WHCRWA & HGSD: HOUSTON, WE HAVE SUBSIDENCE

October 8, 2025

HISTORY OF THE WEST HARRIS COUNTY REGIONAL WATER AUTHORITY (WHCRWA)

ABOUT THE WHCRWA

whcrwa.net/about

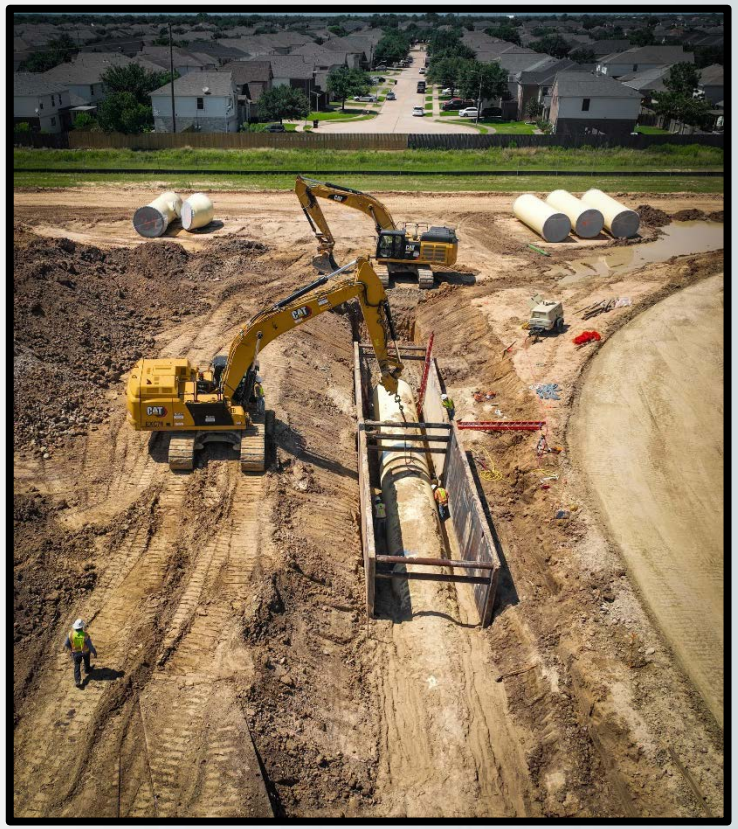
The WHCRWA was created in 2001.

The WHCRWA is one of ***four*** Regional Water Authorities in the Houston region created to implement the Harris – Galveston Subsidence Districts mandate to limit the use of ground water wells.

ABOUT THE WHCRWA

whcrwa.net/about

- The WHCRWA is a water wholesaler or “middleman” facilitating a source of water from lakes and rivers to individual retailers.
- Contract with the City of Houston for raw water supply and treatment capacity in water treatment plants.
- Partner with the other regional water authorities and City of Houston for regional projects to implement the HGSD conversion mandates.
- Construct and operate finished (potable) water transmission lines.



WHCRWA CRITICAL STATISTICS

whcrwa.net/proj

- Currently exceeding the 30% conversion requirement by delivering 28.25MGD to 70 water plants in 49 MUDs through 81.4 Miles of waterlines in WHCRWA's boundaries.
- Will meet the HGSD 60% conversion requirement through 17 CIP projects connecting 41 water plants in 34 MUDs through 33.11 miles of new water lines.

Luce Bayou Interbasin Transfer Project, completed 2021.

626,800
Estimated people within the WHCRWA's boundaries

232
Approximate square miles in WHCRWA

Anticipate converting Approximately
142
Total water plants for the 80% conversion.

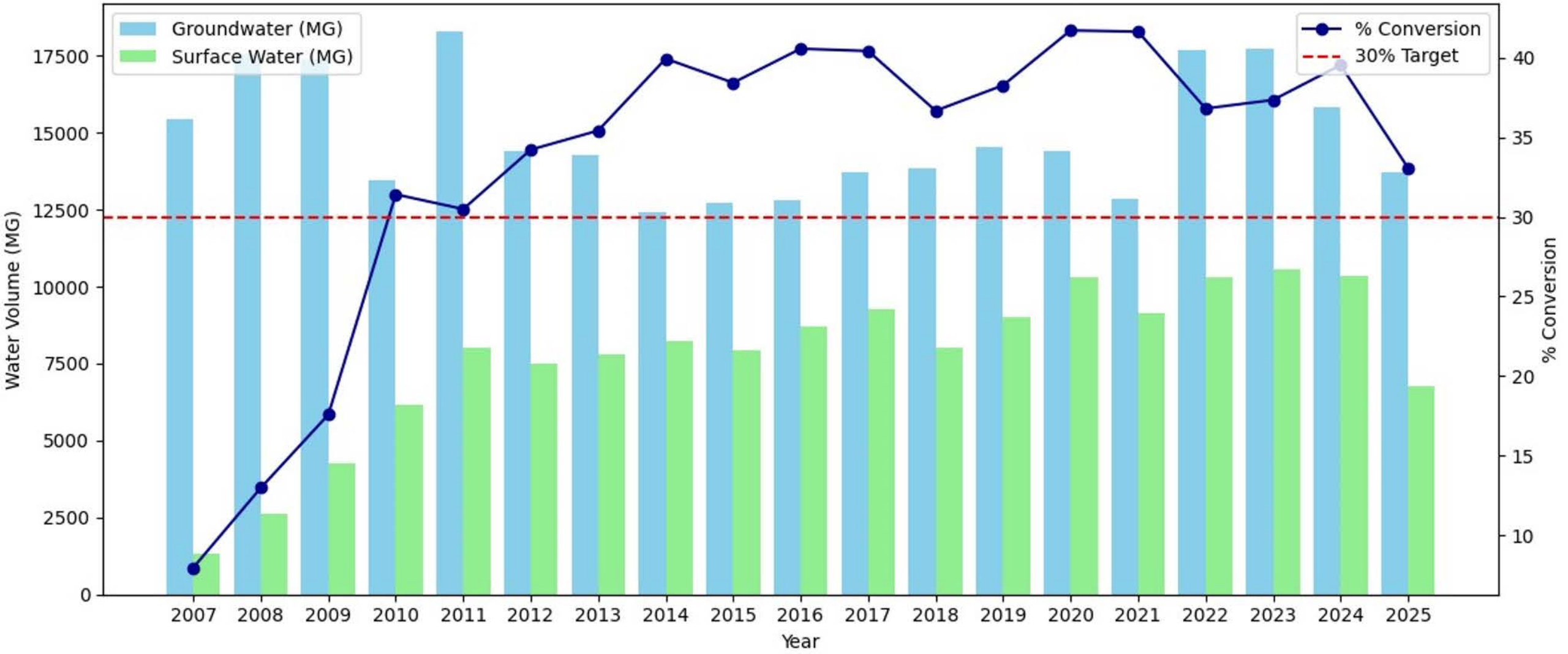
81.4
Miles of newly constructed waterlines in WHCRWA boundaries

