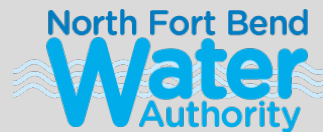




WATER PURIFICATION PLANT EXPANSION

NEWPP Expansion Project

Presentation to Council
Transportation, Technology & Infrastructure
Committee



NEWPP EXPANSION

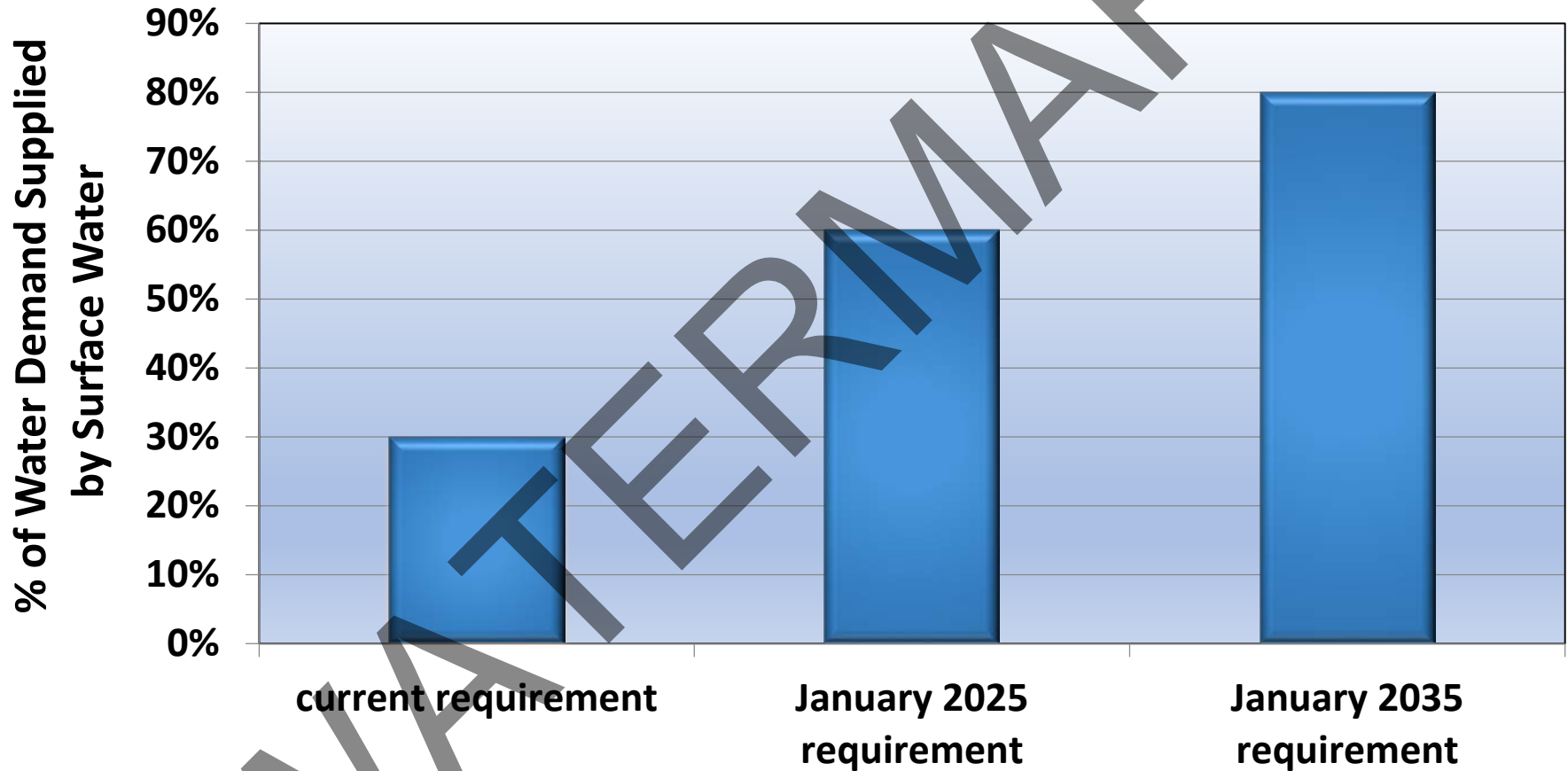
- Project Background
- Current Status
- Ongoing Activities & Upcoming Authorizations

