



***Landscape Irrigation Technology  
Incentive Project for Municipal and Non-  
Residential Customers***

**Small Scale Water Efficiency Project**

**FUNDING OPPORTUNITY ANNOUNCEMENT:  
R21AS00300**

**DATE OF SUBMISSION:  
3-18-2021**

Anne Stahley, Water Conservation Specialist  
City of Glendale  
Water Services Department  
Conservation and Sustainable Living Division  
5959 W. Brown Street, Glendale AZ 85302  
astahley@glendaleaz.com  
**Phone:** (623) 930-3550  
**Fax:** (623) 842-2161

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## **D.2.2.4. Technical Proposal and Evaluation Criteria**

### **Executive Summary**

March 18, 2021  
City of Glendale Water Services Department  
Glendale, Maricopa County, Arizona

The city of Glendale Water Services Department is a municipal water provider, proposing an incentive project that would provide funds to municipal and non-residential customers to upgrade their irrigation systems with innovative irrigation technology. The goal of the Landscape Irrigation Technology Incentive Project is to encourage municipal and non-residential customers to create water-efficient landscapes located in an increasingly hot and dry climate. The project's outcome will provide regionally relevant case studies that offer solutions to improve outdoor water efficiency, quantify potential gallon savings from upgrading landscape irrigation technology, and address the need for continued incentives to increase outdoor water efficiency, especially for customers with large landscaped areas. The project meets the Environmental Sustainability theme and Conservation goals of the city of Glendale's updated General Plan that was adopted by City Council in 2016.

The total project cost is \$109,085 and the city of Glendale Water Services Department is requesting \$50,000 in Bureau of Reclamation WaterSMART grant funds over a two-year period.

The Glendale Water Services Department anticipates the initial start of this project by January 2022, with the full participation of municipal and non-residential customers by June 2023. All projects should be fully installed by July 2023. The project should be completed by December 2023.

## Background Data

The city of Glendale receives an allotment of water from the Salt River Project (SRP) and Central Arizona Project (CAP), which are two Lower Colorado River Basin reclamation projects within the state of Arizona. This renewable surface water supply accounts for approximately 85-95% of the city's total water supply. The Glendale Water Services Department has been providing and treating water since 1915. The Department cleans and transports an average of 13 billion gallons (41,000-acre feet) of drinking water, and over 6 billion gallons (18,400-acre feet) of wastewater per year. This includes water service delivery to over 61,000 connections and over 250,000 people within the community. After water is used by the community, the city's highly treated wastewater or effluent, continues to provide multiple beneficial uses:

- 43% is sent to the multi-city-owned 91<sup>st</sup> Avenue Wastewater Treatment Plant. Effluent is delivered to irrigate crops, provide water for cooling the Palo Verde Nuclear Power Plant, and create the Tres Rios Wetlands that returns the remaining water into the Salt River.
- 41% is stored underground as a backup for future water shortages, and a small portion is used to irrigate the ballfields at Camelback Ranch Spring Training Facility.
- 16% is delivered to constructed lakes in north Glendale where the water is stored and managed by Arrowhead Amenities for landscape water use.

The Glendale City Council approved the city's Water Conservation Program in 1985 in response to Arizona's 1980 Groundwater Management Act, which required water providers in the state's Active Management Areas to create water conservation programs. The city maintains ten water conservation programs listed as Best Management Practices by the Arizona Department of Water Resources. The city's water conservation program primarily targets residential customers – the largest customer class – that consume 65 percent of Glendale's total water supply. Currently, municipal and non-residential customers (i.e. commercial, industrial, institutional and turf-related facilities) account for a smaller customer class of Glendale's overall water deliveries, but they consume 28 percent of the city's total water supply. There are opportunities to improve water efficiency among the top water users in the municipal and non-residential sectors.

The Glendale City Council approved the Landscape Rebate and Water Budget programs for Non-Residential customers in 2005. These programs work in tandem, where non-residential customers can receive a rebate for converting problematic or non-functional grass areas to xeriscape and for monitoring their outdoor water use through a customized landscape water budget. Since 2005, 50 non-residential customers have converted 336,036 square feet of grass to xeriscape. In a recent analysis of 15 non-residential customers with designated water meters, their water use decreased by 14% comparing water use before and after grass removal.

