

Role of Raymond Basin Management Board as Watermaster

- Administer Judgment – which does not include surface rights
 - Entered in 1944 – first in California
 - Amended in 1955 – Increased Pumping Rights from 21,900 AF to 30,622 AF per year
 - Amended in 1984 – Raymond Basin Management Board formed

- Contract with person or firm to perform duties of the Watermaster–
 - **Tony Zampello**, Executive Officer for
 - Raymond Basin Management Board (since 2002) and,
 - Main San Gabriel Basin Watermaster (since 2004)

- Responsible for recording production, tracking activities, reporting conditions and changes in the Basin as they relate to the Judgment

- Make recommendations to the Board

- Board has 10 members – each party with 1,000 AF of Decreed Rights holds a seat, those parties with fewer than 1,000 AF are referred to as “small pumpers” and pool together by subarea

Raymond Basin Management Board Makeup

- Pasadena Subarea: City of Alhambra 3.4% – Martin Ray
City Arcadia 18.4% – Tom Tait (*Board Treasurer*)
California American Water Company 7.5% – Jessica Taylor
City of Pasadena 41.8% – Gary Takara (*Board Vice Chair*)
San Gabriel County Water District 3.6% – Jim Prior
Sunny Slope Water Company 5.1% – Ken Tcheng
Kinneloa Irrigation District 1.7% – Chris Burt (*representing small pumpers: East Pasadena Water Company 1.7% and Huntington Library 1.2%*)
- Monk Hill Subarea: Rubio Canon Land and Water Association 4.0% – Lisa Yamashita-Lopez (*Chair*)
Las Flores Water Company 0.8% – William Kimberling (*representing small pumpers: La Canada Irrigation District 0.3%, Lincoln Avenue Water Company 1.8%, Pasadena Cemetery 0.3%, Valley Water Company 2.6%*)
- Santa Anita Subarea: City of Sierra Madre 5.8% – Jose Reynoso (*Board Secretary*)

Map of Basin

Surface area of 40 square miles

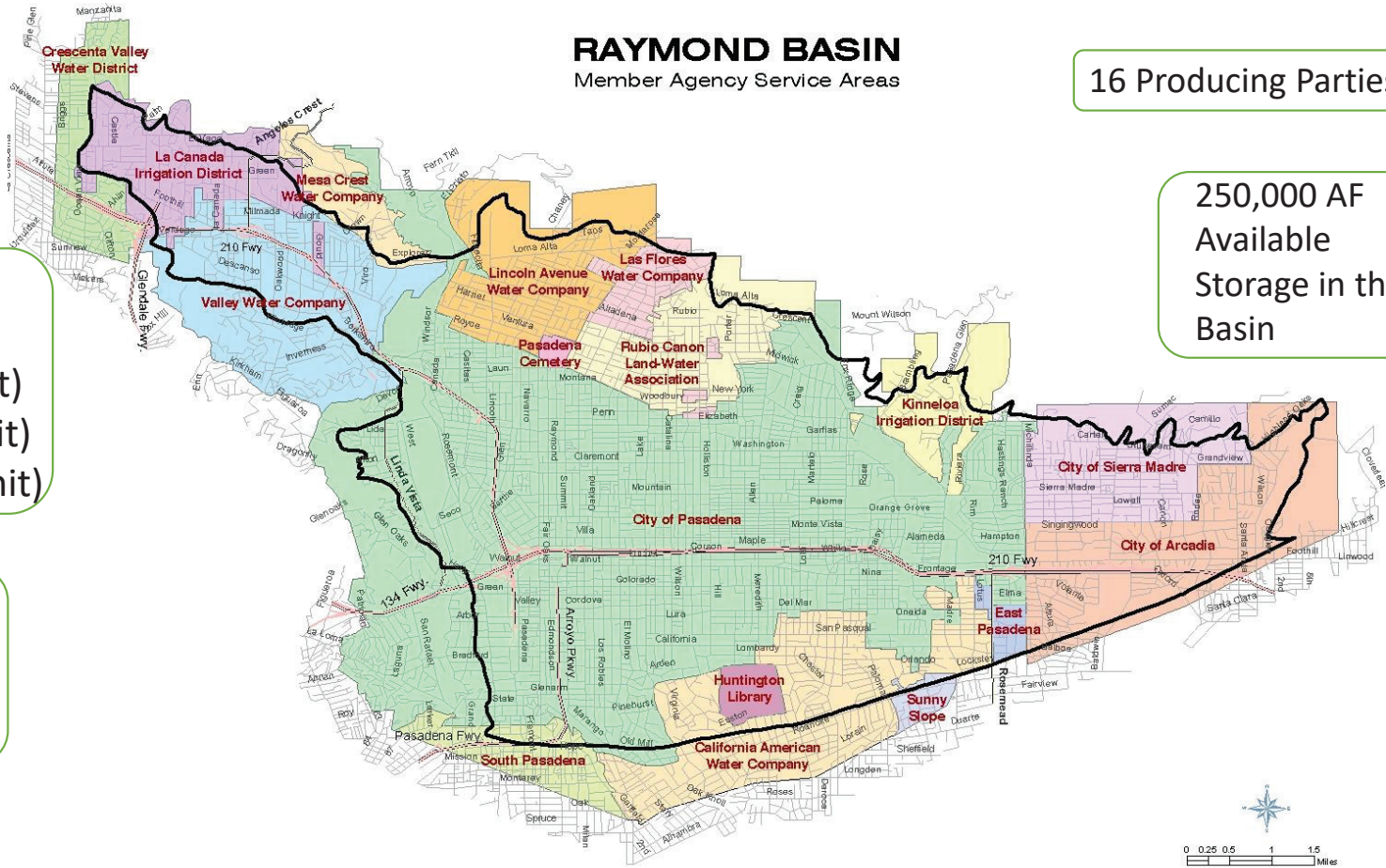
Basin is made up of 3 distinct Subareas:
 Monk Hill (western unit)
 Pasadena (western unit)
 Santa Anita (eastern unit)

