

CERTIFICATE FOR RESOLUTION

THE STATE OF TEXAS §

COUNTY OF HARRIS §

NORTH HARRIS COUNTY REGIONAL WATER AUTHORITY §

I, the undersigned Secretary of the Board of Directors (the "Board") of North Harris County Regional Water Authority (the "Authority"), hereby certify as follows:

1. The Board convened in regular session, open to the public, on the 3rd day of December, 2018, at the regular meeting place thereof, and the roll was called of the members of the Board, to-wit:

Alan J. Rendl	President
Kelly P. Fessler	Vice President
Lenox A. Sigler	Secretary
Ron Graham	Assistant Secretary
Jim Pulliam	Treasurer/Investment Officer

All members of the Board were present, except Director Pulliam, thus constituting a quorum. Whereupon, among other business, the following was transacted at such meeting:

RESOLUTION APPROVING AND IMPLEMENTING CAPITAL IMPROVEMENT PLAN FOR 2019 AND 2020

was duly introduced for the consideration of the Board. It was then duly moved and seconded that such Resolution be adopted; and, after due discussion, such motion, carrying with it the adoption of said Resolution, prevailed and carried by the following vote:

AYES: 4

NOES: 0

2. A true, full, and correct copy of the aforesaid Resolution adopted at the meeting described in the above and foregoing paragraph is attached to and follows this Certificate; such Resolution has been duly recorded in said Board's minutes of such meeting; the above and foregoing paragraph is a true, full, and correct excerpt from the Board's minutes of such meeting pertaining to the adoption of such Resolution; the persons named in the above and foregoing paragraph are the duly chosen, qualified, and acting officers and members of the Board as indicated therein; each of the officers and members of the Board was duly and sufficiently notified officially and personally, in advance of the time, place, and purpose of such meeting and that such Resolution would be introduced and considered for adoption at such meeting and each of such officers and members consented, in advance, to the holding of such meeting for such purpose; such meeting was open to the public, as required by law, and public notice of the time, place and purpose of such meeting was given as required by Chapter 551, Texas Government Code, as amended, and Section 49.063, Texas Water Code, as amended.

SIGNED AND SEALED the 3rd day of December, 2018.


Secretary, Board of Directors



**RESOLUTION APPROVING AND IMPLEMENTING
CAPITAL IMPROVEMENT PLAN FOR 2019 AND 2020**

STATE OF TEXAS §

COUNTY OF HARRIS §

NORTH HARRIS COUNTY REGIONAL WATER AUTHORITY §

WHEREAS, the North Harris County Regional Water Authority (the "Authority") is a governmental agency and body politic and corporate of the State of Texas created pursuant to Chapter 1029 (H.B. 2965), Acts of the 76th Texas Legislature 1999, amended by Chapter 1296 (H.B. 1110), Acts of the 77th Texas Legislature 2001, amended by Chapter 381 (S.B. 1725) and Chapter 248 (H.B. 1541), Acts of the 78th Texas Legislature 2003, amended by Chapter 1343 (S.B. 331), Acts of the 79th Texas Legislature 2005, amended by H.B. 2418, Acts of the 82nd Texas Legislature 2011, and amended by H.B. 3934, Acts of the 83rd Texas Legislature 2013 (collectively referred to as the "Act"), to accomplish the purposes provided by Section 59, Article XVI, Texas Constitution;

WHEREAS, the Authority was created in response to regulations promulgated by the Harris-Galveston Subsidence District (the "Subsidence District") to restrict the use of groundwater in Harris and Galveston Counties and thus limit subsidence, coastal inundation and local inland flooding along the Gulf Coast by, according to the regulations adopted on April 14, 1999, amended on September 12, 2001, June 9, 2010, January 9, 2013 and May 8, 2013, requiring non-exempt water utilities and independent well owners within the Subsidence District to prepare groundwater reduction plans acceptable to the Subsidence District, including the requirement to substantially convert the area from the use of groundwater to the use of surface water, or pay substantial penalties for continuing to use groundwater;

WHEREAS, Section 4.01(a) of the Act states that the Authority has all the rights, powers, privileges, authority, functions and duties necessary and convenient to accomplish the purposes of the Act, including those provided by Chapter 49, Texas Water Code, as amended;

WHEREAS, Section 4.01(b)(2) of the Act states that the Authority may, for the purposes of reducing groundwater withdrawals and subsidence, acquire or develop surface water or groundwater supplies from sources inside of or outside of the boundaries of the Authority and may conserve, store, transport, treat, purify, distribute, sell and deliver water to persons, corporations, municipal corporations, political subdivisions of the State and others ("Water Utilities") inside of and outside of the boundaries of the Authority;

WHEREAS, Section 4.01(b)(4) of the Act states that the Authority may coordinate water services provided inside of, outside of, or into the Authority;

