

## **Continue funding for the Texas Alliance for Water Conservation**

*The Council recommends that, subject to available state revenue for the 2022–2023 biennium, the Texas Legislature fund the Texas Alliance for Water Conservation agricultural demonstration and education project promoting water conservation through best management practices and new technologies at \$475,000 per year, through general revenue appropriations deposited to the Agricultural Water Conservation Fund and distributed through the TWDB’s Agricultural Water Conservation Grants Program, and establish this level of annual funding through baseline general revenue appropriations to the TWDB in future years.*

### **Background:**

The Texas Alliance for Water Conservation (TAWC) located at Texas Tech University is a state-supported, agricultural producer demonstration and education project promoting water conservation through best management practices and technologies to improve sustainability and profitability in the Texas Southern High Plains. This project began in 2004 following the passage of Senate Bill 1053, which provided the Texas Water Development Board with the ability to provide grant funding to state agencies and political subdivisions, including the state university systems, for conservation projects and programs. The project initially received \$6.2M in grant funding for an 8-year period (2005-2012, extended to 2013). In 2014, the Texas Legislature appropriated an additional \$3.6M out of the Agricultural Water Conservation Fund for a 5-year period (2014-2019). Current funding has been extended to December 31, 2020 with a contract expiration date of August 31, 2021.

The Texas High Plains is one of the most important agricultural regions of the United States but is highly dependent on water for irrigation from the Ogallala Aquifer at non-sustainable rates of use. Approximately 90 percent of the water withdrawn from the aquifer is used for agricultural irrigation. TAWC education and demonstration projects are located in the heart of this region. Research efforts are constantly producing advances in technology and agricultural practices to conserve water. In order for those advances to result in more efficient or reduced water usage, users must be made aware of and implement new technologies and practices. TAWC is a vital link between researchers and agricultural water users. TAWC recruits agricultural producers to implement specific practices and technology, keep detailed multi-year records of costs and yields and then demonstrate the results to other producers. This peer-to-peer sharing of experience, data and results is highly effective in increasing the rate of adoption of water conserving best management practices. TAWC demonstration projects provide convincing proof of new methods that not only reduce water usage but also increase profitability for producers, which is a key factor in promoting adoption.

Much of TAWC’s education and demonstration efforts have focused on conservation of the Ogallala Aquifer and the technologies that supply only what the crop needs at specific stages of development, thus creating significant water savings to real farm scenarios. TAWC has accumulated a 15-year database of calculated water use managed with crops and

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irrigation types that are representative of the Texas High Plains. The water-savings estimate depends partly on how much rain serves to replace irrigation in a given year. TAWC has utilized the crop water demand method since the project started in 2005. This consists of calculating the difference between the volume of 100% crop water demand and the volume of irrigation applied for each field. A full irrigation rate would target 100% fulfillment of crop water demand, whereas a shortfall would constitute water saved. Those differences are summed over all fields in the project within a year. The amount of water saved is standardized on a depth basis by dividing volume by the total acreage. From 2005-2018, this method has demonstrated 4,019 acre-feet of annual savings in total irrigation potentially conserved. The number of acre-feet saved refers only to the 3,800 acres per year of producers' fields in the database.

A site-specific example is a demonstration comparing the results of flat rate (grower standard) irrigation to variable rate irrigation. Variable rate irrigation uses technology to match water application to the needs of crops based on a site's soil texture, slope, and crop yield potential. Over three growing seasons, 2017-2019, variable rate irrigation resulted in a 115 pound per acre increase in lint yield over conventional irrigation, with a water savings of 0.4 inches over the whole growing season. For a 100-acre cotton field, this would produce a water savings of 1,086,168 gallons while increasing the net return by \$4,881. This type of information showing that conserving water can increase profits is a powerful means of increasing the adoption of best management practices.

TAWC has received over \$3.2M in supplementary grants and participated in over 500 multi-state presentations and 7 international presentations. Receiving the 2012 Blue Legacy Award, 2013 AWRA Integrated Water Resources Management Award, 2014 Texas Environmental Excellence Award in Agriculture, 2016 National Water & Energy Conservation Award, among others. Field days, field walks, the annual Water College, radio spots, e-newsletters, and social media reach at least 10,000 people per year. TAWC directs its messaging at water-use decision-makers among producers, ag consultants, and policymakers. TAWC contributes to the formal education of university students via an undergraduate ag water certificate and graduate studies in the areas of agronomy, soil management, irrigation technology, economics, and communications.

