



*Update: Water Supply for
the Monterey Peninsula...*

Ord. 152 Citizens' Oversight Panel
January 16, 2013

Section 1: A Short History

Vizcaíno Discovers Monterey Bay and the Carmel River in 1603

Sebastian Vizcaíno discovers a stream and names it El Rio del Carmelo, probably because three friars of the Carmelite order were members of his expedition.



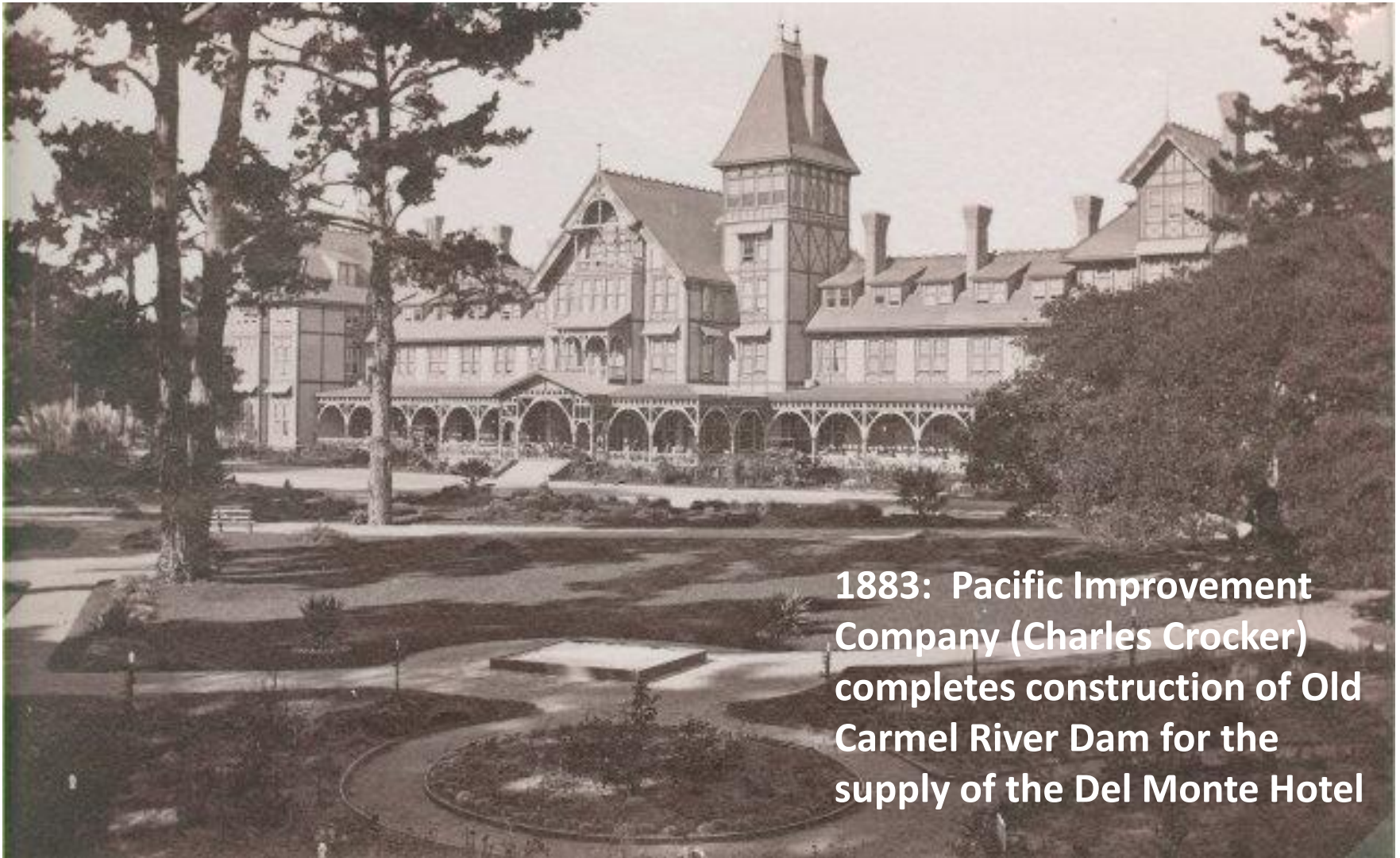
Father Serra's Mission Era

June 1770: “It may be necessary to leave the presidio here and move the mission with a few soldiers to the banks of the Carmel, two short leagues to the South. ***It is a truly delightful spot, which, thanks to its plentiful supply of both land and water, gives promise of abundant harvests.***”

1776: “We are facing the prospect of a bad harvest, since this year we have ***had less rain than at any time since we came here.*** Because of it the wheat, which had never before appeared so promising, is now drying up.”