WATERMARK

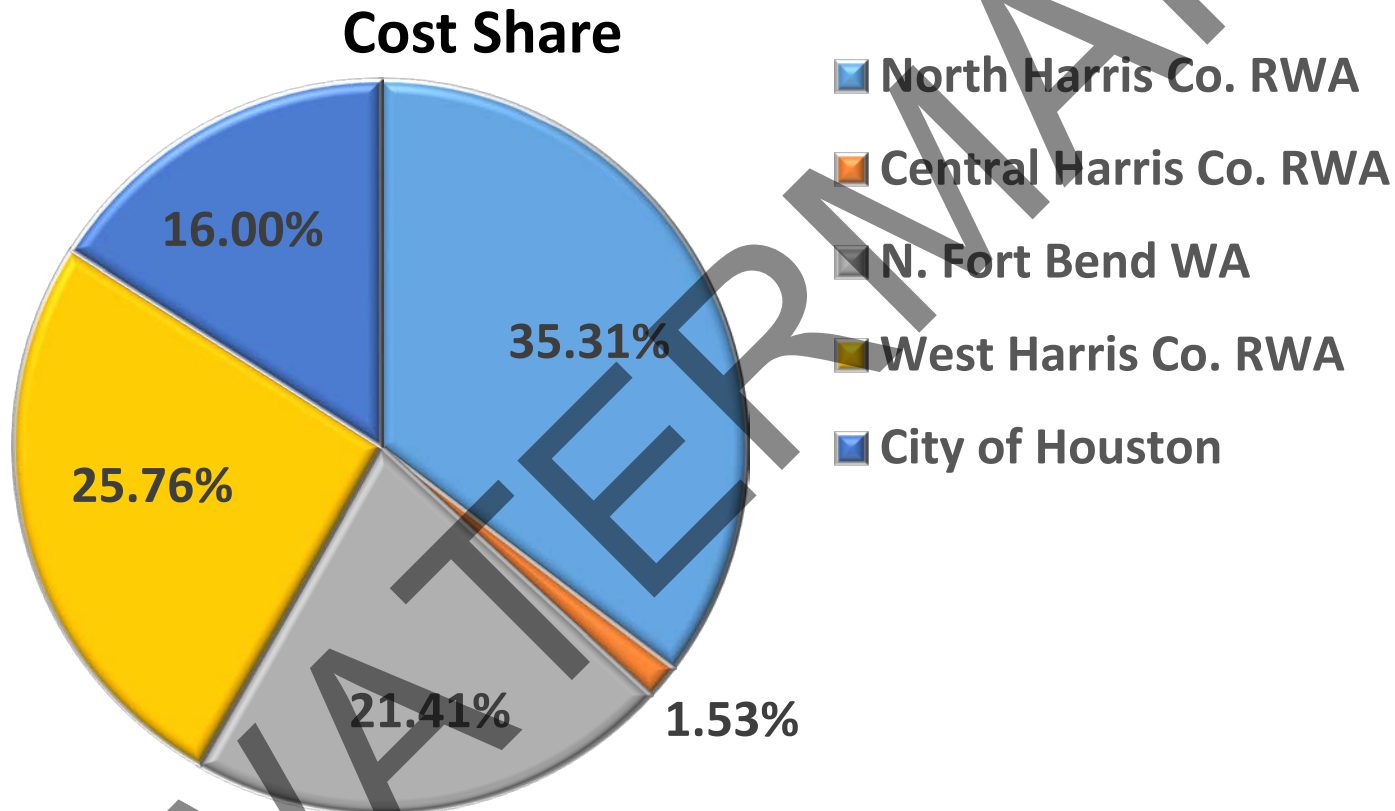
Project Background

WATERMARK

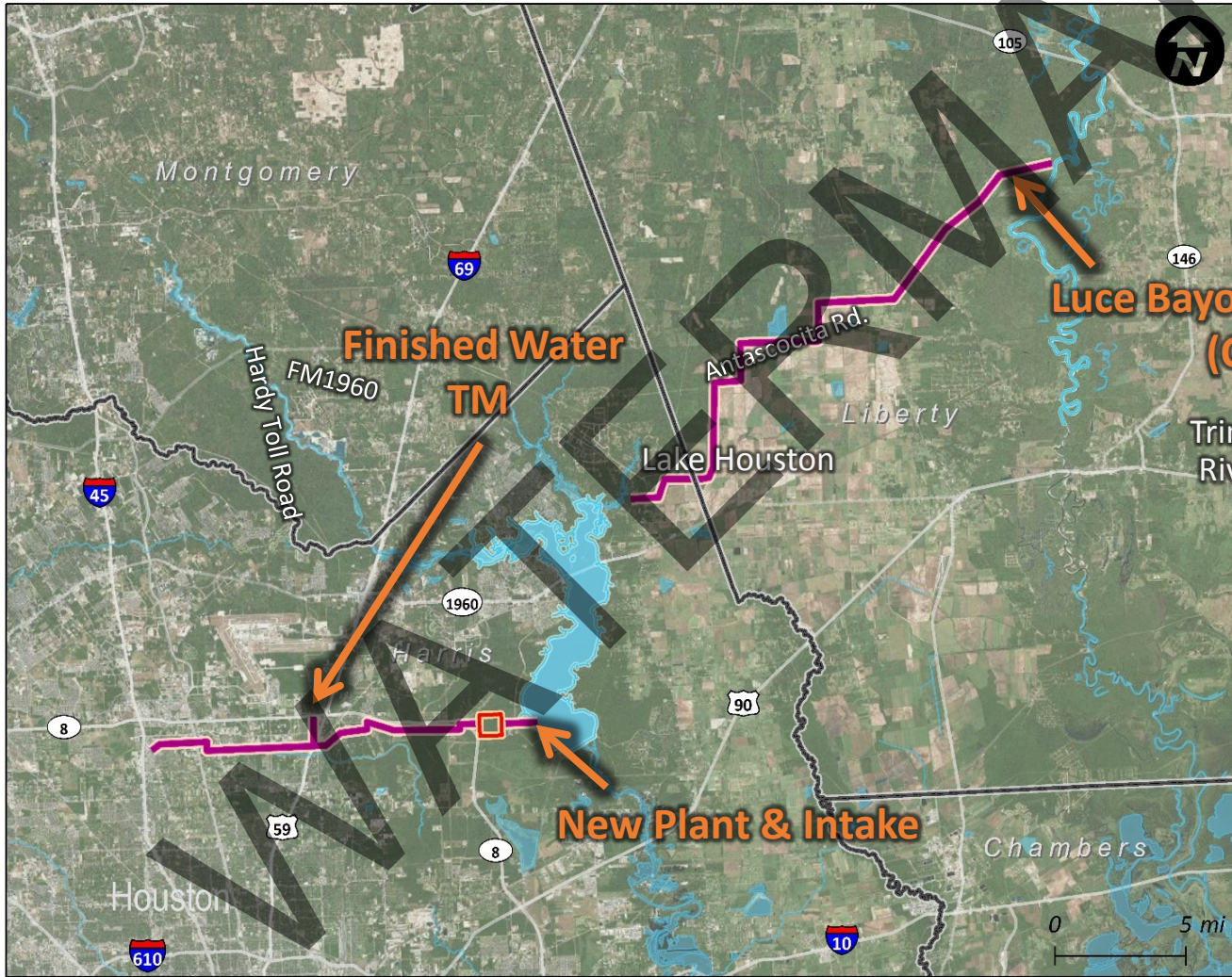
Project Necessary to Meet Local Groundwater Subsidence Regulations



