

16 July 2020

To: Mayor and City Council members

Update on finalizing design of expansion and upgrades necessary for our water reclamation plant on Magnolia Parkway. Budget to be adjusted on estimates of current information/reality. Construction anticipated starting end of 2020. Clay



# John Hargrove Water Reclamation Facility Expansion (JHWRF)

**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 and includes critical infrastructure to be sized for the ultimate capacity of 8 MGD. The expansion project will be constructed via the CMAR delivery process.

**Justification:** This 2 MGD expansion is based on growth projections for the JHEC WRF service area and additional flows that will be diverted to the JHEC WRF from the Longwood Service Area and future development in the south. Current flows have reached 75% of the current plant capacity which requires the design to begin. Projected growth is expected to reach 90% capacity which will be met in the next two years requiring construction.

**Project Manager:** Cara Davis

**Designer:** Ardurra Group

**Contractor:** PLW (CMAR)

### Budget Info:

Funding Sources	Series	To Date	Future	Total Budget
General Revenue - Cash				-
W/S Revenue Bonds	2016A	752,500		752,500
W/S Revenue Bonds	2018B	2,111,526		2,111,526
W/S Revenue Bonds			26,305,000	26,305,000
Impact Fee - Cash		2,111,525		2,111,525
Impact Fee - Debt	2016A	752,500		752,500
Impact Fee - Debt			26,305,000	26,305,000
Other Funding Sources		386,949		386,949
<b>Total Funding Sources</b>		<b>6,115,000</b>	<b>52,610,000</b>	<b>58,725,000</b>

Expenditures	To Date	Future	Total
PER	475,000		475,000
Land			-
Design	3,775,000	710,000	4,485,000
Construction	828,960	65,032,871	65,861,831
Construction Management/Inspection		1,800,000	1,800,000
Construction Materials Testing		400,000	400,000
FF&E		500,000	500,000
<b>Total Expenditures</b>	<b>5,078,960</b>	<b>68,442,871</b>	<b>73,521,831</b>

<b>Project Balance/Contingency</b>	<b>(14,796,831)</b>
------------------------------------	---------------------

Staff is working with TWDB to apply and secure a low interest loan for this project.

Based upon contractor construction estimates, staff is updating the FY21 budget to reflect these cost changes.

## Schedule Info:

	<i>Base Line</i>	<i>Current</i>
<i>Design Start</i>	March-19	April-19
<i>Bid Start</i>	November-20	September-19
<i>Construction Start</i>	November-20	
<i>Proposed Construction Completion</i>	May-23	

## Highlights:

- Staff advertised a Request for Qualifications in May 2018 for design services and in July 2018 selected Ardurra Group for the design of the project. A contract for design services was awarded in March 2019.
- 30% plans were submitted for review by Ardurra to the City in September 2019.
- An RFQ for Construction Manager at Risk (CMAR) was advertised in September 2019. Two respected CMAR firms responded: PLW and McCarthy with McCarthy declining to submit a proposal due to an inability to meet the City's project schedule. The CMAR Pre-Construction Services contract was awarded to PLW in January 2020. PLW delivered the Reflection Bay project in budget and six months early in late 2018.
- CMAR Pre-Construction/Kickoff Meeting on was conducted on January 21, 2020 and Pre-Construction Services began immediately with PLW working directly with the City and Ardurra to guide the design process for constructability, and cost effectiveness and progressive cost estimating.
- PLW's 30% Opinion of Probable Construction Cost (OPCC) of \$64,459,970.00 was delivered in mid-March and reviewed at a meeting held on March 17, 2020. Their 30% estimate included \$56,494,319 for the cost of work, \$2,739,975 for the CMAR fee of 4.85%, a five percent (5%) contingency fee of \$2,824,716, and \$1,572,000 in bonds in insurance. The \$64 million cost estimate also included the Pre-Construction CMAR fee of \$828,960 that has already been awarded by Council.
- Ardurra has now completed the Draft Environmental Information Document (EID) for TWDB and sent letters to the required commenting Agencies. A virtual Public Comment meeting has been scheduled for July 28, 2020. Public Notice will run in Pearland Reporter on June 24, 2020, in the Houston Chronicle, on June 26, 2020 and LaVoz on July 5, 2020. The Public Notice as well as the link to the EID is located on the City's Projects Website <http://www.pearlandtx.gov/departments/engineering-and-capital-projects/projects-division/projects-update/jhec-wrf-expansion>. The meeting will be conducted where people can view the information but must register in advance if they wish to speak.
- 60% Construction plans were submitted on May 22, 2020 to the team for review and for PLW to develop their 60% cost estimate. The 60% plan review meeting with the team, including presentation of PLW's 60% OPCC, was held on July 9, 2020.
- The 60% OPCC estimate presented at the July 9<sup>th</sup> meeting had a \$4,576,611.00 upward trend from the 30% estimate for a total estimate of \$69,744,336.00. The 60% estimate included \$61,070,931 for the cost of work, \$3,110,037 for the CMAR fee of 4.85%, a five percent (5%) contingency fee of \$3,053,546, and \$1,680,863 in bonds in insurance. The Pre-Construction CMAR fee of \$828,960 is still included in this price.

- Based on the current proposed CIP which allocates \$50,530,000 for construction and \$4,960,000 for contingency, we are currently \$14.3 million overbudget. Value engineering options were presented by the CMAR at the 60% OPCC meeting. Staff will review these options internally and reconvene discussions with the CMAR team on July 22<sup>nd</sup>. Staff is conducting a detailed review of the cost estimate and comparing it with the Engineer's estimate to determine the root cause of the higher costs. From this analysis the value engineering options presented will be reviewed and considered and also potential re-design may be conducted. **As a reminder this is the purpose of CMAR to review and develop early cost estimates, review and work as a team to bring these costs back into budget through value engineering and constructability reviews.**
- Regular design team meetings continue on a monthly basis with the CMAR making planning recommendations and providing information on construction impacts.
- In March 2017 Staff submitted the Project Information Form (PIF) to Texas Water Development Board (TWDB) to register the project for an invitation to apply for TWDB funding for the project. In May, this year, Staff submitted an online funding application to TWDB. The application was reviewed and deemed administratively complete on May 14, 2020 and assigned TWDB Project No. 73887. The application will be in process through August 2020. In September/October 2020, TWDB will put the application on the TWDB Board calendar to approve the loan commitment. In January/February 2021 the City can close on the loan.
- TWDB funding options consists of two very favorable funding alternatives: Clean Water, State Revolving Fund: Equivalency and Non-Equivalency. Each come with different requirements and slightly different interest rates and funding mechanisms. There are also different restrictions on the CMAR process. Staff met with TWDB officials on June 23 to discuss details and options for both and are planning a meeting with the Finance Department to review this information. Staff will provide the most beneficial funding source for the City when Council considers approval of the submission for the loan application process.

#### Upcoming Work Items:

- 60% OPCC Value Engineering Review – July 22<sup>nd</sup>
- Environmental Public Meeting – July 28<sup>th</sup>
- 90% plan submittal scheduled for August 2020


**Previous Memos:** 2/21/19, 5/2/19, 10/17/19, 11/14/19, 1/16/20

Project Location Map:

# JOHN HARGROVE WATER RECLAMATION FACILITY



Legend/Notes

 Wastewater Treatment Plant



1:7,715  
1 inch = 640 feet

  
**NORTH**  
This product is for informational purposes only and may not be prepared or be suitable for legal, engineering, or surveying purposes.  
DW P. PREPARED: JANUARY 24, 2018