RESOLUTION 2019-07

Approving the City of Tishomingo working with the Chickasaw Nation to submit a grant to the Bureau of Reclamation for financial assistance to replace current irrigation equipment with more efficient systems at Murray State College.

Whereas, the City of Tishomingo seeks authorization to work with the Chickasaw Nation on a proposal to the Bureau of Reclamation in response to the FY 2019 WaterSMART Small-Scale Water Efficiency Projects grant funding opportunity to install irrigation systems at Murray State College. This project will increase water use efficiency by replacing less efficient irrigation equipment currently in use, and thereby reduce the total water demand from Murray State College. Whereas the proposal will request $28,600 in federal grant funding requiring a cost share match from the City of Tishomingo in the amount of $30,000.

Now therefore the City Council members of the City of Tishomingo, Oklahoma, do hereby authorize City staff, and Justin Baker of Aqua Strategies Inc. on their behalf, to work with the Chickasaw Nation on a proposal to the Bureau of Reclamation seeking funds to install irrigation equipment at Murray State College.

EFFECTIVE DATE:

This Resolution shall take effect this 23rd day of April 2019.

Don Keel, Mayor

ATTEST:
Athletic Facility Irrigation Improvement Project
For City of Tishomingo, Oklahoma

WaterSMART Grant: Small-Scale Water Efficiency Project
Fiscal Year 2019
BOR-DO-19-F005
24 April 2019
(1) Technical Proposal and Evaluation Criteria

Executive Summary
The City of Tishomingo (City) has faced water availability concerns in the recent past, due to population growth and its reliance upon a single water source. While the City is addressing these concerns through expanding its water rights and addressing physical water shortages, it has also sought ways to manage demands and improve water use efficiency. The funding requested under this grant proposal would allow the City to install more efficient (up to 75 percent) irrigation equipment on three separate Murray State College (MSC) athletic facilities, thereby significantly reducing the demand which will ultimately be placed on the City of Tishomingo’s water supply system. Currently portable water cannons are used to water these facilities, requiring intensive manual labor and allowing high water losses due to evaporation and daytime watering. This proposed project is one element of a larger effort by the City of Tishomingo to improve aging water infrastructure, increase capacity, and maximize water reliability. The overall effort, including the project described in this proposal, is supported by existing local and regional water resource planning efforts, including technical assistance from the Chickasaw Nation.

The application information required in the Funding Opportunity Announcement (FOA) is provided below.

Date: 24 April 2019
Applicant Name: City of Tishomingo
City, County, and State: City of Tishomingo, Johnston County, Oklahoma

This proposed project is expected to begin in November 2019 and will take four months to complete. No work will take place on a federal facility or federal land.
Background Data

City of Tishomingo

The City of Tishomingo (City) is the largest city in Johnston County in southeastern Oklahoma as well as the county seat, as shown in Figure 1. The city, located within the Chickasaw Nation, utilizes an old and deteriorating water treatment plant—a situation the City is currently and aggressively addressing in partnership with the Chickasaw Nation.

The City has historically relied solely on the small stream, Pennington Creek, which runs through the city, but this source has proven unreliable and nearly dried up during the drought of 2011. A further concern is rapid population growth due to proposed developments by the Chickasaw Nation. The City succeeded in 2018 in expanding its surface water right to 7,000 acre-feet per year. However, this legal right to capture more water does not improve the physical quantity of water available in Pennington Creek, and city officials are conscious of the fact that the next drought could result in water shortages and associated economic woes. Furthermore, a recent system audit concluded that the water distribution system experiences up to 50 percent water loss, an alarmingly high percentage that the City is committed to addressing. To this end, the City has initiated a project to upgrade and expand the capacity of its water treatment plant, which is scheduled for completion in 2021.
Murray State College Athletic Facilities
Murray State College (MSC) maintains several athletic fields as well as a rodeo arena. These facilities provide recreational opportunities for MSC students and occasionally for other residents of Tishomingo and the surrounding county. While several MSC fields (including a baseball field) are currently irrigated using an in-ground irrigation system, the soccer field, practice baseball field, and the rodeo arena are irrigated using portable irrigation equipment (shown in Figures 2 through 6). These facilities are supplied with treated water by MSC’s own on-site water treatment plant and distribution system. However, an emergency interconnect currently exists between the MSC distribution system and the City system, and during periods of low flow in Pennington Creek the City has provided water to MSC. Upon completion of the new community water treatment plant the MSC plant will be closed and the City of Tishomingo will take over water supply responsibility for MSC. Therefore, efficiency gains obtained now will ultimately reduce demand on the water supply of the City. Details on the current water line source and watering requirements for each athletic facility are provided in Table 1.

