



*2017 -2018*

*Capital Improvement  
Plan*

**Adopted December 5, 2016**

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## INTRODUCTION

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The North Harris County Regional Water Authority (the “Authority”) was created by the 76<sup>th</sup> 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. (This disincentive fee was later raised to \$7.00/1,000 gal.) The Authority has met all of the 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. The 2017-2018 CIP defines several of the major components of the plan detailed in the Authority's updated GRP needed to facilitate continued compliance with the HGSD's conversion requirements.

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 2017-2018 Capital Improvement Plan (the "2017-2018 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 2017-2018 CAPITAL IMPROVEMENT PLAN**

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### **Overview**

The 2017-2018 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 2017-2018 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 2017-2018 CIP are:

- 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.
- Provide infrastructure to areas adjacent to the 2010 service area to facilitate continued compliance with HGSD mandates.
- Continue the planning and design and initiate construction of the 2025 distribution system.
- Initiate design of the initial phase of the State Hwy. 249 Regional Pump Station.
- Identify and purchase the sites for the third regional pump station and second regional water plant.
- 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 and the design 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 initial loan costs for the Luce Bayou Interbasin Diversion Project.
- 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 2017-2018 CIP.

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

### **Considerations**

The 2017-2018 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 2017-2018 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 2017-2018 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. As seen in the following table, approximately \$98 million of Revenue Bonds will be used to implement the 2017-2018 CIP. Additionally, approximately \$875 million of Texas Water Development Board State Water Infrastructure Fund for Texas ("SWIFT) funds are committed to implement the 2017-2018 CIP.

**SUMMARY OF 2017-2018 CAPITAL IMPROVEMENT PLAN**

Category	Authorizations <sup>1</sup> (Thousands)		Fiscal Year Planned Authorizations (Thousands)		Total
	1/1/03-9/30/16	10/1/16-12/31/16	2017	2018	
Acquisition	\$ 35,260	\$ 125	\$ 9,295	\$ 14,582	\$ 59,262
Design	63,395	2,594	19,942	12,497	98,428
Construction	242,991	4,173	60,983	148,291	456,438
Equipment					
Other	92,411	7,850	337,227	355,001	792,489
<b>Total Authorizations</b>	<b>\$ 434,057</b>	<b>\$ 14,742</b>	<b>\$ 427,447</b>	<b>\$ 530,371</b>	<b>\$ 1,406,617</b>
<b>Source of Funds</b>					
Revenue Bonds	\$ 405,705	\$ 7,513	\$ 53,416	\$ 36,725	\$ 503,359
SWIFT Funds	28,352	7,229	374,031	493,646	903,258
To Be Determined					
<b>Total Funds</b>	<b>\$ 434,057</b>	<b>\$ 14,742</b>	<b>\$ 427,447</b>	<b>\$ 530,371</b>	<b>\$ 1,406,617</b>

<sup>1</sup> Authorizations do not typically represent actual expenditures.

**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
UD	Utility District
VAR	Various districts or key map locations as applicable
WCID	Water Control & Improvement District

**APPENDIX B**  
**PROJECT DETAIL FORMS**

**2017 – 2018  
CAPITAL IMPROVEMENT PLAN**

**NORTH HARRIS COUNTY  
REGIONAL WATER AUTHORITY**

<b>Project:</b> SPEARS ROAD REGIONAL PUMP STATION	<b>District:</b> VAR	<b>C.I.P. Number:</b> 2
		<b>Key Map:</b> 372J

**Description:** Project provides for the siting study, site acquisition, design, construction and upgrades/enhancements of this regional pump station (Formerly called the T.C. Jester Regional Pump Station)

Category	Authorizations (Thousands)		Fiscal Year Planned Authorizations (Thousands)		Project Total
	1/1/03-9/30/16	10/1/16-12/31/16	2017	2018	
Acquisition	5,924				5,924
Design	3,457	0	146	214	3,817
Construction	37,083	0	1,719	1,597	40,399
Equipment					0
Other			200	200	400
<b>Total Authorizations</b>	46,464	0	2,065	2,011	50,540
<b>Source of Funds</b>					
Revenue Bonds	46,464	0	2,065	2,011	50,540
SWIFT Funds					
To Be Determined					
<b>Total Funds</b>	46,464	0	2,065	2,011	50,540

<b>Project:</b> REGIONAL WELLS	<b>District:</b> VAR	<b>C.I.P. Number:</b> 3
		<b>Key Map:</b> 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 as needed to augment supplies of water needed by the Authority to facilitate operation of its System.

