

Texas Water Development Board

PROJECT FUNDING REQUEST

BOARD DATE: July 21, 2016

TEAM MANAGER: Nancy Richards

APPLICANT	Central Harris County Regional Water Authority
TYPE OF ASSISTANCE	\$12,585,000 Loan Transmission and Distribution Expansion \$2,905,000 Loan Second Source Transmission Lines Phase I
LEGAL PLEDGE	First Lien on the Water System Net Revenues

STAFF RECOMMENDATION

Approve No Action

ACTION REQUESTED

Approve by resolution a request from Central Harris County Regional Water Authority (Harris County) for 1) a \$12,585,000 multi-year low interest loan commitment from the State Water Implementation Revenue Fund for Texas to finance the Transmission and Distribution Expansion; and, 2) to amend Texas Water Development Board Resolution No.15-078 authorizing a \$2,905,000 increase in financial assistance from the State Water Implementation Revenue Fund for Texas for costs related to the Second Source Transmission Lines Phase I project.

BACKGROUND

Passed by the 83rd Legislature and approved by Texas voters through a constitutional amendment, the State Water Implementation Fund for Texas (SWIFT) and the State Water Implementation Revenue Fund for Texas (SWIRFT) were created to provide affordable, alternative financing options to develop projects that are recommended water management strategies in the State Water Plan. The program, referred to as SWIFT, provides financing through low interest loans, deferral of loan repayments, and incremental repurchase terms for projects with state ownership aspects. SWIFT projects presented for consideration have been scored and ranked utilizing a prioritization criteria outlined in Texas Administrative Code Title 31 §363.1304 and are included on the prioritized list of projects approved by the Board on April 11, 2016.

Project 51043: Transmission and Distribution Expansion

To meet the 2025 and 2035 Harris-Galveston Subsidence District groundwater reduction mandates, the Central Harris County Regional Water Authority (Authority) is purchasing additional surface water capacity in various regional water projects including the Luce Bayou, the expansion of the Northeast Water Purification Plant (Plant), and the Second Source Line

Multi-Year-Commitment	Expiration Date
\$9,270,000 Series 2016	December 31, 2016
\$21,650,000 Series 2017	December 31, 2017
\$5,235,000 Series 2018	December 31, 2018
\$6,600,000 Series 2019	December 31, 2019
\$3,560,000 Series 2020	December 31, 2020

Phases I and II. The Authority must also expand its internal distribution system to serve the following member districts: Harris County (HC) Municipal Utility District (MUD) 304, Fallbrook MUD, HC MUD 33, HC Utility District (UD) 16, and HC MUD 215. This loan is for the planning, acquisition, design and construction of the internal distribution expansion project, which primarily consists of meter stations and transmission lines that will provide surface water to these member districts.

Project 51021: Second Source Transmission Lines Phase I

The project consists of a 108-inch transmission pipeline jointly shared by the Authority, the City of Houston, and the North Harris County Regional Water Authority. The line will convey treated surface water approximately 17 miles east from the Plant to the City's Acres Homes Pump Station, terminating just west of IH-45. The City will manage the project.

Second Source Transmission Lines Phase I

Regional Partners

Entity	% share of project	Amount
City of Houston	15%	\$138,920,000
Central Harris Co. Regional Water Authority	5%	\$12,365,000
North Harris Co. Regional Water Authority	80%	\$339,990,000
Total	100%	\$491,275,000

FINANCIAL

Key Issues

The Authority received \$41,630,000 in loan from the SWIFT in FY 2015 to finance the planning, acquisition, design and construction of the Plant expansion and the Second Source Phases I and II water transmission lines. The Authority's new request for additional funds will bring the total SWIFT commitment to \$53,995,000. The Authority has also requested to amend the FY 2015 SWIFT commitment for the Second Source Phase I project in the amount of \$2,905,000 for FY2016.

The two other regional partners in this project, the City of Houston and North Harris County Regional Water Authority have also requested increases to their funding for the Second Source Transmission Lines Phase I project.

Multi-Year Commitment

The SWIFT program has the ability to offer applicants multi-year commitments. This flexibility allows Texas Water Development Board (TWDB) to manage program demand while allowing the applicant to fund large projects over time. Each annual commitment installment has its own expiration date and applicable subsidies will be applied for a maximum of five funding year cycles from the time of initial Board commitment.

The Authority has requested a multi-year commitment over a period of four years, 2016 through 2020. The subsidy rate of 20% applicable to 30 year loans will be applied through 2020.

Pledge and Repayment

The Authority is pledging a first lien on the net revenues of the water system to cover the proposed debt. The Authority will generate system net revenues sufficient for the payment of the

bonds through pumpage fees and other services fees assessed pursuant to the Authority's rules and regulations. The Authority has proposed an additional rate increase of \$0.50 per 1000 gallons over its current rates with the sale of the 2016 through 2020 SWIFT bonds. The Authority has also proposed additional rate increases of \$0.55 in 2019 and \$0.25 in 2021 for surface water and groundwater rates. The Authority will review its revenues on an annual basis to ensure that the necessary rates and charges are in place to repay the proposed debt services.

Cost Savings

Based on a 30-year maturity and current interest rates, the Authority could save approximately \$1,165,319 over the life of the \$9,270,000 Series 2016 loan.

Internal Risk Score

Staff assigns a risk score 2B to the Authority and the proposed projects, which means that the Authority repayment capacity is adequate.

The financial sustainability indicators for the water system are strong. These indicators show the Authority's short-term and long-term ability to repay the debt. The Authority's system produces net revenues of 1.94 times the annual debt service requirements for the first year of principal repayment. This coverage level indicates the flexibility to withstand unexpected expenses or declines in demand while still assuring repayment of debt. Additionally, the long term condition of the system is sound.

Overall, the Authority has been able to retain its revenues, as evidenced by average annual revenues of \$2,818,641 with a net income of \$1,117,465 over the last five years.

The Authority's socioeconomic indicators are higher than the State of Texas (State) overall and indicate a strong and healthy economy. The Authority's population serviced has remained constant since 2011 at 28,350, and is expected to remain at that level through 2021. The Authority's average median household income of \$53,822 is 102% of the median for the State overall of \$52,576. The Authority's median household income is based on the median household income of Harris County. The unemployment rate for the Authority and Harris County is 4.8% in comparison to the State's rate of 4.4%.

The Authority maintains good liquidity with cash and short-term investments equivalent to 2,884 days of operating expenses. Any amount over 250 days is considered to be a very high level of liquidity. Adequate liquidity provides greater stability to a utility system by providing the resources needed to cover short-term, unplanned needs.

