

# AJSD WRF Expansion CMAR Services RFQ Pre-Submittal Meeting

April 19, 2023



**APACHE JUNCTION  
SEWER DISTRICT**  
RECLAIMING WATER FOR THE FUTURE

Presented by:  
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District Manager

# About us



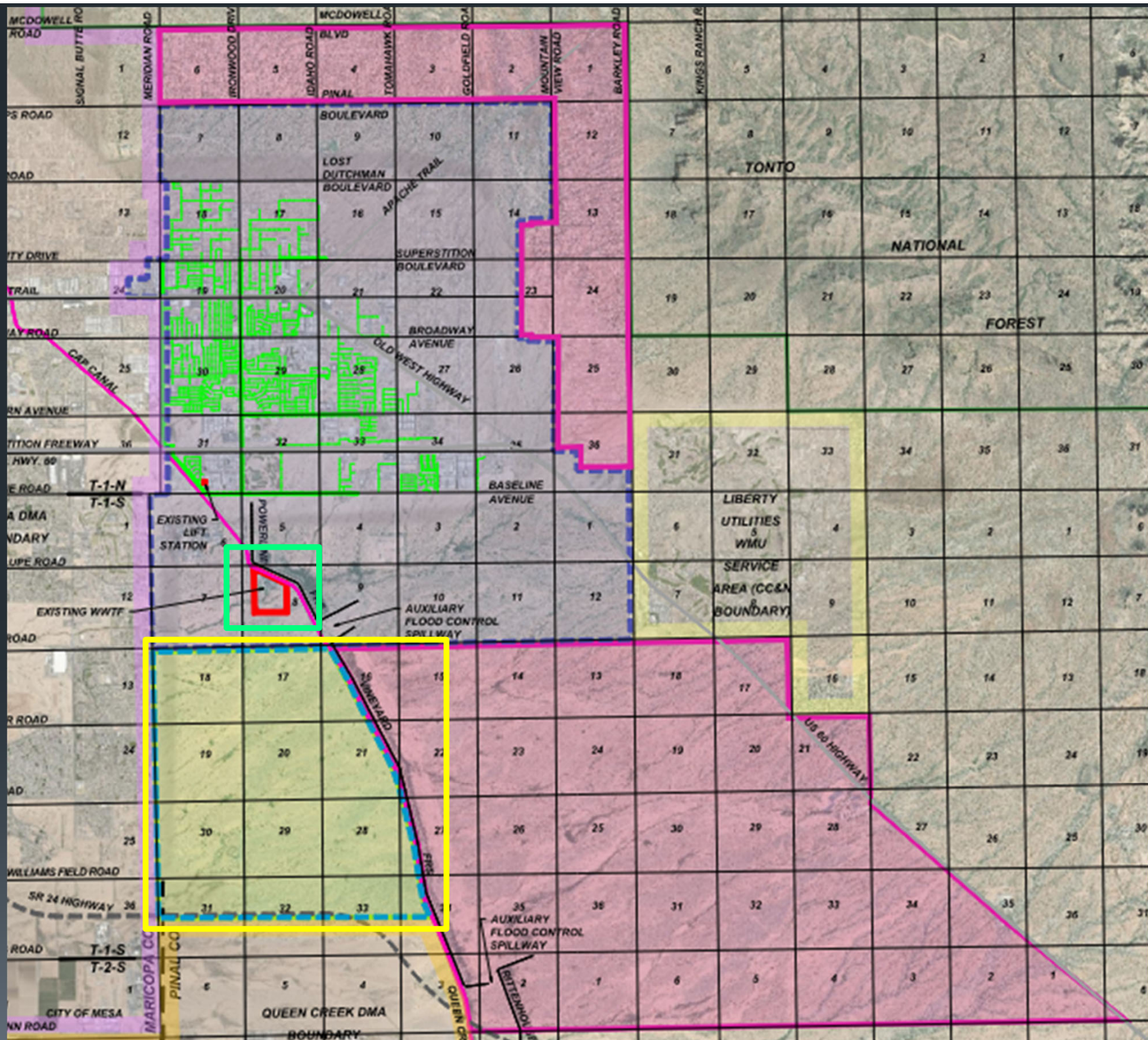
- ❖ SMCFD was formed as a Special Purpose District by the Apache Junction City Council in 1992 to provide regional wastewater collection and treatment
- ❖ We are governed by a volunteer Board of Directors who are appointed by City Council and serve 6 year terms
- ❖ Our authority to provide these services 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







