

**CITY OF CORPUS CHRISTI  
CORPUS CHRISTI WATER**

**TO:** Peter Zanoni, City Manager  
**FROM:** Drew Molly, P.E., Chief Operating Officer  
**COPY:** Mayor & City Council  
**DATE:** June 27, 2025  
**SUBJECT:** Water Supply Projects Update

 6/27/25

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Corpus Christi Water (CCW) continues to evaluate the four major alternative water supply projects, which include the Nueces River Groundwater Wells Project, the Evangeline Groundwater Project, the South Texas Water Authority (STWA), and the EV Ranch Groundwater Project. These are in addition to the Inner Harbor Water Treatment Campus, which is currently progressing with design under the City Council (Council) approved design-build contract with Kiewit.

**Inner Harbor Water Treatment Campus (IHWTC)**

The project consists of three phases with Phase 1 having two parts (A and B). Phase 1A of the project was completed on June 1, 2025, and included planning, initiation of the Basis of Design Report, and development of the pilot plant protocol.

At the upcoming July 15<sup>th</sup> City Council meeting, Brett Van Hazel will present the near- and far-field modeling, as well as the cost model.

Phase 1B began in April 2025 and was designed to include multiple "Steps" (contract amendments).

Phase 1B – Step 1 included support from the main technology supplier in the development of the Basis of Design Report, as well as planning and design support from the transformer supplier, and GHD's near- and far-field modeling. This phase is complete.

Phase 1B – Step 2 will be executed by June 30, 2025, and includes the following tasks:

- Pilot plant fabrication details for construction
- Project management
- Pilot plant procurement and construction
- Pilot plant operations for approximately 90 days

Phase 1B – Step 3 includes administrative support in the development of the main technology supplier procurement package, vendor package review, and award. This phase is complete.

Phase 1B – Step 4 includes design development to bridge engineering services from Phase 1A to Phase 1B – Step 5, and all costs will be tracked on a time and material basis. This phase is ongoing.

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Phase 1B – Step 5 will be presented to City Council on July 29<sup>th</sup>, which will include full design and GMP development.

The total project expenditure for Phase 1 to date (Through May 2025) includes:

- Freese and Nichols - \$3,050,200
- Kiewit - \$11,982,461

### **Nueces River Groundwater Wells Project**

#### Phase 1 – Groundwater Well Implementation for Diversions to Nueces River

Phase 1 consists of obtaining the necessary Texas Commission on Environmental Quality (TCEQ) Bed and Banks permit to discharge up to 15,680 acre-feet per year (approximately 14 MGD) of groundwater into the Nueces River. As of today, the current expenditures for this project are \$9,868,517.

The incremental start-up of multiple wells may begin during the week of June 30<sup>th</sup>. The water will be introduced slowly and will comply with the City of Corpus Christi's (City) monitoring plan.

A summary of the activities includes:

- Well Field 1
  - Completion of Well No. 1
  - Completion of Well No. 2
  - Completion of Well No. 3
  - Completion of Well No. 4
  - Completion of test pumping on Well No. 5
    - City staff anticipate the well to be operable by the end of July
  - Design of permanent pumping is completed on Well No. 6
    - City staff anticipate the well to be operable by the end of July
  - Drilling completed on Well No. 7
    - City staff anticipate the well to be operable by the end of August
  - Drilling has begun on Well No. 8
    - City staff anticipate the well to be operable by the end of August

#### Bed and Banks Permit

The City has received an administratively complete Bed & Banks permit from TCEQ on June 11<sup>th</sup>.

#### Phase 2 – Proposed Future Brackish Reverse Osmosis (RO) Treatment Plant

Phase 2 of the Nueces River Groundwater Project will utilize groundwater from the eight new wells as a source of water for a future brackish groundwater plant. The City has estimated that the eight groundwater wells will provide approximately 11 MGD of drinking water to its current supply. Preliminary and conceptual design work has commenced for the development of a future plant and is included in the Region N Water Plan.

#### Nueces River Groundwater Well Data

In response to the severe drought conditions, the City began drilling water wells adjacent to the Nueces River in Nueces County in March 2025. Phase 1 of this project, referred to as the Nueces River Groundwater Project, consists of utilizing groundwater to augment the river for downstream



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use at the City's drinking water plant, O.N. Stevens Water Treatment Plant. This temporary source of water provides an expedient and cost-effective water supply to reduce releases from Lake Corpus Christi, while the City continues to maximize its water supply from the Mary Rhodes Pipeline (MRP) at flows of approximately 70 MGD.

In order to comply with the TCEQ requirements, the City evaluated water quality in the river at the necessary river segments adjacent to the proposed groundwater discharge locations. Based on this assessment, a monitoring plan has been developed to ensure water quality compliance is maintained. The efforts associated with this work have been summarized and included in the Temporary Bed and Banks Permit application that was submitted to the TCEQ on May 12, 2025.