<table>
<thead>
<tr>
<th>Facility</th>
<th>Irrigation Equipment/System</th>
<th>Source Water Line</th>
<th>Estimated Weekly Water Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice Baseball Field</td>
<td>Traveling water cannon</td>
<td>4-in line</td>
<td>80,000 gallons during peak season and 40,000 gallons during off-season</td>
</tr>
<tr>
<td>Soccer Field</td>
<td>3 traveling water cannons (used simultaneously)</td>
<td>4-in line</td>
<td>80,000 gallons during peak season and 40,000 gallons during off-season</td>
</tr>
<tr>
<td>Rodeo Arena</td>
<td>Custom irrigation system fed from fire hydrant</td>
<td>2-in line from fire hydrant</td>
<td>Not estimated (rodeo facility is not used on regular schedule)</td>
</tr>
</tbody>
</table>

Table 1: Current Irrigation Equipment and Water Requirements for each Targeted Facility

At present, the soccer field and practice baseball field are watered using portable water cannons, which require relocation four to five times per field during watering in order to ensure water is distributed evenly. This means that watering cannot always take place at night or during the early morning, as is normally recommended to achieve maximum water efficiency.\(^1\) According to the facilities manager at MSC, these fields and the rodeo arena require approximately 40,000 gallons (combined) per day during peak watering season (May through October), and approximately 20,000 gallons per day during the off-season (November through April). The fields are watered on

\(^1\) The pros and cons of various irrigation system types are discussed here: [http://wolfcreekcompany.com/sport-field-irrigation/](http://wolfcreekcompany.com/sport-field-irrigation/)
an alternating schedule each week and for the purposes of this proposal are assumed to be watered twice each week (once each week during the off-season).

![Figure 2: Targeted Athletic Facilities to Receive Irrigation System Upgrades](image)

**Past Relationship with Reclamation**

The City of Tishomingo received a previous WaterSMART Small-Scale Water Efficiency grant for FY2018 (BOR-DO-18-F009) to install smart meters for large, institutional water users supplied by the City.

**Project Location**

The proposed project will take place on three athletic facilities of Murray State College, within the City of Tishomingo in Johnston County, Oklahoma (approximately 120 miles southeast of Oklahoma City). Murray State College is shown in Figure 1 and the three athletic facilities are shown in Figure 2. The lat./long. coordinates of the athletic facilities are approximately -34.2194, 96.6761.
Figure 3: Baseball Practice Field

Figure 4: Soccer Field
Figure 5: Rodeo Facility

Figure 6: Portable Water Cannons on the Soccer Field
Technical Project Description and Milestones

Project Activities
Proposed activities under this project include installing new in-ground, automated irrigation systems for three Murray State College athletic facilities (the rodeo arena, soccer field, and practice baseball field, as shown in Figure 2). The following tasks will be performed by the City of Tishomingo and a qualified irrigation system installer under a properly procured contract:

1. Coordinate with OKIE 811 to demarcate underground utilities before any site work begins.
2. Install a required water meter on City of Tishomingo water line in order to supply water to the soccer field.
3. Layout site flags according to planned in-ground system.
4. Install irrigation system (using trenching), including pipes and sprinkler heads. A Hunter brand irrigation system was recommended for use. Rain sensors will also be installed as parts of the soccer field and practice baseball field systems, in order to reduce unnecessary watering.
5. Deliver as-built plans of new systems after project completion.

