baseline, and earlier years will be used as the baseline when the use of 2015 data is not feasible.

The collection and analysis of performance data will be the responsibility of the Town's Engineering and Public Works Division, working collaboratively. Data collection and analysis during Year 1 of the project will be two-fold:

- 1) Baseline Data. During Year 1, baseline data (i.e., data from calendar year 2015) will be collected for each of the performance measures named below. These data will be included in the Year 1 report (4th quarterly report), and presented both quarterly and annually.
- 2) Project Data. Also during Year 1, project performance data will be collected and compiled each quarter. This will allow for: a) incremental assessment of performance, which will be reported in the project's quarterly reports, and b) annual and two-year projections of performance.

Proposed Performance Measures

The performance of the proposed wastewater storage tank will be assessed using two measures:

1) Actual Amount of Additional Water Supply Utilized – The wastewater storage tank will hold 100,000 gallons of water. We know that our current reuse irrigation needs are 262,823 gallons per day. The storage tank capacity to produce recycled water outweighs our current irrigation needs, thus we estimate that all 262,823 gallons per day (294.4 AFY) will be utilized as a result of this project.

Baseline and project data collected will be complied and analyzed to determine if the actual amount of additional water supply generated meets the estimates.

2) Actual Amount of Water Better Managed – The wastewater storage tank will have the capacity to better manage, an additional 294.4 AFY of water supply, calculated using the

same data as above. This means the Town will require 99.9 million gallons less of potable water to be pumped from NTMWD per year, enabling us to better manage the total supply because we are less dependent on external supplies. Baseline and project data collected will be complied and analyzed to determine if the actual amount of water better managed meets the estimates.

Water-Savings Measurement

The project is expected to save approximately 294.4 AFY of potable water. Upon project completion, measurement of actual reclaimed water used for irrigation in this location will be accomplished by monthly monitoring of water usage via metered connections. The Town will document actual usage as required in regular BOR grant reports. Actual reclaimed water used may vary depending upon how controllers are programmed and the number of rain events/droughts that occur in each year.

Environmental and Cultural Resources Compliance

All applicants must respond to the following list of questions focusing on the NEPA, ESA, and NHPA requirements. If any question is not applicable to the project, please explain why.

• Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.

The proposed project will have a minor and temporary impact on the surrounding environment which could include dust, soil erosion, partial loss of vegetation, and minor traffic congestion. The construction phase is scheduled to be completed within six (6) months and will included the following tasks:

- Excavate and dispose of native expansive soil at the storage tank and pump building locations and backfill with select material as recommended by the geotechnical study;
- Pour concrete for storage tank foundation ring and pump building slab;
- Install water supply piping to the storage tank and discharge piping to the Town's reuse system. Install electrical conduit for lighting and equipment;
- Construct steel storage tank and pump building;
- Install reuse pump equipment and associated piping; and
- Pour concrete access driveway and prepare finished grade.

The Town and construction contractor will take every precaution and develop a plan to minimize any temporary impacts on the environment. The actions taken will include, but not be limited to:

- Utilizing erosion control devices such as buffer zones, flow diversion, gabions, and sediment traps;
- Minimizing the amount of disturbed soil;
- Meeting or exceeding any local or state sediment or erosion control plans;
- Minimizing the amount of removed vegetation;
- Ensuring efficient and timely construction;
- Construction personnel will post signage of work area;
- Construction personnel will facilitate ingress and egress of vehicles to project site through on-street traffic direction; and
- The Construction Contractor will alert local emergency response entities that construction vehicles will be located within the project area.

- Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project? There are no known species listed as a Federal threatened or endangered species in the project area.
- Are there wetlands or other surface waters inside the project boundaries that
 potentially fall under CWA jurisdiction as "Waters of the United States?" If so, please
 describe and estimate any impacts the proposed project may have.
 There are no wetlands or other surface waters inside the project boundaries.
- When was the water delivery system constructed? The NTMWD Regional Water System, created in 1954, provides treated drinking water supplies to over 1.6 million people in the 55 cities, towns, special utility districts, and water supply corporations. NTMWD owns and operates the transmission pipelines, pumps, and storage reservoirs necessary to deliver the treated water to customers. Little Elm is a NTMWD customer.
- Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.
 The proposed project will not result in any modification of individual features of a canal-based irrigation system such as headgates, canals, or flumes.
- Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.

There are no buildings, structures, or features in the proposed project area that are listed on or eligible for listing on the National Register of Historic Places.

- Are there any known archeological sites in the proposed project area? There are no known archeological sites in the proposed project area.
- Will the proposed project have a disproportionately high and adverse effect on low income or minority populations?

No. In fact, the proposed project will have a highly positive effect on all residents of the Town of Little Elm including low income and minority populations. The project will provide a consistent supply of treated wastewater available for irrigation and other municipal uses, saving our imported, potable water for our growing population.

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

No, the project will not have any impacts on sacred sites or tribal lands.

• 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?

Note, if mitigation is required to lessen environmental impacts, the applicant may, at Reclamation's discretion, be required to report on progress and completion of these commitments. Reclamation will coordinate with the applicant to establish reporting requirements and intervals accordingly.

The proposed project will not contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species.



TOWN OF LITTLE ELM

WATER CONSERVATION, DROUGHT CONTINGENCY AND WATER EMERGENCY RESPONSE PLAN

VERSION: MARCH 2008 ADOPTED: MAY 2011

MODIFIED BY:

TOWN OF LITTLE ELM 100 W. ELDORADO LITTLE ELM, TEXAS 75068 (972) 377-5556

TOWN OF LITTLE ELM Water Conservation, Drought Contingency And Water Emergency Response Plan

MARCH 2011

1. INTRODUCTION AND OBJECTIVES

Water supply has always been a key issue in the development of Texas. In recent years, the growing population and economic development of North Central Texas has led to increasing demands for water supplies. At the same time, local and less expensive sources of water supply are largely developed. Additional supplies to meet higher demands will be expensive and difficult to develop. It is therefore important that the Town of *Little Elm* make the most efficient use of existing supplies. This will delay the need for new supplies, minimize the environmental impacts associated with developing new supplies, and delay the high cost of additional water supply development.

Recognizing the need for efficient use of existing water supplies, the Texas Commission on Environmental Quality (TCEQ) has developed guidelines and requirements governing the development of water conservation and drought contingency plans for public water suppliers. ^{1, 2} TCEQ guidelines and requirements are included in Appendix B. The best management practices established by the Water Conservation Implementation Task Force ³, established pursuant to SB1094 by the 78th Legislature, were also considered in the development of the water conservation measures. The North Texas Municipal Water District (NTMWD) has developed this model water conservation and drought contingency and water emergency response plan for its Member Cities and Customers following TCEQ guidelines and requirements. This water conservation and drought contingency and water emergency response plan.⁴ This water conservation and drought contingency and water emergency response plan. ⁴ This water conservation and drought contingency and water emergency and water emergency response plan.⁴ This water conservation and drought contingency and water emergency response plan.⁴ This water conservation and drought contingency and water emergency response plan.⁴ This water conservation and drought contingency and water emergency response plan.⁴ This water conservation and drought contingency and water emergency response plan.⁴ This water conservation and drought contingency and water emergency response plan.⁴ This water conservation and drought contingency and water emergency response plan replaces the model plans dated August 2004 and April 2006.

The water conservation sections of this plan include measures that are intended to result in ongoing, long-term water savings. The drought contingency and water emergency response sections of this plan address strategies designed to temporarily reduce water use in response to specific conditions.

The objectives of this model water conservation plan are as follows:

- To reduce water consumption from the levels that would prevail without conservation efforts.
- To reduce the loss and waste of water.
- To improve efficiency in the use of water.