The Authority's total outstanding per capita debt of \$1,502 with the proposed financing is considered to be low to moderate level of debt based on population serviced by the Authority's wholesale customers. The Authority's debt is paid by system revenues with their Top Ten customers representing 100% of the system revenues, but the stability of the Top Ten customer's and the long term contracts with those MUDs offset any concerns.

Although the Authority's proposed total TWDB debt will be \$53 million, when all funding is secured, the socioeconomic indicators of the service area are strong, as are the indicators for financial sustainability of the system. The Authority is therefore assigned a risk score of 2B.

LEGAL

Key Issues

None.

Conditions

Standard SWIFT, tax-exempt and net revenue conditions:

- Attachments:
1. Project Data Summary
 2. Debt Service Schedule
 3. Total Project Budget
 4. Engineering/Environmental Review/Budget Transmission/Distribution
 5. Engineering/Environmental Review/Budget-Second Source Line Phase I
 6. Resolution (16-)
 7. Water Conservation Review
 8. Location Map

Responsible Authority	Central Harris County Regional Water Authority	
Program	State Water Implementation Fund for Texas	
Commitment Codes	LM16039	Project No. 51043
	LM18039	
	LM19039	
	LM16021	Project No. 51004
Project Number	51043-Transmission & Distribution Expansion 51021-Second Source Transmission Line Phase I	
Intended Use Plan/Fund Year	2016	
Fund Number	361	
Type of Pledge	2	
Revenue Pledge Level	First	
Legal Description	\$12,585,000 Transmission and Distribution Expansion \$2,905,000 Second Source Transmission Lines Phase I CHCRWA Revenue Bonds, Proposed Series 2016	
Tax-Exempt or Taxable	Tax-Exempt	
Refinance	No	
Outlay Requirement	No	
Disbursement Method	Escrow	
Outlay Type	N/A	
Population	28,350	
Rural	No	
Water Connections	Wholesale Provider	
Wastewater Connections	N/A	
Qualifies as Disadvantaged	No	
Disadvantaged Level	9	
Clean Water State Revolving Fund Type	N/A	
Financial, Managerial and Technical Review Complete?	N/A	
SWIFT Financing Type	Low Interest Loan	
SWIFT Characteristics	N/A	
Phase Committing	Planning, Acquisition, Design and Construction	
Pre-Design	Yes	
Project Consistent with Water Plan	Yes	
Water Conservation Plan	N/A	
Water Rights Certification Required	N/A	
Internal Risk Score	2B	
External Ratings		
Standard and Poor's	Non-Rated	
Moody's	Non-Rated	
Fitch	Non-Rated	
Special Issues	Multi-year Funding Commitment	

Project Team

Team Manager	Nancy Richards
Financial Analyst	Charles R. Nichols
Engineering Reviewer	James Bronikowski
Environmental Reviewer	Jean Devlin
Attorney	Annette Mass

ISSUE BEING EVALUATED
FOR ILLUSTRATION PURPOSES ONLY
Central Harris County Regional Water Authority

\$9,270,000 CHCRWA Revenue Bonds, Proposed Series 2016

Dated Date: 11/30/2016
Delivery Date: 11/30/2016
First Interest: 2/1/2017
First Principal: 8/1/2018
Last Principal: 8/1/2046
Fiscal Year End: 12/31
Required Coverage: 1.0

Source: SWIFT-LOW-30YR
Rate: 2.78%
Insurance: No
Case: -
Admin.Fee: \$ -
Admin. Fee Payment Date: N/A

FISCAL YEAR	PROJECTED NET SYSTEM REVENUES	CURRENT DEBT SERVICE	PRINCIPAL PAYMENT	INTEREST RATE	\$9,270,000 ISSUE		TOTAL DEBT SERVICE	COVERAGE
					INTEREST PAYMENT	TOTAL PAYMENT		
2017	4,091,381	1,954,829	-	0.00%	151,540	151,540	2,106,369	1.94
2018	4,091,381	1,959,407	240,000	0.89%	226,367	466,367	2,425,774	1.69
2019	4,091,381	1,961,629	245,000	0.99%	224,231	469,231	2,430,860	1.68
2020	4,091,381	1,966,611	245,000	1.11%	221,806	466,806	2,433,417	1.68
2021	4,091,381	1,962,937	250,000	1.21%	219,086	469,086	2,432,023	1.68
2022	4,091,381	1,956,832	250,000	1.31%	216,061	466,061	2,422,893	1.69
2023	4,091,381	1,963,667	255,000	1.41%	212,786	467,786	2,431,453	1.68
2024	4,091,381	1,963,175	260,000	1.51%	209,191	469,191	2,432,366	1.68
2025	4,091,381	1,965,750	265,000	1.59%	205,265	470,265	2,436,015	1.68
2026	4,091,381	1,966,447	265,000	1.67%	201,051	466,051	2,432,498	1.68
2027	4,091,381	1,959,998	270,000	1.91%	196,626	466,626	2,426,624	1.69
2028	4,091,381	1,966,426	275,000	2.08%	191,469	466,469	2,432,895	1.68
2029	4,091,381	1,965,348	285,000	2.23%	185,749	470,749	2,436,097	1.68
2030	4,091,381	556,789	290,000	2.36%	179,393	469,393	1,026,182	3.99
2031	4,091,381	557,646	295,000	2.48%	172,549	467,549	1,025,195	3.99
2032	4,091,381	552,884	305,000	2.58%	165,233	470,233	1,023,117	4.00
2033	4,091,381	557,804	310,000	2.67%	157,364	467,364	1,025,168	3.99
2034	4,091,381	557,079	320,000	2.74%	149,087	469,087	1,026,166	3.99
2035	4,091,381	555,991	330,000	2.80%	140,319	470,319	1,026,310	3.99
2036	4,091,381	559,496	335,000	2.86%	131,079	466,079	1,025,575	3.99
2037	4,091,381	556,745	345,000	2.91%	121,498	466,498	1,023,243	4.00
2038	4,091,381	553,683	355,000	2.95%	111,459	466,459	1,020,142	4.01
2039	4,091,381	560,310	365,000	2.99%	100,986	465,986	1,026,296	3.99
2040	4,091,381	556,270	380,000	3.02%	90,073	470,073	1,026,343	3.99
2041	4,091,381	561,918	390,000	3.04%	78,597	468,597	1,030,515	3.97
2042	4,091,381	556,558	400,000	3.07%	66,741	466,741	1,023,299	4.00
2043	4,091,381	560,878	415,000	3.09%	54,461	469,461	1,030,339	3.97
2044	4,091,381	559,507	425,000	3.11%	41,637	466,637	1,026,144	3.99
2045	4,091,381	567,655	440,000	3.13%	28,420	468,420	1,036,075	3.95
2046	4,091,381	-	465,000	3.15%	14,648	479,648	479,648	8.53
		\$ 34,444,269	\$ 9,270,000		\$ 4,464,766	\$ 13,734,766	\$ 48,179,035	

AVERAGE (MATURITY) LIFE	17.33 YEARS
NET INTEREST RATE	2.779%
COST SAVINGS	\$1,165,319
AVERAGE ANNUAL REQUIREMENT	\$1,605,968

Disclaimer: This is a working document and is provided as a courtesy. All information contained herein, including the proposed interest rates, is subject to change upon further review of the TWDB in accordance with 31 Texas Administrative Code Chapters 363,371,375, or 384, as applicable.

