

SUBJECT TO REVISION**EA RWCP Uvalde Assessment Report and Proposed Plan****Executive Summary**

The total cost of the proposed three-year Uvalde Regional Water Conservation Program (RWCP) is \$539,500, at a total cost of \$229 per acre-foot. The program is expected to save an estimated 2,358 acre-feet of water over ten years, which is expected to provide 1,292 acre-feet to the Edwards Aquifer (EA) reserve (129 acre-feet on a one-year basis). Based on the needs, concerns, and past, current, and planned water conservation activities specific to the City of Uvalde, the proposed Uvalde RWCP elements are as follows.

1. \$125,000 per year in 2013 through 2015 in RWCP funds to implement a **City High-Efficiency Plumbing Program** with projected water savings of 2,025 acre-feet over ten years. The annual cost cited above includes the purchase, transportation, storage, and distribution of 3,000 high-efficiency showerheads, sink faucet aerators, and Caroma dual-flush toilets during the three-year program. The RWCP cost is estimated to be \$185 per acre-foot of projected water savings over ten years.
2. \$12,500 per year in 2013 through 2015 in RWCP funds to implement an **Exempt Well High-Efficiency Plumbing Program** with projected water savings of 203 acre-feet over ten years. This annual cost pays for the purchase, transportation, storage, and distribution of 300 high-efficiency showerheads, sink faucet aerators, and Caroma dual-flush toilets during the three-year program. The RWCP cost per acre-foot of projected water savings over ten years is estimated to be \$185.
3. \$40,000 in RWCP funds in 2014 or 2015 (or \$20,000 per year) to implement a **Large-Scale Commercial Retrofit Program** with projected water savings of 100 acre-feet over ten years. Commercial customers will receive rebates for instituting technological changes to alternative water-saving equipment or processes.
4. \$6,000 per year in 2014 and 2015 in RWCP funds to implement a **Reclaimed Water Program** that provides rebates for rainwater, graywater, and condensate collection and reuse projects, resulting in estimated water savings of 30 acre-feet over ten years.

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Introduction

The primary goal of the Edwards Aquifer (EA) Regional Water Conservation Program (RWCP) is to provide 10,000 acre-feet of water as a reserve in the EA to benefit spring flow levels. The purpose of this Assessment Report and Proposed Plan (hereafter referred to as Report or Plan) is to identify the Uvalde baseline condition and mix of the four RWCP elements – High-Efficiency Plumbing Fixtures & Toilet Distribution, Lost Water & Leak Detection, Commercial/Industrial Retrofit Rebates, and Water Reclamation for Efficient Water Use – that can best take advantage of the water conservation opportunities that exist in Uvalde. Once approved by the Uvalde City Council and the Edwards Aquifer Authority (EAA), this Plan will be structured into a contract that will serve as the funding mechanism for EAA to implement the RWCP elements specific to Uvalde and its needs. In the contract between the EAA and the City of Uvalde, the Uvalde water system projected water savings and associated EA reserve fifteen-year commitment (i.e., 50 percent of water conserved within the Uvalde water system is to remain in the EA for fifteen years) in return for the RWCP funds will be delineated. The City of Uvalde, as well Universal City, volunteered to be the pilot communities for the RWCP.

Water Uses and Demand

Uvalde is located in Uvalde County with a current service area population of approximately 17,000; this figure includes some customers outside the City limits that use City water. The Uvalde water system currently has 5,228 single-family residential connections, 899 commercial connections, and one wholesale connection for a total of 6,128 connections. The “commercial” category actually consists of industrial, institutional, and commercial customers, including multi-family establishments. Because the number of living units in multi-family residences is unknown, the total number of living units served by the Uvalde water system is also unknown.