Based on conversations with an irrigation installation contractor (see Scope of Work and bid provided in Attachment 1), it is estimated that the three facilities will require the use of the volumes provided in Table 2 in order to maintain the fields and rodeo arena (i.e., during rodeo events) after system installation. Overall, the expected efficiency gain from installing a new irrigation system for each facility is up to 75 percent during peak watering periods and 50 percent during off-peak periods. This would lead to water savings of up to 75,000 gallons per week, or approximately 9.0 acre-feet of water per year.

<table>
<thead>
<tr>
<th>Facility</th>
<th>Irrigation Equipment/System</th>
<th>Estimated Weekly Water Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice Baseball Field</td>
<td>Hunter I-25 rotor heads, 11 zones</td>
<td>19,800 gallons per week (9,900 gallons in off-season)</td>
</tr>
<tr>
<td>Soccer Field</td>
<td>Hunter I-25 rotor heads, 3 zones</td>
<td>5,400 gallons per week (2,700 gallons in off-season)</td>
</tr>
<tr>
<td>Rodeo Arena</td>
<td>Hunter I-90 rotor head</td>
<td>1,800 gallons per event</td>
</tr>
</tbody>
</table>

Table 2: Estimated Use with Proposed Irrigation Systems

Ultimately the City would prefer to irrigate the fields with raw water from Pennington Creek, rather than treated water. After MSC has switched to using City water, the existing athletic facility
irrigation systems could potentially be retrofitted to make use of raw water from the creek – this would further reduce the demand on the City of Tishomingo’s water supply.

**Project Milestones**
Table 3 provides a timeline for all activities proposed under this project.

<table>
<thead>
<tr>
<th>Project Tasks and Milestones</th>
<th>Project Month</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Receive Notice of Award</td>
<td></td>
</tr>
<tr>
<td>Acquire Materials/Select contractor</td>
<td></td>
</tr>
<tr>
<td>Install Required Water Meter</td>
<td></td>
</tr>
<tr>
<td>Installation of Irrigation System by Contractor</td>
<td></td>
</tr>
<tr>
<td>Submit Interim Performance Report</td>
<td></td>
</tr>
<tr>
<td>Submit Final Performance Report</td>
<td></td>
</tr>
</tbody>
</table>

**Table 3: Project Timeline**

**Evaluation Criteria**

**Evaluation Criterion A – Project Benefits**

*Describe the expected benefits and outcomes of implementing the proposed project*

The following are the expected project benefits:

1. **Reduction in water demand.** At first this reduction will impact the MSC water treatment plant; however, after the City of Tishomingo takes responsibility for water distribution to the athletic fields the water efficiency savings will apply to the City. This efficiency improvement will also affect the water required from Pennington Creek. Estimated water efficiency gains are provided in Table 4, based on values provided by the MSC facilities manager and the irrigation installation contractor that already provided a bid and scope of work for this project.

2. **Decrease in watering times and required labor.** MSC will see a reduction in the watering times and required manual labor for watering the three target facilities. The new irrigation system will be able to water over night and/or during the early mornings, through the use of a timing mechanism.
<table>
<thead>
<tr>
<th>Facility</th>
<th>Irrigation Equipment/System</th>
<th>Estimated Existing Weekly Use</th>
<th>Proposed Use after Irrigation System Installation</th>
<th>Estimated Water Efficiency Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice Baseball</td>
<td>Traveling water cannon</td>
<td>80,000 gallons during peak season (40,000 gallons during off-peak season)</td>
<td>19,800 gallons per week (9,900 gallons in off-season)</td>
<td>75%</td>
</tr>
<tr>
<td>Field</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soccer Field</td>
<td>3 traveling water cannons (used simultaneously)</td>
<td>20,000 gallons during peak season (10,000 gallons during off-peak season)</td>
<td>5,400 gallons per week (2,700 gallons in off-season)</td>
<td>73%</td>
</tr>
<tr>
<td>Rodeo Arena</td>
<td>Custom irrigation system fed from fire hydrant</td>
<td>Not estimated (rodeo facility is not watered on a regular schedule)</td>
<td>1,800 gallons per event</td>
<td>Not estimated</td>
</tr>
</tbody>
</table>

