Planning and Financing a Regional Water Solution in Montgomery County, Texas

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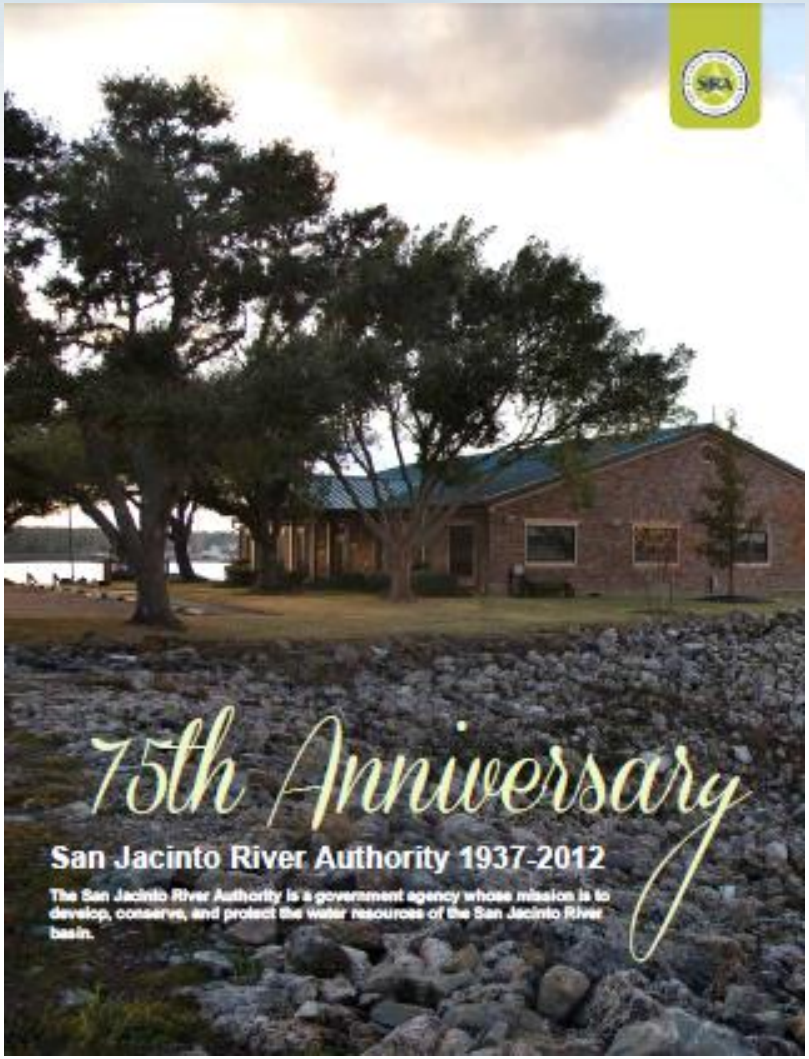
San Jacinto River Authority
GRP Implementation and Planning Coordinator

San Jacinto River Authority

- Created in 1937
- Multi-County governmental agency
- Geographic boundaries cover the entire San Jacinto River basin, excluding Harris County
- Managed by 7 member Board of Directors appointed by Governor



