

Texas Water Development Board

PROJECT FUNDING REQUEST

BOARD DATE: July 26, 2018

TEAM MANAGER: Nancy Richards

APPLICANT	City of Houston
TYPE OF ASSISTANCE	\$137,250,000 Northeast Water Purification Plant Expansion \$15,905,000 Second Source Transmission Line (108-inch)
LEGAL PLEDGE	Combined Utility System Revenue

STAFF RECOMMENDATION

Approve No Action

ACTION REQUESTED

Approve by resolution a request from the City of Houston (Harris County) to amend Texas Water Development Board Resolution No. 15-076, as amended by TWDB Resolution Nos. 15-130, 16-080 and 17-084, to authorize a \$153,155,000 increase in financial assistance from the State Water Implementation Revenue Fund for Texas for costs related to the Northeast Water Purification Plant Expansion and Second Source Transmission Line projects, and to modify the annual closing schedule.

BACKGROUND

Passed by the 83rd Texas 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 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 5, 2018.

Project Background: Northeast Water Purification Plant Expansion

The City of Houston (City) is a major water provider in Region H and will supply treated surface water to numerous municipalities, districts and areas outside of its current corporate limits. Many of these water user groups, as well as a significant amount of the City's own growth in surface water demand, are located in northern and western portions of Harris and Fort Bend Counties. The City and its four regional partners are co-funding the expansion of the City's Northeast Water Purification Plant to increase the plant's water

Commitment (includes new and previous commitments)	Expiration Date
\$170,265,000 Series 2018	December 1, 2018

treatment capacity from the current 80 million gallons per day (MGD) to 400 MGD. The need for surface water treatment facility infrastructure improvements follows the passage of rules and regulations issued by the Harris-Galveston Subsidence District to decrease groundwater usage and consequently increase surface water usage. This project is intended to serve an initial population of 2,230,006. The City serves as project manager and owns approximately 16 percent of the plant's capacity.

Project Background: Second Source Transmission Line (108-inch)

In order to move water from the Northeast Water Purification Plant across the City, the City, North Harris County Regional Water Authority, and Central Harris County Regional Water Authority are participating in construction of a 108-inch shared transmission pipeline. This pipeline, approximately 17 miles in length, will convey treated surface water from the plant to the City and the authorities' boundaries to allow them to supplement their current water supplies.

FINANCIAL

Key Issues

The City received \$296,125,000 in the 2015 SWIFT funding cycle to finance the planning, acquisition, design and construction of its SWIFT projects of which \$17,110,000 has not closed. The City is requesting an additional \$137,250,000 for the Northeast Water Purification Plant expansion and \$15,905,000 for the Second Source Transmission line due to progressions in the design stage as cost estimates are refined. The City has requested to move a \$17,110,000 Fiscal Year (FY) 2015 SWIFT multi-year commitment from FY 2019 to FY 2018, and include the costs as part of the City's 2018 SWIFT closing. The City intends to close all commitments in fall 2018. The City will use bond proceeds to fund the bond reserve requirement as they have done for prior Texas Water Development Board (TWDB) Bonds.

Pledge and Repayment

The City has pledged a subordinate lien on its Combined Utility System General Purpose fund. The pledge matches prior SWIFT financial assistance that was committed in 2015 and therefore will be on parity with the City's outstanding obligations under the SWIFT. The pledge will also be on parity with the City's payments to the Coastal Water Authority under the terms of their contract for the Luce Bayou Project (that is also funded with TWDB financial assistance through the SWIFT).

The Master Ordinance requires the City to maintain and collect rates that will produce net revenues at least equal to the greater of: (1) 1.20 times coverage of the maximum annual principal and interest requirements of all first lien bonds and any previous bond ordinance bonds; or (2) 1.10 times coverage of the maximum annual principal and interest requirements on all first lien bonds, second lien bonds, and any previous ordinance bonds. Each April, per City Ordinance, the City's Combined Utility System implements an annual rate adjustment to water and wastewater rates, which includes a review of system revenues to ensure sufficient revenues are available to meet all debt service requirements.

The attached debt service schedule reflects the impact of the issuance of the current \$17,110,000 FY 2015 commitment and the proposed 2018 funding request.

Cost Savings

Based on a 30-year maturity and current interest rates, the City could save approximately \$25,981,361 over the life of the \$170,265,000 Series 2018 closing, which includes the City's proposed movement of \$17,110,000 from 2019 into 2018.

Internal Risk Score

Staff assigns a 2A to the City and the proposed project to be funded by the TWDB. This means that the City's repayment capacity is strong. The risk score is based on staff analysis of the City's Combined Utility Revenues.

The financial indicators for the City are strong. These indicators are more heavily weighted than the other internal risk score factors and show the City's short-term and long-term ability to repay the debt. The City has a strong debt service coverage ratio, with utility system revenue available for debt representing 1.59 times the existing and proposed debt in the first year of principal repayment. Additionally, the long-term condition of the system is sound with an asset condition ratio of 27 years. An asset condition ration of 12 to 24 years is considered typical.

The City also scored well on other indicators showing the overall health of the City. The City has been able to retain its revenues, as evidenced by an increase in the fund balance over the last five years relative to revenues. In addition, taxable property in the City has been stable over the last five years. This has resulted in a strong net taxable assessed valuation per capita of \$102,610. A net taxable assessed valuation per capita of \$30,000 to \$65,000 is considered typical.

The City's socioeconomic indicators are average or below the state's median overall. The median household income of \$47,010 is 86 percent of the state's median. The City's unemployment rate of 4.2 percent is above the state average of 3.8 percent. On average, the residential user pays 1.67 percent of their annual income for water and sewer service. This is below the industry benchmark of 2 percent for two services.

