The Board of Directors is composed of 15 members appointed to six-year terms by the governor with advice and consent of the Texas Senate. Directors represent counties in the electric and water service areas. The Board meets regularly to set strategic corporate direction for the general manager and staff, to approve projects and large expenditures, and to review progress on major activities and issues.
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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 2019. 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% 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 2019, HB 1437-funded projects conserved an estimated 12,800 acre-feet of water. The amount of water available for transfer in 2020 under no net loss is 12,637 acre-feet, a figure computed in accordance with the LCRA Water Contract Rules by averaging the amount of water conserved annually in 2017, 2018 and 2019. LCRA transferred 345 acre-feet of water to Williamson County in 2019 under the HB 1437 program. The most recent information from the Brazos River Authority indicates transfers are expected to reach approximately 2,300 acre-feet per year in 2020, then increase to 11,000 acre-feet per year by 2023 due to a short-term wholesale treated water agreement, declining to 8,200 acre-feet per year by 2024 and rising to 11,900 acre-feet per year by 2032.

2019 Activities

In 2019, LCRA finished the gate rehabilitation project in the Gulf Coast Irrigation Division, and began planning for the Garwood gate automation project.

Agricultural Water Conservation Fund

The balance in the Agricultural Water Conservation Fund as of Dec. 31, 2019, was $2.96 million. In 2019, the fund’s income totaled $540,310, and expenditures were $117,579.
Program Outlook for 2020
The 2020 program includes beginning the Garwood gate automation project and continued 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 2019. 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 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 2021.

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% 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%, which has remained unchanged.
- The LCRA 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, and one committee member from Colorado County was replaced in October 2018. The committee last met in November 2019, and unanimously confirmed support for funding the Garwood gate automation project with HB1437 funds.

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 LCRA Board at 25%) 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 2019, 345 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 February 2020, the Brazos River Authority presented updated water demand projections, which are higher overall in anticipation of an added contract with the City of Georgetown of 1,200 acre-feet starting in May 2020. The amount of water demand will increase by 7,200 acre-feet per year in 2023 and by 1,100 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 smaller allocations to the Liberty Hill Water Supply Corporation and the City of Georgetown. Larger transfers to Round Rock are projected to begin in 2021 at a rate of 3,900 acre-feet per year and increasing to 8,500 acre-feet per year by 2023 and 9,500 acre-feet per year by 2032. The City of Round Rock is working on a possible short-term treated wholesale water agreement with a neighboring entity that would increase their water usage temporarily and possibly require them to
transfer more water through HB 1437, resulting in the elevated demand from 2021-2023.

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 12,800 acre-feet conserved in 2019 in all three LCRA irrigation divisions.

In 2019, 9,914 acres of agricultural fields previously laser-leveled with matching funds from LCRA’s Agricultural Water Conservation Fund were in production and conserved approximately 4,560 acre-feet of water. LCRA did not provide any new funds for land leveling in 2019. 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 4,840 acre-feet in 2019.

**Water Available for Transfer**

Based on data from the last three years, there is 12,637 acre-feet of water available for transfer to Williamson County in 2020. 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 2023.

**Water Transferred**

In 2019, 345 acre-feet of water was transferred, which includes 331 acre-feet of water to Liberty Hill, and 14 acre-feet of construction water.

![Figure 1.2 – Water Transfers Under HB 1437](image)
No Net Loss Status
The “no net loss” chart (Table 1.1) summarizes HB 1437 availability. LCRA can presently satisfy demand for up to 12,637 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>
<th></th>
<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>
<td>0</td>
</tr>
<tr>
<td>2007</td>
<td>1,688</td>
<td>0</td>
<td>0</td>
<td>1,481</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2008</td>
<td>3,656</td>
<td>0</td>
<td>0</td>
<td>2,206*</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<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>
</tr>
<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>
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<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>
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<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>
<tr>
<td>2019</td>
<td>12,800</td>
<td>0</td>
<td>0</td>
<td>12,637</td>
<td>2,316</td>
<td>345</td>
<td>0</td>
</tr>
</tbody>
</table>

* Three-year rolling average
** Forecast for 2020, Letter from Brazos River Authority to LCRA, Feb. 14, 2020
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% 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.