Category	Authorizations (Thousands)		Fiscal Year Planned Authorizations (Thousands)		Project Total
	1/1/03-9/30/16	10/1/16-12/31/16	2017	2018	
Acquisition	3				3
Design	93				93
Construction					0
Equipment					0
Other			1,000	1,000	2,000
<b>Total Authorizations</b>	96		1,000	1,000	2,096
<b>Source of Funds</b>					
Revenue Bonds	96	0	1,000	1000	2,096
SWIFT Funds					
To Be Determined					
<b>Total Funds</b>	96	0	1,000	1,000	2,096

**2017 – 2018  
CAPITAL IMPROVEMENT PLAN**

**NORTH HARRIS COUNTY  
REGIONAL WATER AUTHORITY**

<b>Project:</b> LOUETTA REGIONAL WATER PLANT			<b>District:</b> 2, 4		<b>C.I.P. Number:</b> 5	
					<b>Key Map:</b> 329R	
<b>Description:</b> Project provides for the site acquisition, design, construction and upgrades/enhancements of this regional water plant.						
Category	Authorizations (Thousands)		Fiscal Year Planned Authorizations (Thousands)		Project Total	
	1/1/03-9/30/16	10/1/16-12/31/16	2017	2018		
Acquisition	967		210		1,177	
Design	1,481		100		1,581	
Construction	17,407		921		18,328	
Equipment	0		0		0	
Other	0		100	100	200	
<b>Total Authorizations</b>	19,855		1,331	100	21,286	
<b>Source of Funds</b>						
Revenue Bonds	19,855		1,331	100	21,286	
SWIFT Funds						
To Be Determined						
<b>Total Funds</b>	19,855	0	1,331	100	21,286	

<b>Project:</b> WEST REGIONAL WATER PLANT (formerly Telge Regional Water Plant)			<b>District:</b> 1		<b>C.I.P. Number:</b> 21	
					<b>Key Map:</b> 368E	
<b>Description:</b> 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	
	1/1/03-9/30/16	10/1/16-12/31/16	2017	2018		
Acquisition			245	2,350	2,595	
Design						
Construction						
Equipment						
Other						
<b>Total Authorizations</b>			245	2,350	2,595	
<b>Source of Funds</b>						
Revenue Bonds			245	2,350	2,595	
SWIFT Funds						
To Be Determined						
<b>Total Funds</b>			245	2,350	2,595	

**2017 – 2018  
CAPITAL IMPROVEMENT PLAN**

**NORTH HARRIS COUNTY  
REGIONAL WATER AUTHORITY**

<b>Project:</b> HARDY REGIONAL PUMP STATION			<b>District:</b> VAR	<b>C.I.P. Number:</b> 23	
				<b>Key Map:</b> 333S	
<b>Description:</b> 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
	1/1/03-9/30/16	10/1/16-12/31/16	2017	2018	
Acquisition			245	3,945	4,190
Design					
Construction					
Equipment					
Other					
<b>Total Authorizations</b>			245	3,945	4,190
<b>Source of Funds</b>					
Revenue Bonds			245	3,945	4,190
SWIFT Funds					
To Be Determined					
<b>Total Funds</b>	0	0	245	3,945	4,190

<b>Project:</b> SH 249 REGIONAL PUMP STATION			<b>District:</b> VAR	<b>C.I.P. Number:</b> 24	
				<b>Key Map:</b> 370S	
<b>Description:</b> Project provides for the siting study and site acquisition and 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
	1/1/03-9/30/16	10/1/16-12/31/16	2017	2018	
Acquisition	4,625				4,625
Design	548		6,684		7,232
Construction	346			92,134	92,480
Equipment					
Other					
<b>Total Authorizations</b>	5,519		6,684	92,134	104,337
<b>Source of Funds</b>					
Revenue Bonds	5,519				5,519
SWIFT Funds	0	0	6,684	92,134	98,818
To Be Determined	0				
<b>Total Funds</b>	5,519		6,684	92,134	104,337

**2017 – 2018  
CAPITAL IMPROVEMENT PLAN**

**NORTH HARRIS COUNTY  
REGIONAL WATER AUTHORITY**

<b>Project:</b> 2025 TRANSMISSION LINE (formerly 2020 TRANSMISSION LINE)			<b>District:</b> VAR	<b>C.I.P. Number:</b> 25	
				<b>Key Map:</b> VAR	
<b>Description:</b> Project provides for the acquisition, design and construction of a major transmission line generally located in the corridor along 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
	1/1/03-9/30/16	10/1/16-12/31/16	2017	2018	
Acquisition	6,028		4,536	4,536	15,100
Design	1,490		6,548		8,038
Construction				54,500	54,500
Equipment					
Other			100	100	200
<b>Total Authorizations</b>	7,518	0	11,184	59,136	77,838
<b>Source of Funds</b>					
Revenue Bonds	7,104				7,104
SWIFT Funds	414	0	11,184	59,196	70,794
To Be Determined					
<b>Total Funds</b>			11,184	59,196	77,898