The City maintains a liquidity position with cash and short-term investments equal to 791 days of operating expenses. An amount greater than 250 days is considered to be a strong level of liquidity. The high level of liquidity provides stability to the City by providing the resources needed to cover short-term, unplanned needs.

The City demonstrates strong management with the implementation of adequate rate covenants and with its annual review and adjustment of utility system rates. In addition, the City maintains ample cash, and is financially sound overall. The City is assigned a risk score of 2A.

LEGAL

Key Issues

All conditions from the original commitment will continue to apply to the additional funding granted in the current Resolution.

Conditions

Standard SWIFT, tax-exempt and net revenue conditions.

- Attachments:
1. Project Data Summary
 2. Debt Service Schedule
 3. Engineering/Environmental Reviews
 4. Total Budget/51021 Budget/51023 Budget
 5. Resolution (18-)
 6. Resolution (15-076)
 7. Resolution (15-130)
 8. Resolution (16-080)
 9. Resolution (17-084)
 10. Water Conservation Review
 11. Location Map

Project Data Summary

Responsible Authority	City of Houston
Program	State Water Implementation Fund for Texas
Commitment Codes	L18858-Project # 51023 L18859 Project #51021
Project Number	51023- Northeast Water Purification Plant Expansion 51021-108-inch Transmission Line Project
Intended Use Plan Year	N/A
Type of Pledge	2-Revenue
Revenue Pledge Level	Third
Legal Description	\$170,265,000 City of Houston Combined Utility System Subordinate Lien Revenue Bonds, Proposed Series 2018E
Tax-Exempt or Taxable	Tax-Exempt
Refinance	No
Outlay Requirement	No
Disbursement Method	Escrow/Trust
Outlay Type	N/A
Population	2,240,582
Rural	No
Water Connections	464,094
Wastewater Connections	449,492
Qualifies as Disadvantaged	No
Disadvantaged Level	9- N/A
Clean Water State Revolving Fund Type	N/A
Financial, Managerial and Technical Review Complete?	N/A
SWIFT Financing Type	Low-Interest Loan
SWIFT Characteristic	N/A
Phase Committing	Planning, Acquisition, Design, and Construction
Pre-Design	Yes
Project Consistent with Water Plan	Yes
Water Conservation Plan	Adopted
Water Rights Certification Required	N/A
Internal Risk Score	2A
External Ratings	
Standard and Poor's	General Purpose Fund(GPF) Non-Rated; AA+ Combined Utility System (CUS) Rating
Moody's	GPF Non-Rated; Aa2 CUS Rating
Fitch	GPF Non-Rated; AA+ CUS Rating
Special Issues	None

Project Team

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

ISSUE BEING EVALUATED
FOR ILLUSTRATION PURPOSES ONLY
City of Houston

\$170,265,000 City of Houston Combined Utility System Subordinate Lien Revenue Bonds, Proposed Series 2018E

Dated Date: 11/16/2018	Source: SWIFT-LOW-30YR
Delivery Date: 11/16/2018	Rate: 2.99%
First Interest: 5/15/2019	Insurance: No
First Principal: 11/15/2019	Case: Revenue
Last Principal: 11/15/2048	Admin.Fee: \$0
Fiscal Year End: 06/30	Admin. Fee Payment Date: N/A
Required Coverage: 1.0	

FISCAL YEAR	PROJECTED NET SYSTEM REVENUES	CURRENT DEBT SERVICE	\$170,265,000 ISSUE				TOTAL DEBT SERVICE	COVERAGE
			PRINCIPAL PAYMENT	INTEREST RATE	INTEREST PAYMENT	TOTAL PAYMENT		
2019	\$871,399,000	\$518,842,382	\$0	-	\$2,299,842	\$2,299,842	\$521,142,224	1.67
2020	871,399,000	539,423,895	3,975,000	1.43%	4,596,960	8,571,960	547,995,855	1.59
2021	871,399,000	560,547,129	4,035,000	1.53%	4,537,671	8,572,671	569,119,800	1.53
2022	871,399,000	578,252,438	4,100,000	1.62%	4,473,594	8,573,594	586,826,032	1.48
2023	871,399,000	599,355,462	4,165,000	1.67%	4,405,606	8,570,606	607,926,068	1.43
2024	871,399,000	618,132,512	4,240,000	1.74%	4,333,940	8,573,940	626,706,452	1.39
2025	871,399,000	637,844,158	4,315,000	1.85%	4,257,138	8,572,138	646,416,296	1.35
2026	871,399,000	656,175,265	4,400,000	1.96%	4,174,105	8,574,105	664,749,370	1.31
2027	871,399,000	674,878,032	4,485,000	2.03%	4,085,462	8,570,462	683,448,494	1.28
2028	871,399,000	694,403,613	4,580,000	2.07%	3,992,536	8,572,536	702,976,149	1.24
2029	871,399,000	716,947,691	4,680,000	2.15%	3,894,823	8,574,823	725,522,514	1.20
2030	871,399,000	746,221,566	4,785,000	2.31%	3,789,246	8,574,246	754,795,812	1.15
2031	871,399,000	759,360,356	4,900,000	2.45%	3,673,955	8,573,955	767,934,311	1.13
2032	871,399,000	781,596,180	5,025,000	2.56%	3,549,610	8,574,610	790,170,790	1.10
2033	871,399,000	804,069,373	5,155,000	2.67%	3,416,470	8,571,470	812,640,843	1.07
2034	871,399,000	826,720,269	5,300,000	2.75%	3,274,776	8,574,776	835,295,045	1.04
2035	871,399,000	673,071,786	5,450,000	2.83%	3,124,784	8,574,784	681,646,570	1.28
2036	871,399,000	694,378,498	5,605,000	2.90%	2,966,394	8,571,394	702,949,892	1.24
2037	871,399,000	701,042,447	5,775,000	2.96%	2,799,651	8,574,651	709,617,098	1.23
2038	871,399,000	648,570,314	5,945,000	3.01%	2,624,709	8,569,709	657,140,023	1.33
2039	871,399,000	668,010,457	6,130,000	3.05%	2,441,754	8,571,754	676,582,211	1.29
2040	871,399,000	631,290,823	6,320,000	3.09%	2,250,628	8,570,628	639,861,451	1.36
2041	871,399,000	654,975,498	6,520,000	3.12%	2,051,272	8,571,272	663,546,770	1.31
2042	871,399,000	643,081,676	6,730,000	3.14%	1,843,899	8,573,899	651,655,575	1.34
2043	871,399,000	650,283,745	6,945,000	3.17%	1,628,159	8,573,159	658,856,904	1.32
2044	871,399,000	637,633,304	7,170,000	3.19%	1,403,720	8,573,720	646,207,024	1.35
2045	871,399,000	624,557,239	7,400,000	3.22%	1,170,218	8,570,218	633,127,457	1.38
2046	871,399,000	607,853,017	7,645,000	3.24%	927,229	8,572,229	616,425,246	1.41
2047	871,399,000	589,633,476	7,895,000	3.26%	674,692	8,569,692	598,203,168	1.46
2048	871,399,000	581,686,023	8,160,000	3.28%	412,179	8,572,179	590,258,202	1.48
2049	871,399,000	536,393,338	8,435,000	3.30%	139,178	8,574,178	544,967,516	1.60
		\$20,255,231,962	\$170,265,000		\$89,214,195	\$259,479,195	\$20,514,711,157	