ISSUE BEING EVALUATED
FOR ILLUSTRATION PURPOSES ONLY
Central Harris County Regional Water Authority

\$37,045,000 CHCRWA Revenue Bonds, Proposed Series 2017-2020

Dated Date:	11/30/2017	Source:	SWIFT-LOW-30YR
Delivery Date:	11/30/2017	Rate:	2.80%
First Interest:	2/1/2018	Insurance:	No
First Principal:	8/1/2019	Case:	-
Last Principal:	8/1/2046	Admin.Fee:	\$ -
Fiscal Year End:	12/31	Admin. Fee Payment Date:	N/A
Required Coverage:	1.0		

FISCAL YEAR	PROJECTED NET SYSTEM REVENUES	CURRENT DEBT SERVICE	PRINCIPAL PAYMENT	INTEREST RATE	\$37,045,000 ISSUE			TOTAL DEBT SERVICE	COVERAGE
					INTEREST PAYMENT	TOTAL PAYMENT	TOTAL DEBT		
2018	4,999,473	2,425,774	-	0.00%	615,004	615,004	3,040,778	1.64	
2019	4,999,473	2,430,860	1,000,000	0.99%	918,678	1,918,678	4,349,538	1.15	
2020	4,999,473	2,433,417	1,010,000	1.11%	908,778	1,918,778	4,352,195	1.15	
2021	4,999,473	2,432,023	1,025,000	1.12%	897,567	1,922,567	4,354,590	1.15	
2022	4,999,473	2,422,893	1,035,000	1.31%	886,077	1,921,077	4,343,970	1.15	
2023	4,999,473	2,431,453	1,050,000	1.41%	872,518	1,922,518	4,353,971	1.15	
2024	4,999,473	2,432,366	1,065,000	1.51%	857,713	1,922,713	4,355,079	1.15	
2025	4,999,473	2,436,015	1,080,000	1.59%	841,632	1,921,632	4,357,647	1.15	
2026	4,999,473	2,432,498	1,095,000	1.67%	824,460	1,919,460	4,351,958	1.15	
2027	4,999,473	2,426,624	1,115,000	1.91%	806,173	1,921,173	4,347,797	1.15	
2028	4,999,473	2,432,895	1,135,000	2.08%	784,877	1,919,877	4,352,772	1.15	
2029	4,999,473	2,436,097	1,160,000	2.23%	761,269	1,921,269	4,357,366	1.15	
2030	4,999,473	1,026,182	1,185,000	2.36%	735,401	1,920,401	2,946,583	1.70	
2031	4,999,473	1,025,195	1,215,000	2.48%	707,435	1,922,435	2,947,630	1.70	
2032	4,999,473	1,023,117	1,245,000	2.58%	677,303	1,922,303	2,945,420	1.70	
2033	4,999,473	1,025,168	1,275,000	2.67%	645,182	1,920,182	2,945,350	1.70	
2034	4,999,473	1,026,166	1,310,000	2.74%	611,139	1,921,139	2,947,305	1.70	
2035	4,999,473	1,026,310	1,345,000	2.80%	575,245	1,920,245	2,946,555	1.70	
2036	4,999,473	1,025,575	1,385,000	2.86%	537,585	1,922,585	2,948,160	1.70	
2037	4,999,473	1,023,243	1,425,000	2.91%	497,974	1,922,974	2,946,217	1.70	
2038	4,999,473	1,020,142	1,465,000	2.95%	456,507	1,921,507	2,941,649	1.70	
2039	4,999,473	1,026,296	1,510,000	2.99%	413,289	1,923,289	2,949,585	1.69	
2040	4,999,473	1,026,343	1,555,000	3.02%	368,140	1,923,140	2,949,483	1.70	
2041	4,999,473	1,030,515	1,600,000	3.04%	321,179	1,921,179	2,951,694	1.69	
2042	4,999,473	1,023,299	1,650,000	3.07%	272,539	1,922,539	2,945,838	1.70	
2043	4,999,473	1,030,339	1,700,000	3.09%	221,884	1,921,884	2,952,223	1.69	
2044	4,999,473	1,026,144	1,750,000	3.11%	169,354	1,919,354	2,945,498	1.70	
2045	4,999,473	1,036,075	1,805,000	3.13%	114,929	1,919,929	2,956,004	1.69	
2046	4,999,473	479,648	1,855,000	3.15%	58,433	1,913,433	2,393,081	2.09	
		\$ 46,072,672	\$ 37,045,000		\$ 17,358,258	\$ 54,403,258	\$ 100,475,930		

AVERAGE (MATURITY) LIFE	16.73 YEARS
NET INTEREST RATE	2.800%
COST SAVINGS	
AVERAGE ANNUAL REQUIREMENT	\$3,464,687

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Central Harris County Regional Water Authority
Total Funding

Budget Items	Previous SWIFT Commitment	Current SWIFT Request	Total SWIFT Funding
Construction			
Construction	\$0	\$7,990,700	\$7,990,700
Construction Total	\$0	\$7,990,700	\$7,990,700
Basic Engineering Services			
Planning	\$0	\$50,000	\$50,000
Design	\$0	\$50,000	\$50,000
Construction Engineering	\$0	\$200,000	\$200,000
Basic Engineering Services Total	\$0	\$300,000	\$300,000
Special Services			
Environmental	\$0	\$50,000	\$50,000
Special Services Total	\$0	\$50,000	\$50,000
Contingency			
Contingency	\$0	\$1,677,500	\$1,677,500
Contingency Total	\$0	\$1,677,500	\$1,677,500
Other			
Land/Easements Acquisition	\$0	\$296,000	\$296,000
Capacity Buy-In	\$35,385,500	\$2,379,512	\$37,765,012
Other Total	\$35,385,500	\$2,675,512	\$38,061,012
Fiscal Services			
Fiscal/Legal	\$6,244,500	\$2,796,288	\$9,040,788
Fiscal Services Total	\$6,244,500	\$2,796,288	\$9,040,788
Grand Total	\$41,630,000	\$15,490,000	\$57,120,000



**Central Harris Co Regional WA
51043 Central Harris County Regional
Water Authority Transmission and
Distribution Expansion
Engineering and Environmental Review**

Engineering:Key Issues:

None known at this time.

