## CALIFORNIA RECYCLED WATER USE IN 2015

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# Survey Approach



- Definition of recycled water (RW) Title 22 compliant RW used for beneficial reuse that offsets or augments fresh water supplies.
- Use the same suite of beneficial reuses from earlier surveys.
- Survey should address the following questions:
  - How much and where RW is being used;
  - What are the beneficial reuses and qualities of RW being used.
- Be simple, straight forward and easy to complete.
- Facility Based provides a simple completeness check.
- Data Quality Assurance (QA) / collaboration with Department of Water Resources Staff.



# **Primary Data Sources**



Online Survey to ~250 CA wastewater plants reusing treated wastewater



Urban Water Management Plans from ~400 CA water suppliers

### **BOTH WERE CRITICAL**



# **Conducting a Statewide Recycled** Water Survey has its Challenges

- No standard reporting method to the regional boards
- Finding the right person who has the data
- Misunderstanding of the term "recycled water" or beneficial uses
- Implementation of recycled water projects varies from location to location





### California Recycled Water Production and Distribution





Distribution

Uses

Collection

Treatment







# Comparison of Beneficial RW use 2009 vs. 2015

Beneficial Reuse	2009		2015		Change from 2009 to 2015	
	AFY	% of Total	AFY	% of Total	AFY	% Change
Golf Course Irrigation	44,000	7%	56,000	8%	12,000	27%
Landscape Irrigation	112,000	17%	126,000	18%	14,000	13%
Agriculture Irrigation	245,000	37%	220,000	31%	-25,000	-10%
Commercial	6,000	1%	4,000	1%	-2,000	-33%
Industrial	50,000	7%	67,000	9%	17,000	34%
Geothermal Energy Production	15,000	2%	18,000	3%	3,000	20%
Seawater Intrusion Barrier	49,000	7%	54,000	8%	5,000	10%
Groundwater Recharge	80,000	12%	115,000	16%	35,000	44%
Recreational Impoundment	26,000	4%	28,000	4%	2,000	8%
Natural Sys. Restoration, Wetlands, Wildlife Habitat	30,000	4%	24,000	3%	-6,000	-20%
Other	12,000	2%	2,000	0%	-10,000	-83%
TOTAL	669,000		714,000		45,000	7%



### **CA Recycled Water Use Since 1970**





# **Beneficial Uses Vary By Region**



### Region 3 Water Recycling survey results 2009 – 2015

Survey Year	Recycled Water Results (AFY)	Golf Course Irrigation	Landscape Irrigation	Agriculture Irrigation	Industrial	Seawater Intrusion Barrier	Other
2009	23,258	1,898	2,251	18,827	265	-	17
2015	29,870	2,147	4,814	19,984	2,454	420	51
Difference 2009 to 2015	6,612	249	2,563	1,157	2,189	420	34
% Difference	28%	13%	114%	6%	825%	na	200%



#### Factors Affecting the 2015 Water Recycling Survey Data Outcome



![](_page_10_Picture_2.jpeg)

#### **The Future is Positive**

![](_page_11_Figure_1.jpeg)

![](_page_11_Picture_2.jpeg)

![](_page_12_Picture_0.jpeg)

# **Looking Ahead**

- The Division of Water Quality (DWQ) is tasked with developing permit language that will require monitoring and reporting of RW use – annually.
- DWQ will be working closely with the Division of Information Technology (DIT) and the Office of Information Management and Analysis (OIMA) on updating the survey tool portal to be used for future RW reporting purposes.

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# **Contact Information**

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