In 1964, the Uvalde population was approximately 10,500 and those people used just over 3,800 acre-feet of water. The Uvalde population grew slowly until the 1970's, and then began growing more steadily until about 1985 when the population leveled off around 16,000 to 16,500. Since the late 1980's the population has gone up and down with notable drops in 1989-90, early 2000-02, and 2007-08, and a 2012 service area population of approximately 17,000. Between 1964 and 2012, the City's water use fluctuated greatly, ranging from a low of 2,677 acre-feet in 1971, with two other dips below 3,000 acre-feet in 1977 and 2004, to a high over 6,000 acre-feet in 2000, with five other spikes above 4,250 acre-feet in 1982, 1996, 2006, 2009, and 2011 and three higher spikes above 4,750 acre-feet in 1980, 1984, and 1989. At the peak usage of 6,070 acre-feet in 2000, Uvalde

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exceeded their EA water allocation. This peak level of water usage was due at least in part to a large amount of unmetered water use, including use of “free water” from fire hydrants for construction projects. The City started installing water meters in 2000 and water usage dropped sharply to 4,108 acre-feet in 2001 and continued dropping to 2,996 acre-feet in 2004. The per capita municipal water use has also fluctuated over the years, ranging from 192 gallons per capita per day (GPCD) in 1977 to 363 GPCD in 2000, but with an overall downward trend and an average of 252 GPCD. Uvalde’s 2012 water use was approximately 3,800 acre-feet (slightly lower than their 1964 usage) and 200 GPCD. In comparison, projected water demand for Uvalde in the 2011 South Central Texas Regional Water Plan was 6,087 acre-feet for 2010, rising slowly to a projected 6,178 acre-feet by 2060.¹ Refer to the Appendix for additional Uvalde municipal water use and GPCD data.

Uvalde utilizes Edwards Aquifer water as its sole water source. In addition to ensuring there are no longer unmetered water connections, Uvalde has prohibited water waste and is more closely monitoring water use and lost water to reduce their demand on EA water. Uvalde also uses reclaimed water from their wastewater treatment plant for construction projects and landscape irrigation.

The City of Uvalde currently owns 5,190 acre-feet of EA water, as well as another 207 acre-feet of EA water for irrigation, for a total of 5,397 acre-feet. This compares favorably to the City’s 2012 usage of approximately 3,800 acre-feet. Uvalde has not had a pumping limit violation since 2000. This is in part due to Uvalde’s purchase of additional EA water rights after their Initial Permit was lower than their previous Interim Authorization. While Uvalde has not experienced an actual water shortage, the EAA has imposed pumping restrictions on the City, as well as San Antonio and other area cities, for the past two years due to drought conditions. Once the EA Habitat Conservation Plan (HCP) went into effect after recent U.S. Fish and Wildlife Service approval, the EAA declared Emergency Stage V for Uvalde County, including the City of Uvalde, on March 28, 2013. The EAA made this determination based on the ten-day average water level as measured at the J-27 Index Well for the Uvalde Pool of the EA. Stage V is an HCP amendment to EAA’s Critical Period Management Program and requires an emergency withdrawal reduction of 44 percent, reducing the volume of water available for pumping by the Uvalde water system from 5,397 acre-feet to 3,022 acre-feet per year.

Since 2003, Uvalde has used a tiered rate structure for all water and sewer customers where the rates are higher as the volume of water consumed and treated increases. Tiered rate structures are thought to increase water conservation by providing extra financial disincentive when higher volumes of water are used. The Uvalde data supports this

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positive correlation between tiered rates and water consumption; the average per capita daily use was 264 GPCD for 1964 to 2002, while the average per capita daily use dropped to 205 GPCD for 2003 to 2012. In response to the ongoing drought and associated EAA Stage restrictions, Uvalde issued two ordinances in 2012 and another one in 2013 that affect their customers' water rates and water use. These ordinances added a pass-through charge for the HCP, in addition to the existing EAA management fee pass-through charge, changed how the pass-through charge is calculated, and increased their residential and commercial water rates, including larger increases for higher volume users, and a drought surcharge during Stage II-V restrictions for high volume water users. Uvalde's average per capita daily use has dropped to the approximate 2012 level of 200 GPCD. This decrease in water consumption is admirable and due in part to the water conservation initiatives the City has implemented to date.