AVERAGE (MATURITY) LIFE	17.5 YEARS	Comm. Year
NET INTEREST RATE	2.995%	2015 \$ 17,110,000.00
COST SAVINGS	\$25,981,361	Proposed 2018 \$ 153,155,000.00 New
AVERAGE ANNUAL REQUIREMENT	\$661,764,876	\$ 170,265,000.00

Disclaimer: This is a working document and is provided as a courtesy. All information contained herein, including the proposed interest rate, 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. The TWDB does not function as a financial advisor to anyone in connection with this financing. The information contained in this document is used by TWDB staff to analyze the application for financing is illustrative only and does not constitute any guaranty of future rates. The TWDB makes no claim regarding the applicability of the information at closing, at which time actual rates will be set.



Houston
51021 Houston – Second Source Phase I
Engineering and Environmental Review

Engineering:

Key Issues:

The City of Houston is requesting additional financial assistance to cover its share of increased project costs.

Project Need/Description

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. To accommodate the planned Northeast Water Purification Plant (NEWPP) expansion, the City of Houston (City), North Harris County Regional Water Authority (NHCRWA) and Central Harris County Regional Water Authority (CHCRWA) will require a system to transport this water supply to their service areas.

Project Description: The City, NHCRWA, and CHCRWA 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 NEWPP to just west of IH 45. This pipeline will convey treated surface water from the plant to the City, NHCRWA, and CHCRWA to allow them to supplement their current water supplies.

Project Schedule:

Project Task	Schedule Date
Closing	11/16/2018
Start of Construction	7/31/2018
Design Phase Complete	9/30/2019
Construction Completion	7/31/2021

Environmental Section:

Key Issues:

None.

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 planning, 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 has been issued.

As required by 31 TAC § 363.14, the environmental review of the proposed project has been completed for several project segments. Favorable Environmental Determinations (ED) were issued on February 25, 2016, December 7, 2016, and February 20, 2018 for this project. In addition, the City must comply with the special conditions included in these findings.



**City of Houston
51023 Houston - NEWPP Expansion
Engineering and Environmental Review**

Engineering:

Key Issues:

The City of Houston is requesting additional financial assistance to cover its share of increased project costs.

Project Need/Description

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 (City) and regional partners expand the existing Northeast Water Purification Plant (NEWPP).

Project Description: The City along with the North Harris County Regional Water Authority, West Harris County Regional Water Authority, Central Harris County Regional Water Authority, and North Fort Bend Water Authority is seeking financial assistance for the planning, design, and construction of an expansion to the existing NEWPP that will increase the surface water intake and treated water production capacity from 80 million gallons per day (MGD) to 400 MGD. The expansion will provide the project participants with an additional surface water supply to help achieve the regulatory requirements of the Subsidence District and the Fort Bend Subsidence District that restrict groundwater usage.

Project Schedule:

Project Task	Schedule Date
Closing	11/16/2018
Start of Construction	12/31/2017
Design Phase Complete	12/31/2019
Construction Completion	1/31/2025

Environmental Section:

Key Issues:

None.

Environmental Summary:

As required by 31 Texas Administrative Code § 363.14, the environmental review of the proposed project has been completed. A favorable Environmental Determination was issued on November 14, 2016. In addition, the City must comply with the special conditions included in this finding.

**Houston
Total Funding**

Budget Items	Previous SWIFT Commitment	Current SWIFT Request	Total SWIFT Funding
Construction			
Construction	\$266,169,144	\$148,885,863	\$415,055,007
Construction Total	\$266,169,144	\$148,885,863	\$415,055,007
Basic Engineering Services			
Planning	\$1,579,777	\$0	\$1,579,777
Design	\$20,396,298	\$0	\$20,396,298
Construction Engineering	\$6,250,960	\$0	\$6,250,960
Basic Engineering Services Total	\$28,227,035	\$0	\$28,227,035
Fiscal Services			
Issuance Costs	\$1,114,966	\$4,269,137	\$5,384,103
Bond Reserve Fund	\$613,855	\$0	\$613,855
Fiscal Services Total	\$1,728,821	\$4,269,137	\$5,997,958
Grand Total	\$296,125,000	\$153,155,000	\$449,280,000