150+
MUDs and City of Katy

**Updated as of March 2025*

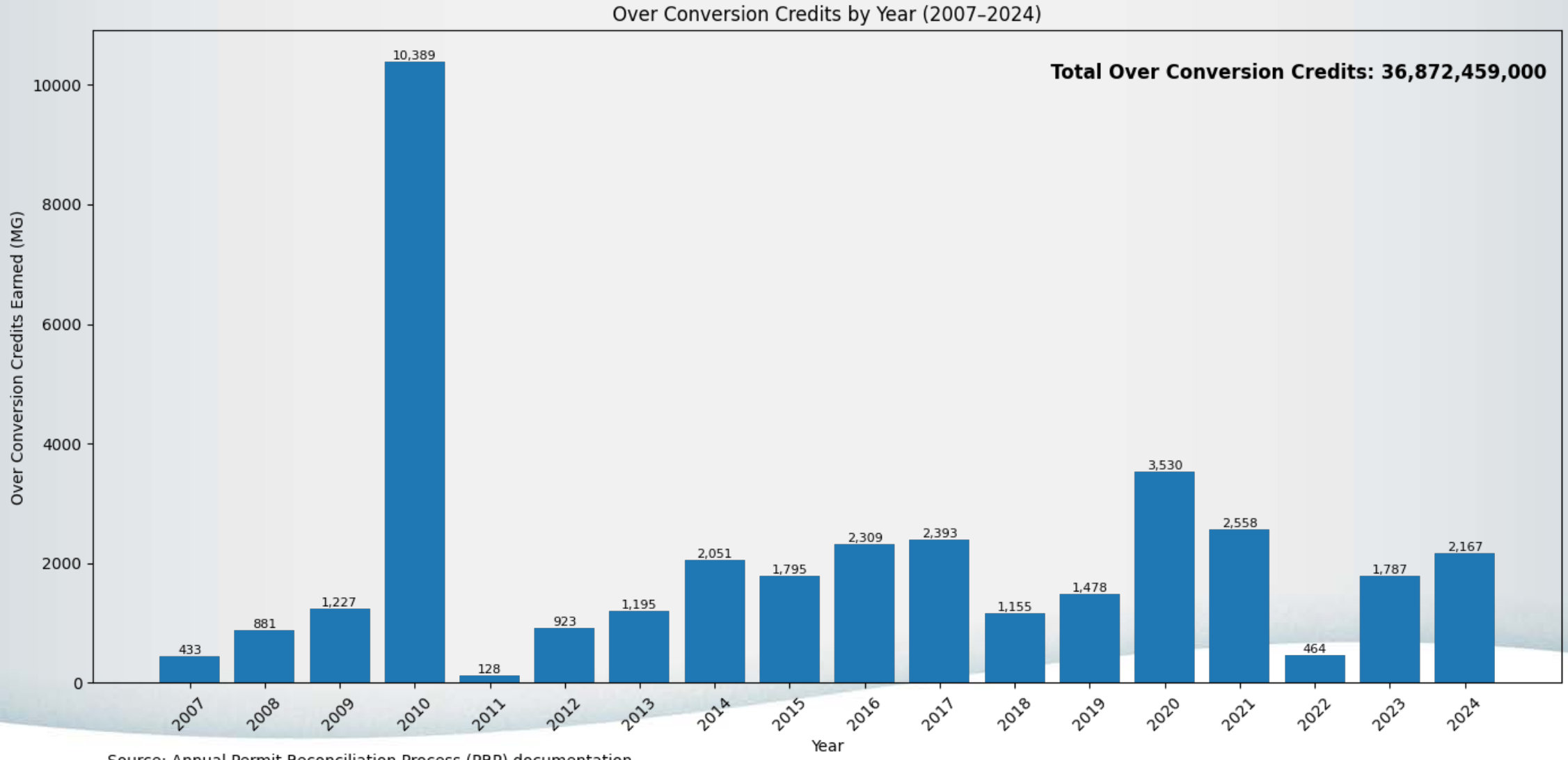
WEST HARRIS COUNTY REGIONAL WATER AUTHORITY

30% CONVERSION (2007 – SEPT 2025)



Source: WHCRWA HGSD Regulatory Plan (2007-2009), WHCRWA PRP, Permits, and Annual Report Submittal(s) (2010-September 2025)

OVER CONVERSION CREDITS (OCC) EARNED BY YEAR



Source: Annual Permit Reconciliation Process (PRP) documentation.

