

OVERVIEW



Area water providers have have partnered to finance a major expansion of the Northeast Water Purification Plant. The expansion will more than triple the plant’s output of fresh drinking water and help meet the mandate to reduce our area’s dependence on groundwater.

While this project is complex, its footprint will not extend beyond property already owned by the City of Houston at the Northeast Water Purification Plant and Lake Houston. Construction will begin in late 2017 using a progressive design-build approach, and be totally online in 2024.

Activity Name	17	2018				2019				2020				2021				2022				2023				2024					
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Northeast Water Purification Plant																															
Northeast Transmission Line Construction																															
Northeast Transmission Line Construction																															
NEWPP Expansion Project																															
Site Preparation																															
Raw Water Pump Station Utility Relocation																															
Raw Water Pipeline Installation																															
West Filter & Transfer Pump Station Structures																															
Balance of Project Phase 1 Construction																															
Balance of Project Phase 2 Construction																															

A Partnership

Increasing the output of freshwater by 320 million gallons per day is expensive; the cost of this project is more than a billion dollars. That is why five water providers – the North Harris County Regional Water Authority (NHCRWA), the West Harris County Regional Water Authority (WHCRWA), the Central Harris County Regional Water Authority (CHCRWA), the North Fort Bend Water Authority (NFBWA), and the City of Houston – have joined together to share its cost.





We promise to do all we can to minimize the impact our expansion will have on the surrounding neighborhoods. Almost all the construction will take place on City of Houston property, with most of it occurring in the area adjoining the existing plant.

During construction, we will position personnel on streets near the site to help with traffic control; water trucks will be utilized to hold down dust; fencing will be constructed to maximize safety; precautions will be taken to avoid construction-caused flooding, and once done, our goal is to leave the perimeter of the plant more attractive than when the project began.

Frequently Asked Questions

Q. Who do I contact if I have a question or concern?

If you have a question, comment, or problem, please contact us on our Information line: (281) 520-3777 or at our website: www.greaterhoustonwater.com/contact

Q. Why is the Northeast Purification Plant being expanded?

We are expanding the purification plant for two major reasons: (1) to meet the additional demand for clean drinking water caused by our area’s fast-growing population; and, (2) to comply with the mandate to lessen our dependence on groundwater, which leads to land subsidence and increases the area’s vulnerability to flooding.

Q. What does the expansion entail?

The Northeast Water Purification Plant expansion includes construction of new water purification facilities on the City of Houston property adjoining the existing plant, building an intake and pump station in Lake Houston, and running a larger pipeline from the lake to the plant through the existing corridor.

Q. How long will the construction be going on?

Construction begins this year and will be completed in parts or modules using a progressive design-build approach by the end of 2024. You can obtain additional information on current construction by visiting our website: www.greaterhoustonwater.com/construction-information

Q. How will traffic in the area be affected by the construction?

There will be additional truck and employee traffic during construction, mainly impacting Beltway 8 at Lockwood and West Lake Houston Parkway, and West Lake Houston Parkway from Beltway 8 to Summer Lake Ranch Drive. Flag personnel will be on duty to assist with safe travel flow.

Q. Will the work at the water plant affect our drinking water?

No. Existing plants will continue to produce water during the construction of the new facilities. Tie-ins to existing facilities will be planned to avoid impacting water service.