Baseline Condition and Future Opportunities for Conservation – RWCP Elements

City High-Efficiency Plumbing Fixtures

Uvalde conducted a high-efficiency plumbing distribution program in 2011 that provided its citizens with a new high quality, high-efficiency toilet that they installed to replace a high-flow toilet manufactured in or before 1992. Residents completed an application form, committing to replacing a high-flow toilet with the new one within 60 days and leaving the toilet at the residence even if they no longer reside there. Before approving applications and issuing vouchers for free low-flow toilets, City of Uvalde staff checked the address against a master list of homes from the Uvalde County Appraisal District to verify homes built and presumably having plumbing fixtures made in or before 1992. During two two-day events held a month apart in late 2011, City staff distributed 33 Americans with Disabilities Act (ADA)-compliant toilets, 624 standard toilets, and 1700 plumbing retrofit kits (i.e., showerheads and sink aerators). Public response was slow at first, but once word got out the toilets were very popular. Uvalde found the ADA-compliant toilets to be most in demand and in fact ran out of those toilets, so will want to include both types of toilets in their future program. The plumbing kits, some of which were distributed at other City events, were less popular than the toilets.

Uvalde received a 50/50 matching funds Conservation Grant from the EAA to purchase the high-efficiency toilets that were distributed. Uvalde ordered the Caroma toilets and plumbing kits through the San Antonio Water System (SAWS) contract. Through this contract, the ADA toilets cost about \$124 each, the standard toilets cost about \$95 each, and the plumbing kits cost about \$6 each, for a total cost of approximately \$74,000.

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The industry standard estimated water savings for replacement of a high-water use toilet with a high-efficiency model is 12,000 gallons per year. The industry standard estimated water savings is 10,000 gallons per year per showerhead/aerator retrofit. The past Uvalde toilet replacements will therefore save an estimated 240 acre-feet of water and the plumbing kit retrofits another 520 acre-feet over ten years.

City officials estimate that 5,200 high-water use toilets are still in use based on an analysis of pre-1992 housing data. Replacement of 3,000 toilets, showerheads, and sink aerators during the three-year Uvalde RWCP will save a projected 2,025 acre-feet of water over ten years (using the industry standard estimated water savings of 22,000 gallons per year per toilet/showerhead/aerator, as noted above), which is expected to provide 1,013 acre-feet to the EA reserve (101 acre-feet on a one-year basis).

A part-time Uvalde staff member, hired with RWCP funds, will implement the High-Efficiency Plumbing Program, as well as other water conservation programs, with the assistance of Texas A&M Water Conservation & Technology Center (WCTC) staff. The RWCP funding for this staff support is discussed later in this Report.

Utilizing the San Antonio Water System (SAWS) contract, \$125,000 in RWCP funds will be used for purchase, transportation, storage, and distribution of 1,000 toilets and plumbing kits per year during the three-year program. Uvalde officials plan to issue a bid proposal to contract with a hardware or ranch supply store to take delivery and store the toilets and plumbing kits, make them available for pick-up one day a week, and load the toilets for customers. This is expected to cost about \$5 per toilet. Uvalde's Conservation Coordinator would be onsite at the store that one day a week to take care of the paperwork and consumer education. The City may also or instead distribute the high-efficiency plumbing equipment during their monthly trash pick-up events.

In addition to a marketing/public education campaign being part of the High-Efficiency Plumbing Program, training on installation and maintenance of dual-flush toilets will also be provided for local plumbers. Free toilet recipients can install the toilets themselves or hire local plumbers to install them. Upon customer request, referrals will be made to local plumbers who have attended this training. Additionally, attendance at this training will be a provision of contracts awarded for retrofit of Uvalde municipal and commercial facilities with high-efficiency plumbing equipment.