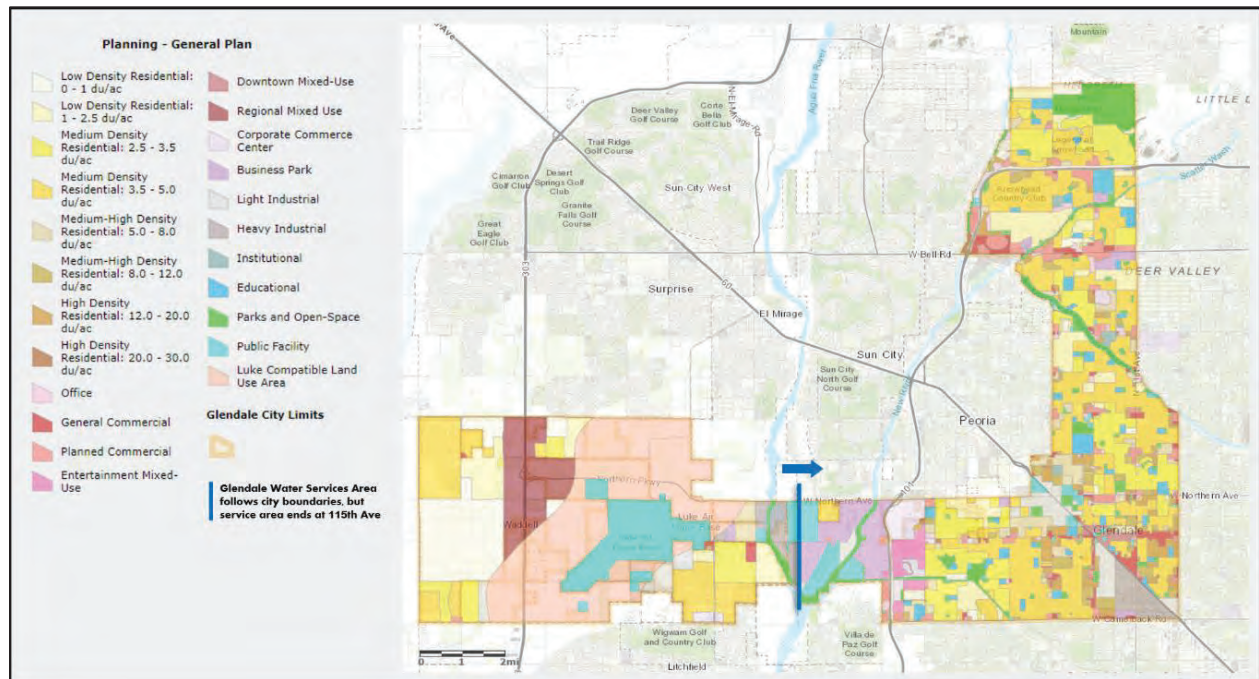
The city of Glendale's Water Efficiency Partner (GWEP) program was developed in 2017 and provides municipal and non-residential customers with indoor and outdoor water efficiency assessments and detailed confidential reports that identify cost-

effective ways to save water and money. Offering these water efficiency assessments has helped cross-promote the city’s two long-standing programs, the Landscape Water Budget and Non-Residential Landscape Rebate. Since the GWEP program’s inception in 2017, the city has helped 18 local businesses and non-profits identify over 6 million gallons of potential water savings through repairs and upgrades. However, additional opportunities exist to help the city’s municipal and non-residential customers identify potential outdoor water savings through the installation of innovative landscape irrigation technology.

## Project Location

The city of Glendale is located within Maricopa County, Arizona and Sonoran Desert region. This region has a hot and dry climate, with two rainy seasons: a summer monsoon season and an occasional period of rainfall during the winter season. Figure 1 shows a General Planning map of the city of Glendale. Glendale’s Water Service area follows the same jurisdictional boundaries as the city, but water services end at 115<sup>th</sup> Avenue west of the Glendale Municipal Airport. The Landscape Irrigation Technology Incentive Project would occur at municipally-owned properties and eligible non-residential landscape properties within the city’s Water Service area

Figure 1. Glendale Map showing land use and water service area that follow city boundaries.



## Project Description

The city of Glendale Water Services Department is requesting grant funds to promote the benefits of a system-wide approach to creating water-efficient landscapes that use

proven innovative landscape irrigation technologies. This project would include the purchase and installation of landscape irrigation technology such as smart irrigation controllers, flow sensors, climate sensors for manual controllers, and water-efficient pressure regulating sprinkler spray bodies, sprinkler nozzles, sprinkler check valves, and drip irrigation emitters. Grant funds would be used to provide water-efficient landscape irrigation equipment for approximately 10 municipal and non-residential customers in the city's water services area. Staff time to support the project and installation costs by the city's approved landscape contractor would be provided as in-kind contribution or grant match. Our anticipated grant match will exceed the 50% grant match requirement.

**Purpose:** The purpose of the Landscape Irrigation Technology Incentive Project is to improve water efficiency through proven innovative landscape irrigation technology for municipal and non-residential customers. Currently, the city only offers one rebate – the landscape rebate – for customers that convert grass to xeriscape. The city would like to use this incentive project to build regionally relevant case studies, promote potential water savings, and address the need for continued incentives to increase outdoor water efficiency, especially for customers with large landscape areas. Smart irrigation controllers will be a central part of this program because irrigation schedules can be automatically adjusted to account for changing weather conditions, through evapotranspiration (ET) and rainfall. Additional equipment being considered in this incentive project are permanent flow sensors used to detect water flow and send leak alerts, climate weather sensors for manual irrigation controllers, and pressure regulating equipment such as sprinkler spray bodies, sprinkler nozzles, sprinkler check valves, and drip irrigation emitters. The program will replace manually operated irrigation systems and non-pressure regulating components with proven innovative landscape irrigation technology to demonstrate how these components work together to increase total outdoor water efficiency. A set amount of grant funds will be applied towards the installation costs of irrigation equipment by qualified landscape irrigation professionals.

### **E.1.1. Evaluation Criterion A—Project Benefits**

#### **What are the benefits to the applicant's water supply delivery system?**

The project will reduce the demand on the city's surface water supply delivery system by reducing the demand for outdoor water use. By increasing the overall water efficiency of outdoor irrigation systems, the project will reduce water use without compromising plant health. The project will increase the ability to prevent outdoor water waste.

#### **Extent to which the proposed project improves overall water supply reliability.**

Peak demand and outdoor water use increase during the summer months, when the water needs of plants are higher due to high ET rates. Glendale Water Services staff have observed patterns where homeowner associations deficit water in the winter and spring, causing plant stress and soil moisture depletion. To make up for deficit watering, these properties will significantly over-water in the summer and fall. This project encourages the use of proven innovative landscape irrigation technology to apply the



appropriate amounts of water to turf and desert landscapes, and can be used to help reduce peak demand.

