



Regional Recycled Water Program

Authorize Agreement for Engineering and Technical Studies at
the Advanced Water Treatment Demonstration Facility

Engineering and Operations Committee

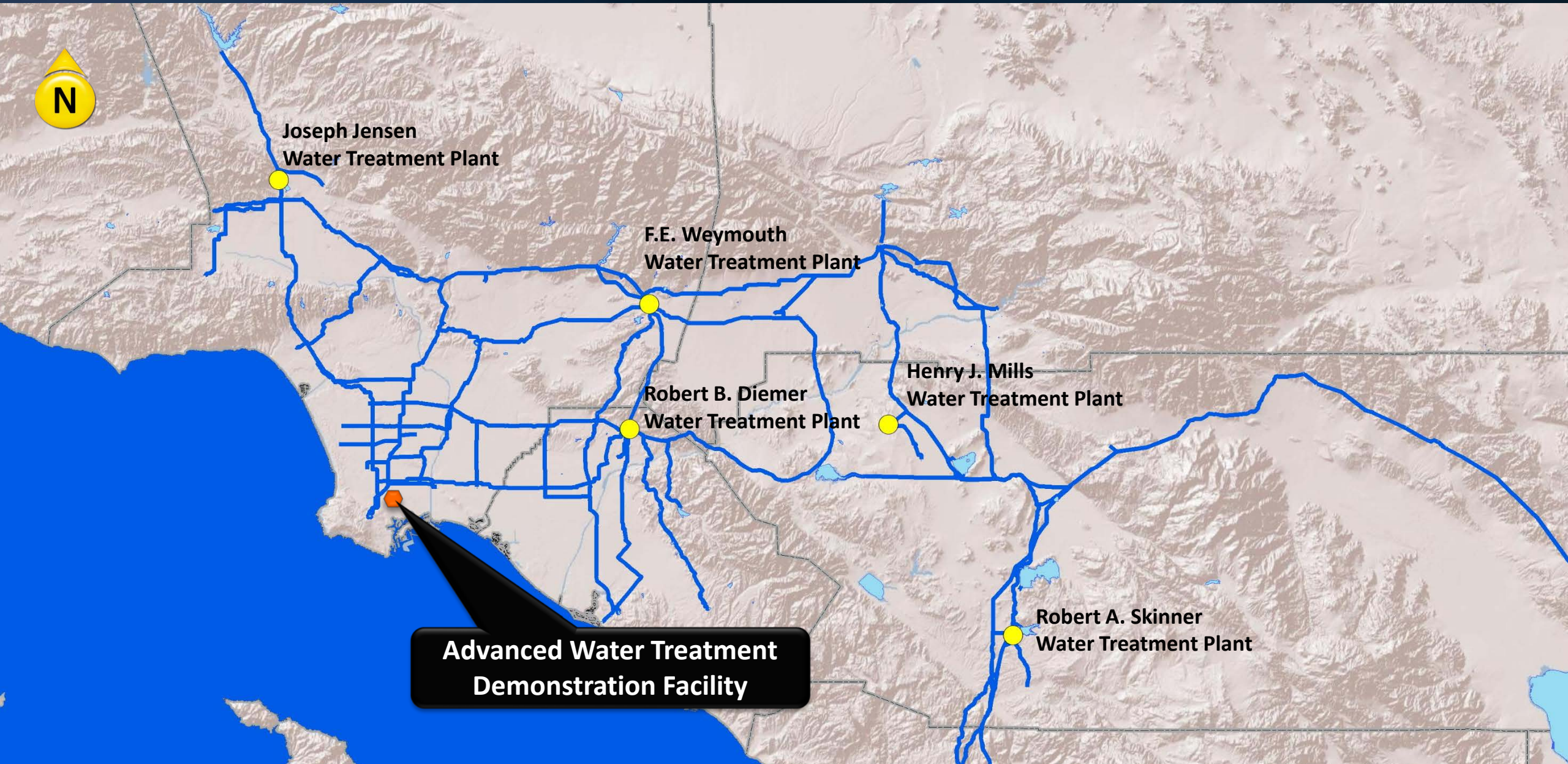
Item 7-3

August 16, 2021

Current Action

- Authorize an agreement with CDM Smith Inc., in an amount not to exceed \$2.75 million, for support of engineering and technical studies at the advanced water treatment demonstration facility

