

# *Tucson Water*

## *Finance Subcommittee*

October 21, 2015

Presenters:

Pat Eisenberg, Chief Engineer

Melodee Loyer, Planning Administrator



# Overview

- Infrastructure Inventory
- How have we done?
- Proposed Capital Improvement Program (CIP)
- Alternative Infrastructure Assessment (AIA)
- Upcoming Adjustments



# Tucson Water's Infrastructure Inventory

- 4,600 miles of water mains
- 85,400 valves
- 21,600 fire hydrants
- 253,300 services (meters)
- 209 wells
- 280 million gallons of reservoir storage
- 123 boosters
- 135 geographically separated pressure zones



# CIP Needs

- Reliability
- Replacement
- Water Quality

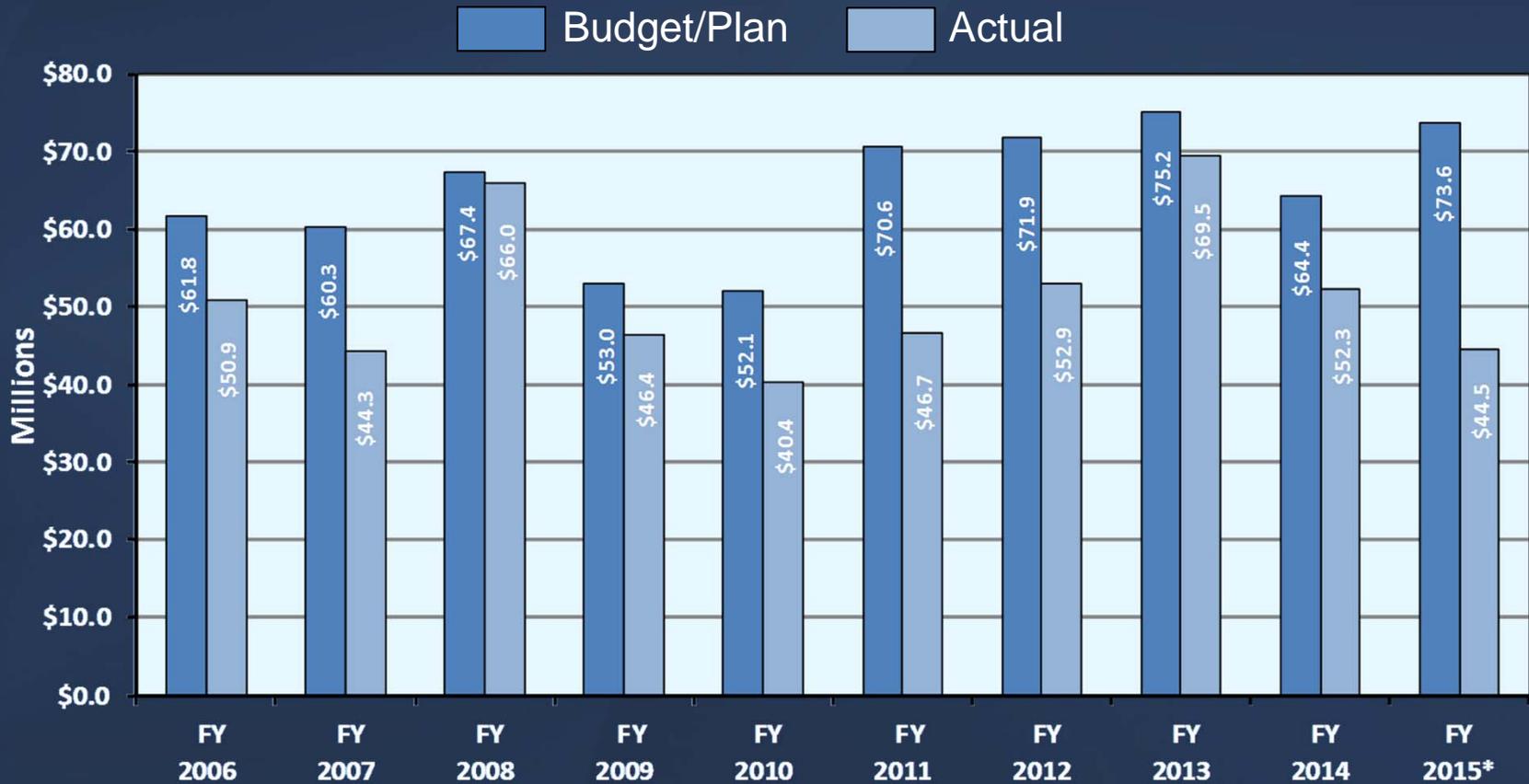


# CIP- How have we done?

- 22nd Street Reservoir - \$2.5M
- Dove Mt. 36" Reclaimed TM - \$4.0M
- Kino Parkway Overpass - \$1.6M
- Magee Road - \$0.3M



# CIP Trends: Planned vs Actual



\*Unaudited actual as of June 30, 2015



# FY15 Planning vs Actual - Imbalance

- Delayed Santa Cruz Treatment to support economic development
- Avra Valley Transmission Main (AVTM) work deferred for AIA evaluation
- Inability to retain engineering staff
- Reclaimed filters held back for possible favorable Arizona Department of Environmental Quality (ADEQ) permitting



# Capital Improvements Program

CIP#	PROJECT NAME	FY 2016	Prop.	Year 1	Year 2	Year 3	Year 4	Year 5	Years 1-5 Subtotal	Year 6	Year 7	Year 8	Year 9	Year 10	Years 6-10 Subtotal	10-Year Total
		Budget	CF	FY 2017	FY 2018	FY 2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026			

Current year plus 5-future year look at requirements

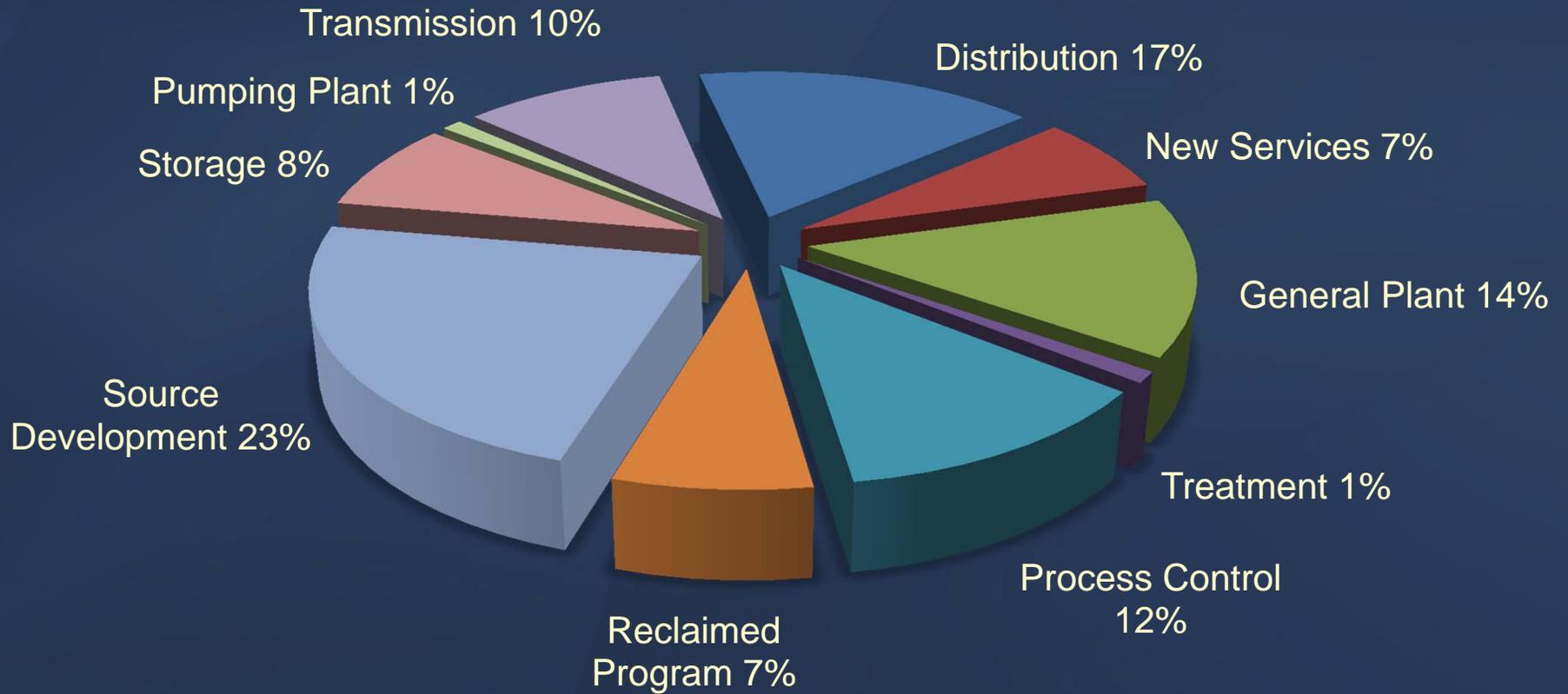
Additional 5-year look for strategic planning

CIP#	PROJECT NAME	FY 2016	Prop.	Year 1	Year 2	Year 3	Year 4	Year 5	Years 1-5 Subtotal	Year 6	Year 7	Year 8	Year 9	Year 10	Years 6-10 Subtotal	10-Year Total
		Budget	CF	FY 2017	FY 2018	FY 2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026			
<b>Potable Total:</b>		69,167	8,300	53,591	51,134	53,220	48,213	43,886	258,344	22,852	24,368	45,925	38,250	19,865	151,260	409,604
<b>Reclaimed Total:</b>		6,038	2,000	9,040	8,049	592	612	961	21,254	25,362	27,128	46,435	38,760	20,375	158,060	179,314
<b>Total FY17 through FY2021 Proposed CIP Budget</b>		<b>75,205</b>	<b>10,300</b>	<b>62,631</b>	<b>59,183</b>	<b>53,812</b>	<b>48,825</b>	<b>44,847</b>	<b>279,598</b>	<b>48,214</b>	<b>51,496</b>	<b>92,360</b>	<b>77,010</b>	<b>40,240</b>	<b>309,320</b>	<b>588,918</b>

Annual CIP budget; \$48M - \$75M

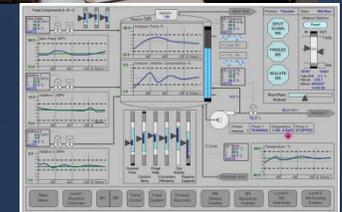
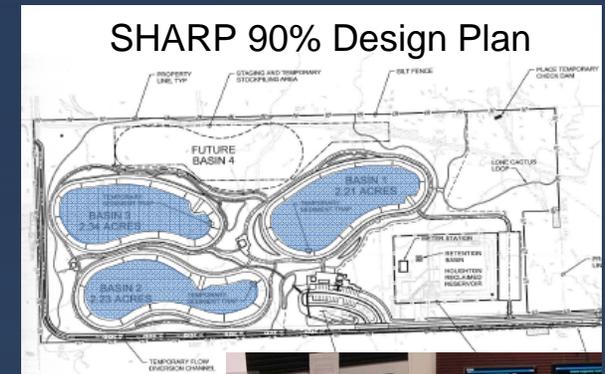


# FY2017 – FY2021 Capital Budget \$279.6 Million



# Proposed 5-Yr CIP Large Infrastructure Replacement (Continuing)

- 20,000 Advanced Metering Infrastructure (AMI) Meters/Year - \$25.5M
- Main Replacements - \$24.0M
- Supervisory Control And Data Acquisition (SCADA) Upgrades - \$31.5M
- Clearwell Reservoir Rehab - \$14.2M
- Southeast Houghton Area Recharge Project (SHARP) - \$7.1M



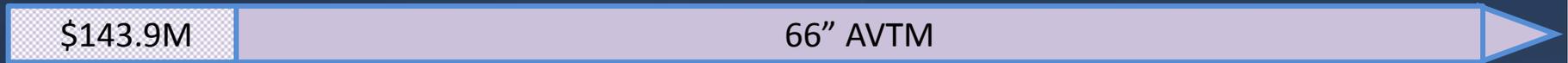
# Proposed 5-Yr CIP (New Work)

- ~~Reclaimed Filtration - \$4.8M~~ → Filter Bypass - \$2.1M
- Valley View Reservoir - \$2.7M
- Effluent Forebay Roof - \$3.9M
- ~~Avra Valley Transmission Main (AVTM 7 Year Implementation)~~ → AIA
- Santa Cruz Wellfield

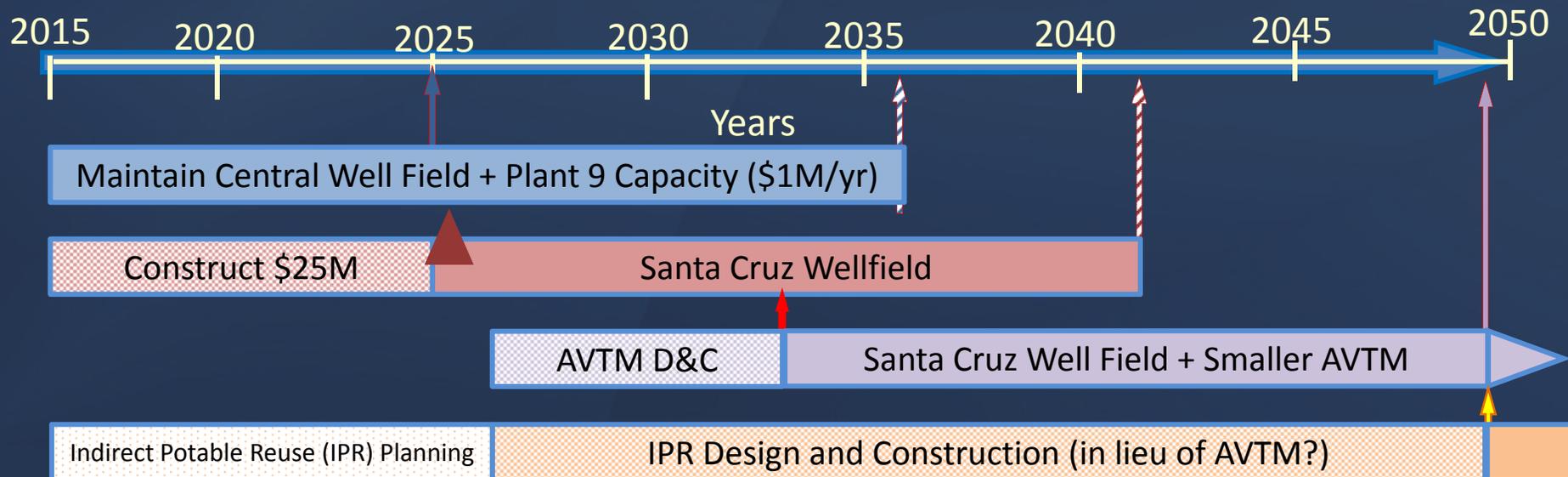


# AIA Outcome

## Original AVTM Plan



## AIA Plan



# Santa Cruz Wellfield Phasing

	2016	2017	2018	2019	2020	2021
<b>Phase I (10 MGD)</b>	X \$1,000	X \$1,000	X \$1,000	X \$1,000	X \$1,000	X \$1,000
W857 Re-Equip 3/5/8/13	300	610				
W039 SC-008 Collector	27	200				
New SC-005 Collector	27	200				
New SC-013 Collector	27	200				
<b>Phase II (Disinfection)</b>						
W759 Treatment		150	2320			
W089 Headers for Treatment	10	40	5500			
W153 Nogales 36"	500	500	2018			
W154 SC TM PH2	5	5	85			
<b>Phase III (5 MGD)</b>						
New Well Replace 1/4/14			500	2000		
New Collector SC-001		15	10	200		
New Collector SC-004		15	10	200		
New Collector SC-014		15	10	200		
W796 Slip Liner	30	70	1037	5397		
<b>Phase IV (5MGD)</b>						
New Well Drill (3)				2500	-	-
*New Well Outfit (3)					150	1200
W160 Collector Mains					50	1150
W161 Transmission					50	2000
<b>Totals</b>	<b>926</b>	<b>2020</b>	<b>6540</b>	<b>10647</b>	<b>250</b>	<b>4350</b>

10MGD

Treatment

10MGD  
+5MGD  
15MGD

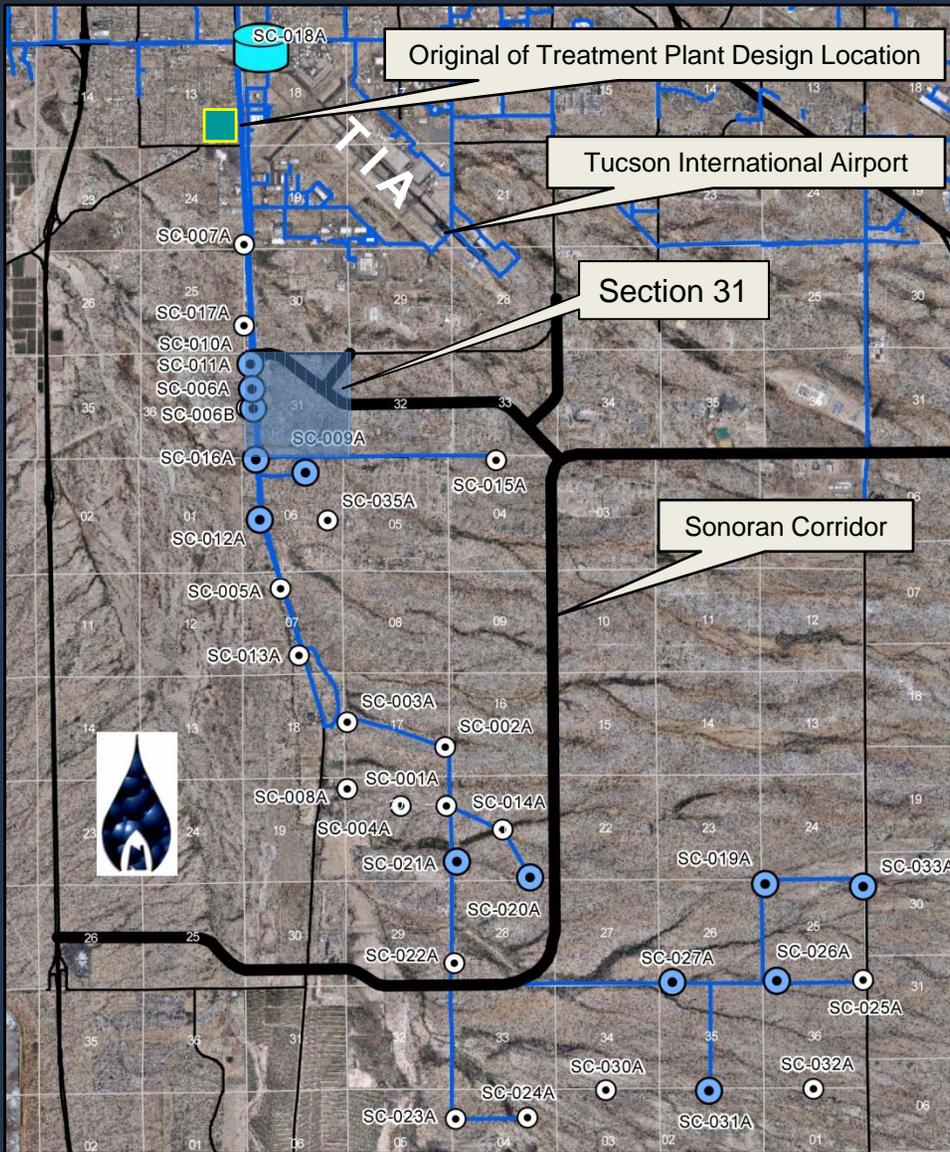
15MGD  
+5MGD  
20MGD

**+20MGD = \$24.7M**



# Sonoran Corridor (West Side)

- Original treatment plant design location
- Section 31 is the most viable property for future development



# Upcoming CIP Adjustments

## Relocate Treatment Plant to Support Economic Development



### Existing CIP = \$14.3M

- 28" slip liner
- Santa Cruz Treatment Facilities
- Martin Booster Upgrade
- 4,000' – 36" line

### **Unfunded = \$5.5M - \$6M**

- 37% shorter slip liner
- **Treatment Relocation Cost**
- **Eliminate Martin Booster Upgrade**
- **Additional 5280' – 36" line**
- **10,000' – 16" Hughes Main**
- **B-D Reservoir and Booster**





# Questions?

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