WHEREAS, the Act provides that the Authority may, among various powers, implement and enforce a Groundwater Reduction Plan ("GRP") on behalf of all water utilities within the Authority, adopt regulations reducing reliance on groundwater, buy, sell and distribute water inside and outside the boundaries of the Authority and establish fees, rates, and charges and

classifications of fee and rate payers, as necessary to enable the Authority to fulfill the Authority's purpose and regulatory obligations under the Act;

WHEREAS, in accordance with the requirements of the Subsidence District's updated Regulatory Plan dated January 2013, which extended the 2020 and 2030 conversion deadlines back five (5) years to 2025 and 2035, respectively, with conversion requirements of 60% for 2025 and 80% for 2035, the Authority has updated and submitted its GRP to the Subsidence District and such updated GRP was approved by the Subsidence District on October 14, 2015;

WHEREAS, the Board of Directors (the "Board") of the Authority desires to move forward with the definition and initiation of the 2019-2020 Capital Improvement Plan (the "2019-2020 CIP") that focuses on enhancements to the Authority's 2010 surface water system to facilitate a continuous satisfactory level of conversion to surface water and the planning and initial development of the infrastructure needed to meet the Subsidence District's 2025 conversion mandate. Such infrastructure includes, but is not limited to the following: 1) continue maintenance and enhancements of the Authority's existing Regional Pump Station and Water Plant; 2) continue evaluating the need for additional regional water wells and enhancements to the 2010 System and take any necessary steps to optimize use of such system; 3) identify and purchase the sites for the third Regional Pump Station and second Regional Water Plant; 4) initiate design of the initial phase of the State Highway 249 Regional Pump Station; 5) initiate design and construction of the 2025 transmission line; 6) provide funding for the Authority's share of the cost for the major expansion of the NEWPP; 7) provide funding for the Authority's share of the cost of major rehabilitation, reconstruction and upgrading of the existing NEWPP; 8) provide funding for the Authority's share of the cost for acquisition of real estate and design of the proposed joint transmission line from the NEWPP site to the Authority's proposed 2025 transmission line; 9) pay the Authority's portion of the initial loan costs for the Luce Bayou Interbasin Diversion Project; 10) continue the planning, design and construction of the 2025 distribution system; 11) provide funding for chloramination credits; 12) provide funding to help encourage and facilitate implementation of reuse systems; and 13) provide professional services to perform the wide variety of activities required to implement the 2019-2020 CIP.

WHEREAS, in order to effectively implement these various activities/programs outlined above, the definition of the facilities needed, their estimated cost and a timetable authorizing the expenditures have been identified and placed in the 2019-2020 CIP, which will serve as the definition tool to facilitate the implementation of the various activities/programs;

WHEREAS, the Board of the Authority has reviewed the proposed 2019-2020 CIP for the two (2) year period of January 1, 2019 through December 31, 2020, attached hereto as **Exhibit "A,"** and desires to approve and authorize the implementation of the 2019-2020 CIP; and

WHEREAS, the Board recognizes that the proposed 2019-2020 CIP is a planning tool to be used by the Board, consultants and General Manager of the Authority to implement the Authority's updated GRP and other capital related improvements that the Authority proposes to undertake during the two (2) year period of January 1, 2019 through December 31, 2020.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE AUTHORITY AS FOLLOWS:

Section 1. The Board hereby finds that the facts recited in the recitals herein are true and correct in all material respects, and adopts the recitals as if set forth in full herein.

Section 2. This Resolution hereby approves the 2019-2020 CIP as set forth in **Exhibit "A,"** attached hereto, and approves the implementation of the 2019-2020 CIP to be used as a planning tool by the Board, General Manager and consultants of the Authority to identify the capital improvements, estimated costs and relative timetables that the Authority proposes to undertake for the two (2) year period of January 1, 2019 through December 31, 2020.

Section 3. This Resolution further authorizes the General Manager of the Authority to proceed with the implementation of the 2019-2020 CIP, with the understanding that certain revisions and/or adjustments to the 2019-2020 CIP project descriptions, project costs and project timetables may be required from time to time, as may be determined by the General Manager of the Authority, and the General Manager of the Authority is hereby authorized and directed to take any actions necessary and convenient to implement the 2019-2020 CIP.

Section 4. In order to fully effectuate the 2019-2020 CIP and provide flexibility for implementation of the 2019-2020 CIP, the General Manager is hereby authorized and directed to make the necessary decisions and take the necessary actions regarding the transfer and usage of funds from the various accounts of the Authority in connection with the funding of the various projects and activities included in the 2019-2020 CIP.

