

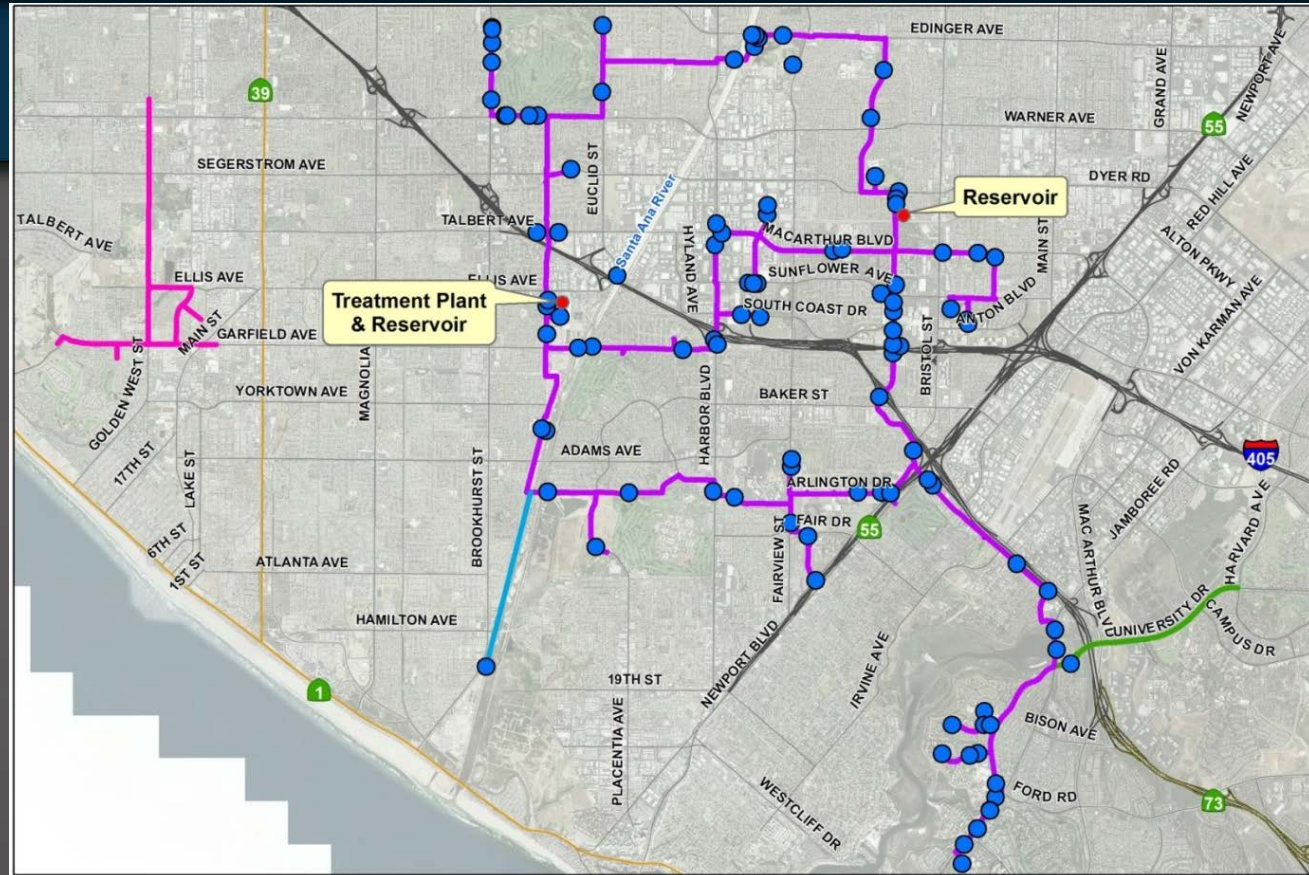


Green Acres Project Future Direction

Water Issues Committee
August 10, 2016

GAP Facts

- Non-potable, water supply substitute
- Reduces coastal pumping
- 36 miles of OCWD distribution pipelines
- 107 active meters
- Directly serves recycled water to four Retailers & OCSD



0 2,900 5,800
Feet

— Green Acres Project Pipeline
 — OCSD Plant 2 Dedicated GAP Service
 ● GAP Meter
— IRWD Intertie Facilities
 — Leased to Huntington Beach

GAP Map



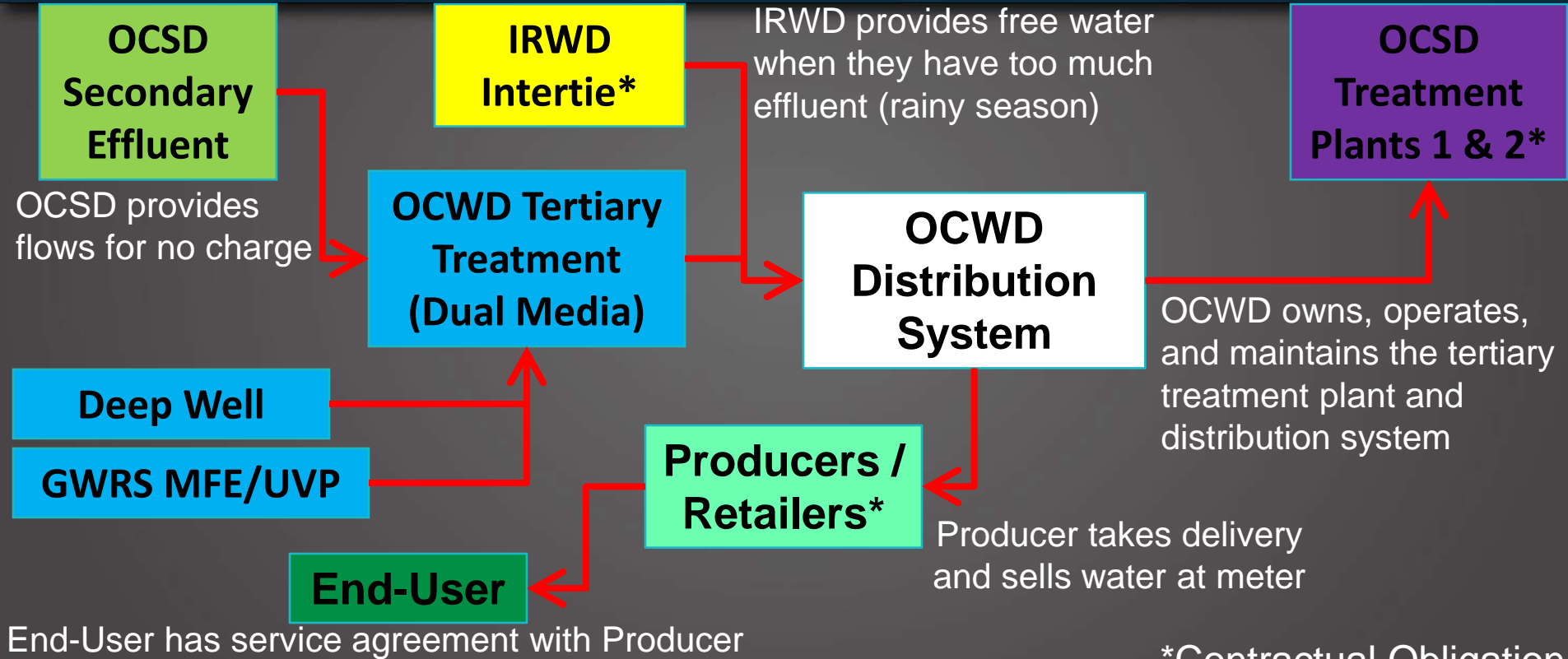
Producer/Retailer Participation

GAP Participation In FY 2014-15 (4,320 AF)

Producer / Retailer	Number of Active Meters	Percent of Total	Major End-Users
Fountain Valley	17	32%	Mile Square Park, Mile Square Golf, F.V. Recreation Center, Caltrans, Green Valley Golf, Baker Golf, Santa Ana River Bike Trails, Residential HOA
Mesa Water	42	26%	O.C. Performing Arts Center, C.M. Country Club, IKEA, Mt. Olive Cemetery, City Parks, Caltrans, Orange Coast College, Town Center, Plaza Tower, South Coast Plaza, Residential HOA
OCSD	3	23%	Wastewater Treatment Plants #1 & #2, Irrigation
Newport Beach	17	11%	Big Canyon Country Club, Newport Beach Country Club, NMUSD Schools, City Parks & Medians, Our Lady Queen of Angels
Santa Ana	25	8%	City Parks and Bike Trails, SAUSD Schools, Fabrica Carpet, Kaiser Medical Office, Chick-fil-A, Santa Ana River Bike Trails
OCWD	3	0.1%	Landscape Irrigation & Toilet Flushing



Water Supply & Infrastructure Ownership





Green Acres Project (GAP)

1. Should the District continue operating GAP?
2. How should the GAP system be coordinated with the GWRS?
3. Should the District allow additional users to connect to the GAP system?
4. What should the OCWD selling price of GAP water be?
5. Should GAP be exclusively supplied by “Deep” Well water?



Continue Operating GAP?

Staff recommends continued operation of the GAP system.

GAP reduces dependence on higher quality water sources, reduces seawater intrusion, and promotes public water conservation awareness.

GAP is the least expensive option to reuse wastewater from OCSD.

GAP discontinuance would force over 100 users to convert back to potable water systems.



How Coordinate GAP with GWRS?

Staff recommends to continue supplying GAP sufficient flow to meet its demand.

GWRS MF is at capacity for GWRS production. Use of GWRS MF for GAP would reduce GWRS production.

Staff recommends hiring a consultant to analyze proposed changes to the treatment technology for possible efficiency gains in production volume, quality, and economics through changes such as use of MF including adding extra MF to GWRS Final Expansion.



Additional Users to GAP?

Staff recommends to allow a limited number of new users (see table) that are currently in design and hold others until there is 174 MGD or more source flow for the OCWD treatment plants

- 174 MGD source flow is sufficient to run GWRS Final Expansion at full capacity and meet the existing GAP demand
- Approximately 243 AFY (0.2 MGD) of additional GAP demand

New users would continue to pay all connection expenses.

New GAP Connection Requests

Property / Owner	Retailer	Status	Estimated Demand (AFY)
The Irvine Company: Eastbluff Village Center	Newport Beach	In Construction	2
The Irvine Company: San Joaquin Apartments	Newport Beach	In Construction	20
Canyon Mesa HOA	Newport Beach	In Design	18
Versailles on the Lake Apartments	Santa Ana	In Design	10
South Coast Plaza RW Expansion	Mesa Water	In Design	100
Azulon at Mesa Verde Apartments	Mesa Water	In Design	20
The Enclave Apartments	Mesa Water	In Design	30
Mesa Verde Shopping Center	Mesa Water	In Design	15
Corona Del Mar High School	Newport Beach	In Design	28
The Irvine Company: Fashion Island	Newport Beach	Concept	350
Costa Mesa High School	Mesa Water	Concept	32
Hyatt Regency	Newport Beach	Concept	16
Costa Mesa Fairview Park	Mesa Water	Concept	15
Caltrans RW Expansion: 405 North of Talbert	Fountain Valley	Concept	8
Orange County Museum of Arts	Newport Beach	Concept	2
Golden West College	Huntington Beach	Concept	45
OC Airport, Coastal Comm. Fellow, BEHR Paint, Glasir Design, TIC Baypointe		Concept	-

243 afy
Allow

Hold
468+ afy





GAP Sales Price?

Charge Retailers the actual cost incurred by OCWD for production and distribution of GAP water.

- Same approach as Producers directly taking GWRS Water.
- Follows Propositions 26 and 218 principles

Discontinue using the Replenishment Assessment to subsidize the GAP system

District would need to re-negotiate Retailer agreements (Newport Beach, Fountain Valley, Santa Ana, Mesa Water, Huntington Beach?)

Goal to implement new rates for FY 2017-18



Annual GAP Costs

	FY 2014-15	\$ per AF
Total GAP AF Served	4,320	
Chemicals	\$ 102,781	\$ 24
Electricity	\$ 441,339	\$ 102
Labor	\$ 570,395	\$ 132
Testing & Maintenance	\$ 92,987	\$ 22
Deep Well Supplement Value	\$ 65,139	\$ 15
R&R Contribution	\$ 875,400	\$ 203
O&M Sub-Total	\$ 2,148,041	\$ 497
COP (Payoff in 2043)	\$ 690,000	\$ 160
State Loan (Payoff in 2017)	\$ 290,331	\$ 67
Total	\$ 3,128,372	\$ 724
LRP Subsidy (Expires October 2016)	(\$ 700,000)	(\$ 162)
Total (O&M + Sunk - Subsidy)	\$ 2,428,372	\$ 562

FY 2016-17
GAP sales rate:
\$478 per AF



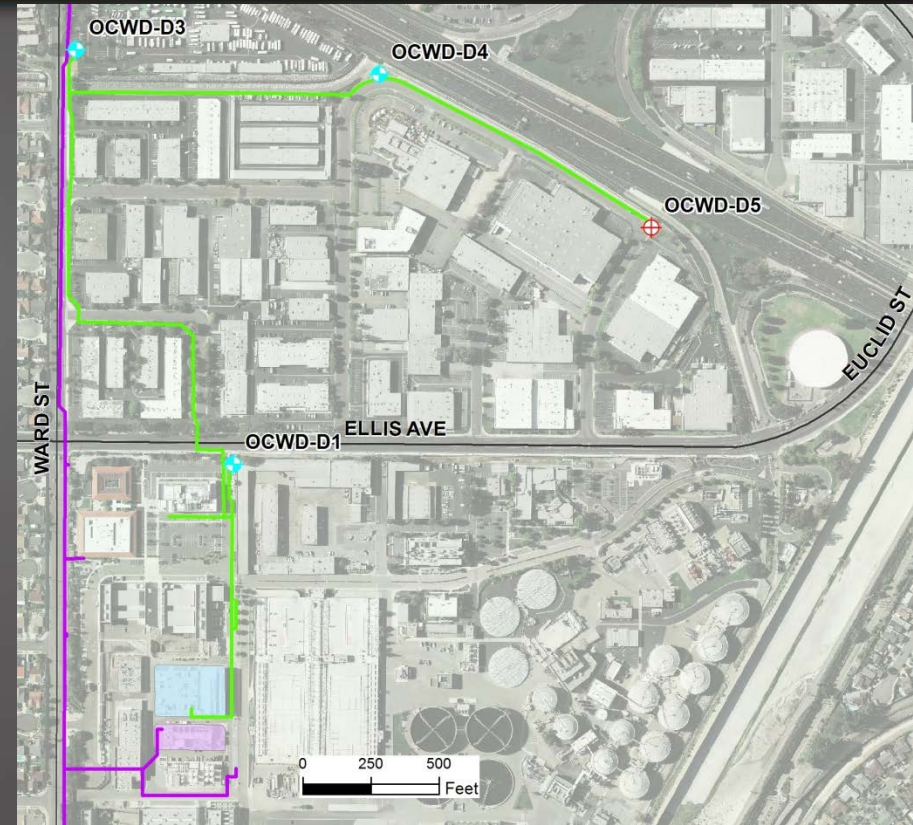
Cost, Revenue, RA Subsidy

	FY 2014-15	\$ per AF
Total GAP AF Served	4,320	
Total Cost (O&M + Sunk)	\$ 3,128,372	\$ 724
Net Cost (O&M + Sunk - Subsidy)	\$ 2,428,372	\$ 562
Total Revenue	\$ 1,459,721	\$ 338
Total Cost Subsidized by RA	\$ 1,668,651	\$ 6*
Net Cost Subsidized by RA	\$ 968,651	\$ 3*

*Assumes 300,000 AF pumping. Value will vary year to year.

Supply GAP with “Deep” Wells?

- OCWD Production Wells in Fountain Valley
- Wells are used to reduce salinity in GAP water
- Wells produce colored water
- “Deep” Wells are not deep, 600 to 800 feet bgs





Deep Well Issues To Consider

- No regulatory restrictions if same end-users
- Additional 4,300 afy of coastal groundwater pumping
- Would create separate groundwater system serving GAP Producers which already have potable systems
- No measurable pumping benefit to non-GAP Producers
- May need another well to meet peak summer demands
- A few GAP end-users may lose LEED credit on their buildings
- Would shut down GAP treatment plant, but plant debt of ~\$3.7 million would be outstanding

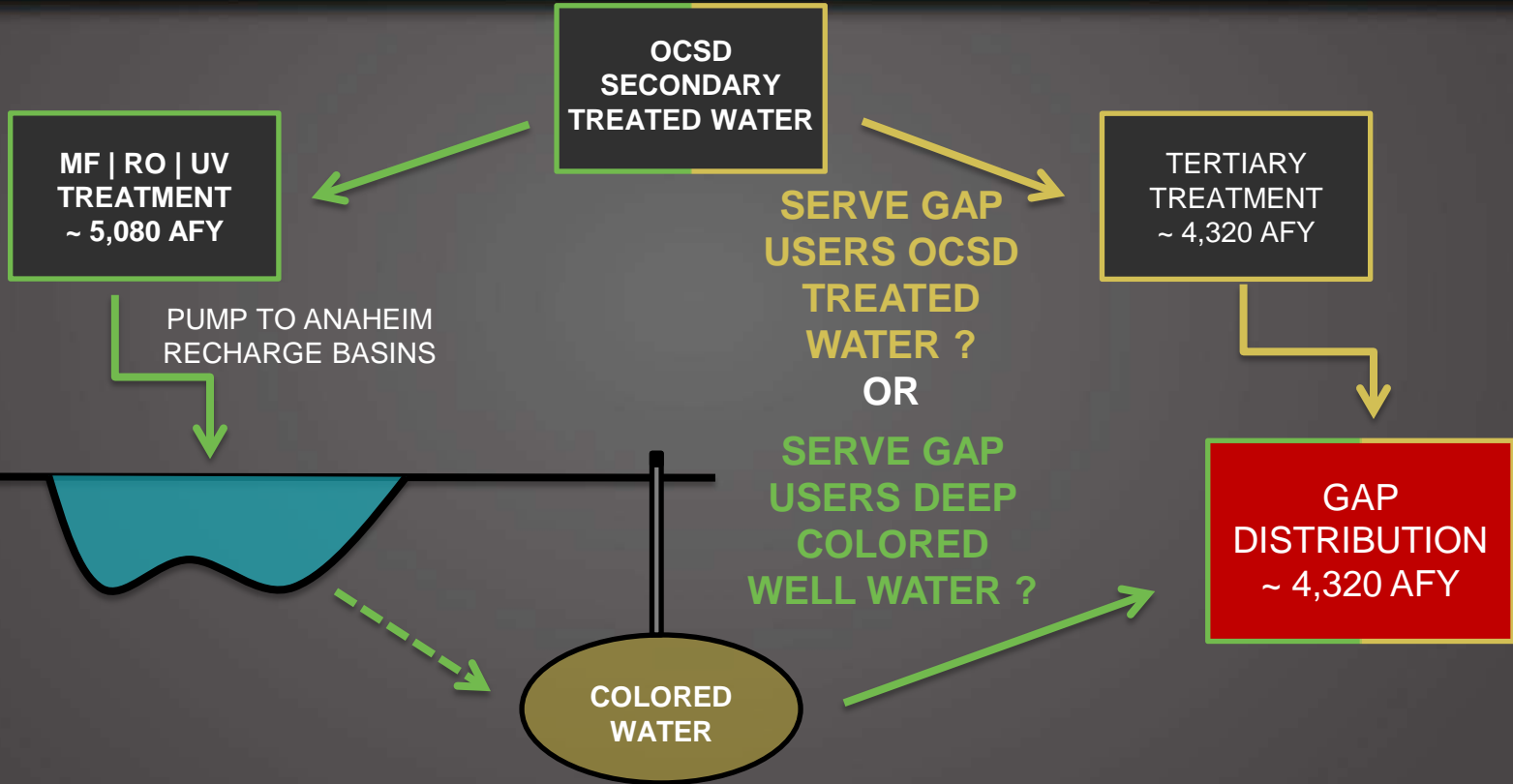


Deep Well Issues To Consider

- No compelling basin management reason to pump additional colored water in this location
- Loss of benefits to end-users during years State requires conservation (mandatory use reductions, median turf, etc.)
- Would have to replace groundwater being pumped via GWRS (inefficient operation)
 - RO treatment (lose 15% of water to brines)
 - Pump water to Anaheim & Recharge (see figure)
 - Higher costs incurred (see table)



Water Balance





Approximate Deep Well Option Cost

	Deep Well + GWRS (\$ per AF)	Existing Treatment (\$ per AF)
Deep Well Pumping Electrical	\$ 120	-
Well Capital + O&M	\$ 124	-
GWRS Product Water	\$ 443	-
Existing Treatment Chemicals	-	\$ 24
Distribution Electrical	\$ 71	\$ 71
Existing Treatment Electrical	-	\$ 31
Labor & Benefits	\$ 66	\$ 132
Testing & Maintenance	\$ 22	\$ 22
GAP R&R Contribution	\$ 144	\$ 203
GAP Capital Debt Payments	\$ 227	\$ 227
Deep Well RA Value	-	\$ 15
Total	\$ 1,217	\$ 724



GAP Future Direction Summary

1. Continue operating the GAP program.
2. Meet the small GAP demand and send majority of OCSD flow to GWRS.
3. Allow additional users currently in design, hold others.
4. Sell GAP water to Retailers at the actual OCWD cost (including debt).
5. Determine the optimum treatment system for GAP water.
6. Continue using wastewater to supply the GAP.



Recommendations

1. Authorize staff to issue a Request for Proposal of GAP Treatment Options
2. Authorize General Manager and General Counsel to negotiate and execute new GAP Sales and Distribution agreements with five Retailers: City of Fountain Valley, Mesa Water District, City of Newport Beach, City of Santa Ana, and City of Huntington Beach.
3. Hold future requests to connect to GAP until there is 174 MGD or more source flow for OCWD treatment plants



End of Presentation