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

Total Costs

Budget Items	Houston TWDB Funds	Central Harris County Regional Water Authority	North Harris County Regional Water Authority	TWDB Total Funds
Construction				
Construction	\$143,447,680	\$0	\$214,804,495	\$358,252,175
Construction Total	\$143,447,680	\$0	\$214,804,495	\$358,252,175
Basic Engineering Services				
Planning	\$77,356	\$0	\$8,056,049	\$8,133,405
Design	\$7,972,959	\$0	\$27,289,572	\$35,262,531
Construciton Engineering	\$2,073,013	\$0	\$0	\$2,073,013
Basic Engineering Services Total	\$10,123,328	\$0	\$35,345,621	\$45,468,949
Special Services				
Environmental Application	\$0	\$0	\$399,843	\$399,843
Project Management (by engineer)	\$0	\$0	\$78,818	\$78,818
	\$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	\$613,855	\$0	\$16,851,888	\$17,465,743
Issuance Costs	\$640,137	\$0	\$934,284	\$1,574,421
Fiscal Services Total	\$1,253,992	\$1,944,488	\$37,853,518	\$41,051,998
Total	\$154,825,000	\$12,365,000	\$339,990,000	\$507,180,000

*The City of Houston's current funding request is allocated towards their share of construction and issuance costs.

Houston
51023 - Northeast Water Purification Plant Expansion Total Costs

Budget Items	Houston	North Fort Bend Water Authority	Central Harris County Regional Water Authority	North Harris County Regional Water Authority	West Harris County Regional Water Authority	TWDB Total Funds
Construction						
Construction	\$271,607,327	\$0	\$0	\$336,094,399	\$0	\$607,701,726
Construction Total	\$271,607,327	\$0	\$0	\$336,094,399	\$0	\$607,701,726
Basic Engineering Services						
Planning	\$1,502,421	\$0	\$0	\$36,387,839	\$0	\$37,890,260
Design	\$12,423,339	\$0	\$0	\$45,490,784	\$0	\$57,914,123
Construction						
Engineering	\$4,177,947	\$0	\$0	\$0	\$0	\$4,177,947
Project Management	\$0	\$0	\$347,203	\$28,817	\$0	\$376,020
Basic Engineering Services Total	\$18,103,707	\$0	\$347,203	\$81,907,440	\$0	\$100,358,350
Contingency						
Contingency	\$0	\$0	\$0	\$70,150,890	\$0	\$70,150,890
Contingency Total	\$0	\$0	\$0	\$70,150,890	\$0	\$70,150,890
Other						
Capacity Buy-In	\$0	\$370,283,978	\$29,169,242	\$187,626,758	\$397,700,000	\$984,779,978
Other Total	\$0	\$370,283,978	\$29,169,242	\$187,626,758	\$397,700,000	\$984,779,978
Fiscal Services						
Financial Advisor	\$0	\$645,886	\$0	\$2,772,842	\$0	\$3,418,728
Bond Counsel	\$0	\$399,498	\$0	\$3,822,770	\$0	\$4,222,268
Capitalized Interest	\$0	\$0	\$0	\$49,263,070	\$0	\$49,263,070
Fiscal/Legal	\$0	\$0	\$5,623,555	\$450,000	\$8,500,000	\$14,573,555
Bond Reserve Fund	\$0	\$0	\$0	\$40,841,831	\$0	\$40,841,831
Issuance Costs	\$4,743,966	\$0	\$0	\$900,000	\$0	\$5,643,966
Fiscal Services Total	\$4,743,966	\$1,045,384	\$5,623,555	\$98,050,513	\$8,500,000	\$117,963,418
Grand Total	\$294,455,000	\$371,329,362	\$35,140,000	\$773,830,000	\$406,200,000	\$1,880,954,362

*The City of Houston's current funding request is allocated towards their share of construction and issuance costs.

A RESOLUTION OF THE TEXAS WATER DEVELOPMENT BOARD AMENDING TEXAS
WATER DEVELOPMENT BOARD RESOLUTION NO. 15-076 AS AMENDED BY TEXAS
WATER DEVELOPMENT BOARD

RESOLUTION NOS. 15-130, 16-080, AND 17-084
TO PROVIDE ADDITIONAL FINANCIAL ASSISTANCE TO THE CITY OF
HOUSTON IN THE AMOUNT OF \$153,155,000

(18-)

WHEREAS, at its July 23, 2015, meeting, the Texas Water Development Board (TWDB), by TWDB Resolution No. 15-076, made a multi-year commitment to the City of Houston (City) for financial assistance in the amount of \$296,125,000 from the State Water Implementation Revenue Fund for Texas (SWIRFT), through the purchase of \$296,125,000 City of Houston, Texas Combined Utility System Revenue Bonds, all as is more specifically set forth in the TWDB's Resolution Nos. 15-076, 15-130, 16-080, 17-084 and accompanying documentation, to which documents express reference is made; and

WHEREAS, at its October 28, 2015, meeting, the TWDB, through Resolution No. 15-130, amended TWDB Resolution 15-076 to specify that the commitment made in TWDB Resolution No. 15-076 was based on a subordinate lien for the \$25,915,000 Series 2015E Bonds; and

WHEREAS, at its July 21, 2016, meeting, the TWDB, through Resolution No. 16-080 amended TWDB Resolution No. 15-076 as amended by TWDB Resolution No. 15-130, to accept a subordinate lien pledge on the remaining financial assistance to the City; modified the City's Annual Loan Closing Schedule for funding cycles 2016 through 2020; and delegated authority to the Executive Administrator to approve the movement of funds between the City's SWIFT Projects that were approved in TWDB Resolution No. 15-076; and

WHEREAS, at its July 20, 2017 meeting, the TWDB amended TWDB Resolution No. 15-076, as amended by TWDB Resolution Nos. 15-130 and 16-080, to modify the City's Annual Loan Closing Schedule to reflect an increase in funding in the amount of \$37,940,000 in 2017 and a decrease in funding in the same amount in 2018;