Project Need/Description

Project Need: The Central Harris County Regional Water Authority (Authority) has entered into contractual agreements with the City of Houston (City) to purchase treated surface water from the City's Northeast Water Purification Plant (Plant) for use in complying with the Harris-Galveston Subsidence District (Subsidence District) regulatory conversion requirements as detailed in the Authority's Groundwater Reduction Plan. In addition to the expansion of the Plant, a transmission pipeline will be built from the Plant to the Authority's service area boundary to provide treated surface water for the various type water districts and cities (collectively called MUDs) to facilitate compliance with the Subsidence District's regulatory conversion requirements.

Project Description: The Authority is seeking financial assistance for the planning, acquisition, design, and construction necessary to expand their internal water distribution system in order to provide treated surface water to its remaining member districts as required to meet the groundwater reduction plan mandates. This internal distribution expansion project primarily consists of two master meter stations and several 8 to 24-inch diameter transmission lines that will deliver the treated surface water to member district water plants.

**Project
Schedule:**

Project Task	Schedule Date
Closing	11/30/2016
Engineering Feasibility Report Completion (End of Planning Phase)	7/31/2018
Start of Construction	12/1/2018
Design Phase Complete	12/31/2019
Construction Completion	12/31/2022

**Environmental
Section:**Key Issues:

None known at this time.

Environmental Summary:

Pursuant to the requirements of 31 Texas Administrative Code (TAC) §363.14, all financial assistance shall be conditioned to read that funding for acquisition, design, and construction costs for specific project elements will not be released until the environmental review has been completed and a favorable Environmental Determination (ED) has been issued.


51043 - Transmission and Distribution Expansion

Budget Items	Current SWIFT Request	Local Funds	Total Project Costs
Construction			
Construction	\$7,990,700	\$350,000	\$8,340,700
Construction Total	\$7,990,700	\$350,000	\$8,340,700
Basic Engineering Services			
Planning	\$50,000	\$200,000	\$250,000
Design	\$50,000	\$375,000	\$425,000
Construction Engineering	\$200,000	\$0	\$200,000
Basic Engineering Services Total	\$300,000	\$575,000	\$875,000
Special Services			
Environmental	\$50,000	\$0	\$50,000
Surveying	\$0	\$120,000	\$120,000
Permits	\$0	\$50,000	\$50,000
Special Services Total	\$50,000	\$170,000	\$220,000
Contingency			
Contingency	\$1,677,500	\$0	\$1,677,500
Contingency Total	\$1,677,500	\$0	\$1,677,500
Other			
Land/Easements Acquisition	\$296,000	\$304,000	\$600,000
Other Total	\$296,000	\$304,000	\$600,000
Fiscal Services			
Fiscal/Legal	\$2,270,800	\$0	\$2,270,800
Fiscal Services Total	\$2,270,800	\$0	\$2,270,800
Grand Total	\$12,585,000	\$1,399,000	\$13,984,000



**Central Harris County Regional Water Authority
51021 Houston - SS Phase I
Engineering and Environmental Review**

Engineering:

Key Issues:

None known at this time.

Project Need/Description

Project Need: The need for surface water treatment facility infrastructure improvements follows the passage of rules and regulations issued by the Harris-Galveston Subsidence District (Subsidence District) to decrease groundwater usage and consequently increase surface water usage in the Subsidence District. Groundwater subsidence in the greater Houston area coupled with increasing water demands requires that the City of Houston and regional partners expand the existing Northeast Water Purification Plant (Plant). To accommodate the planned plant expansion, the City and both the North Harris County Regional Water Authority and Central Harris County Regional Water Authority will require a system to transport this increase in water supply to their service areas.

Project Description: The City and the Authorities are seeking financial assistance for the planning, design, and construction of a 108" shared transmission pipeline approximately 17 miles in length from the City's Plant to just west of IH 45. This pipeline will convey treated surface water from the Plant to the City and Authorities and allow them to supplement their current water supplies.

Project Schedule:

Project Task	Schedule Date
Closing	11/30/2016
Engineering Feasibility Report Completion (End of Planning Phase)	10/31/2016
Start of Construction	2/28/2017
Design Phase Complete	9/30/2025
Construction Completion	5/31/2028

Environmental Section:

Key Issues:

None known at this time.

Environmental Summary:

A Determination of No Effect (DNE) for this project was issued on February 25, 2016. As required by 31 Texas Administrative Code (TAC) §363.14, environmental review of the proposed project has been completed.



51021 - Second Source Transmission Line Phase I (108-inch)

Budget Items	Houston TWDB Funds	Central Harris County Regional Water Authority	North Harris County Regional Water Authority	TWDB Total Funds
Construction				
Construction	\$132,269,426	\$0	\$214,804,495	\$347,073,921
Construction Total	\$132,269,426	\$0	\$214,804,495	\$347,073,921
Basic Engineering Services				
Planning	\$77,356	\$0	\$8,056,049	\$8,133,405
Design	\$4,370,630	\$0	\$27,289,572	\$31,660,202
Construction Engineering	\$2,073,013	\$0	\$0	\$2,073,013
Basic Engineering Services Total	\$6,520,999	\$0	\$35,345,621	\$41,866,620
Special Services				
Environmental	\$0	\$0	\$399,843	\$399,843
Application	\$0	\$0	\$78,818	\$78,818
Project Management (by engineer)	\$0	\$0	\$3,523,164	\$3,523,164
Special Services Total	\$0	\$0	\$4,001,825	\$4,001,825
Contingency				
Contingency	\$0	\$0	\$34,484,441	\$34,484,441
Contingency Total	\$0	\$0	\$34,484,441	\$34,484,441
Other				
Capacity Buy-In	\$0	\$10,420,512	\$0	\$10,420,512
Land/Easements	\$0	\$0	\$13,500,100	\$13,500,100
Other Total	\$0	\$10,420,512	\$13,500,100	\$23,920,612
Fiscal Services				
Financial Advisor	\$0	\$0	\$764,284	\$764,284
Bond Counsel	\$0	\$0	\$1,106,924	\$1,106,924
Capitalized Interest	\$0	\$0	\$17,725,474	\$17,725,474
Fiscal/Legal	\$0	\$1,944,488	\$470,664	\$2,415,152
Bond Reserve Fund	\$0	\$0	\$16,851,888	\$16,851,888
Issuance Costs	\$129,575	\$0	\$934,284	\$1,063,859
Fiscal Services Total	\$129,575	\$1,944,488	\$37,853,518	\$39,927,581
Grand Total	\$138,920,000	\$12,365,000	\$339,990,000	\$491,275,000