As of today, Wells No. 1 through No. 4 are operational, while four additional wells are expected to be operational by August. The analytical results from the first four wells are summarized below:

	Depth (ft)	Total Dissolved Solids (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Dissolved Oxygen (mg/L)	pH (S.U.)	Temperature (°C)
<b>Well 1</b>		5,180	2,458	619	4	8	28
Nueces River at Well 1 Discharge	810	580	233	93	7	8	27
<b>Well 2</b>		3,130	1,744	882	3	8	29
Nueces River at Well 2 Discharge	724	1,160	472	144	8	8	28
<b>Well 3</b>		3,660	1,412	808	3	8	22
Nueces River at Well 3 Discharge	760	930	273	90	7	8	22
<b>Well 4</b>		3,450	1,558	589	3	8	26
Nueces River at Well 4 Discharge	690	710	233	88	6	8	26

### Evangeline Groundwater Project

City staff presented to the San Patricio County Groundwater Conservation District (SPGCD) on June 26<sup>th</sup> and specifically discussed the Evangeline groundwater project, including the need for an export permit to transfer water from San Patricio County to the City.

Mr. Stewart, the General Manager of SPGCD mentioned that the board may consider adding special conditions to the Evangeline production permit that would potentially limit the production of water from this well field. This is a concern because it could potentially limit our overall water supply availability from this source. The board also expressed concerns about the export permit as it relates to water leaving the district.

During a June 25<sup>th</sup> normally scheduled meeting with City staff and Evangeline, a senior member of the Evangeline team criticized the City for discussing arsenic levels from test well data performed by the City last year during the June 24<sup>th</sup> City Council Meeting. The City's testing of the Evangeline second test well in February 2024 revealed arsenic in excess of the Environmental Protection Agency (EPA) maximum contaminant level (MCL) of 10 parts per billion. The results were reported at 12.8 parts per billion and a copy of the laboratory report was sent to City Council on June 25<sup>th</sup>. While the City believes these challenges can be addressed, it is imperative that the community is fully aware of the water quality data.

### South Texas Water Authority (STWA)

The City entered into a Memorandum of Understanding (MOU) with STWA on June 23, 2025, ahead of the deadline set by City Council on June 10<sup>th</sup>. A summary of the comments made at the

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June 10<sup>th</sup> city council meeting by Kleberg County Judge Rudy Madrid, and General Manager of STWA, John Marez is provided below:

- STWA can convey up to 28 MGD
- The estimated timeline to deliver this project is approximately 24 months
- A contract between the City and STWA needs to be in effect by September 1, 2025
- STWA will provide maintenance and operation for the lifetime of the facility
- The rate will not exceed \$5.50 for 1,000 gallons of water over the 30-year contract
- The additional cost of water to the City will be determined by:
  - The cost of electricity, which would be priced into the rate separately
  - Annual rate increases tied to the Consumer Price Index (CPI)
- There will be no upfront infrastructure costs or debt to the City

City staff are committed to bringing back a contract within 45 business days, which would be August 14, 2025, for a vote at the city council meeting on August 19<sup>th</sup>. The success of achieving the August 19<sup>th</sup> milestone will depend on the ability of STWA to provide the City with timely information for the City to evaluate the project.

The City and its consultant team repeatedly requested documents from STWA throughout the month of May but was informed that a response from attorney general's office would be required to consider the legality of releasing the information. On June 20<sup>th</sup>, the City received confidential documents including a hydrogeologic study for 10 MGD, a water supply contract between SSW and STWA, and a lease agreement with the Ed Rachel Foundation. Unfortunately, this delayed the City's consultant team to conduct it's preliminary analysis of this project.

In a preliminary effort to assess the overall 30-year cost of water for this project, the team used 1) verbal statements by Judge Madrid at the June 10<sup>th</sup> City Council Meeting; 2) information from the confidential contact between SSW and STWA, and other assumptions that still need to be validated. Based on these assumptions, the City used a simple spreadsheet to calculate the 30-year cost of the water assuming the initial cost of \$6.50/KGA as shown below.

Total O&M Costs over 30-year contract with STWA: \$3,331,278,700 (see attached table)

### **EV Ranch Groundwater Project**

There is no update to add regarding the EV Ranch Groundwater Project for this week. City staff continue to work with Dr. Mintz and Darrell Brownlow.

**Attachment:** STWA Annual Cost Table

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
Annual Cost per 1,000 gallons	\$6.50	\$6.71	\$6.92	\$7.14	\$7.37	\$7.61	\$7.85	\$8.10	\$8.36	\$8.63	\$8.91	\$9.19	\$9.49	\$9.79	\$10.10
Annual Cost	\$66,430,000	\$68,555,760	\$70,749,544	\$73,013,530	\$75,349,963	\$77,761,161	\$80,249,519	\$82,817,503	\$85,467,663	\$88,202,629	\$91,025,113	\$93,937,916	\$96,943,930	\$100,046,135	\$103,247,612
	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30
Annual Cost per 1,000 gallons	\$10.43	\$10.76	\$11.10	\$11.46	\$11.83	\$12.20	\$12.59	\$13.00	\$13.41	\$13.84	\$14.29	\$14.74	\$15.21	\$15.70	\$16.20
Annual Cost	\$106,551,535	\$109,961,184	\$113,479,942	\$117,111,300	\$120,858,862	\$124,726,346	\$128,717,589	\$132,836,552	\$137,087,321	\$141,474,116	\$146,001,287	\$150,673,328	\$155,494,875	\$160,470,711	\$165,605,774

*\*3.2% (10-year average) CPI adjustment each year, over the 30-year contract with STWA*