Table 4: Estimated Water Efficiency Gains

**Evaluation Criterion B – Planning Efforts Supporting the Project**

Describe how your project is supported by an existing planning effort

The 2012 Oklahoma Comprehensive Water Plan Lower Washita Watershed Planning Region report recognizes the unreliability of the City of Tishomingo’s water supply and recommends distribution system improvements to meet their current and future supply needs. A recently completed BOR Drought Contingency Plan for the Arbuckle-Simpson aquifer also recommended drought conservation measures to assist the City of Tishomingo. The Choctaw and Chickasaw Nations have begun a comprehensive regional water planning initiative for their jurisdictional homelands in Southeast Oklahoma. In this role, the Chickasaw Nation has a vested interest in ensuring that communities across the region, including Tishomingo, are able to meet their water needs. A letter of support from the Chickasaw Nation for the proposed project is provided in Attachment 2.

The City of Tishomingo has also been proactive at addressing their water system needs by conducting a water audit, pursuing water treatment plant expansion, and funding installation of SCADA system improvements to ensure reliability for water system customers. This project and
the demand management it will carry through demonstrates another way in which the City is attempting to address its water supply problems. MSC also supports the project, and a letter of support is provided in Attachment 3.

**Evaluation Criterion C – Project Implementation**

Table 3 provides the major tasks, milestones and schedule for the proposed project. The project is estimated to require four months for completion.

**Project Reporting**

Required reports will be submitted twice. An interim performance report will be submitted after two months specifying project status, including a summary of project milestones as well as any cost revisions and potential issues impacting scheduled project completion. A final performance report will be submitted after the project is completed and will include whether the project objectives and goals were met, a discussion of the benefits achieved by the project and any relevant documentation, including photos. Installation of equipment for the proposed project is ready to proceed upon funding notification and acquisition of the required equipment. Detailed engineering and design work is not required to implement the project. Environmental compliance costs are not anticipated for the proposed project. The proposed project will not require permits. No new policies or administrative actions are expected to be required.

**Evaluation Criterion D – Nexus to Reclamation**

*Is the proposed project connected to a Reclamation project or activity? If so, how?*

Pennington Creek, which is the City of Tishomingo’s sole water source, is a shared resource in the Washita River Basin. The Tishomingo National Fish Hatchery, operated by the U.S. Fish and Wildlife Service (another agency within the Department of the Interior) relies upon adequate flows from the creek for its operation. The Tishomingo National Wildlife Refuge, also in the basin, provides critical habitat for crappie, sandbass, and catfish in the Cumberland Pool, which is fed by both Pennington Creek and the Washita River. The proposed project will help ensure the efficient use of water supplied by Pennington Creek.

*Will the project benefit any tribe(s)?*

The Chickasaw Nation has a number of facilities in the City of Tishomingo, including the former Chickasaw Nation Capitol building, constructed around 1900. Improving city infrastructure to provide adequate and reliable water supplies benefits both tribal government and the local community.

**Evaluation Criterion E – Department of the Interior Priorities**

*Up to 10 points may be awarded based on the extent that the proposal demonstrates that the project supports the Department of the Interior priorities. Please address those priorities that are applicable to your project*

This project will directly support two out of the five priorities of the Department of Interior:

1. *Creating a conservation stewardship legacy second only to Teddy Roosevelt.* The irrigation systems that will be installed will be equipped with rain sensors and programmable controllers that will reduce overwatering after rain events and allow for watering during evening hours to
reduce evaporation from the field. This approach utilizes the latest scientific technology to improve water use efficiency.

3. *Restoring trust with local communities.* This project brings five groups together for the greater goal of resource conservation. They are the Bureau of Reclamation, The City of Tishomingo, the Chickasaw Nation, the citizens of Tishomingo, and Murray State College. It shows that partnerships with multiple groups can truly help the community.