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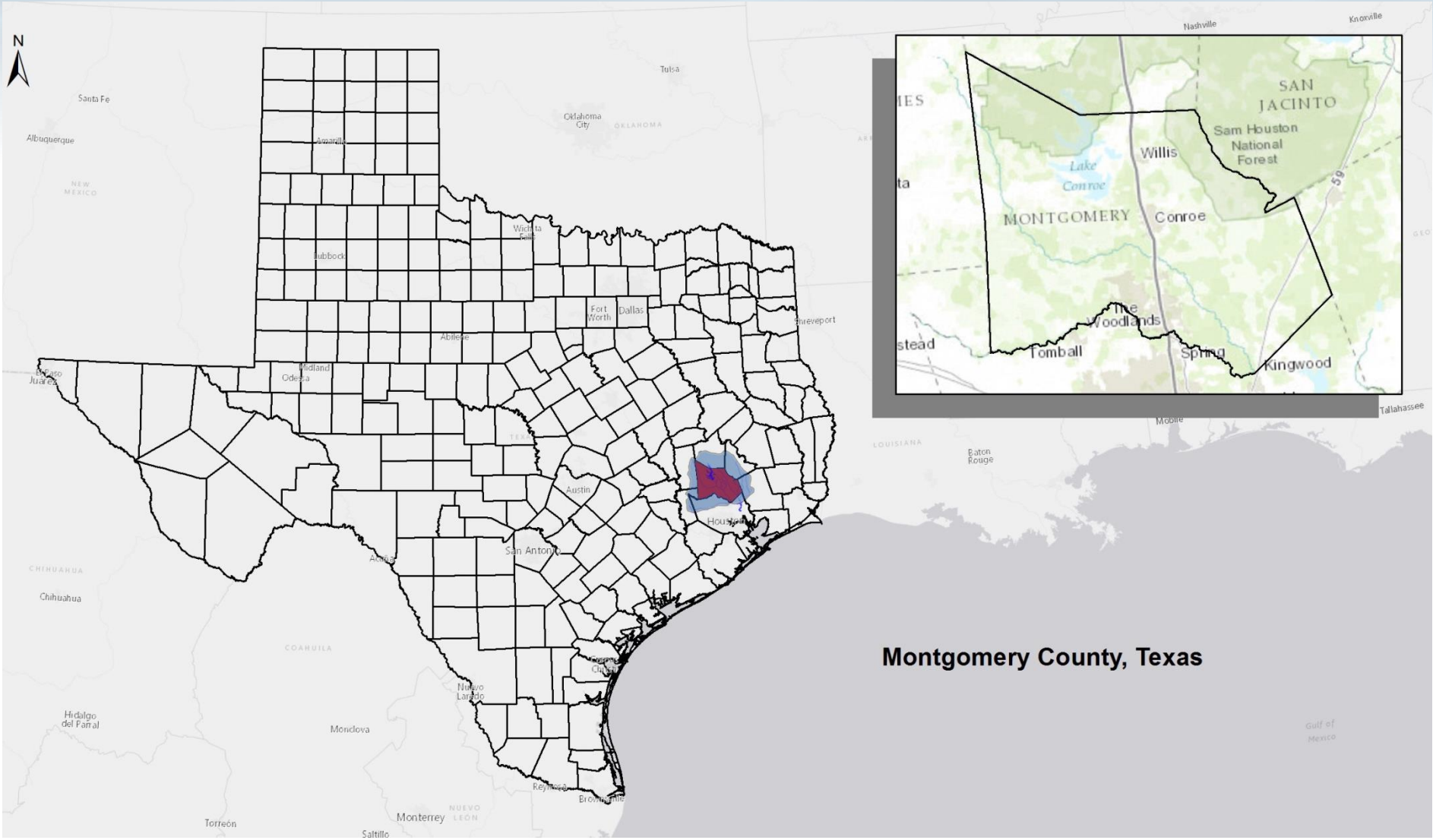


SJRA Funding

- SJRA receives no money from the state and does not collect any type of taxes.
- Income is primarily derived from the sale and distribution of water and treatment of wastewater.
  - Revenue covers the cost of operation, maintenance, and retirement of debt on capital projects.
- Revenue bonds are sold to finance projects.

SJRA's Organizational Structure

- General & Administrative (G&A) Offices
  - Located at the Lake Conroe Dam
  - Provides general and administrative support to all four operating divisions:
    - Highlands Division
    - Lake Conroe Division
    - Woodlands Division
    - GRP Division

Highlands Division

- Operates Lake Houston Pump Station
- 1400-acre reservoir
- 42 water conveyance structures
- 30 miles of canal system
- 9 long-term raw water contracts
- Additional short-term irrigation contracts

Lake Conroe Division

- Located at west Lake Conroe Dam
- Lake Completed in 1973
  - 20,985 surface acres
  - 444 sq-mile watershed
  - 159 miles of shoreline
  - 11,350 feet long dam
  - 100,000 ac-ft/yr yield
- High hazard category
- 4200+ permitted docks
- 1900+ permitted OSSFs
- 7 major marinas

Woodlands Division

- Located In southern Montgomery County
- Provides wholesale water and wastewater services to 100,000 person community
- 3 wastewater treatment plants; 30 lift stations
- 5 Groundwater plants; 39 water wells; 6 elevated storage tanks
- Miles of collection and distribution lines

GRP Division

- Groundwater Reduction Plan (GRP) Division
- Located at east Lake Conroe Dam
- Responsible for implementing a countywide program to reduce groundwater usage

Why the GRP program?

- Montgomery County has a water supply problem
- LSGCD regulations have been adopted to force a solution (30% GW reduction by 2016)
- SJRA offered a solution that is cost-effective and available to all (the GRP program)
- As a river authority, SJRA is uniquely positioned to implement a countywide solution
- SJRA created its GRP Division to implement that solution

The Goal of SJRA's Proposed Solution is to:

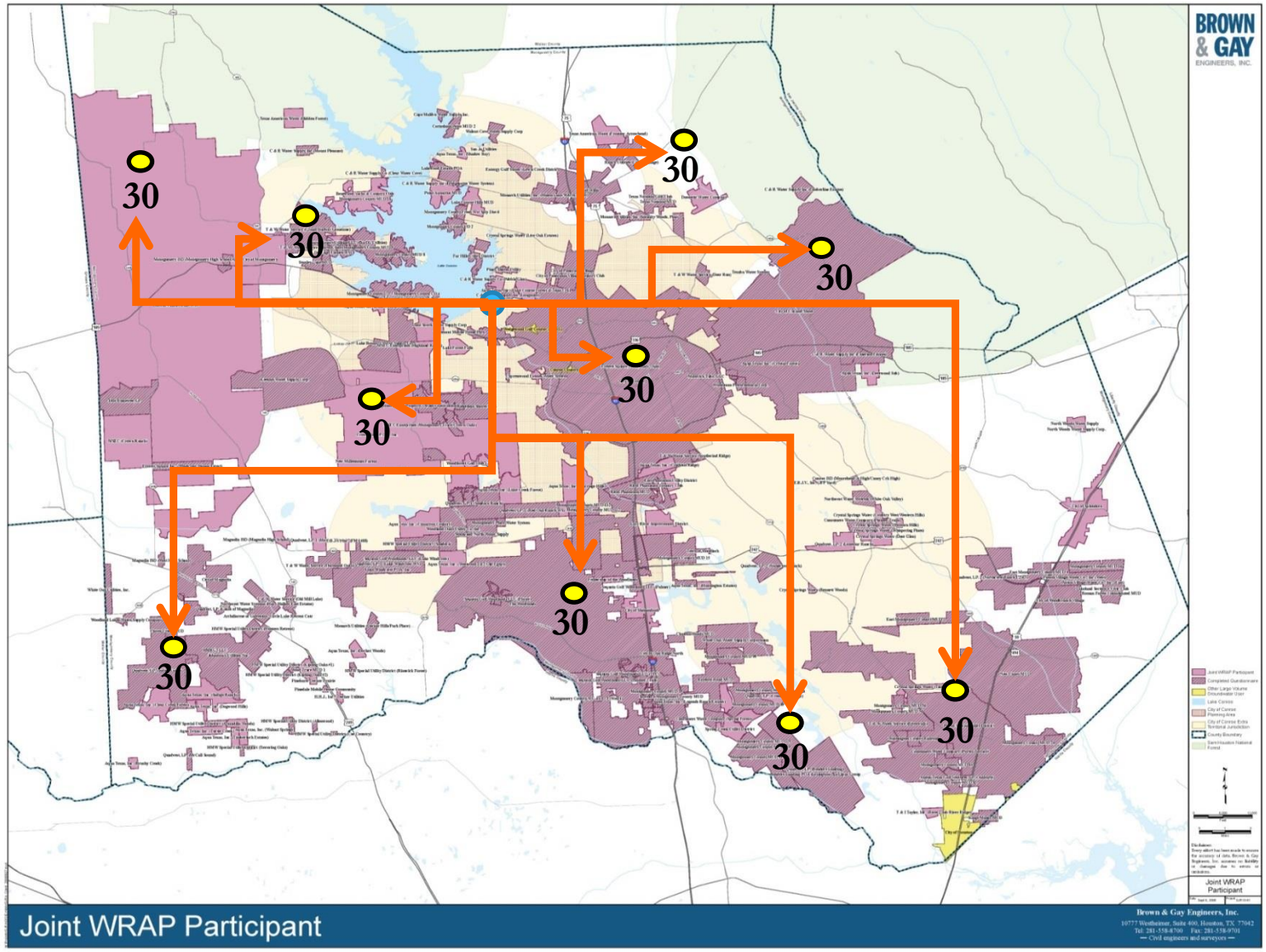
- Create a compliance solution for ALL Montgomery County LVGUs
- Treat all LVGUs on a cost-equal basis regardless of location
- Achieve compliance at the lowest possible cost
  - lowest source water cost
  - lowest infrastructure cost
  - lowest administration cost