# 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)*





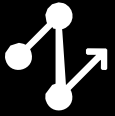




# Phasing Plan

- 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

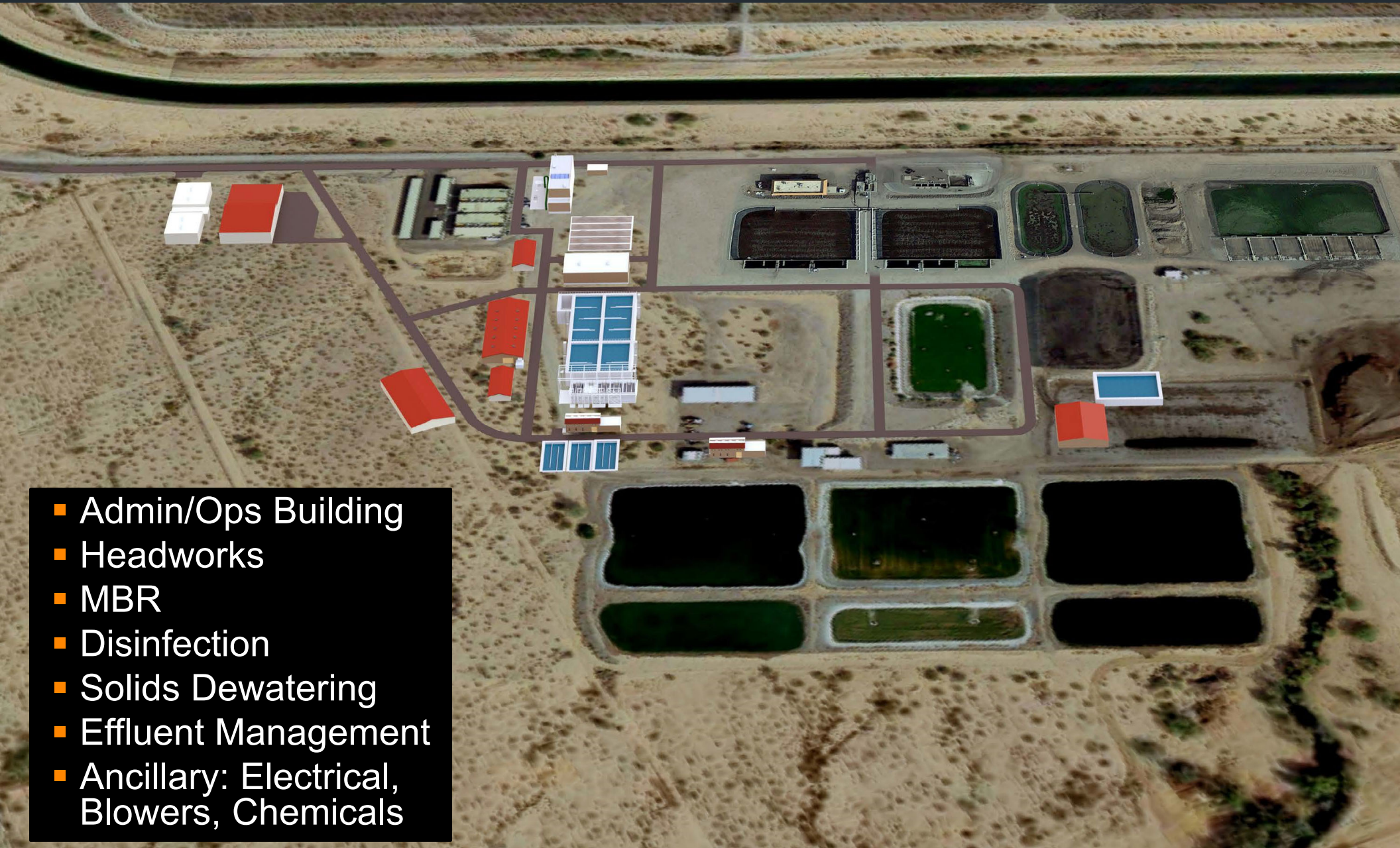