City of Pasadena pumps from Monk Hill and Pasadena Subareas

RAYMOND BASIN Member Agency Service Areas

16 Producing Parties

250,000 AF Available Storage in the Basin



Sustainability vs. Recovery

Sustainability

- Raymond Basin's Natural Recharge couldn't sustain itself in 1944 (Raymond Judgment)
- 2004 Baseline Study- Basin cannot sustain current pumping indefinitely
- In-Lieu / Retirement of Rights

Recovery

- Determine New Safe Yield
 - Decreed rights or annual determination
 - Re-evaluate spreading credits
 - Eliminate Long Term Storage
 - Determine more specific Annual Loss
- Bring in Imported Water for Replenishment Water
- Enhance Stormwater Capture in Eaton Spreading Grounds and Arroyo Seco

Cooperative Studies

Imported Storage Program Development

- Raymond Basin Baseline Study (RBMB)
- Foothill Area Study (MWD)
- MWD Conjunctive Use CEQA (RBMB, MWD, PWP)

Local Run-off and Stormwater Recapture

- East Raymond Basin Study (Arcadia & Sierra Madre)

Local Basin Supply Concerns

- Main San Gabriel Basin Technical Advisory Committees (MSGBW)
- Project Implementation Plan
 - Army Corps of Engineers
 - Foothill Water Coalition
 - Tetra Tech
 - Stetson Engineers

Santa Anita Subarea

January 2013 Reinstated 500' Rule and Pumping Reduction

Resulting Solutions: Imported Water Spreading Program Approved in 2015

Financial Participation with Cities of Arcadia and Sierra Madre, as well as Los Angeles County on the Santa Anita Dam/Spreading Grounds project

Proposed Joint Well with City of Sierra Madre and Arcadia under Joint Agreement

Santa Anita Subarea Production 2019-2020

1955 Right	5,290 AF
500' Reduction	3,261 AF allowable extraction
Import Spreading	1,729 AF
Actual Extraction	4,224 AF
Left in Basin	766 AF

Pasadena Subarea

- *2002 MWD Conjunctive Use Program initiated with the potential to store up to 64,000 AF in Western Unit*
 - CEQA funded by MWD, final agreement never executed by City of Pasadena*
- *2008 Adopted Resolution 42-0109 Initiated 30% Reduction Program – ramping up 6% per year reduction over 5-years – 30% ongoing reduction beginning 2014*
- *2019 Board Adopted Resolution No. 54-0719 “freezing” Long Term Storage accounts*
- *Engaged Consultant (Woodard & Curran) to work with City of Pasadena and Upper District on potential projects to look at opportunities to maximize imported water deliveries*
- *2020 In-Lieu Program w/PWP/MWD to retire 1,000 AF of pumping right*

Pasadena Subarea Production 2019-20

1955 Right	17,843 AF
Actual Extraction	11,196 AF includes 1,000 AF of In-Lieu Program
Left in Basin	6,647 AF

Monk Hill Subarea

- *2003 Foothill Municipal Water District Conjunctive Use Project implemented, storing 1,971 AF maximum storage capacity 9,000 AF*
- *2007 Authorized Monk Hill Task Force and Groundwater Monitoring & Management Plan*
- *Pasadena Pump Back Project Proposed to capture water leaving the Basin downstream and spread upstream in the watershed (Arroyo Seco)*
- *Explore In-Lieu opportunities*