Location Map



Joseph Jensen
Water Treatment Plant

F.E. Weymouth
Water Treatment Plant

Robert B. Diemer
Water Treatment Plant

Henry J. Mills
Water Treatment Plant

Robert A. Skinner
Water Treatment Plant

**Advanced Water Treatment
Demonstration Facility**

Regional Recycled Water Advanced Purification Center



APC Demo
Facility

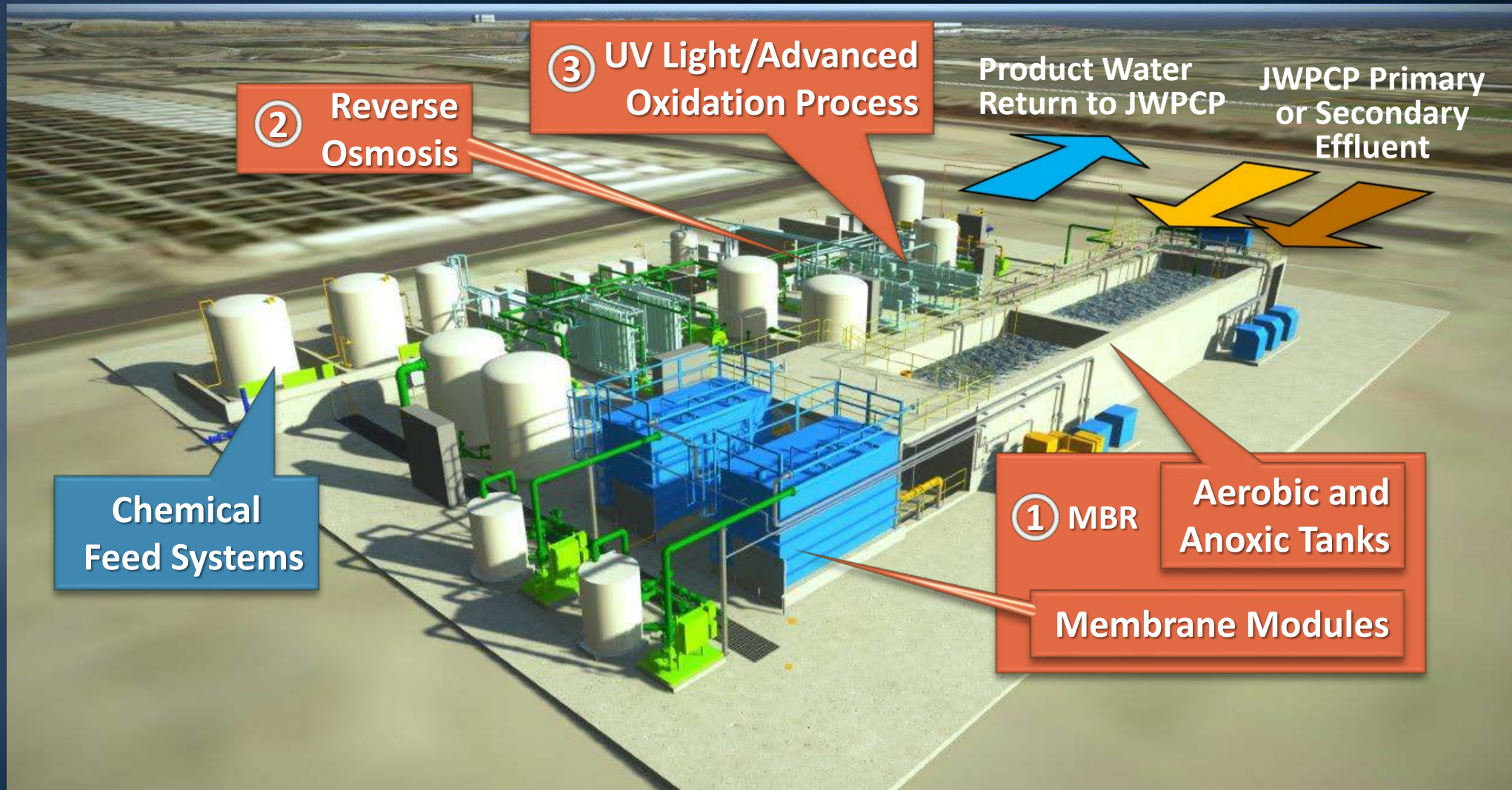
Future Potential
AWT Facility

JWPCP
Site
(LACSD)

110

N

Demonstration Facility Processes



Summary of Work to Date

- Pilot Studies (2010-2012)
- Demonstration Facility online (2019)
- Tertiary MBR testing (2019-2021)
 - Treating secondary effluent
 - Evaluating treatment performance
 - Assessing pathogen removal through MBR
 - Supporting LACSD in concentrate and residuals characterization



Nitrogen Management Studies

- Nitrogen management committee (2017-2019)
 - LACSD and Metropolitan joint effort
 - Comprehensively evaluated approaches to meet nitrogen targets
 - Recommended treatment process trains for further evaluation
- Analysis of JWPCP process enhancements (2020-Present)
 - LACSD nutrient removal study to refine potential alternatives
 - Treatment options include tertiary and secondary MBR



E&O Committee



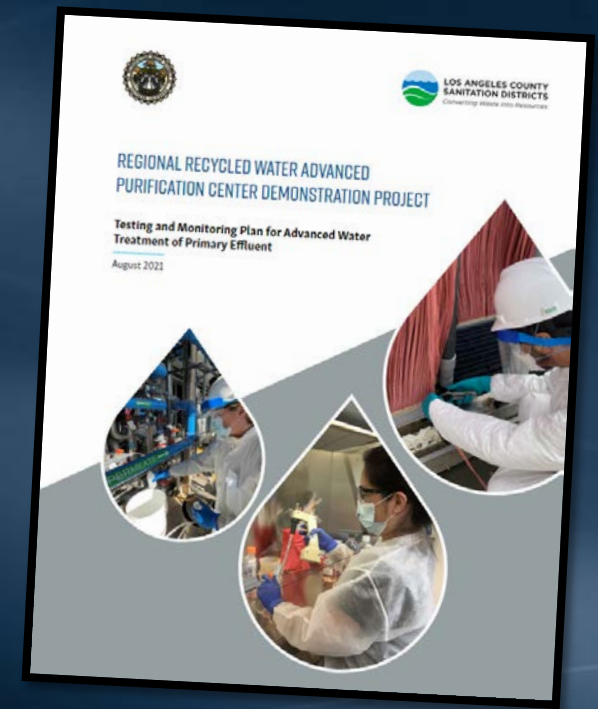
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Secondary MBR Testing

