



# General Manager's Report

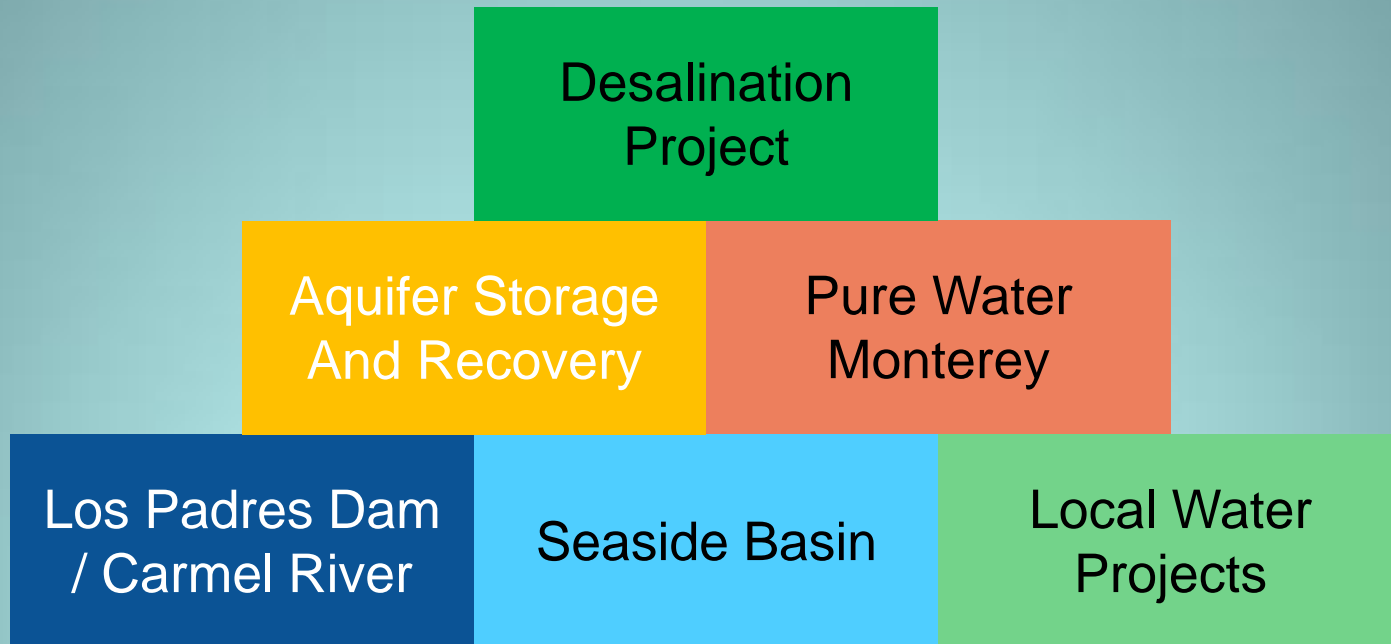
## Item 14:



### Update on Development of Water Supply Projects

*February 22, 2017*  
*David J. Stoldt*

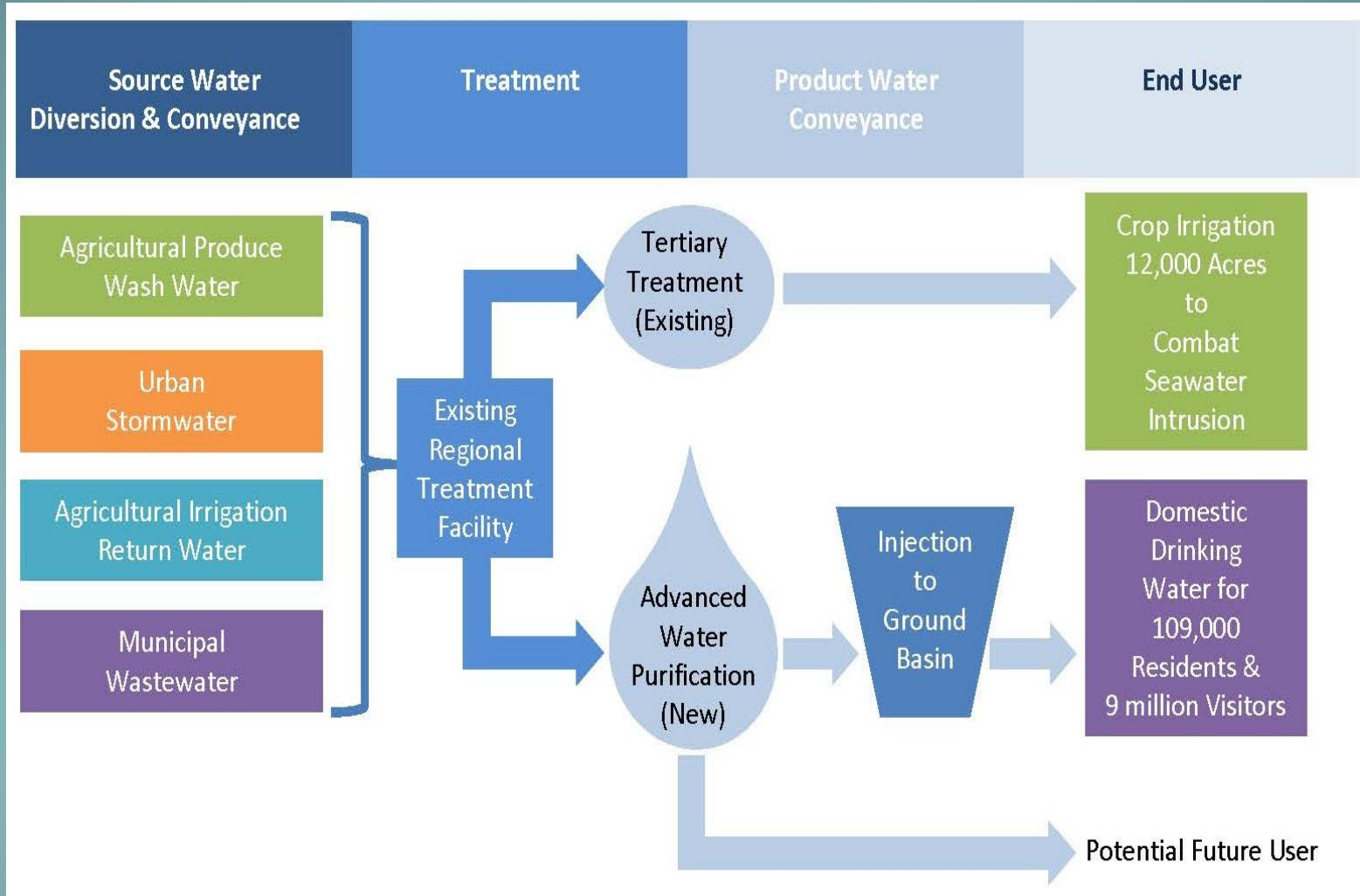
# The Water Supply Portfolio



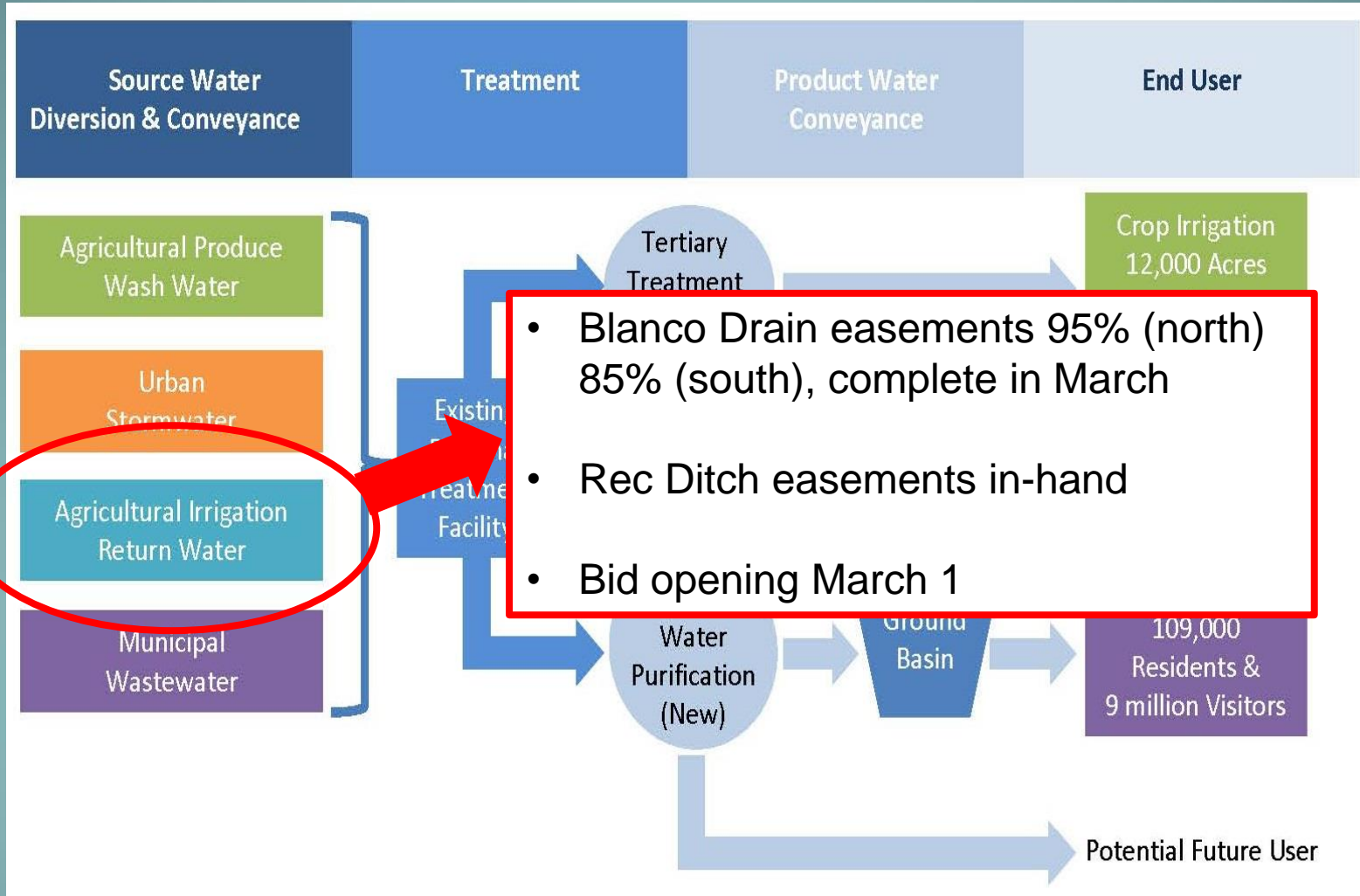
# Project Sizing

Demand	Supply
13,290 AF average customer demand	3,376 AF legally from Carmel River (2017)
500 AF for economic recovery	1,474 AF legally from Seaside Basin (2021)
325 AF for Pebble Beach buildout	(700) AF Cal-Am intends to leave in the Seaside Basin for recharge for 25 years
1,181 AF for legal lots of record	94 AF available from Sand City long term
----- 15,296 AF total demand	1,300 AF assumed available from ASR
	3,500 AF from Pure Water Monterey
	6,252 AF from Desalination Plant
	----- 15,296 AF total supply