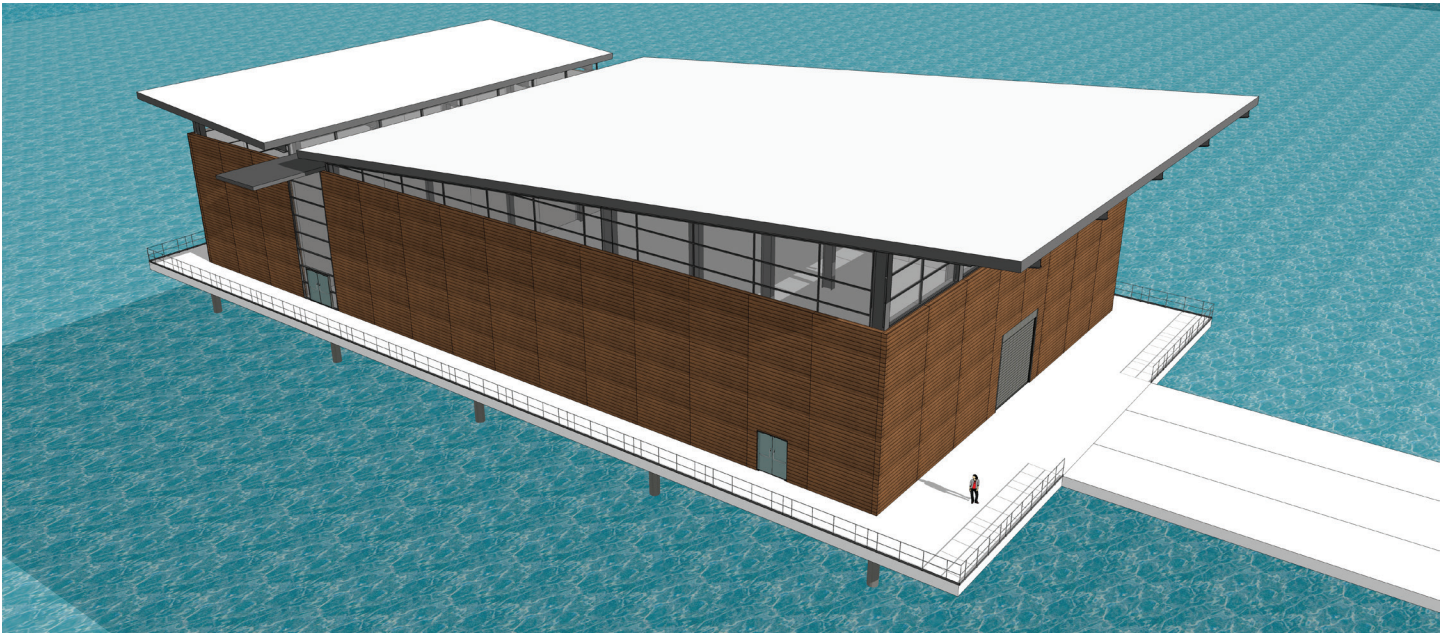


The major component of the expansion is a new treatment facility; constructed on land owned by the City of Houston next to the current plant. It is designed to supply 320 million gallons per day of treated water capacity in addition to the current 80 million gallons per day of treated water capacity.



Improved Techniques

The expansion will include conventional treatment processes like the existing plant that help coagulate, settle, filter, and then disinfect the water to a quality that exceeds requirements set forth by the Texas Commission on Environmental Quality. In addition, an advanced oxidation process called ozonation will be constructed. Ozonation is a very powerful process for disinfecting water to help ensure that harmful organisms such as Giardia and Cryptosporidium are eliminated. Ozonation also helps eliminate taste and odor causing compounds, which improves the aesthetic quality of the water supplied by the plant.



A key aspect of the project includes the design and construction of a new intake pump station that will be located approximately 900 feet from the shore of Lake Houston. The intake station includes underwater screens, pumping, and conveyance to withdraw water from the lake and then deliver it to the treatment facilities.

Lake Houston water is particularly difficult to treat because the lake is shallow. The new intake will alleviate some of the water quality challenges by withdrawing from a slightly deeper depth than the existing intake while also reducing the impacts from Jack’s Ditch, which discharges poor water quality in the vicinity of the existing intake.

Pumps and other mechanical equipment will be located inside the building to reduce noise impacts.