Superscripted numbers match references listed in Appendix A.

- To document the level of recycling and reuse in the water supply.
- To extend the life of current water supplies by reducing the rate of growth in demand.

The Town of Little Elm in adopting this Water Conservation/Drought Contingency has completed the following and has been included as part of the WC and DC plan:

- The water utility profile (provided in Appendix C).
- The annual water conservation implementation report (in Appendix I).
- Set five-year and ten-year goals for per capita water use.
- Adopt ordinance(s) approving the model plan.

The water utility profile, goals, and ordinance(s) will be provided to NTMWD, as well as TCEQ in the final adopted versions.

This plan includes all of the elements required by TCEQ. Some elements of this plan go beyond TCEQ requirements. Any water supplier wishing to adjust elements of the plan should coordinate with NTMWD.

8. OTHER WATER CONSERVATION MEASURES

8.1 NTMWD System Operation Plan

The Town of Little Elm purchase treated water from NTMWD and does not have surface water supplies for which to implement a system operation plan. NTMWD's permits do allow some coordinated operation of its water supply sources, and NTMWD is seeking additional water rights for coordinated operation to optimize its available water supplies.

8.2 Reuse and Recycling of Wastewater

Most Member Cities and Customers do not own and operate their own wastewater treatment plants. Their wastewater is treated by NTMWD. NTMWD currently has the largest wastewater reuse program in the state. NTMWD has water rights allowing reuse of up to 71,882 acre-feet per year of this treated wastewater through Lake Lavon for municipal purposes. In addition, NTMWD has also developed the East Fork Raw Water Supply Project which can divert up to 157,393 acre-feet per year based on treated wastewater discharges by the NTMWD. When fully developed, these two reuse projects will provide up to 44 percent of the NTMWD's currently permitted water supplies. NTMWD also provides treated effluent from its wastewater treatment plants available for direct reuse for landscape irrigation and industrial use.

The Town of Little Elm owns and operates their own wastewater treatment plant and plans to move toward reuse of treated effluent for irrigation purposes at the WWTP site over the next three years. Little Elm will also seek other alternatives for use of the recycled wastewater effluent.

8.3 Ordinances, Plumbing Codes, or Rules on Water-Conserving Fixtures

The state has required water-conserving fixtures in new construction and renovations since 1992. The state standards call for flows of no more than 2.5 gallons per minute (gpm) for faucets, 3.0 gpm for showerheads, and 1.6 gallons per flush for toilets. Similar standards are now required nationally under federal law. These state and federal standards assure that all new construction and renovations will use water-conserving fixtures. Optional rebate programs to encourage replacement of older fixtures with water conservation programs are discussed in Section 8.5.

8.4 Landscape Water Management Measures

The following landscape water management measures are required by the Town of Little Elm for this plan. These are the minimal measures that should be implemented and enforced in order to irrigate the landscape appropriately.

- Time of day restrictions prohibiting lawn irrigation watering from 10 AM to 6 PM beginning April 1 and ending October 31 of each year.
- Prohibition of watering of impervious surfaces. (Wind driven water drift will be taken into consideration.)

Permits

The Town expects to file for a construction permit (provided by the Town Development Services Department), which will be provided in-kind, and a municipal reclaimed water permit from the Texas Commission on Environmental Quality (TCEQ). The Town will follow local and State protocol to procure the TCEQ permit.

HOUSE OF REPRESENTATIVES



PAT FALLON DISTRICT 106

April 1, 2016

Secretary Sally Jewell U.S. Department of the Interior 1849 C Street NW Washington, DC 20240

Subject: Little Elm, Texas Wastewater Storage Tank Project

Dear Secretary Jewell:

As the Texas State Representative for Denton County, I would like to offer this letter in support of the Town of Little Elm's application for Bureau of Reclamation funding. The proposed project will add a storage tank to save treated water for irrigation to its Wastewater Treatment Plant, and encourage increased resiliency to the ongoing North Texas drought. As a state representative, I have a record of fiscal responsibility. As a resident of North Texas, I am also a concerned taxpayer, and support projects like this one that aim to stretch taxpayers' dollars.