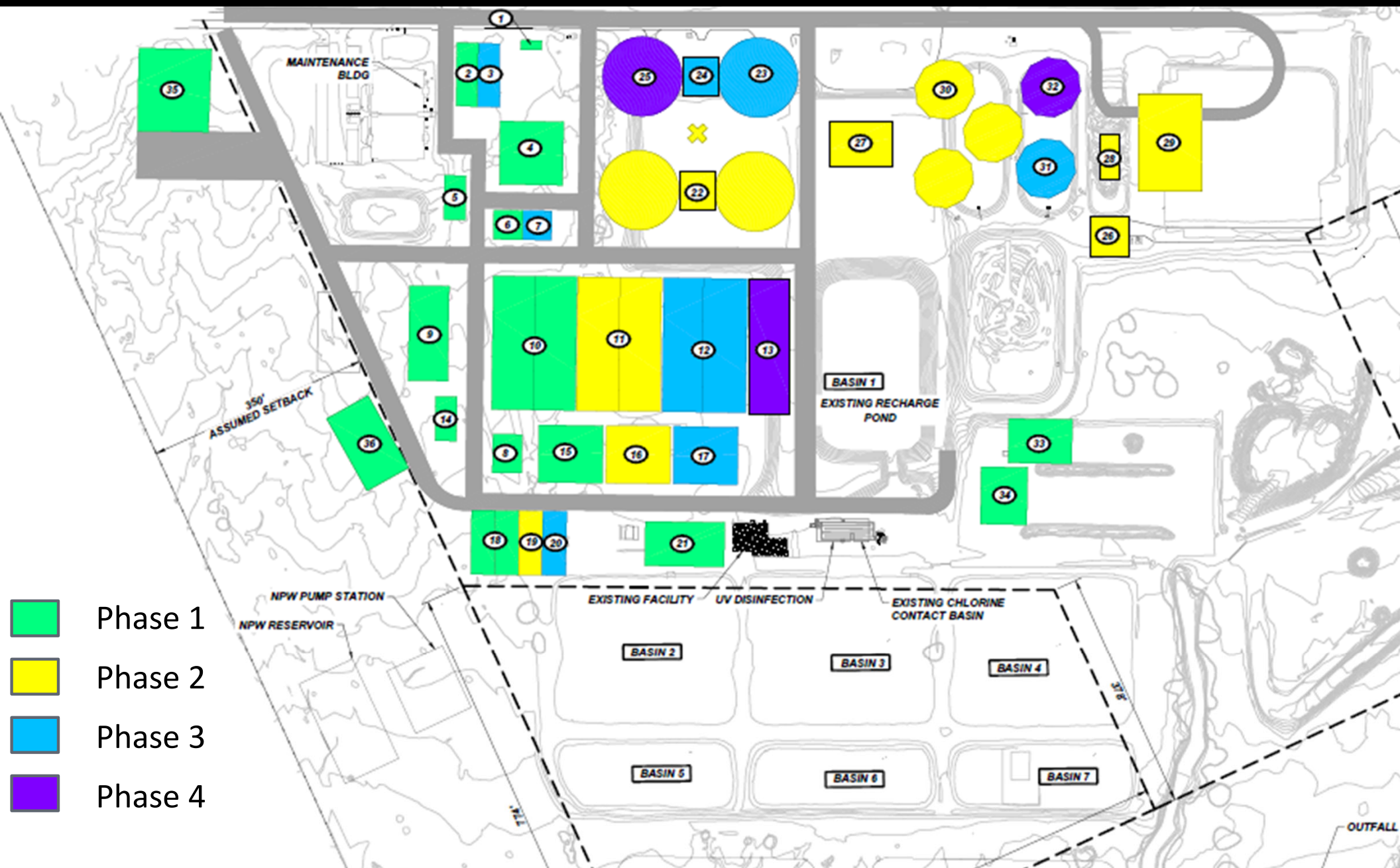
# Phase 1



- Admin/Ops Building
- Headworks
- MBR
- Disinfection
- Solids Dewatering
- Effluent Management
- Ancillary: Electrical, Blowers, Chemicals