WHEREAS, the City seeks an amendment to TWDB Resolution No. 15-076, as amended by TWDB Resolution Nos. 15-130, 16-080, and 17-084, for additional financial assistance for Project Nos. 51021 and 51023 through the TWDB's proposed purchase of \$153,155,000 City of Houston, Texas Combined Utility System Revenue Bonds, Proposed Series 2018; and

WHEREAS, the City requests that the TWDB further amend TWDB Resolution No. 15-076, as amended by TWDB Resolution Nos. 15-130, 16-080, and 17-084, to modify the City's Annual Loan Closing Schedule to reflect an increase in funding in the amount of \$17,110,000 in 2018 which is the remaining amount of funding committed to the City; and

WHEREAS, the TWDB hereby finds that it is reasonable and within the public interest and will serve a public purpose to amend TWDB Resolution No. 15-076, as amended by TWDB Resolution Nos. 15-130, 16-080, and 17-084, to modify the City's Annual Loan Closing Schedule to reflect an increase in funding in the amount of \$153,155,000 and to permit the City to close on the remainder of the commitment in 2018; and

WHEREAS, in accordance with the Texas Water Code, the TWDB has carefully considered all matters required by law;

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

1. The annual loan closing schedule commitment that was made through TWDB Resolution No. 15-076, as amended by TWDB Resolution Nos. 15-130, 16-080, and 17-084, to the City of Houston for financial assistance from the State Water Implementation Revenue Fund for Texas is further amended as proposed below:
 - a. \$170,265,000 City of Houston, Texas Combined Utility System Subordinate Lien Revenue Bonds, Proposed Series 2018;
2. Further, the commitment as amended by this Resolution and described above consists of the following Projects:
 - a. Project No. 51023 (Northeast Water Purification Plant Expansion) in the amount of \$137,250,000; and
 - b. Project No. 51021 (Second Source Phase I) in the amount of \$33,015,000.

All other terms and conditions of TWDB Resolution No. 15-076 as amended by TWDB Resolution Nos. 15-130, 16-080, and 17-084, shall remain in full force and effect.

APPROVED and ordered of record this the 26th day of July, 2018.

TEXAS WATER DEVELOPMENT BOARD

Peter M. Lake, Chairman

DATE SIGNED: _____

ATTEST:

Jeff Walker, Executive Administrator

**A RESOLUTION OF THE TEXAS WATER DEVELOPMENT BOARD
APPROVING AN APPLICATION FOR FINANCIAL ASSISTANCE TO THE CITY OF HOUSTON
IN THE FORM OF A MULTI-YEAR COMMITMENT
FROM THE STATE WATER IMPLEMENTATION REVENUE FUND FOR TEXAS
THROUGH THE PROPOSED PURCHASE OF
\$296,125,000 CITY OF HOUSTON, TEXAS COMBINED UTILITY SYSTEM REVENUE BONDS
PROPOSED SERIES 2015 THROUGH PROPOSED SERIES 2020**

(15-076)

WHEREAS, the City of Houston, located in Harris County, Texas, (City) has filed an application for financial assistance in the amount of \$296,125,000 from the State Water Implementation Revenue Fund for Texas (SWIRFT), to finance the planning, design and construction of certain water supply projects identified below; and

WHEREAS, the City seeks financial assistance from the Texas Water Development Board (TWDB) in the form of a multi-year commitment through the TWDB's proposed purchase of \$296,125,000 City of Houston, Texas Combined Utility System Revenue Bonds, Proposed Series 2015 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 City has offered a pledge of net revenues of the combined utility system 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 the commitment is approved for an interest rate subsidy through December 31, 2019; and

WHEREAS, interest rate subsidies are available to the City at the following levels: 35.5% for loans of a term of 20 years, 27% for loans of a term of 25 years, and 22% for loans of a term of 30 years. The interest rate subsidy applicable to each proposed series will be set through each financing agreement executed between the TWDB and the City, pursuant to this Resolution; and

WHEREAS, the City is requesting a waiver of the requirement that a portion of the financial assistance received from the TWDB be used to mitigate the City's system water loss because the City is currently using TWDB funds to mitigate its water loss; and

WHEREAS, the TWDB hereby finds:

1. 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;
2. that the project 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);

3. that a water conservation plan, if required by Texas Water Code § 11.1271, has been submitted and implemented in accordance with 31 TAC § 363.1309(b)(1);
4. that the City 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);
5. that the current water audit, if required by Texas Water Code § 16.0121, has been completed by the City and filed with the TWDB in accordance with 31 TAC § 358.6;
6. that based on the conditions, as described above, the City is satisfactorily addressing the City's system water loss which warrants a waiver of the requirement that a portion of the financial assistance received from the TWDB be used to mitigate the City's system water loss in accordance with Texas Water Code § 16.0121 (g); and
7. that the City 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).

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

A commitment is made by the TWDB to the City of Houston for financial assistance in the amount of \$296,125,000 from the State Water Implementation Revenue Fund for Texas, to be evidenced by the TWDB's proposed purchase of City of Houston, Texas Combined Utility System Revenue Bonds, in accordance with the schedule proposed below:

- a) \$25,915,000 City of Houston, Texas Combined Utility System Revenue Bonds, Proposed Series 2015, to expire on December 31, 2015;
- b) \$31,400,000 City of Houston, Texas Combined Utility System Revenue Bonds, Proposed Series 2016, to expire on December 31, 2016;
- c) \$45,230,000 City of Houston, Texas Combined Utility System Revenue Bonds, Proposed Series 2017, to expire on December 31, 2017;
- d) \$161,150,000 City of Houston, Texas Combined Utility System Revenue Bonds, Proposed Series 2018, to expire on December 31, 2018;
- e) \$15,320,000 City of Houston, Texas Combined Utility System Revenue Bonds, Proposed Series 2019, to expire on December 31, 2019; and
- f) \$17,110,000 City of Houston, Texas Combined Utility System Revenue Bonds, Proposed Series 2020, to expire on December 31, 2020.