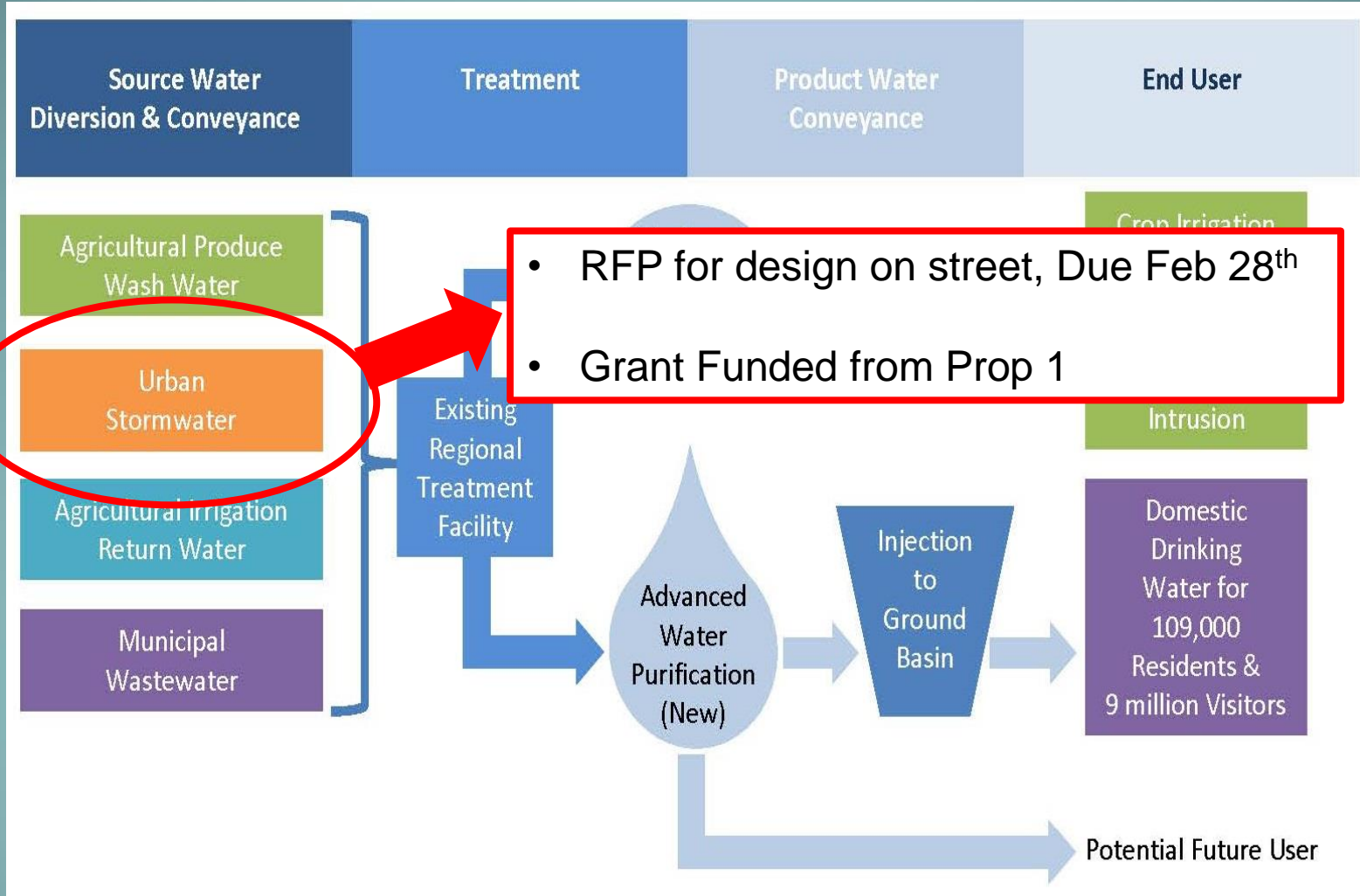
# Pure Water Monterey



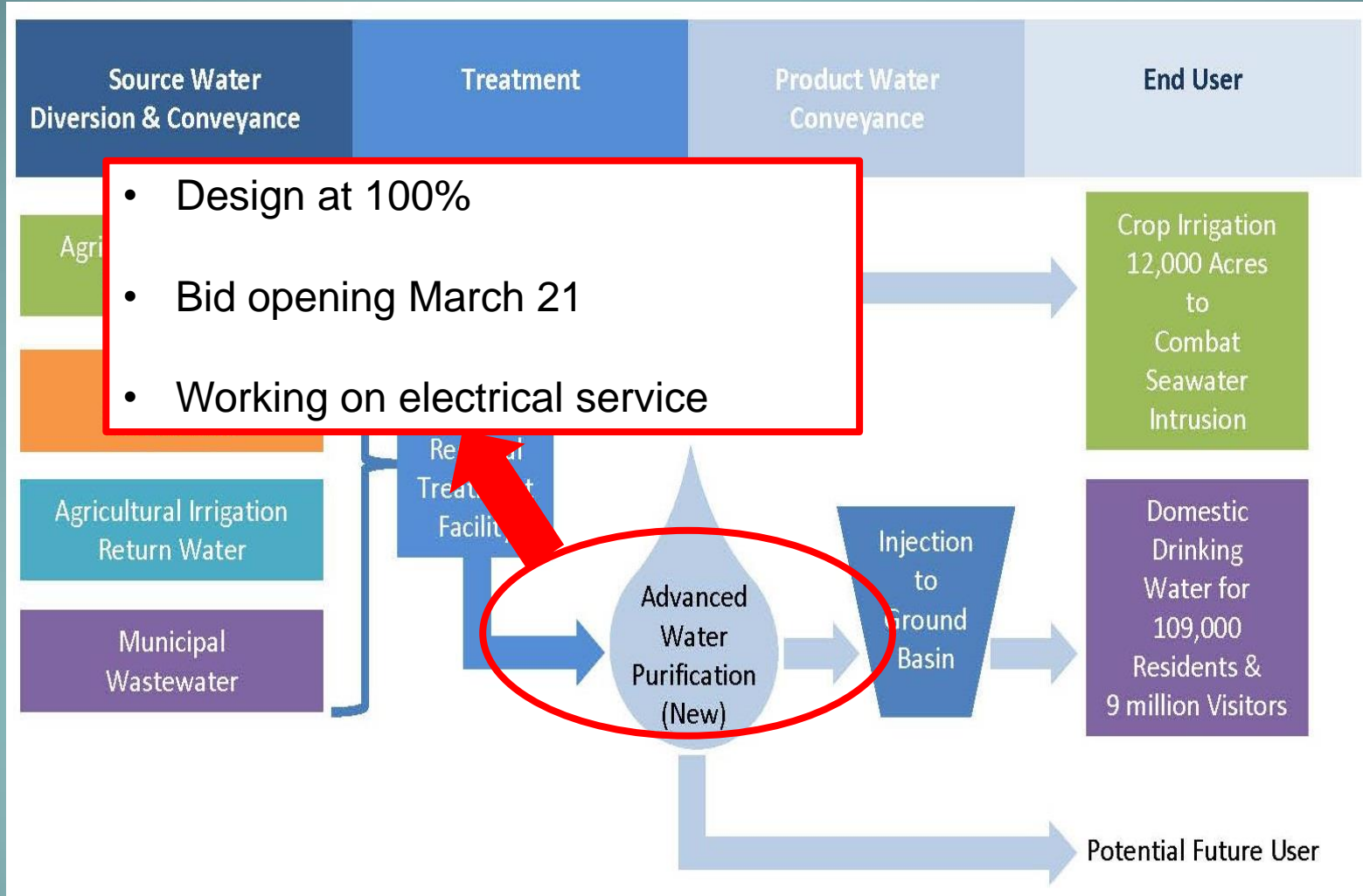
# Pure Water Monterey



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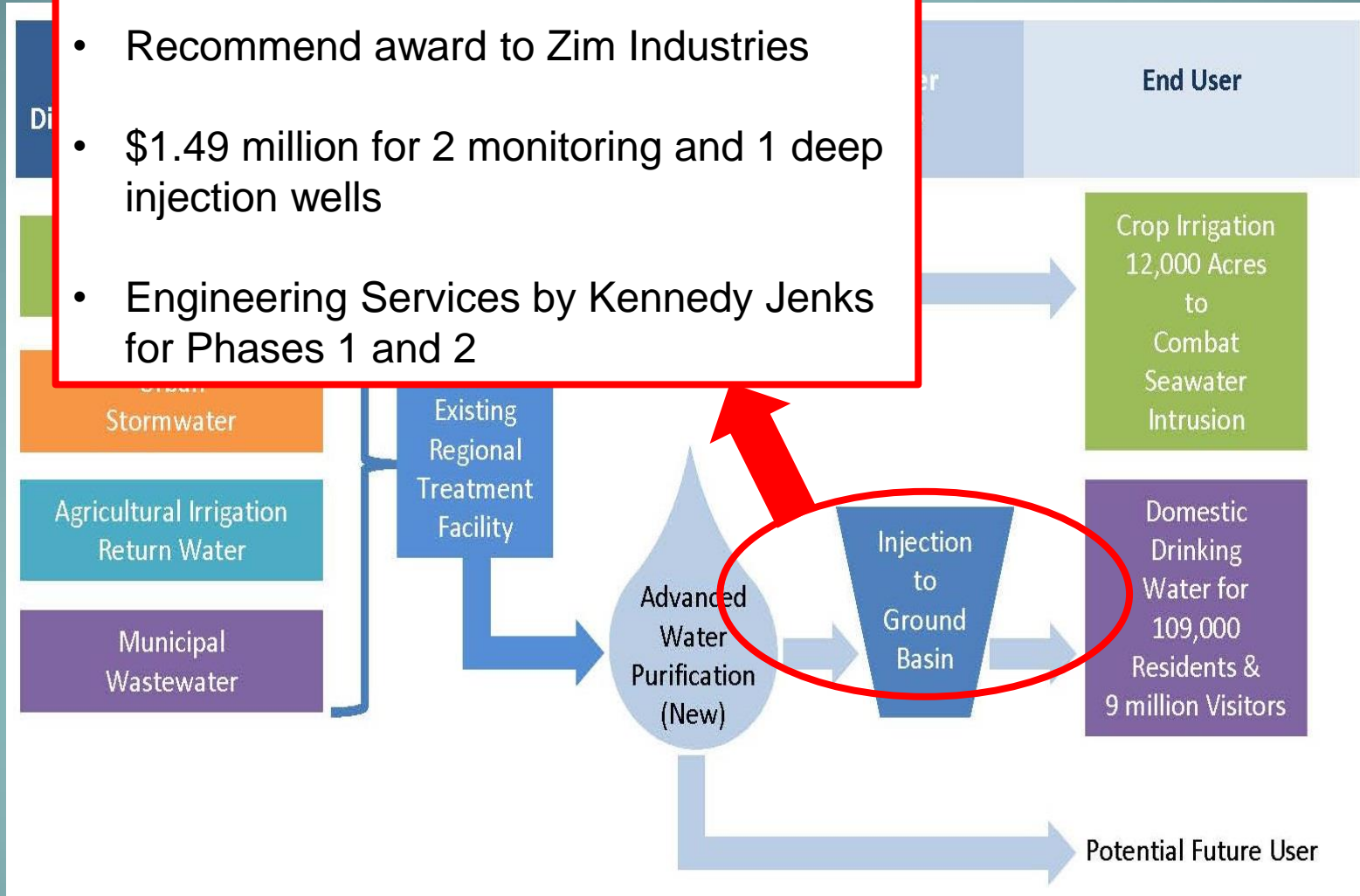
# Pure Water Monterey





# Pure Water Monterey

- Bid opened for Phase 1 on Feb 7<sup>th</sup>
- Recommend award to Zim Industries
- \$1.49 million for 2 monitoring and 1 deep injection wells
- Engineering Services by Kennedy Jenks for Phases 1 and 2