SJRA GRP Implementation Strategy

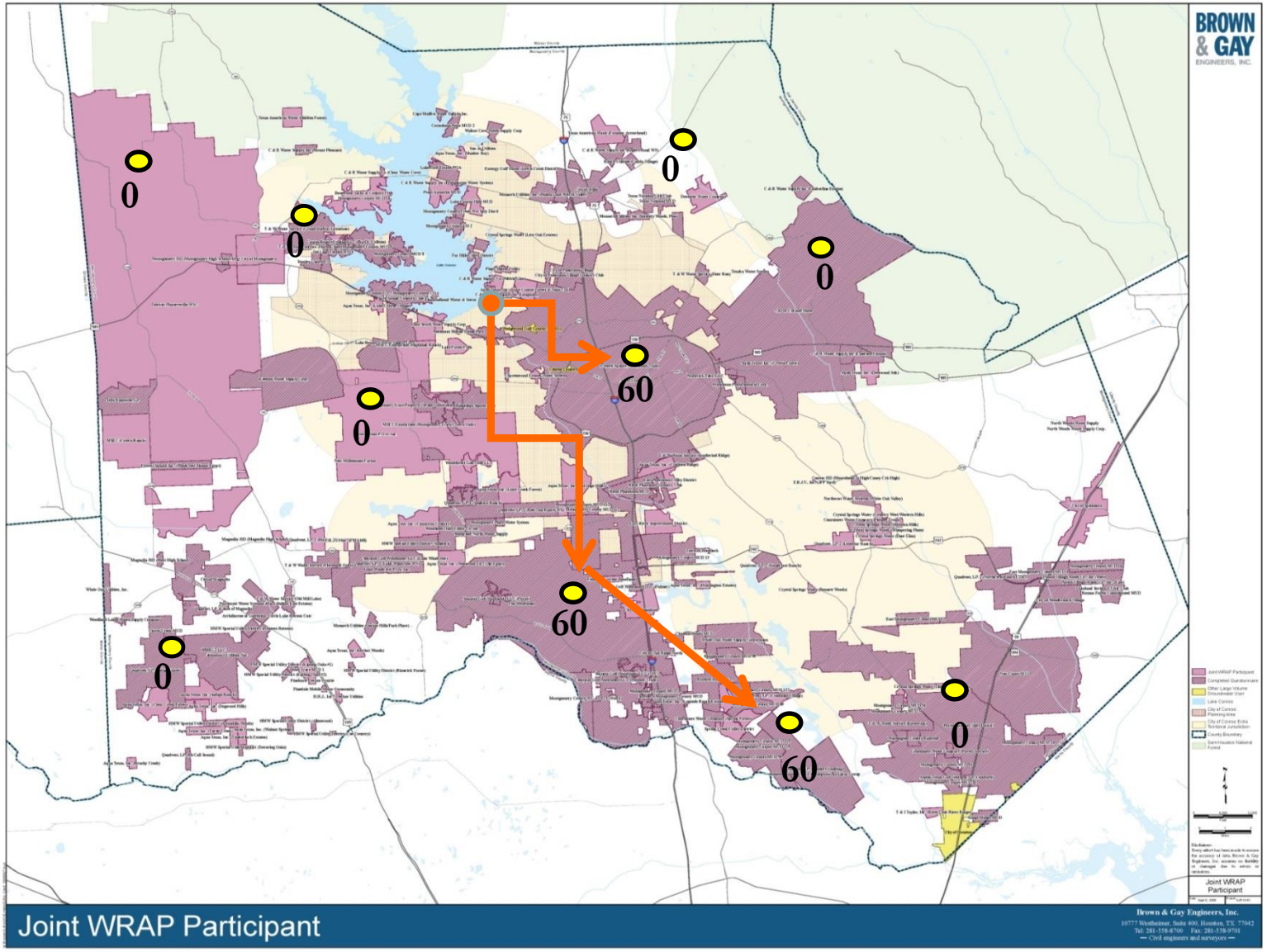
- Initially sought Legislative support to impose a statutory fee from Participants
- Offered Individual Contracts when legislative effort failed
- Potential Participants offered an “Opt Out/ Option” period
- 60% participation (by water use) considered a viable program
- SJRA reached participation goal on June 29, 2010

SJRA GRP Implementation Strategy

The SJRA GRP Solution



The SJRA GRP Solution



SJRA GRP Participant Stats

- 80 percent of the LVGUs in the county joined SJRA's GRP
  - 76% of total current County groundwater allocations
  - 81 individual contracts
  - 148 individual water utility systems
- ~15 percent are pursuing other GRP plans
- ~5 percent plan to simply use less water
- August 1, 2010, Participants began self-reporting well pumpage and making pumpage fee payments to the Authority.

Construction Components of the GRP Plan

Surface Water Plant

Transmission Lines

Receiving Facilities

Surface Water Treatment Plant

- 30 MGD (peak) Phase 1 capacity
- Expansion in 3 additional phases to 120 MGD
- 3 engineering design firms
  - High Service Pump Station and Ground Storage Tanks
  - Raw Water Intake and Pump station
  - Surface Water Treatment Plant

Surface Water Treatment Plant

- Construction Manager at Risk (CMAR) delivery method
- Construction divided into 4 early work packages
  - EWP No. 1 – Pre-construction contract and membrane equipment
  - EWP No. 2 – General site work and excavation, HSPS foundations and GSTs
  - EWP No. 3 – HSPS and GST piping, pumps, equipment and structures; RWIPS piers and structure
  - EWP No. 4 - Surface water plant piping, pumps, equipment and structures

Transmission System

- Competitive Sealed Proposal (CSP) delivery method
- 53 miles of fiber optic communication lines and transmission lines 60- to 12-inches diameter
  - 12 design engineers
  - 16 line segment contracts
  - 11 contractors