Further, the commitment described above consists of the following Projects:

- a) Project No. 51023 (North East Water Purification Plant Expansion) in the amount of \$183,635,000; and
- b) Project No. 51021 (Second Source Phase I) in the amount of \$112,490,000.

For the reasons stated above, the TWDB hereby waives the requirements of Texas Water Code § 16.0121(g).

Such commitment 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 City;
3. this commitment is contingent upon the City'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 City 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 City shall use a paying agent/registrar in accordance with 31 TAC Section 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 City, 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 City'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 City's Obligations, if the TWDB sells or otherwise transfers such Obligations, and the beneficial owners of the TWDB's bonds if the City is an obligated person with respect to such bonds under SEC Rule 15c2-12;

8. the Obligations must contain a provision requiring the City 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 City 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 City 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 City 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 City, 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 City 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 Section 363.42(c)(1);
15. the Obligations must include a provision prohibiting the City 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 of 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 City 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 City 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 City may, however, to the extent permitted by law, commingle Gross Proceeds of its loan with other money of the City, provided that the City 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 City 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 City 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 City 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 City 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 City by the TWDB;

Revenue Pledge

21. the Obligations shall contain a provision that the City will at all times maintain and collect sufficient rates and charges to produce net system revenues in each fiscal year at least equal to the greater of (A) (i) 120% of the combined debt service requirements scheduled to occur in such fiscal year on all Previous Ordinance Bonds and First Lien Bonds then outstanding; or (ii) 110% of the combined debt service requirements scheduled to occur in such fiscal year on all Previous Ordinance Bonds, First Lien and Subordinate Lien Bonds then outstanding, and (B) Net Revenues in each fiscal year at least equal to 100% of the combined debt service or contractual requirements scheduled to occur in such fiscal year on the Obligations and any other obligations (including contractual covenants) at parity with the Obligations, then outstanding, taking into account unrestricted accumulated Net Revenues from prior years in the General Purpose Fund;
22. if the City 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 shall contain a provision for the accumulation of a reserve fund equal to 50% of the maximum annual debt service requirements, to be accumulated in equal monthly installments over the initial sixty months following the issuance of the Obligations;
24. the Obligations shall contain a provision stating that no First lien or Subordinate lien bonds may be issued by the City unless net system revenues for the last completed fiscal year or any consecutive 12-month period out of the 18-month period immediately preceding the month in which the Supplemental Ordinance adopting such additional First Lien Bonds or additional Subordinate Lien Bonds was issued shall have been not less than the greater of (1) 120% of the combined maximum annual debt service requirements on all First Lien Bonds and any Previous Ordinance Bonds or (ii) 110% of the combined maximum annual debt service requirements on all

First Lien Bonds, Subordinate Lien Bonds and any Previous Ordinance Bonds, considering existing, outstanding bond ordinance language regarding calculation methodologies.

Conditions to Close or for Release of Funds:

25. prior to closing, the City shall submit documentation evidencing the adoption and implementation of sufficient system rates and charges or, if applicable, the levy of an interest and sinking tax rate sufficient for the repayment of all system debt service requirements;
26. prior to closing, and if not previously provided with the application, the City 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;
27. prior to closing, when any portion of financial assistance is to be held in escrow or in trust, the City 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;
28. prior to release of funds for acquisition, design or construction for specific project elements, the environmental review must be completed and a favorable environmental finding must have been issued;
29. prior to closing, the City'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 City when rendering this opinion;
30. prior to closing, the City'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 City when rendering this opinion;
31. the transcript must include a No Arbitrage Certificate or similar Federal Tax Certificate setting forth the City's reasonable expectations regarding the use, expenditure and investment of the proceeds of the Obligations;
32. 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;

PROVIDED, however, the commitment is subject to the following special conditions:

Special Conditions:

33. prior to the release of funds for the costs of planning, engineering, architectural, legal, title, fiscal, or economic investigation, studies, surveys, or designs for that portion of a project that proposes surface water or groundwater development, the Executive Administrator must either issue a written finding that the City has the right to use the water that the project financed by the TWDB will provide or a written determination that a reasonable expectation exists that such a finding will be made before the release of funds for construction; and
34. prior to the release of construction funds for that portion of a project that proposes surface water or groundwater development, the Executive Administrator must have issued a written finding that the City has the right to use the water that the project financed by the TWDB will provide.

APPROVED and ordered of record this, the 23rd day of July, 2015.

TEXAS WATER DEVELOPMENT BOARD



Bech K. Bruun, Chairman

DATE SIGNED: 7-23-15

ATTEST:



Kevin Patteson
Executive Administrator

**A RESOLUTION OF THE TEXAS WATER DEVELOPMENT BOARD
AMENDING TWDB RESOLUTION NO. 15-076
TO PROVIDE FINANCIAL ASSISTANCE TO THE CITY OF HOUSTON
IN THE AMOUNT OF \$296,125,000**

(15-130)

WHEREAS, at its July 23, 2015, meeting, the Texas Water Development Board (TWDB), by TWDB Resolution No. 15-076, made a multi-year commitment to the City of Houston for financial assistance in the amount of \$296,125,000 from the State Water Implementation Revenue Fund for Texas (SWIRFT), through the purchase of \$296,125,000 City of Houston, Texas Combined Utility System Revenue Bonds, all as is more specifically set forth in the TWDB's Resolution No. 15-076 and accompanying documentation, to which documents express reference is made; and

WHEREAS, TWDB Resolution No. 15-076 was based on a pledge of a first lien on the net revenues of the combined utility system; and