Monk Hill Subarea Production 2019-20

1955 Right	7,489 AF
Used Carryover	612.5 AF
Actual Extraction	8,438 AF
Deficit	336.5 AF



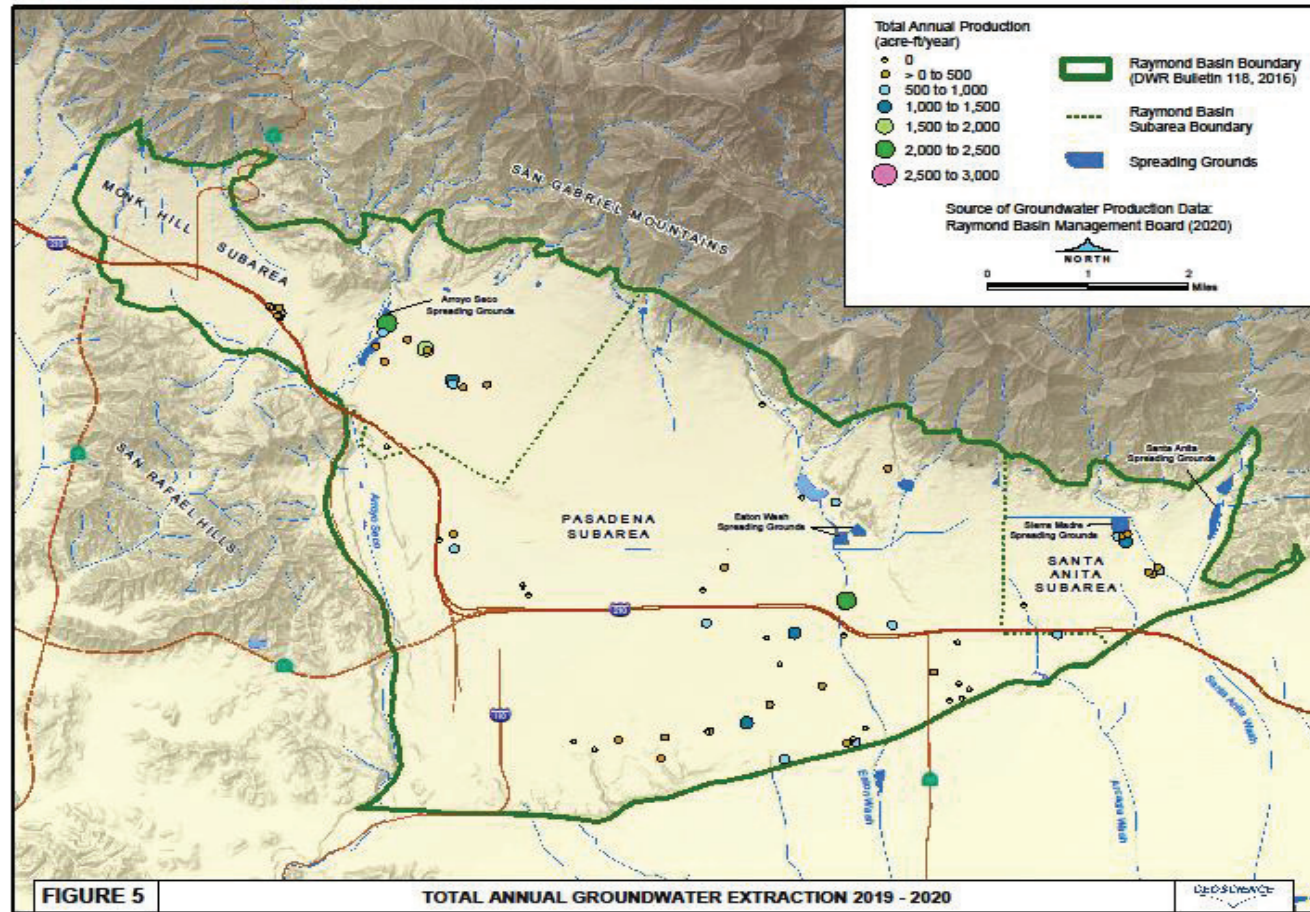
Basin Wide Groundwater Level Data

TABLE 8. GROUNDWATER LEVEL ELEVATIONS AT REPRESENTATIVE WELLS
(feet)