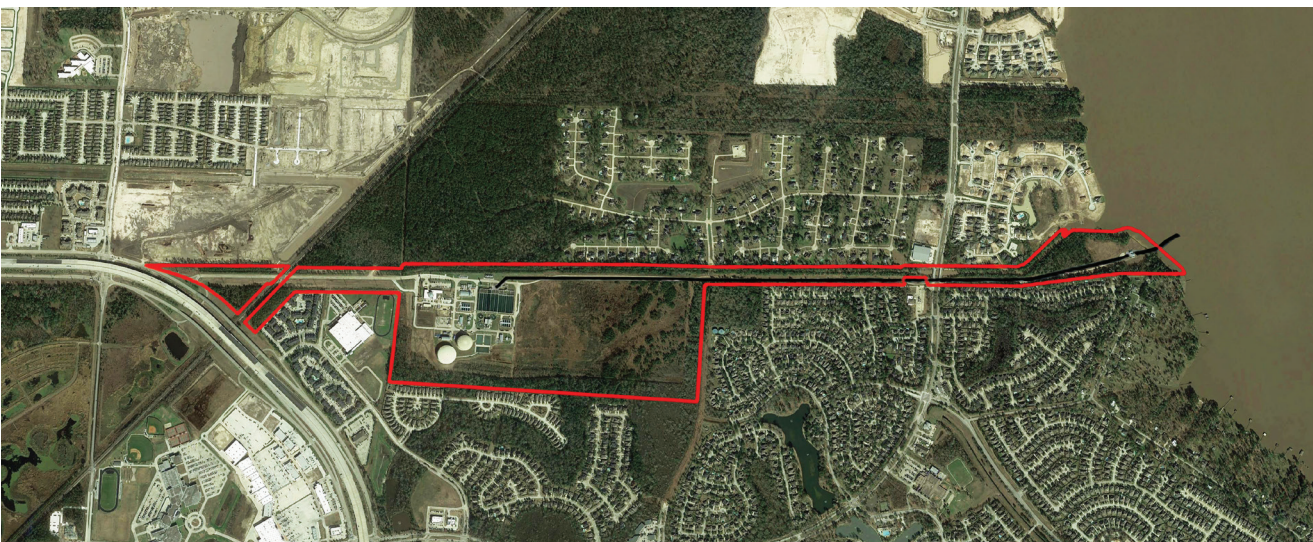




Two 108” pipes will carry the water from the intake pump station in Lake Houston to the Northeast Water Purification Plant facility.

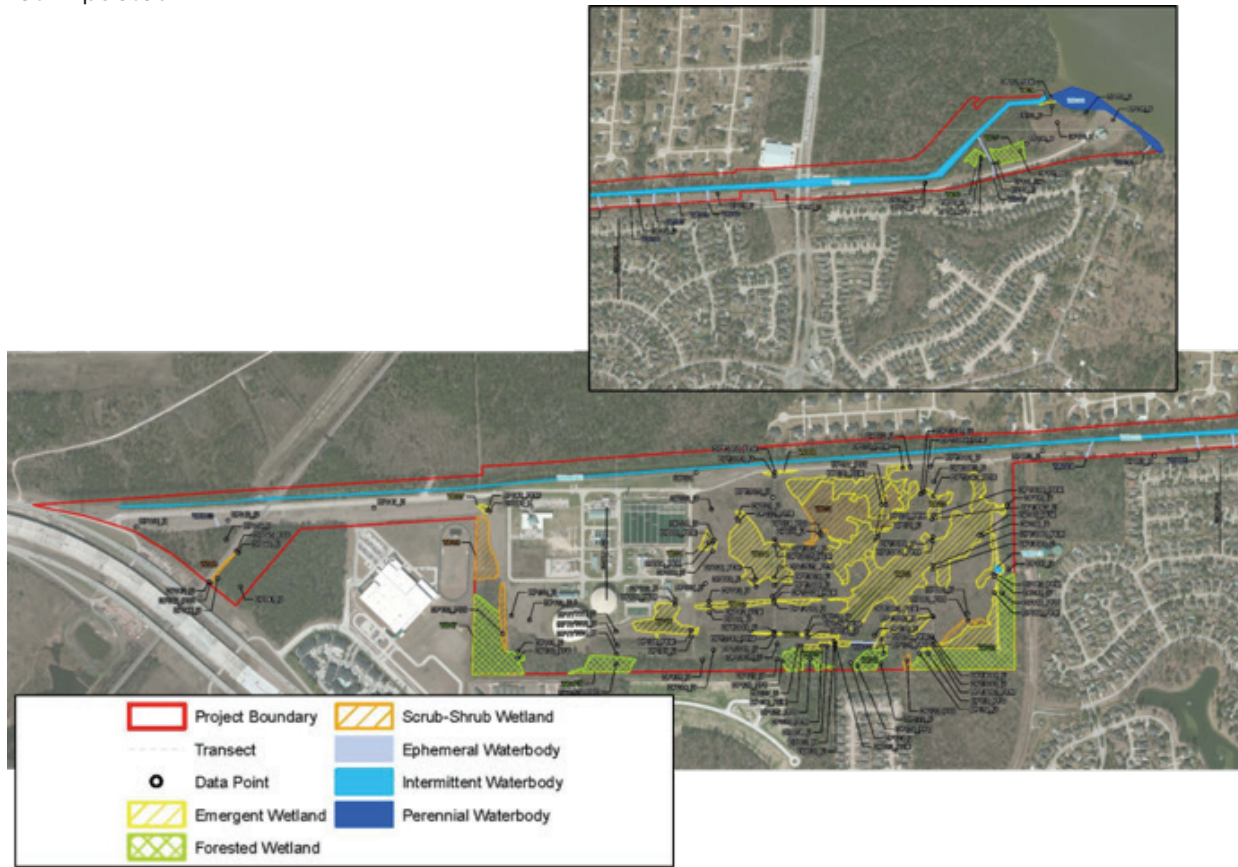
The water pipeline will follow the route of the current water pipe, using the existing easement and running under West Lake Houston Parkway. Construction will begin in early 2018.