A REGIONAL APPROACH TO SUBSIDENCE

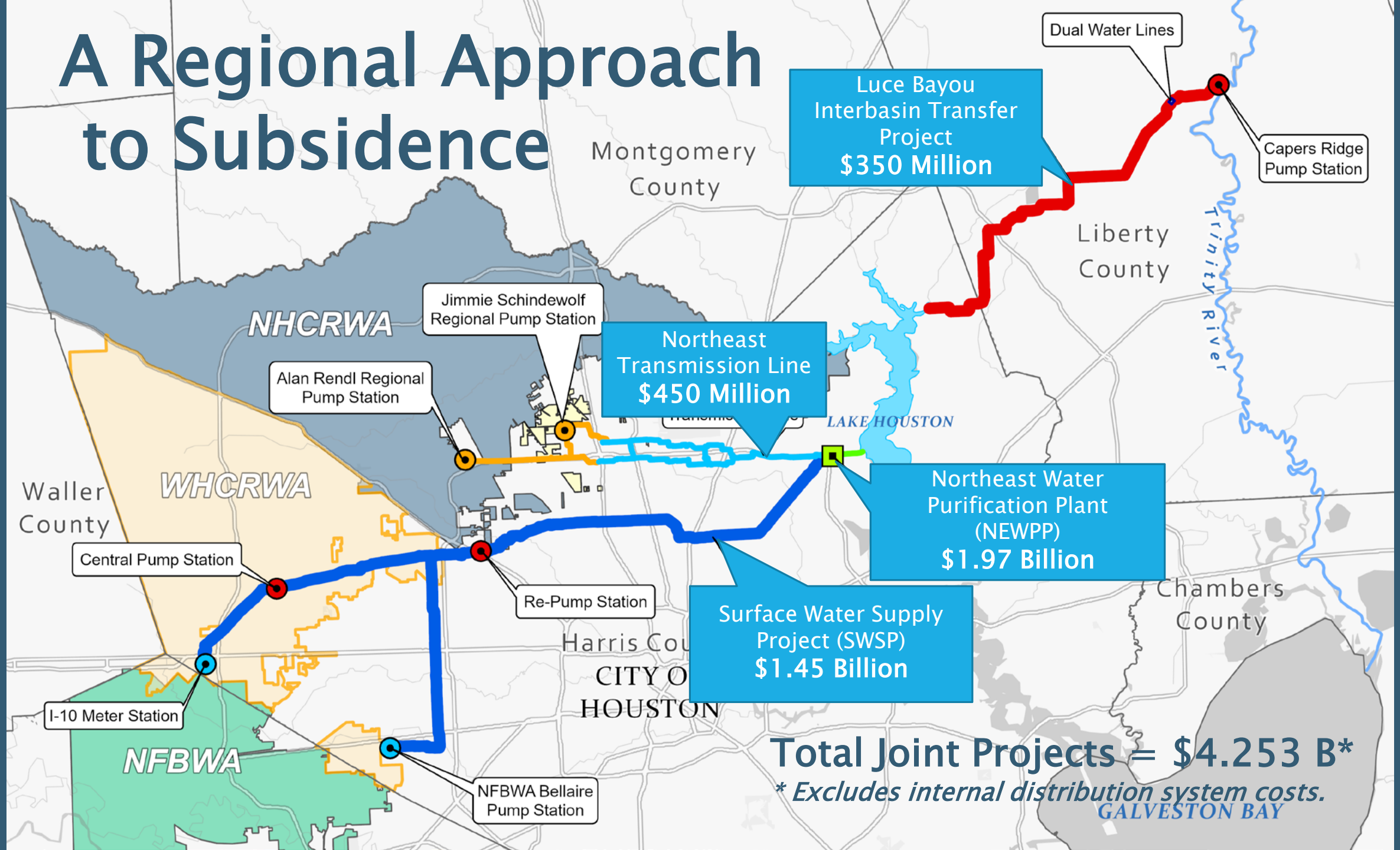
WEST HARRIS COUNTY REGIONAL WATER AUTHORITY

A REGIONAL APPROACH TO SUBSIDENCE

2025 / 60% CONVERSION
TOTAL REGIONAL COST
$6.24+ BILLION

Includes: Luce Bayou, NEWPPEP, NETL, SWSP, & 60% CIP/Internal Distribution Lines (2020 Cost Data)