Renewed funding will allow TAWC to continue promoting water conservation and launch ***new thrusts*** to include **1)** field-scale demonstrations of minimum tillage and multi-species cover crops to enhance soil water retention, and **2)** options and guidelines for conversion from irrigated to rainfed cropping systems. TAWC will also communicate options in contract cattle grazing of cover crops and rainfed forages to enhance the value of land retired from irrigation. New investment in TAWC will expand the impact of technology transfer for water savings through tighter linkage with soil health and value-added land management. TAWC is requesting **\$475,000 per year** to support the core operations and personnel to carry on administration, producer relations, education, event programming, and demonstrations. Supplementary grants will be obtained to support specific outreach objectives.

**Restore funding for the Texas Ag Water Efficiency Education and Demonstration Project facility.**

*The Council recommends that, subject to available state revenue for the 2022-2023 biennium, the Texas Legislature fund the Texas Project for Ag Water Efficiency (AWE) for the education, research and development of agricultural water conservation initiatives at \$200,000 per year, through general revenue appropriations deposited and distributed through the TWDB's Agricultural Water Conservation Grants Program, and establish this level of annual funding through baseline general revenue appropriations to the TWDB in future years.*

**Background:**

From 2004 to 2015 the Texas Water Development Board's Agriculture Water Conservation Grants Program funded a project known as the Texas Project for Ag Water Efficiency. This project demonstrated the various types of surface-water irrigation on farms in the Lower Rio Grande Valley. The project assisted farmers in implementing conservation measures that would conserve water and maintain the economic viability of their farming practices. Out of these demonstrations, a number of operations were converted to more efficient irrigation practices both by the farmers and the districts.

A component of the project was the construction of a meter calibration and educational center named the *Texas Center for Ag Water Efficiency*. Its purpose is the demonstration, education and research of agricultural water conservation measures, tools and technologies. This million-dollar facility is the only one of its kind in Texas and one of only a handful nationwide. Water managers and employees from across the state utilized these facilities to educate personnel on the refinement of agricultural water measurement and delivery.

Multiple developments resulted from the work at the facility and have been adopted by several Rio Grande Valley irrigation districts as well as El Paso County Water Improvement District #1 and the Lower Colorado River Authority. An overview of these developments are as follows:

**Gate development:** Efficient low-cost canal gates for controlling water delivery were developed. These gates were designed to operate in open canal systems using solar or wind generated power, a necessity as many sites were without a power source.

**Automation:** Prototypes of these gates were designed and perfected to be utilized with a Supervisory Control and Data Acquisition (SCADA) system also developed at the facility. The SCADA development allowed for the automation of multiple gates throughout the district's delivery system to maximize the efficient delivery of water to farmers and cities served by the district. The facility being equipped with these auto-gates provides a vehicle for the demonstration of a fully automated and efficient district delivery system.

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**Telemetry:** Our system was developed to meet the unique needs of monitoring and operation of delivery systems that are common for the surface water irrigation systems of Texas. New telemetry hardware and software is constantly being developed but not necessarily targeting irrigation needs. The AWE facility is ideal for demonstrating and testing the viability of these systems for utilization in the agricultural irrigation industry.

**Meter calibration:** The AWE facility was designed to enable meter calibration for various types of metering devices used in irrigation. One of the major benefits that developed out of this facility was the ability to demonstrate each of the many devices in typical raw water conditions. Many meters simply will not function properly in raw water conditions as trash and hydrophilic vegetation fouls the mechanical components of standard meters. This facility allows for the demonstration of new devices to determine if in fact they will withstand the harsh raw water conditions typical to water diverters across the state.

**Irrigation practices:** Educational programs are a must to develop and encourage the use of improved irrigation practices. This facility is ideal for not only demonstration of different practices but in the education and presentation of new developments in surface water irrigation. We have partnered with the Texas A&M AgriLife Extension Service, Texas State Soil and Water Conservation Districts and the United States Department of Agriculture Natural Resource Conservation Service to present programs important to the promotion of water conservation and practical methods of best management practices.

**Additional educational programs:** New telemetry hardware and software is constantly being developed but not necessarily targeting irrigation needs. The AWE facility is ideal for demonstrating and testing the viability of these systems for utilization in the agricultural irrigation industry. The facility is setup to educate the users on the best options for their needs but also could be used to demonstrate and educate the engineering community. This would better enable them to keep up to speed on the ever-changing systems available and to incorporate the new systems into their designs.