The project will also result in enhanced water reliability, including under drought conditions, for local water users, which is also an initiative of the WaterSMART Program through which Reclamation works with tribal and other entities to increase water supply through infrastructure modernization and related activities. From an environmental/ecosystem perspective, the City's anticipated water efficiency will result in augmented flows in Pennington Creek and the downstream U.S. Fish and Wildlife Service Tishomingo National Wildlife Refuge. The Department of the Interior priority of supporting and enhancing the water and related economic security of Tribal Nations is also aligned with this project. Water security is improved through more efficient use of water and economic security is improved through decreased water losses and waste.
(2) Project Budget

Funding Plan and Letters of Commitment

*How will you make your contributions to the cost share requirement, such as monetary and/or in-kind contributions and source funds contributed by the applicant (e.g. reserve account, tax revenue, and/or assessments)?*

The City of Tishomingo has committed $10,020 to the proposed project as in-kind labor. The Chickasaw Nation has also committed to providing $10,000 as a cash match, as well as $5,000 in in-kind services (including administration and stakeholder coordination). MSC has also pledged to provide $5,000 of in-kind labor towards the project. To meet the total project cost of $58,620 a federal match of $28,600 is requested. The City of Tishomingo passed a resolution (attached to this proposal in Attachment 4) supporting the funding for this project. Letters of support from the Chickasaw Nation and MSC are provided in Attachments 2 and 3, respectively.

*Describe any in-kind costs incurred before the anticipated Project start date that you seek to include as costs*

No in-kind costs have been incurred to date.

*Describe any funding requested or received from other Federal partners*

There are currently no funding requests that would affect the proposed project.

*Describe any pending funding requests that have not yet been approved, and explain how the Project will be affected if such funding is denied*

There are currently no pending funding requests that would affect the proposed project. Estimated project funding sources are provided in Table 5.

<table>
<thead>
<tr>
<th>Funding Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant</td>
<td></td>
</tr>
<tr>
<td>City of Tishomingo (in-kind)</td>
<td>$10,020</td>
</tr>
<tr>
<td>Third party contributions</td>
<td></td>
</tr>
<tr>
<td>Chickasaw Nation (cash)</td>
<td>$10,000</td>
</tr>
<tr>
<td>Chickasaw Nation (in-kind)</td>
<td>$5,000</td>
</tr>
<tr>
<td>Murray State College (in-kind)</td>
<td>$5,000</td>
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<tr>
<td>Subtotal Third party contributions</td>
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</tr>
<tr>
<td>Non-federal subtotal</td>
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<tr>
<td>Federal</td>
<td></td>
</tr>
<tr>
<td>Requested from Reclamation</td>
<td>$28,600</td>
</tr>
<tr>
<td>Total Project Cost</td>
<td>$58,620</td>
</tr>
</tbody>
</table>

*Table 5: Total Project Cost*
Budget Proposal

A budget proposal is included in Table 6.

<table>
<thead>
<tr>
<th>Budget Item Description</th>
<th>Computation</th>
<th>Quantity</th>
<th>Type</th>
<th>Federal Share</th>
<th>Match Share</th>
<th>Total Cost</th>
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</thead>
<tbody>
<tr>
<td><strong>$/Unit</strong></td>
<td><strong>Quantity</strong></td>
<td></td>
<td></td>
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<tr>
<td>Salaries and Wages</td>
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<tr>
<td>Public Works Director</td>
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<td>126</td>
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<td>Contractual Expenses</td>
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<td>Irrigation Installation Contractor</td>
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<td></td>
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</tr>
<tr>
<td>Murray State College – Labor</td>
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<td>Hour</td>
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<td>$5,000</td>
<td><strong>$10,000</strong></td>
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<tr>
<td>Chickasaw Nation – Director of Natural Resources</td>
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<td>10</td>
<td>Hour</td>
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<td>$1,000</td>
<td><strong>$10,000</strong></td>
</tr>
<tr>
<td>Chickasaw Nation – Water Resources Planner</td>
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<td>58.8</td>
<td>Hour</td>
<td>$4,000</td>
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<td><strong>$10,000</strong></td>
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<tr>
<td><strong>TOTAL</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>$10,000</strong></td>
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<tr>
<td><strong>GRAND TOTAL</strong></td>
<td>$28,600</td>
<td>$30,020</td>
<td>$58,620</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6: Budget Proposal
Budget Narrative

The following items provide descriptions of the proposed budget categories.