A Regional Approach to Subsidence



Total Joint Projects = $4.253 B*

** Excludes internal distribution system costs.*

LUCE BAYOU INTERBASIN TRANSFER PROJECT

whcrwa.net/proj

5
Acre Pump station

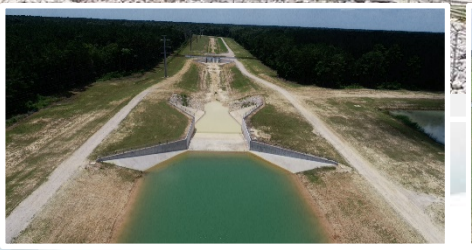
500 MILLION
Gallons a day

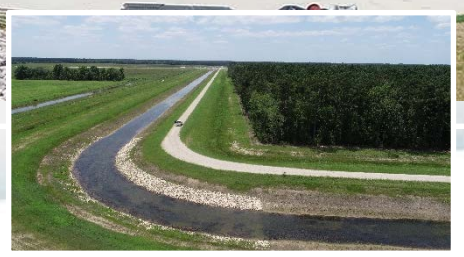
3 MILES
Dual 96” Pipeline

23
Miles of Canals

$350 MILLION
Total Project Cost

COMPLETED IN 2021





$70 MILLION
WHCRWA Cost Share

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY

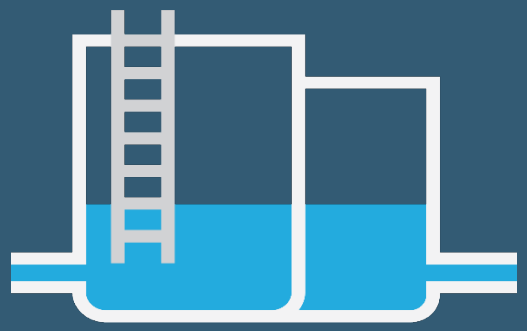
TREATING THE WATER: NEWPP
320 MGD EXPANSION

NORTHEAST
WATER PURIFICATION PLANT EXPANSION

whcrwa.net/proj

Phase 1 Expansion

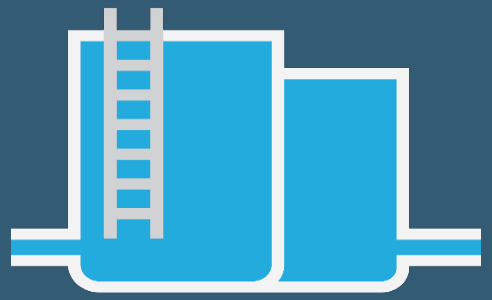
80 MGD



Completed July 2024

Phase 2 Expansion

240 MGD



Expected in November 2025

$1.973

BILLION

Design Build Project

$488

MILLION

WHCRWA Cost Share

Once Phase 1 & Phase 2 are complete WHCRWA will have 25.76% of the expansion project or 82.42 MGD capacity. The capacity and costs are strictly related to the expansion.

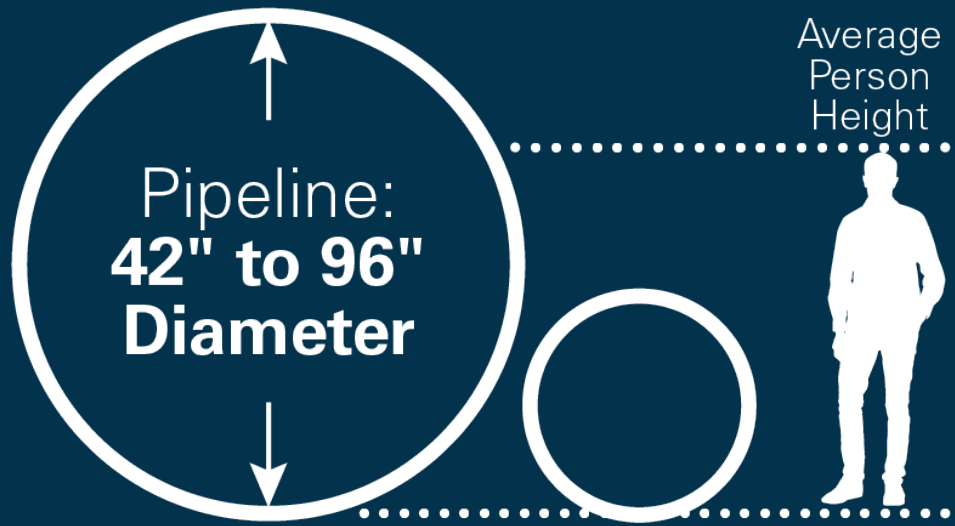
WEST HARRIS COUNTY REGIONAL WATER AUTHORITY

WHCRWA SURFACE WATER SUPPLY PROJECT

(JOINT PROJECT WITH NFBWA)