1783: “To the 7 months' worth required to take water from the river for irrigation, we must add the labor of bringing it to the lagoon near the mission residence. ***In some years, this lagoon used to be dry. Now it is always full, making it a great convenience and a delight to the mission. Some salmon (pescado) have been placed in the pool so we have it handy.***”

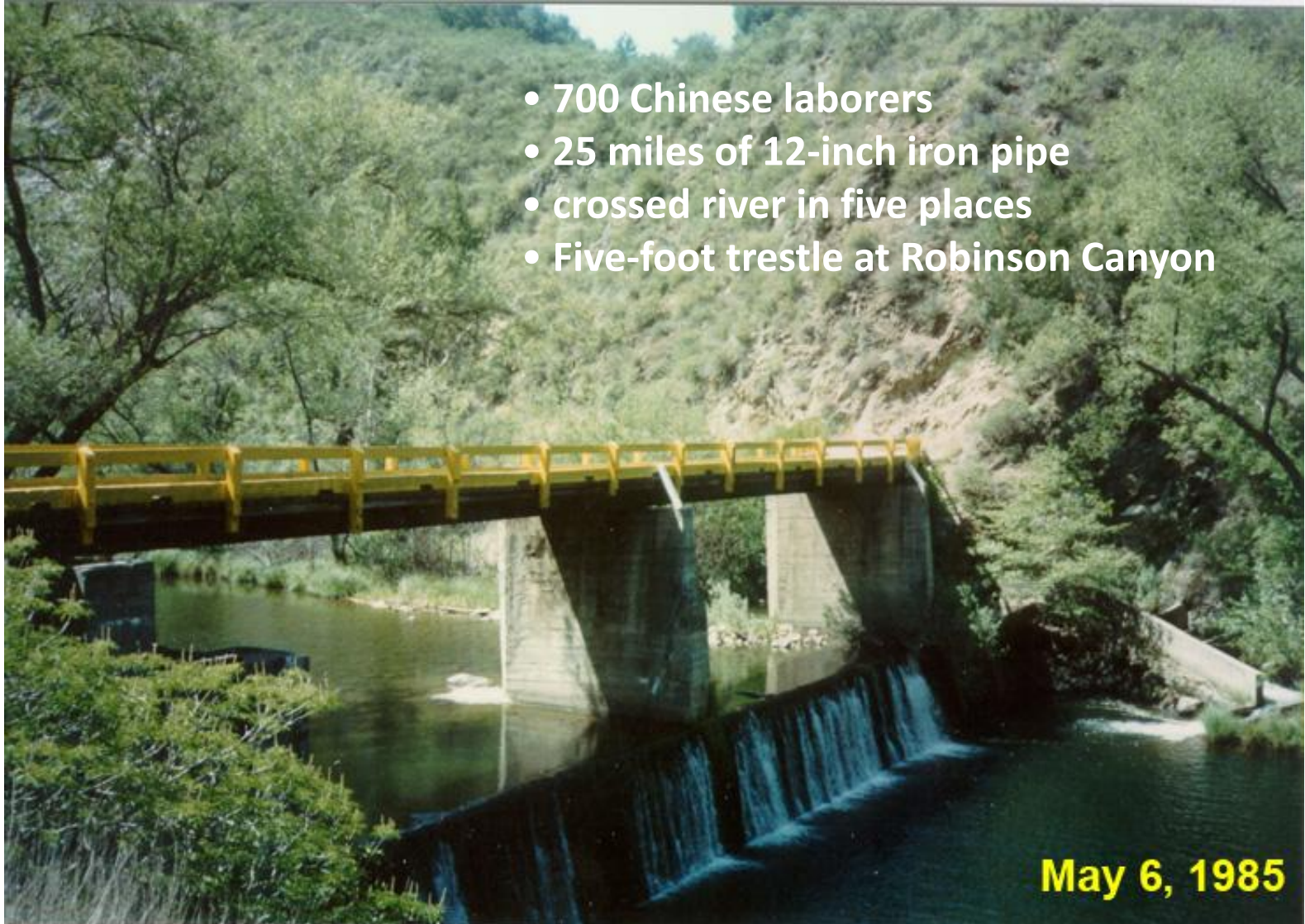
Historical Overview – Why is Peninsula Water Supply Private?