Houston is Delivering Project on Behalf of Four Authority Partners



NEWPP Expansion is One Piece of Regional Plan to Deliver & Treat Trinity River Water



Progressive Design-Build Delivery

Delivery method selected for:

- Schedule certainty
- Cost certainty
- Ability to have input on design & insure quality
- Ability to avoid liability gap between designer and builder

WATERMARK

Design-Builder's Roles and Responsibility

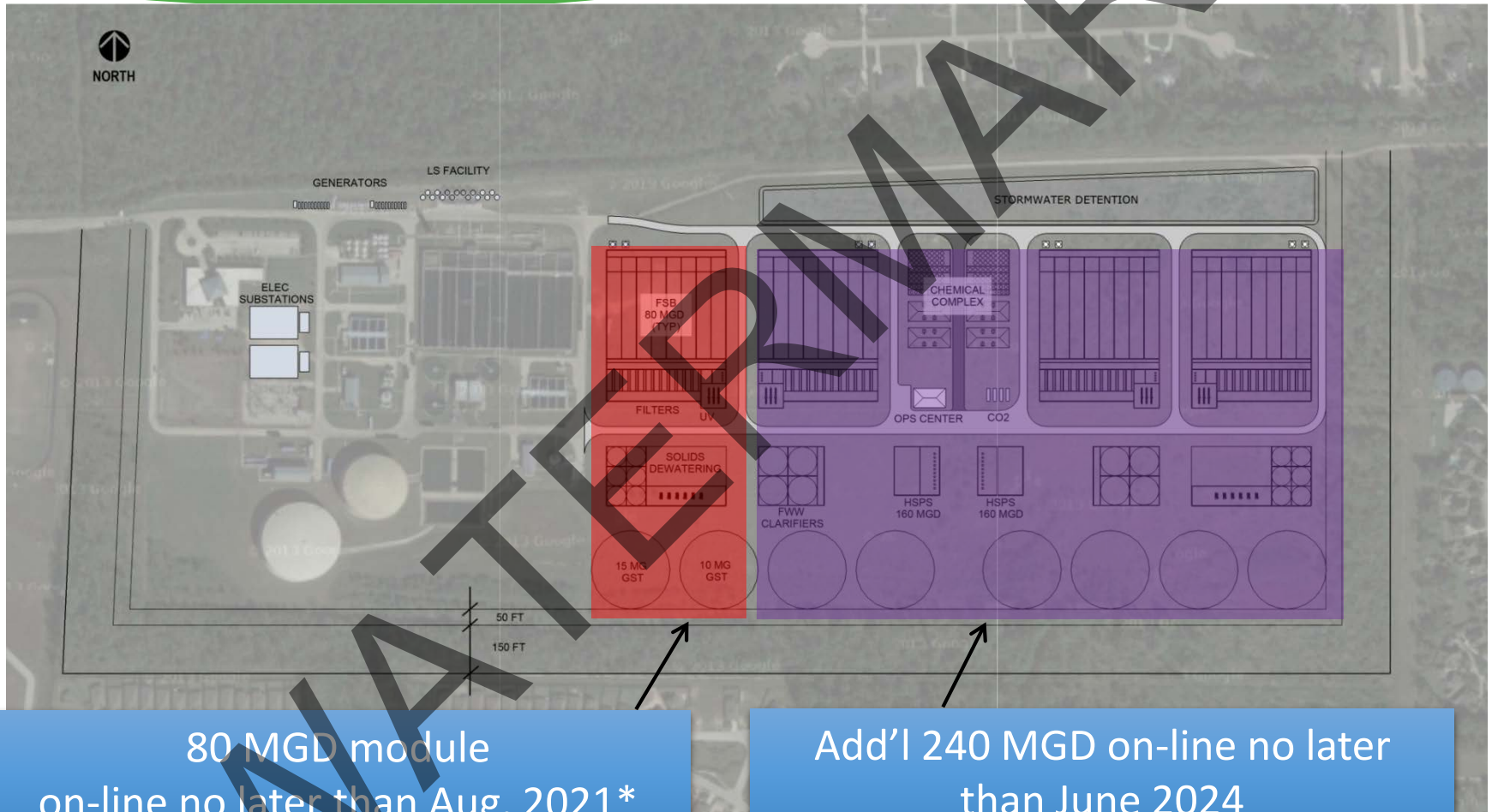
- Engineer-of-record
- Obtains permits
- Constructor
- Commissioning & start-up
- Provides performance guarantee