**The expected geographic scope benefits from the proposed project (e.g., local, sub-basin, basin).**

According to the U.S. Census Bureau, Phoenix is ranked number one for the fastest-growing cities in the United States. Glendale remains the largest city in the West Valley and is experiencing rapid growth. As people relocate to the Sonoran Desert region from other areas in the country, the city of Glendale has an opportunity to partner with the non-residential sector to showcase proven water-efficient technology that can be used to irrigate turf landscapes and xeriscapes.

The project will benefit customers responsible for maintaining large landscapes located in a hot and dry region that is currently experiencing its 21<sup>st</sup> year of a long-term drought. According to an Arizona Department of Water Resources August 2020 eNewsletter, the summer of 2020 marked the second season of little to no rainfall or a “Non-Soon 2.0” monsoon season for Arizona. National Weather Service forecasters also stated that the winter of 2020 and summer of 2021 will bring drier-than-average conditions. Xeriscapes are sustainable landscapes that save water and energy and provide wildlife habitat. Xeriscapes preserve the Sonoran Desert landscape compared to the built environment. As the environment and climate continues to change towards a hotter and drier future, nearly all landscapes in this region will continue to require regular irrigation to survive.

Smart irrigation controllers utilize ET data by connecting with local and regional weather stations. This proven innovative technology provides data-driven decision-making to apply appropriate irrigation to turf and desert-adapted plants. Smart irrigation controllers must be appropriately programmed by a qualified landscape irrigation professional for the soils and plant compositions in our Sonoran Desert region. However, the controller by itself does not create an efficient irrigation system. The system is only as efficient as its design. They must be used in connection with an irrigation system that is pressure regulated to evenly distribute irrigation to plants. The system must also be able to automatically shut itself off in the event of a leak or failed irrigation valve. Irrigation components such as flow sensors, pressure regulating valves, and sprinklers coupled with a properly programmed smart irrigation controller create a water-smart irrigation landscape system.

**Extent to which the proposed project will increase collaboration and information sharing among water managers in the region.**

This project will complement the long-standing city of Glendale’s Non-Residential Landscape Rebate program that promotes water efficiency through converting problematic or non-functional grass areas to xeriscape. This project will enhance Glendale Water Services’ relationship building and outstanding customer service to our external customers. The project results will be presented to the Arizona Municipal Water Users Association’s (AMWUA) Commercial, Institutional, Industrial (CII) Workgroup meeting. This is a regional CII workgroup, comprised of 10 member cities in metro Phoenix. Glendale Water Services Department staff have represented the city of

Glendale by co-chairing this CII best practices planning workgroup since 2018. The project and participants will continue to be evaluated beyond the duration of the grant period to serve as local case studies for other Glendale non-residential customers.

**Any anticipated positive impacts/benefits to local sectors and economies.**

There are positive benefits to homeowners' associations that have a responsibility to maintain common areas for outdoor enjoyment by neighboring communities. Common areas within homeowners' associations consist of outdoor environments such as turf and desert landscapes in which children and families recreate. These areas have increased use since they represent a safer option during COVID-19, compared to visiting public entertainment amusement parks. The project provides a solution for municipal (internal) and non-residential (external) water users to work together in reducing outdoor water demand by modernizing outdoor infrastructure with proven landscape irrigation technology. This project will be accomplished by providing a menu of options or equipment for consideration that will be tailored to each site's needs. While smart irrigation controllers are the primary irrigation technology being considered for the project, additional technologies such as flow sensors and pressure regulating components, are also being included to assist with leak detection and maximize the irrigation system's efficiency in delivering the appropriate amount of water to manage turf and desert landscapes. This alleviates the need of relying on human behaviors to modify irrigation programs based on weather and seasonal changes. It also provides the customer or their landscape contractor with the ability to remotely manage large landscapes.

**E.1.2. Evaluation Criterion B—Planning Efforts Supporting the Project**

**Does the proposed project implement a goal or address a need or problem identified in the existing planning effort?**

The project supports the mission of the City of Glendale Water Services Conservation and Sustainable Living (CSL) Division that has been identified in the city's updated General Plan that was approved by Glendale City Council in 2016. According to "Goal CON-3 Efficient use of water resources" in the Glendale Envision 2040 plan on page 7-6, "The City shall promote water conservation in landscaping for public facilities and streetscapes, residential, commercial and industrial facilities, including use of water conserving fixtures (low water usage) and low-water-use plants". The city of Glendale's Non-Residential Landscape Rebate program promotes the benefits of xeriscapes or low-water-use plants in the Sonoran Desert. This project helps to accomplish our goal of promoting water conservation in landscapes using water conserving fixtures by specifically targeting the city's high-water users and offering proven landscape irrigation technology incentives for our municipal and non-residential customers. The city of Glendale's General Plan Envision 2040 document can be located under the Glendale Planning website at: [https://www.glendaleaz.com/work/planning\\_zoning/general\\_plan](https://www.glendaleaz.com/work/planning_zoning/general_plan)

The city of Glendale's Drought Management Plan (DMP) was updated in 2016 and requires the city to offer a list of measures that can be selected to reduce residential, commercial, and industrial water use. The CSL Division is required to provide water



conservation technical assistance to residents and businesses. According to Glendale's DMP on page 15, "Services offered include landscape consultations and water budgets, water use audits, leak detection, incentives, and rebates". These services are already being provided to customers as requested because they represent one of many Best Management Practices that the Glendale Water Services Department's – CSL Division offers. If the City Manager activates the Drought Management Plan, this project would provide additional incentives available to our municipal and non-residential customers to achieve targeted water savings they may be asked to make under a specific drought stage. The Glendale DMP can be located online under the Glendale Water Services website's "Drought Information" tab at:

[https://www.glendaleaz.com/live/city\\_services/water\\_services](https://www.glendaleaz.com/live/city_services/water_services)

In 2017, the City of Glendale Water Services Department's CSL Division worked with students from the Arizona State University's Morrison Institute for Public Policy to survey several non-residential customers on ways to partner with the City of Glendale to accomplish their water conservation goals. The majority of participants who were surveyed indicated that they were interested in water audits and rebates or incentives that would help them achieve water savings. Afterward, the city created the Glendale Water Efficiency Partner program to provide water efficiency assessments to non-residential users, and the new program was used to promote the city's existing Landscape Rebate and Landscape Water Budget programs. This project would allow the city to further expand the services and collaboration with non-residential customers to increase their outdoor water efficiency and meet their water conservation goals.