surfacewatersupplyproject.com

Construction of
2 Pump Stations



Estimated Cost

$1.45

BILLION

$785

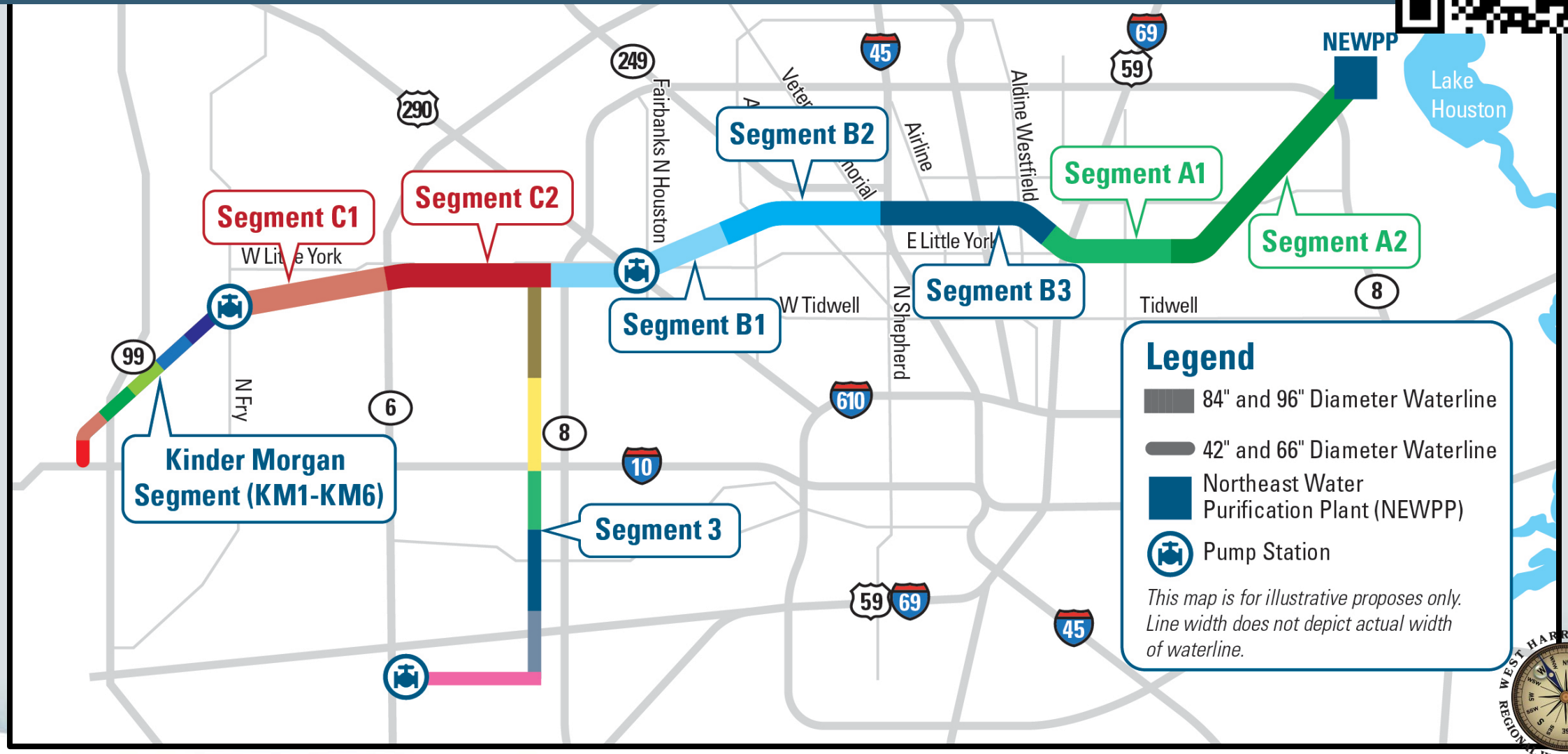
MILLION

WHCRWA Estimated
Cost Share

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY

SURFACE WATER SUPPLY PROJECT
(22 DESIGN CONTRACTS)

surfacewatersupplyproject.com



WEST HARRIS COUNTY REGIONAL WATER AUTHORITY

2025 CONVERSION COSTS – WHCRWA'S SHARE

Over $1.8 BILLION Through 2025

Cost includes **30%** and 60% Conversion, Construction, Design, and Financing Costs

$70
MILLION

Luce Bayou

$488
MILLION

NEWPP

$785
MILLION

SWSP

$378
MILLION

Distribution System

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY

Where are we today?