A RESOLUTION OF THE TEXAS WATER DEVELOPMENT BOARD
AMENDING TEXAS WATER DEVELOPMENT BOARD RESOLUTION 15-078
AND
APPROVING AN APPLICATION FOR FINANCIAL ASSISTANCE TO CENTRAL HARRIS
COUNTY REGIONAL WATER AUTHORITY
IN THE FORM OF A MULTI-YEAR COMMITMENT
FROM THE STATE WATER IMPLEMENTATION REVENUE FUND FOR TEXAS
THROUGH THE PROPOSED PURCHASE OF \$15,490,000 CENTRAL HARRIS COUNTY
REGIONAL WATER AUTHORITY REVENUE BONDS,
PROPOSED SERIES 2016 THROUGH PROPOSED SERIES 2020

(16-)

WHEREAS, at its July 23, 2015 meeting, the Texas Water Development Board (TWDB), by TWDB Resolution No. 15-078, made a multi-year commitment to provide financial assistance to Central Harris County Regional Water Authority (Authority) from the State Water Implementation Revenue Fund for Texas (SWIRFT) through the TWDB's proposed purchase of \$41,630,000 Central Harris County Regional Water Authority Revenue Bonds Proposed Series 2015 through 2020 for Project Nos. 51023, 51021, and 51009; and

WHEREAS, the Authority has filed an application requesting that the TWDB amend TWDB Resolution No. 15-078 to increase the commitment in the amount of \$2,905,000 from the SWIRFT for Project No. 51021; and

WHEREAS, the Authority has filed an application for financial assistance in the amount of \$12,585,000 from SWIRFT to finance the planning, acquisition, design, and construction of Project No. 51043; and

WHEREAS, the Authority seeks an amendment to TWDB Resolution No. 15-078 for additional financial assistance for Project No. 51021,

WHEREAS the Authority seeks financial assistance for Project No. 51043 in the form of a multi-year commitment through the TWDB's proposed purchase of \$15,490,000 Central Harris County Regional Water Authority Revenue Bonds, Proposed Series 2016 through Proposed Series 2020 (together with all authorizing documents "Obligations"), all as is more specifically set forth in the application and in recommendations of the Executive Administrator's staff; and

WHEREAS, the Authority has offered a pledge of system revenue as sufficient security for the repayment of the Obligations; and

WHEREAS, the commitment is approved for funding under the TWDB's pre-design funding option, and initial and future releases of funds are subject to 31 TAC § 363.1307; and

WHEREAS, interest rate subsidies are available to the Authority at the following levels: 35% for a loan of a term of 20 years, 25% for a loan of a term of 21 to 25 years, and 20% for a loan of a term of 26 to 30 years. The interest rate subsidy applicable to each proposed series will be set through each financing agreement executed between the TWDB and the Authority, pursuant to this Resolution; and

WHEREAS, the TWDB hereby finds that the amendment to increase the commitment in the amount of \$2,905,000 for Project No. 51021, is reasonable and that the request is in the public interest and will serve a public purpose; and

WHEREAS, the TWDB hereby finds:

1. that TWDB Resolution No. 15-078 is amended as described above to reflect a commitment in the total amount of \$12,365,000 for Project No. 51021;
2. that all other terms and conditions of TWDB Resolution No. 15-078 shall remain in full force and effect as related to Project No. 51021;
3. that the application and assistance applied for meet the requirements of Texas Water Code, Chapter 15, Subchapters G and H and 31 TAC Chapter 363, Subchapters A and M;
4. that Project No. 51043 is a recommended water management strategy in the State Water Plan adopted pursuant to Texas Water Code § 16.051, in accordance with Texas Water Code § 15.474(a);
5. that the Authority satisfactorily completed any request by the Executive Administrator or a regional planning group for information relevant to the project, including a water infrastructure financing survey under Texas Water Code § 16.053(q), in accordance with 31 TAC § 363.1309(b)(2);
6. that the current water audit, if required by Texas Water Code § 16.0121, has been completed by the Authority and filed with the TWDB in accordance with 31 TAC § 358.6;
7. that the Authority has acknowledged its legal obligation to comply with any applicable requirements of federal law relating to contracting with disadvantaged business enterprises, and any applicable state law relating to contracting with historically underutilized businesses, in accordance with Texas Water Code § 15.435(h) and 31 TAC § 363.1309(b)(3); and
8. that the amendment to TWDB Resolution No. 15-078 to increase the commitment by \$2,905,000 is reasonable, is in the public interest and will serve a public purpose and the commitment will be made in accordance with the annual loan closing schedule as proposed below.

NOW THEREFORE, based on these findings, the TWDB resolves as follows:

1. The commitment made through TWDB Resolution No. 15-078 is amended to include an additional \$2,905,000 for Project No. 5102.
2. All other terms and conditions of TWDB Resolution No. 15-078 shall remain in full force and effect; and
3. The commitment made through TWDB Resolution No. 15-078 is amended to include a commitment made by the TWDB to the Central Harris County Regional Water Authority for financial assistance in the amount of \$15,490,000 from the State Water Implementation Revenue

Fund for Texas, to be evidenced by the TWDB's proposed purchase of Central Harris County Regional Water Authority Revenue Bonds as follows:

- a) \$9,270,000 Central Harris County Regional Water Authority Revenue Bonds, Proposed Series 2016, to expire on December 31, 2016;
- b) \$21,650,000 Central Harris County Regional Water Authority Revenue Bonds, Proposed Series 2017, to expire on December 31, 2017;
- c) \$5,235,000 Central Harris County Regional Water Authority Revenue Bonds, Proposed Series 2018, to expire on December 31, 2018;
- d) \$6,600,000 Central Harris County Regional Water Authority Revenue Bonds, Proposed Series 2019, to expire on December 31, 2019; and
- e) \$3,560,000 Central Harris County Regional Water Authority Revenue Bonds, Proposed Series 2020, to expire on December 31, 2020.

