

## **TABLE OF CONTENTS**

---

### **SECTION**

**SECTION I – INTRODUCTION**

**SECTION II – THE PLAN**

### **APPENDICES**

Appendix A – Glossary of Terms

Appendix B – Project Detail Forms

## SECTION I - INTRODUCTION

---

The North Harris County Regional Water Authority (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 and promoting water conservation, as well as maintaining regulatory compliance. This last assignment was critical because the Harris-Galveston Subsidence District (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 independent neighborhoods, municipal utility districts, small municipalities, and permitted well owners within its boundaries, and 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.

Several disincentives were built into the HGSD Regulatory Plan, including a \$3/1,000 gallons (groundwater pumped) "penalty" fee if the Groundwater Reduction Plan (GRP) was not submitted and certified according to the timeline, and if construction had not begun on the surface water delivery infrastructure by 2005. (This disincentive fee was later raised to \$3.50/1,000 gal.) The Authority has timely met all of the deadlines to date. Additional disincentive fee "triggers" involved reduction of groundwater usage by 2010, 2020 and 2030 mandates.

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. The dilemma facing these districts was to decide whether or not to drill new wells (sometimes at a cost of more than a million dollars) that may be taken out of service or minimally used once the area is converted to surface water in 2010.

In response, the Authority initiated a bold new strategy to share the groundwater by connecting the districts that had surplus capacity in their wells to the ones that needed additional water now. This innovative solution -- called the Groundwater Transfer Program (GTP) -- involves constructing portions of the 2010 distribution lines earlier than originally planned.

The Authority adopted its first Capital Improvement Plan (CIP), the 2004-2005 CIP, in October 2003. The first and current CIPs' primary focus has been the definition and construction of the infrastructure necessary to allow implementation of the GTP. The 2006-2007 Capital Improvement Plan outlines and initiates a broad-based program to provide the remainder of the infrastructure necessary to allow the conversion to surface water in 2010.

---

## **SECTION II - THE PLAN**

---

### **Overview**

The 2006-2007 Capital Improvement Plan (the "Plan") continues the systematic planning and development process begun when the Authority's Board adopted the Authority's first CIP in 2003. However, unlike the first and current CIP, the Plan's focus is not the GTP. Rather, the Plan (1) defines and initiates a broad-based program to provide the remaining components of the system which will be needed to provide surface water to districts in 2010 and (2) provides for the procurement of sites/easements for several of the key infrastructure components which will be needed to continue implementation of the GRP in 2020.

Some of the more significant activities provided for in the Plan are:

- Define the alignment, secure necessary easements and begin design of all the remaining 2010 distribution lines (six projects) and complete the design and award construction contracts for two of the six projects
  - Finalize the alignment, secure necessary easements and begin design on the 2010 Transmission Line from the Greens Road water line to the T.C. Jester Regional Pump Station
  - Identify and purchase the site and begin design of the T. C. Jester Regional Pump Station
  - Begin design of the Louetta Regional Water Plant
  - Evaluate the need and as need is defined, locate, design and construct regional water wells
  - Define Supervisory Control and Data Acquisition (SCADA) System required to enable efficient operation of the 2010 system and initiate design
  - Finalize the alignment of the portion of the 2020 transmission line generally north of Beltway 8 from just east of US Highway 59 to State Highway 249 and secure necessary easements
  - Identify and purchase the site for each of the three 2020 regional water plants and two 2020 regional pump stations
  - Infrastructure purchase and/or participation agreements
  - Reuse program participation
  - Professional services to perform the wide variety of activities required to implement the CIP
-

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

### **Considerations**

CIPs are typically updates which are based on an array of prior program and project experience. While the Authority does have some history in terms of costs experience, which has been used in the development of this CIP, this is only the third Authority CIP. As such, the following points are offered so that the implementation of this CIP may be kept in perspective:

- All projects have not been totally defined at this point, and as such, cost estimates are based on what is known and available at this time.
- Real estate and construction costs can be and are influenced by variables over which the Authority has no control.
- It is not uncommon – in fact, 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 actual prior Authority program or the project experience on which to build. Additionally, 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 would need to develop its projects became clearer, the definition of the projects was sharpened, and as a result, the ability to estimate what the projects might cost improved. The estimated costs included in the Plan have been updated and/or based, where practical, on experience gained thus far on actual Authority projects.

As seen in the following table, the estimated cost to implement the Plan is approximately \$83.5 million. Approximately \$ 55 million will be funded by proceeds from the sale of the Authority's Series 2003 and 2005 Senior Lien Revenue Bonds, capital contributions and interest earned (collectively called "Revenue Bonds"). The remaining \$28.5 million is to be funded through either Bond Anticipation Notes (BANS) or a future bond sale.

Through September 2005, approximately 65% of the Revenue Bonds earmarked for the implementation of the CIP have been authorized (encumbered). The remainder of those funds is scheduled to be authorized by the end of 2007.

---

**SUMMARY OF 2006-2007 CAPITAL IMPROVEMENT PROGRAM**

Category	Authorizations <sup>1</sup> (Thousands)		Fiscal Year Planned Authorizations <sup>1</sup> (Thousands)		Project Total
	1/1/03-9/30/05	10/1/05-12/31/05	2006	2007	
Acquisition	\$ 8,101	\$ 564	\$ 19,373	\$	\$ 28,038
Design	14,253	3,916	9,721	7,271	35,161
Construction	69,404	6,318	14,892	23,086	113,700
Equipment					0
Other	30,597	350	5,969	3,204	40,120
<b>Total Authorizations</b>	<b>\$ 122,355</b>	<b>\$ 11,148</b>	<b>\$ 49,955</b>	<b>\$ 33,561</b>	<b>\$ 217,019</b>
<b>Source of Funds</b>					
Revenue Bonds	\$ 122,355	\$ 11,148	\$ 49,955	5,061	\$ 188,519
Future BANS/Bonds				28,500	28,500
					0
<b>Total Funds</b>	<b>\$ 122,355</b>	<b>\$ 11,148</b>	<b>49,955</b>	<b>33,561</b>	<b>\$ 217,019</b>

Notes: 1. Authorizations do not typically represent actual expenditures.

**APPENDIX A**  
**GLOSSARY OF TERMS**

## **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 project planning, design services and design management
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
MUD	Municipal Utility District
N/A	Not Applicable or Contingency CIP No.
Other	A general category that may include participation commitments with other parties, and 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**