The city of Glendale Water Services Department is currently working with an environmental engineering consultant to develop an Integrated Water Master Plan that will provide recommendations to the city's existing Water Conservation program and Drought Management Plan. This plan is not available yet, because it is still being drafted by the consultant.

### **E.1.3. Evaluation Criterion C—Project Implementation**

The project will be implemented with four phases over the two-year grant period: (1) Design, Development, and Promotion (2) Application Reviews and Participant Selections (3) Customer Service, Technical Assistance, and Monitoring, and (4) Final Evaluations and Follow-up. All participants must be a municipal or non-residential customer within the city's water service area. Eligible non-residential customers are defined as businesses, schools, non-profit or faith-based organizations, homeowners' associations, and multi-family properties. Participation in the city's existing Landscape Water Budget Program will be required. All participants will be subjected to a pre- and post-water efficiency assessment and must agree to a monitoring plan. All landscaped areas must be in relatively good health and have historic water use data available. No special permits are required, but approvals are necessary for participants who are eligible for a Landscape Rebate. Grass to xeriscape conversions along a major arterial street must go through the Planning Department's Design Review Process. Grass to xeriscape conversions in retention basins must obtain approval from the Engineering

Department. Please see Table 1. Landscape Irrigation Technology Incentive Project Work Plan to view milestones and project implementation details.

**Describe the timeline for completion of environmental and cultural resource compliance. Was the timeline for completion of environmental and cultural resource compliance discussed with the local Reclamation office?**

We do not anticipate any environmental and cultural resource compliance issues. The timeline for completion was discussed with BOR Water Resources Program Manager of the Phoenix Area Office, Jessica Asbill-Case.

**Participant Requirements**

- Participants must agree to a monitoring plan that will include scheduled check-ins and site inspections.
- The project must be approved by the Glendale Water Services Department before installation. The Department must be notified about any project changes so the monitoring plan can be revised.
- Participants must provide all up-front costs associated with the equipment purchases and equipment installation. Projects must be installed by July 1, 2023.
- The city of Glendale Water Services Department will reimburse the participant with grant funds for eligible equipment costs up to a set maximum. Proof of installation should be documented by the participant and verified at the scheduled post-inspection.
- Applicants are eligible for the city of Glendale Water Services Department’s rebate, including the Non-Residential Landscape Rebate. Applicants must follow rebate program guidelines – [https://www.glendaleaz.com/live/city\\_services/water\\_services/water\\_conservation\\_and\\_sustainable\\_living/landscape\\_rebate](https://www.glendaleaz.com/live/city_services/water_services/water_conservation_and_sustainable_living/landscape_rebate)
- Participants agree that the Glendale Water Services Department may monitor and report program activities and results to the Bureau of Reclamation, including water usage and savings, project photos, etc. The Glendale Water Services Department may also use this information as a case study. This includes being promoted in publications and online media to further promote water conservation in the city of Glendale.

**Example of complete applications**

- Participant information and project description:
  - Applicant contact information, including account numbers for water meters.
  - Statement of purpose and need.
  - Project descriptions and locations.
  - Amount of money requested and proof of payment with itemized invoices.
  - List of contractors or others involved in the project.
- A clear map of existing irrigation system and landscape.
- Photographs of equipment to be replaced.
- Professional irrigation plan and/or equipment upgrade irrigation schedule.
- Irrigation plan, including plant establishment schedule and long-term schedule if

- applicable.
- Community outreach plan (e.g. homeowners’ associations board presentation meetings, signs).
- Completed Landscape Rebate application for landscape conversion participants.

Table 1. Landscape Irrigation Technology Incentive Project Work Plan

Milestones/Activity	Completion Date
<b>Year 1 Phase 1 – Program Design, Development, and Marketing</b>	
Set-up grant administrative processes.	1 month January 2022
Environmental and cultural resource compliance.	1 month February 2022
<ul style="list-style-type: none"> <li>• Set-up project participant eligibility checklist.</li> <li>• Create online participant application forms.</li> <li>• Create online landing webpage for project.</li> </ul>	3 months January – March 2022
<ul style="list-style-type: none"> <li>• Conduct pre-landscape assessments at municipal sites.</li> <li>• Inventory actual needs of irrigation equipment components.</li> </ul>	6 months February – July 2022
Application period opens.	N/A March 2022
<ul style="list-style-type: none"> <li>• Promote the project. Call for applications.</li> </ul>	16 months March 2022 – June 2023
<ul style="list-style-type: none"> <li>• Target relevant audiences with program information.</li> <li>• Provide presentations at customer events and meetings.</li> </ul>	12 months August 2022 – June 2023
Application period ends.	N/A July 2023
<b>Year 1 Phase 2 – Application Review and Selection, and Assessments</b>	
<ul style="list-style-type: none"> <li>• Review and select applicants on a rolling basis.</li> <li>• Meet with selected applicants to review project details.</li> <li>• Create participant monitoring plan and schedule assessments.</li> <li>• Register participants in Landscape Water Budget program.</li> <li>• Provide pre landscape assessments and follow-up with reports.</li> </ul>	16 months April 2022 – July 2023
Complete irrigation installation at municipal sites.	6 months October 2022 – March 2023
<b>Year 2 – Phase 3 – Implementation and Post Inspections</b>	
Promote participants on landing webpage.	12 months January 2023 – December 2023
Design educational sign for participants.	3 months April – June 2023
Provide scheduled post inspections to document upgrades.	10 months October 2022 – July 2023
Provide scheduled site visits and technical consultations.	12 months October 2022 – September 2023
Provide updated monthly landscape water budgets.	15 months October 2022 – December 2023
Meet with participants to make necessary adjustments.	6 months April – September 2023

