

El Paso Water's Advanced Water Purification Facility

Sanaan Villalobos, PE

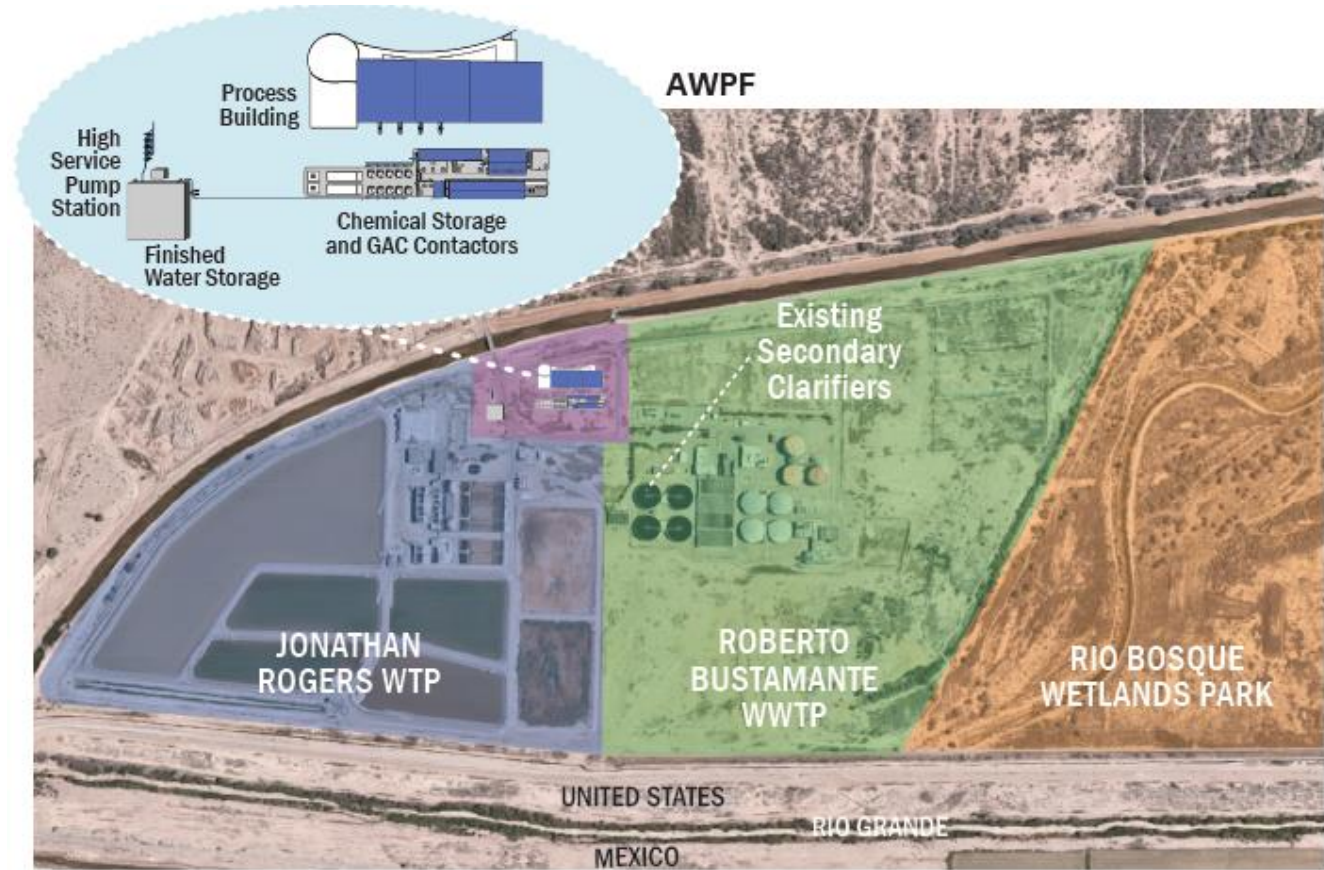


// What is it?

- The AWPf will be the first **direct-to-distribution** reuse facility in the U.S.



// Where is it?