Temporary fencing will be erected between the pipeline and the neighboring yards during construction. After the installation of the new pipes, a permanent fence will be added and trees will be planted.



The project will be constructed in accordance with the regulations and requirements of federal, state, and local agencies that have jurisdiction over various aspects of the work. Permits and approvals that are being obtained include:

- U.S. Army Corps of Engineers permit (404 permit) for impacts to wetlands and surface waters within the project area. Approximately 39.5 acres of wetlands, which are shown on the nearby figure, will be impacted. Impacts are being mitigated through the purchase of wetlands credits at the Gin City Mitigation Bank. Various studies were conducted as part of this permit to ensure that endangered species and archeological resources are not impacted.



- The Texas Commission on Environmental Quality will provide a water quality certification (401 permit) in conjunction with the U.S. Army Corps of Engineers permit. Additionally, they will review and approve construction plans and provide an operating permit.
- Harris County will provide a general site civil permit for construction of improvements within the site. They will also provide a building permit for the treatment facilities constructed near the existing plant.
- Harris County Flood Control District will review stormwater plans to ensure that the project does not impact nearby property owners during storm events.
- The City of Houston will provide a building permit for construction of the intake facilities on and near Lake Houston. The City is also responsible for reviewing and approving the water quality aspects of stormwater systems.



Fast Facts about Jobs for the Northeast Water Purification Plant

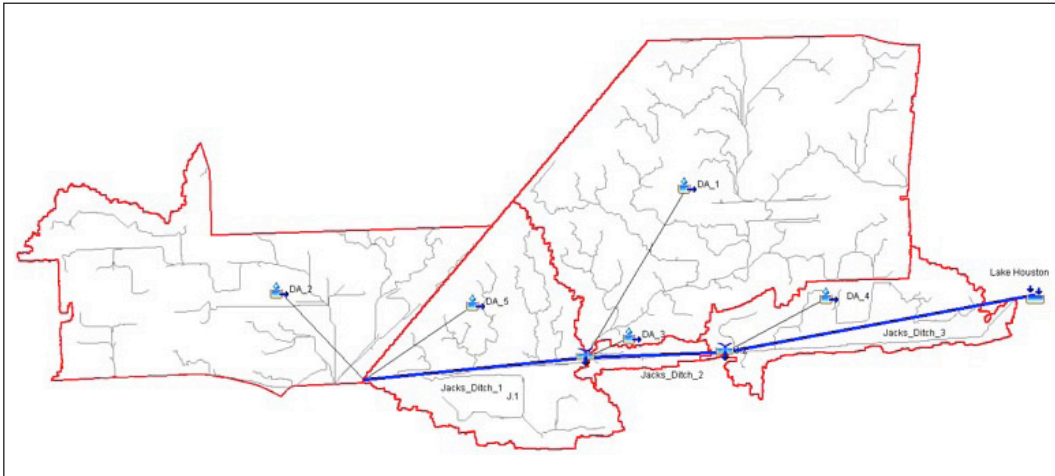
- Houston Waterworks Team, a joint venture of CH2M and CDM Smith is responsible for procuring the companies to construct the expansion
- This is such a large project that the construction had to be broken into packages that will spread across eight years