<b>Year 2 – Phase 4 – Final Review</b>	
Review all participant water usage data.	6 months May – December 2023
<ul style="list-style-type: none"> <li>• Provide post landscape assessment and reports.</li> <li>• Meet with participants to discuss results.</li> </ul>	6 months July – December 2023
Evaluate overall project to consider new or increased incentive costs.	3 months October – December 2023
Complete final Reclamation grant reporting requirements.	1 month December 2023

#### **E.1.4. Evaluation Criterion D— Nexus to Reclamation**

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

Approximately 85-95 percent of Glendale’s water supply originates from the Central Arizona Project and the Salt River Project, two Reclamation Project Water Supplies. The city of Glendale’s Central Arizona Project Sub-contract number is 5-07-30-W0062. A portion of the city’s water service area is located on project land, has a water right, and Water Use and Delivery Agreement (WDUA) with the Salt River Project. This WDUA agreement is attached to this grant application. The proposed work of increasing outdoor water efficiency will allow us to quantify potential water savings and minimize outdoor water waste. Water saved means more remaining in the Lower Colorado River basin and Salt River basin that is stored in the reservoirs. By saving water in our immediate service area, this means more water is available downstream to benefit tribes and other communities.

Signage showcasing landscape irrigation technology at participant sites will inform the public of the water conservation commitment from the Bureau of Reclamation and the city.

#### **D.2.2.5. Project Budget**

##### **Funding Plan**

The city of Glendale Water Services Department requests \$50,000 from the Bureau of Reclamation. The total cost of the Landscape Irrigation Technology Incentive Project is \$109,085. If all funding is granted, \$50,000 will be used for smart irrigation controllers, installation costs for external customers, and other water-efficient irrigation equipment. The remaining \$59,085 will cover materials, installation costs for municipal customers, and in-kind salaries and wages. We do not anticipate any environmental and cultural resource issues. All the work involves upgrading existing equipment and minimal earthwork of existing irrigation lines on public and private properties. Glendale Water Services Department commits to providing \$1,890 in cash from budgeted department funds and \$57,195 of in-kind services for a total amount of \$59,085 to pursue this project with funds available immediately.

## Budget Proposal

Table 2. Total Project Cost

SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal Funding	\$50,000
Costs to be paid by the applicant:	\$59,085
<b>TOTAL ESTIMATED PROJECT COST</b>	<b>\$109,085</b>

Table 3. Sample Budget Proposal Format

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity Type	TOTAL COST
	\$/Unit	Quantity		
<b>Salaries and Wages</b>				
Environmental Program Administrator	\$43.71	196	Hours	\$8,567
Project Manager – Water Conservation Specialist 1	\$31.06	510	Hours	\$15,840
Water Conservation Specialist 2	\$28.08	498	Hours	\$13,983
Water Conservation Assistant 1	\$19.78	86	Hours	\$1,701
Water Conservation Assistant 2	\$16.00	119	Hours	\$1,904
<b>Fringe Benefits</b>				
Environmental Program Administrator	20.06%	\$8,567	N/A	\$1,718
Project Manager – Water Conservation Specialist 1	20.06%	\$15,840	N/A	\$3,177
Water Conservation Specialist 2	20.06%	\$13,983	N/A	\$2,805
<b>Supplies and Materials</b>				
Materials – sign printing	\$270	7	Sign	\$1,890
<b>Contractual</b>				
Contractor Installation Costs	N/A	N/A	N/A	\$7,500
<b>Other</b>				
Project Incentives	\$7,500	N/A	N/A	\$50,000
<b>TOTAL ESTIMATED PROJECT COSTS</b>				<b>\$109,085</b>

## Budget Narrative

The city of Glendale Procurement Office has identified an approved contractor to regularly maintain landscaping and irrigation work at the Glendale Water Services Department's sites through a city-wide Request For Proposals process. The CSL Division staff have researched the costs of commercial-grade irrigation components and have obtained hourly rates and duration of projects for estimating irrigation replacements and upgrades from contractors in the commercial landscape irrigation industry. This project includes contractor irrigation component installation work at municipal sites. Non-residential customers would be eligible to receive an incentive towards the installation costs of installing a smart irrigation controller or flow sensors on irrigation valves. The installation incentive can only be provided to qualified landscape irrigation professionals.



## **Project Incentives (Federal)**

Participants will be reimbursed after the components have been installed based on a set maximum of \$7,500 per program participant. Landscape irrigation upgrades may include the following water-efficient components:

- Smart irrigation controllers
- Flow sensors for smart irrigation controllers
- Climate or weather sensors for manual controllers
- Sprinkler spray bodies
- Sprinkler check valves added to the base of sprinklers
- High efficiency nozzles
- Drip irrigation emitters

## **Non-Federal Funding**

The non-federal matching funds will be provided by the Glendale Water Service's annual budgeted totals for work with landscape irrigation contractors (\$172,000), and through Water Conservation's budgeted amounts for promotion and publicity (\$35,000). These funds will be used for the following:

Landscape Contractor Services - \$7,500

Campaign-style signs for public education at participant sites - \$1,890

**Salaries and Wages** – The hourly rate shown in the budget proposal (Table 3) represents the actual labor rates of the identified personnel as of March 2021.