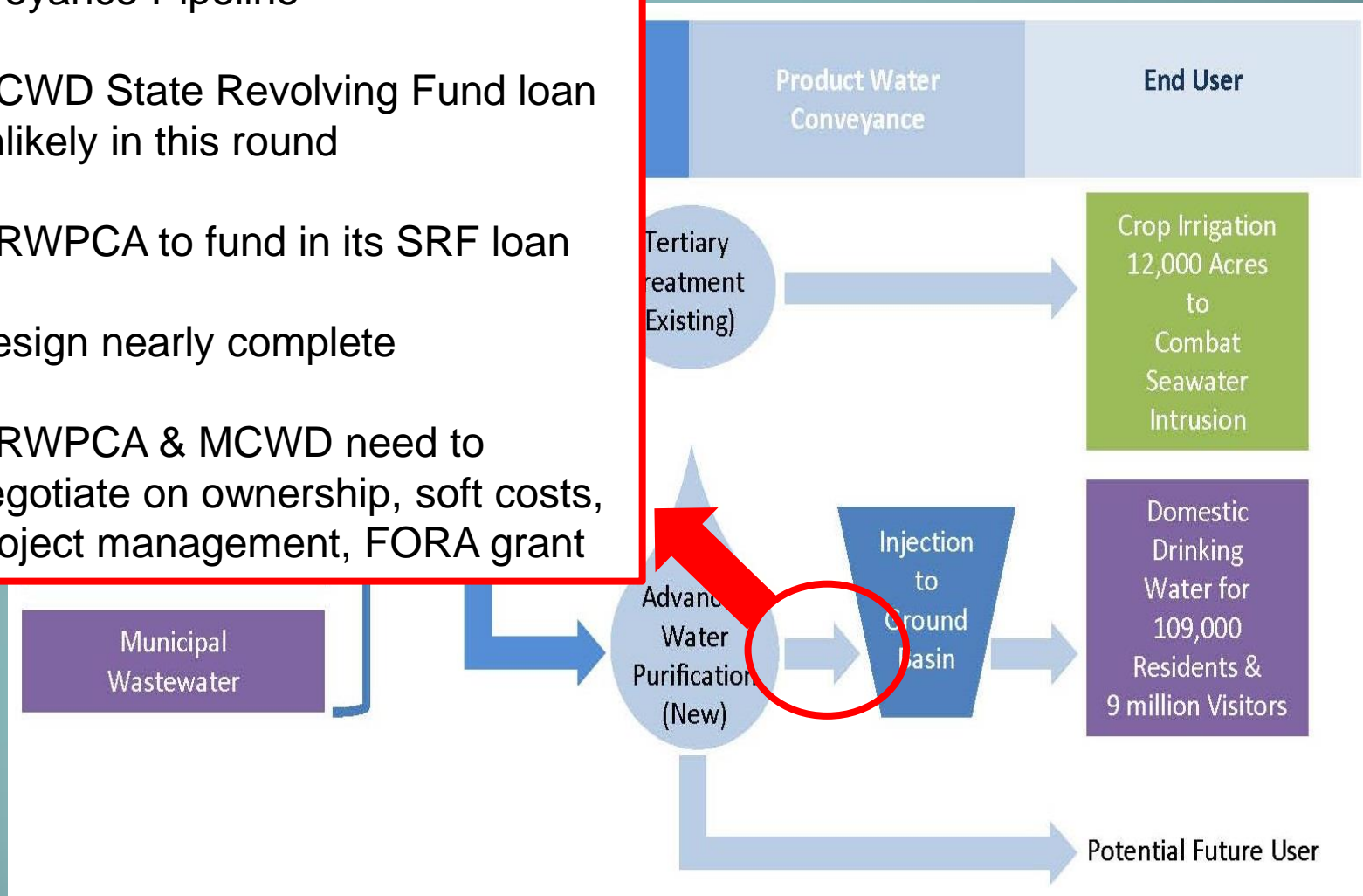




# Pure Water Monterey

## Conveyance Pipeline

- MCWD State Revolving Fund loan unlikely in this round
- MRWPCA to fund in its SRF loan
- Design nearly complete
- MRWPCA & MCWD need to negotiate on ownership, soft costs, project management, FORA grant



# Desalination Plant and Pipeline

- DEIR comments due February 27th
- Addenda to ASR and Pure Water Monterey EIRs for pipeline realignment
- Costs and Expenditures to Date (12-31-16)

Intake System and Return Facilities: \$79M (24% spent)

Desalination Plant: \$115M (14% spent)

Pipeline Facilities: \$128M (13% spent)

Pre-Construction Cost\*: \$8M (100% spent)

*NOTE: These figures are based on a 6.4 MGD desalination facility.  
Pre-construction costs are included in the \$322-million project total.*