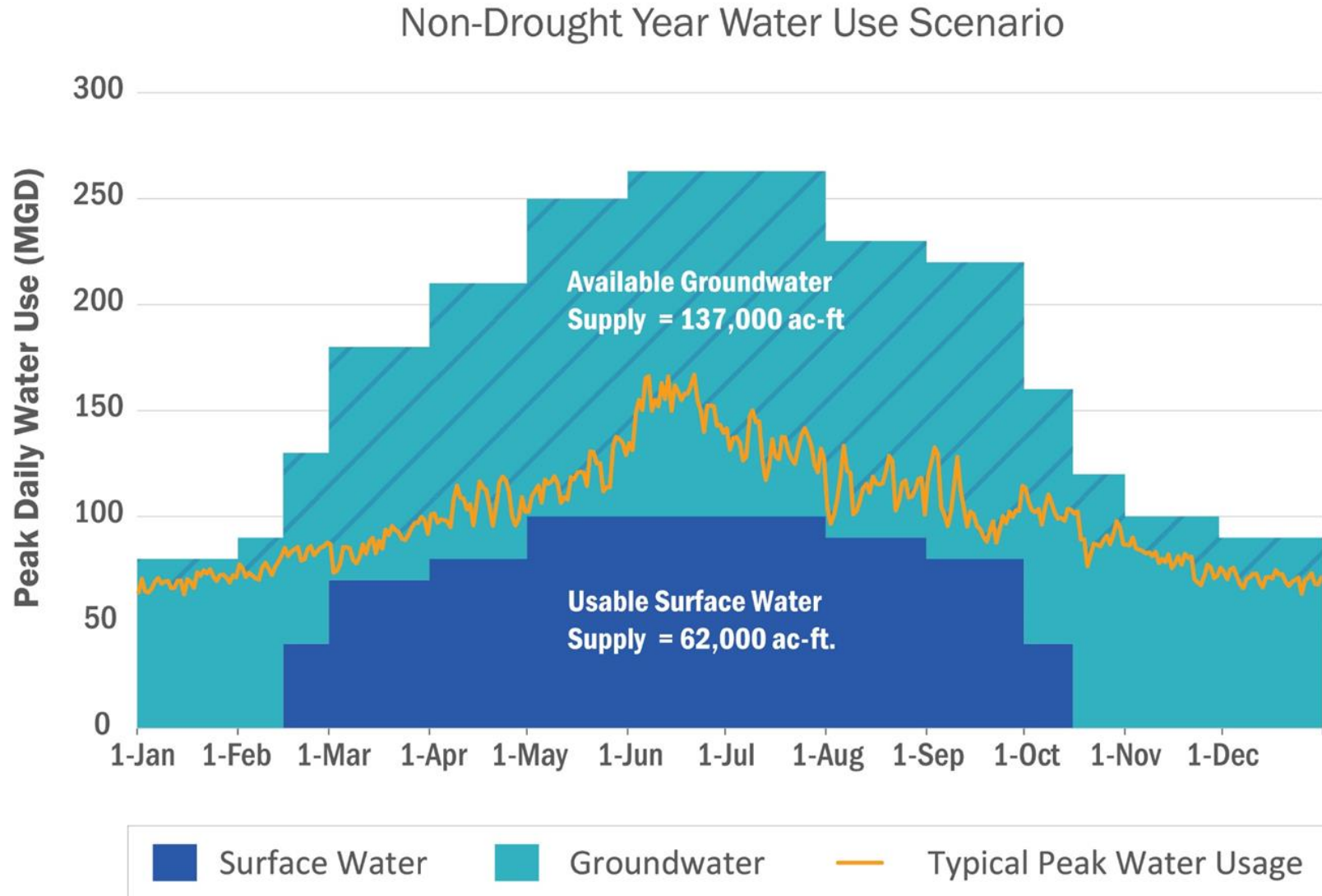


// What will it do?