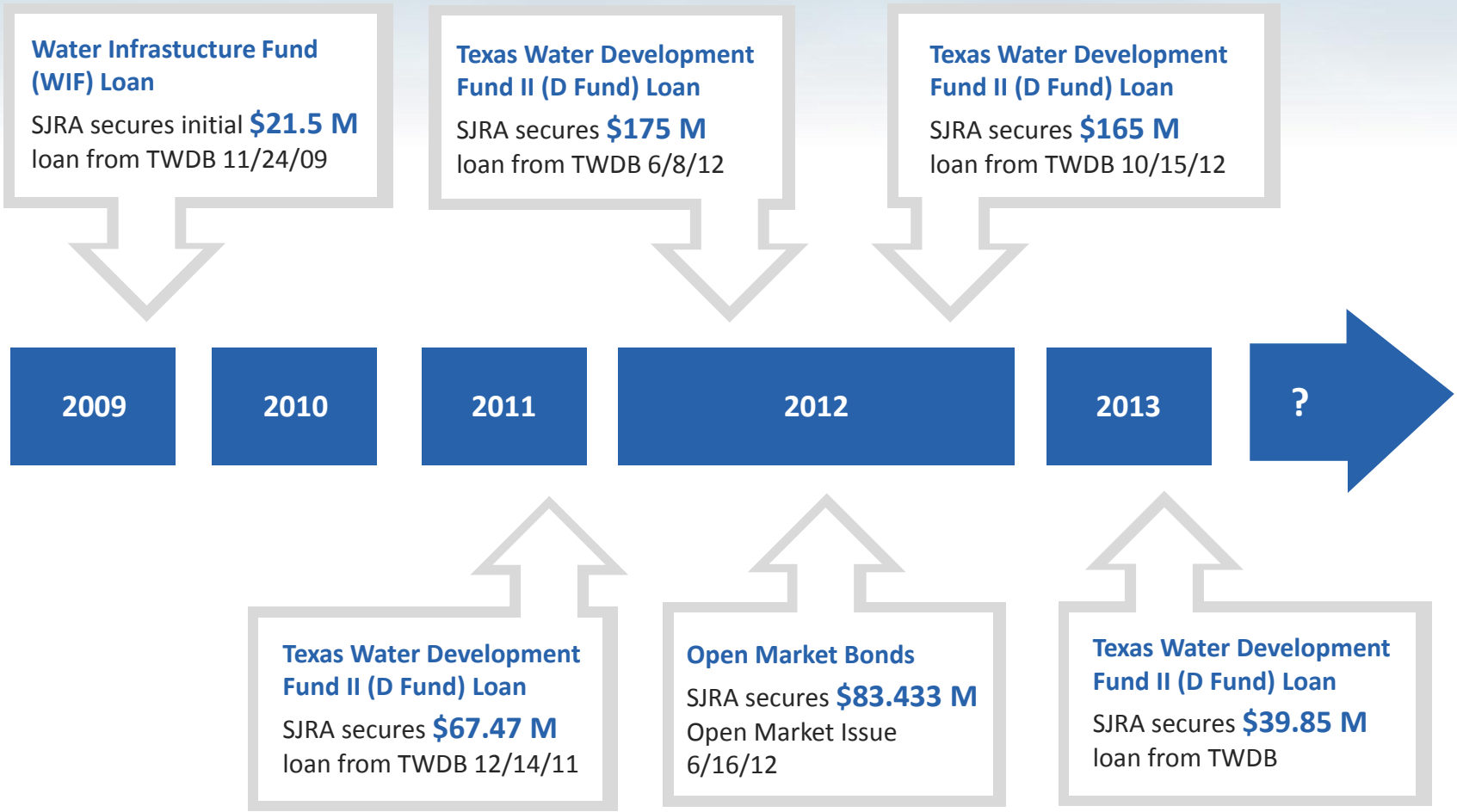
Receiving Facilities

- CSP Delivery Method, or Design, Bid, Build in some systems
- 7 Utilities Receiving Surface Water
  - 6 receiving plants in City of Conroe
  - 5 receiving plants in The Woodlands
  - 6 receiving plants at MSEC, Oak Ridge North, SMCMUD, Rayford MUD

State Agency Plan Coordination

- Plan approvals required coordination with TCEQ and TWDB
- TCEQ agreed to allow TWDB oversight for transmission lines and EWP Nos. 2 and 3
- SJRA developed standard specifications for all contracts. Drafts reviewed with TWDB to ensure compliance and speed approval process
- TCEQ Drinking Water Group approved plant process (EWP No. 4) and receiving facilities. Dam Safety Group monitored construction adjacent to the dam