Further, the commitment made through TWDB Resolution No. 15-078 as hereby amended and described above consists of the following Projects:

- a) Project No. 51023 (Northeast Water Purification Plant Expansion) in the amount of \$22,655,000;
- b) Project No. 51021 (Second Source Transmission Line Phase I) in the amount of \$12,365,000;
- c) Project No. 51009 (Second Source Transmission Line Phase II) in the amount of \$9,515,000; and
- d) Project No. 51043 (Internal Transmission and Distribution Line Expansion) in the amount of \$12,585,000.

Such commitment as it relates to Project No. 51043 is conditioned as follows:

Standard Conditions:

- 1. this commitment is contingent on a future sale of bonds by the TWDB or on the availability of funds on hand;
- 2. this commitment is contingent upon the issuance of a written approving opinion of the Attorney General of the State of Texas stating that all of the requirements of the laws under which said Obligations were issued have been complied with; that said Obligations were issued in conformity with the Constitution and laws of the State of Texas; and that said Obligations are valid and binding obligations of the Authority;
- 3. this commitment is contingent upon the Authority's continued compliance with all applicable laws, rules, policies and guidance as these may be amended from time to time to adapt to a change in law, in circumstances, or any other legal requirement;
- 4. this commitment is contingent upon the Authority executing a separate financing agreement, approved as to form and substance by the Executive Administrator, and submitting that executed agreement to the TWDB consistent with the terms and conditions described in the financing agreement;

5. the Authority shall use a paying agent/registrar in accordance with 31 TAC § 363.42(c)(2), and shall require the paying agent/registrar to provide a copy, to the TWDB and to the TWDB's designated Trustee, of all receipts documenting debt service payments;

The Following Conditions Must Be Included in the Obligations:

6. the Obligations must provide that the Obligations can be called for early redemption only in inverse order of maturity, and on any date beginning on or after the first interest payment date which is 10 years from the dated date of the Obligations, at a redemption price of par, together with accrued interest to the date fixed for redemption;
7. the Obligations must include a provision wherein the Authority, or an obligated person for whom financial or operating data is presented to the TWDB in the application for financial assistance either individually or in combination with other issuers of the Authority's Obligations or obligated persons, will, at a minimum, regardless of the amount of the Obligations, covenant to comply with requirements for continuing disclosure on an ongoing basis substantially in the manner required by Securities and Exchange Commission (SEC) in 17 CFR § 240.15c2-12 (Rule 15c2-12) and determined as if the TWDB were a Participating Underwriter within the meaning of such rule, such continuing disclosure undertaking being for the benefit of the TWDB and the beneficial owners of the Authority's Obligations, if the TWDB sells or otherwise transfers such Obligations, and the beneficial owners of the TWDB's bonds if the Authority is an obligated person with respect to such bonds under SEC Rule 15c2-12;
8. the Obligations must contain a provision requiring the Authority to levy a tax and/or maintain and collect sufficient rates and charges to produce system revenues in an amount necessary to meet the debt service requirements of all outstanding obligations and to maintain the funds established and required by the Obligations;
9. the Obligations must include a provision requiring the Authority to use any loan proceeds from the Obligations that are determined to be surplus proceeds remaining after completion of the project for the following purposes as approved by the Executive Administrator: (1) deposit into the Interest and Sinking Fund or other debt service account for the payment of interest or principal on the Obligations owned by the TWDB; or (2) eligible costs for the project as authorized by the Executive Administrator;
10. the Obligations must contain a provision that the TWDB may exercise all remedies available to it in law or equity, and any provision of the Obligations that restricts or limits the TWDB's full exercise of these remedies shall be of no force and effect;
11. loan proceeds are public funds and, as such, the Obligations must include a provision requiring that these proceeds shall be held at a designated state depository institution or other properly chartered and authorized institution in accordance with the Public Funds Investment Act, Government Code, Chapter 2256, and the Public Funds Collateral Act, Government Code, Chapter 2257;
12. loan proceeds shall not be used by the Authority when sampling, testing, removing or disposing of contaminated soils and/or media at the project site. The Obligations shall include an

environmental indemnification provision wherein the Authority agrees to indemnify, hold harmless and protect the TWDB from any and all claims, causes of action or damages to the person or property of third parties arising from the sampling, analysis, transport, storage, treatment, recycling and disposition of any contaminated sewage sludge, contaminated sediments and/or contaminated media that may be generated by the Authority, its contractors, consultants, agents, officials and employees as a result of activities relating to the project to the extent permitted by law;

13. the Obligations must include a provision stating that the Authority shall report to the TWDB the amounts of project funds, if any, that were used to compensate historically underutilized businesses that worked on the project, in accordance with 31 TAC § 363.1312;
14. the Obligations must contain a provision that the TWDB will purchase the Obligations, acting through the TWDB's designated Trustee, and the Obligations shall be registered in the name of Cede & Co. and closed in book-entry form in accordance with 31 TAC § 363.42(c)(1);
15. the Obligations must include a provision prohibiting the Authority from using the proceeds of this loan in a manner that would cause the Obligations to become "private activity bonds" within the meaning of § 141 of the Internal Revenue Code as amended (Code) and the Treasury Regulations promulgated thereunder (Regulations);
16. the Obligations must provide that no portion of the proceeds of the loan will be used, directly or indirectly, in a manner that would cause the Obligations to be "arbitrage bonds" within the meaning of § 148(a) of the Code and Regulations, including to acquire or to replace funds which were used, directly or indirectly, to acquire Nonpurpose Investments (as defined in the Code and Regulations) which produce a yield materially higher than the yield on the TWDB's bonds that are issued to provide financing for the loan (Source Series Bonds), other than Nonpurpose Investments acquired with:
 - a. proceeds of the TWDB's Source Series Bonds invested for a reasonable temporary period of up to three (3) years after the issue date of the Source Series Bonds until such proceeds are needed for the facilities to be financed;
 - b. amounts invested in a bona fide debt service fund, within the meaning of § 1.148-1(b) of the Regulations; and
 - c. amounts deposited in any reasonably required reserve or replacement fund to the extent such amounts do not exceed the least of maximum annual debt service on the Obligations, 125% of average annual debt service on the Obligations, or 10 percent of the stated principal amount (or, in the case of a discount, the issue price) of the Obligations;
17. the Obligations must include a provision requiring the Authority take all necessary steps to comply with the requirement that certain amounts earned on the investment of gross proceeds of the Obligations be rebated to the federal government in order to satisfy the requirements of § 148 of the Code. The Obligations must provide that the Authority will:

- a. account for all Gross Proceeds, as defined in the Code and Regulations, (including all receipts, expenditures and investments thereof) on its books of account separately and apart from all other funds (and receipts, expenditures and investments thereof) and retain all records of such accounting for at least six years after the final Computation Date. The Authority may, however, to the extent permitted by law, commingle Gross Proceeds of its loan with other money of the Authority, provided that the Authority separately accounts for each receipt and expenditure of such Gross Proceeds and the obligations acquired therewith;
 - b. calculate the Rebate Amount, as defined in the Code and Regulations, with respect to its loan, not less frequently than each Computation Date, in accordance with rules set forth in § 148(f) of the Code, § 1.148-3 of the Regulations, and the rulings thereunder. The Authority shall maintain a copy of such calculations for at least six years after the final Computation Date;
 - c. as additional consideration for the making of the loan, and in order to induce the making of the loan by measures designed to ensure the excludability of the interest on the TWDB's Source Series Bonds from the gross income of the owners thereof for federal income tax purposes, pay to the United States the amount described in paragraph (b) above within 30 days after each Computation Date;
 - d. exercise reasonable diligence to assure that no errors are made in the calculations required by paragraph (b) and, if such error is made, to discover and promptly to correct such error within a reasonable amount of time thereafter, including payment to the United States of any interest and any penalty required by the Regulations;
18. the Obligations must include a provision prohibiting the Authority from taking any action that would cause the interest on the Obligations to be includable in gross income for federal income tax purposes;
 19. the Obligations must provide that the Authority will not cause or permit the Obligations to be treated as "federally guaranteed" obligations within the meaning of § 149(b) of the Code;
 20. the Obligations must provide that neither the Authority nor a related party thereto will acquire any of the TWDB's Source Series Bonds in an amount related to the amount of the Obligations to be acquired from the Authority by the TWDB;

Revenue Pledge

21. the Obligations must require the accumulation of a reserve fund of no less than average annual debt service requirements, to be accumulated in equal monthly installments over the initial sixty (60) months following the issuance of the Obligations;
22. if the Authority has existing revenue obligations with the same pledge of security as the proposed Obligations that will remain outstanding after any loan(s) made by the TWDB pursuant to this commitment, the Obligations must contain a provision providing that the lien or liens

securing the Obligations issued to the TWDB shall be at least on a parity with lien or liens securing such outstanding obligations;

23. the Obligations must contain a provision providing that additional revenue obligations may only be incurred if:

- (a) The Net Revenues of the Authority for the most recently completed Fiscal Year, or during any period of twelve (12) consecutive calendar months ending no more than ninety (90) days preceding the adoption of the resolution or order authorizing the issuance of such Additional Bonds, together with any funds then available on deposit in or to the credit of the Surplus Revenue Fund, were not less than 1.25 times the annual average of the principal and interest payments scheduled to become due on the Bonds and any Additional Bonds then outstanding and estimated to become due on such proposed Additional Bonds; or

- (b) The Authority has duly adopted revisions to its Service Fees and/or Pumpage Fees, effective at least sixty (60) days prior to the close of its most recent Fiscal Year or any other period of twelve (12) consecutive calendar months ending no more than ninety (90) days prior to the proposed date of issuance of such Additional Bonds, and the Authority has received a certificate executed by a certified public accountant or firm of certified public accounts to the effect that the Net Revenues of the Authority during such Fiscal Year or twelve-month period, if recalculated on the assumption that such revised Service Fees and/or Pumpage Fees had been in effect for the entirety of such Fiscal Year or twelve-month period, together with any funds then available on deposit in or to the credit of the Surplus Revenue Fund and any interest to be capitalized out of the proceeds of such proposed Additional Bonds, would have been no less than 1.25 times the annual average of the principal and interest payments scheduled to become due on the Bonds and any Additional Bonds then outstanding and estimated to become due on such proposed Additional Bonds; or

- (c) The Authority has received the written consent and approval to the issuance of such Additional Bonds from the Holders or beneficial owners of not less than two-thirds (2/3) in aggregate principal amount of the Bonds then outstanding.

Conditions to Close or for Release of Funds:

24. prior to closing, and if not previously provided with the application, the Authority shall submit executed contracts for engineering, and, if applicable, financial advisor and bond counsel contracts, for the project that are satisfactory to the Executive Administrator. Fees to be reimbursed under the contracts must be reasonable in relation to the services performed, reflected in the contract, and acceptable to the Executive Administrator;
25. prior to closing, when any portion of financial assistance is to be held in escrow or in trust, the Authority shall execute an escrow agreement or trust agreement, approved as to form and substance by the Executive Administrator, and shall submit that executed agreement to the TWDB;

26. prior to closing, the Authority's bond counsel must prepare a written opinion that states that the interest on the Obligations is excludable from gross income or is exempt from federal income taxation. Bond counsel may rely on covenants and representations of the Authority when rendering this opinion;
27. prior to closing, the Authority's bond counsel must prepare a written opinion that also states that the Obligations are not "private activity bonds." Bond counsel may rely on covenants and representations of the Authority when rendering this opinion;
28. the transcript must include a No Arbitrage Certificate or similar Federal Tax Certificate setting forth the Authority's reasonable expectations regarding the use, expenditure and investment of the proceeds of the Obligations; and
29. the transcript must include evidence that the information reporting requirements of § 149(e) of the Code will be satisfied. This requirement may be satisfied by filing an IRS Form 8038 with the Internal Revenue Service. In addition, the applicable completed IRS Form 8038 or other evidence that the information reporting requirements of § 149(e) have been satisfied must be provided to the Executive Administrator within fourteen (14) days of closing. The Executive Administrator may withhold the release of funds for failure to comply.

APPROVED and ordered of record this, the 21st day of July, 2016.

TEXAS WATER DEVELOPMENT BOARD

Bech K. Bruun, Chairman

DATE SIGNED: _____

ATTEST:

Jeff Walker
Executive Administrator

WATER CONSERVATION REVIEW

Entity: _____

Review date: _____

WATER CONSERVATION PLAN DATE: **Approvable** **Adopted**

	Total GPCD	Residential GPCD	Water Loss GPCD	Water Loss Percent
Baseline				
5-year Goal				
10-year Goal				

WATER LOSS AUDIT YEAR:

Total water loss (GPCD): _____ Total water loss (percent): _____ Wholesale Water
 Total no. of connections: _____ Length of mains (miles): _____ Connections per mile: _____
 If > 16 connections per mile and > 3,000 connections, Infrastructure Leakage Index (ILI): _____

WATER LOSS THRESHOLDS:

	Apparent Loss Gallons per connection per day	Real Loss Gallons per mile per day	Real Loss Gallons per connection per day	Apparent Threshold Gallons per connection per day	Real Threshold Gallons per mile per day	Real Threshold Gallons per connection per day
If population ≤ 10K, connections/mile < 32 :						
If population ≤ 10K, connections/mile ≥ 32 :						
If population > 10K :						

Does the applicant meet Water Loss Threshold requirements? Yes No NA

ADDITIONAL INFORMATION:

STAFF NOTES AND RECOMMENDATIONS:

DEFINITIONS

Adopted refers to a water conservation plan that meets the minimum requirements of the water conservation plan rules and has been formally approved and adopted by the applicant's governing body.