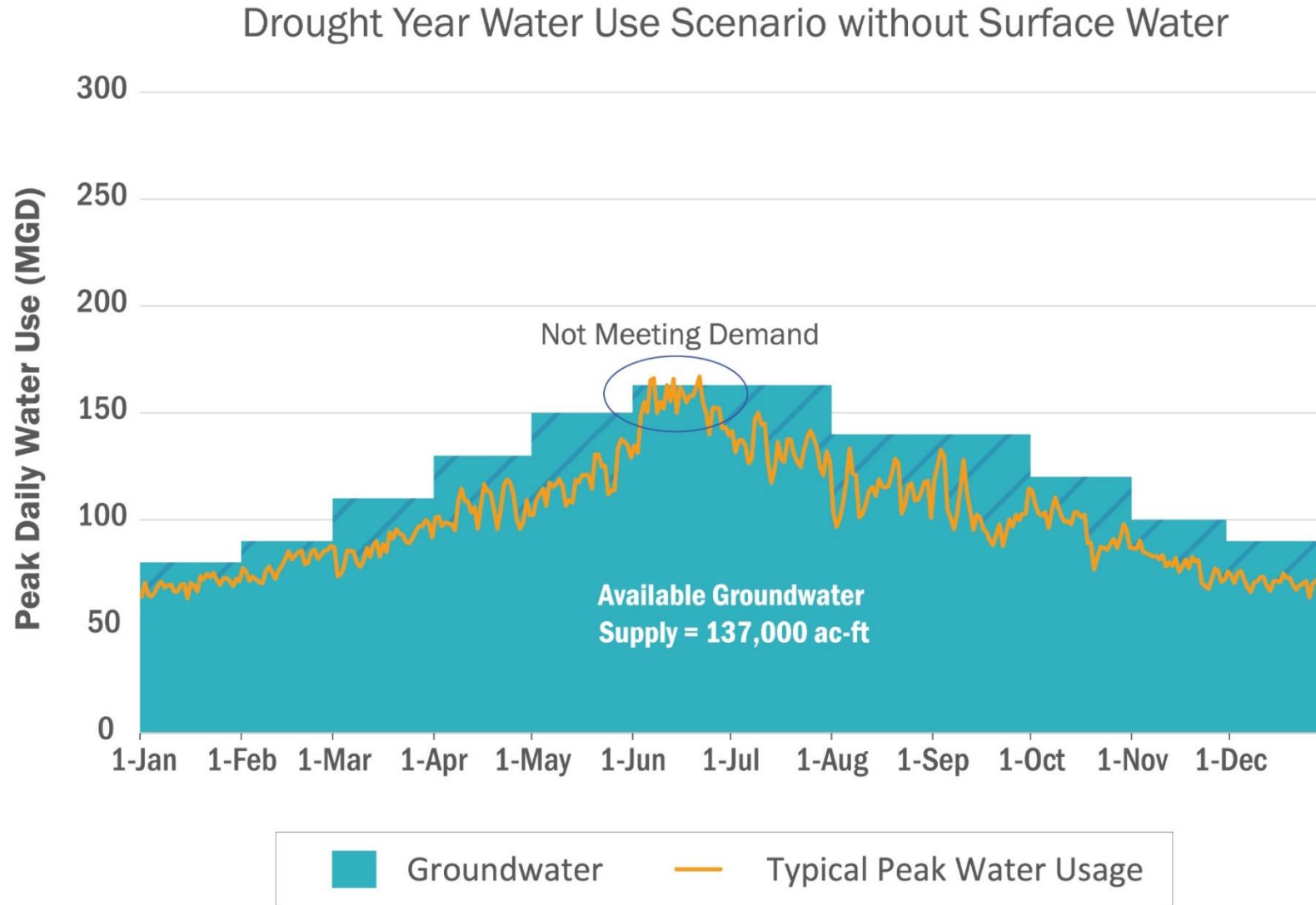
- Bustamante WWTP will supply effluent to the AWPf
- The AWPf will produce 10 mgd of purified water at buildout and up to 12 mgd with blending
- Brackish groundwater will be used for a blend source