1883: Pacific Improvement Company (Charles Crocker) completes construction of Old Carmel River Dam for the supply of the Del Monte Hotel

Old Carmel River Dam – Still there, but will be removed as part of San Clemente Dam Removal

- 700 Chinese laborers
- 25 miles of 12-inch iron pipe
- crossed river in five places
- Five-foot trestle at Robinson Canyon



1921 – Building San Clemente Dam

In 1915, SFB Morse hired to manage Crocker's holdings. Forms Del Monte Properties Corp in 1919 and acquires all the assets. Finding no water in Pebble Beach, builds San Clemente Dam in 1921 for \$2 million

San Clemente Dam ■ March 29, 1932

Pat Hathaway Collection

San Clemente Dam is Coming Down, Coming Down.... For \$83 million



Historical Overview - Water on the Peninsula

- 1948: California Water & Telephone Company, which acquired the Del Monte Properties water system in 1935, constructs Los Padres Dam for new homes and the canneries with mules and 1 bulldozer.
- 1958: Monterey Peninsula Municipal Water District formed by voters by 2 to 1 margin; 1965 attempt to purchase two private Peninsula water companies for \$17.5 million fails by 3 to 1 margin; District disbanded shortly thereafter.
- 1966: American Water Works (Cal-Am) buys one of the same two companies, eventually the other.
- 1975-76: Severe drought ensues... The MPWMA is formed as a JPA to administer water rationing. In 1976, it calls for a Peninsula-wide district with greater powers to resolve area's water issues.
- 1977: State Legislature creates Water Management District to “manage, augment, and protect water resources for the benefit of the community and the environment”

Section 2:

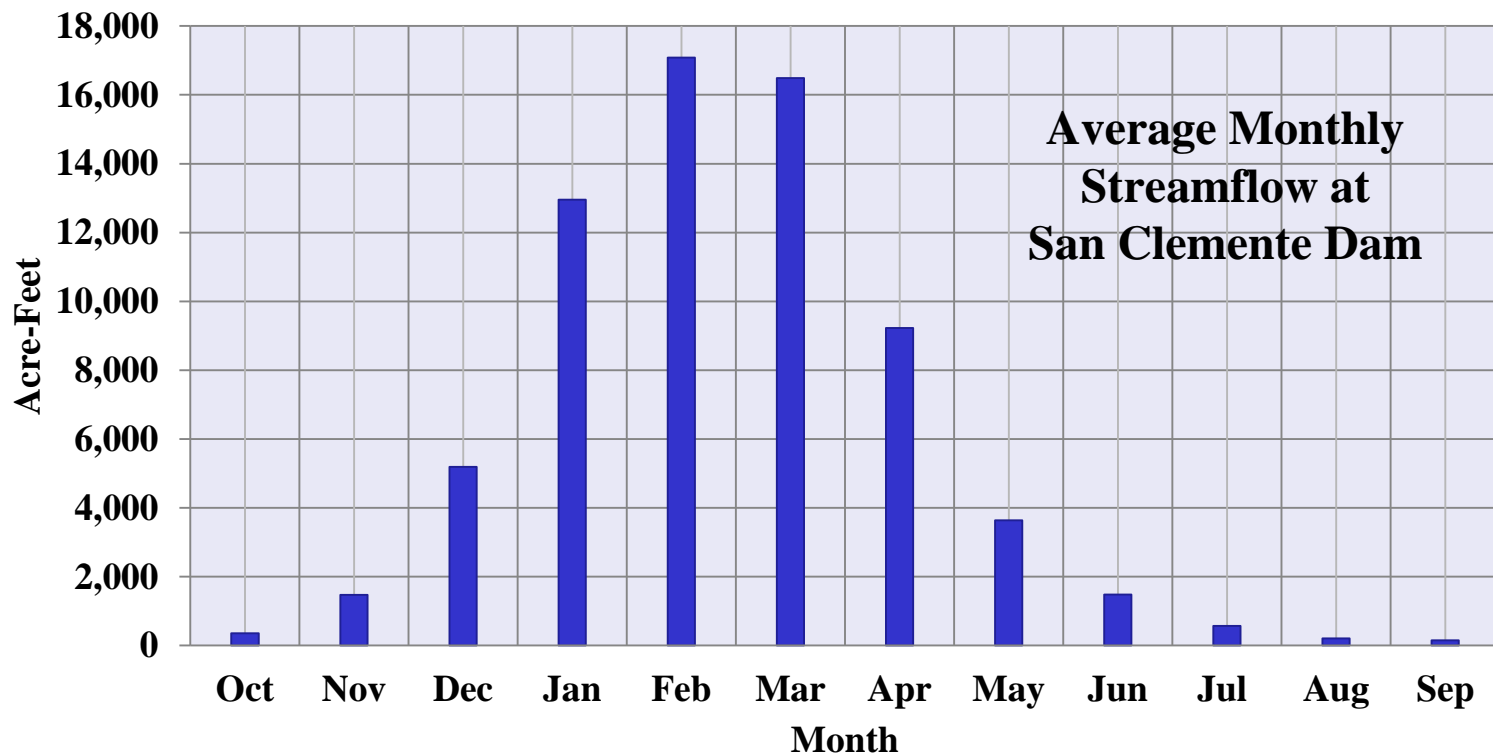
What is the Problem?