Built adjacent to the Harlingen Irrigation District's main pumping plant on land donated by the District, the facility is ideal and necessary for the development, research and education in new conservation and water management systems that will apply to the vast amount of unique conditions in Texas irrigation. The use of off-the-shelf products and programs are expensive and many times not economically feasible. They often fail to meet the needs of Texas irrigators and are subsequently rejected by them. This facility can help to build confidence and demonstrate the feasibility of new water conservation technologies. An additional plus for the developments from this project is the availability of the data. The gate programming and

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construction plans, and all demonstration data is available at no cost, via TexasAWE.org<sup>1</sup>, to entities across the state as they were all developed with public funds.

During the active project period, the Harlingen Irrigation District hosted more than 20 workshops, seminars, and other such training events at the Rio Grande Center for Ag Water Efficiency. These educational opportunities allowed for water providers and agricultural producers to not only gain knowledge on developing technology and conservation strategies but also established a dialogue between the producers and water providers to further innovations. Four of the Blue Legacy Awards for agriculture have been awarded to recipients related to this project.

As surface water is still the largest user of water in several areas of the state, this facility has the potential to play a significant role in the education, research and development of water conservation initiatives for irrigated agriculture. Despite initial investment, this facility is no longer being used to its full potential.

Restored funding will enable the maintenance, improvement and expansion of the mechanical and technological components of the facility; which in turn, will allow for the growth of educational and research opportunities. As innovative water conservation technologies continue to evolve, the vision for the Rio Grande Center for Ag Water Efficiency is to use the facility as a hub to demonstrate the relationship between effective on-farm and district delivery systems and educate both agricultural producers, water providers and project developers on proven water conservation technologies that are available to modernize their operations, with the Harlingen Irrigation District continuing to provide “in-kind” support in the form of labor, materials, and administrative oversight.

**Maintain level of funding for TWDB’s Agricultural Water Conservation Grant program.**

*The Council recommends that, subject to available state revenue for the 2022–2023 biennium, the Texas Legislature maintain the current level of \$1,200,000 per year for Texas Water Development Board’s Agricultural Water Conservation Grant Program, in addition to any funds appropriated specifically for the Texas Alliance for Water Conservation and the Texas Project for Ag Water Efficiency.*

**Background:**

During the 86th Legislative Session, the appropriations act increased authorized dispersals through the Agricultural Water Conservation Grant Program from \$600,000 to \$1,200,000 per fiscal year.

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<sup>1</sup> At the time of this draft, the Texas Project for Ag Water Efficiency’s website is currently unavailable. Continued funding for the project would allow for the maintenance of the project’s website as discussed in the recommendation.

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The Agricultural Water Conservation Program promotes water conservation programs and projects throughout the state by supporting the implementation of water conservation water management strategies identified in the state and regional water plans. Previously funded activities include demonstrations of conservation practices, educational outreach, purchase and installation of water use monitoring equipment, and irrigation-efficiency improvements. Funding recipients must report improvements in water use efficiency or water savings. Over the past five years, grant and loan recipients have reported approximately 350,000 acre-feet of water savings through the program.

The grant program offers funding through a competitive process at least once a year to state agencies and political subdivisions for agricultural water conservation programs and projects. Grant topics vary from year to year to address current issues in agricultural water conservation. Projects awarded funding must further water conservation in the state and support the implementation of water conservation management strategies in the state water plan. Specific evaluation criteria are listed in the request for applications.

The success of the program is quantified through annual water savings estimates reported by grant and loan recipients for five years after equipment installation and/or construction completion.

The program has collectively saved:

- 496,000-acre feet of water reported through 74 grant projects over the past 10 years.
- 79,000-acre feet of water reported through 10 loan projects over the past 10 years.

Examples of successful projects that implement irrigation conservation strategies include:

- Irrigation scheduling via the use of real-time soil moisture monitoring, remote system shutoff devices and other conservation tools in Regions A and O.
- Irrigation conservation demonstrations and outreach through the Texas Alliance for Water Conservation project, identified as a strategy in the Region O plan.
- Irrigation system improvements such as canal lining, canal-to-pipeline projects, SCADA systems, and automated canal gates in Region E, Region K, and Region M.
- Irrigation water use measurement throughout the state.