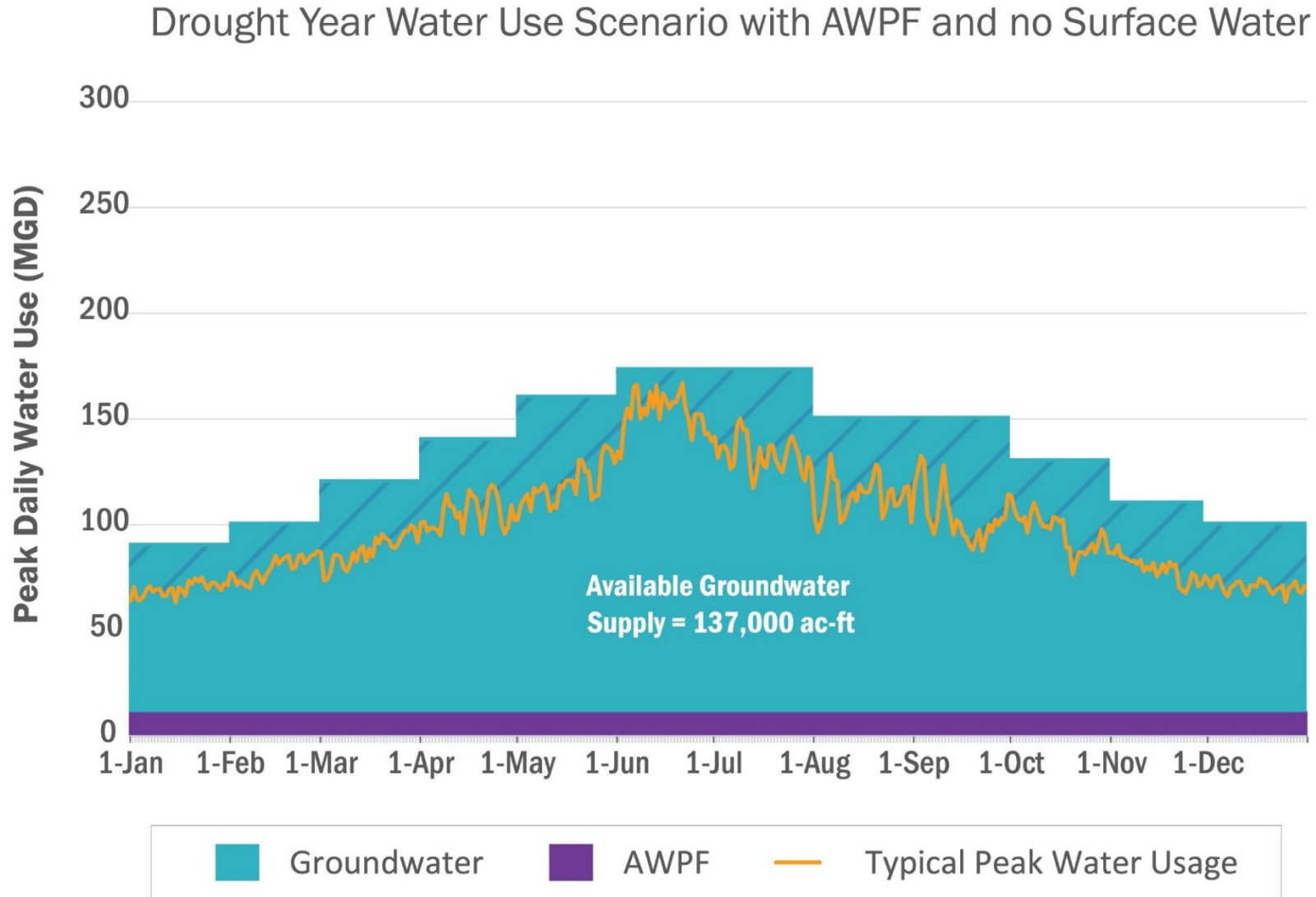
// Why is it needed?



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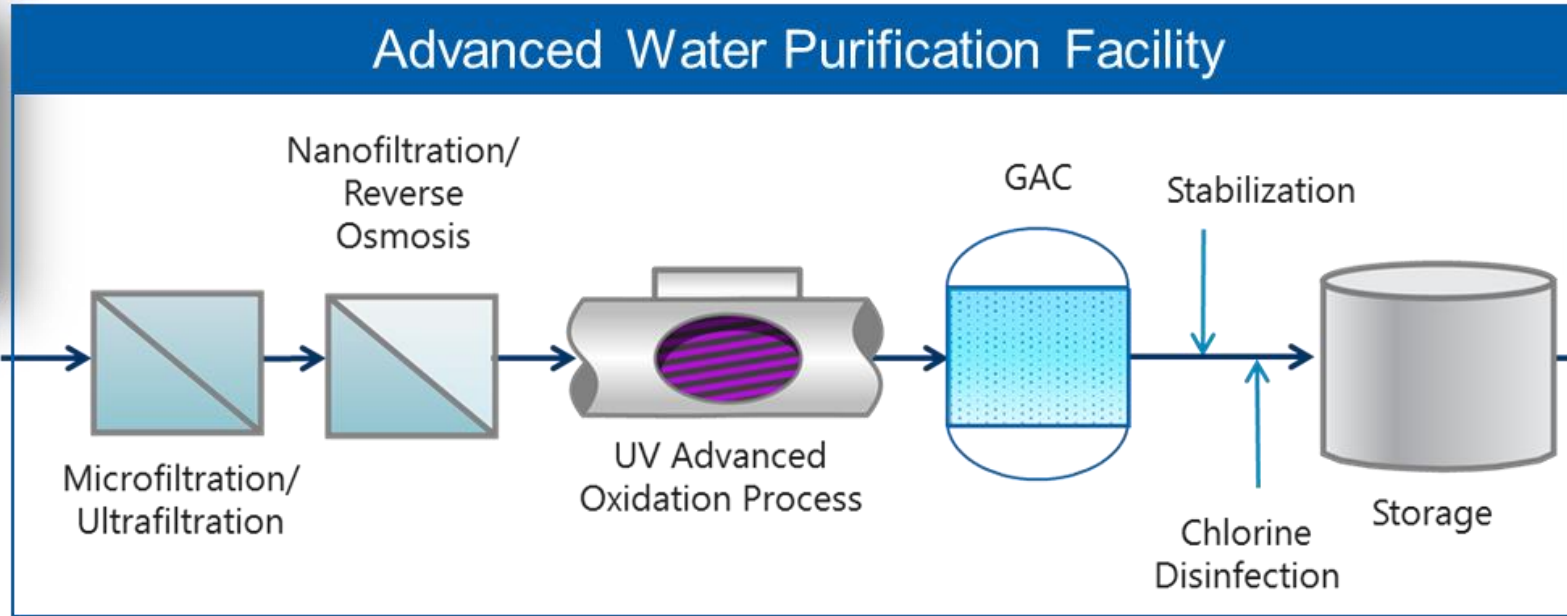
// Why is it needed?