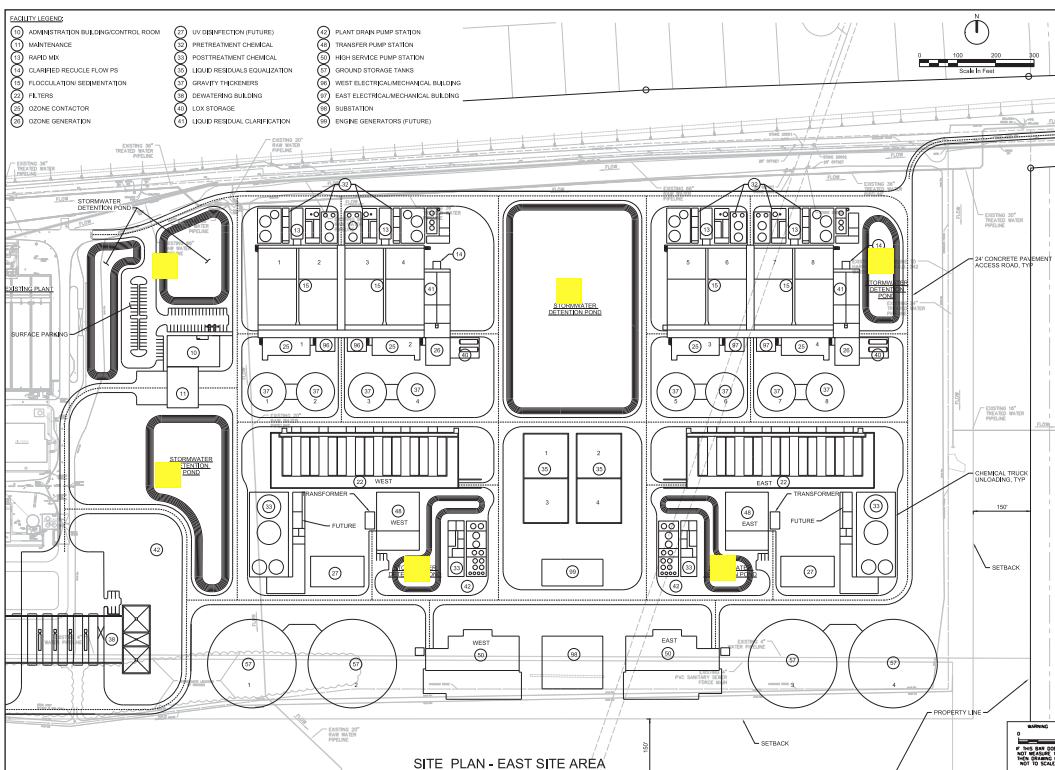
- All parties involved are heavily invested in Houston's economy
 - > Local businesses are being utilized when a package is the right size and/or scope
 - > Minority, women and small businesses are being utilized when a package is the right size and/or scope
- Each package has a City set goal
 - > Will create an influx of construction jobs for the City and increase in immediate vicinity revenue
- Construction teams/companies are chosen through a proposal process that scores qualifications for safety, quality and experience; coupled with pricing
- All employees are subjected to security checks that will keep the plant and our communities safe

For information go to www.newppexpansion.com

The project will be constructed in accordance with stormwater regulations and requirements of Harris County and the City of Houston. Several studies and design activities are ongoing to help ensure that the new facilities do not induce flooding in the areas surrounding the site. Key aspects of the stormwater management approach are discussed below.



A multitude of stormwater ponds will be constructed throughout the expanded facilities to handle runoff and alleviate off-site impacts.



Contractors will be required to maintain stormwater runoff features during construction to help avoid off-site impacts during storms. All drainage swales and stormwater piping will be restored to pre-construction conditions following completion of the pipeline construction.

A hydrologic and hydraulic study of Jack’s Ditch is helping to identify improvements that can alleviate flooding during high rainfall events. The model is being compared to flood elevations that occurred during Harvey to make sure it accurately represents real-world conditions.