

LCRA WATER CONSERVATION INCENTIVES PROGRAM

—
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1.0 Introduction

1.1 Background

LCRA's firm raw water customers, other stakeholders and the public have identified conservation as a strategy for LCRA to meet its future water supply needs.

Because of the large amount of funds dedicated to the incentives program and the importance of water conservation as a long-term water supply strategy, the LCRA Board of Directors established a Water Conservation Incentives Program Review Committee in June 2011 to provide direction on the incentives program.

The criteria used to select and prioritize conservation measures included in the plan were: cost effectiveness; maturity of technology; certainty and magnitude of water savings; service area match; end user and public acceptability; and customer ability to implement. LCRA expects nearly one-third of the estimated savings included in the plan to come from the implementation of a number of conservation incentives.

To be eligible for an incentive, the recipient must be either a firm water customer of LCRA or an end user with an active retail water account with a provider that is an LCRA firm water customer. The availability of rebates is subject to funding. Current conservation incentive measures are found in Table 3. The cost per acre-foot saved varies by measure and is based on both the LCRA cost for the incentive and the life cycle of the measure, or the period of time a measure continues to save water.

1.2 Incentives Program Overview

1.2.1 Residential Rebates

The Water Conservation Incentives Program Review Committee (Review Committee) approves individual funding amounts for each measure.

- Eligible measures include pool filters and covers, aeration, compost and/or mulch.
- LCRA funding is limited to a set amount for equipment, with the end user responsible for installation and any other costs.
- LCRA's role includes providing technical assistance to firm water customers with program setup; managing vendor contracts; making incentive payments; and evaluating the program.
- The firm water customers' role includes marketing; qualifying end users; issuing vouchers and/or verifying end users for payment; performing follow-up inspections (if required); and providing water-use data to LCRA on program participants (if needed).

1.2.2 Residential WaterSmart Rebates

The Review Committee approves individual funding amounts for each measure and advises on program measures.

- Eligible measures include irrigation system equipment upgrades and modifications, such as rain sensors, soil moisture sensors, pressure-reducing valves, pressure-reducing sprinkler heads and nozzles, pre-approved Water-Sense smart controllers, and irrigation system checkups.
- LCRA funding for equipment upgrades and modifications is limited to a set amount for the equipment or labor for a system checkup, with the end user responsible for installation and any other associated costs
- LCRA's role includes providing technical assistance to the firm water customer with program setup; making incentive payments; and evaluating the program.
- The firm water customers' role includes marketing; verifying end users for payment; and providing water-use data to LCRA on program participants as requested.

1.2.3 Commercial, Institutional and Industrial (CII) Rebates

The Review Committee advises on program measures and approves individual funding amounts. Committee approval is required for any rebate over \$25,000 before the funds are released.

- Eligible measures include indoor and outdoor equipment, as listed in the Commercial, Institutional and Industrial (CII) table (Table 3), water audits, efficient conservation equipment, and/or modifications to processes that result in water savings, such as toilet fixtures, commercial ice machines, spray rinse valves and recycling water used in cooling towers.
- LCRA funding is limited to a set amount for equipment or process. The end user is responsible for installation and any other associated costs related to equipment or process incentives. For water audits, the customer must submit an application or scope of work proposal to LCRA for approval prior to audit to ensure funding.
- LCRA's role includes auditing and providing recommendations for water savings opportunities; qualifying end users and inspecting their work; making incentive payments; and evaluating the program.
- The firm water customers' role includes marketing; qualifying end users; and providing end user water-use information to LCRA.

1.2.4 Firm Water Conservation Cost-Share Program

The Review Committee is responsible for approving the program guidelines and procedures, including setting the evaluation criteria for awarding funds and the amount of funding per project. LCRA staff reviews and recommends proposals, with the Review Committee providing final approval of any funded projects.