Monterey Peninsula Water Resource System

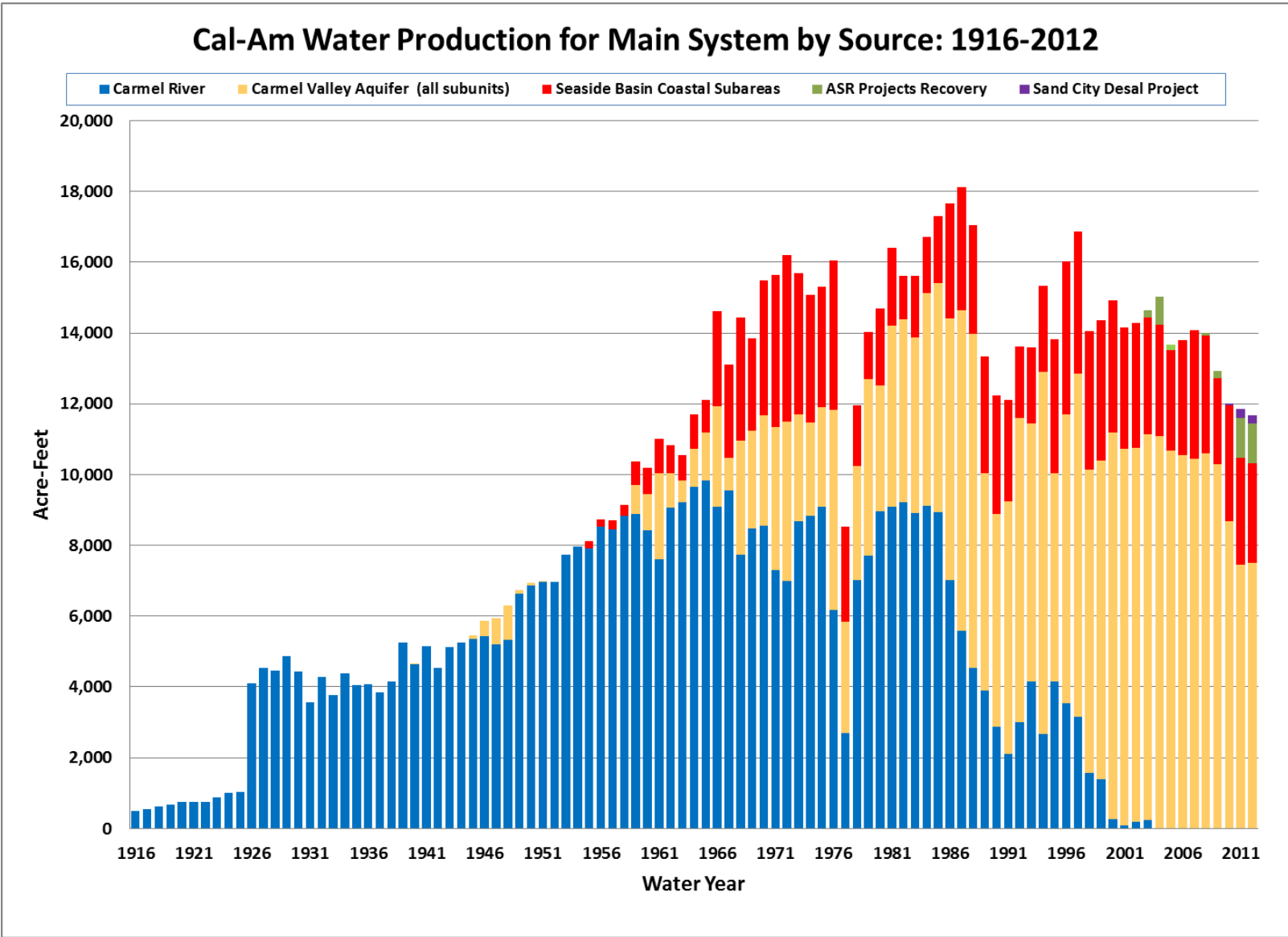


Physical Limitations to Water Supply

- Extreme annual and seasonal variability of streamflow in the Carmel River
- Inadequate surface water and groundwater storage capacity in Carmel River Basin