Since 2014 in five phases, LCRA continued to rehabilitate gates in Gulf Coast based on availability of funding and irrigation division staff labor. The project was completed in 2019. Based on the success of this project, LCRA is proposing to automate gates in Garwood beginning in 2020.

Discussions are underway with Brazos River Authority regarding estimated current conservation savings and on potential infrastructure projects for meeting HB1437 requirements 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%), followed by Garwood (43%) and Gulf Coast (4%). 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% 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 2.1 – 2006-2013 Acres Leveled and HB 1437 Cost-Share Grants

<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><strong>Total</strong></td>
<td><strong>365</strong></td>
<td><strong>30,288</strong></td>
<td><strong>$9,682,255</strong></td>
<td><strong>$1,748,518</strong></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 2019 (Figure 2.1) was slightly lower than estimated, due to lower 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. Staff conducted a survey of Garwood customers in early 2020 and half of the customers who had land leveled fields indicated they plan to re-apply for EQIP, and the rest plan to continue to perform yearly land-grading maintenance.

<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.

2019 Gate Rehabilitation Project Results

In 2019, LCRA finished the last phase of the Gulf Coast Irrigation Division gate rehabilitation project to automate 12 additional gates on the Wadsworth line of the eastern canal system. Fifty seven main canal structures are now automated in the Gulf Coast canal system.

The combined gate rehabilitation projects are projected to save an estimated 4,840 acre-feet per year. In 2019, overflow volumes (excess water not needed for irrigation that is released out of the end of canal lines) were low throughout the system with only 14 acre-feet lost across all four measurement sites on the western canal system, and 136 acre-feet lost across all four measurement sites on the eastern canal system. Savings compared to overflow volumes before the gate rehabilitation project began are slightly higher than previous years at approximately 3,400 acre-feet.

Figure 2.2 shows an overview of all gate rehabilitation projects completed to date.
2.5 Garwood Gate Automation Project

The main canal gate structures in the Garwood Irrigation Division are unique compared to the other irrigation divisions because they already have metal slide gates in good condition. Staff proposed automating the existing gates using the same actuators as in the Gulf Coast gate rehabilitation project. In fall 2019, irrigation staff built an automated gate prototype in Garwood. The two-week pilot project was successful, and in November 2019, staff presented the project to automate 46 main canal gate structures in Garwood to the HB 1437 Agricultural Water Conservation Fund Advisory Committee. With the committee’s unanimous support for the project, LCRA added the three-year project to the LCRA FY 2021-2023 proposed budgets. In February 2020, LCRA submitted a grant proposal to the Texas Water Development board requesting funds to cover approximately one quarter of the project cost.

Figure 2.3 shows the sites planned for automation and the prioritization of which sites would be automated first. These structures will be integrated into the existing SCADA system developed for the Gulf Coast gate rehabilitation project.
2.6 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) was linked to xMap. This linked system significantly reduced the QA/QC that was previously required to match data between the GIS platform and the billing software and time spent by staff to re-draw field shapes that can now be copied from one year to the next. In early 2020, the structures data set also was upgraded to xMap.

Ongoing and Future Verification Studies

In 2019, staff received results from the updated model for the 2012-2016 conservation practice savings verification study in Garwood from the University of Wisconsin. The study found volumetric billing conditions and decreased levee density result in decreased water use. Due to the relatively wide range of the quantified savings estimate, staff is conducting another survey of Garwood customers to add 2017-2019 data to the study and increase the number of participants. Updated model results should be available in late 2020.

The 2019 irrigation season data for Gulf Coast continues to verify the success of the gate rehabilitation project, 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 at least five years of data is needed to statistically verify the savings estimate.