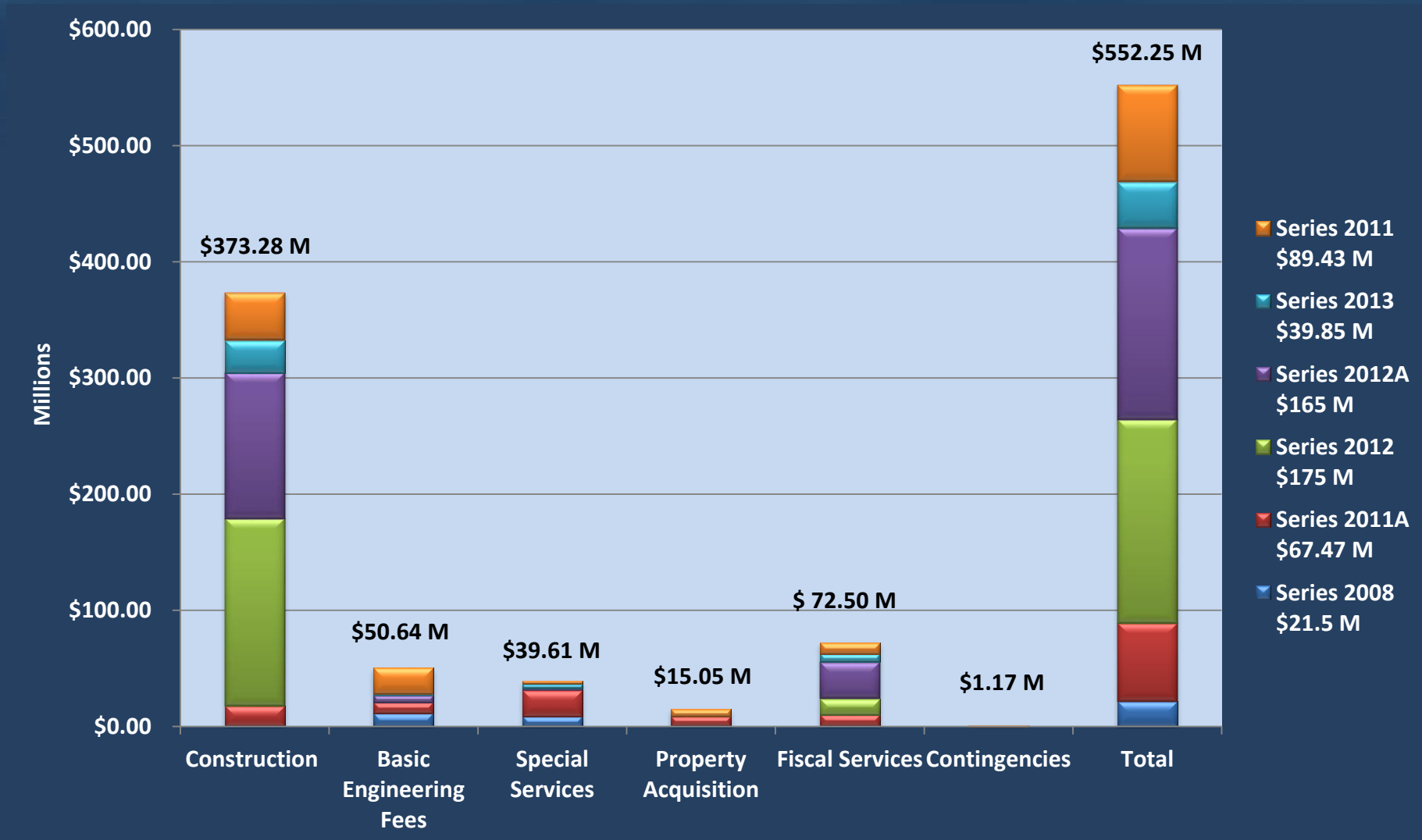
GRP Financial Timeline



Project Cost Summary

Funding Source	Authorized Amount	Interest Rate	Bond Costs	Capitalized Interest	Debt Service Reserve Fund	Net Amount Available
TWDB WIF Bond Issue Series 2009	$ 21,500,000	2.71%	$ 470,337	$ -	$ -	$ 21,029,663
2011 Open Market Bond Issue	$ 83,430,358	5.25%	$ 2,049,764	$ 7,858,242	$ -	$ 73,522,353
TWDB DFund Series 2011A	$ 67,470,000	4.97%	$ 751,195	$ 5,166,233	$ 3,859,151	$ 57,693,421
TWDB DFund Series 2012	$ 175,000,000	4.62%	$ 971,769	$ 12,869,175	$ -	$ 161,159,056
TWDB DFund Series 2012A	$ 165,000,000	4.62%	$ 952,270	$ 14,139,669	$ 16,500,000	$ 133,408,061
TWDB Dfund Series 2013	$ 39,850,000	4.50%	$ 628,750	$ 3,214,292	$ 3,073,489	$ 32,933,469
Totals	**$ 552,250,358**		**$ 5,824,086**	**$ 43,247,611**	**$ 23,432,640**	**$ 479,746,022**

