



TRANSPORTATION, INFRASTRUCTURE & OPERATIONS COMMITTEE

OCTOBER 20, 2021



ORDINANCE NO. 210913

Modernization Improvements at the Water Treatment Plant, Amendment No. 3

Authorizing a \$4,527,732.00 design professional services contract Amendment No. 3 to Contract No. 9472 with Black & Veatch Corporation, for the Modernization Improvements at the Water Treatment Plant project for a total contract amount of \$9,722,712.00.

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Phase 1 Design Identified Bottlenecks To Modify For Improved Throughput and Performance

- Bench-scale testing
 - Disinfection mods to reduce byproducts
 - Primary and final basin operational enhancements
- Pilot testing
 - Polymer, coagulant, sequestering agent
 - Recycling calcium carbonate residuals
- Full-scale testing
 - Determine feasibility of rating filters higher
 - Evaluate conversion to dual media filters



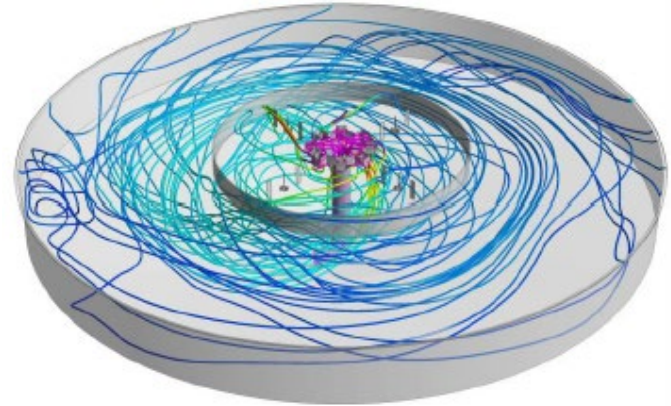
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Additional Phase 1 Design Elements:

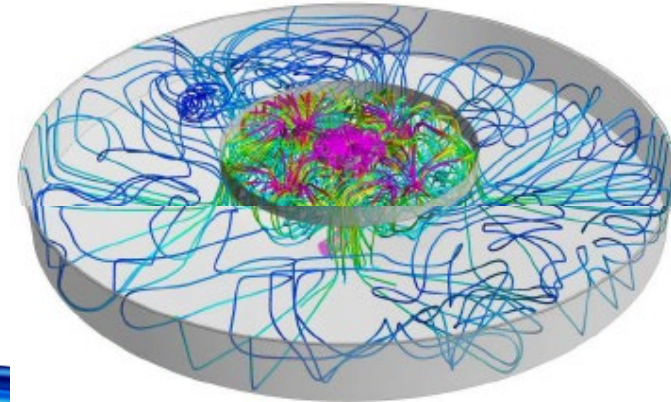
- Tracer Testing
 - Identify baffling factor for secondary basins, final basins, filter gallery, and reservoirs
 - Establish new baffling factors to support the development of operations simulator
- Modeling
 - Assess impact of changes in chemical dosages
 - Predict finished water quality and stability
 - Model contact time calculations based on chlorine dose

Phase 1 Improvements Under Construction

Existing Primary Basins 5 & 6



Recommended Improvements



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Phase 2 Design Amendment includes:

- Design of new and replacement equipment and repairs for primary & final basins
- Replacement of isolation valves in the intake pump discharge header
- Rehabilitation and improvements including baffling for 7 MG Reservoir



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Phase 2 Design Amendment includes:

- Evaluate the feasibility of rehabilitating the secondary pumping station valves and actuators
- Increase reliability and capacity of raw water supply wells:
 - Replace five (5) existing vertical wells with larger capacity vertical wells
 - Build horizontal collector wells and a raw water pipeline
 - Groundwater supply would increase from 45 to 145 mgd, increasing the total raw water supply to 388 mgd.





THANK YOU