WHEREAS, the City intended to pledge a subordinate lien on the net revenues of the combined utility system for the \$25,915,000 Series 2015E Bonds; and

WHEREAS, TWDB Resolution No. 15-076, condition numbers twenty-one (related to the City's coverage requirements) and twenty-four (related to the City's additional bonds test), inadvertently refer to "Subordinate Lien Bonds" instead of "Second Lien Bonds"; and

WHEREAS, an amendment to TWDB Resolution No. 15-076 is therefore necessary to correspond with the City's Series 2015E Bond Ordinance; and

WHEREAS, the TWDB hereby finds that the amendment to modify the City's pledge from a first lien to a subordinate lien for the Series 2015E Bonds and the amendment to change the reference from "Subordinate Lien Bonds" to "Second Lien Bonds" in condition numbers twenty-one and twenty-four from the TWDB's commitment to the City are reasonable, are in the public interest, and will serve a public purpose; and

WHEREAS, in accordance with the Texas Water Code, the TWDB has carefully considered all matters required by law;

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

1. The commitment made through TWDB Resolution No. 15-076 to the City of Houston for financial assistance from the State Water Implementation Revenue Fund for Texas is based on a subordinate lien for the \$25,915,000 Series 2015E Bonds.
2. The commitment made through TWDB Resolution No. 15-076 to the City of Houston for financial assistance in the amount of \$296,125,000 from the State

Water Implementation Revenue Fund for Texas will reference "Second Lien Bonds" in place of "Subordinate Lien Bonds" in condition numbers twenty-one and twenty-four.

3. All other terms and conditions of TWDB Resolution No. 15-076 shall remain in full force and effect.

APPROVED and ordered of record this, the 28th day of October, 2015.

TEXAS WATER DEVELOPMENT BOARD



Bech Bruun

Bech Bruun, Chairman

DATE SIGNED: 10-28-15

ATTEST:

Kevin Patteson

Kevin Patteson
Executive Administrator

**A RESOLUTION OF THE TEXAS WATER DEVELOPMENT BOARD AMENDING
TEXAS WATER DEVELOPMENT BOARD RESOLUTION NO. 15-076 AS AMENDED
BY TEXAS WATER DEVELOPMENT BOARD RESOLUTION NO. 15-130
TO PROVIDE FINANCIAL ASSISTANCE TO THE CITY OF HOUSTON
IN THE AMOUNT OF \$296,125,000**

(16-080)

WHEREAS, at its July 23, 2015, meeting, the Texas Water Development Board (TWDB), by TWDB Resolution No. 15-076, as amended by TWDB Resolution No. 15-130, made a multi-year commitment to the City of Houston (City) for financial assistance in the amount of \$296,125,000 from the State Water Implementation Revenue Fund for Texas (SWIRFT), through the purchase of \$296,125,000 City of Houston, Texas Combined Utility System Revenue Bonds, all as is more specifically set forth in the TWDB's Resolution Nos. 15-076 and 15-130 and accompanying documentation, to which documents express reference is made; and

WHEREAS, at its October 28, 2015, meeting the TWDB, by Resolution No. 15-130, amended TWDB Resolution 15-076 to specify that the commitment made in TWDB Resolution No. 15-076 was based on a subordinate lien for the \$25,915,000 Series 2015 E Bonds; and

WHEREAS, by letter dated May 9, 2016, the City requested that the TWDB approve a subordinate lien pledge on the remaining \$270,210,000 of the TWDB commitment made in TWDB Resolution No. 15-076; and

WHEREAS, the TWDB hereby finds that it is reasonable and within the public interest and will serve a public purpose to amend TWDB Resolution No. 15-076, as amended by TWDB Resolution No. 15-130 to accept a subordinate lien pledge on the remaining \$270,210,000 of the TWDB commitment made in TWDB Resolution No. 15-076;

WHEREAS, by letter dated February 5, 2016, the City requested that the TWDB amend TWDB Resolution No. 15-076, to modify the City's Annual Loan Closing Schedule for funding cycles 2016 through 2020;

WHEREAS, the TWDB hereby finds that it is reasonable and within the public interest and will serve a public purpose to amend TWDB Resolution No. 15-076, as amended by TWDB Resolution No. 15-130, to modify the City's Annual Loan Closing Schedule to reflect an increase in funding in the amount of \$31,620,000 in 2016 and a decrease in funding in the same amount in 2018;

WHEREAS, the TWDB hereby finds that it is reasonable and within the public interest and will serve a public purpose to amend TWDB Resolution No. 15-076, as amended by TWDB Resolution No. 15-130, to adjust specific projects as originally budgeted in the commitment as proposed by the City; and

WHEREAS, the TWDB finds that due to the significant scope and complexity of the projects funded under this commitment there is reason to allow the Executive Administrator to

review and, where appropriate, to provide approval of the movement of funds between the projects funded by this commitment; and

WHEREAS, in accordance with the Texas Water Code, the TWDB has carefully considered all matters required by law;