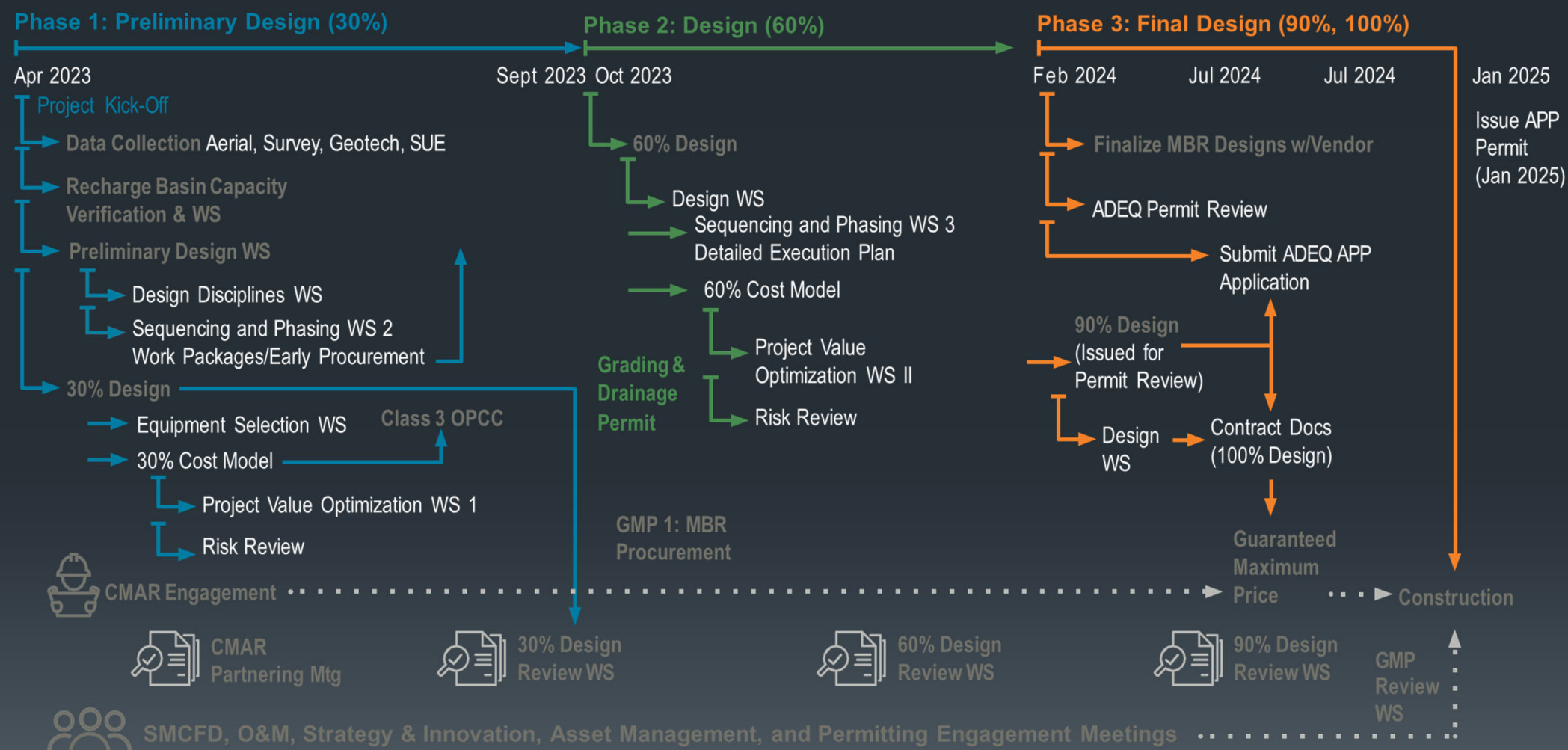


# Buildout





# 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