- Examples of possible projects include efforts to decrease utility system water loss, such as meter replacement, pressure reduction, and leak detection and repair, as well as demand-side conservation programs with real water savings, such as “smart” irrigation controllers or soil moisture sensors.
- Funding will be in the form of a cost-share grant for the total project.
- LCRA’s role is to review proposals and recommend customer projects.
- The firm water customers’ role is to develop and implement the project; verify water savings; and submit a project completion report.

2.0 Residential Rebates

The maximum rebate amount per residential property is \$600 per year, which includes a 10-year total of 50% of the purchase price up to \$450 per pool filter and cover; a yearly total of 50% of the purchase price up to \$200 per landscape options (aeration, compost and mulch); a yearly total of 50% of the purchase price up to \$600 for WaterSmart Rebates; and a yearly total of 25 cents per gallon up to \$600 for rainwater harvesting, until property sizing capacity has been met, whichever is less. Rebates will be paid directly to the applicant.

2.1 Pool Filters and Covers

2.1.1 Background

Water loss due to inefficient equipment and evaporation of pools can be significant. A 16-by-24-foot uncovered pool can lose more than 8,000 gallons to evaporation during the summer months in Central Texas. Pool covers eligible for this rebate include manual, solar ring and mechanical.

Pools with sand and diatomaceous earth filters require more frequent backwashing at a higher rate of flow, resulting in more water use than cartridge filters. Cartridge filters are also more energy efficient and can save up to 20,000 gallons a year.

2.1.2 Overview

Rebates are available for the purchase of approved pool filters or covers. In order to receive the rebate, the end user must submit a rebate application to LCRA staff along with any itemized receipts for reimbursement within 90 days of the purchase or completion of the installation by a licensed irrigator. The receipt must include the purchase date, vendor name and address, and purchase price.

2.2 Compost, Mulch and Aeration

2.2.1 Background

Soil amendments help to reduce water loss, soil cracking and weeds, moderate soil temperatures, and prevent soil erosion. Soil amendments include mulch and compost. Mulch can be made from many types of organic matter, including yard waste, plant debris and hardwood. Mulch should be installed at least 2 inches deep and should be added on to (and not removed) a minimum of every two years.

Compost is the result of decayed organic matter, such as yard trimmings or kitchen scraps, and provides nutrients to the soil. It adds beneficial microbes, attracts worms and helps retain moisture in the soil. The beneficial microbes in compost help break down mulch over time into plant-available nutrients, providing a constant food source for plants.

In addition to soil amendments, aeration improves drainage and compaction, and should be conducted on a yearly basis to improve soil and plant health and water retention ability.

Reference the LCRA Sensible Landscape Guide for details on application of soil, mulch and aeration practices.

2.2.2 Overview

Rebates are available for the purchase of compost, mulch and aeration equipment or services. In order to receive the rebate, the end user must submit a rebate application to LCRA staff along with any itemized receipts for reimbursement within 90 days of the purchase or completion of the service by a licensed irrigator. The receipt must include the purchase date, vendor name and address, and purchase price.

2.3 Rainwater Harvesting

2.3.1 Background

Collecting and using rainwater for lawns and gardens reduces the amount of water flowing into local storm drains, sewer systems and local waterways, while benefiting plants and microbes with naturally soft water free of chlorine, fluoride and other chemicals. LCRA offers rebates for the collection of water for nonpotable uses. The tanks must be installed properly when the application is submitted. Program guidelines are subject to change without notice.

Program Qualifications

- Only purchased tanks are eligible for the rebate. Homemade tanks and tanks installed prior to September 1, 2017, are not eligible for the rebate.
- Applicant may apply for system expansion until reaching \$600, or until property sizing capacity has been met, whichever is less.
 - Property sizing calculates catchment area (gallons), local precipitation, landscape demand (1 inch per week) and irrigated area demand.
- Tank size: 100-gallon minimum and must be designed for the intended purpose of rain capture.