WATERMARK

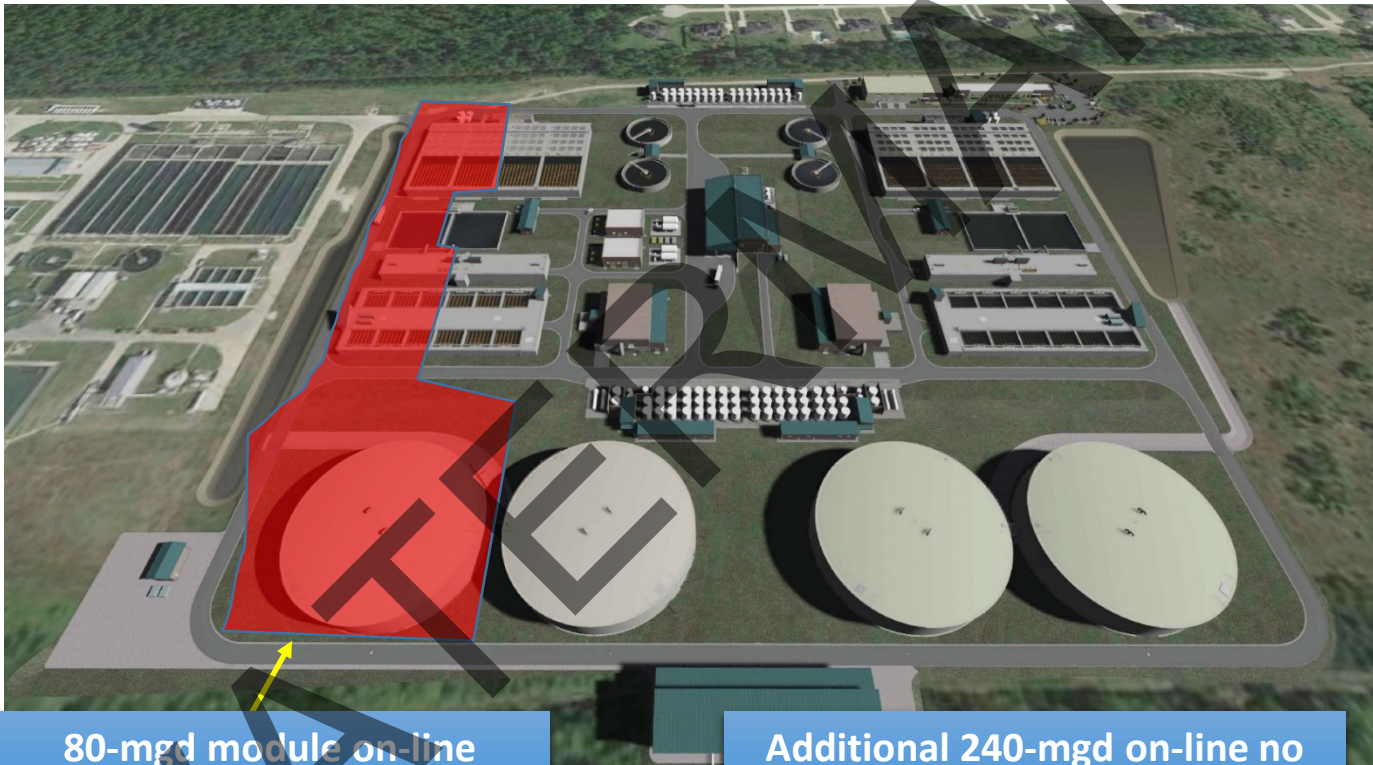
Project Advisor/Technical Consultant's Roles and Responsibility

- Extension of PWE staff
- Technical advice & oversight
- Stakeholder outreach
- Environmental permitting
- Project controls
- Cost & schedule validation
- Negotiation & procurement support
- Quality review
- Field engineering & construction oversight
- Constructability review

Pre-Proposal Phase: 320 MGD expansion with early 80 MGD milestone (Indicative Design)



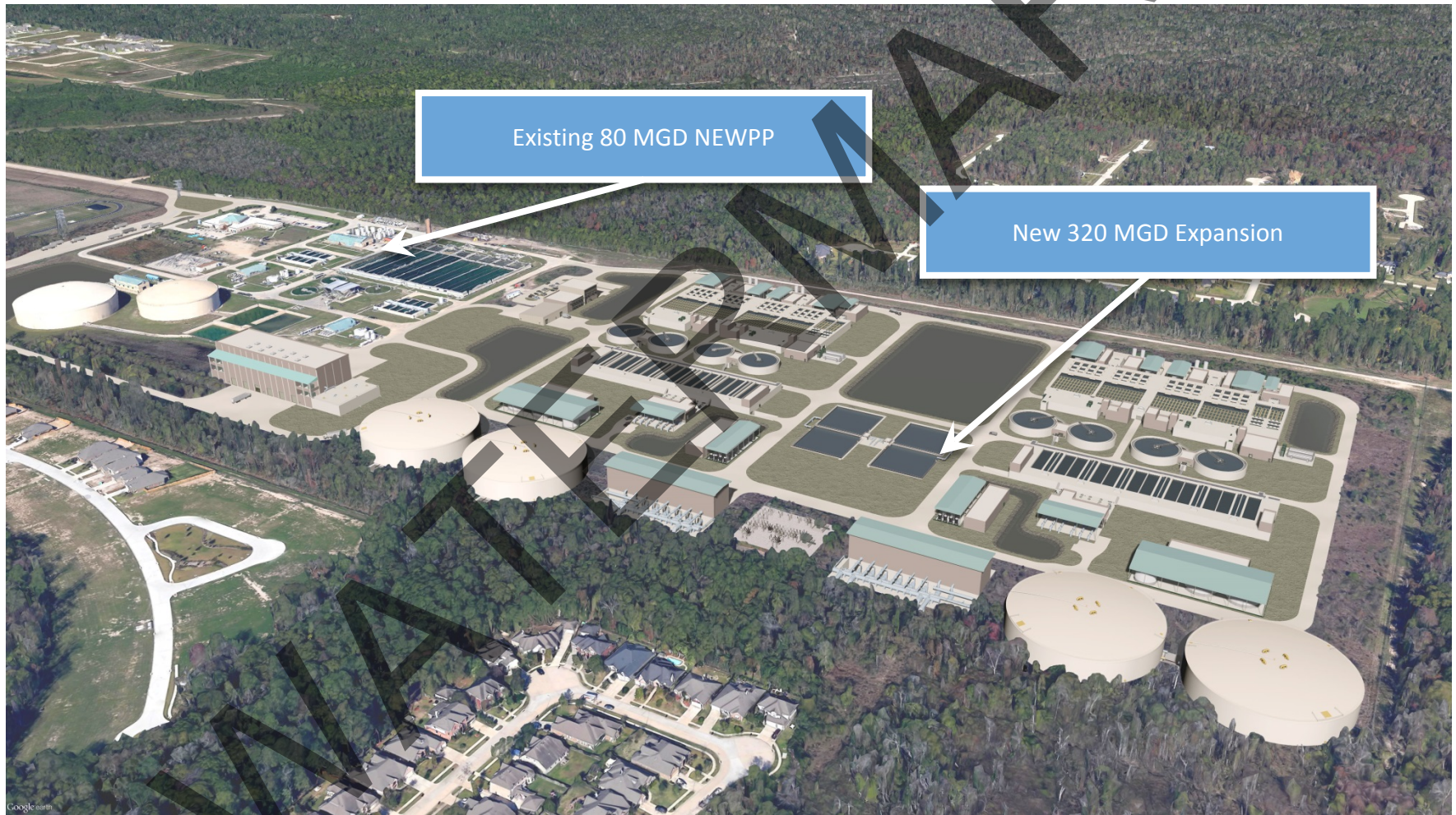
HWT Proposal: 320-mgd Expansion with Early 80-mgd milestone (Concept Design)