Glendale Water Conservation staff will coordinate the project and provide administrative services. The following employees will be involved in the grant project:

Anne Stahley, Water Conservation Specialist 1 (Project Manager for the grant), 12% of their time

Omon' Abu, Water Conservation Specialist 2, 12% of their time

Joanne Toms, Environmental Program Administrator, 5% of their time

Bill Simonson, Water Conservation Assistant, 6% of their time

Sawyer Treese, Water Conservation Assistant, 7% of their time

### Environmental Program Administrator

The Environmental Program Administrator will review the project application materials and provide support for promoting the project to non-residential customers. They will attend review sessions of selected applicants and the initial participant meetings. The Administrator serves as the final reviewer on all water efficiency assessment reports and landscape water budgets, and any data from the evaluation of the project. They are the primary point of contact with homeowners' associations, in providing monthly updated landscape water budgets and water efficiency recommendations. The Environmental Program

Administrator will work with the grant's Project Manager to ensure milestones are accomplished. They will assist the Project Manager in sharing the final project findings with regional partners and community stakeholders.

#### Project Manager, Water Conservation Specialist 1

The Project Manager is responsible for grant administration duties such as grant reporting requirements and tracking expenditures. They are the lead on program development, design, and application guidelines. They are responsible for organizing internal staff meetings to discuss tasks to meet each grant milestone. They will be a lead contact in corresponding with selected participants related to grant items. They are the lead contact for commercial, industrial, and institutional customers and secondary point of contact with homeowners' associations in providing technical assistance and monthly communications to provide updated landscape water budgets, provide pre- and post-water efficiency assessments and reports, evaluating the water savings data, and providing presentations of the project findings at regional meetings.

#### Water Conservation Specialist 2

The Water Conservation Specialist 2 will have a lead role in promoting or marketing the incentive project to potential participants. This includes creating signage for participants. They are a lead point of contact with municipal customers in providing site inspections and pre- and post-water-efficiency assessments and reports. They will also be responsible for corresponding with municipal participants monthly to provide updated landscape water budgets, evaluating the water savings data, and assisting with the project findings at regional meetings.

#### Water Conservation Assistant 1

The Water Conservation Assistant 1 is the team's irrigation specialist. They will attend the majority of the pre- and post- water-efficiency assessments and scheduled post inspections to verify participants have installed irrigation technology. This includes providing photo documentation of installed technology.

#### Water Conservation Assistant 2

The Water Conservation Assistant 2 is the lead on preparing landscape water budgets and initial evaluation of water savings data for all participants. This includes the Landscape Water Budget program set up for each participant and updating each water budget monthly. They may assist with water efficiency assessments and reports as needed.

The calculations for their time are contained in the Budget Proposal (Table 3). The total in-kind value for five employees is \$49,695.

#### **D.2.2.6. Environmental and Cultural Resources Compliance**

***Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)?*** No. Modifications or replacements of irrigation system components will result in minor earthwork of existing systems on public and private property.

***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?*** No.

***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.*** No.

***When was the water delivery system constructed?*** Initial system components were constructed in 1915.

***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.*** No.

***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.

***Are there any known archeological sites in the proposed project area?*** No.

***Will the proposed project have a disproportionately high and adverse effect on low income or minority populations?*** No.

***Will the proposed project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?*** No.

***Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?*** No.

#### **D.2.2.7. Required Permits and Approvals**

The city of Glendale Water Services Department does not anticipate any permit requirements or approvals in this project. No new policies or modifications to existing policies are required for this project, other than the Glendale City Council’s approval and execution of the grant agreement with the Bureau of Reclamation.

### **D.2.2.8. Official Resolutions**

The city of Glendale Water Services Department is seeking an Official Resolution to support this grant application at a City Council Meeting on April 13, 2021. We will send the Official Resolution as a separate attachment.

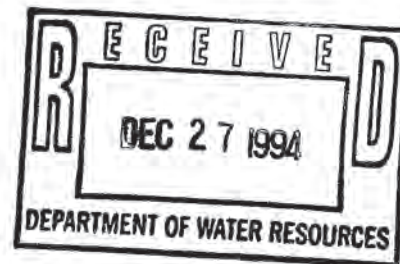


PETER VAN HAREN  
CITY ATTORNEY

Office of the City Attorney  
Telephone: (602) 435-4236  
Facsimile: (602) 931-5542



C-3031



December 22, 1994

Mr. Herb Dishlip  
Director, Water Management  
Arizona Department of Water Resources  
500 North Third Street  
Phoenix, Arizona 85004-3903

Re: Enrollment of Water Exchanges Between City of  
Glendale and Salt River Project

Dear Mr. Dishlip:

On December 29, 1993, the City of Glendale filed a Statement of Water Exchange Contract with the Director pursuant to A.R.S. Sec. 45-1021. This letter updates that Statement.

Enclosed is a copy of the Water Delivery and Use Agreement between the Salt River Valley Water Users' Association and the City of Glendale ("WDUA"), effective as of December 31, 1994. The WDUA consolidates previous agreements between the Association and the City under which, among other things, water exchanges have occurred yearly since before 1992 and through the present.