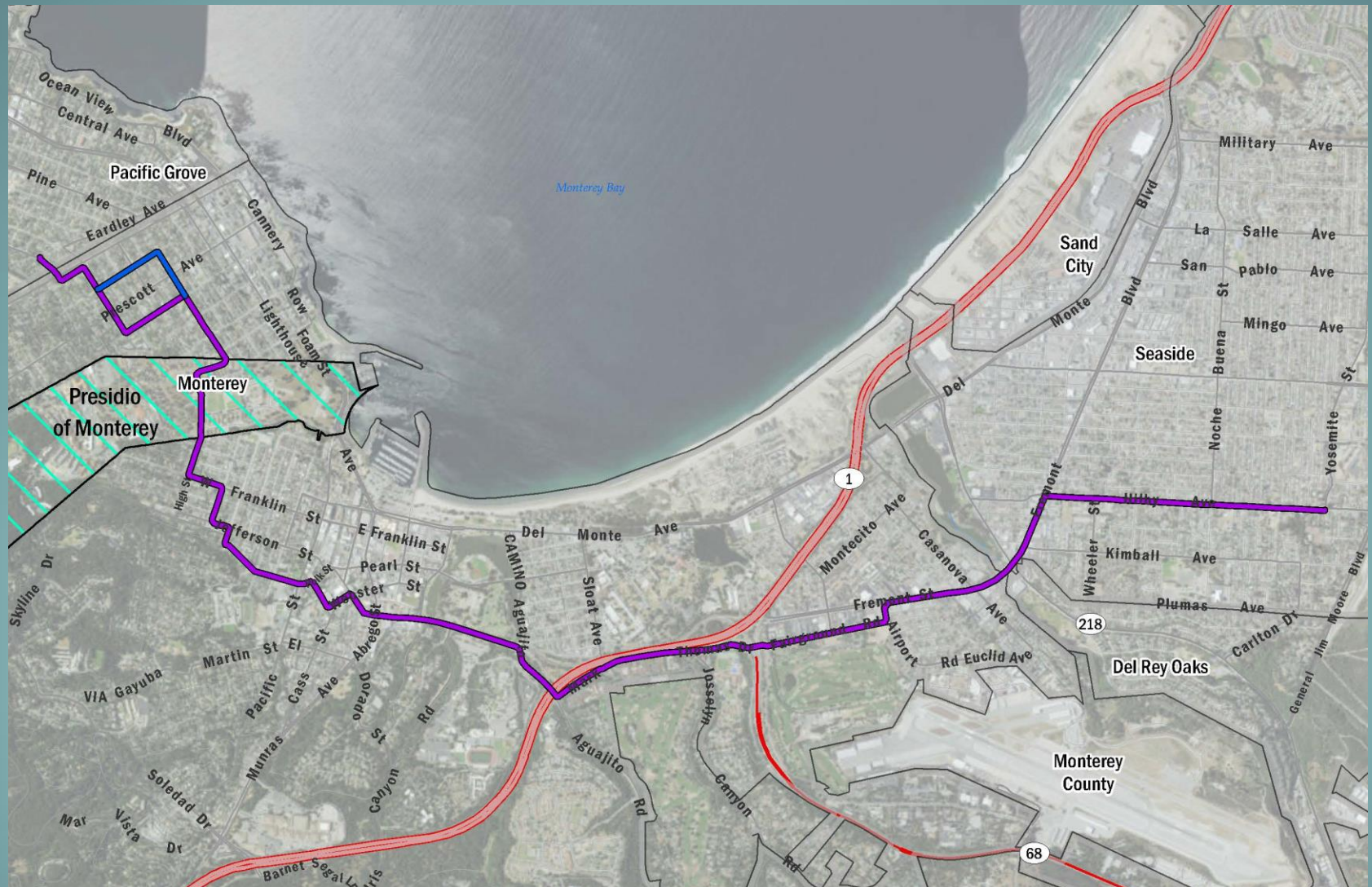


# Cal-Am Monterey Pipeline





# Pipeline Realignment

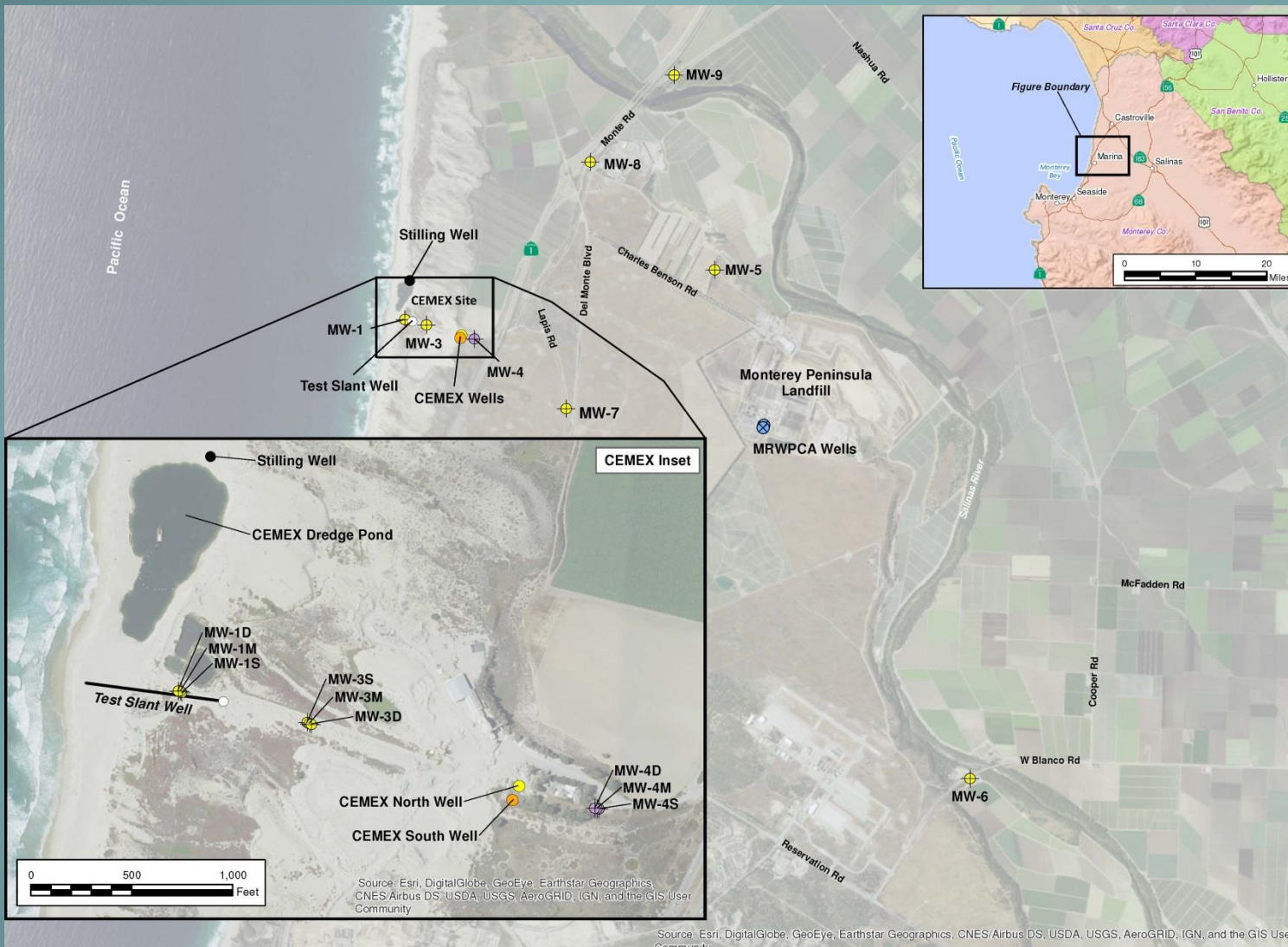








# Test Slant Well



**EXPLANATION**

- Monitoring Well Cluster
- Compliance Monitoring Well Cluster
- Inactive Production Well
- CEMEX Well - Inactive
- CEMEX Well - Active
- Stilling Well
- Test Slant Well

N

0      3,000      6,000  
Feet

**MPWSP GROUNDWATER MONITORING NETWORK**

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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## Test Slant Well

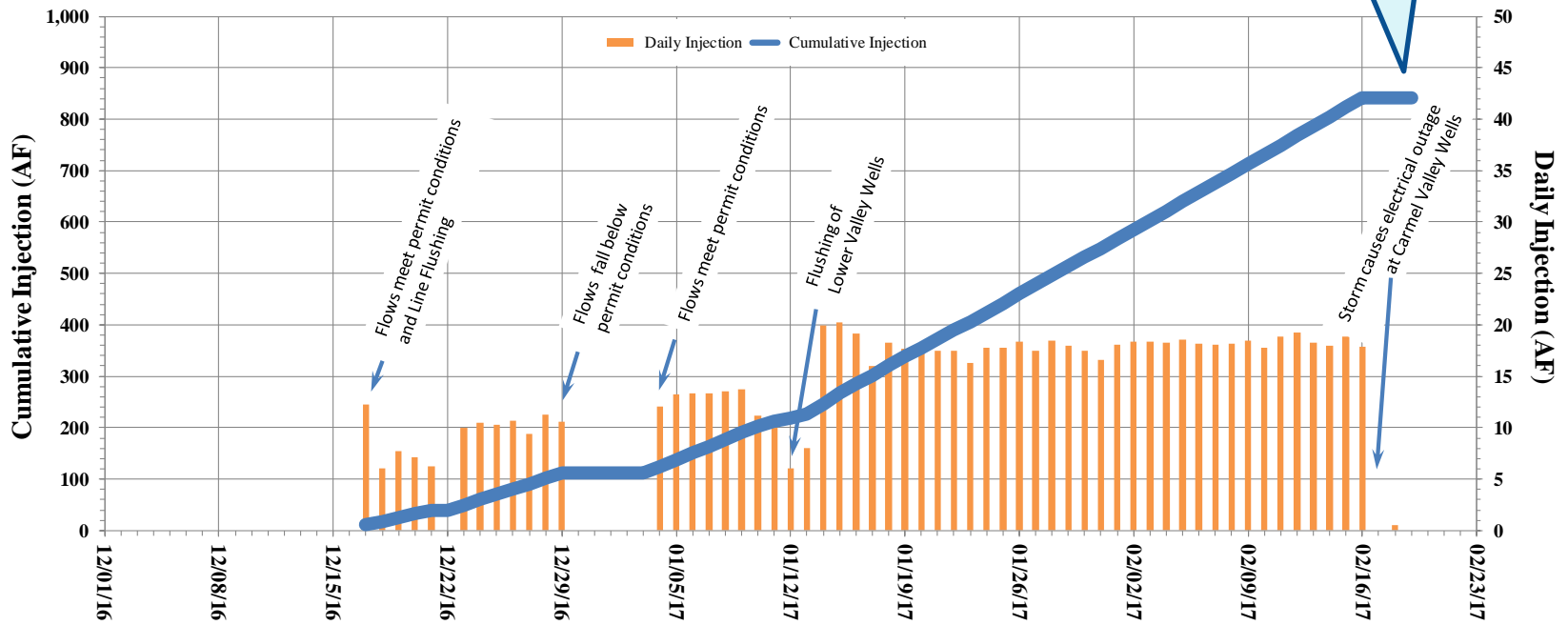
- Groundwater elevation and TDS changes in the compliance well (MW-4S and MW-4M) show no measurable impact that can be attributed to test well pumping
- Well has periodically and unexpectedly stopped pumping due to a PG&E low voltage issues in the immediate area
- The well has been off as a precaution during recent storm events. For example, the well remained off from December 24, 2016 through January 11, 2107
- 6-week rolling average shows 8% fresh water ratio