80-mgd module on-line no later than Aug. 2021

Additional 240-mgd on-line no later than Jun. 2024

Basis of Design: 320-mgd Expansion at Basis of Design Milestone



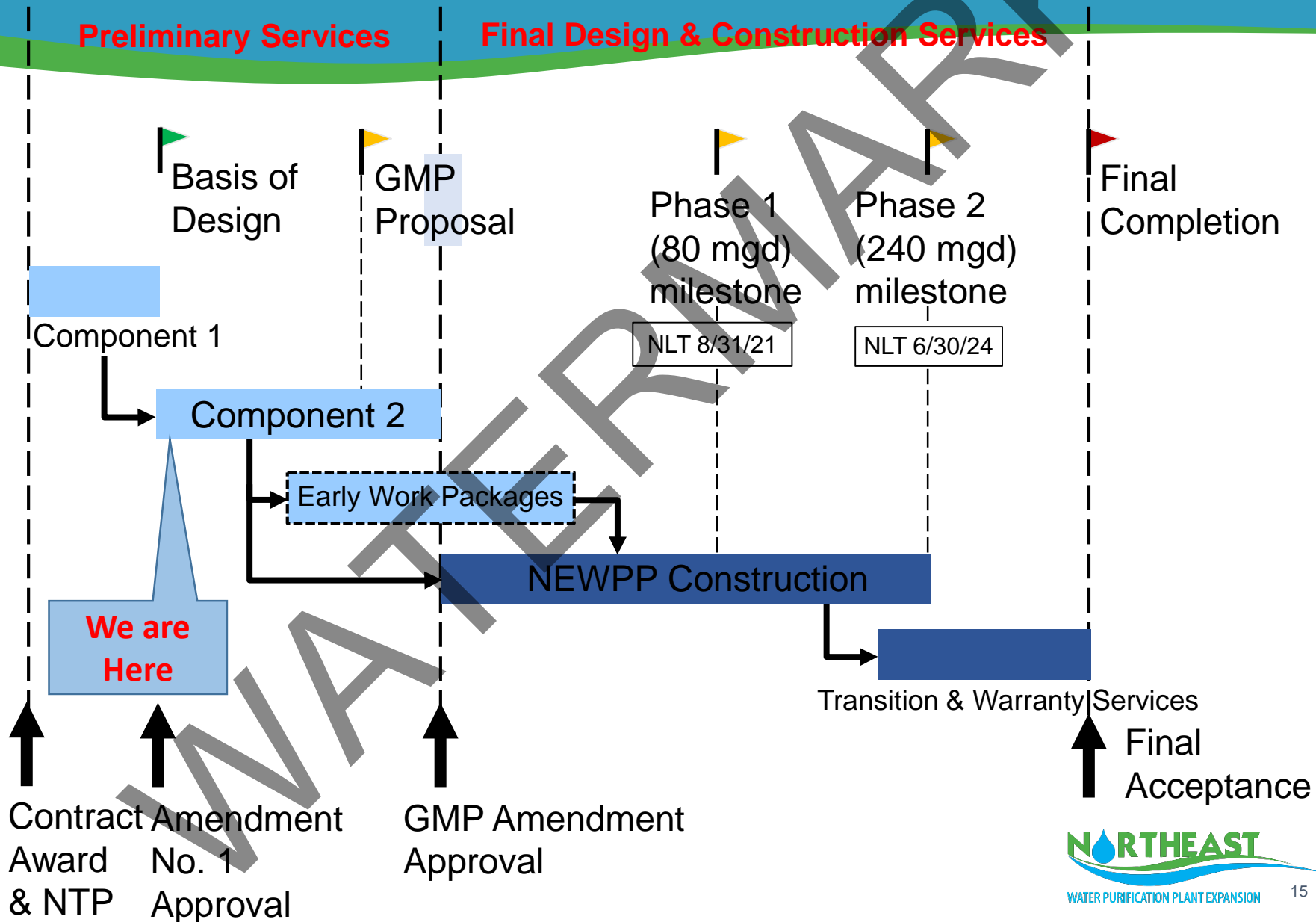
New Intake in Lake Houston will Supply Raw Water to Plant



WATERMARK

Current Status

Expansion being Delivered using 2-Phase (Progressive) Design-Build



Component 2 – Preliminary Services

- Basis of Design
 - Technical Submittal received February 28, 2017
 - Cost Model and Schedule submitted May 1, 2017
 - Currently reviewing Cost Model and Schedule
- Working toward 30% Design on Balance of Plant
- Finalizing designs of the Early Work Packages
- Expecting submission of Early Work Package GMPs within next few weeks
 - Site Work
 - Utility Relocates
 - Raw Water Pipelines
 - Module 1 Filter Structure & Underground Piping