A.R.S. Sec. 45-1002.A.3 provides that if a water exchange is made pursuant to a contract enrolled under Sec. 45-1021, the amount of water exchanged may "not exceed either the maximum amount of water exchanged in any twelve month period before 1992 or any specific maximum amount established in the water exchange contract, whichever is more." Emphasis added. The WDUA sets forth the historical understanding of the Association and the City that, while the quantity of water exchanged would vary from year to year, the maximum amount that could be exchanged would be limited by the constraints of the Association's system. Under section 15.1 of the WDUA, 61,422 acre feet is the specific maximum amount of water that may be exchanged annually.

A.R.S. Sec. 45-1002.B provides that the water given and the water received must be exchanged within a twelve-month period unless "(t)he exchange is made pursuant to a water exchange contract enrolled under section 45-1021 and the contract contains an explicit term providing for a longer period." The WDUA incorporates the historical practice between the Association and the City of allowing multi-year



Mr. Herb Dishlip  
December 22, 1994  
Page 2

exchanges. Section 15 of the WDUA contains the provisions under which multi-year exchanges will continue to be allowed.

Please feel free to contact us if you have any questions or would like further information.

Sincerely,



Kenneth E. Martin  
Deputy City Manager  
Public Works  
City of Glendale

  
Salt River Project

KEM:ac

Enclosure

cc: Pat Schiffer

RESOLUTION NO. 2935 NEW SERIES

A RESOLUTION OF THE COUNCIL OF THE CITY OF GLENDALE, MARICOPA COUNTY, ARIZONA, AUTHORIZING AND DIRECTING THE ENTERING INTO OF AN INTER-GOVERNMENTAL AGREEMENT WITH SALT RIVER PROJECT FOR DOMESTIC WATER DELIVERY AND USE AGREEMENT.

WHEREAS, after several years of negotiations, the Cities of Glendale, Chandler, Mesa, Peoria, Phoenix, Scottsdale, and Tempe, and the Town of Gilbert, have finalized a new Domestic Water Delivery and Use Agreement (the formal name for the Salt River Project (SRP) domestic water service agreement) with the Salt River Valley Water Users Association; and

WHEREAS, the new Domestic Water Delivery and Use Agreement was presented to the Council Utilities Committee on October 12, 1994. The Utilities Committee recommended approval of the agreement to the Glendale City Council.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF GLENDALE as follows:

SECTION 1. That it is deemed in the best interest of the City of Glendale and the citizens thereof that the Domestic Water Delivery and Use Agreement with the Salt River Project be entered into, which agreement is now on file in the office of the City Clerk of the City of Glendale.

SECTION 2. That the Mayor or City Manager and the City Clerk be authorized and directed to execute and deliver said agreement on behalf of the City of Glendale.

PASSED, ADOPTED AND APPROVED by the Mayor and Council of the City of Glendale, Maricopa County, Arizona, this 13TH day of DECEMBER, 1994.

  
MAYOR

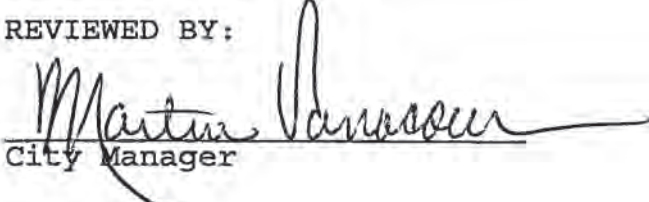
ATTEST:

  
City Clerk (SEAL)

APPROVED AS TO FORM:

  
City Attorney

REVIEWED BY:

  
City Manager

ELAINE M. SCRUGGS

M A Y O R

ATTEST:

PAMELA OLIVEIRA  
City Clerk

(SEAL)

APPROVED AS TO FORM:

PETER VAN HAREN  
City Attorney

REVIEWED BY:

MARTIN VANACOUR  
City Manager

STATE OF ARIZONA )  
County of Maricopa) ss  
City of Glendale )

I, the undersigned, Pamela Oliveira, being the duly appointed, qualified and acting City Clerk of Glendale, Maricopa County, Arizona certify that the foregoing Resolution No. 2935 New Series is a true, correct, and accurate copy of Resolution No. 2935 New Series, passed and adopted at a regular meeting of the Council of the City of Glendale, held on the 13th day of December 1994, at which a quorum was present and voted in favor of said Resolution.

Given under my hand and seal this 21st day of December, 1994.

  
\_\_\_\_\_  
City Clerk





City of Glendale, Arizona

# Council Communication

CC NO: 19 - 179  
1994/95  
DATE: 12/13/94

TO: Honorable Mayor and Council  
FROM: City Manager  
SUBJECT: WATER DELIVERY AND USE AGREEMENT WITH SALT RIVER PROJECT

SUMMARY

After several years of negotiations, the Cities of Glendale, Chandler, Mesa, Peoria, Phoenix, Scottsdale, and Tempe, and the Town of Gilbert, have finalized a new Water Delivery and Use Agreement (the formal name for the Salt River Project (SRP) domestic water service agreement) with the Salt River Valley Water Users' Association. A summary of the major provisions of the agreement is attached for your information. The new Water Delivery and Use Agreement defines the terms and conditions under which SRP will deliver water developed, controlled or stored by SRP to the City for treatment and distribution to lands within the City with rights to water from SRP. Salt River Project supplies accounted for slightly more than two-thirds of the water used by Glendale residents in 1993. The demand for SRP supplies will increase as agricultural lands continue to urbanize. The agreement is intended to remain in effect through December 21, 2101.

The new Water Delivery and Use Agreement was presented to the Council Utilities Committee on October 12, 1994. The Utilities Committee recommended approval of the agreement to the full Council.