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***Uvalde RWCP: \$125,000 RWCP funds per year in 2013 to 2015 for 1000 high-efficiency showerhead/aerator kits and dual-flush Caroma toilets (including transportation, storage, and distribution) per year
Total three-year cost to RWCP is \$375,000 to achieve projected water savings of 2,025 acre-feet over ten years from the Uvalde Water System***

Table 1 – City High-Efficiency Plumbing Program Budget and Projected Savings

Year	# of Toilets & Plumbing Kits	Cost for Toilets	Cost for Plumbing Kits	Transportation	Distribution	Total RWCP Cost
2013	1000	\$100,000	\$15,000	\$5,000	\$5,000	\$125,000
2014	1000	\$100,000	\$15,000	\$5,000	\$5,000	\$125,000
2015	1000	\$100,000	\$15,000	\$5,000	\$5,000	\$125,000
Total for 3-Year Program						\$375,000
Year	# of Toilets & Plumbing Kits	10-Yr Water Conserved (Ac-Ft)	10-Yr Aquifer Reserves (Ac-Ft)	1-Yr Aquifer Reserves (Ac-Ft)		
2013	1000	675	338	34		
2014	1000	675	338	34		
2015	1000	675	338	34		
Totals for 3-Yr Program		2,025	1,013	101		
RWCP Cost Per Ac-Ft		\$185	\$370	\$3,703		

Exempt Well High-Efficiency Plumbing Fixtures

In addition to the City of Uvalde's wells, there are an estimated 500 exempt wells in Uvalde County that use Edwards Aquifer water. The City is willing to take responsibility for administering the high-efficiency plumbing program for Uvalde County EA exempt well owners as well as their water system customers.

RWCP funds of \$12,500 will be used for purchase, transportation, storage, and distribution of 100 high-efficiency toilets and plumbing kits per year in 2013 through 2015. This plumbing equipment will be available for Uvalde County EA exempt well owners to pick up at the same times and location(s) set up for Uvalde water system customers. In addition to the commitment to replace high-flow plumbing fixtures with the new high-efficiency equipment within 60 days and leave this equipment at the residence even if they no longer reside there, exempt well owners must also commit to leaving at least 50 percent of the conserved water in the EA for fifteen years. While exempt well owners are only required to

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commit 50 percent of the conserved water for the EA reserve, just as the City of Uvalde must commit to leaving 50 percent of the water conserved through the RWCP in the EA, 100 percent of the water savings produced from exempt wells typically remains in the aquifer.

Replacement of high-flow plumbing equipment with these high-efficiency fixtures will save a projected 203 acre-feet of water over ten years (using the industry standard estimated water savings of 22,000 gallons per year per toilet/showerhead/aerator as noted above), which is expected to provide 203 acre-feet to the EA reserve (20 acre-feet on a one-year basis). Note that this 203 acre-feet of water for the EA reserve will not be included in the City of Uvalde's contracted commitment, since these savings are based on commitments from individual EA exempt well owners.

***Uvalde RWCP: \$12,500 RWCP funds per year in 2013 to 2015 for 100 high-efficiency showerhead/aerator kits and dual-flush Caroma toilets (including transportation, storage, and distribution) per year
Total three-year cost to RWCP is \$37,500 to achieve projected water savings of 203 acre-feet over ten years from Uvalde County exempt wells***

Table 2 – Exempt Well High-Efficiency Plumbing Program Budget and Projected Savings

Year	# of Toilets & Plumbing Kits	Cost for Toilets	Cost for Plumbing Kits	Transportation	Distribution	Total RWCP Cost
2013	100	\$10,000	\$1,500	\$500	\$500	\$12,500
2014	100	\$10,000	\$1,500	\$500	\$500	\$12,500
2015	100	\$10,000	\$1,500	\$500	\$500	\$12,500
Total for 3-Year Program						\$37,500

Year	# of Toilets & Plumbing Kits	10-Yr Water Conserved (Ac-Ft)	10-Yr Aquifer Reserves (Ac-Ft)	1-Yr Aquifer Reserves (Ac-Ft)
2013	100	68	68	7
2014	100	68	68	7
2015	100	68	68	7
Totals for 3-Yr Program		203	203	20
RWCP Cost Per Ac-Ft		\$185	\$185	\$1851

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Commercial/Industrial Retrofits

As previously noted, Uvalde's "commercial" water connections actually consist of industrial, institutional, and commercial customers, including multi-family residential establishments. The following list of the top ten "commercial" water accounts in Uvalde, by 2012 volume of water used, indicate potential targets for the Large-Scale Retrofit Program.