Section 5. The President or Vice President, the Secretary or any Assistant Secretary and/or the General Manager of the Authority are hereby authorized to execute and deliver all such documents, and to take all such actions, in the name of, and on behalf of, the Authority as they or any of them may deem necessary or appropriate to carry out and give effect to the intent of this Resolution.

Section 6. This Resolution shall be in full force and effect immediately upon its approval and adoption.

PASSED AND ADOPTED this 3rd day of December, 2018.

* * * * *



2019-2020

Capital Improvement

Plan

Adopted December 3, 2018

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SECTION I – INTRODUCTION

The North Harris County Regional Water Authority (the “Authority”) was created by the 76th Texas Legislature in 1999 and confirmed by a special public election in 2000. The Authority’s mission included finding and assuring a long-term supply of quality drinking water at the lowest responsible cost. The new entity was also charged with promoting water conservation, as well as maintaining regulatory compliance. This last assignment was critical because the Harris-Galveston Subsidence District (the “HGSD”) had published its 1999 Regulatory Plan requiring our area *to reduce groundwater withdrawals to no more than 20 percent of total water demand by the year 2030*. Since no individual MUD or well owner had the ability to convert to surface water on their own, the Authority became the single entity to negotiate for a secure, long-term supply of drinking water for all the municipal utility districts, small municipalities and other permitted well owners within its boundaries. Perhaps the most critical task was to develop and construct the infrastructure to bring that water to the subdivisions within the boundaries of the Authority. The Authority was not given taxing ability; rather funding for the conversion to surface water comes from pumpage fees charged to the well owners and the sale of surface water.

Several disincentives were built into the HGSD Regulatory Plan, including a \$3.00/1,000 gallons (groundwater pumped) “penalty” fee that would be triggered: 1) If the Groundwater Reduction Plan (the “GRP”) was not submitted and certified according to the timeline; 2) If construction had not begun on the surface water delivery infrastructure by 2005; and 3) If the mandated groundwater pumpage reductions were not accomplished within the 2010, 2020 and 2030 timelines. The HGSD has issued several revisions to their regulatory plan and the currently adopted plan, (HGSD 2013 Regulatory Plan), stipulates a 60% conversion by 2025 and 80% by 2035 while increasing the disincentive fee to \$9.00/1000 gallons for calendar year 2019. The Authority has met all applicable deadlines to date.

As the GRP was being developed, it became apparent that some water districts within the Authority were experiencing difficulty with either water quality or water quantity to meet accelerating demand. These districts would soon be forced to decide whether or not to drill a new well -- sometimes at a cost of more than a million dollars -- that may be minimally used once the area converted to surface water in 2010.

From the outset, the Authority’s cornerstone precept was fairness and equity among all water users within its boundaries, and promised that the overall cost of accommodating the HGSD mandate would be shared by everyone. Random drilling of new wells that were not ideally positioned to be incorporated into the long term distribution system was clearly not cost-effective. Recognizing this, the Authority initiated a bold new strategy to share existing groundwater supplies by ‘connecting’ the districts that had surplus capacity in their wells with the ones that needed additional water immediately. This innovative solution – called the Groundwater Transfer Program (the “GTP”) – involved constructing portions of the 2010 distribution lines significantly earlier than originally planned. The necessary components of the GTP were completed and the GTP was placed in operation in January

2006. After very successfully meeting its intended purpose, the GTP ended in June 2010 with the conversion to surface water by the involved districts.

The Authority's system was ready to begin delivering surface water in September 2009. However, the first districts did not begin to take surface water until February 2010. The remaining districts scheduled to receive surface water continued to come online as their chloramination facilities were ready with the last district coming on line in March 2011.

The HGSD updated its Regulatory Plan ("Plan") in January 2013. The updated Plan extended the 2020 and 2030 conversion deadlines each back five years to 2025 and 2035 respectively. Also the conversion requirements were reduced to 60% in 2025 and set at 80% for 2035. Additionally, existing certified GRPs were required to incorporate any changes required by the updated Regulatory Plan and be resubmitted for certification no later than July 1, 2014. The Authority submitted its updated GRP to the HGSD on June 26, 2014. The HGSD approved the Authority's updated GRP October 14, 2015.

In 2003, the Authority adopted its initial **Capital Improvement Plan** ("CIP") for years 2004-2005. The primary focus of that CIP, and the one following it, was to define and construct the infrastructure necessary to launch the GTP. Subsequent plans expanded on this foundation by outlining and implementing a broad-based program to provide the remainder of the infrastructure necessary to enable the initial conversion to surface water in 2010. The 2019-2020 Capital Improvement Plan (the "2019-2020 CIP") provides for enhancements to the 2010 system to facilitate a continuous satisfactory level of conversion to surface water and focuses on the planning and initial development of the infrastructure, especially those requiring coordination with other regional water providers and long delivery periods, needed to meet the HGSD 2025 conversion mandate.

SECTION II – THE 2019-2020 CAPITAL IMPROVEMENT PLAN

Overview

The 2019-2020 CIP continues the systematic planning and development process that began when the Authority's Board adopted the Authority's first CIP in 2003. The primary focus of the 2019-2020 CIP is to continue the planning and development of the infrastructure required to enable the Authority to meet the HGSD's 2025 conversion requirement.

Significant activities addressed in the 2019-2020 CIP are:

- Continue maintenance and enhancements of the Authority's existing Regional Pump Station and Water Plant.
- Continue evaluating the need for additional regional water wells and enhancements to the 2010 system and take necessary efforts to optimize use of the system.
- Identify and purchase the sites for the third Regional Pump Station and second Regional Water Plant.
- Initiate design and construction of the initial phase of the State Hwy. 249 Regional Pump Station.
- Initiate design and construction of the 2025 transmission line.
- Provide funding for the Authority's share of the major expansion of the Northeast Water Purification Plant (the "NEWPP").
- Provide funding for the Authority's share of the cost of major rehabilitation, reconstruction and upgrading of the existing NEWPP.
- Provide funding for the Authority's share of the cost for acquisition of real estate, design and construction of the proposed joint transmission line from the NEWPP site to the Authority's proposed 2025 transmission line.
- Pay the Authority's portion of the project costs for the Luce Bayou Interbasin Diversion Project.
- Continue the planning and design and construction of the 2025 distribution system.
- Provide funding for the Chloramination Credit.
- Provide funding to help encourage and facilitate implementation of reuse systems.
- Provide professional services to perform the wide variety of activities required to implement the 2019-2020 CIP.

Details on the specific projects are presented in *Appendix B*.

Considerations

The 2019-2020 CIP has been developed using the best, currently available information for the scope of each project along with cost information from a variety of sources, including cost experience from the Authority's projects completed to date. While the Authority's body of empirical cost data is expanding, especially in terms of water lines, the cost base is still evolving in several areas. Accordingly, the following points are offered to help keep the implementation of this 2019-2020 CIP in perspective:

- It is possible that conditions would evolve on a project that could materially impact the cost of the project.
- Real estate and construction costs can be and are influenced by variables over which the Authority has no control.
- It is common to experience unexpected costs in the implementation of a CIP. Provision of a contingency is the most practical way to attempt to address this issue.

Financial

While the 2004-2005 CIP used the best cost estimation available at the time, it did not have the benefit of building upon actual prior Authority project experience; instead, the costing was based on the general project definition presented in the GRP. As the actual design of the projects proceeded and the criteria within which the Authority needed to develop its projects became clearer, it has become possible to sharpen the definition of the projects. As a result, the ability to estimate the project costs has improved. The estimated costs included in the 2019-2020 CIP have been updated and/or based - wherever possible and practical - on experience gained thus far on actual Authority projects.

The proceeds from the Authority's Series 2003, 2005, 2008 and 2016 Senior Lien Revenue Bonds, capital contributions and interest earned (collectively called "Revenue Bonds") used to support the capital improvement plans total approximately \$503 million. The Authority also applied for, and was granted, financing through the Texas Water Development Board ("TWDB") via the State Water Implementation Fund for Texas ("SWIFT") program. For SWIFT program years 2015-2018 the TWDB has committed \$2.076 billion of financial support to the Authority.

As seen in the following table, approximately \$55 million of Revenue Bonds will be used to implement the 2019-2020 CIP. Additionally, approximately \$747 million of SWIFT funds are committed to implement the 2019-2020 CIP. The remaining approximately \$27 million of the near \$829 million needed to implement the 2019-2020 CIP will be funded through sources, To Be Determined, i.e. bonds, capital contributions, etc.

SUMMARY OF 2019-2020 CAPITAL IMPROVEMENT PLAN

Category	Authorizations ¹ (Thousands \$)		Fiscal Year Planned Authorizations (Thousands \$)		Total
	1/1/03-9/30/18	10/1/18-12/31/18	2019	2020	
Acquisition	20,973	690	6,265	10,765	38,693
Design	47,030		20,640	8,052	75,722
Construction	72,513		59,914	211,883	344,310
Equipment			20		20
Other	197,602	80,493	355,483	155,700	789,278
Total Authorizations	338,118	81,183	442,322	386,400	1,248,023
Source of Funds					
Revenue Bonds	176,534	849	43,477	11,957	232,817
SWIFT Funds	161,584	80,334	391,140	355,361	988,419
To Be Determined			7,705	19,082	26,787
Total Funds	338,118	81,183	442,322	386,400	1,248,023

¹ Total Authorizations are based upon current projects included in CIP 2019-2020.

APPENDIX A
GLOSSARY OF TERMS

Acquisition	Includes the cost to purchase land and easements and the acquisition services (i.e. ROW Services, appraisals, legal, etc.) required to accomplish the purchase
Authorization	Amount designated for or authorized for the performance of work, service, equipment or participation agreements - the values typically do not represent actual expenditure of funds
Design	Includes the cost for program management, project planning, design related services, design management and other engineering and planning activities
Construction	Includes the cost of the construction contract, contingencies, construction administration, construction observation and materials testing
Equipment	Includes the cost of any equipment that may be purchased separately from a construction contract
FWSD	Fresh Water Supply District
ID	Improvement District
MUD	Municipal Utility District
N/A	Not Applicable or Contingency C.I.P. Number
Other	A general category that may include participation commitments with other parties, acquisition, design, construction, equipment or any other relevant costs
PUD	Public Utility District
SWIFT	State Water Implementation Fund for Texas
UD	Utility District
VAR	Various districts or key map locations as applicable
WCID	Water Control & Improvement District

APPENDIX B
PROJECT DETAIL FORMS

**2019 – 2020
CAPITAL IMPROVEMENT PLAN**

**NORTH HARRIS COUNTY
REGIONAL WATER AUTHORITY**

Project: SPEARS ROAD REGIONAL PUMP STATION			District: VAR		C.I.P. Number: 2	
					Key Map: 372J	
Description: Project provides for the design, construction and upgrades/enhancements of this regional pump station.						
Category	Authorizations (Thousands \$)		Fiscal Year Planned Authorizations (Thousands \$)		Project Total	
	1/1/03-9/30/18	10/1/18-12/31/18	2019	2020		
Acquisition	5,924				5,924	
Design	3,465		101		3,566	
Construction	37,083		1,231		38,314	
Equipment			20		20	
Other			200	200	400	
Total Authorizations	46,472		1,552	200	48,224	
Source of Funds						
Revenue Bonds	46,472		1,552	200	48,224	
SWIFT Funds						
To Be Determined						
Total Funds	46,472		1,552	200	48,224	

Project: REGIONAL WELLS			District: VAR		C.I.P. Number: 3	
					Key Map: VAR	
Description: Project provides for the acquisition of well sites and design and construction of new wells and appurtenances and/or the purchase of existing wells. The wells will be constructed or purchased for emergency supplies of water as needed by the Authority to facilitate operation of its System.						
Category	Authorizations (Thousands \$)		Fiscal Year Planned Authorizations (Thousands \$)		Project Total	
	1/1/03-9/30/18	10/1/18-12/31/18	2019	2020		
Acquisition	3				3	
Design	120				120	
Construction						
Equipment						
Other			200	7,500	7,700	
Total Authorizations	123		200	7,500	7,823	
Source of Funds						
Revenue Bonds	123				123	
SWIFT Funds						
To Be Determined			200	7,500	7,700	
Total Funds	123		200	7,500	7,823	

**2019 – 2020
CAPITAL IMPROVEMENT PLAN**

**NORTH HARRIS COUNTY
REGIONAL WATER AUTHORITY**

Project: LOUETTA REGIONAL WATER PLANT		District: 2, 4	C.I.P. Number: 5		
			Key Map: 329R		
Description: Project provides for the design, construction and upgrades/enhancements of this regional water plant.					
Category	Authorizations (Thousands \$)		Fiscal Year Planned Authorizations (Thousands \$)		Project Total
	1/1/03-9/30/18	10/1/18-12/31/18	2019	2020	
Acquisition	967				967
Design	1,481		91		1,572
Construction	17,407		1,227		18,634
Equipment					
Other			100	100	200
Total Authorizations	19,855		1,418	100	21,373
Source of Funds					
Revenue Bonds	19,855		1,418	100	21,373
SWIFT Funds					
To Be Determined					
Total Funds	19,855		1,418	100	21,373

Project: WEST REGIONAL WATER PLANT		District: 1	C.I.P. Number: 21		
			Key Map: 368E		
Description: Project provides for the siting study and site acquisition for this regional pump station. This facility will be part of the 2035 Water Distribution and Transmission System.					
Category	Authorizations (Thousands \$)		Fiscal Year Planned Authorizations (Thousands \$)		Project Total
	1/1/03-9/30/18	10/1/18-12/31/18	2019	2020	
Acquisition			305	3,382	3,687
Design					
Construction					
Equipment					
Other					
Total Authorizations			305	3,382	3,687
Source of Funds					
Revenue Bonds					
SWIFT Funds					
To Be Determined			305	3,382	3,687
Total Funds			305	3,382	3,687

**2019 – 2020
CAPITAL IMPROVEMENT PLAN**

**NORTH HARRIS COUNTY
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Project: HARDY REGIONAL PUMP STATION	District: VAR	C.I.P. Number: 23
		Key Map: 333S

Description: Project provides for the siting study and site acquisition for this regional pump station. This facility will be part of the 2025 Water Distribution and Transmission System.

