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Executive Summary

In accordance with LCRA Board Policy 301.603 – Agricultural Water Conservation Fund, this report provides a summary of projects implemented in 2018. The report also provides information about provisions in the House Bill 1437 legislation and a status update on the fund.

Background
The Texas Legislature passed HB 1437 in 1999. The law authorizes LCRA to provide up to 25,000 acre-feet per year of surface water to Williamson County if there is “no net loss” to the lower Colorado River basin.

The legislation also created the HB 1437 Agricultural Water Conservation Fund, which is used to address the costs of mitigating any adverse effects of transferring water to Williamson County. The fund may be used only for water resources development or water use strategies to replace or offset the amount of transferred surface water, and those water resources must be used to benefit the water service areas of LCRA’s irrigation operations. Projects are funded by a 25 percent surcharge on all water under contract to the Brazos River Authority, which has secured the full 25,000 acre-feet per year.

Water Conserved and No Net Loss
To date, all of LCRA’s projects to meet the “no net loss” requirement have involved water conservation in the irrigation operations. In 2018, HB 1437-funded projects conserved an estimated 13,076 acre-feet of water. The amount of water available for transfer in 2019 under no net loss is 12,437 acre-feet, a figure computed in accordance with the LCRA Water Contract Rules by averaging the amount of water conserved annually in 2016, 2017 and 2018. LCRA transferred 296 acre-feet of water to Williamson County in 2018 under the HB 1437 program. The most recent information from the Brazos River Authority indicates transfers are expected to increase in 2019 to approximately 500 acre-feet per year, then increase to 2,700 acre-feet by 2020, to 5,300 by 2025 and to 10,800 acre-feet per year by 2032.

2018 Activities
In 2018, LCRA began the gate rehabilitation project on the Wadsworth line in the eastern canal system in the Gulf Coast Irrigation Division, which will finish the gate rehabilitation project by May 2019.

Agricultural Water Conservation Fund
The balance in the Agricultural Water Conservation Fund as of Dec. 31, 2018, was $2.0 million. In 2018, the fund’s income totaled $463,371 and expenditures were $266,218.
Program Outlook for 2019
The 2019 program includes finishing the Wadsworth line gate rehabilitation project in the Gulf Coast system canal rehabilitation project, adding additional water level sensors in the Lakeside Irrigation Division, planning for an additional gate rehabilitation project in the Lakeside and Garwood Irrigation Divisions, and ongoing work on savings verification studies.
1.0 Program Overview and Requirements

1.1 Purpose of Report
This report summarizes HB 1437 Agricultural Water Conservation Program activities in 2018. It is submitted in accordance with LCRA Board Policy 301 – Finance and LCRA’s Water Contract rules. The report provides:

- Background on HB 1437 legislation and the program.
- An update on projects implemented to achieve no net loss and the volume of water currently available for transfer.
- Statistics on how funds in the Agricultural Water Conservation Fund were spent.
- An overview of activities planned through fiscal year 2020.

1.2 HB 1437 Legislation
HB 1437, passed by the Texas Legislature in 1999, authorizes LCRA to provide up to 25,000 acre-feet of surface water per year for use outside the lower Colorado River watershed in Williamson County under several conditions.\(^1\)

- LCRA can only transfer water in accordance with HB 1437 if it assures “no net loss” of surface water to the lower Colorado River basin, as determined by the LCRA Board of Directors.\(^2\) LCRA’s Water Contract Rules provide that the requirement for “no net loss” be satisfied prior to any diversion of water.
- LCRA is required to add a minimum of a 10 percent surcharge to the rates for water contracted in accordance with HB 1437. Proceeds from the surcharge are deposited in the Agricultural Water Conservation Fund. In December 1999, the LCRA Board established the HB 1437 surcharge at 25 percent, which has remained unchanged.
- The Board may use money from the Agricultural Water Conservation Fund only to address the costs of mitigating any adverse effects of the transfer of water to Williamson County and to develop water resources or other water use strategies to replace or offset the amount of surface water transferred. This includes opportunities to reduce reliance on surface water for agricultural irrigation. Water resources developed or conserved through the additional charge may be acquired from any source inside or outside LCRA’s boundaries and must be used to benefit the water service area of the authority’s irrigation operations.
- An agricultural advisory committee must be established and consulted on projects funded by HB 1437. The advisory committee is composed of agricultural interest representatives appointed by the Colorado, Wharton and Matagorda county judges.

\(^1\) The 25,000 acre-feet per year amount is in addition to surface water that may be transferred to Cedar Park and Leander, municipalities that were water customers of LCRA on May 20, 1997, and are located in the watersheds of both the Colorado River and Brazos River.

\(^2\) LCRA’s Water Contract Rules provide that the requirement for “no net loss” be satisfied prior to any diversion of water. The rules define “no net loss” as “a hydrologic condition where the volume of Transferred Water is equivalent to, or less than, the combined value of Conserved Water, Developed Water, and Returned Water resulting in a reduced reliance on Surface Water for agricultural irrigation” (“Surface Water” is limited to Colorado River supplies). The amount of conserved, developed or transferred water is based on the average volume over a continuous three-year period.
1.3 LCRA Board Policy
In accordance with HB 1437, the LCRA Board has established policies to implement the “no net loss” requirement and established the surcharge and procedures for tracking use of the Agricultural Water Conservation Fund. These are presently included in Board Policy 301 and the LCRA Water Contract Rules (Article 12).

1.4 Agricultural Conservation Fund Advisory Committee
The Agricultural Conservation Fund Advisory Committee was established in 2000 in accordance with HB 1437. The advisory committee represents agricultural irrigation interests appointed by Matagorda, Wharton and Colorado county judges. In August 2017, these county judges appointed new committee members. The new committee last met in September 2017. In October 2018, one committee member from Colorado County was replaced.

1.5 Brazos Water Contract and Interbasin Transfer Permit
In October 2000, LCRA and the Brazos River Authority signed a 50-year water sale agreement for 25,000 acre-feet per year. In addition to the standard contract provisions, the agreement included the statutorily required surcharge (currently set by the Board at 25 percent) for transferred and reserved water. It also contains a clause that allows the Brazos River Authority to terminate the agreement on Feb. 15 of any year after the contract has been in effect for 10 years by providing notice on or before Jan. 15 of that year. The contract has been in effect for more than 10 years, and the Brazos River Authority has not terminated the contract.

Brazos River Authority holds the interbasin transfer permit to allow transfer up to 25,000 acre-feet per year to Williamson County in the Brazos River Basin. In 2018, 296 acre-feet of water transfers occurred.

1.6 Demand Projections for HB 1437 Water
As required by its water contract, the Brazos River Authority updates water demand projections for HB 1437 water each year. In March 2019, the Brazos River Authority presented updated water demand projections, which are now higher starting in 2023. The amount of water demand will increase by 2,800 acre-feet per year in 2032 compared to the projections estimated in 2018 (Figure 1.1). The Brazos River Authority is contracted to supply most of its reserved water to the City of Round Rock, with a minor amount allocated to the Liberty Hill Water Supply Corporation. Larger transfers to Round Rock are projected to begin in 2020 at a rate of 2,200 acre-feet per year and increasing to 10,800 acre-feet per year by 2032.
Figure 1.1 – Demand Projections for HB 1437 Water
1.7 Water Conserved and Available for Transfer

HB 1437 requires no net loss be met for interbasin transfer of surface water to Williamson County. No net loss occurs when the average annual volume of HB 1437 water transferred in a given year is less than or equal to the rolling average of water conserved, developed or returned in the three preceding years (per Article 12 of LCRA’s Water Contract Rules).

**Water Conserved**

LCRA estimates a total savings of 13,076 acre-feet conserved in 2018 in all three LCRA irrigation divisions.

In 2018, 12,447 acres of agricultural fields previously laser-leveled with matching funds from LCRA’s Agricultural Water Conservation Fund were in production and conserved approximately 5,726 acre-feet of water. LCRA did not provide any new funds for land leveling in 2018. The installation of standardized delivery structures and canal rehabilitation within the Garwood Irrigation Division saved an additional estimated 3,400 acre-feet of water, and the automation of canal gates in the Gulf Coast Irrigation Division saved an estimated 3,950 acre-feet in 2018.

**Water Available for Transfer**

Based on data from the last three years, there is 12,437 acre-feet of water available for transfer to Williamson County in 2018. Staff estimates that water conserved through existing projects will be sufficient to meet the “no net loss” requirement consistent with Brazos River Authority’s projections through 2020.

**Water Transferred**

In 2018, 296 acre-feet of water was transferred, which includes 240 acre-feet of water to Liberty Hill, and 56 acre-feet of construction water.

Figure 1.2 – Water Transfers Under HB 1437
No Net Loss Status
The no net loss chart (Table 1.1) summarizes HB 1437 availability. LCRA can presently satisfy demand for up to 12,437 acre-feet of water.

Table 1.1 – No Net Loss Summary, Volume of HB 1437 Water in Acre-Feet

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>1,274</td>
<td>0</td>
<td>0</td>
<td>1,274</td>
<td>0</td>
<td>0</td>
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<tr>
<td>2007</td>
<td>1,688</td>
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<td>0</td>
<td>1,481</td>
<td>0</td>
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<td>0</td>
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<tr>
<td>2008</td>
<td>3,656</td>
<td>0</td>
<td>0</td>
<td>2,206*</td>
<td>0</td>
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<td>0</td>
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<tr>
<td>2009</td>
<td>4,900</td>
<td>0</td>
<td>0</td>
<td>3,415*</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>2010</td>
<td>5,607</td>
<td>0</td>
<td>0</td>
<td>4,721*</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2011</td>
<td>7,101</td>
<td>0</td>
<td>0</td>
<td>5,869*</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2012</td>
<td>5,803</td>
<td>0</td>
<td>0</td>
<td>6,170*</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2013</td>
<td>5,681</td>
<td>0</td>
<td>0</td>
<td>6,195*</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2014</td>
<td>5,188</td>
<td>0</td>
<td>0</td>
<td>5,557*</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2015</td>
<td>5,538</td>
<td>0</td>
<td>0</td>
<td>5,469*</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2016</td>
<td>12,200</td>
<td>0</td>
<td>0</td>
<td>7,642*</td>
<td>32</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2017</td>
<td>12,036</td>
<td>0</td>
<td>0</td>
<td>9,925*</td>
<td>532</td>
<td>102</td>
<td>0</td>
</tr>
<tr>
<td>2018</td>
<td>13,076</td>
<td>0</td>
<td>0</td>
<td>12,437</td>
<td>532</td>
<td>296</td>
<td>0</td>
</tr>
</tbody>
</table>

* Three-year rolling average

** Forecast for 2019, Letter from Brazos River Authority to LCRA, Mar. 8, 2019
2.0 HB 1437 Programs

2.1 Program Planning
In 2004, the LCRA Board authorized a seven-year plan to meet projected water demands through on-farm and in-district water conservation projects and a 25 percent surcharge on the water transferred to Williamson County customers.

In 2009, a report of short-term water conservation strategies included a five-year plan (2010-2014) to meet revised demand projections for water transfers to Williamson County. Strategies included 12,500 acres of land leveling cost-share grants, which were completed in 2013; construction of the Garwood measurement project, which was completed in 2012; and the first gate rehabilitation project in the Gulf Coast Irrigation Division, which was completed in 2012.

Planning efforts are underway with Brazos River Authority on potential projects for a long-term plan.
2.2 Laser Land Leveling Cost-Share Program

In 2006, the LCRA Board adopted the application guidelines, eligibility rules and contract provisions for awarding cost-sharing conservation grants from the Agricultural Water Conservation Fund. The guidelines integrated the Natural Resources Conservation Service (NRCS) technical specifications and payment certification processes, which significantly reduced the verification and administrative costs for the HB 1437 grant program.

Table 2.1 shows the total acres leveled and cost-share grants awarded from 2006 to 2013. The program shared the precision land leveling cost for 365 fields, totaling 30,288 acres. The most acreage is in the Lakeside Irrigation Division (53 percent), followed by Garwood (43 percent) and Gulf Coast (4 percent). Since its inception, the HB 1437 Agricultural Water Conservation Fund has contributed nearly $1.75 million of a total land leveling cost of about $9.68 million – an average of 18 percent cost-share. The average acreage of a leveled field is about 83 acres. The average total cost to precision land level a field was about $320 per acre during this time frame.

<table>
<thead>
<tr>
<th>Division</th>
<th>Fields Leveled</th>
<th>Acres Leveled</th>
<th>Total Project Cost</th>
<th>HB 1437 Grant Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lakeside</td>
<td>189</td>
<td>16,177*</td>
<td>$5,645,770</td>
<td>$996,763</td>
</tr>
<tr>
<td>Garwood</td>
<td>162</td>
<td>13,023</td>
<td>$3,730,554</td>
<td>$689,938</td>
</tr>
<tr>
<td>Gulf Coast</td>
<td>14</td>
<td>1,088</td>
<td>$305,932</td>
<td>$61,818</td>
</tr>
<tr>
<td>Total</td>
<td>365</td>
<td>30,288</td>
<td>$9,682,255</td>
<td>$1,748,518</td>
</tr>
</tbody>
</table>

* Excludes 682 acres leveled with HB 1437 grant funds but refunded to the Agricultural Water Conservation Fund in 2010 and 2011 due to contractual issues.

LCRA’s cost-share program ended in 2013 after achieving the five-year planning goals set in 2009. HB 1437 funds had become less relevant in encouraging participation in the NRCS Environmental Quality Incentives Program (EQIP), due to increases in the percentage of total precision land leveling cost that EQIP would fund. The LCRA program funded 11,500 acres above the original planned implementation study and 5,000 acres above the goal set in the 2009 five-year strategy report update.

In this report, LCRA incorporated water savings from land leveled acreage in production funded through the HB 1437 program in all three irrigation divisions. Land leveled acreage in production in 2018 (Figure 2.1) was higher than estimated, due to higher land leveled acreage in production in Lakeside.

NRCS defines the useful life of projects in the EQIP program. Per NRCS, the useful life of precision land leveling projects is 15 years. At the end of the 15 years, NRCS allows
farmers to re-sign for additional financial assistance with the condition that new work must move at least 100 cubic yards of dirt per acre. The useful life on land LCRA awarded cost-share grants will begin maturing in 2021, with the largest yearly acreage reaching its maturity in 2023-2024. Staff will present options for verifying the water savings associated with existing land leveled fields to the advisory committee before LCRA-funded fields reach their 15-year life. The schedule for the expiration of LCRA HB 1437 contracts and associated NRCS contracts through EQIP is shown in Table 2.2.

Table 2.2 - Expiration of HB 1437 land leveling contracts

<table>
<thead>
<tr>
<th>Award Year</th>
<th>Expiration Year</th>
<th>Total Acres Funded</th>
<th>Percent Expiring</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>2021</td>
<td>2599</td>
<td>9%</td>
</tr>
<tr>
<td>2007</td>
<td>2022</td>
<td>3533</td>
<td>12%</td>
</tr>
<tr>
<td>2008</td>
<td>2023</td>
<td>5592</td>
<td>18%</td>
</tr>
<tr>
<td>2009</td>
<td>2024</td>
<td>6463</td>
<td>21%</td>
</tr>
<tr>
<td>2010</td>
<td>2025</td>
<td>3217</td>
<td>11%</td>
</tr>
<tr>
<td>2011</td>
<td>2026</td>
<td>3189</td>
<td>11%</td>
</tr>
<tr>
<td>2012</td>
<td>2027</td>
<td>2216</td>
<td>7%</td>
</tr>
<tr>
<td>2013</td>
<td>2028</td>
<td>3479</td>
<td>11%</td>
</tr>
</tbody>
</table>

2.3 Garwood Irrigation Division Measurement Project

The Garwood volumetric measurement project installed or rehabilitated approximately 400 water measurement and check structures on existing canals and field laterals in the Garwood Irrigation Division. In addition, 85 miles of canal laterals were rehabilitated to facilitate LCRA control of all measurement structures. The project was completed in 2012 and was expected to conserve about 3,400 acre-feet of water each year.
2.4 Gulf Coast Irrigation Division Gate Rehabilitation and Control Project

In 2011, LCRA began implementing rehabilitation, automation, and remote monitoring and control of main canal gates in the Gulf Coast Irrigation Division due to historical high canal water losses. A matching grant from the U.S. Bureau of Reclamation funded a portion of the work. A radio-based communications system and supervisory control and data acquisition (SCADA) interface now allows centralized management of the canal system’s main gates, reducing water loss and spills.

2018 Gate Rehabilitation Project Results
In 2018, LCRA began a gate rehabilitation project to automate 12 additional gates in the Gulf Coast Irrigation Division’s eastern canal system on the Wadsworth line. This project would complete the final stage of the canal gate rehabilitation for the Gulf Coast Irrigation Division. The gates will be operational during the 2019 irrigation season. Once this project is complete, 57 main canal structures will be automated in the Gulf Coast canal system.

The combined gate rehabilitation projects are projected to save an estimated 3,950 acre-feet per year with the completion of the last automation project. In 2018, overflow volumes (excess water not needed for irrigation that is released out of the end of canal lines) were also low where accurate measurements were available, however an accurate overflow volume was not available at several sites as a result of excessive debris causing instrumentation to malfunction during high flow periods. To address this issue, a new method of installation placing the level sensors on the overflow side of the structure will be in place at the beginning of the 2019 irrigation season. Based on overflow volumes from locations that have accurate data, savings are similar to 2017 and in line with current conservation estimates for the Gulf Coast gate rehabilitation project. Several years of data will be needed to provide a reliable updated savings estimate.
Figure 2.2 shows an overview of all gate rehabilitation projects completed to date.
2.5 Conservation Monitoring and Measurement

Accurate water conservation estimates are critical to show consistency with the “no net loss” requirement.

Leveling Verification Study

In 2012, LCRA worked with The University of Texas LBJ School of Public Affairs to complete a land leveling savings verification study. The study used six years of LCRA billing data and detailed farmer surveys to quantify water savings from the on-farm precision land leveling in the Lakeside Irrigation Division. The study identified a statistically significant difference in water use between leveled and non-leveled fields for the first crop. Based on the study, LCRA revised the savings estimate to 0.46 acre-foot per acre and extrapolated water savings for the second crop from the savings identified for the first crop based on average water use.

Land Leveled Field Mapping

LCRA uses an electronic mapping application to determine the land leveled acres in production each year, which is used to calculate water conserved through land leveling. LCRA staff developed the first version of this application called “uMap” in 2012. The application makes mapping fields for contracted acreage more efficient and accurate. In 2016, for the first time, all three irrigation divisions used uMap as a part of the irrigation water contracting process. In 2018, uMap was upgraded to a new platform called xMap and in 2019 for the first time the irrigation billing software (WAMS) will be linked to xMap. This will eliminate duplicative data entry into the two systems, integrate a new feature to copy field shapes from one year to the next and enable the development of additional features in the future to utilize GIS to further automate mapping processes for the irrigation divisions.

Ongoing and Future Verification Studies

In May 2016, the LCRA Board authorized spending $20,000 to complete a study with Texas State University to refine the model used in the previous land leveling verification study for the Garwood volumetric measurement project. The updated model evaluated savings at the field level based on 2012-16 information from LCRA’s billing system and a farmer survey. In 2017, LCRA entered into a contract with Texas State University to conduct a savings verification study of this project. In 2018, staff contracted with the University of Wisconsin to validate findings from the study. Those study results will be available in the first half of 2019.

The 2018 irrigation season data for Gulf Coast indicates the gate rehabilitation project has been a success, reducing overflows from thousands of acre-feet to hundreds. However, the frequency and timing of shutdowns due to heavy rainfall events vary greatly between seasons, so several additional years of data will need to accumulate to statistically verify the savings estimate.

In 2018, LCRA installed eight temporary water level monitoring devices at key locations within the Lakeside and Garwood irrigation divisions. The first set of devices were well
received by irrigation division staff, who indicated that having remote access to water flow data was very helpful to increase efficiency in managing canal water levels. In 2019, eight additional water level monitoring devices will be installed to gather data necessary to accurately identify which gate structures need to be automated to effectively manage water flow remotely within each canal system. This monitoring study is not funded through HB1437, but the information gathered will be used to plan potential future projects that could be funded through HB1437.
3.0 Agricultural Water Conservation Fund

The HB 1437 Agricultural Water Conservation Fund was established by the HB 1437 legislation to help fund conservation projects that benefit agricultural interests. It is managed separately from LCRA funds in an interest-bearing account.

The fund receives income from the annual conservation charge provision incorporated into the HB 1437 water sales contract with the Brazos River Authority. The current surcharge is 25 percent and is applied to both reserved and diverted water. Surcharge income is deposited into the Agricultural Water Conservation Fund in January of each year.

3.1 Expenditures

Table 3.1 summarizes 2018 expenditures by project. It shows that 2018 expenditures totaled $266,218, which included $246,428 for Gulf Coast gate rehabilitation projects. Program administration and conservation verification expenditures were $19,790, or 7 percent of the total. The 2018 expenses in the Gulf Coast Gate Rehab column represent the majority of expenses for the Wadsworth line project on the eastern Gulf Coast canal system (see Section 2.4).

Table 3.1 – HB 1437 Expenditures by Project

<table>
<thead>
<tr>
<th></th>
<th>Leveling Grants, Conservation Verification and Program Administrative Costs</th>
<th>Garwood Project</th>
<th>Gulf Coast Gate Rehab</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Previous Expenditures 2003-2016</td>
<td>$2,734,900</td>
<td>$817,606</td>
<td>$1,256,635</td>
<td>$4,809,141</td>
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<tr>
<td>Expenditures in 2018**</td>
<td>$19,790</td>
<td>$0</td>
<td>$246,428</td>
<td>$266,218</td>
</tr>
<tr>
<td>Total</td>
<td>$2,754,690</td>
<td>$817,606</td>
<td>$1,503,063</td>
<td>$5,075,359</td>
</tr>
</tbody>
</table>
There were no additional LCRA Board authorizations from the fund in 2018. Program expenditures through 2018 were below the $5.46 million amount authorized to date. Two of the gate projects came in under budget, several land leveling grants were paid back due to contractual issues and funds budgeted for future planning efforts and other administrative items have not yet been spent.