1. UniFirst Industrial Laundry = 37.4 acre-feet
2. Southwest Texas Junior College = 33.0 acre-feet
3. Granada Apartments = 27.6 acre-feet
4. Quail Springs RV Park = 24.9 acre-feet
5. La Quinta Apartments = 20.6 acre-feet
6. Memorial Hospital = 20.2 acre-feet
7. Amistad Nursing Home & Rehab Center = 16.5 acre-feet
8. Quality Inn, Uvalde Hotel Corp = 15.6 acre-feet
9. El Dorado Apartments = 14.9 acre-feet
10. Laurel Apartments = 13.9 acre-feet

In addition to the water system customers listed above, car wash establishments are another potential target for the Commercial/Industrial Retrofit Program.

Based on a review of Uvalde's commercial water use, there are approximately 600 acre-feet of annual water use remaining in the category once irrigation use is removed. Using the SAWS 30 percent estimate of savings that can be achieved equates to a potential water savings target of 200 acre-feet. Given SAWS' experience that it requires time to negotiate technological change in commercial/industrial water use, a conservative target of 100 acre-feet for the three-year program will be utilized. Per the EA HCP, the RWCP Commercial/Industrial Retrofit Program is to be modeled on the SAWS Commercial/Industrial Retrofit Program. The SAWS program provides a rebate of \$400 per acre-foot of water saved over ten years or 50 percent of the cost of the technological change, whichever is less. RWCP funds of \$40,000 will be used to provide rebate(s) to Uvalde water system "commercial" customer(s) who institute technological changes to their processes or equipment resulting in water savings totaling 100 acre-feet. Again, attendance at dual-flush toilet installation and maintenance training will be a provision of contracts awarded for commercial retrofit projects involving high-efficiency toilets.

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Uvalde RWCP: \$40,000 RWCP funds in 2014 or 2015 (or \$20,000 per year in 2014 and 2015) for rebate(s) for large-scale retrofit projects to reduce commercial water consumption to achieve projected water savings of 100 acre-feet over ten years

Table 3 – Commercial Retrofit Program Budget and Projected Savings

Year	Commercial Retrofit Rebate(s)	10-Yr Water Conserved (Ac-Ft)	10-Yr Aquifer Reserves (Ac-Ft)	1-Yr Aquifer Reserves (Ac-Ft)
2014	\$40,000	100	50	5

Cost Per Ac-Ft \$400 \$800 \$8,000

Reclaimed Water

Uvalde does not currently have an organized program to encourage residential or commercial rainwater, condensate, or graywater collection and reuse. The City does, however, use and sell reclaimed water from their wastewater treatment plant. The volume of treated effluent used for onsite irrigation, landscape irrigation at City parks and the golf course, and construction projects rose from 430.6 acre-feet in 2009 to 761.2 acre-feet in 2012.

To encourage residential and commercial customers to invest in rainwater, condensate, or graywater collection and reuse systems, a relatively simple Reclaimed Water Program will be instituted. The program will target EA exempt well owners in Uvalde County, but will also be available to City of Uvalde residents. Exempt well owners are targeted because all water saved typically stays in the aquifer. To participate in the Reclaimed Water Program, Uvalde water system customers will have to install a rainwater, condensate, or graywater system that can be certified as using the alternative water to replace City EA water for manufacturing/industrial use, landscape irrigation, and/or indoor use such as toilet flushing. Landscape irrigation systems are only eligible if they replace municipal water entirely as the water source for drip or sprinkler irrigation.