Project Construction Cost Overview

Construction Cost Estimate*

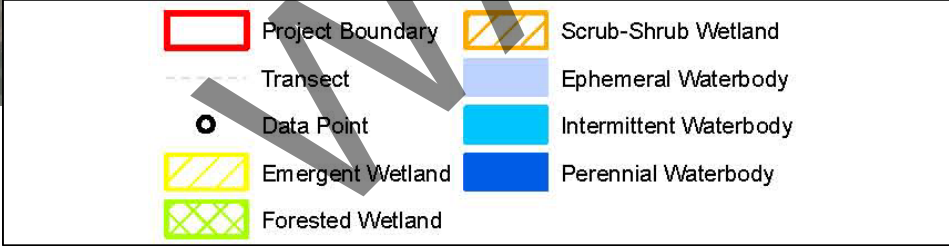
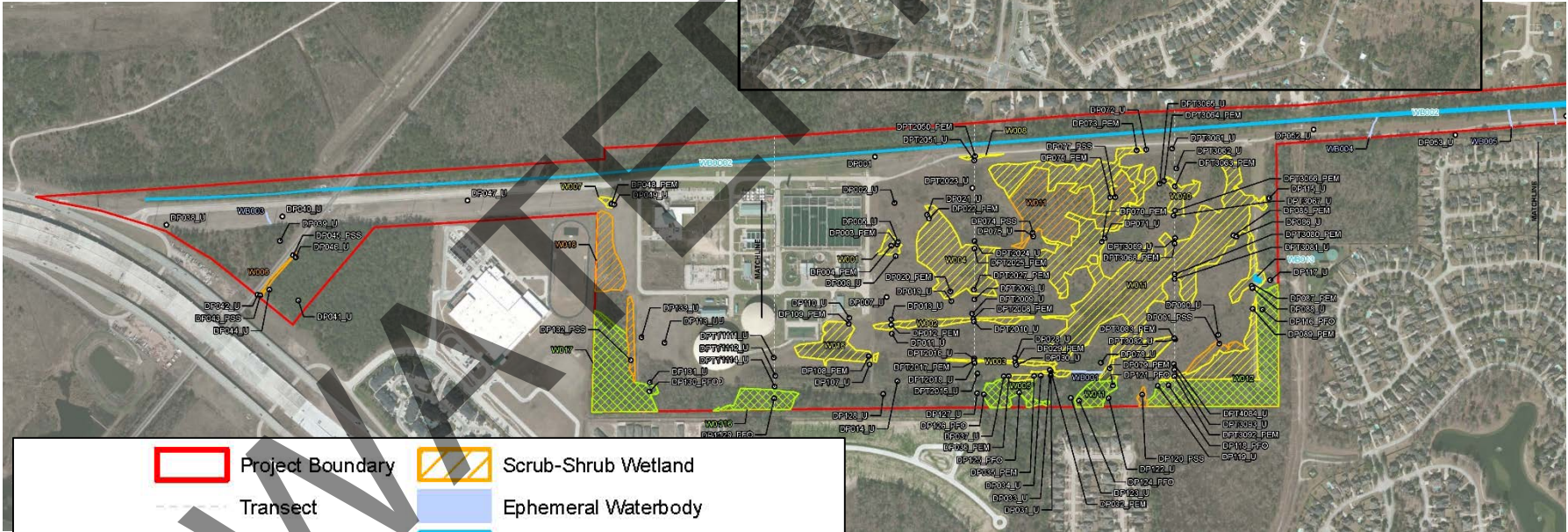
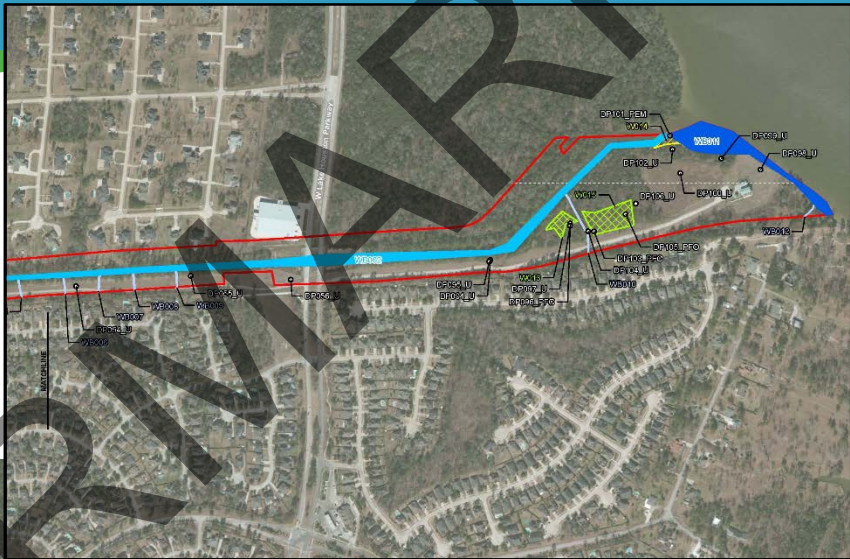
- Original Construction Estimate, Summer 2013: \$1.167B
- Cost Model Forecast, Fall 2016: \$1.272B
- Current Cost Model Forecast, May 2017: \$1.51B
- Key cost/budget considerations:
 - Design-Builder's opinion/forecast of what they believe could be the GMP cost to build the plant
 - We still need to validate the cost model (we have only had it for 7 days)
 - We still need to review the scope and schedule
 - We still need to negotiate direct and indirect costs such as risk, contingency, escalation, and other factors that will greatly affect this number.

Ongoing Activities & Upcoming Authorizations

WATERMARK

Anticipating Record of Decision for 404 permit Summer 2017

Impacts to jurisdictional wetlands & streams require mitigation



Community awareness and outreach

- Fliers to neighbors for upcoming EWP work
- Hotline established – (281) 520-3777
- Website under development
- Public meeting being planned
- Over 20 Contractor Outreach Events between February & May of 2017, including:
 - National Association of Minority Contractors
 - PWE Contracts in 5
 - Greater Houston Black Chamber of Commerce
 - Greater Houston Business Procurement Forum