# Aquifer Storage and Recovery



842 AF  
Thru  
2/18/17

## ASR Injection Summary WY 2017



# Aquifer Storage and Recovery Seaside Middle School Last Storm





# Aquifer Storage and Recovery – New Sign Last Fall



# Cease and Desist Order

**Condition 2  
Guidance**

**Motions for  
Reconsideration**

**Meeting the  
Milestones**

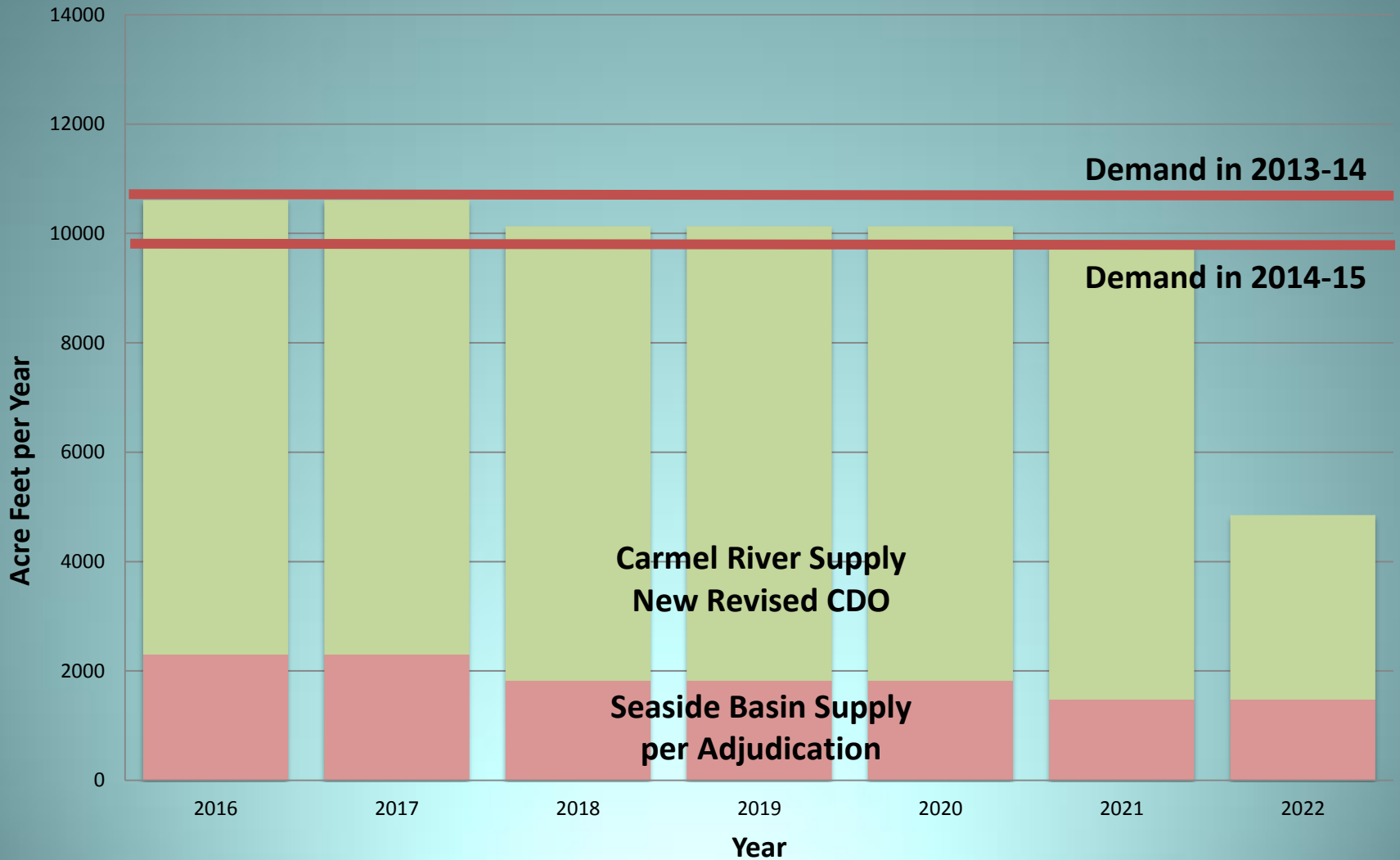
**Staying w/in the  
Diversion Limit**



# Legally Available Water Supply in MPWMD Territory

Compared to

## Consumer Water Demand in MPWMD Territory





## Condition 2 Guidance

Cal-Am shall not divert water from the Carmel River for new service connections or for any increased use of water at existing service addresses resulting from a change in zoning or use.

Meeting held December 13<sup>th</sup>

Proposal made January 3

Much back-and-forth since

# Local Water Projects

Project	Status
Pacific Grove \$200,000	First \$100,000 spent; Anticipate construction start this fall; Will save 88 AFY
Old Del Monte Golf Course \$80,000	Two wells completed; Pebble Beach Company put storage project on temporary hold
Monterey Regional Airport \$30,000	Completed study; Identified 104 AFY of non-potable supply; Will attempt to find users in FY 2016-17
City of Monterey \$85,000	Storm water capture study; No expenditures to date; Trying to obtain state grant moneys
City of Seaside \$106,900	Laguna Grande non-potable well; No expenditures to date
Monterey County Fairgrounds \$75,000	Agreed to forego project

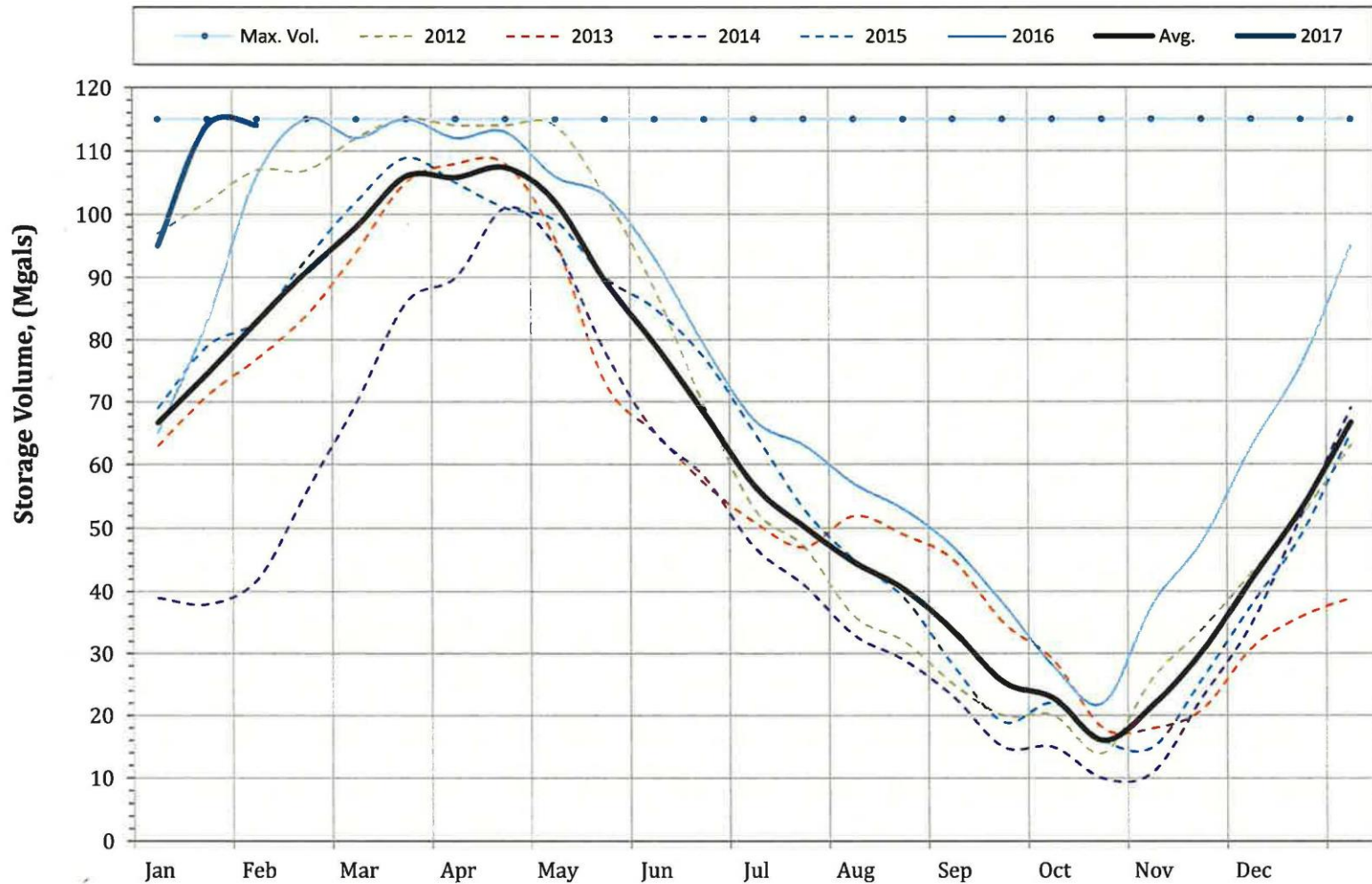
## Malpaso (Odello) Water

- 80 AF available
- 22.84 AF sold thru 12/31/17
- 112 separate purchases
- 1.052 AF have come to District for permits

# Reclamation Project

## Forest Lake Reservoir Storage Volume Current vs Historic

Current Volume: 114

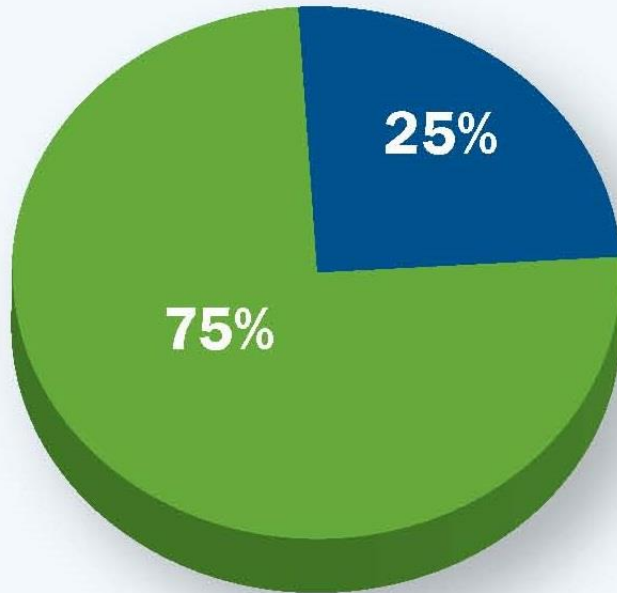


# Reclamation Project – Recycled Water Deliveries

2016 Calendar Year	5 Year Average	21 Year Average
929 AF	978 AF	983 AF

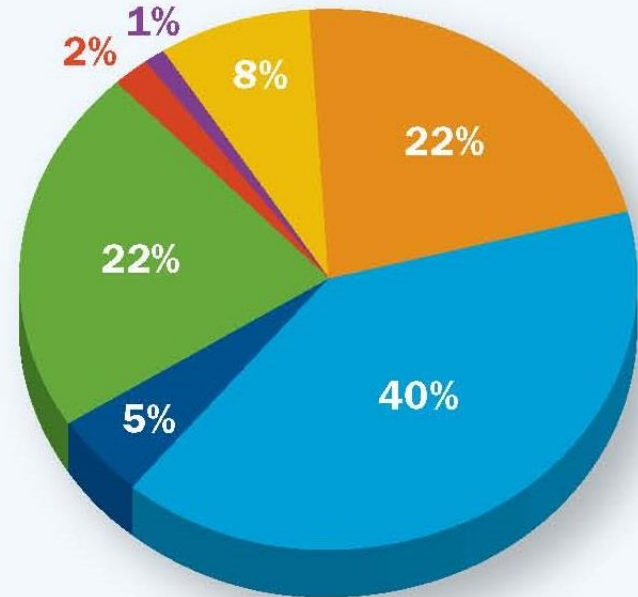
# Changing Sources of Supply on the Monterey Peninsula

## Traditional Sources



- Seaside Basin
- Carmel River

## Proposed Water Sources



- Groundwater Replenishment
- Desalination
- Seaside Basin
- Carmel River
- Sand City
- Pacific Grove
- Aquifer Storage Recovery

The Water Supply Project will diversify the Monterey Peninsula's water supply portfolio. These new sources of water will be sustainable and help protect against drought while also protecting the natural resources of the Carmel River.