// How will it work?

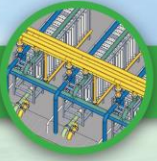


Bustamante
WWTP Secondary
Effluent (10 mgd)



To Distribution
System

// What are the Steps of the Multi-Barrier Process?



MEMBRANE FILTRATION

Primary barrier for particles and for microorganisms that can cause illness, like bacteria, viruses, and protozoa.



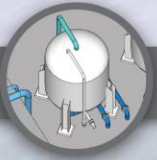
REVERSE OSMOSIS

Removes salts and organic chemicals and provides an additional barrier for microorganisms.



ADVANCED OXIDATION WITH ULTRAVIOLET LIGHT AND HYDROGEN PEROXIDE

Third barrier for microorganisms and destroys any remaining organic chemicals.



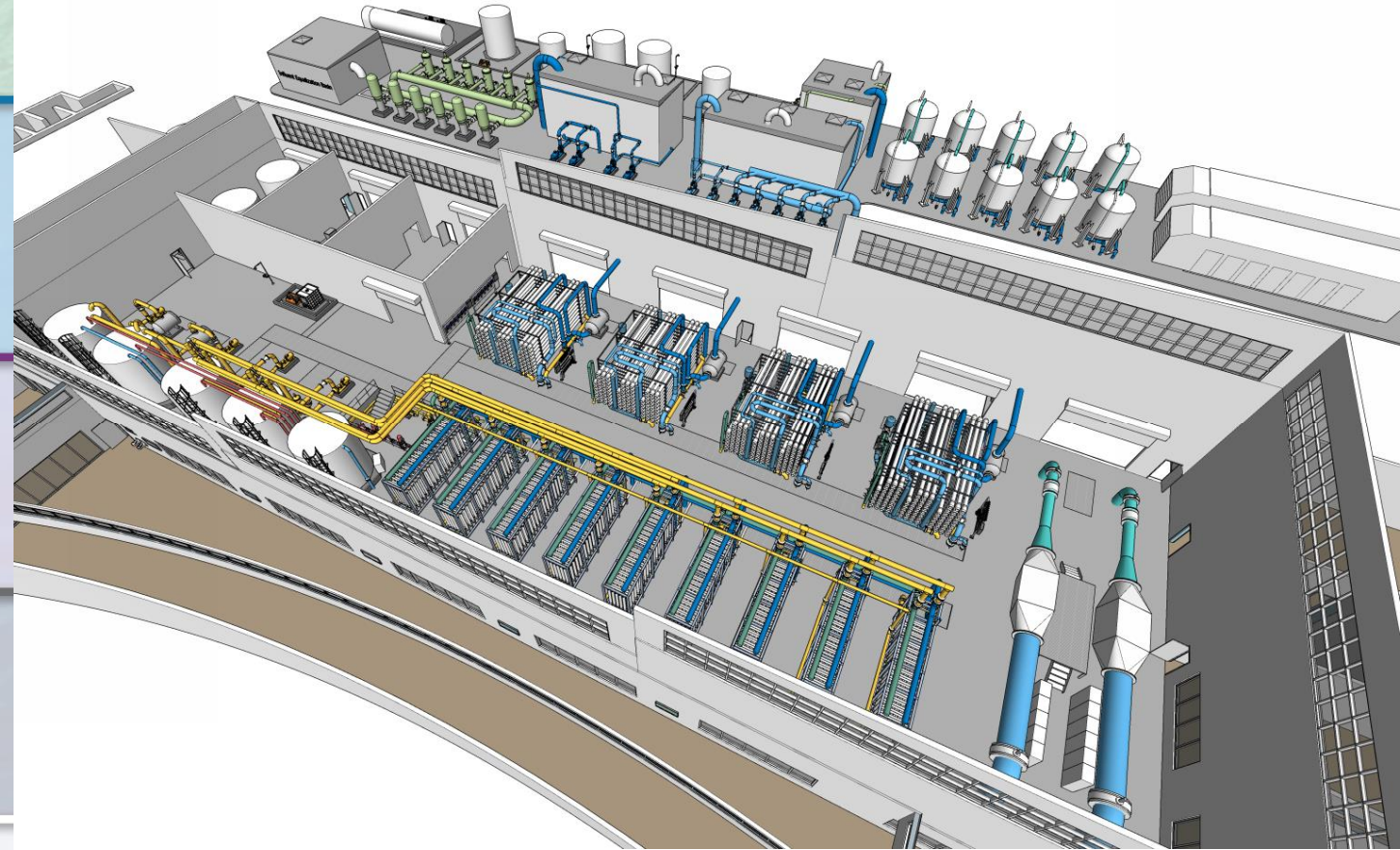
GRANULAR ACTIVATED CARBON

Eliminates excess hydrogen peroxide and provides a third barrier to trace organic chemicals.