Project Cost Summary



Surface Water Treatment Plant Construction

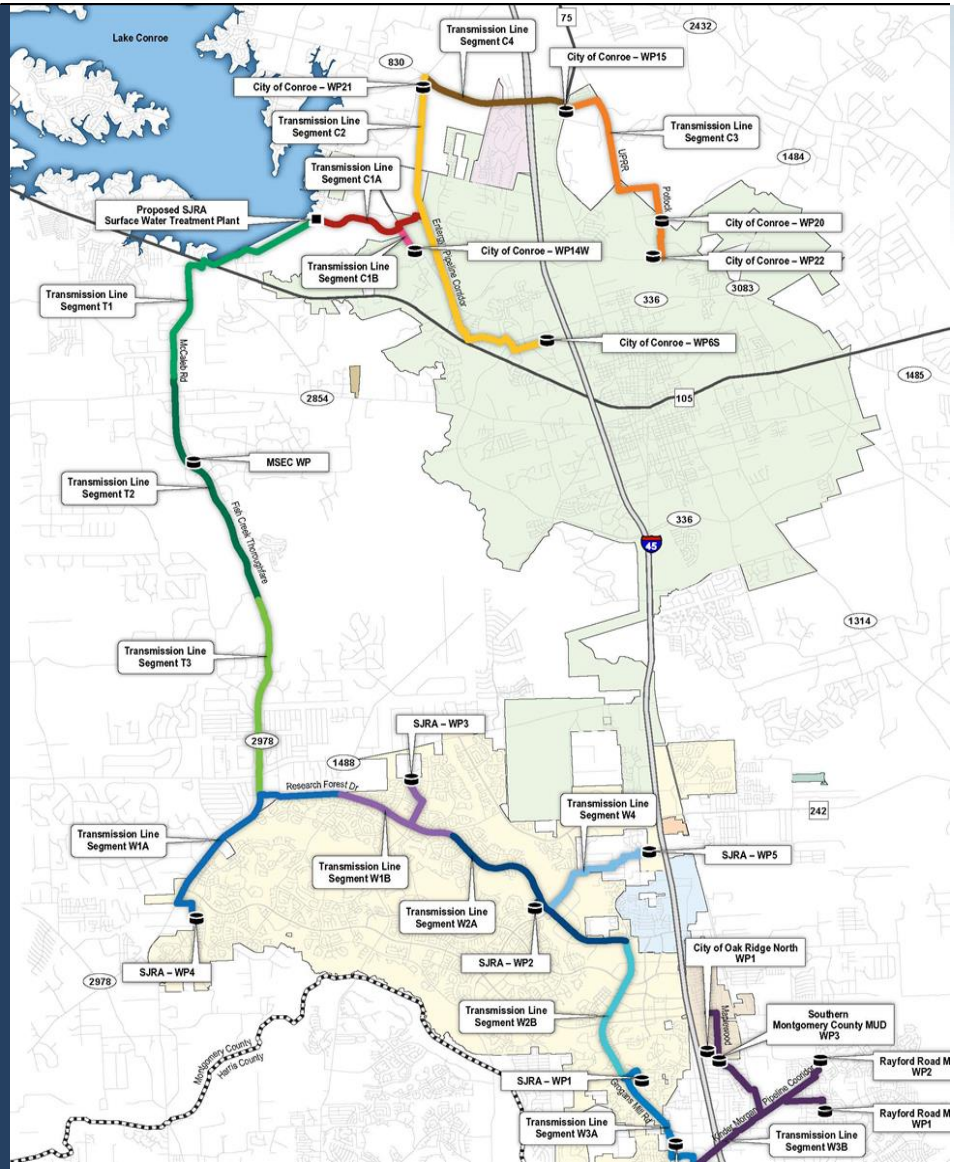
Project Data Thru 7/31/2015

Contracted Amount:	**$190,704,740.00**
Change Orders:	**$ 0.00**
Estimate to Complete:	**$190,704,740.00**
Amount Invoiced:	**$183,694,355.00**
Percent Complete:	**96.3%**

