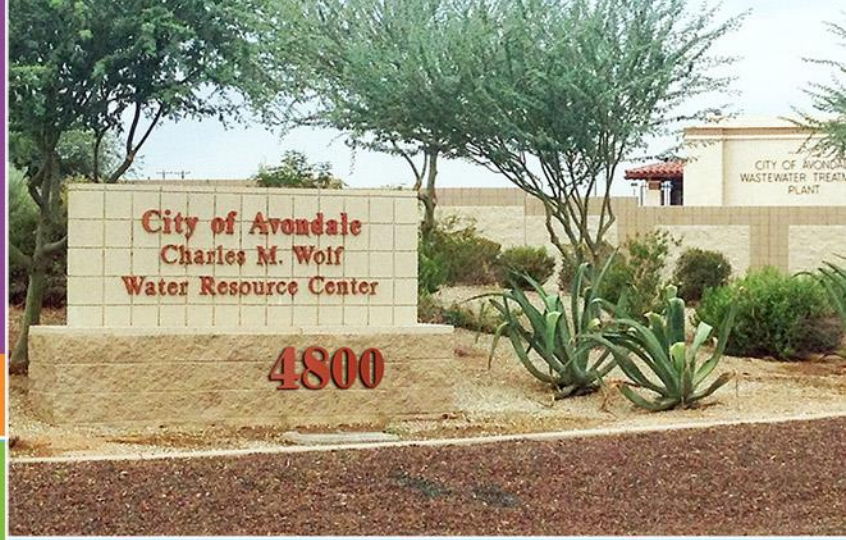


# WRF Facility Upgrades



Presented by:  
Shawn Kreuzwiesner



**August 8, 2016**  
**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 reliably meet permit limits
- Identify improvements needed to ensure **reliable** and **efficient** operations





# Current Challenges

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







# Major Improvement Areas

New 100-foot  
Primary Clarifier

Aeration Basin  
Improvement

Potential Solar Panels

New 90-foot  
Secondary Clarifier

Operations  
Building  
Improvements



# Project Funding

<b>Estimated Costs for Improvements</b>	
<b>Description</b>	<b>Estimated Costs</b>
Plant Process Improvements <i>(Est.)</i>	\$9.00 M
Engineering <i>(CDM Smith)</i>	\$1.03 M
Construction Administration <i>(Est.)</i>	\$0.50 M
Operations Building Upgrades	\$0.80 M
Contingency	\$0.62 M
<b>Total Capital Funding</b>	<b>\$11.95 M</b>



# Construction Methods

- **Design-Bid-Build**

- Lowest responsive bidder awarded work
- Contractor has no input into design
- Project costs unknown until after design completed

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

- Qualifications Based Selection
- Contractor has input into design – ***Team Approach***
- Coordination with Plant operations
- Higher level of projects cost control
- Negotiated Contact – ***Open Book Philosophy***

***High Quality Project for City***



# Preconstruction Services

- **Major Deliverables**

- Provide Costs Models
- Constructability, Bidability and Value Engineering reviews
- Develop Maintenance of Plant Operations (MOPOs)
- Develop Guaranteed Maximum Price (GMP) estimates

- **Advantages to City**

- More efficient design
- Coordination with Plant operations
- Higher level of projects cost control







# Project Schedule – Next Steps

- **Award to Project Design**

- Award of Design Scope to CDM Smith: March 31, 2016
- Award of Construction Phase scope: Early 2017

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

- Award of Pre-Construction contract: Tonight
- Award of Construction GMP No.1: 1<sup>st</sup> Qrt. 2017
- Award of Construction GMP No.2: 2<sup>nd</sup> Qrt. 2017
- Construction Complete: June 2018

- **Operations Building Upgrades**

- Construction complete: Early 2017



# Recommendation

Staff is requesting that City Council approve a Construction Manger at Risk Contract with PCL Construction to preform preconstruction services for the Water Reclamation Facility Upgrades in the amount of \$156,926.