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**Agricultural Water Conservation Fund Projected Balance<sup>2</sup>**

Fiscal Year	Fund Balance	Investment Projections	Loan Origination	Total Loan Repayments	Grants Payable	Annual Grants	Fund Balance
2020	\$7,826,581	\$117,399	\$2,000,000	\$1,284,262	\$3,670,885	\$1,200,000	\$2,357,357
2021	\$2,357,357	\$35,360	\$-	\$1,181,117	\$-	\$1,200,000	\$2,373,834
2022	\$2,373,834	\$35,608	\$1,000,000	\$1,319,863	\$-	\$1,200,000	\$1,529,305
2023	\$1,529,305	\$22,940	\$-	\$1,067,348	\$-	\$1,200,000	\$1,419,592
2024	\$1,419,592	\$21,294	\$1,000,000	\$1,211,904	\$-	\$1,200,000	\$452,791
2025	\$452,791	\$6,792	\$-	\$973,034	\$-	\$1,200,000	\$232,616
2026	\$232,616	\$3,489	\$-	\$833,375	\$-	\$1,069,481	\$-
2027	\$-	\$-	\$-	\$305,576	\$-	\$305,576	\$-
2028	\$-	\$-	\$-	\$305,472	\$-	\$305,472	\$-
2029	\$-	\$-	\$-	\$155,280	\$-	\$155,280	\$-
2030	\$-	\$-	\$-	\$152,640	\$-	\$152,640	\$-
2031	\$-	\$-	\$-	\$-	\$-	\$-	\$-

<sup>2</sup> Data as of 8/31/2019; Assumptions: offer up to \$1,200,000 in annual grants; annual administrative costs associated with the program continue to be covered by general revenue; outstanding balance of \$3,670,885 committed through existing grant project encumbrances; assumed demand for the agricultural loan program is \$1,000,000 every other year after fiscal year 2020; and, 1.50 percent invest earnings rate.

## **Reinstate TSSWCB's Water Supply Enhancement Program.**

*The Council recommends that, subject to available state revenue for the 2022–2023 biennium, the Texas Legislature should restore funding to the TSSWCB, in an amount of \$2.6 million per fiscal year, for projects that conserve water through controlling the spread of invasive species on rangeland to reduce water lost to runoff and evapotranspiration and thereby enhance the infiltration of rainfall for potential aquifer recharge and soil moisture retention.*

### **Background:**

Water loss is as much of an issue for rangelands as it is for municipal water systems. Through evapotranspiration and excessive rainfall runoff due to invasive brush, water is lost from aquifer recharge and the growth of grasses for grazing. Brush management is a proven method of conserving rainfall for beneficial uses with the additional benefits of improving water quality in streams and reducing sedimentation in reservoirs among others.

The Texas Legislature, in 2011, established the Water Supply Enhancement Program (WSEP), through H.B. 1808, administered by the Texas State Soil and Water Conservation Board (TSSWCB), with the purpose of targeted control of brush species that are detrimental to water conservation (for example, juniper, mesquite, saltcedar). Over its history, the program has undergone many modifications and improvements to sharpen the focus of the program, establish goals, require feasibility studies, prioritize projects, monitor and evaluate project implementation, and to measure and publish results.

The TSSWCB collaborates with soil and water conservation districts (SWCDs), and other local, regional, state, and federal agencies to identify watersheds across the state where it is feasible to implement brush control. The TSSWCB uses a competitive grant process to rank feasible projects and allocate WSEP grant funds, giving priority to projects that balance the most critical water conservation need of municipal water user groups with the highest projected water yield from brush control.

Full implementation of brush control, in the 24 approved project watersheds, has a total projected annual water yield of 2.41 million acre-feet of water that could be conserved if the State was able to provide financial incentives to landowners in order to treat 15.86 million acres of brush in those watersheds.

The 2017 State Water Plan adopted by TWDB includes 32 recommended brush control water management strategies in five regions (F, G, J, K, and M). By the 2070 planning horizon, together these brush control water management strategies contribute 9,656 ac-ft/yr to the total supply volume from all recommended water management strategies in the 2017 State Water Plan. Four regions (A, B, C, and O) recommended brush control as a water management strategy, but with no quantified water yields. Nine regions (A, B, F, G, H, K, L, M, and O) included policy recommendations regarding brush control in their respective regional water plans.