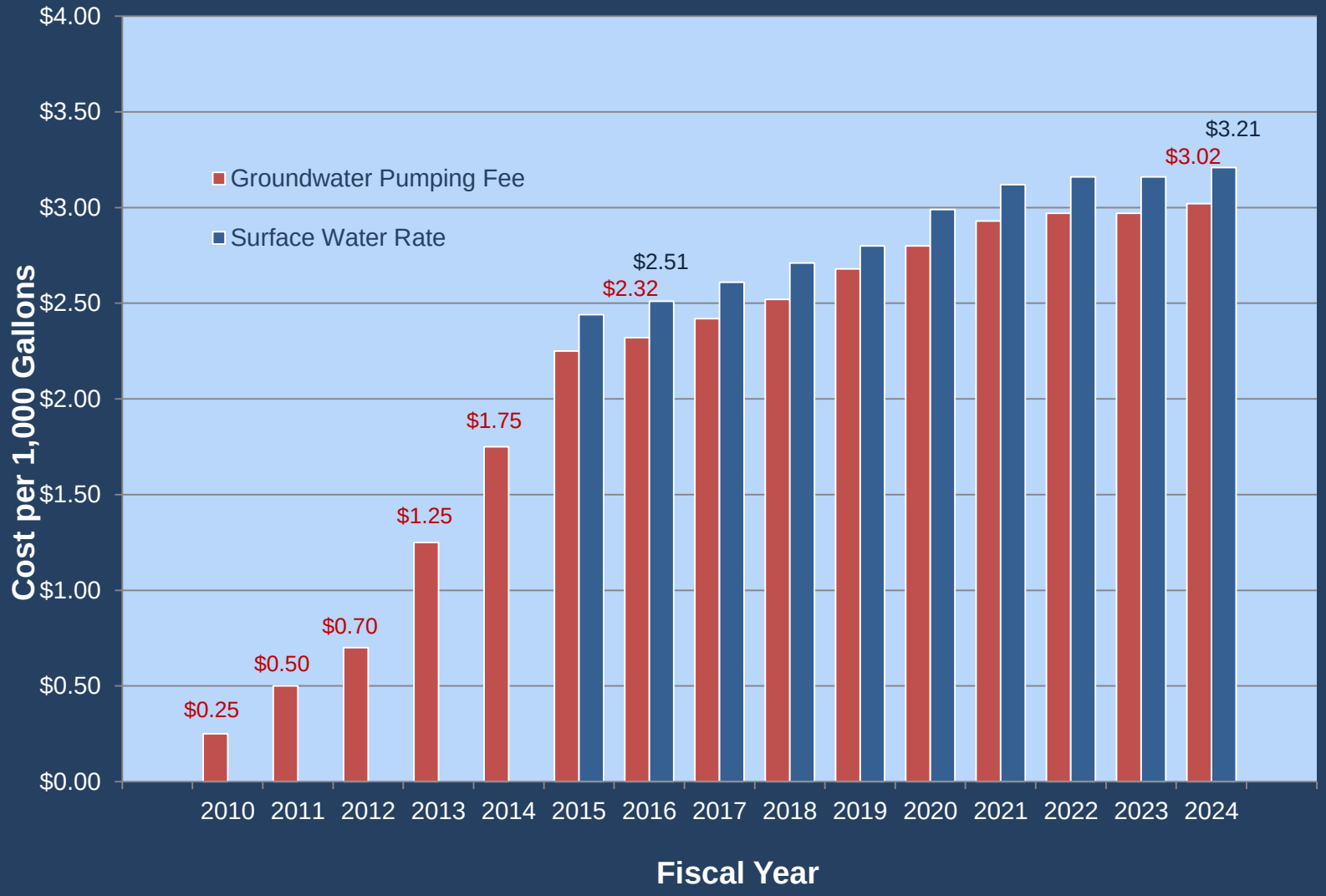
Transmission Pipeline System Construction

Project Data Thru 7/31/2015

Contracted Amount:	**$148,451,986.60**
Change Orders:	**($1,719,693.97)**
Estimate to Complete:	**$146,732,292.63**
Amount Invoiced:	**$142,763,501.78**
Percent Complete:	**97%**



Historic and Projected Water Rates



Open Market vs TWDB Funding

- Open Market Bond Funding
  - Pros
    - Slightly faster delivery time (2 mo. vs 3 mo. process)
    - Fewer restrictions on fund use (fewer environmental approvals, eligibility requirements)
    - No interim approval process (projects not “contingently” awarded)
    - Funds are not escrowed; no funding release process
  - Cons
    - Generally higher interest rate
    - Higher cost of issuance

Open Market vs TWDB Funding

- TWDB Funding
  - Pros
    - Generally lower interest rates
    - Lower cost of issuance
  - Cons
    - Slightly slower delivery time (3 mo. vs 2 mo. process)
    - Some restrictions on fund use (prior environmental approvals, eligibility requirements for fund uses)
    - Interim approval process (obtain TWDB approval to award contracts and obtain Notices to Proceed)
    - Additional paperwork for fund releases from escrow

Open Market vs TWDB Funding

- Bottom Line
  - Significant cost savings with TWDB Funding
  - Estimated $10s of millions over life of the loans for our project
  - Savings far exceed minor inconveniences
  - TWDB staff a pleasure to work with

Is the Project a success?

- Achievements
  - From planning to completed construction in 7 years (2009-2016)
  - Completed under budget
    - Original estimate was $490 Million
    - Final project cost - $480 Million
  - Provides an alternative water supply source for growth in Montgomery County
  - Least cost of compliance to participants

Is the Project a success?

Questions?