Salaries and Wages and Fringe Benefits: Hourly rates listed for City of Tishomingo staff are inclusive of fringe benefits and included as in-kind project services amounting to $10,020. The rates listed in the budget proposal table represent the actual labor rates of the identified personnel.

Travel: Reimbursable travel is not required by the applicant staff for this project.

Equipment: No City of Tishomingo equipment is expected to be used for the duration of this project.

Materials and Supplies: All irrigation system materials will be sourced and installed by a third-party contractor. The water meter (priced at $2,500) will be sourced and installed by the City of Tishomingo.

Contractual: The irrigation system installation/upgrade will be completed by a qualified irrigation installation contractor. An existing, current bid for the installation project is included in Attachment 1. The budgeted amount is based on this bid.

Other: N/A

Indirect Costs: N/A

Environmental and Regulatory Compliance Costs: No environmental or regulatory compliance costs are anticipated for this project.

Total Costs: The total cost of this project is $58,620. The Chickasaw Nation will provide $5,000 of in-kind contributions and $10,000 as matching funds. MSC will also provide $5,000 of in-kind labor. The amount of federal grant funding requested is $28,600.

The City of Tishomingo is registered in the System for Award Management (SAM) under the Unique Entity Identifier: DUNS Number 962064114. The City will maintain an active SAM registration with current information at all times in which it maintains an active Federal award or application under consideration by a Federal awarding agency.
(3) Environmental and Cultural Resources Compliance

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 not significantly impact the surrounding environment. Installation of the project materials and supplies will occur within already developed areas of the City of Tishomingo. Earth-disturbing work will be temporary to allow for installation of irrigation water lines.

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?

The activities associated with the proposed project are not anticipated to affect any threatened or endangered species, or related critical habitat.

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 impacts anticipated to wetlands or surface waters as a result of the proposed project.

When was the water delivery system constructed?

Pennington Creek has been the water supply for the City of Tishomingo since the 1850s. The City of Tishomingo’s current water treatment and water distribution system was built in the 1970s. The current irrigation system at Murray State College has been in place for approximately nine years.

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 includes activities to install a new in-ground irrigation system for three separate athletic facilities. This installation will expand the current irrigation system currently in use at MSC.

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.

No historic or eligible buildings, structures, or features will be affected by the proposed project activities.

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?**
The proposed project will not have any adverse effect on low income or minority populations.

**Will the proposed project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?**
The proposed project will not limit access to or ceremonial use of Indian sacred sites. It will not result in any negative impacts to 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?**
The proposed project will not contribute to the introduction or spread of noxious weeds or invasive species.
(4) Required Permits or Approvals

No permits or approvals are expected to be required for any project activity.
Letters of support are provided from the following organizations:

1. Chickasaw Nation (Attachment 2)
2. Murray State College (Attachment 3)
(6) Official Resolution

An official, signed resolution is provided in Attachment 4.
(7) Attachments

The following documents are attached to this application:

1. Scope of work and bid by Elite Landscaping LLC
2. Chickasaw Nation Letter of Support
3. Murray State College Letter of Support
4. Official Resolution
Attachment 1: Scope of Work and Bid from Elite Landscaping LLC
ELITE LANDSCAPING L.L.C.
6153 SMISER ROAD
CALERA, OK  74730
SHAWN LYDAY-OWNER
580-775-0713

DATE 4/22/19 INVOICE #

BILL TO:

SCOPE OF WORK: IRRIGATION SYSTEMS MURRY STATE COLLEGE

1. Soccer Field. Each zone will consist of 4 to 5 heads. Each head will be an I-25 hunter rotor head. I will be using a # 13 nozzle which will produce about 11.2 gallons per minute of water. Each zone will consist of about 44.8 gallons per minute. In a 20-minute period it would be using about 896 gallons. This would be in relation to a 1” rain. Bermuda only has to have about 2” of water a week to thrive.

2. Practice Baseball field. Will consist of 3 zones and calculations will be exactly the same as soccer field.

3. Rodeo Arena. I will be using an I-90 hunter rotor head. Each head will be run individually. I will be using a # 53 nozzle which consists of about 59.5 gallons per minute of water. These will only be run for about 5 to 10 minutes each. Water usage will be about 297 gallons each zone. There will be 6 zones.
ELITE LANDSCAPING L.L.C.
6153 SMISER ROAD
CALERA, OK  74730
SHAWN LYDAY-OWNER
580-775-0713
DATE 3 /20/19

ESTIMATE: MURRY STATE COLLEGE

SCOPE OF WORK: IRRIGATION SYSTEMS

ELITE LANDSCAPING LLC IS INDIAN OWNED

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. PRACTICE BASEBALL FIELD</td>
<td>$ 4,060.00</td>
</tr>
<tr>
<td>2. SOCCER FIELD</td>
<td>$ 23,040.00</td>
</tr>
<tr>
<td>3. RODEO ARENA</td>
<td>$  9,000.00</td>
</tr>
</tbody>
</table>

ALL IRRIGATION SYSTEMS COME WITH A 3 YEAR WARRANTY

TOTAL $36,100.00
March 28, 2019

Mr. Matthew Reichert  
Bureau of Reclamation  
Financial Assistance Support Service  
Post Office Box 25007, MS 84-278814  
Denver, CO 80225

Dear Mr. Reichert:

The Chickasaw Nation is committed to working with the City of Tishomingo towards water efficiency and sustainable irrigation practices. These practices will focus on addressing community long-term water capacity needs and effectively manage long-term water demand. The Chickasaw Nation will commit $5,000 of in-kind labor and $10,000 in cash for a total of $15,000 for the project.

The Chickasaw Nation appreciates the opportunity to work with the City of Tishomingo, Murray State College and the U.S. Bureau of Reclamation to implement sustainable infrastructure development. If you have questions, please contact Mr. Kristopher Patton, at (580) 399-8975 or at kristopher.patton@chickasaw.net.

Sincerely,

Bill Anoatubby, Governor  
The Chickasaw Nation
Attachment 3: Murray State College Letter of Support
April 23, 2019

Tishomingo City Hall
1130 E. Main Street
Tishomingo, OK 73460

Dear Mr. Steve Kelly,

Murray State College is proud to support the City of Tishomingo in the WaterSMART Small-Scale Water Efficiency Projects grant funding opportunity to install more efficient irrigation systems at the college.

We are committing $5,000 from our staff with in-kind match monies to help complete this project. MSC will continue to aid the city in all efforts to conserve water and better our environment.

Sincerely,

Joy McDaniel
President
Attachment 4: Official Resolution
RESOLUTION 2019-07

Approving the City of Tishomingo working with the Chickasaw Nation to submit a grant to the Bureau of Reclamation for financial assistance to replace current irrigation equipment with more efficient systems at Murray State College.

Whereas, the City of Tishomingo seeks authorization to work with the Chickasaw Nation on a proposal to the Bureau of Reclamation in response to the FY 2019 WaterSMART Small-Scale Water Efficiency Projects grant funding opportunity to install irrigation systems at Murray State College. This project will increase water use efficiency by replacing less efficient irrigation equipment currently in use, and thereby reduce the total water demand from Murray State College. Whereas the proposal will request $28,600 in federal grant funding requiring a cost share match from the City of Tishomingo in the amount of $30,000.

Now therefore the City Council members of the City of Tishomingo, Oklahoma, do hereby authorize City staff, and Justin Baker of Aqua Strategies Inc. on their behalf, to work with the Chickasaw Nation on a proposal to the Bureau of Reclamation seeking funds to install irrigation equipment at Murray State College.

EFFECTIVE DATE:

This Resolution shall take effect this 23rd day of April 2019.

Don Keel, Mayor

ATTEST:
April 23, 2019

Tishomingo City Hall
1130 E. Main Street
Tishomingo, OK 73460

Dear Mr. Steve Kelly,

Murray State College is proud to support the City of Tishomingo in the WaterSMART Small-Scale Water Efficiency Projects grant funding opportunity to install more efficient irrigation systems at the college.

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Sincerely,

Joy McDaniel
President