Table 3.2 – HB 1437 Board Approvals

<table>
<thead>
<tr>
<th>LCRA Board Meeting</th>
<th>Amount</th>
<th>Purpose</th>
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<tr>
<td>November 2003</td>
<td>$250,000</td>
<td>Implementation study</td>
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<tr>
<td>March 2005</td>
<td>$75,000</td>
<td>Implementation study</td>
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<tr>
<td>March 2006</td>
<td>$350,000</td>
<td>Spring 2006 on-farm conservation projects</td>
</tr>
<tr>
<td>November 2006</td>
<td>$500,000</td>
<td>Spring 2007 on-farm conservation projects</td>
</tr>
<tr>
<td>December 2007</td>
<td>$500,000</td>
<td>Spring 2008 on-farm conservation projects</td>
</tr>
<tr>
<td>December 2008</td>
<td>$350,000</td>
<td>Spring 2009 on-farm conservation projects</td>
</tr>
<tr>
<td>November 2009</td>
<td>$450,000</td>
<td>Spring 2010 on-farm conservation projects; Phase 1 of Garwood Measurement Project</td>
</tr>
<tr>
<td>May 2010</td>
<td>$300,000</td>
<td>Cost-share match for Gulf Coast Gate Rehabilitation Project grant</td>
</tr>
<tr>
<td>December 2010</td>
<td>$625,000</td>
<td>Spring 2011 on-farm conservation projects; Phase 2 of Garwood Measurement Project; Phase 1 of Gulf Coast Gate Rehabilitation Project</td>
</tr>
<tr>
<td>November 2011</td>
<td>$590,000</td>
<td>Spring 2012 on-farm conservation projects; Phase 3 of Garwood Measurement Project; Phase 2 of Gulf Coast Gate Rehabilitation Project</td>
</tr>
<tr>
<td>January 2013</td>
<td>$340,000</td>
<td>Spring 2013 on-farm conservation projects; Phase 3 of Gulf Coast Gate Rehabilitation Project – Oxea</td>
</tr>
<tr>
<td>March 2014</td>
<td>$400,000</td>
<td>Phase 4 of Gulf Coast Gate Rehabilitation Project – Western Canal System</td>
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<tr>
<td>May 2016</td>
<td>$430,000</td>
<td>Phase 5 of Gulf Coast Gate Rehabilitation Project – Western Canal System extension</td>
</tr>
<tr>
<td>August 2017</td>
<td>$300,000</td>
<td>Phase 6 of Gulf Coast Gate Rehabilitation Project – Eastern Canal System completion</td>
</tr>
</tbody>
</table>

Total $5,460,000
3.2 Fund Balance

Figure 3.1 shows the annual income, expenditures and current balance of the Agricultural Water Conservation Fund. The fund balance as of Dec. 31, 2018, was $2,041,222. Expenditures over the 2018 reporting period totaled $266,218. Total income over the 2018 reporting period was $502,341.

Figure 3.1 – Annual Agricultural Water Conservation Fund Income and Expenditures
4.0 FY 2020 Program and Budget

The FY 2020 outlook includes ongoing work on verification studies and analysis to scope a gate rehabilitation project in the Lakeside and Garwood irrigation divisions. This section discusses projects that are scheduled to be implemented during FY 2020.

4.1 FY 2020 Budget

The budget period for HB 1437 is LCRA’s fiscal year (July 1 through June 30). The proposed FY 2020 budget for the HB 1437 program is summarized in Table 4.1 and shows a total estimated budget of $30,000.

Table 4.1 – HB 1437 Budget for FY 2020

<table>
<thead>
<tr>
<th>Activity</th>
<th>Budget</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Planning for Lakeside/Garwood gate rehabilitation project</td>
<td>$10,000</td>
<td></td>
</tr>
<tr>
<td>2. Program management, communications, conservation verification and oversight</td>
<td>$20,000</td>
<td>Preparation of annual report; ongoing savings verification study updates.</td>
</tr>
<tr>
<td>Total</td>
<td>$30,000</td>
<td></td>
</tr>
</tbody>
</table>
About LCRA

The Lower Colorado River Authority serves customers and communities throughout Texas by managing the lower Colorado River; generating and transmitting electric power; providing a clean, reliable water supply; and offering access to nature at more than 40 parks, recreation areas and river access sites along the Texas Colorado River, from the Hill Country to the Gulf Coast. LCRA and its employees are committed to enhancing the lives of Texans through water stewardship, energy and community services. LCRA was created by the Texas Legislature in 1934. The organization neither levies taxes nor receives tax money. For more information, visit lcra.org.