Subarea	Owner Key Well Name (Surface Elevation in feet)	Groundwater Level Elevations (feet above sea level)			
		October 2018	April 2019	October 2019	April 2020
Monk Hill					
	<i>City of Pasadena</i> Sheldon (1,048.9)	935	933	945	939
Pasadena					
West Central	<i>City of Pasadena</i> Copelin 3 (916.4)	676	676	680	679
Northeast	<i>Kinneloa Irrigation District</i> Wilcox (874.9)	398	401	404	406
East Central	<i>Cal-American Water Company</i> Winston (682.6)	390	394	393	404
South Central	<i>City of Alhambra</i> No. 2 (701.9)	628	631	625	630
Southeast	<i>East Pasadena Water Company</i> Well No. 7 (601.2)	411	416	415	415
Santa Anita					
	<i>City of Arcadia</i> Orange Grove No. 1A (604.4)	364	371	386	418

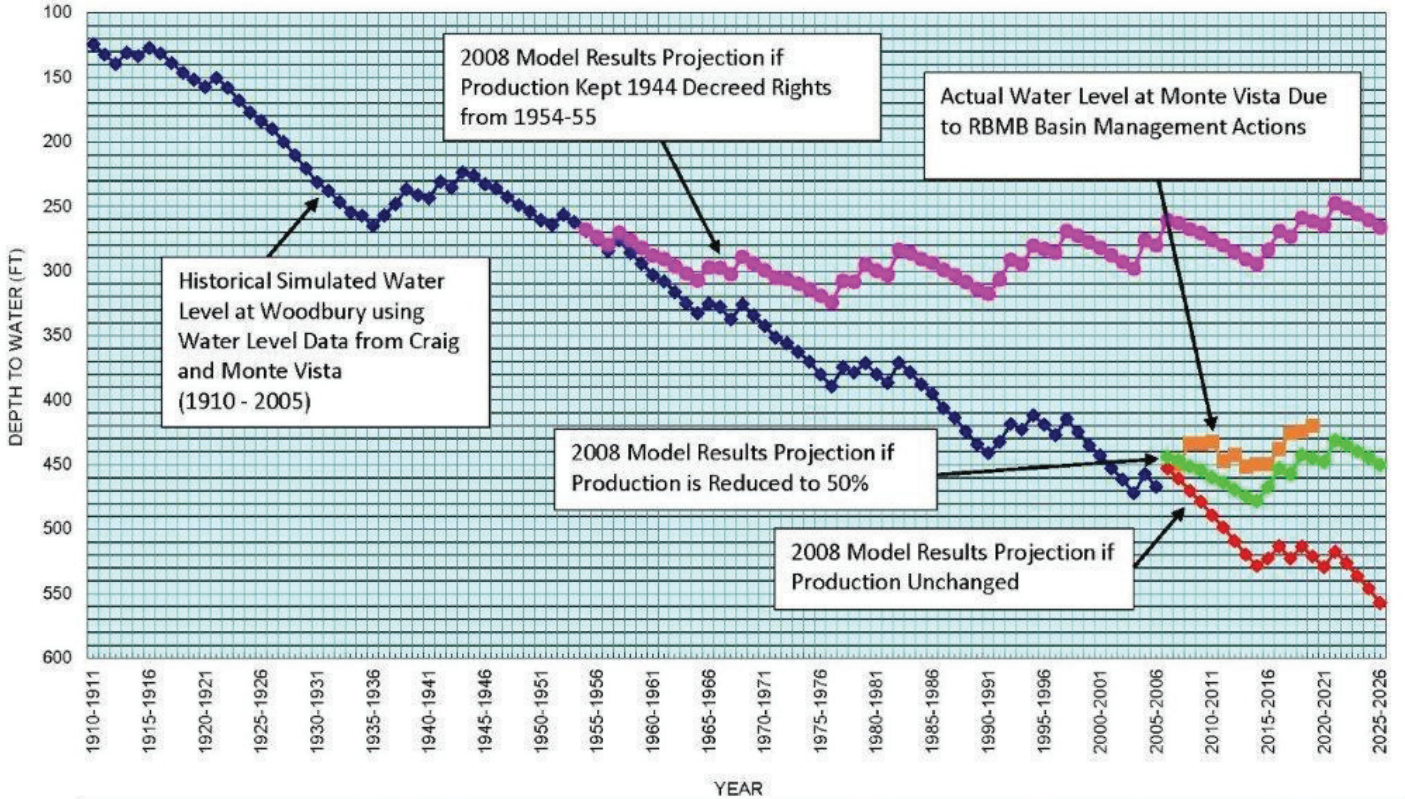
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Basin Wide Groundwater Level Measuring Points