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

1. The commitment made through TWDB Resolution No. 15-076, as amended by TWDB Resolution No. 15-130, to the City of Houston for financial assistance from the State Water Implementation Revenue Fund for Texas is now further amended to be based on a subordinate lien for the remaining \$270,210,000.
2. The commitment made through TWDB Resolution No. 15-076, as amended by TWDB Resolution No. 15-130, to the City of Houston for financial assistance from the State Water Implementation Revenue Fund for Texas is further amended and shall be evidenced by the TWDB's proposed purchase of \$63,020,000 City of Houston, Texas Combined Utility System Subordinate Lien Revenue Bonds, Proposed Series 2016.
3. The annual loan closing schedule commitment that was made through TWDB Resolution No. 15-076, as amended by TWDB Resolution No. 15-130, to the City of Houston for financial assistance from the State Water Implementation Revenue Fund for Texas is further amended as proposed below and will be reviewed by the Executive Administrator each funding cycle:
 - a. \$45,230,000 City of Houston, Texas Combined Utility System Subordinate Lien Revenue Bonds, Proposed Series 2017;
 - b. \$129,530,000 City of Houston, Texas Combined Utility System Subordinate Lien Revenue Bonds, Proposed Series 2018;
 - c. \$15,320,000 City of Houston, Texas Combined Utility System Subordinate Lien Revenue Bonds, Proposed Series 2019; and
 - d. \$17,110,000 City of Houston, Texas Combined Utility System Subordinate Lien Revenue Bonds, Proposed Series 2020.
4. Further, the commitment as amended by this Resolution and described above consists of the following Projects:
 - a. Project No. 51023 (Northeast Water Purification Plant Expansion) in the amount of \$157,205,000; and
 - b. Project No. 51021 (Second Source Phase I) in the amount of \$138,920,000.
5. The TWDB authorizes the Executive Administrator to review and where appropriate, to allow the budgets for Projects No. 51021 and 51023 to be modified to reflect an appropriate allocation of costs.

6. All other terms and conditions of TWDB Resolution No. 15-076 and TWDB Resolution No. 15-130 shall remain in full force and effect.

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

TEXAS WATER DEVELOPMENT BOARD



Bech K. Bruun

Bech K. Bruun, Chairman

DATE SIGNED: 7-21-16

ATTEST:

Jeff Walker

Jeff Walker
Executive Administrator

**A RESOLUTION OF THE TEXAS WATER DEVELOPMENT BOARD AMENDING
TEXAS WATER DEVELOPMENT BOARD RESOLUTION NO. 15-076 AS AMENDED BY
TEXAS WATER DEVELOPMENT BOARD RESOLUTION NOS. 15-130 AND 16-080
TO PROVIDE FINANCIAL ASSISTANCE TO THE CITY OF HOUSTON IN
THE AMOUNT OF \$296,125,000)**

(17-084)

WHEREAS, at its July 23, 2015, meeting, the Texas Water Development Board (TWDB), by TWDB Resolution No. 15-076, as amended by TWDB Resolution Nos. 15-130 and 16-080, made a multi-year commitment to the City of Houston (City) for financial assistance in the amount of \$296,125,000 from the State Water Implementation Revenue Fund for Texas (SWIRFT), through the purchase of \$296,125,000 City of Houston, Texas Combined Utility System Revenue Bonds, all as is more specifically set forth in the TWDB's Resolution Nos. 15-076, 15-130, 16-080, and accompanying documentation, to which documents express reference is made; and

WHEREAS, at its October 28, 2015 meeting the TWDB by Resolution No. 15-130, amended TWDB Resolution 15-076 to specify that the commitment made in TWDB Resolution No. 15-076 was based on a subordinate lien for the \$25,915,000 Series 2015E Bonds; and

WHEREAS, at its July 21, 2016 meeting the TWDB by Resolution No. 16-080 amended TWDB Resolution No. 15-076, as amended by TWDB Resolution No. 15-130, to (1) accept a subordinate lien pledge on the remaining financial assistance to the City; (2) modify the City's Annual Loan Closing Schedule for funding cycles 2016 through 2020; and (3) delegate authority to the Executive Administrator to approve the movement of funds between the City's SWIFT Projects approved in TWDB Resolution No. 15-076; and

WHEREAS, the City, by letter dated February 3, 2017, has requested that the TWDB further amend TWDB Resolution No. 15-076, as amended by TWDB Resolution Nos. 15-130 and 16-080, to modify the City's Annual Loan Closing Schedule reflecting an increase in funding in the amount of \$37,940,000 in 2017 and a corresponding decrease spread over the remaining years;

WHEREAS, the TWDB hereby finds that it is reasonable and within the public interest and will serve a public purpose to amend TWDB Resolution No. 15-076, as amended by TWDB Resolution Nos. 15-130 and 16-080, to modify the City's Annual Loan Closing Schedule to reflect an increase in funding in the amount of \$37,940,000 in 2017 and a corresponding decrease spread over the remaining years; and

WHEREAS, in accordance with the Texas Water Code, the TWDB has carefully considered all matters required by law.

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

1. The annual loan closing schedule commitment that was made through TWDB Resolution No. 15-076, as amended by TWDB Resolution Nos. 15-130 and 16-080, to the City of Houston for financial assistance from the State Water Implementation Revenue Fund for Texas is further amended as proposed below and will be reviewed by the Executive Administrator each funding cycle:
 - a. \$83,170,000 City of Houston, Texas Combined Utility System Subordinate Lien Revenue Bonds, Proposed Series 2017;
 - b. \$106,910,000 City of Houston, Texas Combined Utility System Subordinate Lien Revenue Bonds, Proposed Series 2018;
 - c. \$17,110,000 City of Houston, Texas Combined Utility System Subordinate Lien Revenue Bonds, Proposed Series 2019; and
 - d. \$0 City of Houston, Texas Combined Utility System Subordinate Lien Revenue Bonds, Proposed Series 2020.

2. Further, the commitment as amended by this Resolution and described above consists of the following Projects:
 - a. Project No. 51023 (Northeast Water Purification Plant Expansion) in the amount of \$157,205,000; and
 - b. Project No. 51021 (Second Source Phase I) in the amount of \$138,920,000.

3. All other terms and conditions of TWDB Resolution No. 15-076, as amended by TWDB Resolution Nos. 15-130 and 16-080, shall remain in full force and effect.

APPROVED and ordered of record this the 20th day of July, 2017.

TEXAS WATER DEVELOPMENT BOARD



Bech K. Bruun, Chairman

DATE SIGNED: 7-20-17

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.



City of Houston Harris County