The Town of Little Elm purchases 100% of its water from the North Texas Municipal Water District (NTMWD). The Town's Wastewater Treatment Plant treats and cleans the community's wastewater, and most of it is then released into Lake Lewisville. With the proposed project, the water that the Town pays for from NTMWD will, in effect, be used twice – once for the town's public sewer system, and then, after it is cleaned and treated, again for local landscape irrigation.

The project is a fiscally efficient activity that I urge you to consider for funding.

For Texas and Liberty,

Pat Fallon, Member Texas House of Representatives Denton County

CAPITOL OFFICE: ROOM E1.312 • P.O. Box 2910 Austin, Texas 78768-2910 Ph (512) 463-0694 Fax (512) 463-1130



PAT.FALLON@HOUSE.STATE.TX.US

District Office: 100 W. Eldorado Pkwy. Little Elm, Texas 75068-5060 Ph (469) 362-0500 Fax (469) 362-0540



April 1, 2016

Secretary Sally Jewell US Department of the Interior 1849 C Street, NW Washington, DC 20240

Subject: Bureau of Reclamation Project for Little Elm, Texas

Dear Secretary Jewell:

On behalf of the Little Elm Independent School District (LEISD), I am pleased to provide this letter of recommendation for the Town of Little Elm's project submitted to the Bureau of Reclamation's Drought Resiliency Project Program. The Town plans to expand their Wastewater Treatment Plant to include a new, 100,000-gallon storage tank for recycled water. Currently, the majority of the Town's wastewater is treated and sanitized in the treatment plant and then expelled into Lake Lewisville (the City of Dallas's source of drinking water). The Town plans to capture clean, treated water in the new storage tank to provide an alternative source of water for uses like landscape irrigation.

Currently, the Town is extending recycled water infrastructure near LEISD's Brent Elementary School campus, but there is not a consistent source of recycled water yet available. <u>The new storage tank will provide that consistent source of water</u>. LEISD is interested in investigating a partnership with the Town of Little Elm to irrigate our Brent campus (which includes large athletic fields) with recycled water when it becomes possible.

I urge you to fully consider the Town's application to utilize Bureau of Reclamation funding to complete this important project. LEISD is eager to play our part in saving drinking water during this ongoing drought and to conserve water far into the future.

Sincerely, Lowell H. Strike, Ph.D.

Superintendent of Schools

Villages of Woodlake

April 5, 2016

Secretary Sally Jewell U. S. Department of the Interior 1849 C Street, N. W. Washington, DC 20240

Subject: Little Elm, Texas Drought Resiliency Project

Dear Secretary Jewell:

As a representative of the Villages of Woodlake Homeowners Association (VOWHOA) in Little Elm, Texas, I would like to put forth my support for the town's project to build a recycled water storage tank. VOWHOA has a strong relationship with the town of Little Elm, and is committed to fiscally sound strategies for irrigation in our drought-prone region. To this end, VOWHOA is interested in purchasing recycled water from Little Elm for landscaping irrigation. Should the Bureau of Reclamation fund the town's storage tank project, VOWHOA will pursue this new partnership.

Our town depends heavily on tourism and our beautiful amenities like parks, trails, and native landscaping for our economic sustainability. Town officials recognize the value of their investments in beautification, and so do we. The town uses water-wise irrigation and native, drought-resistant landscaping where possible, and our HOA is following their lead in sustainable beautification. This is an important project that will provide our HOA with a new source of water for irrigation, stretching our precious drinking water supply.

Please help us continue the momentum for our community's water-wise projects.