Individuals or businesses that retrofit existing plumbing or install new plumbing to utilize rainwater, condensate, or graywater collected onsite will be provided a one-time subsidy of \$400 per acre-foot of water saved over ten years. For example, a 5,000-gallon storage tank installed as part of a reclaimed water system would be filled and emptied six times in a typical year, producing water savings of 30,000 gallons per year, or 300,000 gallons over ten years. One acre-foot is approximately 300,000 gallons, so a \$400 rebate would be issued for such a system. To simplify the program, a \$400 rebate will be provided for a

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functioning rainwater, condensate, or graywater system with 5,000 or more gallons of storage and a \$200 rebate will be provided for a functioning system with 2,500 to 4,999 gallons of storage. RWCP funds of \$12,000 will be used to provide rebates to Uvalde County EA exempt well owners and/or Uvalde water system customers who install a rainwater, condensate, or gray water system that meets the cited requirements. Use of these systems is projected to result in 30 acre-feet of water savings over ten years. Note that the City of Uvalde's contracted commitment of water for the EA reserve will not include water saved through use of reclaimed water systems by EA exempt well owners. To develop the projected water savings identified in Table 4, it was assumed that 80 percent of the water savings would come from use of reclaimed water systems by exempt well owners and 20 percent by Uvalde water system customers.

Uvalde RWCP: \$6,000 per year in 2014 and 2015 for rebates for reclaimed water systems to achieve projected water savings of 30 acre-feet over ten years

Table 4 – Reclaimed Water Program Budget and Projected Savings

Year	Reclaimed Water Rebate(s)	10-Yr Water Conserved (Ac-Ft)	10-Yr Aquifer Reserves (Ac-Ft)	1-Yr Aquifer Reserves (Ac-Ft)
2014	\$6,000	15	14	1
2015	\$6,000	15	14	1
Totals	\$12,000	30	27	3
		Cost Per Ac-Ft	\$400	\$4,444

Lost Water and Leak Detection

Uvalde conducts leak detection surveys as regularly as funding allows. Uvalde received an EAA Conservation Grant in 2010 to conduct a leak detection survey and followed up with another survey in 2012. The City implemented a work order system enabling tracking to identify areas with frequent water line breaks and determine when and where water line replacement is warranted. Uvalde also hired two additional staff to more quickly respond to water leaks and repair or replace antiquated lines and/or equipment.

As stated, Uvalde started installing water meters in 2000; previously unmetered water connections are now metered. All new water accounts are metered and since 2002, all irrigation systems are required to have separate irrigation meters. To keep the water system meters in good working order, the City's target is ten percent meter replacement per year. The drought has increased, however, the occurrence of leaks so City workers'

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time is now taken up addressing those leaks. City officials continue to budget meter replacement annually but the utility department is currently only able to replace inoperable meters when they are discovered, despite the addition of two more technicians. Uvalde replaced 86 water meters (plus two more were repaired) or 1.6 percent in 2009, 94 meters or 1.7 percent in 2010, and 219 meters or 3.9 percent in 2011, for an average of 2.4 percent meter replacement per year between 2009 and 2011.

In 2009, ten percent of the water the City pumped from the EA was unaccounted for, amounting to 411.472 acre-feet. Slightly improved, nine percent of the water was unaccounted for in 2010, equaling 314.977 acre-feet. The amount of unaccounted for water was even better in 2011 at seven percent, equaling 302.361 acre-feet. The average annual unaccounted for water from 2009 to 2011 was 342.937 acre-feet or 8 percent.

RWCP Participation

While City of Uvalde officials volunteered as a pilot community and are enthusiastic about the Uvalde RWCP, the City is not sufficiently staffed to implement this program without overly burdening existing staff resources, even with the assistance and support of WCTC staff. A portion of the RWCP funding for Uvalde will therefore be used for staff augmentation. As previously stated, a part-time Uvalde staff member will be hired to implement the Uvalde RWCP. The Uvalde Conservation Coordinator will complete water conservation education, outreach, purchasing, application and rebate processing, and monitoring tasks, as well as other duties needed to make the Uvalde RWCP successful. RWCP funds of \$25,000 per year in 2013 to 2015 will be used to pay a professional employee \$20,000 plus \$5,000 for fringe and other support, such as travel. The City of Uvalde will provide office space, phone, and computer support.