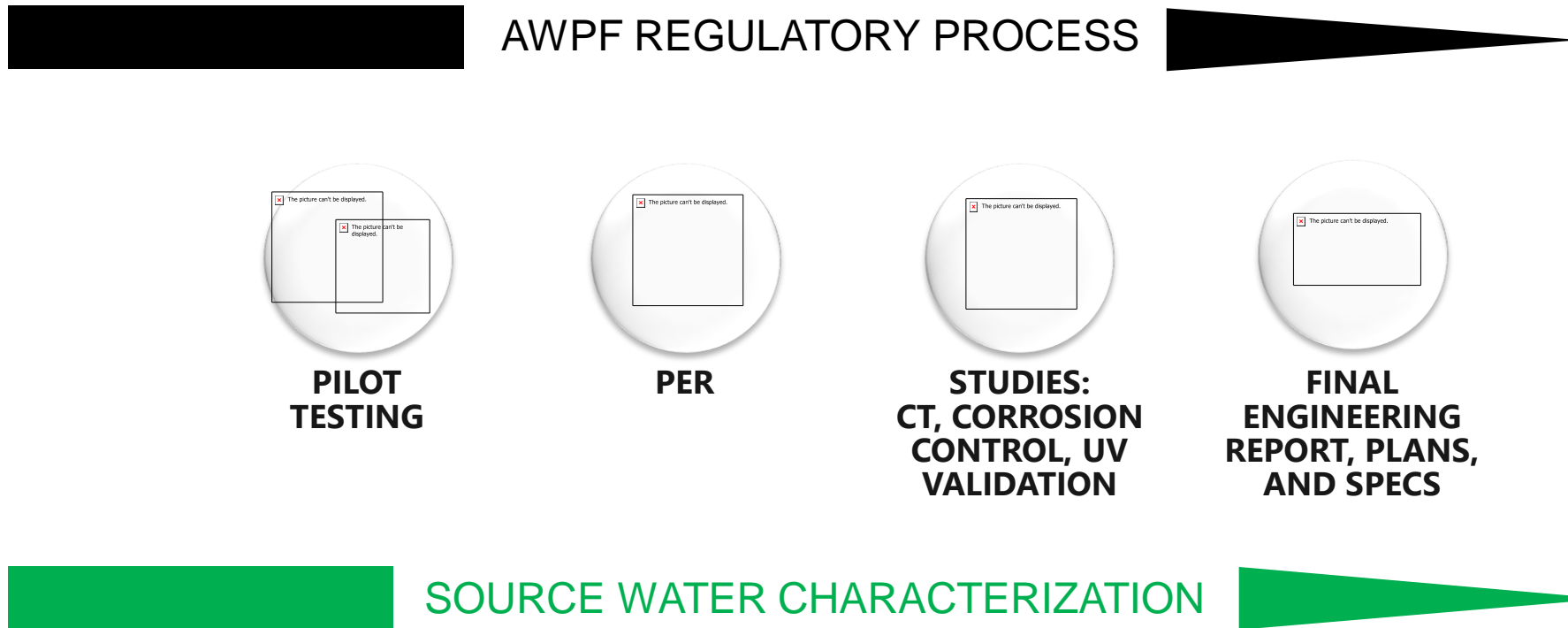
CHLORINE DISINFECTION

Final barrier to microorganisms that lasts as the water reaches homes and businesses.