MWBE Outreach and Labor Participation

PATC

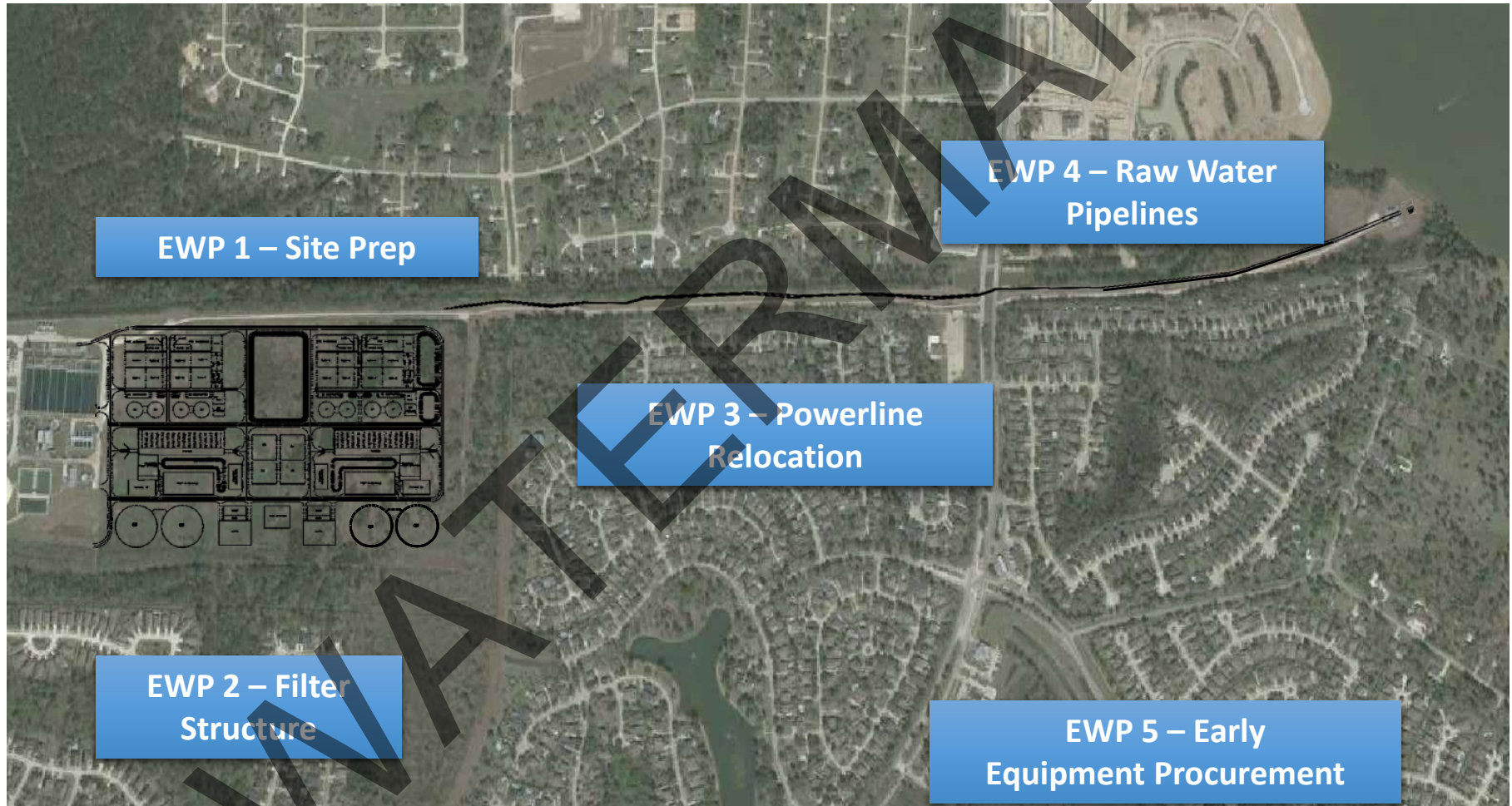
- 24% goal
- 24.61% achieved to date
- 25.82% proposed for upcoming additional appropriation

HWT

- 24% goal
- 15.57% achieved to date
- 24.42% proposed for upcoming amendment

WATERMARK

Early Work Package Construction will Begin in 2017



EWP 1 – Site Prep

EWP 4 – Raw Water Pipelines

EWP 3 – Powerline Relocation

EWP 2 – Filter Structure

EWP 5 – Early Equipment Procurement

Upcoming Authorizations

Action	Approximate Date	Estimated Amount(\$)*
Approve Stream Mitigation Purchase	May 2017	\$0.6M
Approve HWT Component 2B Amendment	May 2017	\$66M
Approve PATC WO9 Amendment	May 2017	\$17M
Approve Wetland Mitigation Purchase	June 2017	\$4M
Approve EWP Construction Amendments	July-Oct 2017	\$150M
Approve GMP Amendment	Mar/Apr 2018	\$900M

*Budgetary estimates, actual values to be based on negotiated amendments

Upcoming RCAs (May)

- HWT Component 2B – Authorizes HWT to complete Component 2 services through GMP, including preconstruction, and final design to IFC. (\$66.3M)
 - In addition to \$16M for Component 2A
- Carollo Component 2 Services – Authorizes Carollo to continue technical services, procurement support, communications and outreach support, provide field engineering and other associated services for acceptance of the construction facilities for Early Work Packages – (\$17.4M for 24 months)
- Stream Bank Mitigation Credit Purchase (\$600K) – Purchase of Stream Bank mitigation credits to meet requirements for US Army Corps of Engineers 404 Permit



