



4 March 2021

To: Mayor and City

Council members

Continuing work on new Surface Water Treatment Plan. Immensely complex and important, progress continues. TWDB administrative delays from their processing the CMAR causing some delays. Clay

Surface Water Treatment Plant

Is It In Budget?		Is It On Schedule?		Community Benefit <i>This project will provide Citizens of Pearland up to 10 mg of safe clean drinking water to accommodate continued population and economic growth</i>
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Project Phase? Construction				

Highlights:

Work on Early Works Package 1 (EWP1) \$7,479,256

- Rough excavation/ fill work site-wide is now largely complete.
- Work continues as weather allows on the excavation of the site detention pond located on the south side of Mustang Bayou. See photo attached.
- The site is graded to meet the sheet flow drainage needs during construction.
- The CMAR's on-site office, parking, material receiving, and storage requirements are in place and functioning
- Installation of Temporary Electrical is still pending Centerpoint move-in

Work on Early Works Package 2 (EWP2) \$8,571,576

Consisting of deep foundation work, construction of the ground storage tank and procurement of the Membrane package:

- Deep Foundation work lies within the Solids Processing area and includes the below grade foundations for
 - Sludge Thickener
 - Dewatering basin
 - Wash Water Recycle sump
 - Return Flow Pump sump
 - Auger cast piles below Pre-Treatment Basin are now complete and tested
- Ground Storage Tank (GST) is now complete and in the water testing phase
 - Construction complete and interior and exterior coatings in place
 - City Logo was installed in early January
 - Testing began Jan15th
 - Substantial completion obtained week of January 11. Tank will remain partially filled to continue soil compression.
- Membrane filter system procurement
 - Project team completed a review of all equipment proposals in March 2020.
 - Engineer, CMAR are in the submittal and review process of all shop drawings for the membrane filters and associated equipment.
- Canal Bi-Pass & Cofferdam work has begun in preparation for work to begin on the Raw Water Intake Lift Station. This allows the canal to continue to function while providing a drained basin to install the



lower portions of the raw water intake. Once the Intake is complete the levee between the canal and the bi-pass channel will be removed effectively expanding the canal volume in front of the Raw Water Intake. See photo.

- **On February 8, 2021** TWDB notified the City that it had approved the first six (6) work packages included in the Balance of Plant Scope. On February 10, the City issued a Notice to Proceed with the work of the following packages:
 - Package 2.05 Yard Piping totaling \$8,096,100
 - Package 11.03 Vertical Turbine Pumps procurement totaling \$792,678
 - Package 11.04 Submersible Pumps procurement totaling \$556,570
 - Package 20.01 Raw Water Intake Pump Station construction totaling \$4,544,570
 - Package 20.03 Pre-Treatment Basin construction totaling \$4,232,500
 - Package 20.04 Membrane Building construction totaling \$14,338,000
- **On February 19** TWDB notified the City that the next four work packages from the Balance of Plant had been approved. On February 22 the City issued a Notice to Proceed with the work of the following packages:
 - Package 11.05 Slide and Weir Gates totaling \$66,780
 - Package 11.06 Dewatering Equipment procurement totaling \$1,887,000
 - Package 11.07 Granulated Activated Carbon Filter Equipment procurement totaling \$2,094,635
 - Package 16.04 Generator Equipment procurement totaling \$1,559,857
- **Total dollar value of all on-going work \$55,311,842 plus the now complete Pre-Construction Services (initial contract) in the amount of \$1,092,320 for a total Encumbered amount of \$56,404,162**
- The project schedule has suffered some schedule challenges due to the challenges created by TWDB's lack of an established procedure accommodating the CMAR delivery process.
 - The impact to the project at this point is that only ten of the 19 commercial packages (sub-contracts or purchase contracts) have been processed and approved by TWDB leaving 9 outstanding.
 - This process delayed the start of work for the Balance of the Plant by approximately 6 weeks beyond the initial schedule of January 2, 2021. As noted above those package approvals have begun and the CMAR still believes that this time can be made up to meet an end of January or early February 2023 water to the system status.