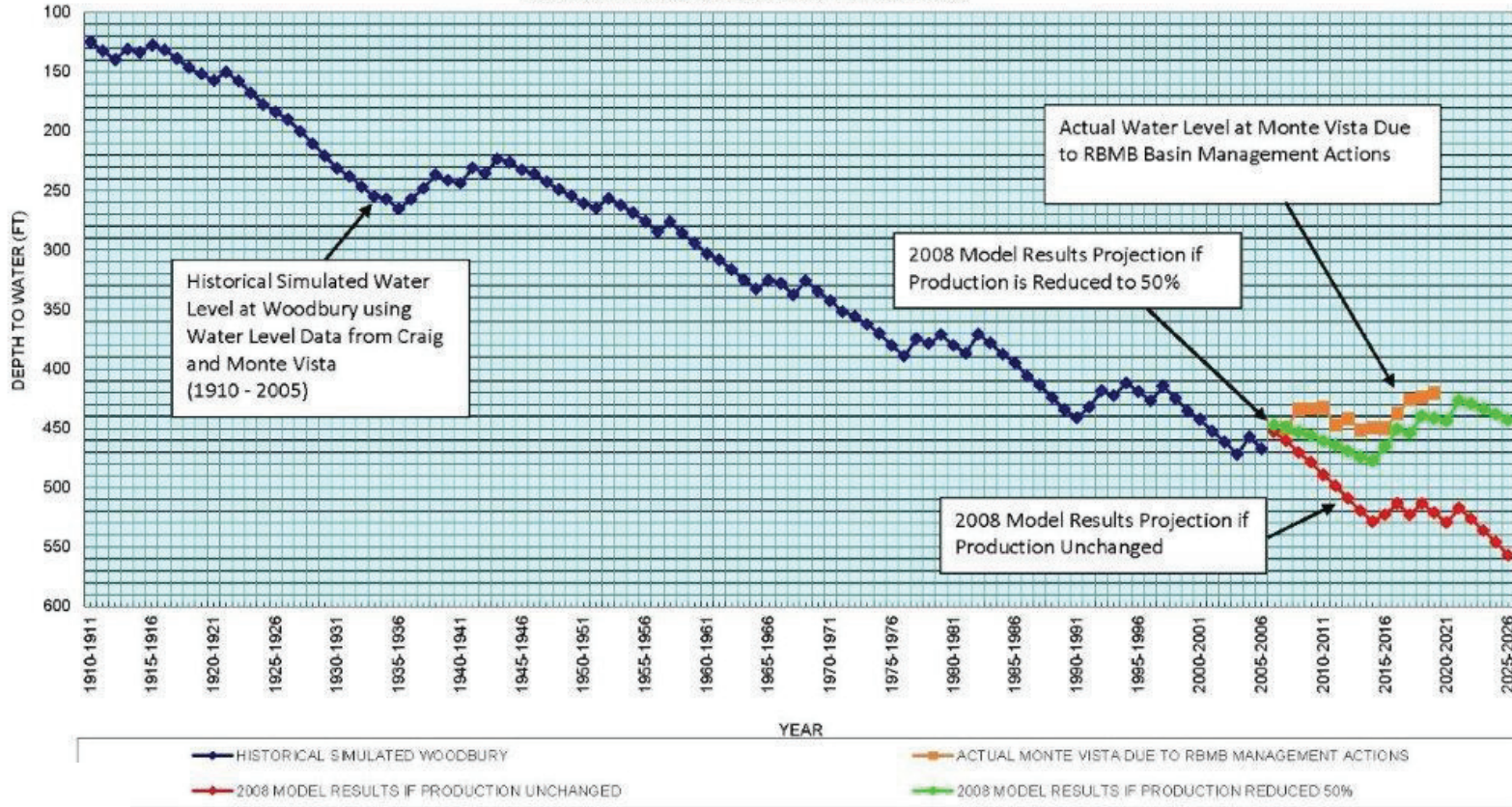
Projections Based on Decreed Rights

SIMULATED WATER LEVEL AT PASADENA'S WOODBURY WELL



Pumping Reduction

PROJECTED WATER LEVEL @ WOODBURY WITH CONTOURED BASIN MANAGEMENT AND WITH 50% REDUCTION IN PUMPING



Additional Recovery Options to Consider

- *Reduce Pumping (Rights)*
- *Bring in Imported Water for Direct Injection or Recharge*
- *MWD Regional Recycled Water Program could shift source of supply*
- *Shift more production to Main Basin*