2.3.2 Overview

Rebate Amount:

- Rebate is 25 cents per gallon of storage capacity for a nonpotable system starting at 100 gallons.
- Rebate of 50% of the purchase price of pad material and a pump to distribute nonpotable water is also available. This does not include labor costs, delivery costs or any tax.
- A purchase receipt must be submitted with the application within 90 days of purchase or completion of the service by a licensed irrigator. The receipt must include the purchase date, vendor name and address, purchase prices and capacity of barrel.
- Rebates are available on a first-come, first-served basis, while funding is still available.

- System maintenance is not eligible for a rebate. Property owner is responsible for maintaining tank level, cleaning gutters and first-flush devices, repairing leaks, repairing and maintaining system, and adopting water-efficient practices.
- All items used for rain capture are tax-exempt by state law. Section 151.355 of the Texas tax code exempts rainwater harvesting equipment and supplies from state sales tax. To claim the exemption, the purchaser must furnish a Tax Exemption Application Form 01-339 to the supplier of the equipment at the time of purchase. The form is available at <https://comptroller.texas.gov/forms/01-339.pdf>

Design Guidelines:

- Property must have existing gutters throughout the entire perimeter of the roof for adequate water collection and also existing water downspouts. The tank must be situated in a way that allows the tank to receive all water unimpeded from a downspout.
- Tank must have a cover to prevent mosquitoes, rodents and debris from entrance.
- Tank must have an overflow spigot to direct the overflow water away from the base of the collection device to prevent erosion and localized flooding.
- Tank should not block or restrict access to walkways or pathways.
- Tank must be used for rain capture only and not another water source.
- Tank must be level on the ground or on a pad site made of concrete, gravel or sand. Tank and pad must meet all local building and plumbing codes.
- Tank should be opaque or UV resistant.
- Tank should be at least 50 feet away from possible contamination sources.

3.0 Residential WaterSmart Rebates

3.1 Background

Studies have shown that at least 15 to 20% of outdoor landscape irrigation is wasted, often due to irrigation systems that are poorly designed, installed or maintained. In addition, landscape irrigation technology is constantly advancing, and these advances often increase water conservation. The Residential WaterSmart Rebates are designed to encourage end users to invest in irrigation equipment upgrades that will increase the efficiency of their systems. Rebates will be paid directly to the applicant.

It is recommended that participating firm water customers have an irrigation evaluation program in place. The evaluation may serve as the prescreening or preapproval process for the equipment rebate, but it is not required for end users to receive the rebates. Evaluations are a very useful tool, particularly in terms of promoting the availability of the rebates to end users and providing firsthand oversight of the equipment being rebated. When an evaluation program is in place, a participating end user can expect to have an irrigator evaluate the performance of the end user’s irrigation system and provide a list of recommendations for equipment upgrades as well as an irrigation schedule that takes into account factors specific to the property, such as plant type, shade coverage and irrigation system efficiency.

3.2 Overview

Rebates are available for the purchase of irrigation equipment that increases the efficiency of residential sprinkler systems. New installations of irrigation systems, as well as irrigation efficiency projects that have been completed before the initial irrigation evaluation, will not qualify.

Eligible equipment items, shown in Table 1, include pressure-reducing spray heads, soil moisture or rain sensors, pressure-reducing valves, preapproved WaterSense smart controllers, and irrigation evaluations. Additional irrigation technologies could be added in the future.

Table 1. Residential Outdoor and Irrigation Technology Equipment Items and Associated Rebate Amounts

| Irrigation Technology Equipment Items | Rebate Amount |
|---|---|
| Pressure-reducing heads and nozzles * | 50% of the cost of nozzles and heads up to \$5 per nozzle or head |
| Soil moisture sensor | 50% of the cost of devices up to \$250 |
| Rain sensors | 50% of the cost of device up to \$20 |
| Pressure-reducing valves and in-line regulators | 50% of the cost of pressure-reducing device up to \$100 |
| WaterSense smart controllers ** | 50% the cost of devices up to \$100 |
| Irrigation evaluation | Total cost, up to \$100 |

*To be eligible for the rebate, the end user applying for the rebate must have replaced an entire zone, or multiple zones, with pressure-reducing spray heads or nozzles.