Category	Authorizations (Thousands \$)		Fiscal Year Planned Authorizations (Thousands \$)		Project Total
	1/1/03-9/30/18	10/1/18-12/31/18	2019	2020	
Acquisition		90	876	4,579	5,545
Design	70				70
Construction					
Equipment					
Other					
Total Authorizations	70	90	876	4,579	5,615
Source of Funds					
Revenue Bonds	70	90			160
SWIFT Funds			876	4,579	5,455
To Be Determined					
Total Funds	70	90	876	4,579	5,615

Project: SH 249 REGIONAL PUMP STATION	District: VAR	C.I.P. Number: 24
		Key Map: 370S

Description: Project provides for the design and construction of this regional pump station. This facility will be part of the 2025 Distribution and Transmission System.

Category	Authorizations (Thousands \$)		Fiscal Year Planned Authorizations (Thousands \$)		Project Total
	1/1/03-9/30/18	10/1/18-12/31/18	2019	2020	
Acquisition	4,625				4,625
Design	548		6,615		7,163
Construction	346			92,389	92,735
Equipment					
Other			500		500
Total Authorizations	5,519		7,115	92,389	105,023
Source of Funds					
Revenue Bonds	5,519				5,519
SWIFT Funds			7,115	92,389	99,504
To Be Determined					
Total Funds	5,519		7,115	92,389	105,023

**2019 – 2020
CAPITAL IMPROVEMENT PLAN**

**NORTH HARRIS COUNTY
REGIONAL WATER AUTHORITY**

Project: 2025 TRANSMISSION LINE		District: VAR	C.I.P. Number: 25		
			Key Map: VAR		
Description: Project provides for the acquisition, design and construction of a major transmission line generally located in the CenterPoint transmission corridor along North Beltway 8 from the City of Houston take point just west of IH45 to just west of State Hwy 249. This line will be part of the 2025 Water Distribution and Transmission System.					
Category	Authorizations (Thousands \$)		Fiscal Year Planned Authorizations (Thousands \$)		Project Total
	1/1/03-9/30/18	10/1/18-12/31/18	2019	2020	
Acquisition	6,028		4,394		10,422
Design	1,556		5,849		7,405
Construction				108,184	108,184
Equipment					
Other					
Total Authorizations	7,584		10,243	108,184	126,011
Source of Funds					
Revenue Bonds	7,170			1,056	8,226
SWIFT Funds	414		10,243	107,128	117,785
To Be Determined					
Total Funds	7,584		10,243	108,184	126,011

Project: WATER SUPPLY		District: ALL	C.I.P. Number: 26		
			Key Map: VAR		
Description: Provides funding to pay the City of Houston for water in accordance with the Authority's Water Supply Contract and Supplement No. 2 to the Contract with the City. Funding included herein will help pay for the Authority's portion of the cost to expand the Northeast Water Purification Plant (NEWPP). Additionally, funds will be used to pay the Authority's share of the cost of Major Rehabilitation, reconstruction and upgrading of the existing NEWPP.					
Category	Authorizations (Thousands \$)		Fiscal Year Planned Authorizations (Thousands \$)		Project Total
	1/1/03-9/30/18	10/1/18-12/31/18	2019	2020	
Acquisition					
Design	150		75	75	300
Construction					
Equipment					
Other	117,760	79,734	162,440	134,189	494,123
Total Authorizations	117,910	79,734	162,515	134,264	494,423
Source of Funds					
Revenue Bonds	25,012				25,012
SWIFT Funds	92,898	79,734	162,515	134,264	469,411
To Be Determined					
Total Funds	117,910	79,734	162,515	134,264	494,423

**2019 – 2020
CAPITAL IMPROVEMENT PLAN**

**NORTH HARRIS COUNTY
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Project: LUCE BAYOU INTERBASIN DIVERSION PROJECT		District: ALL	C.I.P. Number: 27		
			Key Map: VAR		
Description: Provides funding to pay the City of Houston for the Authority's portion of the project costs. The project will deliver surface water from the Trinity River to Lake Houston. The water will be treated by the City of Houston and then delivered to the Authority and other users.					
Category	Authorizations (Thousands \$)		Fiscal Year Planned Authorizations (Thousands \$)		Project Total
	1/1/03-9/30/18	10/1/18-12/31/18	2019	2020	
Acquisition					
Design					
Construction					
Equipment					
Other	3,867	373	1,787	2,216	8,243
Total Authorizations	3,867	373	1,787	2,216	8,243
Source of Funds					
Revenue Bonds	3,867	373	1,787	2,216	8,243
SWIFT Funds					
To Be Determined					
Total Funds	3,867	373	1,787	2,216	8,243