Budget Info:

Funding Sources	Series	To Date	Future	Total Budget
W/S Revenue Bonds	2017B	6,012,500		6,012,500
Impact Fee - Debt	2017B	6,012,500		6,012,500
W/S Revenue Bonds	2018A	4,325,000		4,325,000
Impact Fee - Debt	2018A	4,325,000		4,325,000
W/S Revenue Bonds	2019A	10,500,000		10,500,000
Impact Fee - Debt	2019A	10,500,000		10,500,000
W/S Revenue Bonds	2020A	53,800,000		53,800,000
Impact Fee - Debt	2020A	53,800,000		53,800,000
W/S Revenue Bonds			14,562,500	14,562,500
Impact Fee - Debt			14,562,500	14,562,500
Cash				-
Other Funding Sources				-



Total Funding Sources	149,275,000	29,125,000	178,400,000
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Expenditures	To Date	Future	Total
PER	8,772,583		8,772,583
Land	103,818	200,000	303,818
Design	15,366,103	1,550,000	16,916,103
Construction	135,997,681	4,050,000	140,047,681
Construction Management/Inspection	3,125,014		3,125,014
Construction Materials Testing	462,860	100,000	562,860
FF&E		1,500,000	1,500,000
Total Expenditures	163,828,059	7,400,000	171,228,059

Project Balance/Contingency	7,171,941
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Staff will be reducing the project budget at mid-year

Schedule Info:

	<i>Base Line</i>	<i>Current</i>
<i>Design Start - Package 1</i>	August-19	September-19
<i>Design Start - Package 2</i>	February-19	March-19
<i>Design Start - Package 3</i>	August-19	September-19
<i>Bid Start</i>	March-20	January-19
<i>Construction Start</i>	May-20	June-20
<i>Proposed Construction Completion</i>	December-22	

Rain Days:

Upcoming Work Items:

- Work will continue for the foundations below the Pre-Treatment Basin and Chlorine Building
- Foundation work will begin on the De-Watering Building foundations
- Work will begin on the Raw Water Intake lift station
- Work will continue in the site detention pond with outfall construction and wall slope grading
- CMAR will issue his Purchase Orders for specific plant wide pumping equipment, structure for the Membrane building, de-watering equipment, GAC equipment and the generators.
 - Note: Generator equipment winterizing requirements are under review based on lessons learned during the February freeze

Project Manager: Skipper Jones

Construction Manager: Ardurra Group

Designer: Pkg #1 Freese & Nichols, Pkg #2 CSM Smith, and Pkg #3 Stantec

Contractor: PLW Waterworks

Scope: Pilot testing, design, and construction of a pre-sedimentation basin, 10 MGD Surface Water Treatment Plant and associated distribution system. This project will treat raw water from the Gulf Coast Water Authority (GCWA) canal for distribution throughout the City's water system. The plant will be located on City property on CR48 south of CR59, which is adjacent to the GCWA canal. Pilot testing began in

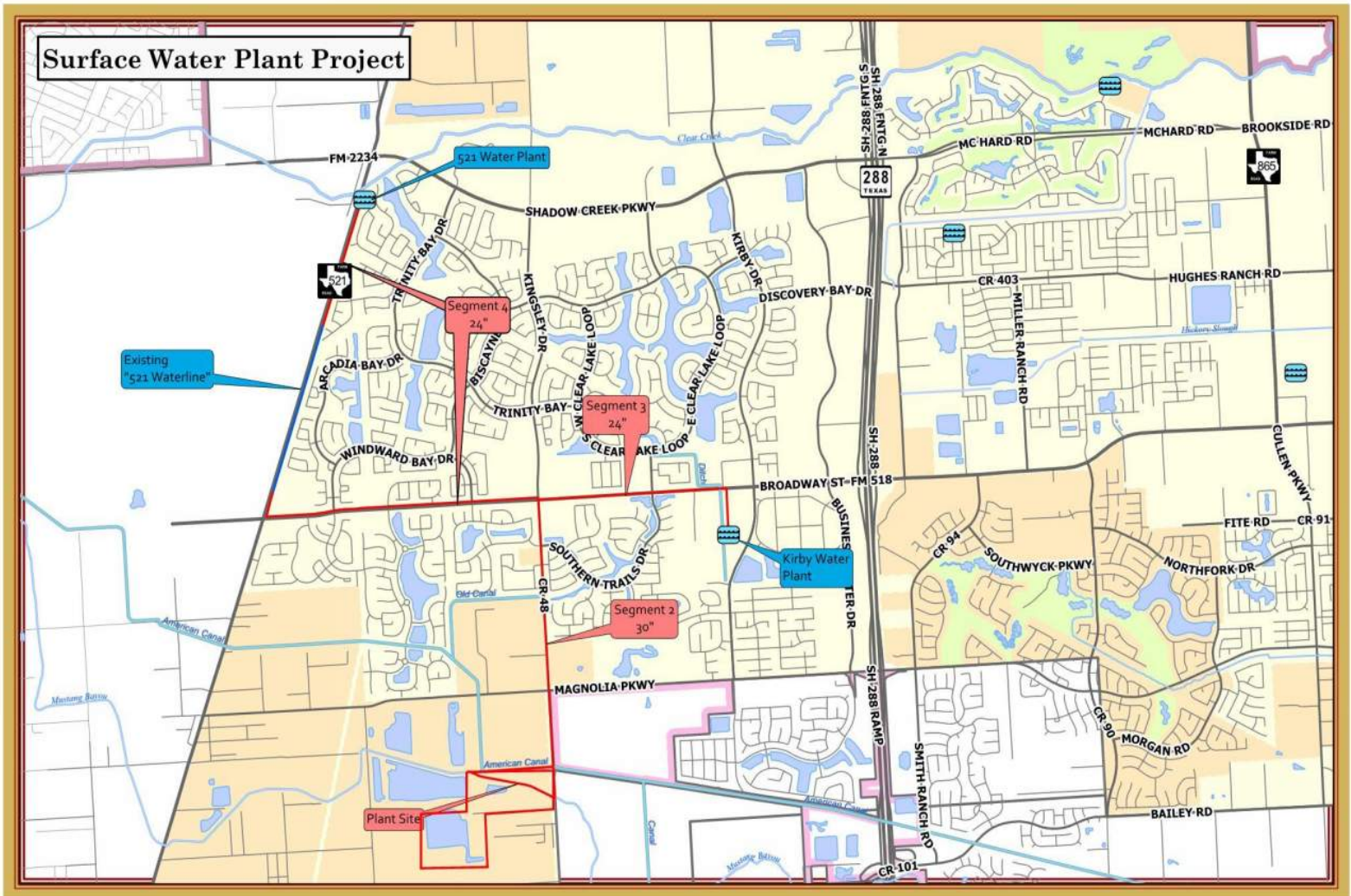


FY2018 and will be followed by design and construction. The project is scheduled to be completed over a five-year period with new capacity available by 2022/2023. Phase 1 of the distribution system is planned to include 24" - 36" pipelines from the Surface Water Plant to the FM 521 and FM 1128 corridors. Installation of fiber to serve the City's SCADA system.

Justification: The project will provide additional potable water capacity to meet demands of northern Brazoria County as the region continues to grow. The 2012 Water Model Update based on growth projections established that the demand for an additional 10 MGD would need to be met by 2022/2023.

Previous Memos: 6/16/16, 2/2/17, 3/9/17, 4/13/17, 3/29/18, 4/19/18, 1/10/19, 2/21/19, 3/28/19, 8/1/19, 8/8/19, 1/23/20, 3/05/20, 4/16/20, 9/17/20

Project Location Map:



Project Photos:



Plant Site Overall View



Pre-Treatment Basin Auger Cast Piles and Foundations



De-Watering Building Foundation



Canal Bi-Pass Channel



Site Detention Pond



Chlorine & Chlorine Dioxide Building Foundation