Sincerely,

Rodney Cruz

Rodney E Cruz, MS, FLMI President, Villages of Woodlake HOA



KEEP LITTLE ELM BEAUTIFUL 1600 Mark Tree Lane Little Elm, Texas 75068

April 1, 2016

Secretary Sally Jewell US Department of the Interior 1849 C Street, NW Washington, DC 20240

Re: Water Storage Tank Project for Little Elm

Dear Secretary Jewell:

I am pleased to provide this letter of support on behalf of the town of Little Elm, Texas's *Keep Little Elm Beautiful* (KLEB) committee. KLEB has worked with Little Elm on numerous conservation and beautification projects. These include our bi-annual Clean & Green litter clean-up and recycling events, and our Water is Life Expo, through which we partner with the town and Little Elm Independent School District to provide rain barrel demonstrations and education regarding water-smart irrigation and conservation.

KLEB will have many opportunities to provide public outreach regarding the proposed wastewater storage tank should the project be awarded. The new tank will allow the Town to store and reuse hundreds of thousands of gallons of water for irrigation and other purposes. This is an excellent opportunity to educate the public about conservation and the value of wastewater reuse. Little Elm is a leader in conservation and environmental issues. As a long-standing 'Tree City USA,' and recipient of multiple awards from Keep America Beautiful and regional recycling and waste reduction agencies, the Town continues to be at the forefront of efforts to preserve and enhance our environment.

This shovel-ready project is ideal for Reclamation funding. We hope you support the Town's ongoing effort to lead North Texas in important conservation projects.

Sincerely,

und

Ms. Doro Nimmick, Chairperson Keep Little Elm Beautiful Commission

TOWN OF LITTLE ELM, TEXAS

RESOLUTION NO. 04051602

RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF LITTLE ELM APPROVING THE APPLICATION FOR GRANT FUNDS FROM THE BUREAU OF RECLAMATION WATERSMART: DROUGHT RESILIENCY PROJECT **GRANT PROGRAM FOR FISCAL YEAR 2016**

WHEREAS, the United States Department of the Interior has provided funds for the WaterSMART: Drought Resiliency Project Grant Program; and

WHEREAS, the Town of Little Elm desires to submit an application for grant funds from said program; and

WHEREAS, the Bureau of Reclamation has been delegated the responsibility for the administration of this grant program and establishing necessary procedures; and

WHEREAS, said procedures established by the Bureau of Reclamation require the applicant to certify by resolution the identity of the official with legal authority to enter into an agreement; that the appropriate official or governing body has reviewed and supports the application submitted; the capability of the applicant to provide the amount of funding and/or in-kind contributions specified in the application funding plan; and that the applicant will work with the Bureau of Reclamation to meet established deadlines or entering into a cooperative agreement; and

WHEREAS, the applicant will enter into a cooperative agreement or grant agreement with the Bureau of Reclamation to complete the project(s) if awarded grant funds.

NOW, THEREFORE, BE IT RESOLVED THAT THE TOWN COUNCIL OF THE TOWN OF LITTLE ELM HEREBY:

- 1. Appoints the Director of Development Services, or his designee, to act as agent with legal authority to enter into the grant agreement, conduct all negotiations, execute and submit all documents including, but not limited to, applications, agreements, payment requests and any other grant required correspondence which may be necessary for the completion of the grant program; and
- 2. Certifies that the Town Council of the Town of Little Elm has reviewed and supports the proposed application; and
- 3. Certifies that the Town of Little Elm has sufficient funds available to provide the amount of funding specified in the funding plan as matching funds/in-kind contributions; and
- 4. Certifies that the Town of Little Elm will work with the Bureau of Reclamation to meet established deadlines for entering into a cooperative agreement.

PASSED AND APPROVED by the Town Council of the Town of Little Elm, Texas this the 5th day of April, 2016.

David Hillock, Mayor

ATTEST:

0.0

Kathy Phillips, Town Secretary

APPROVED AS TO FORM:

Robert F. Brown, Town Attorney