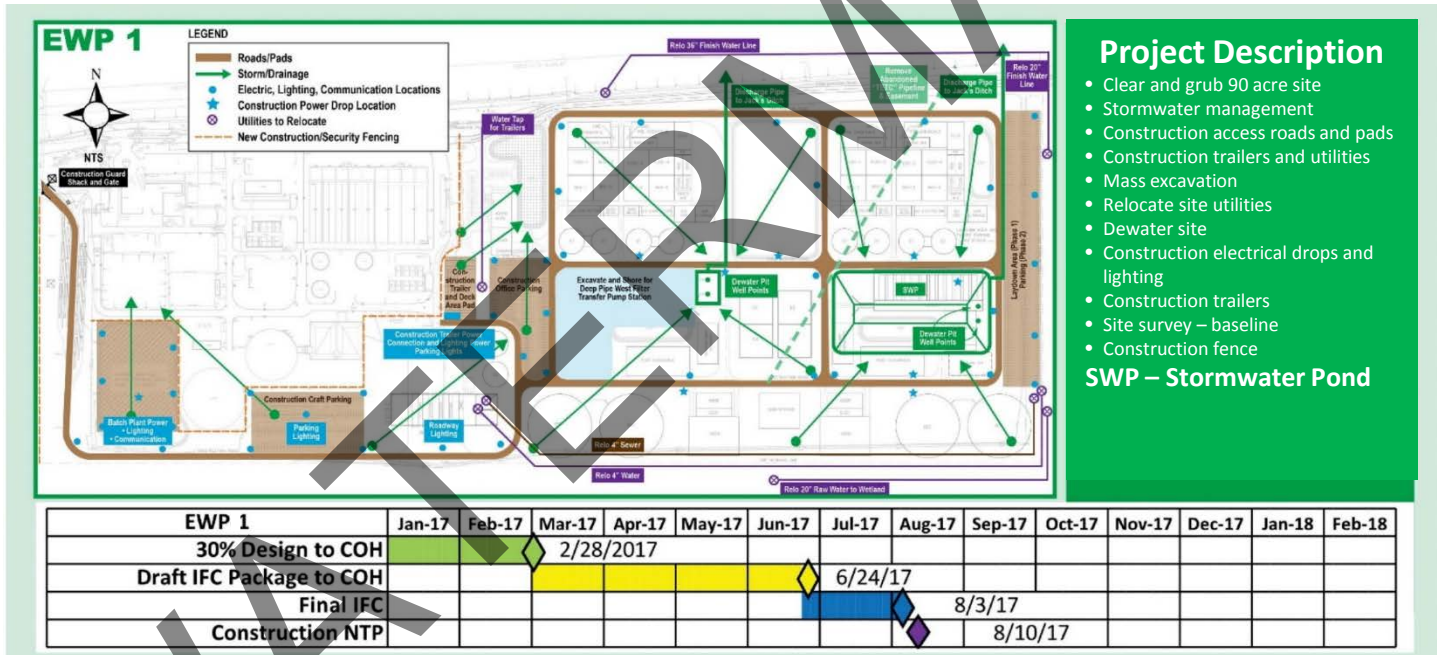
Northeast Water Purification Plant Expansion

WATERMARK

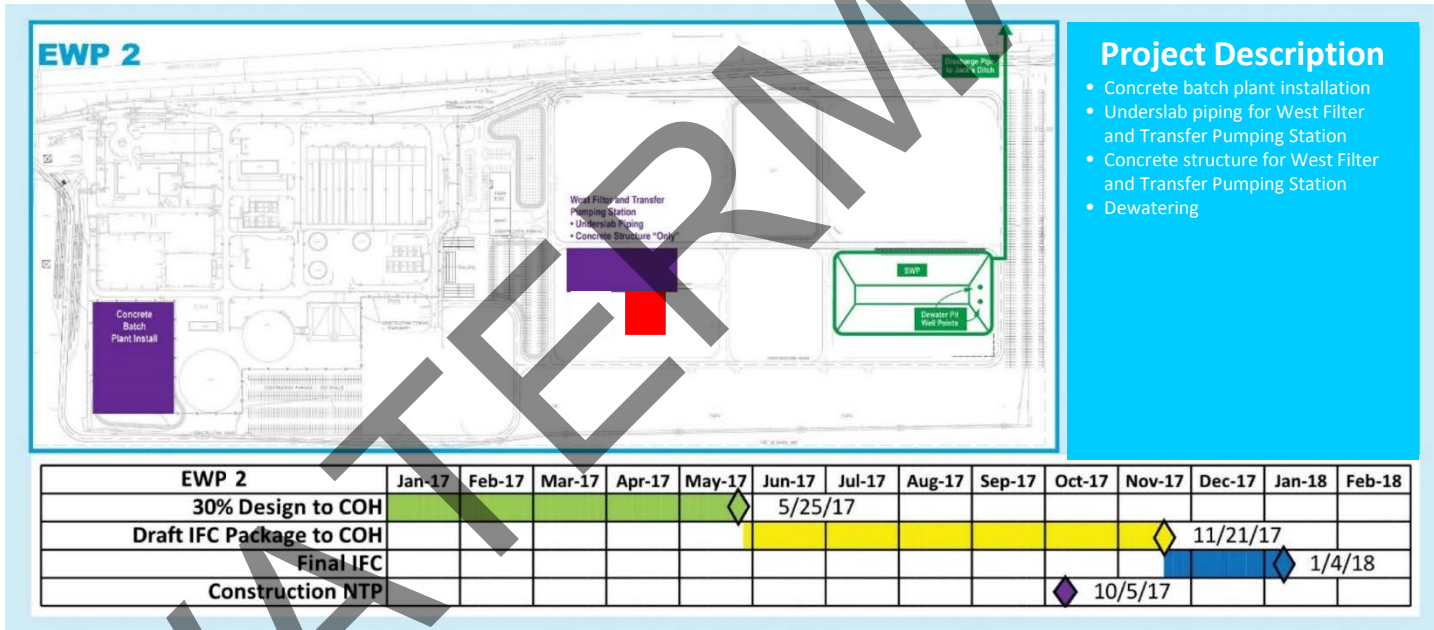
WATERMARK

Back-Up

Early Work Package 1 – Site Preparation



Early Work Package 2 – Deep Structures



Early Work Package 3 – Utility Relocations



Project Description

- Clear and grub utility corridor
- Utility relocations in utility corridor
- 12.5 kV duct banks
- HDD under West Lake Houston Parkway
- Demo of existing overhead 12.5 kV power

EWP 3	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18
30% Design to COH			3/14/2017											
Draft IFC Package to COH							6/29/2017							
Final IFC								8/3/2017						
Construction NTP								7/24/17						

WATER MARK

Early Work Package 4 – Raw Water Mains



- ### Project Description
- Design 2 108-inch raw water pipelines
 - Install single 108-inch steel raw water pipeline
 - Cathodic protection
 - Utility crossing under West Lake Houston Parkway
 - Dewatering
 - Reconstruction of service road

EWP 4	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	
30% Design to COH					5/5/17										
Draft IFC Package to COH										9/5/17					
Final IFC													11/16/17		
Construction NTP										9/15/17					

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