- Infrequent, but certain drought events, i.e., consecutive dry or critically-dry years
- Threat of seawater intrusion in Carmel River and Seaside Groundwater Basins



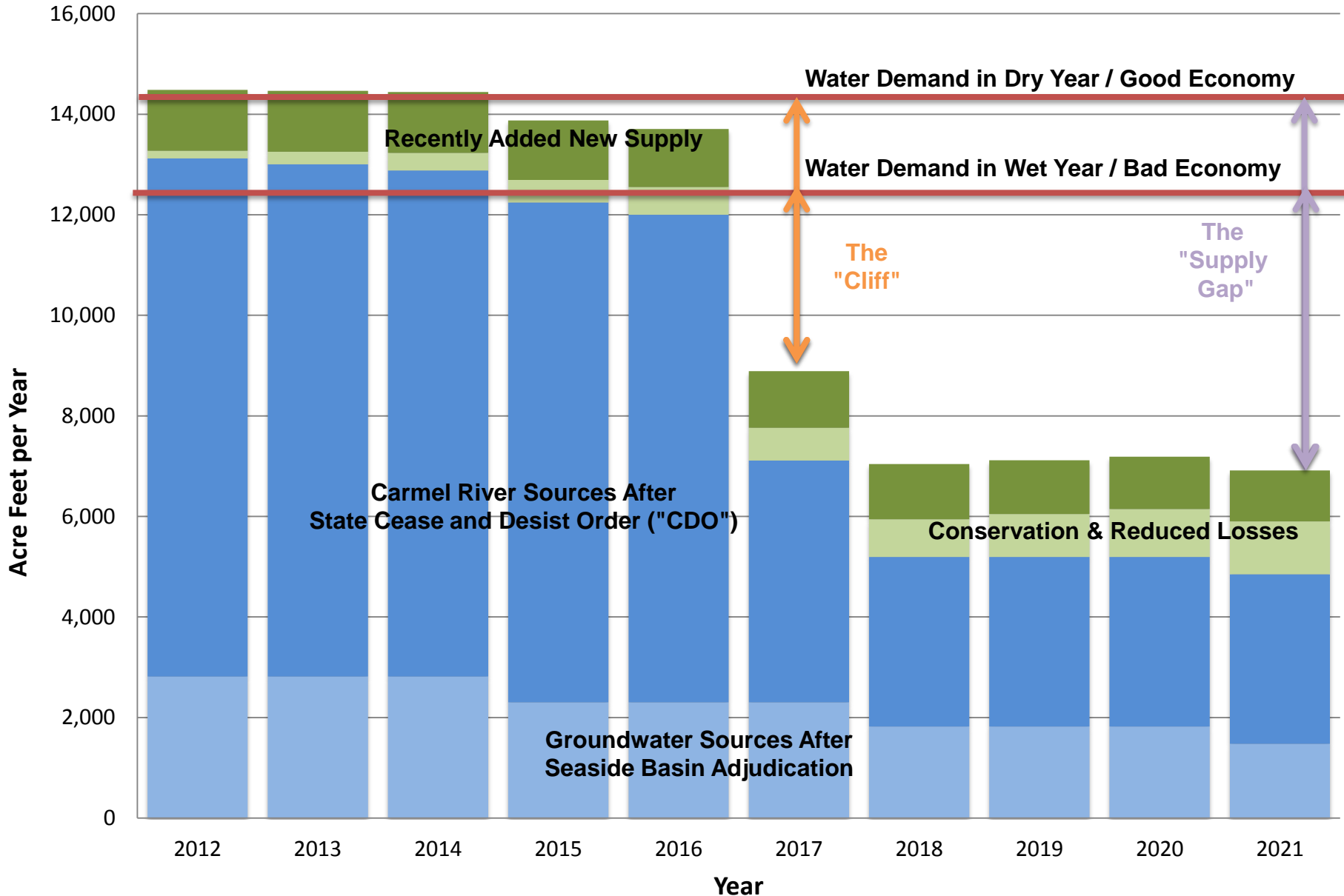
Sources of Supply Have Been Shifting as Demand Rises