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The effectiveness of brush management has been the subject of many research projects. Computer modelling has been refined to more accurately access the projected water conservation benefits. In one of the longest field projects of its kind, a 10-year study conducted by the U.S. Geological Society and the U.S.D.A. Natural Resources Conservation Service on 560 acres adjacent to Honey Creek State Natural Area in Comal County found that selective brush management treatment produced a statistically significant reduction in evapotranspiration and a reduction in suspended sediments in the stream flow.

During FY2014 and FY2015, through the WSEP, 29,406 ac of brush management was incentivized by the State. For these acres, landowners received cost-share incentive funding through the program totaling \$2,123,992 in state funding (\$72.23 per treated ac of brush). Based upon the computer models used in the feasibility studies, this work is projected to enhance public water supplies by 8,826.45 ac-ft per year (\$240.64 per acre-foot of water) over the next 10 years.

Cost-share agreements between the TSSWCB and landowners contain a commitment on the part of the landowner, at no cost to the State, to maintain areas for which cost-share incentive funding for brush control was received for a period of ten years after the initial brush control is accomplished. Maintenance includes periodically re-treating the area with appropriate brush control methods to prevent brush re-infestation over the duration of the 10-year contract period. The TSSWCB is statutorily required to periodically perform status reviews of cost-share contracts to verify compliance with follow-up treatment requirements over the course of the 10-year contract period.

## **Advancing Use of Data to Understand Trends in Water Use.**

The request is for \$200,000 in funding to be made available through TWDB to advance the understanding of municipal water and industrial use trends using available annual reporting data. This would fund a research project to explore how available TWDB water use data and economic and industrial output data available from public data bases can be used to develop the need analysis discussed below and how to set up this analysis on a continuing basis within the TWDB.

### **Objective:**

The objective is to have a consulting firm or university use data reported by municipal providers and industrial users to:

- Better understand municipal seasonal as well as indoor and outdoor water use trends over time;
- Quantify municipal monthly per capita water use over time; and
- Examine Industrial monthly use patterns by NAICS code and geography and develop trend metrics based on gallons of water used by an appropriate denominator depicting output by that industrial sector.

The project would set up analytics that could be easily updated each year as new reports make new information available. An annual report on seasonal and indoor/outdoor water use patterns across regions and by water providers could be made available to help assess progress and update strategies.

Finally, the consultant or university would provide the TWDB with the tools to continue these trend analyses over time.

### **Background:**

Currently, the Texas Water Development Board collects large amount of monthly and annual water use data from urban and industrial (mining, power, and manufacturing) water users. Only annual data has historically been used for TWDB projections of water use and by regional planning groups. What is missing is the examination of past data to develop trends in water efficiency including seasonal variations. Another trend analysis that is not being done is the amount of water used per unit of output for industrial operations and the impact of seasonal industrial use on water use patterns.

This type of information has been identified as needed by the TWDB planning staff, regional water planning groups, and the Texas Water Conservation Advisory Council. All information needed is available from public sources such as TWDB, Energy Information Administration, US Department of Commerce, the Texas Comptroller and related sources.

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This type of data analysis will:

- Provide the TWDB with a statistical analysis of the effectiveness of seasonal and other conservation measures;
- Show how trends in water use per unit of output for industrial operation have changed over time, so better long-range projections can be made;
- Better quantify how water is used in the urban and industrial environment (Seasonal vs Other uses)
- Provide needed input to the Texas Water Conservation Advisory Council for its charge to: ***Monitor trends in water conservation implementation; and***
- Provide better input data to the regional planning groups to make long term projections of water use.

### Need:

One example of the need for trend analysis and the statistical analysis of monthly and seasonal water use can be illustrated by the fact that per capita water use has decreased from around 190 gallons per person per day in 1980 to 140 gallons per person per day by 2015. The TWDB analyzes the impact of plumbing codes on future water use but does not analyze historical seasonal water use trends.

Likewise, manufacturing water use has decreased but production is up. For Example, according to US Energy Information Administration, oil refining output has increased steadily over the last two decades, but total refining water use has decreased over that period. These trends need to be analyzed for all manufacturing sectors. Again, seasonal use by manufacturing is not analyzed.

### Conclusion:

Trend and seasonal water use analysis is critical to advancing our understanding of changing water use patterns in Texas. The information is needed by the TWDB planning staff, the regional planning groups, and the Water Conservation Advisory Council. The project would develop a methodology to accomplish the above analysis and provide a set of data that would follow trends for the period of record starting in 1985. The consultant or university would then help the TWDB install the necessary tools and software to continue this analysis in the future.

