

"Water Issues Facing the City of Houston"

by

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I. TWDB's State Water Plan: Water for Texas (August 1997)

A. Texas is facing many challenges in its water resources future

1. Rapid growth
2. Competition over limited water resources
3. Environmental impacts
4. Significant costs of infrastructure development

B. Population increase

1. Texas: 19 million (1990) to 36 million (2050)
2. Harris County: 2.8 million (1990) to 6.5 million (2050)

C. Changes in Water Usage (million AF/year)

	1994	2050	
Municipal	3.264	6223	(91% increase)
Agriculture	11.113	4.988	(55% increase)
Industrial	2.106	3.699	(75% increase)
TOTAL	16472	14910	(9.5% decrease)
	1994	2050	
Surface Water	7.1	103	(46% increase)
Groundwater	9.4	4.6	(61% decrease)

D. The greater-Houston area is projected to have a water deficit in 2030 - 2050.

II. Houston's Strategy

A. Conversion to 80/20

1. Houston's progress

- a. Houston, as a whole, has averaged 65% surface water for past three (3) years.
- b. Southern portion of Houston in Area 2 is already in compliance
- c. Northern portion of Houston is in Area 3, along with North Harris County and the North Harris County Regional Water Authority.

2. Deadlines by Hams-Galveston Coastal Subsidence District

a. GRP approved January 2003

- b. Constructor underway by January 2005
- c. 30% surface water by January 2010
- d. 70% surface water by January 2020
- e. 80% surface water by January 2030

3. Acceleration of Surface Water Program

- a. 24 projects, northwest portion of Houston
- b. \$130 million construction cost
- c. Completed by Summer 2003
- d. RCA to Council in next few weeks

4. Expansion of Major Water Facilities

- a. Expansion of SE Plant from 80 MOO to 120 MGD firm capacity (CDM)

Pasadena	Baybrook
Gulf Coast	Water Authority HC MUD #55
Clear Brook	Clear Lake
LaPorte	South Houston
Webster	Friendswood

- b. Re-rating of East Plant to 350 MCD firm capacity (Thompson)

5. Construction of NE Water Purification Plant

- a. 90-120 MGO firm capacity
- b. Alternative Project Delivery (APO) approach

B. Planning for the Future

1. Allen's Creek Reservoir

- a. 76th Stat Legislature (via Senate Bill 1593, Senator Buster Brown) authorized
 - i. Reinsurance of Permit from TNRCC to TWDB.
 - ii Transfer of interests in Permit from TWDB to "...a municipality, river authority or other political subdivision, or water supply corporation..."
 - iii. Permit amendmen
 - iv. State participation up to 50% of project costs; including site acquisition (\$100 million, maximum)
 - v. Construction must begin by September 2018
- b. BRA, who Field the option to acquire the site, has paid \$150,000.00 holding fee to Reliant Energy and received title to 9500 acres in Austin County
 - c. Houston in negotiation with BRA for joint participation
 - d. Houston is also a member of Lower Brazos River Water Alliance

Gulf Coast Water Authority
 Brazos River Authority
 Missouri City
 Richmond
 Rosenberg

WCLD #2
 Sugar Land
 Pearland
 Simmonton

e. Permit has been reissued from TNRCC to TWDB, although Permit interests have not been transferred from TWDB to BRA

f. Houston and BRA have met with TWDB regarding Permit amendment, Impoundment would be increased from 55,000 AF/yr to 110,1000 AF/yr(98 MCD).

2. State Water Planning

a. Member of Region H. one at 1b regions.

b. Each Region to define 2000 thru 2050 levels for

- i. Population
- ii. Water Demand
- iii. Water Supply
- iv. Water Balance v. Strategies

c. Within Region, 3.2 million A/F demand, with 3.5 million A-F in supply. Water isn't where it needs to be.

d. Current status

- i. Available resources
- ii. Current demand
- iii. Projected demand
- iv. MOVE THE WATER

e. Issues to be addressed

i. Inter-Basin transfer

aa. Sabine River (Toledo Bend Reservoir)

bb. Luce Bayou (Trinity to San Jacinto) ii. Freshwater inflow to Galveston Bay f. Draft due to TWDB by October 2000.

C. Continuing Houston's Role as the Regional Provider of Surface Water

1. Mayor Browns Regional Advisory Board (21 members)

7 - MUD's

6 - City of Houston (community at-large)

Katy

Jersey Village

Tomball Humble

Compaq Computer (industrial/commercial)

Harris County

North Harris County Regional Water Authority (2)

2. Develop "Regional Partnership Agreements":

- a. Groundwater Reduction Plan (GRP) for Area 3
 - b. Conversion credits c. Cost-sharing (equality is the key)
3. Supply treated water via the Northeast Water Purification Plant
 4. Construction of distribution system to serve Harris County
 - a. Harris County
 - b. North Harris County Regional Water Authority

If you have any questions, please contact [Dr. C.Vipulanandan](#)
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