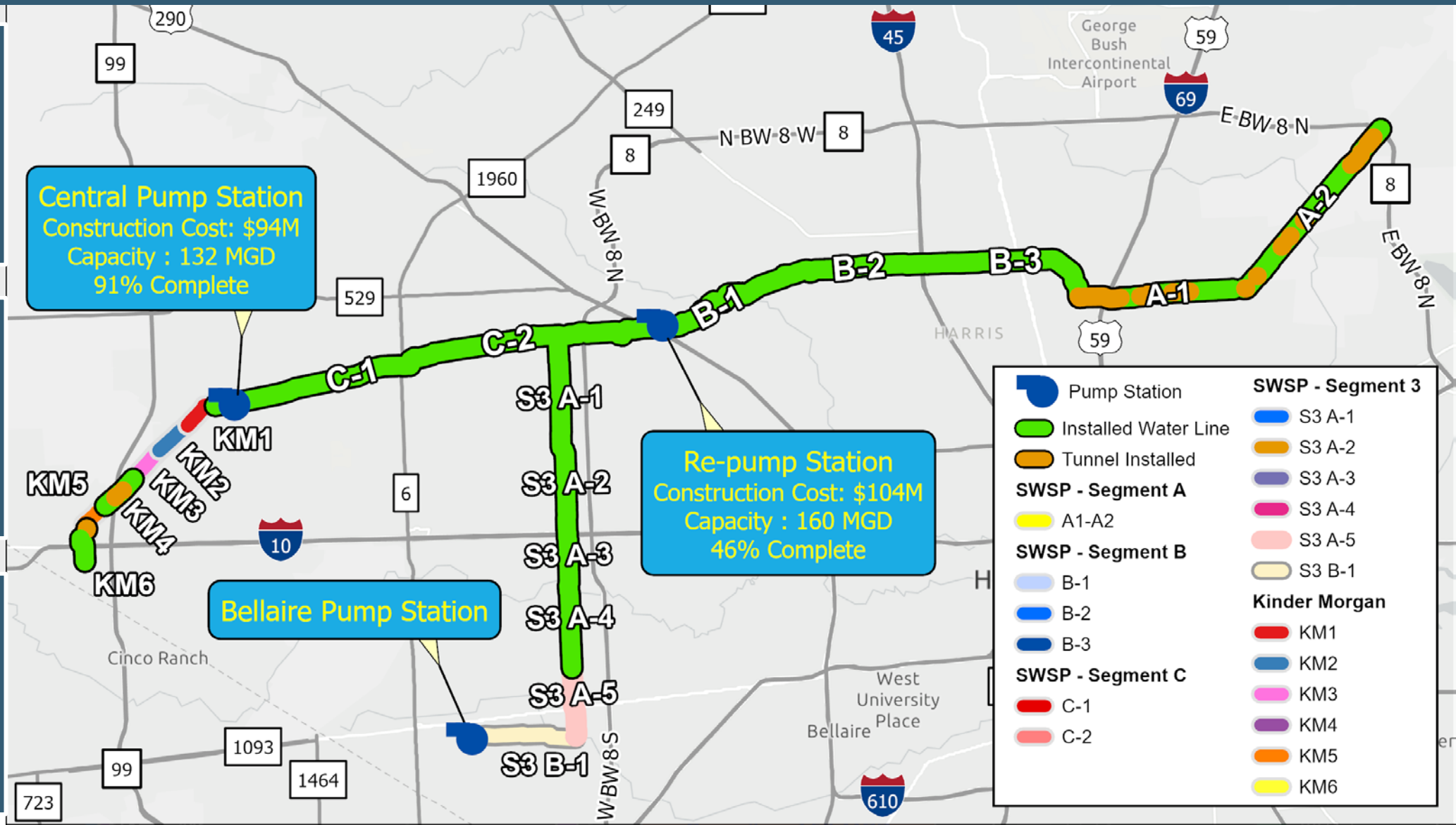
CURRENT SWSP CONSTRUCTION PROJECTS OVERVIEW

September 2025

Total (LF) Installed
239.4K

Total (LF) Remaining
59.4

Total (LF) Complete
80.1%



SWSP OPEN-CUT CONSTRUCTION

232K LF / 43.9 MILES

Open Cut (LF)

179.3K

Installed

Open Cut (LF)

52.5K

Remaining

Open Cut (LF)

77%

Complete

As of September 2025

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY

SWSP – OPEN-CUT

OPEN-CUT CONSTRUCTION

Surface restoration after pipe installation.

SWSP TUNNEL CONSTRUCTION

67K LF / 12.68 MILES

Tunneling (LF)

60.1K

Installed

Tunneling (LF)

6.9K

Remaining

Tunneling (LF)