// How will TCEQ permit it?

TCEQ permits and reviews DPR projects on a case-by-case basis

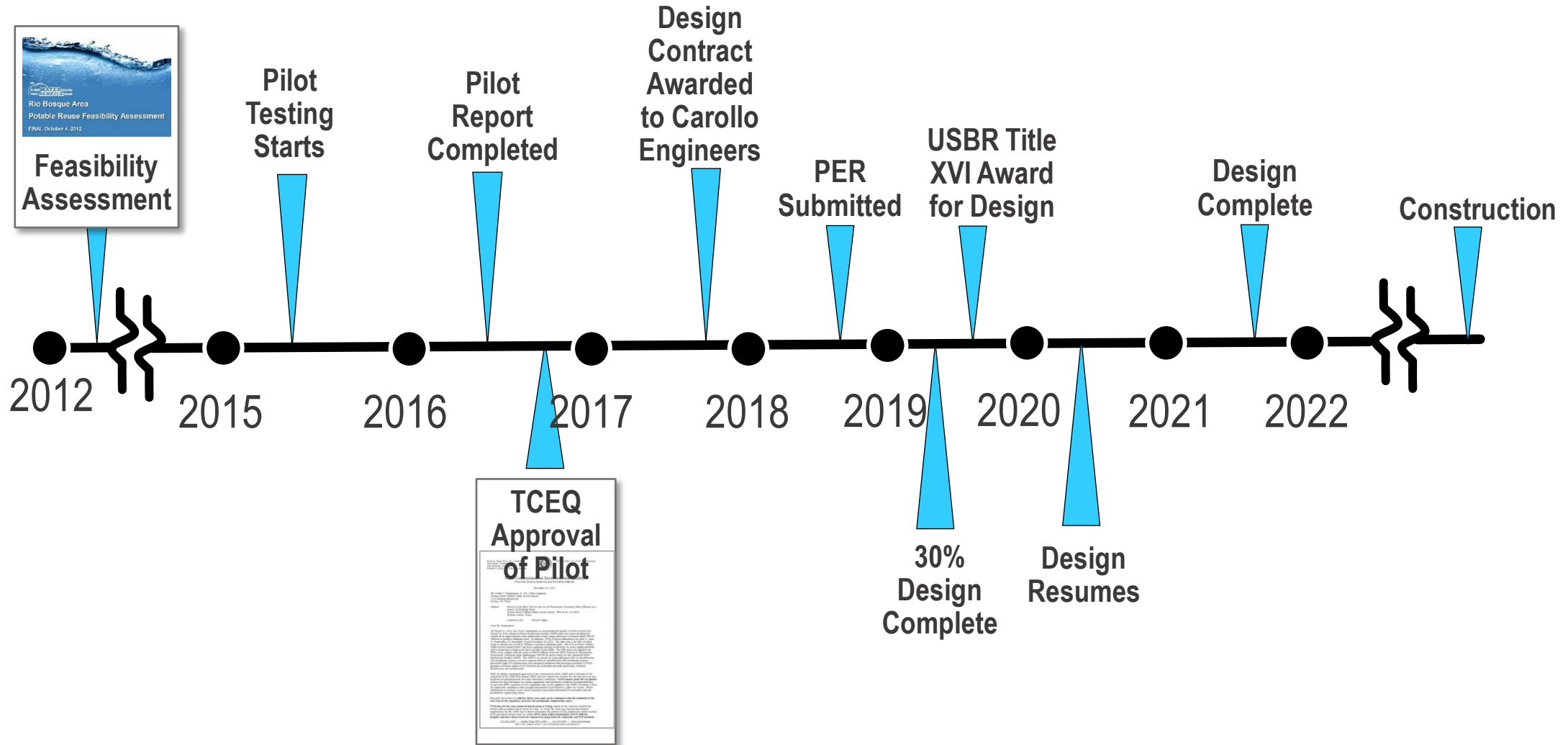


// What will it cost?

