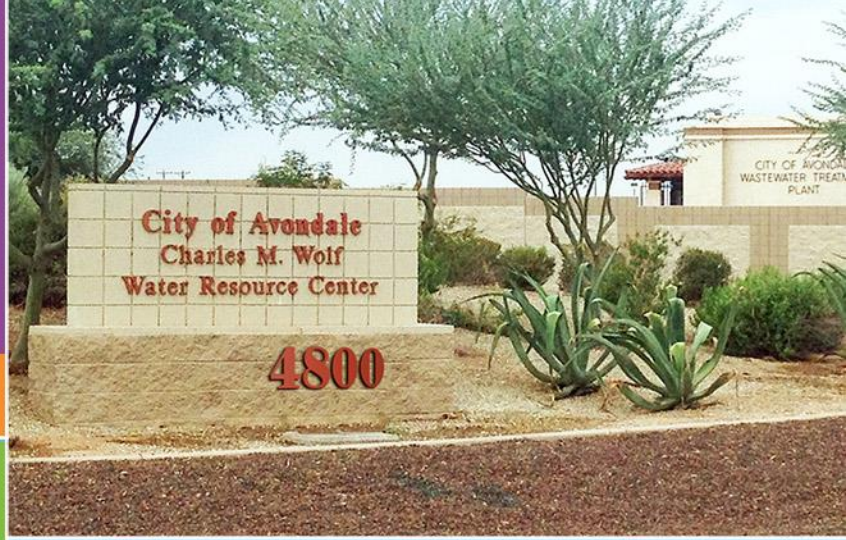


WRF Facility Upgrades



Presented by:
Shawn Kreuzwiesner



April 3, 2017
**Council
Meeting**



WRF Background

- **Treats all of Avondale's Wastewater flows**
 - Creates a *renewable* water supply for city
- **1993 - Original Construction**
 - Capacity 3.5 MGD (*Million Gallons per Day*)
- **2002 - Expanded to 6.4 MGD**
- **2010 - Phase 1 Expansion to 9 MGD**
- **Future Planned Expansions based on growth**
 - Phase 2 to 12 MGD
 - Phase 3 to 15 MGD



2014 WRF Master Plan

- Reviewed plant's ability to meet permit limits
- Identified improvements needed to ensure **reliable** and **efficient** operations





Current Challenges

- ***Several years*** before the next expansion
- ***Harsh operating conditions*** for equipment
- Some critical components have ***no redundancy***
- Some components are ***under-sized*** due to increased concentration of wastewater





Major Improvement Areas

New 100-foot
Primary Clarifier

Aeration Basin
Improvement

Potential Solar Panels

New 90-foot
Secondary Clarifier

Operations
Building
Improvements



Construction Method

- **Construction Manager at Risk (CMAR)**
 - Qualifications Based Selection
 - Contractor has input into design – ***Team Approach***
 - Coordination with Plant operations
 - Cost estimates provided during design
 - Open Book Philosophy





Project Schedule – Next Steps

- **Project Engineer – CDM Smith**

- Award of Design scope: March 31, 2016
- Award of Construction Phase scope: Tonight

- **Construction Manager at Risk (CMAR) - PCL**

- Award of Pre-Construction contract: August 8, 2016
- Award of Construction GMP No.1: Tonight
- Award of Construction GMP No.2: 3rd Qtr. 2017
- Construction Complete: November 2018





Updated Project Funding

Estimated Costs for Improvements	
Description	Estimated Costs
Plant Process Improvements (<i>PCL</i>)	\$11.00 M
Engineering (<i>CDM Smith</i>)	\$1.11 M
Construction Administration (<i>CDM Smith</i>)	\$0.57 M
Operations Building Upgrades	\$0.89 M
Misc. Project Costs	\$0.12 M
Unencumbered Funds	\$0.16 M
Total Capital Funding	\$13.85 M



Recommendations

Staff is requesting that City Council approve:

- An amendment to PCL Construction's CMAR contact to fund GMP No. 1 for the Water Reclamation Facility Upgrades in the amount of \$6,641,970.
- An amendment to CDM Smith's PSA contract to fund extra design services and add construction phase services in the amount of \$662,479.





Project Funding

Estimated Costs for Improvements		
Description	Orig. Cost Est.	New Cost Est.
Plant Process Improvements <i>(Est.)</i>	\$9.00 M	\$11.00 M
Engineering <i>(CDM Smith)</i>	\$1.03 M	\$1.11 M
Construction Administration <i>(Est.)</i>	\$0.50 M	\$0.57 M
Operations Building Upgrades	\$0.80 M	\$0.89 M
Misc. Project Costs	--	\$0.12 M
Unencumbered Funds	\$0.62 M	\$0.16 M
Total Capital Funding	\$11.95 M	\$13.85 M