** Approved controllers: pre-approved WaterSense smart controller.

After receiving an irrigation evaluation, upgrades can be made by the homeowner or a licensed irrigator for a partial reimbursement. In order to receive the rebate, the end user must submit a rebate application within 90 days of purchase or completion of the service by a licensed irrigator to LCRA staff along with any evaluation form(s) for reimbursement.

4.0 Commercial, Institutional and Industrial (CII) Incentives

4.1 Background

Rebates are available for the purchase of proven water-efficient technologies installed in eligible commercial, institutional and industrial buildings. The rebate process for CII retrofits is designed to assist end users of LCRA's firm water customers with identification of indoor and outdoor water-saving opportunities. Participants must have a qualified water conservation consultant evaluate the performance of the site's water-using components and receive a list of recommendations for equipment efficiency upgrades. The goal of the rebate is to shorten the payback period associated with CII projects, thus making their implementation more feasible from an economic standpoint. Rebates will be paid directly to the applicant.

4.2 Overview

CII measures and rebate amounts are in Table 2. In addition to rebates for specific equipment items, incentives also are available for process modifications that result in water savings.

Determination of equipment eligible for the CII rebate was based on the following:

- Potential for water savings.
- Cost per acre-foot.
- Estimated return on investment for the customer receiving the rebate.

Table 2. CII Equipment Items and Associated Rebate Amounts

| CII Equipment Items | Rebate Amount |
|---|---|
| High-efficiency toilet (1.28 gallons per flush or less) | Up to \$100 per unit |
| High-efficiency urinal (0.5 gpf or less) | Up to \$100 per unit |
| High-efficiency spray rinse valve | Up to \$65 per unit |
| Water-saving technology | 50% of cost up to \$20,000 per customer |
| WaterSmart rebate | 50% of the cost up to \$1,500 |

LCRA firm water customers with CII uses and the CII end users of LCRA firm water customers are eligible for the rebates. A comprehensive water audit of the facility by a licensed irrigator, plumber, auditor, inspector, or other pre-approved professional is required prior to applying for any water-saving technology rebates to help identify potential water-saving opportunities. When a licensed professional conducts the audit, the participating firm water customer or end user must allow access to the facility, supply water use records, and provide a knowledgeable representative to escort during the evaluation. The CII end user or firm water customer must install or implement water-saving recommendations within three years from the date of the evaluation in order to qualify for the rebate. The amount funded to the applicant for the water audit is not combined within the total \$20,000 for water-saving technology rebates.

For process modifications, an applicant must provide a written proposal outlining the facility's current process configuration, proposed process configuration(s), amount of water proposed to be saved, project costs and the timeline needed to complete the modifications. At a minimum, the proposal must reflect the schematics outlining the proposed modifications along with a written report.