Legal Limitations to Water Supply

- Mid-1980s: lower 6.5 miles of Carmel River go dry 5-6 months a year
- 1995: State determines Cal-Am has been over-drafting the river and actual right is roughly 30% of its then current draw; Order 95-10 requires reductions by Cal-Am and suggests additional pumping from Seaside Basin.
- 1998: Steelhead listed as threatened species under ESA
- 2003: Seaside Basin Adjudication mandates forced reductions of groundwater pumped from the basin
- 2009: State Cease and Desist Order (CDO) mandates forced reductions of Carmel River diversions
- Customer demand for water will exceed available “legal” supplies
- New supply is needed just to keep up with existing demand – without consideration to future needs for lots of record or new construction
- Currently under moratorium for any new connections.

The Supply Gap



Possible Outcomes if New Supply Not Implemented by 2017

- Imposition of administrative civil liability under Water Code Sec.1055
- Referral to Attorney General under Water Code Sec. 1845 for injunctive relief and/or civil liability
- Retroactively include all Cal Am violations of Water Code section 1052 since Order 95-10 adopted
- Enforced mandatory conservation and its effects on Peninsula health and welfare



Hospitality Industry in Monterey County

- 22,000 jobs
- 8 million visitors
- \$2 billion in spending

Average Monterey County Earnings (per worker in 2011 dollars)

- \$35,579 Hotels
- \$25,978 Full-Service Restaurants
- \$17,053 Limited Service Restaurants

Section 3:

What is the Proposed Solution?



Plan A (1981): Army Corp 154,000AF New San Clemente Dam

Plan B (1986): MPWMD 29,900AF New San Clemente Dam

Plan C (1992): MPWMD 24,000AF New Los Padres Dam

Plan D (1993): MPWMD 3400AF Desal Plant in Sand City & New Los Padres Dam
(1993 vote for desal fails; 1995 vote for dam fails)

Plan E (1997): Cal-Am New Carmel River Dam – killed by Steelhead and CPUC

Plan F (2004): Cal-Am Coastal Water Project Desal Plant in Moss Landing

Plan G (2010): Cal-Am / County / Marina Coast Desal Plant in North Marina

What Did Get Done?

1980s: Peralta Well Expansion (900 AF)

1992: Pebble Beach Reclamation Project (530 AF)

2000s: Aquifer Storage and Recovery (1,000 AF and growing)

What is “Plan H” ?

Cal-Am’s “Monterey Peninsula Water Supply Project” filed April 23, 2012

Desalination (5,500 AF)

Aquifer Storage and Recovery (1,300 AF)

Groundwater Replenishment (3,500 AF)

No dams, Salinas River water rights, Table 13 water rights, over-commitment to conservation, or joining the State water project.

Groundwater Replenishment



- Advanced Treatment of wastewater
- Injection into soil and groundwater table
- Six months later – clean water available for use
- 3,500 Acre-Feet
- Complete by 2016
- Public Component
- 3-Party MOU:
 - ✓ MRWPCA will own and operate
 - ✓ MPWMD will finance and purchase recycled water
 - ✓ Cal-Am will purchase potable water from MPWMD