90%

Complete

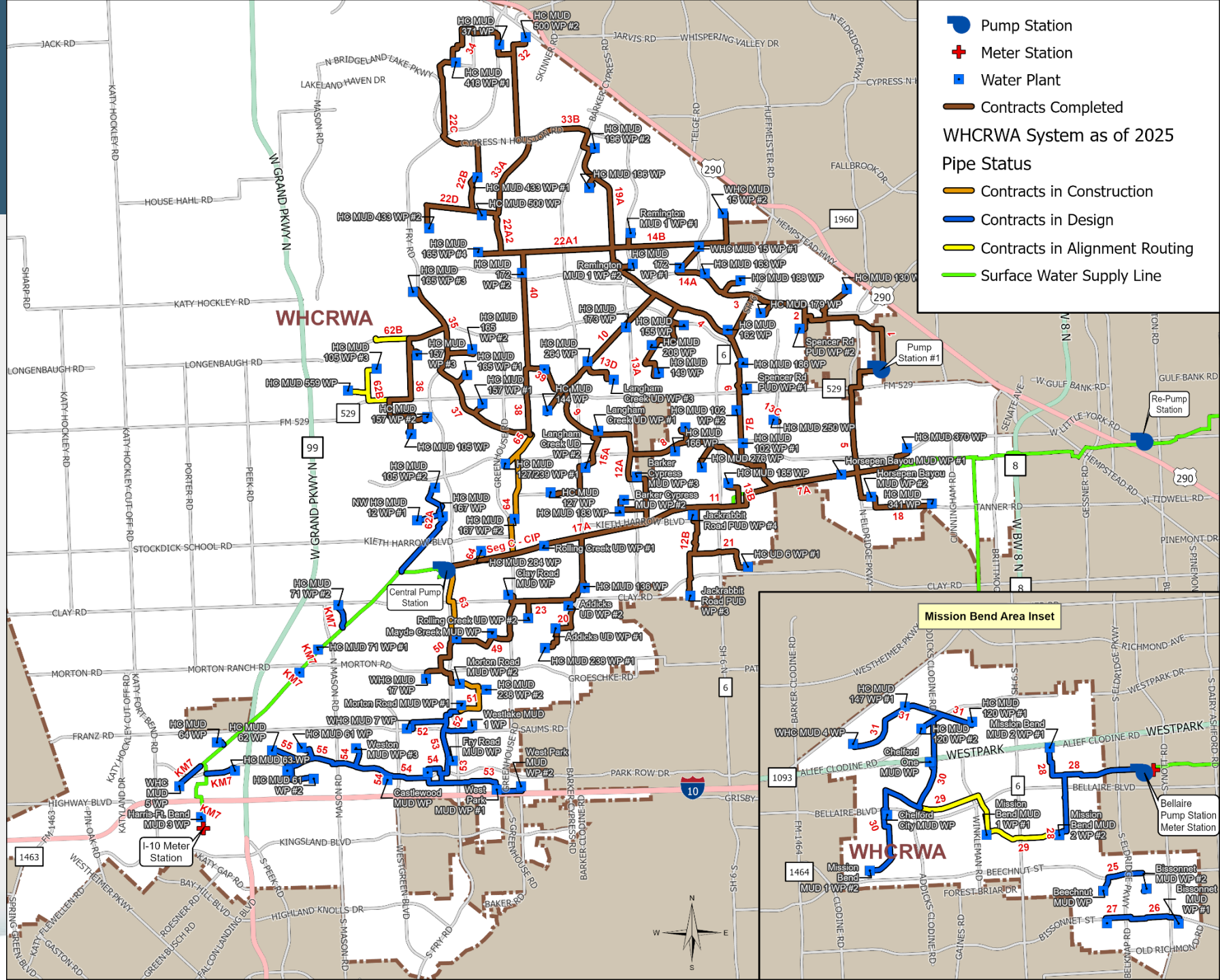
As of September 2025

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY

2025 CIP SYSTEM

- $295MM Cost
- 17 2025 CIP Contracts
- 33.11 Miles of new water lines
- 31 Additional MUDs & 43 Additional Water Plants connected
- 12” – 60” diameter lines
- 16 MGD additional water

- 114.51 Total Miles of water distribution lines
- 113 Connected Water Plants

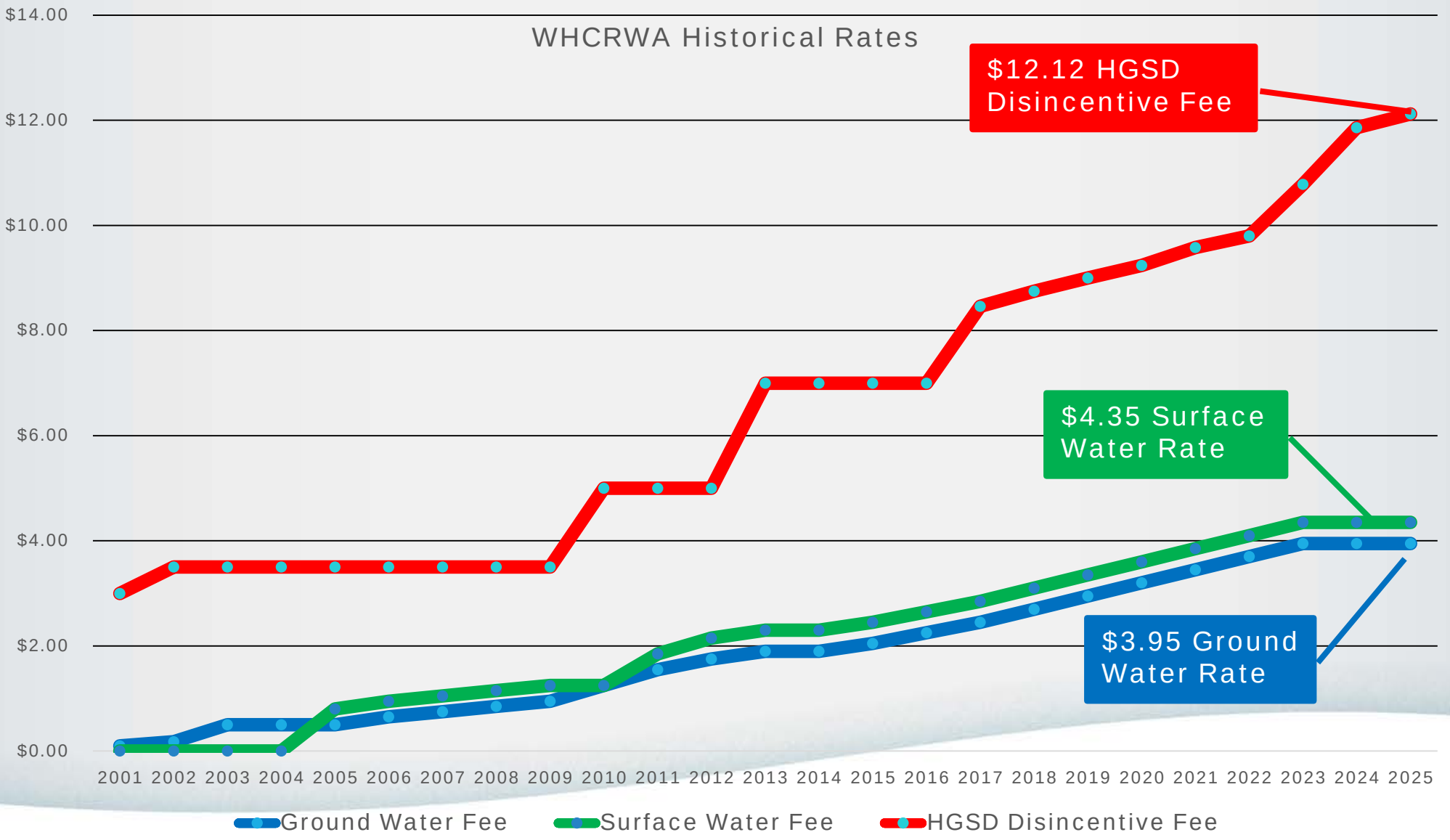


2025 CIP DISTRIBUTION – CONTRACT 63

Did you know?