- Treats primary effluent; common practice in non-potable reuse
- Potential for operational efficiencies and cost savings
- Secondary MBR demonstration testing results will inform treatment process selection
 - Builds on tertiary MBR testing results
 - Supports LACSD's technical evaluations for JWPCP
- A test plan is completed and will be submitted to DDW for approval



Alternatives Considered

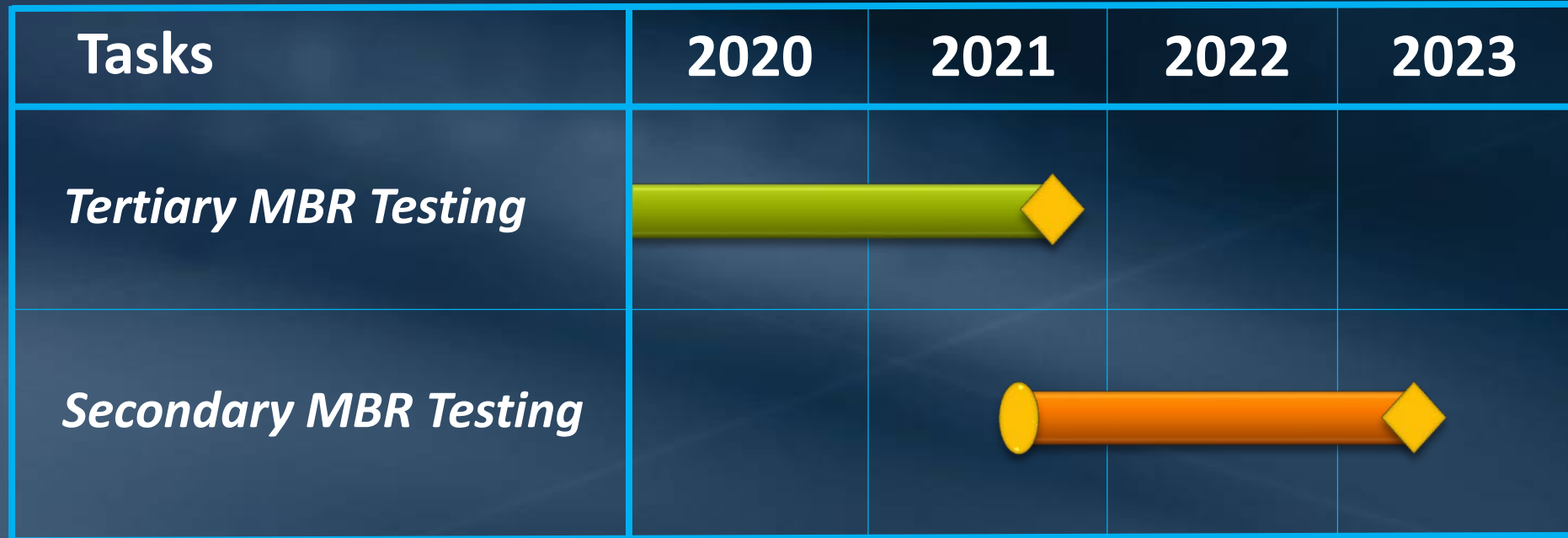
- Alternatives for engineering & technical studies
 - All work by Metropolitan staff
 - All work by Consultant
 - Hybrid staffing approach (selected option)
- Metropolitan's role
 - Project management, technical oversight, laboratory analyses, LACSD coordination, and other activities that support staff's core competencies
- Consultant's role
 - Operations and testing, supplemented by Metropolitan staff
 - Specialized technical expertise



New Agreement – CDM Smith Inc.

- Competitively selected under RFP No. 1274
- Scope of Work
 - Operate the facility to test AWT technologies
 - Execute the secondary MBR testing and monitoring plan to treat JWPCP primary effluent
 - Train Metropolitan operations staff
 - Develop engineering design and operating criteria for a full-scale facility
 - Prepare documents for regulatory approval and permitting
- SBE/DVBE participation level – 25%
- NTE amount – \$2.75 million

Project Schedule



 Board Action

 Completion

 Tertiary MBR Testing

 Secondary MBR Testing

Board Options

- Option #1
 - Authorize an agreement with CDM Smith Inc., in an amount not to exceed \$2.75 million, for support of engineering and technical studies at the advanced water treatment demonstration facility
- Option #2
 - Do not proceed with the new agreement at this time

Staff Recommendation

- Option #1