<b>Project:</b> WATER SUPPLY			<b>District:</b> ALL	<b>C.I.P. Number:</b> 26	
				<b>Key Map:</b> VAR	
<b>Description:</b> 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
	1/1/03-9/30/16	10/1/16-12/31/16	2017	2018	
Acquisition					
Design	75	0	0	0	75
Construction					
Equipment					
Other	32,405	7,480	241,947	201,900	483,732
<b>Total Authorizations</b>	32,480	7,480	241,947	201,900	483,807
<b>Source of Funds</b>					
Revenue Bonds	24,761	251	2,025		27,037
SWIFT Funds	7,719	7,229	239,922	201,990	456,860
To Be Determined	0				
<b>Total Funds</b>	32,480	7,480	241,947	201,990	483,897

**2017 – 2018  
CAPITAL IMPROVEMENT PLAN**

**NORTH HARRIS COUNTY  
REGIONAL WATER AUTHORITY**

<b>Project:</b> LUCE BAYOU INTERBASIN DIVERSION PROJECT			<b>District:</b> ALL		<b>C.I.P. Number:</b> 27	
					<b>Key Map:</b> VAR	
<b>Description:</b> Provides funding to pay the City of Houston for the Authority's portion of the Right-of-Way and related costs for the project. 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	
	1/1/03-9/30/16	10/1/16-12/31/16	2017	2018		
Acquisition						
Design						
Construction						
Equipment						
Other	3,199	36	160	200	3,595	
<b>Total Authorizations</b>	<b>3,199</b>	<b>36</b>	<b>160</b>	<b>200</b>	<b>3,595</b>	
<b>Source of Funds</b>						
Revenue Bonds	3,199	36	160	200	3,595	
SWIFT Funds						
To Be Determined						
<b>Total Funds</b>	<b>3,199</b>	<b>36</b>	<b>160</b>	<b>200</b>	<b>3,595</b>	

<b>Project:</b> 2025 DISTRIBUTION SYSTEM (formerly 2020 DISTRIBUTION SYSTEM)			<b>District:</b> VAR		<b>C.I.P. Number:</b> 28	
					<b>Key Map:</b> VAR	
<b>Description:</b> 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	
	1/1/03-9/30/16	10/1/16-12/31/16	2017	2018		
Acquisition		125	4,059	3,751	7,935	
Design	7,264	47	914	7,333	15,558	
Construction	0	4,173	58,343	0	62,516	
Equipment						
Other						
<b>Total Authorizations</b>	<b>7,264</b>	<b>4,345</b>	<b>63,316</b>	<b>11,084</b>	<b>86,009</b>	
<b>Source of Funds2</b>						
Revenue Bonds	6,714	4,345	30,174	11,084	52,317	
SWIFT Funds	550	0	33,142	0	33,692	
To Be Determined	0					
<b>Total Funds</b>	<b>7,264</b>	<b>4,345</b>	<b>63,316</b>	<b>11,084</b>	<b>86,009</b>	

**2017 – 2018  
CAPITAL IMPROVEMENT PLAN**

**NORTH HARRIS COUNTY  
REGIONAL WATER AUTHORITY**

<b>Project:</b> CHLORAMINATION SYSTEMS		<b>District:</b> VAR	<b>C.I.P. Number:</b> 29		
			<b>Key Map:</b> VAR		
<b>Description:</b> 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
	1/1/03-9/30/16	10/1/16-12/31/16	2017	2018	
Acquisition					
Design					
Construction					
Equipment					
Other	8,262	334	1,321	1,321	11,238
<b>Total Authorizations</b>	8,262	334	1,321	1,321	11,238
<b>Source of Funds</b>					
Revenue Bonds	8,262	334	1,321	1,321	11,238
SWIFT Funds					
To Be Determined					
<b>Total Funds</b>	8,262	334	1,321	1,321	11,238

<b>Project:</b> NORTHEAST TRANSMISSION LINE (previously known as Second Source Line)		<b>District:</b> VAR	<b>C.I.P. Number:</b> 30		
			<b>Key Map:</b> VAR		
<b>Description:</b> 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
	1/1/03-9/30/16	10/1/16-12/31/16	2017	2018	
Acquisition					
Design					
Construction					
Equipment					
Other	19,554	0	83,099	140,326	242,979
<b>Total Authorizations</b>	19,554	0	83,099	140,326	242,979
<b>Source of Funds</b>					
Revenue Bonds					
SWIFT Funds	19,554	0	83,099	140,326	242,979
To Be Determined					
<b>Total Funds</b>	19,554	0	83,099	140,326	242,979



**2017 – 2018  
CAPITAL IMPROVEMENT PLAN**

**NORTH HARRIS COUNTY  
REGIONAL WATER AUTHORITY**

<b>Project:</b> SYSTEM IMPROVEMENTS		<b>District:</b> VAR		<b>C.I.P. Number:</b> 100	
				<b>Key Map:</b> VAR	
<b>Description:</b> Project provides design, real estate acquisition and construction of improvements to existing 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
	1/1/03-9/30/16	10/1/16-12/31/16	2017	2018	
Acquisition					
Design	591				591
Construction	4,679				4,679
Equipment	0				
Other	284	0	3,200	3,200	6,684
<b>Total Authorizations</b>	5,554	0	3,200	3,200	11,954
<b>Source of Funds</b>					
Revenue Bonds	5,554	0	3,200	3,200	11,954
SWIFT Funds					
To Be Determined					
<b>Total Funds</b>	5,554	0	3,200	3,200	11,954

<b>Project:</b> CENTRAL CONTROL SYSTEM		<b>District:</b> VAR		<b>C.I.P. Number:</b> 101	
				<b>Key Map:</b> VAR	
<b>Description:</b> 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
	1/1/03-9/30/16	10/1/16-12/31/16	2017	2018	
Acquisition	100	0	0	0	100
Design	2,274	0	100	100	2,474
Construction	4,917	0	0	0	4,917
Equipment					
Other			500	500	1,000
<b>Total Authorizations</b>	7,291	0	600	600	8,491
<b>Source of Funds</b>					
Revenue Bonds	7,192	0	600	600	8,392
SWIFT Funds					
To Be Determined					
<b>Total Funds</b>	7,192	.0	600	600	8,392

**2017 – 2018  
CAPITAL IMPROVEMENT PLAN**

**NORTH HARRIS COUNTY  
REGIONAL WATER AUTHORITY**

<b>Project:</b> WATER REUSE		<b>District:</b> VAR	<b>C.I.P. Number:</b> 102		
			<b>Key Map:</b> VAR		
<b>Description:</b> 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
	1/1/03-9/30/16	10/1/16-12/31/16	2017	2018	
Acquisition					
Design	40	0	0	0	40
Construction					
Equipment					
Other			500	1,000	1,500
<b>Total Authorizations</b>	40	0	500	1,000	1,540
<b>Source of Funds</b>					
Revenue Bonds	40	0	500	1,000	1,540
SWIFT Funds					
To Be Determined					
<b>Total Funds</b>	40	0	500	1,000	1,540

<b>Project:</b> SUPPORT AND SPECIALTY		<b>District:</b> VAR	<b>C.I.P. Number:</b> 200		
			<b>Key Map:</b> VAR		
<b>Description:</b> 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
	1/1/03-9/30/16	10/1/16-12/31/16	2017	2018	
Acquisition	691				691
Design	22,340	2,547	5,450	4,850	35,187
Construction					
Equipment					
Other					
<b>Total Authorizations</b>	23,031	2,547	5,450	4,850	35,878
<b>Source of Funds</b>					
Revenue Bonds	22,916	2,547	5,450	4,850	35,763
SWIFT Funds	115		0	0	115
To Be Determined					
<b>Total Funds</b>	23,031	2,547	5,450	4,850	35,878

**2017 – 2018  
CAPITAL IMPROVEMENT PLAN**

**NORTH HARRIS COUNTY  
REGIONAL WATER AUTHORITY**

<b>Project:</b> CONTINGENCY			<b>District:</b> VAR	<b>C.I.P. Number:</b> N/A	
			<b>Key Map:</b> VAR		
<b>Description:</b> 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
	1/1/03-9/30/16	10/1/16-12/31/16	2017	2018	
Acquisition					
Design					
Construction					
Equipment					
Other			5,100	5,064	10,164
<b>Total Authorizations</b>			3,000	6,380	9,380
<b>Source of Funds</b>					
Revenue Bonds			5,100	5,064	10,164
SWIFT Funds					
To Be Determined					
<b>Total Funds</b>			5,100	5,064	10,164