(The serious stuff.)

HISTORICAL WATER RATES



A DIFFERENT PERSPECTIVE ON RATES

The WHCRWA does not assess property taxes. But, what if it did?

- The WHCRWA rate would be $0.21 / $100 in value (based on a home value of $250,000, 10,000 gal/month use, and a WHCRWA rate of $4.35)
- The WHCRWA would be the 7th highest tax rate in the county behind: Katy ISD ($1.12), HISD ($0.87), Houston ($0.52), Katy ($0.43), Harris County ($0.39), MUDs ($0.31 – $1.05)*

* Special Note: MUDs assess a property tax ***and*** also charge a water rate. The water only rate of many MUDs is similar to the WHCRWA rate.

2035 – 80% CONVERSION

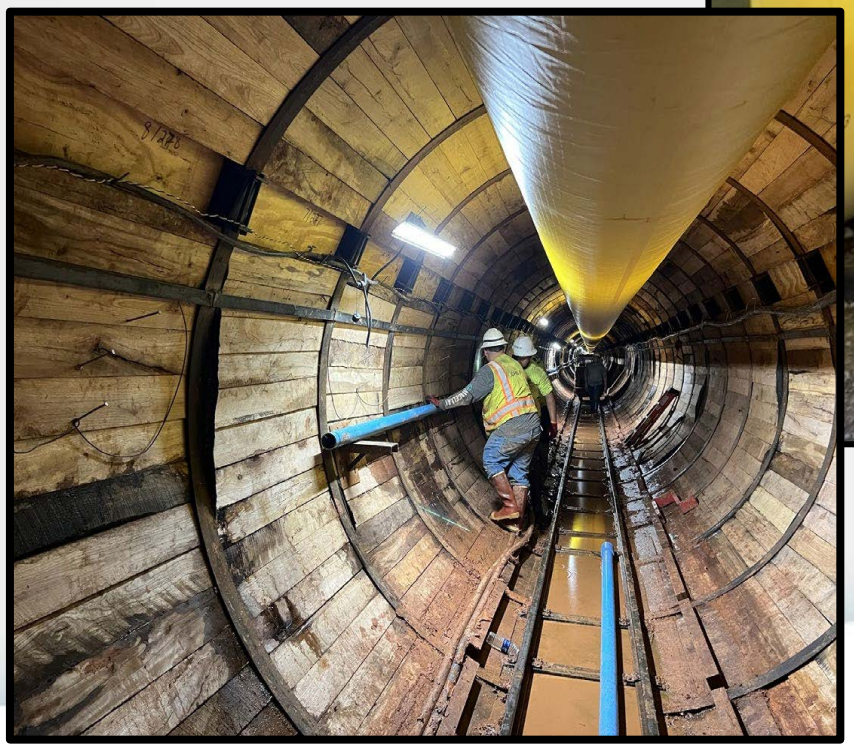
- Already in the planning stages.
  - 19+ Additional MUDs to convert
  - 31 Water plants to connect
  - Route alignment
  - Easement acquisition
- Expected to include City of Katy
- Expected Cost:$213,000,000
- 50+ miles of pipe
- Expected to be built in 10 – 20 contracts
- Water Line Sizes of 12” – 54 “

Did you know?

(The fun stuff.)

SNAP SHOT – 10/8/2025

	Length (Miles)	# of Contracts	Diameter
WLs in Construction	51	15	12″ to 96″
WLs in Design	33	~19	12″ to 54″
2035 CIP “Future” WLSs	50+	~10-20	12″ to 54″



Note: This is a snap shot of where we are & where we are going.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY

NEWPP (EXPANSION PROJECT)

CONSTRUCTION COST: $1.972B ◆ CAPACITY: 320 MGD ◆ 98.6% COMPLETE

September 2025

NEWPP

SWSP – CENTRAL PUMP STATION

CONSTRUCTION COST: $94M ◆ CAPACITY: 132 MGD ◆ 91% COMPLETE

September 2025

SWSP – SEGMENT B3 LONG TUNNEL

- The 8500 Lovat tunnel boring machine (TBM) is a refurbished dual-mode TBM that has done work previously in Houston. The complete tunnel was done in open-mode.
- TBM Size: 128” OD
- Pipe Size: 96” inch
- Schedule: 3 years

Best Day of Production

224

Feet of tunnel

Prior to Refurbishment

WHCRWA Board with refurbished TBM

23000’ Tunnel Completion

SWSP – B3 LONG TUNNEL SEGMENT

SWSP – TUNNEL MACHINES

"SUZZANN"

"SHERYL"


Really? Another picture?


320 MGD Water Plant?
– $1.97 Billion
55 miles of 96” Pipe ?
– $1.45 Billion
Increasing from 30%
to 60% surface water?
– $295 Million
Taking your nephew
in the tunnel under I-
10?
PRICELESS!!

It’s not this bad!

October 8, 2025

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY