



30 March 2022
 To: Mayor and City Council members
 Progress on the big expansion (2 MGD) of wastewater treatment and reclamation at our JHEC plant. Progressing for December 2023 completion on the \$80 million investment. Clay

JHEC Water Reclamation Facility Expansion (JHWRF)

Is it in Budget?		Is it on Schedule for the Current Phase per the Contract?		Community Benefit
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<i>This project will provide Citizens of Pearland with an expanded facility (from a 4MGD to a 6MGD) to accommodate continued population and economic growth</i>
Project Phase?				
Construction				

Highlights:

Headworks and yard piping:

- PLW, the Construction Manager At Risk (CMAR) has installed the 48-inch pipe from the Headworks to the Splitter Box which allowed work on the Operations building to begin in January 2022.
- 36-inch and 20-inch piping from the Headworks to the lift station is approximately 80% complete.
- Manholes, including plant drainage is complete on the south side of the project site.
- The slab foundation and walls for the first elevation of the Headworks were poured in February 2022.
- The Headworks concrete structure is scheduled to be 100% complete by the end of March 2022.

Sludge Building:

- The potable water installation is complete.
- Concrete slab and concrete columns are complete
- CMU walls have been completed up to the elevated deck.
- Electrical conduits and outlets have been installed in the completed sections of the CMU.
- Elevated deck scaffolding, formwork, and reinforcement has begun.
- The pre-engineered metal building has been ordered and its manufacturing has started.

UV System:

- The UV System partial substantial completion was held in February 2022.
- The existing UV gates were found to be un-operatable and will need to be replaced.

Duct Bank:

- The generator pads 1 and 2 were poured in February.
- The motor Control Center (MCC)-2 stub ups to the Sludge Building is complete.
- MCC-5 at the Non-Potable Water Building is complete.
- Contractor has completed approximately 50% of the duct bank at the plant entrance in preparation for the permanent power connection.



Sequence Batch Reactors (SBRs):

- The north portion of the slab at SBR 5 and 6 was poured in December 2021.
- Work on the north walls began in January 2022.
- The south portion of the slab at SBR 5 and 6 was poured March 10, 2022.
- Process mechanical piping was delivered in February 2022.
- The slab at the scum deposit is complete.

Tertiary Filters (T-Filters)

- Installation of new filter equipment at the existing basins started in January 2022.

Ongoing work includes:

- Preparation for the concrete pour of the elevated deck for the Sludge Building.
- Start erecting the CMU walls on the Chemical Building.
- Start erecting the wall on the south portion of SBR 5 and 6.
- Begin forming up the generator pad 3 and 4.

The project is beginning to experience some minor material/equipment delays. The delays are minor in that the orders were placed early enough to not impact the critical path yet. The only exception is the electrical gear which may begin to impact the schedule if not delivered by May 2022. Releasing the Early Works Package allowed the contractor to order most of the long lead equipment and material far enough in advance to mitigate the impact of the supply chain shortages. The Early Works Package even allowed some work items to be completed ahead of schedule which is having a positive impact on the overall project schedule. To date, the project is running a little over 30 days ahead of schedule.

The NTP for Pre-Construction was issued on February 10, 2020. The work contained in the Guaranteed Maximum Price (GMP) began in July 2021. As of latest pay estimate, the project is 32% complete by expenditure and 52% complete by time expended. In the next several months the expenditures will increase significantly because of the work that has started on the Headworks and the Chemical, Sludge, and Operations buildings, including preliminary electrical and HVAC work. The project is scheduled to be complete on December 27, 2023.

Budget Info:

Funding Sources	Series	To Date	Future	Total Budget
General Revenue - Cash				-
W/S Revenue Bonds				-
W/S Revenue Bonds				-
W/S Revenue Bonds	2021A	37,500,000		37,500,000
W/S Revenue Bonds	TBS 2022	1,100,000		1,100,000
System Revenue - Cash			\$1,465,500	1,465,500
Impact Fee - Debt	2021A	37,500,000		37,500,000
Impact Fee - Cash		1,100,000	1,465,500	2,565,500



Other Funding Sources	462,236		462,236
Total Funding Sources	77,662,236	2,931,000	80,593,236

Expenditures	To Date	Future	Total
PER	462,235		462,235
Land			-
Design	5,717,000		5,717,000
Construction	70,597,942		70,597,942
Construction Management/Inspection	1,670,000		1,670,000
Construction Materials Testing	446,969		446,969
FF&E		500,000	500,000
Total Expenditures	78,894,146	500,000	79,394,146

Project Contingency	1%	1,199,090
Project Balance		(0)

Schedule Info:

	Base Line	Current
Design Start	March-19	April-19
Bid Start	November-20	September-19
Construction Start	January-21	July-21
Construction Completion	December-23	

Upcoming Work Items:

- Complete SBR 5 and 6.
- Complete generator pads 3 and 4.
- Replace Channel Gates in the Headworks.
- Continue work on the Chemical building.
- Continue work on the Sludge building.
- Begin work on the Operations building.
- Begin work on Blower building 1.