Table 3: Summary of LCRA Firm Water Conservation Incentive Measures

| Conservation Measure | Estimated Water Saved per Year (Gallons) | Incentive Per Unit ¹ | Projected Upfront Cost per Acre-foot | Life Cycle of Measure (Years) | Annualized Cost per Acre-foot ² |
|---|--|--|--------------------------------------|-------------------------------|--|
| Residential Outdoor | | | | | |
| <i>WaterSmart Rebate</i> | 50% of total cost up to \$600 per system. Specific unit amounts include: | | | | |
| Pressure-reducing heads and nozzles | 32,585 per property | 50% of cost of nozzles and heads up to \$5 per nozzle or head | \$2,514 | 10 | \$326 |
| Pressure-reducing valves (PRV) and in-line regulators | | 50% of cost of devices up to \$100 | | | |
| Soil moisture sensors | | 50% of cost of devices up to \$250 | | | |
| Rain sensors | | Up to \$20 | | | |
| Smart controllers | | 50% of cost of devices up to \$100 | | | |
| Irrigation checkup | 50,000 per checkup | Up to \$100; must be performed by licensed irrigator | \$85 | 3 | \$185 |
| Pool filter | Up to 20,000 ³ | \$250 for cartridge filter | About \$4,000 | 5-10 | \$400 |
| Pool cover | About 9,500 | 50% of purchase price up to \$50 for manual or solar ring, and 50% of purchase price up to \$200 for permanent mechanical pool cover | \$1,700-\$6,800 | 5 | \$340-\$1,370 |
| Aeration | N/A | \$100 for equipment rental or toward contractor costs | | | |
| Compost and mulch | N/A | 50% of cost up to \$300 per household; if provided by contractor, must show offset cost to homeowner; no activated sewer sludge | | | |
| Soil testing | N/A | Rebate full cost up to \$50 for a Texas AgriLife soil sample, or 50% of the cost up to \$125 | | | |

¹ Amounts approved by the LCRA Water Conservation Incentives Program Review Committee.

² Savings for existing rebates taken from "Strategies for Implementing Firm Water Conservation," CH2M Hill and BBC Research and Consulting, May 2009, and based on a discount rate of 5% per year. Cost per acre-foot for new rebates calculated using the Alliance for Water Efficiency tracking tool.

³ Savings based on San Antonio Water System pilot study.

Table 3: Summary of LCRA Firm Water Conservation Incentive Measures (continued)

| Commercial, Institutional and Industrial (CII) | | | | | |
|--|--|--|-----------------------------------|----|-----------------------------------|
| High-efficiency toilet distribution or rebate | 19,000 per unit | Up to \$100 per unit | \$1,671 | 25 | \$119 |
| High-efficiency urinal rebate | 19,000 per unit | Up to \$100 per unit | \$1,671 | 25 | \$119 |
| High-efficiency spray rinse valve distribution | 50,000 per unit | Up to \$65 per unit | \$424 | 5 | \$98 |
| Water-savings technology (i.e. cooling tower recycling, rainwater harvesting, commercial ice machines) | Will vary by equipment or process | 50% of cost up to \$20,000 per customer; must have prior staff approval | Will vary by equipment or process | | |
| <i>WaterSmart Rebate</i> | 50% of total cost up to \$1,500 per system. Specific unit amounts include: | | | | |
| Pressure-reducing heads and nozzles | 32,585 per property | 50% of cost of nozzles and heads up to \$5 | \$2,514 | 10 | \$326 |
| Pressure reducing valves (PRV) and in-line regulators | | 50% of cost of devices up to \$100 | | | |
| Soil moisture sensors | | 50% of cost of devices up to \$900 | | | |
| Rain sensors | | Up to \$20 | | | |
| WaterSense smart controller | | 50% of cost of devices up to \$100 | | | |
| Water audit (includes water loss and leak detection) | Depends on size of system and coverage area | Up to \$125/hour for outdoor audit, not to exceed \$2,000; or \$125/hour for combined indoor and outdoor audit, not to exceed \$5,000; must have staff approval prior to audit | Will vary by equipment or process | 3 | Will vary by equipment or process |
| Aeration | N/A | \$50 for equipment rental or toward contractor costs | | | |
| Compost and mulch | 75,122 gallons per acre at a 1% increase in O&M | 50% of cost up to \$400; no activated sewer sludge | | | |
| Firm Water Conservation Cost-share | | | | | |
| (Such as leak detection and repair, effluent) | Will vary by project | Up to \$1,160 per acre-foot of savings per year ² , and no more than 50% of the project cost | | | |

5.0 Firm Water Conservation Cost-Share Program

5.1 Background

The LCRA Firm Water Conservation Cost-Share Program provides funding to LCRA firm water customers to help offset the cost of water-efficiency projects and programs established by customers. LCRA firm water customers expressed their support for the program at customer meetings and throughout the 2008 Task Force process, stating that this type of program would help make certain projects attainable that otherwise would not be attainable without a supplemental funding mechanism.