Groundwater Replenishment



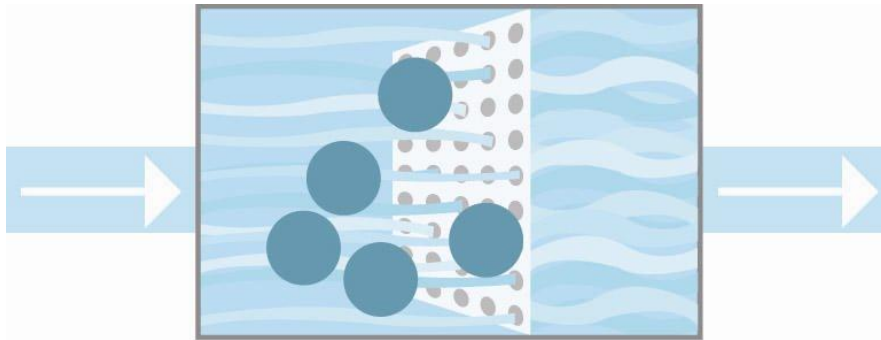
Aquifer Storage and Recovery



- Move excess winter flows from the Carmel River or surplus desalination production to the groundwater basin until high demand in summer
- 1,300 Acre-Feet (Eventual ASR Capacity of 3,000+ AF)
- Complete by 2016
- Public and Private Components
- Work jointly with Cal-Am
- Additional MPWMD Capital Costs Next 2-3 Years
- District will continue to develop future ASR opportunities

Desalination

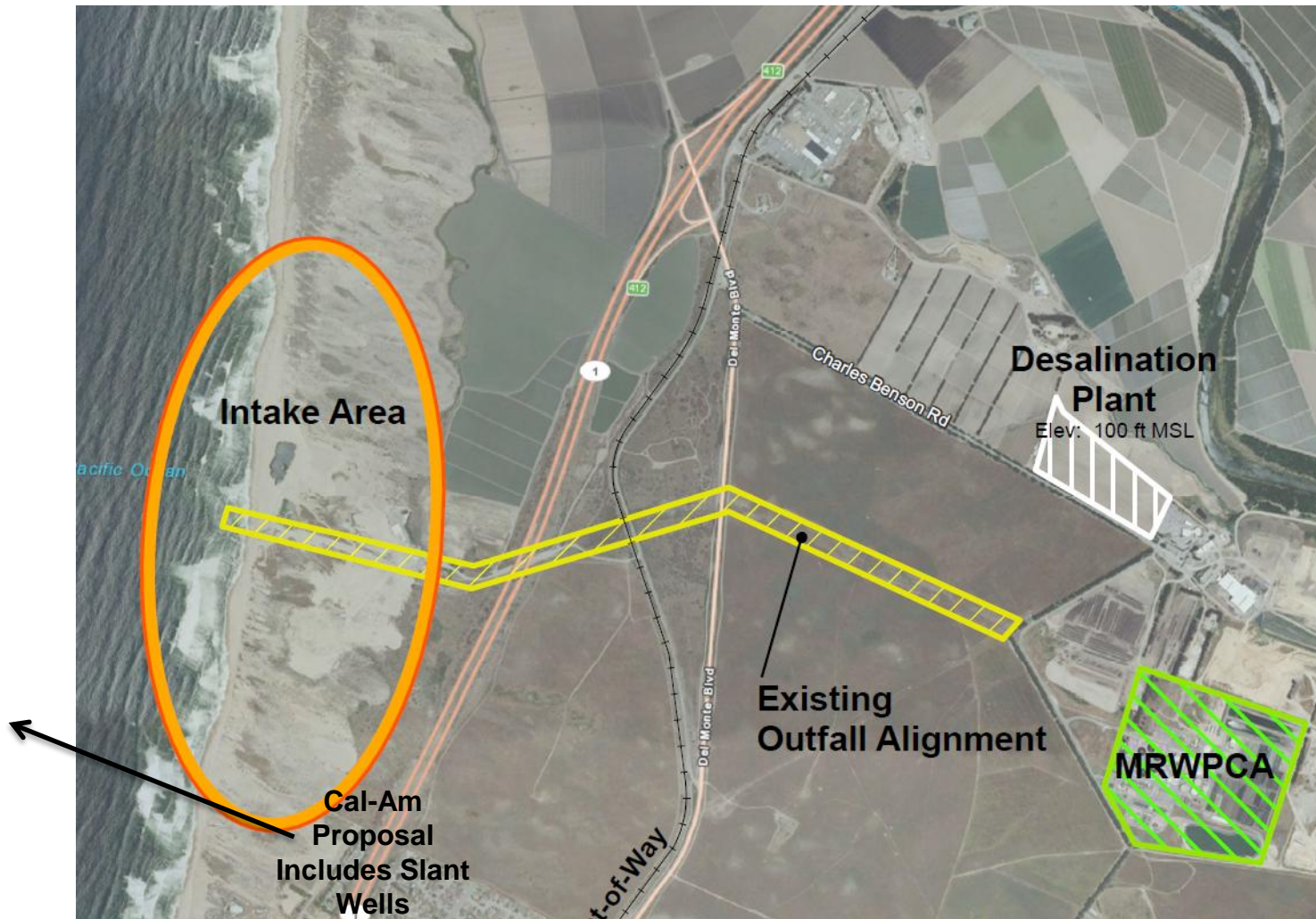
- 5,500 Acre-Feet (goes to 9,000 AF if Groundwater Replenishment cannot be built)
- Slant well, below ground intake proposed
- Cal-Am has proposed ownership and operations
- Path to success depends on CPUC and CEQA schedule, as well as “Litigation Risk”
- Public Proposals are out there on Ownership, Governance, and Finance