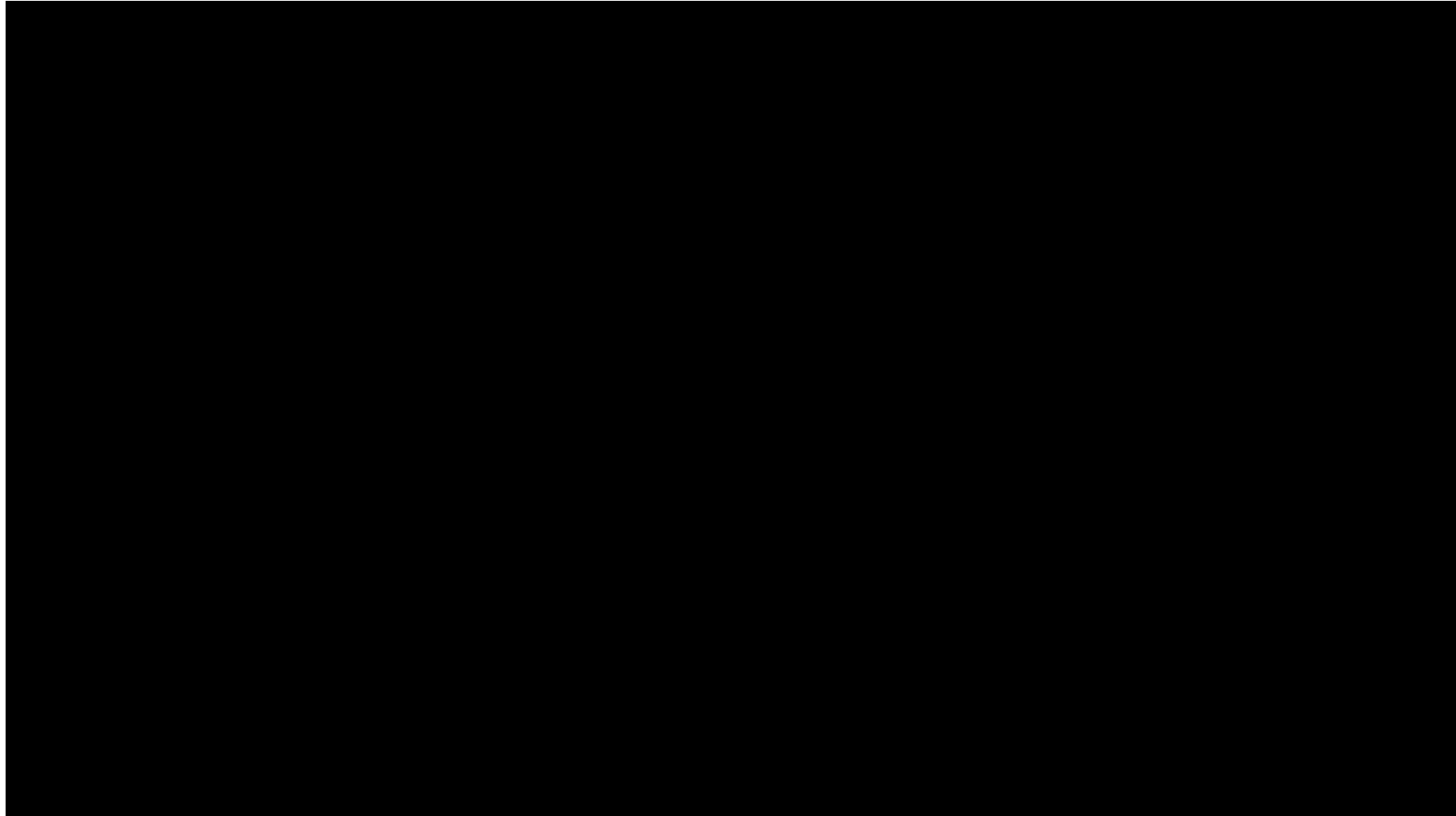
- Estimated construction cost is \$78M at 30% design level
- Reclamation awarded \$3.5M for design



// What is the project timeline?



// What will it look like?





el paso
WATER



Questions?

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