Apparent loss refers to unauthorized consumption, meter inaccuracy, billing adjustments, and waivers.

Approvable refers to a water conservation plan that substantially meets the minimum requirements of the water conservation plan rules but has not yet been adopted by the applicant's governing body.

Best Management Practices are voluntary efficiency measures that save a quantifiable amount of water, either directly or indirectly, and that can be implemented within a specific time frame.

GPCD means gallons per capita per day.

Infrastructure Leakage Index (ILI) is the current annual real loss divided by the unavoidable annual real loss (theoretical minimum real loss) and only applies to utilities with more than 5,000 connections, average pressure greater than 35 psi, and a connection density of more than 32 connections per mile. The **ILI** is recommended to be less than 3 if water resources are greatly limited and difficult to develop, between 3 and 5 if water resources are adequate to meet long-term needs but water conservation is included in long-term water planning, and between 5 and 8 if water resources are plentiful, reliable, and easily extracted. The **ILI** is recommended as a benchmarking tool, but until there is increased data validity of the variables used in the calculation, the **ILI** should be viewed with care.

NA means not applicable.

Produced water is the total amount of water purchased or produced by the utility.

Real loss comes from main breaks and leaks, storage tank overflows, customer service line breaks, and leaks.

Residential GPCD is the amount of water per capita used solely for residential use and ideally includes both single and multi-family customer use.

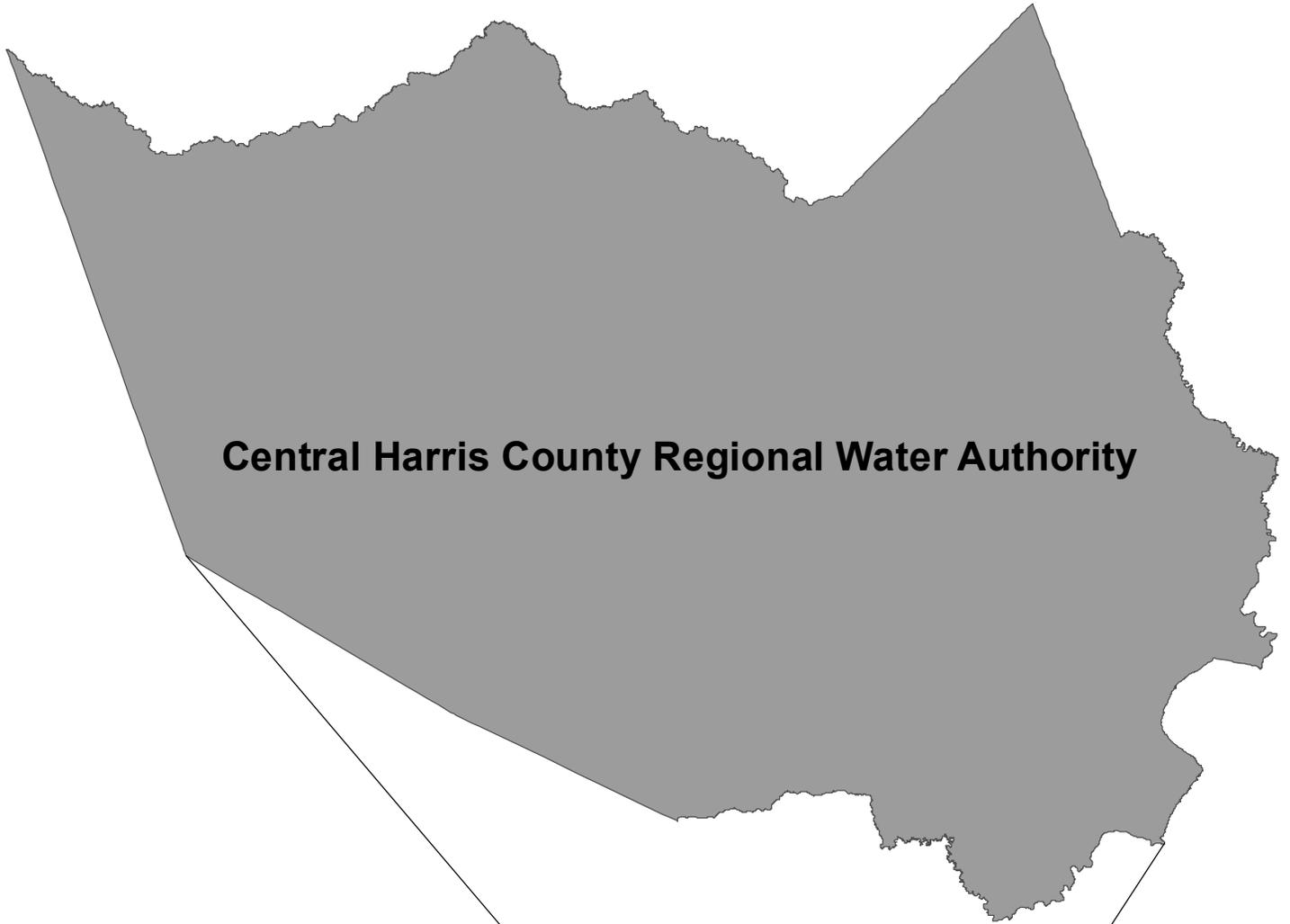
Total baseline GPCD is the amount of all water purchased or produced by the utility divided by the service area population and then divided by 365.

Total water loss is the sum of the apparent and real water losses.

Water loss is the difference between the input volume and the authorized consumption within a water system. Water Loss consists of real losses and apparent losses.

Water Loss Thresholds are levels of real and apparent water loss determined by the size and connection density of a retail public utility, at or above which a utility receiving financial assistance from the Texas Water Development Board must use a portion of that financial assistance to mitigate the utility's system water loss.

**Central Harris County Regional Water Authority,
Harris County**



Central Harris County Regional Water Authority

