AJSD WRF Expansion CMAR Services RFQ Pre-Submittal Meeting

April 19, 2023



Presented by:

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District Manager

About us

- SMCFD was formed as a Special Purpose District by the Apache Junction City Council in 1992 to provide regional wastewater collection and treatment
- We are governed by a volunteer Board of Directors who are appointed by City Council and serve 6 year terms
- Our authority to provide these services is granted by the City, which is the Designated Management Agency (DMA)

About us

- Our current customer count, north of Baseline Avenue, is approximately 7,400, and our current average daily flow is 1.6 MGD
- Our Service Area was expanded in 2022 to include 11 square miles of Arizona State Land to be developed as a Master Planned Community known as Superstition Vistas
- In order to serve the expanded service area, which will include nearly 11,000 homes in the first phase, SMCFD's WRF will require expansion to 6.0 MGD in the near future

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Flow Projections

- Existing flows 1.6 MGD
- Current permitted capacity 2.1 MGD
- * Rerating (2023) 3.0 MGD
- ❖ SV Phase 1 − 2.91 MGD.

These flows do not include pending development north of Baseline Avenue.

Current Processes

- Baseline Pump Station
- Headworks
 - Mechanical bar screen and grit classifier
- Septage Receiving Station
- Aeration
 - Two extended aeration, activated sludge basins
 - Upgrades for rerating from 2.1 to 3.0 MGD
- Clarifiers three for each aeration basin
- Tertiary disk filter and disinfection

Current Processes

- Solids Handling
 - Two sludge lagoons
 - Polymer system
 - Six sand drying beds and two solar drying beds
- Effluent Management
 - 11 recharge basins
 - Intermittent discharge to Weekes' Wash tributary
 - Non-potable reuse in conjunction with AJWD (future)



Phasing Plan

Four planned expansions until buildout

- Phase 1:
 - ~ 3MGD MBR added to operate in parallel with existing treatment facility
- Phase 2:
 - Option to add primary treatment/digestion or additional MBR capacity based on growth
- Phase 3 + 4:
 - Overall process expansions

Meeting today's needs while planning for the facility buildout



Existing facility needs:

- Imminent need for liquid stream treatment capacity
- Process redundancy to facilitate maintenance
- Immediate need for solids handling capacity
- Improved effluent water quality for recycled water customers
- Improved SCADA, laboratory, and maintenance facility for efficient operations



Phase 1



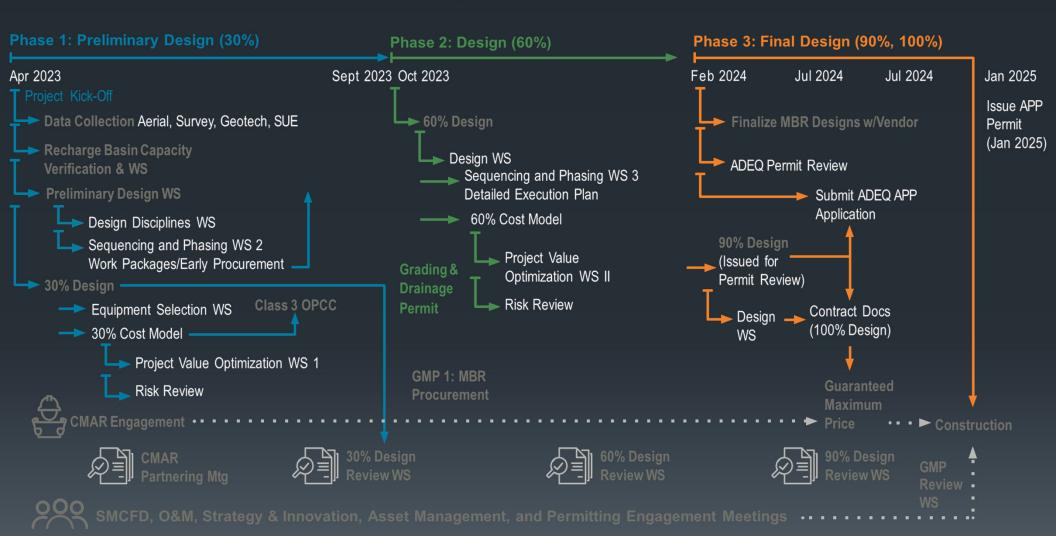




Buildout



Overall Project Delivery



SMCFD Requirements

- Parallel treatment systems
- Effluent management / direct potable reuse
- Odor control
- Septage receiving
- Adequate training for staff on new technologies

SMCFD Priorities

- Value Engineering Opportunities
- MBR Experience
- Critical Material Procurement and Options to Optimize Cost and Value
- MOPO Planning
- Safety

Questions