Project Manager: Jennifer Lee

Construction Manager: Ardurra Group

Contractor: PLW Waterworks

Scope: This project consists of a 2 MGD expansion to the existing 4 MGD Sequential Batch Reactor (SBR) water reclamation facility that will increase the treatment capacity to 6 MGD (plus peak) at the John Hargrove Water Reclamation Facility (JHEC WRF) and includes critical infrastructure to be sized for the ultimate capacity of 8 MGD. The expansion project uses the CMAR project delivery method. The project will include



new headworks, refurbished and new pumps for the influent lift station, 2-1 MGD basins, blowers, and tertiary treatment along with SCADA upgrades.

Justification: This 2 MGD expansion is based on growth projections for the JHEC WRF service area and additional flows to be diverted to the JHEC WRF from the Longwood Service Area and the future development in the south. In 2016, flows exceeded the TCEQ requirement of 75% which required the start of design and staff requesting TWDB funding. In 2019, several months exceeded the 90% threshold which predicted the need to finalize the design and begin construction.


Previous Memos: 02.21.19, 05.02.19, 10.17.19, 11.14.19, 01.16.20, 07.16.20, 10.01.20, 01.14.21, 02.11.21, 05.13.21, 06.10.21, 10.28.21

Project Location Map:

JOHN HARGROVE WATER RECLAMATION FACILITY



Legend/Notes

 Wastewater Treatment Plant



1:7,715
1 inch = 640 feet


NORTH
This content is for informational purposes only and may not be prepared, disseminated, or suitable for legal, engineering, or financial purposes.
DATE PREPARED: JANUARY 24, 2019



Project Photos:



Preparing to pour slab at SBR 5 and 6



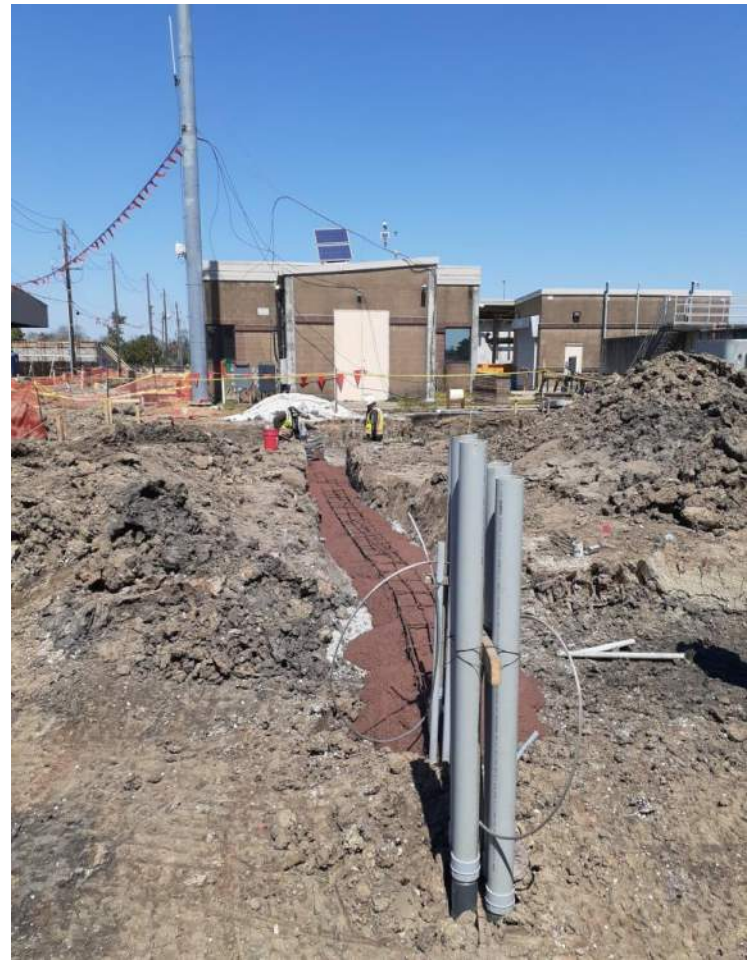
Duct Bank Installation at Plant Entrance



Elevated Deck Scaffolding, Formwork, and Reinforcement at the Sludge Building



Columns for Sludge Building



Stub-ups at Generator Pads 3 and 4