Uvalde staff conducted a Spring Water Conservation Event for the public on March 23, 2013 to kick-off their RWCP. The local irrigation and landscaping contractors and a local nursery participated, promoting use of drip irrigation and attractive, native vegetation. The Texas A&M AgriLife Research and Extension Center at Uvalde also provided information on the variety of drought-hardy vegetation that will thrive in Uvalde County. A City employee provided information on composting and use of mulch and the EAA detailed their Voluntary Irrigation Suspension Program Option, known as VISPO. WCTC staff participated and SAWS loaned their demonstration Caroma dual-flush toilet, both generating public interest in the elements of the Uvalde RWCP. Approximately 70 people were in attendance at the event.

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There are no additional initiatives or recommendations from Uvalde staff that have not been discussed in the preceding sections. Uvalde staff members provided the requested data and are ready to implement their RWCP.

Conclusions and Recommendations

Uvalde staff has made, with limited resources, great strides in their efforts to eliminate water waste and use water more efficiently to reduce the City's water consumption, even in times of drought.

Following are the prioritized recommendations for the Uvalde RWCP.

1. \$125,000 RWCP funds per year in 2013 to 2015 for 1000 high-efficiency showerhead/aerator kits and dual-flush Caroma toilets (including transportation, storage, and distribution) per year for Uvalde Water System customers – *\$185 per acre-foot*
2. \$12,500 RWCP funds per year in 2013 to 2015 for 100 high-efficiency showerhead/aerator kits and dual-flush Caroma toilets (including transportation, storage, and distribution) per year for Uvalde County exempt well owners – *\$185 per acre-foot*
3. \$40,000 RWCP funds in 2014 or 2015 (or \$20,000 per year in 2014 and 2015) for rebate(s) for large-scale commercial retrofit projects – *\$400 per acre-foot*
4. \$6,000 per year in 2014 and 2015 for rebates for reclaimed water systems – *\$400 per acre-foot*

Refer to Table 5 for the consolidated Uvalde RWCP budget and projected water conservation savings. The total cost of the three-year program is \$539,500 and equates to projected water savings of 2,358 acre-feet over ten years, which is expected to provide 1,292 acre-feet of water to the EA reserve (129 acre-feet on a one-year basis). The cost per acre-foot over ten years is \$229, while the EA reserve cost is \$417 per acre-foot (\$4,175 per acre-foot on a one-year basis).

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Table 5 – Uvalde RWCP Budget and Projected Savings

Year	Total Cost	Total 10-Yr Water Conserved (Ac-Ft)	Total Cost Per Ac-Ft	Total 10-Yr Aquifer Reserves (Ac-Ft)	Total Cost Per Ac-Ft	Total 1-Yr Aquifer Reserves (Ac-Ft)	Total Cost Per Ac-Ft
2013	\$162,500	743	\$219	405	\$401	41	\$4,011
2014	\$208,500	858	\$243	469	\$445	47	\$4,449
2015	\$168,500	758	\$222	419	\$403	42	\$4,025
	\$539,500	2,358	\$229	1292	\$417	129	\$4,175

References

1. *2011 Regional Water Plan, South Central Texas Regional Water Planning Area, Volume I*, September 2010, Appendix C, South Central Texas Regional Water Planning Group, San Antonio River Authority, HDR Engineering, Inc., Laura Raun Public Relations, Ximenes & Associates.
2. Uvalde staff.
3. Uvalde's official website, uvaldetx.com.
4. Uvalde's 2009, 2010, and 2011 Water Conservation Annual Reports to the TWDB.
5. Uvalde's 2012 Municipal Groundwater Conservation Plan to the EAA.
6. Uvalde Leader-News website, uvaldeleadernews.com.