Water efficiency programs encompass conservation and reuse efforts as well as water loss reduction and prevention. LCRA's Firm Water Conservation Cost-Share Program could provide funding for a variety of projects and efforts, including:

1. Water loss reduction efforts:
 - Implementing pressure-reduction measures.
 - Replacing or retrofitting existing water meters with automatic meter reading systems.
 - Reducing flushing amounts due to the elimination of dead-end lines.
 - Distributing system leak detection equipment, including portable and permanent equipment.
2. Efficiency equipment upgrades for irrigation and industrial firm water customers.
3. Recycling and water reuse projects that replace potable or raw water use with condensate or reclaimed water.
4. Demand-side conservation programs with proven water savings (Table 3):
 - Installing or retrofitting water-efficient devices, such as plumbing fixtures and appliances.
 - Encouraging the retrofit of existing landscape irrigation systems to more efficient systems using soil moisture sensors or other technologies.
5. Emerging Technologies Cost-Share Program not based solely on water savings.

Examples of projects that could be funded:

- Conservation analytic software for advanced metering infrastructure, leak detection, water budgeting or social engagement.

See Section 5.3 for more information.

5.2 Large Sum Cost-Share Program Overview

Only LCRA firm water customers are eligible to participate. Cost-share funds awarded will be used only for water efficiency measures that result in concrete water savings. Funds will not be used for planning grants, hiring of consultants, training or workshops.

LCRA will market the availability of the program directly to its firm water customers through its firm water customer meetings and other forms of communications. Similar to the state's efforts with the Clean Water and Drinking Water State Revolving Funds, systems with high water loss will be contacted to encourage improvements.

Applications will be received and reviewed twice a year. Application packages that do not include all required documentation will be deemed ineligible and will not be reviewed by LCRA staff or the Review Committee.

The application package will include the following:

- Statement of work, including time frame.
- Funding proposal and breakdown of project costs and local commitments.
- Project criteria checklist.
- Water-savings calculations (estimated demand reduction) resulting from the completion of the proposed project.

Any eligible application not funded may be resubmitted for the next funding cycle. Applicants are able to bundle multiple projects into one application; however, the Review Committee has the discretion to recommend awarding an incentive amount lower than what is requested. The Review Committee approved the evaluation criteria that assist in the review and evaluation of the proposals. Funding will be awarded based on a combination of factors including:

- Cost effectiveness (LCRA cost per acre-foot of water saved).
- Life expectancy of water savings.
- Certainty of water savings.
- Ability to implement.
- Past performance and/or previous participation.
- Innovation.

LCRA staff will review, evaluate and present qualifying applications to the Review Committee, which will make the final determination for funding awards.

There is a minimum 50% cost-share requirement for applicants, which can be made through a combination of local funds and/or in-kind services.

5.3 Emerging Technologies Cost-Share Program Overview

LCRA will market the availability of the program directly to its firm water customers through its firm water customer meetings and other forms of communications.

Applications will be received and reviewed twice a year. Application packages that do not include all required documentation will be deemed ineligible and will not be reviewed by LCRA staff or the Review Committee. The application package will include the following:

- Potential water savings amount and cost savings (if applicable).
- Duration of savings.
- Percentage of population impacted within service area.
- Identification of multiple project benefits, if any (e.g., improves water quality, stormwater control, resiliency of water supply during drought restrictions).
- Evidence of innovation (e.g., not well adopted in region).
- Availability on multiple technology platforms (e.g., mobile, web).
- Replicability (the program can be implemented for other water suppliers).

There is a minimum 20% cost-share requirement for applicants applying for up to \$15,000, which can be made through a combination of local funds and/or in-kind services. The customer will supply data to LCRA staff to determine the effectiveness of the program. The Review Committee can approve higher-cost projects for an applicant based on staff recommendations.