Project: 2025 DISTRIBUTION SYSTEM		District: VAR	C.I.P. Number: 28		
			Key Map: VAR		
Description: Project provides for the design, real estate acquisition and construction of the initial component(s) of the 2025 Distribution System.					
Category	Authorizations (Thousands \$)		Fiscal Year Planned Authorizations (Thousands \$)		Project Total
	1/1/03-9/30/18	10/1/18-12/31/18	2019	2020	
Acquisition	2,635	300	390		3,325
Design	8,563		759		9,322
Construction	8,082		57,456	11,310	76,848
Equipment					
Other					
Total Authorizations	19,280	300	58,605	11,310	89,495
Source of Funds2					
Revenue Bonds	15,290		29,575		44,865
SWIFT Funds	3,990	300	29,030	11,310	44,630
To Be Determined					
Total Funds	19,280	300	58,605	11,310	89,495

**2019 – 2020
CAPITAL IMPROVEMENT PLAN**

**NORTH HARRIS COUNTY
REGIONAL WATER AUTHORITY**

Project: CHLORAMINATION SYSTEMS	District: VAR	C.I.P. Number: 29
		Key Map: VAR

Description: Provides funding to pay a Chloramination Credit to Public Water Systems (the "PWSs") which receive surface water and converted to surface water. The Chloramination Credit is intended to reimburse the PWSs for the cost of chloramination facilities the PWSs constructed in order to use surface water.

Category	Authorizations (Thousands \$)		Fiscal Year Planned Authorizations (Thousands \$)		Project Total
	1/1/03-9/30/18	10/1/18-12/31/18	2019	2020	
Acquisition					
Design					
Construction					
Equipment					
Other	11,524	386	1,545	1,545	15,000
Total Authorizations	11,524	386	1,545	1,545	15,000
Source of Funds					
Revenue Bonds	11,524	386	1,545	1,545	15,000
SWIFT Funds					
To Be Determined					
Total Funds	11,524	386	1,545	1,545	15,000

Project: NORTHEAST TRANSMISSION LINE	District: VAR	C.I.P. Number: 30
		Key Map: VAR

Description: This is the line from the Northeast Water Purification Plant which will be built in two segments. The first segment will be a 120-inch line in which all four water authorities and the City of Houston will own capacity. The second segment will be a 108-inch line in which the City of Houston, North Harris County Regional Water Authority and the Central Harris County Regional Water Authority will own capacity. The City is responsible for designing, acquiring land/easements for the line and constructing the line.

Category	Authorizations (Thousands \$)		Fiscal Year Planned Authorizations (Thousands \$)		Project Total
	1/1/03-9/30/18	10/1/18-12/31/18	2019	2020	
Acquisition		300	300		600
Design					
Construction					
Equipment					
Other	64,167		179,261		243,428
Total Authorizations	64,167	300	179,561		244,028
Source of Funds					
Revenue Bonds					
SWIFT Funds	64,167	300	179,561		244,028
To Be Determined					
Total Funds	64,167	300	179,561		244,028

**2019 – 2020
CAPITAL IMPROVEMENT PLAN**

**NORTH HARRIS COUNTY
REGIONAL WATER AUTHORITY**

Project: 2025 Distribution System (Second Phase)			District: VAR	C.I.P. Number: 31	
				Key Map: VAR	
Description: Project provides for the design, real estate acquisition and construction of the initial components of the second phase of the 2025 Distribution System.					
Category	Authorizations (Thousands \$)		Fiscal Year Planned Authorizations (Thousands \$)		Project Total
	1/1/03-9/30/18	10/1/18-12/31/18	2019	2020	
Acquisition				2,804	2,804
Design			1,550	2,637	4,187
Construction					
Equipment					
Other					
Total Authorizations			1,550	5,441	6,991
Source of Funds					
Revenue Bonds					
SWIFT Funds			1,550	5,441	6,991
To Be Determined					
Total Funds			1,550	5,441	6,991

Project: City of Tomball			District: VAR	C.I.P. Number: 32	
				Key Map: VAR	
Description: Project provides for the design, real estate acquisition and construction of the 2025 Distribution System to the City of Tomball.					
Category	Authorizations (Thousands \$)		Fiscal Year Planned Authorizations (Thousands \$)		Project Total
	1/1/03-9/30/18	10/1/18-12/31/18	2019	2020	
Acquisition					
Design					
Construction					
Equipment					
Other			250	250	500
Total Authorizations			250	250	500
Source of Funds					
Revenue Bonds					
SWIFT Funds			250	250	500
To Be Determined					
Total Funds			250	250	500

**2019 – 2020
CAPITAL IMPROVEMENT PLAN**

**NORTH HARRIS COUNTY
REGIONAL WATER AUTHORITY**

Project: SYSTEM IMPROVEMENTS		District: VAR	C.I.P. Number: 100		
			Key Map: VAR		
Description: Project provides funding for possible required expansions or upgrades to the distribution system or transmission system, additional flushing hydrants, replacement flow control and/or metering station components, additional connection to districts receiving surface water, district backfill pilot systems, and other supplemental additions to facilitate the efficient operation of the Authority's System.					
Category	Authorizations (Thousands \$)		Fiscal Year Planned Authorizations (Thousands \$)		Project Total
	1/1/03-9/30/18	10/1/18-12/31/18	2019	2020	
Acquisition					
Design	591				591
Construction	4,678				4,678
Equipment					
Other	284		3,200	3,200	6,684
Total Authorizations	5,553		3,200	3,200	11,953
Source of Funds					
Revenue Bonds	5,553		2,000	1,000	8,553
SWIFT Funds					
To Be Determined			1,200	2,200	3,400
Total Funds	5,553		3,200	3,200	11,953

Project: CENTRAL CONTROL SYSTEM		District: VAR	C.I.P. Number: 101		
			Key Map: VAR		
Description: Project provides the design and construction of the Supervisory Control and Data Acquisition (SCADA) System, upgrades to same and related activities to facilitate the operation of the Authority's System.					
Category	Authorizations (Thousands \$)		Fiscal Year Planned Authorizations (Thousands \$)		Project Total
	1/1/03-9/30/18	10/1/18-12/31/18	2019	2020	
Acquisition	100				100
Design	2,274		100	100	2,474
Construction	4,917				4,917
Equipment					
Other			500	500	1,000
Total Authorizations	7,291		600	600	8,491
Source of Funds					
Revenue Bonds	7,291		600	600	8,491
SWIFT Funds					
To Be Determined					
Total Funds	7,291		600	600	8,491

**2019 – 2020
CAPITAL IMPROVEMENT PLAN**

**NORTH HARRIS COUNTY
REGIONAL WATER AUTHORITY**

Project: WATER REUSE		District: VAR	C.I.P. Number: 102		
			Key Map: VAR		
Description: Project provides for engineering and other services to support the Authority's Water Reuse efforts and an allowance to participate in water reuse projects.					
Category	Authorizations (Thousands \$)		Fiscal Year Planned Authorizations (Thousands \$)		Project Total
	1/1/03-9/30/18	10/1/18-12/31/18	2019	2020	
Acquisition					
Design	40			40	80
Construction					
Equipment					
Other			500	1,000	1,500
Total Authorizations	40		500	1,040	1,580
Source of Funds					
Revenue Bonds	40		500	1,040	1,580
SWIFT Funds					
To Be Determined					
Total Funds	40		500	1,040	1,580

Project: SUPPORT AND SPECIALTY		District: VAR	C.I.P. Number: 200		
			Key Map: VAR		
Description: Provides various support and specialty professional services such as program management, control surveying, well location assessments, corrosion protections analysis, surge analysis, GIS and pricing policy/model updates.					
Category	Authorizations (Thousands \$)		Fiscal Year Planned Authorizations (Thousands \$)		Project Total
	1/1/03-9/30/18	10/1/18-12/31/18	2019	2020	
Acquisition	691				691
Design	28,172		5,500	5,200	38,872
Construction					
Equipment					
Other					
Total Authorizations	28,863		5,500	5,200	39,563
Source of Funds					
Revenue Bonds	28,748		2,500	2,200	33,448
SWIFT Funds	115				115
To Be Determined			3,000	3,000	6,000
Total Funds	28,863		5,500	5,200	39,563

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CAPITAL IMPROVEMENT PLAN**

**NORTH HARRIS COUNTY
REGIONAL WATER AUTHORITY**

Project: CONTINGENCY			District: VAR		C.I.P. Number: N/A	
					Key Map: VAR	
Description: Provides funding for costs in excess of original program estimates and unexpected necessary expenses such as those to facilitate escalation of program components, to facilitate system operations and to enable payment of exceptional real estate judgements.						
Category	Authorizations (Thousands \$)		Fiscal Year Planned Authorizations (Thousands \$)		Project Total	
	1/1/03-9/30/18	10/1/18-12/31/18	2019	2020		
Acquisition						
Design						
Construction						
Equipment						
Other			5,000	5,000	10,000	
Total Authorizations			5,000	5,000	10,000	
Source of Funds						
Revenue Bonds			2,000	2,000	4,000	
SWIFT Funds						
To Be Determined			3,000	3,000	6,000	
Total Funds			5,000	5,000	10,000	