In 2018-2019, LCRA installed a total of 16 temporary water level monitoring devices at key check structure locations within the Lakeside and Garwood irrigation divisions. Irrigation division staff continue to find that having remote access to water flow data is a helpful tool to increase efficiency in managing canal water levels. Staff will continue to
gather data necessary to accurately identify which gate structures need to be automated in Lakeside to effectively manage water flow remotely within each canal system. This monitoring study is not funded through HB 1437, but the information gathered will be used to plan potential future projects that could be funded through HB 1437.
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% 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 2019 expenditures by project. It shows that 2019 expenditures totaled $117,579, which included $94,417 for the Gulf Coast gate rehabilitation project. Program administration and conservation verification expenditures were $23,161. The 2019 expenses in the Gulf Coast Gate Rehab column represent the final expenses for the Wadsworth line project on the eastern Gulf Coast canal system (see Section 2.4).

<table>
<thead>
<tr>
<th>Table 3.1 – HB 1437 Expenditures by Project</th>
<th>Leveling Grants and Other Administrative Costs</th>
<th>Garwood Project</th>
<th>Gulf Coast Gate Rehab</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Previous Expenditures 2003-2018</td>
<td>$2,754,690</td>
<td>$817,606</td>
<td>$1,503,063</td>
<td>$5,075,359</td>
</tr>
<tr>
<td>Expenditures in 2019</td>
<td>$23,161</td>
<td>$0</td>
<td>$94,417</td>
<td>$117,579</td>
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<tr>
<td>Total</td>
<td>$2,777,851</td>
<td>$817,606</td>
<td>$1,597,480</td>
<td>$5,192,938</td>
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</tbody>
</table>
There were no additional LCRA Board authorizations from the fund in 2019. Program expenditures through 2019 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. An additional authorization of $1.175 million is planned in May 2020 to cover the Garwood gate automation project.

**Table 3.2 – HB 1437 Board Approvals**

<table>
<thead>
<tr>
<th>LCRA Board Meeting</th>
<th>Amount</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 2003</td>
<td>$250,000</td>
<td>Implementation study</td>
</tr>
<tr>
<td>March 2005</td>
<td>$75,000</td>
<td>Implementation study</td>
</tr>
<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</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>
</tr>
<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, 2019, was $2,963,769. Expenditures over the 2019 reporting period totaled $117,579. Total income over the 2019 reporting period was $592,592. The TWDB grant for the Wadsworth gate project is included in this income.

Figure 3.1 – Annual Agricultural Water Conservation Fund Income and Expenditures
4.0 FY 2021 Program and Budget

The FY 2021 outlook includes ongoing work on verification studies and the beginning phase of the Garwood gate automation project (see section 2.5 for a detailed project description). This section discusses projects that are scheduled to be implemented during FY 2021.

4.1 Garwood Gate Automation Project

This project to automate 46 main canal gate structures in the Garwood Irrigation Division is expected to cost $1.1 million and will be completed in phases over three fiscal years, FY21-FY23. This project will complete automation of key canal gate structures necessary to remotely control the majority of canal flows in the Garwood canal system. Staff anticipates bringing an item authorizing funds to be allocated for this project from the HB 1473 Agricultural Water Conservation Fund to the LCRA Board in May 2020. In February 2020, staff submitted an grant application to TWDB for matching funds up to $244,744.

4.1 FY 2021 Budget

The budget period for HB 1437 is LCRA’s fiscal year (July 1 through June 30). The proposed FY 2021 budget for the HB 1437 program is summarized in Table 4.1 and shows a total estimated budget of $305,000.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Budget</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Garwood gate automation project phase 1</td>
<td>$280,000</td>
<td>This three-year project will be funded through one Board authorization to provide flexibility to complete it within two years, if possible.</td>
</tr>
<tr>
<td>2. Program management, communications, conservation verification and oversight</td>
<td>$25,000</td>
<td>Preparation of annual report; ongoing savings verification study updates.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$305,000</strong></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 outdoor adventures at more than 40 parks along the Colorado River from the Texas Hill Country to the Gulf Coast. LCRA and its employees are committed to fulfilling our mission to enhance the quality of life of the Texans we serve through water stewardship, energy and community service.

LCRA was created by the Texas Legislature in 1934 and receives no state appropriations. For more information, visit lcra.org.