### **Establish Level 1 Validation program for Water Loss Audits.**

*The Council recommends that, subject to available state revenue for the 2022-2023 biennium, the Texas Legislature appropriate \$605,000 for the biennium to the TWDB to establish a program building on a water audit validation study being conducted by the TWDB. Under the guidance of the TWDB, level 1 validations would be conducted of water loss audits submitted by a group of 50 utilities volunteering to participate, establish a methodology for conducting level 1 validations, and establish a training program to certify validators. Preference for participation would be given to those utilities with a financial obligation to the State requiring that they complete a water loss audit. If more than 50 utilities apply to this program TWDB will work to ensure that a representative group of utilities is selected (ex. geographical, population, urban/rural, financial obligation)*

#### **Background:**

Level 1 validation of water loss audits is a process by which the data used in a water loss audit is reviewed by a third party working with the submitting utility. Assessment scores are scores given to 20 different data inputs in the water loss audit that provide an indication of how much confidence a utility or governing agency should have in the accuracy of that input. Level 1 validation works to ensure those scores are accurate, bringing in fresh eyes to review the audit. This is crucial since water loss audits are used to make funding decisions, both by the State and by utilities. The validation ensures that best practices are being followed per industry guidance, increasing the efficacy of spending on reducing water loss and helping ensure that cost effective water loss measures are targeted.

The funding for this initiative includes all costs required to have a third party, hired by the TWDB, perform the validations, building on completed water loss audits completed by the participating utilities.

This program is intended to build upon a study currently underway by the TWDB to perform level 1 validations on at least six utilities of varying sizes. That study is exploring the framework required to establish a level 1 validation process in Texas. For the proposed initiative, the TWDB would be encouraged to include a variety of utilities, with consideration given to utility size, type, and whether the utility is rural or urban.

California implemented Level 1 validation of water loss audits, the percentage of submitted audits that contained unrealistic results, such as negative water losses, fell by over ten percent. Reported data validity scores also dropped by a median number of 13 points. Thus, the data accuracy improved, while overconfidence in the results of those audits decreased.

Level 1 validation would require training of on proper validation methodology according to the TWDB validation scoring matrix and would be separate from the training that the TWDB currently requires for submission of water loss audits. The validator cannot be the same person who completes the audit to prevent bias and to minimize unintentional omissions. For this recommendation, validation would be conducted by third party contractors. This funding would establish a framework for an ongoing validation effort.

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Budget Justification:

Task	Cost
<b>Program Announcement/Recruitment</b>	<b>\$20,000</b>
<i>Provide on-going management of the program, including the development of a program management plan and associated schedule, marketing and outreach plan, regular team coordination calls for program management and documentation, internal progress tracking, internal task assignments and accountability, program management plan amendments, and course corrections as warranted.</i>	
<i>Development of a recruitment and retention plan, development of all communication materials in support of the recruitment plan.</i>	
<i>Manage water system recruitment and retention for the program.</i>	
<b>Level 1 Validation Process</b>	<b>\$175,000</b>
<i>Receipt and review of supporting documentation</i>	
<i>Level 1 Validation session</i>	
<i>Utility-specific documentation</i>	
<b>Compilation and reporting of validation results</b>	<b>\$40,000</b>
<b>Validation Certification</b>	<b>\$250,000</b>
<i>Texas specific Level 1 Validation certification criteria</i>	
<i>Scheduling and administration of certification workshops</i>	
<i>Certification workshops</i>	
<i>Proctor/examinations/compilation of results</i>	
<i>Participation notification and reporting</i>	
<b>Training of TWDB staff for follow-on certification training</b>	<b>\$20,000</b>
<i>Conduct "train the trainer" classes with TWDB staff</i>	
<b>TWDB staffing during validation and certification process</b>	<b>\$100,000</b>
<i>On-going administration of the Program including ongoing management for training and technical assistance, subject matter experts, and regular progress reporting.</i>	
<i>Kickoff call to begin the process of Validation Training Program design.</i>	
<i>Host a webinar to prepare attendees for Level 1 Validation Process.</i>	
<i>Provide direct outreach to training participants to ensure they will bring appropriate representation of utility staff to events.</i>	
<b>Total</b>	<b>\$605,000</b>