SUBJECT: WATER DELIVERY AND USE AGREEMENT  
WITH SALT RIVER PROJECT

PAGE NO: 2

CC NO: 19 - 179

DATE: 12/13/94

RECOMMENDATION

Waive reading beyond the title and adopt a resolution authorizing and directing the City Manager to execute the Domestic Water Delivery and Use Agreement.

  
Martin Vanacour, City Manager





# Memorandum

DATE: November 28, 1994  
TO: Martin Vanacour, City Manager  
FROM: Doug Kukino, Environmental Resources Administrator  
SUBJECT: WATER DELIVERY AND USE AGREEMENT WITH SALT RIVER PROJECT

PLEASE SEE ATTACHMENTS

\_\_\_\_\_  
Department Head Approval

HG/pjg

ATTACHMENTS  
Agreement  
Resolution

  
\_\_\_\_\_  
Deputy City Manager Approval

# WATER DELIVERY AND USE AGREEMENT

## SUMMARY

### 1. Introduction

The proposed Water Delivery and Use Agreement (Agreement) defines the terms and conditions under which the Salt River Project (SRP, Project) will deliver water developed, controlled or stored by SRP to a City for treatment and distribution to lands within the City with rights to water from SRP. Each of the Cities of Chandler, Glendale, Mesa, Peoria, Phoenix, Scottsdale and Tempe, and the Town of Gilbert will have a separate contract with the Salt River Valley Water Users Association (Association). The Agreement is intended to last through the year 2101. Following is a general summary of the major provisions of the proposed Agreement.

### 2. Water Deliveries and Payments

The City will pay SRP the assessments, fees and other water delivery charges for lands within its water service area with rights to water from SRP, except lands receiving water for agricultural uses and except to the extent that urban irrigators receive water directly from SRP. SRP will then deliver the water associated with such lands to the City whereupon the City, as agent for the landowners, delivers the water to the lands.

To the extent that an urban irrigator does not use all the water to which he or she is entitled, SRP will deliver the excess to the City. SRP landowners retain the right to pay for and request direct delivery of water from SRP. As agricultural lands urbanize, the City will assume payment of the assessments, fees and other charges for those lands and will receive the water for those lands.

### 3. Treatment and Distribution of Water

The City retains full discretion to treat the water received from SRP prior to distribution through any means, including underground treatment.

The City may deliver the water received from SRP to any lands in its water service area with rights to water from SRP, except agricultural lands.



#### 4. Pumping of Wells Within the Salt River Reservoir District

It is SRP's position that a City may not pump water from wells located on lands which have subscribed to Association membership, i.e., Member Lands, for use on Non-Member Lands located within the Salt River Reservoir District (SRRD). SRP further maintains that water withdrawn anywhere within the SRRD cannot be used outside the SRRD. This prohibition does not cover a water exchange. The Agreement does not attempt to resolve this issue. Instead, it preserves the right of SRP and each City to seek a judicial resolution. Additionally, if SRP prevails in court, the City must repay SRP all of the water it has transported for use outside the SRRD.

#### 5. Water Exchanges

The Agreement provides for the continuance of the long-standing practice of water exchanges. In an exchange, the City delivers SRP water to lands not entitled to this water and, in return, delivers City water from another source to SRP or directly to lands entitled to water from SRP.

The Agreement clarifies the terms and conditions for water exchanges. Each City will be limited in the amount of water which may be carried over from month-to-month in its water exchange account. With some exceptions, all water must be repaid to SRP by the end of the calendar year, and, if a City has delivered water to SRP and established credits which may be used to offset a future exchange, these credits will be lost at the end of the calendar year. Sources of exchange water are identified in the Agreement. Any water delivered by the City to SRP is subject, by reference, to the terms and conditions of the water transportation agreement which each City has executed, or will execute, with SRP. Other details of each water exchange will be determined by the Authorized Representatives of SRP and the City (see Section 10, below). SRP will charge each City an additional fee to cover SRP's costs in administering water exchanges. These additional costs appear to be nominal.

#### 6. City Use of SRP Wells

The Agreement sets forth the terms and conditions pursuant to which a City may use an SRP well to deliver water directly into the City's water distribution system. SRP wells which are currently being used by the City must be brought into conformance with the terms of the Agreement no later than the end of 1997. The Agreement identifies any existing wells which do not conform and the general actions to be taken to bring the wells into compliance. The City assumes all costs of conforming existing wells and



connecting any additional wells to its distribution system. SRP retains the right to establish policies and procedures related to the City use of SRP wells which do not conflict with the terms and conditions of the Agreement.

7. Flow Measurement

The Agreement establishes the accuracy standards and conditions for measuring water delivered by SRP to the City, measuring water delivered by the City to SRP, and measuring water use.

8. General Liability

SRP and the City each assume liability for its own action and indemnifies the other party for any damages the non-responsible party incurs as a result of the responsible party's action.

9. Water Quality

SRP does not provide any guarantees with respect to water quality. However, SRP does acknowledge that water quality concerns are changing as a result of the changing use of the water and agrees to devote resources, which are reasonable and prudent, for remediation of water quality degradation. To the extent that SRP is complying with pertinent federal and state water quality requirements, the City releases SRP from any liability for City claims related to water quality. This release does not apply to negligent or wrongful actions on the part of SRP.

10. Authorized Representatives

For the most part, implementation of the Agreement is vested in a person appointed by each party. The Agreement specifically identifies a number of matters and issues on which the Authorized Representatives must agree on a course of action.

11. Additional Terms and Conditions

The Agreement also establishes general conditions for billing and payment of bills, dispute resolution, auditing, water accounting and reporting, and each party's agreement to support the same position with respect to two issues in the Gila River General Stream Adjudication.