Reverse Osmosis (RO) directs the water at high pressure through thin membranes that eliminate salts, creating near-distilled water.

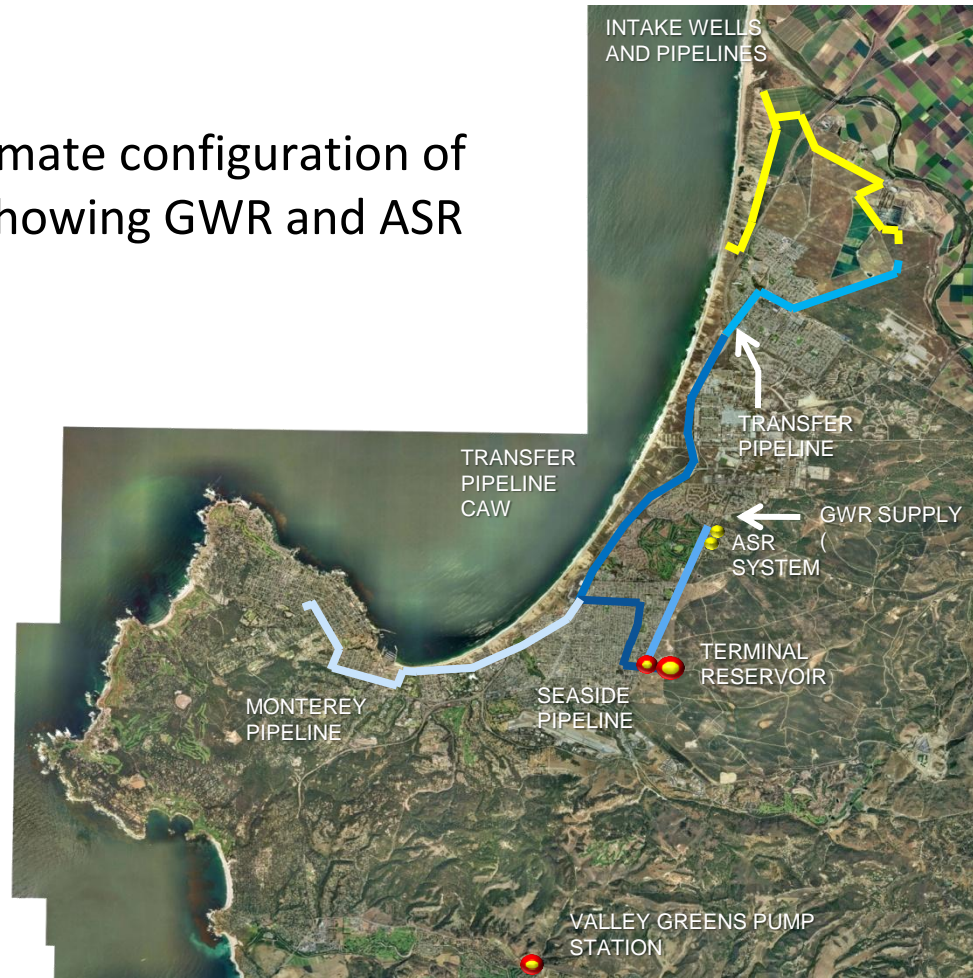


Cal-Am's Proposed Desalination Project



Cal-Am's Proposed Desalination Project

Approximate configuration of Desal, showing GWR and ASR



Section 4:

Financial Implications

What Does it Cost?

Water Supply Project Cost per Acre-Foot

Big Desalination = \$3,490 per AF

Small Desalination = \$4,070 per AF

Groundwater Replenishment = \$2,500 per AF

Cal-Am Aquifer Storage and Recovery = \$1,800 per AF

MPWMD Aquifer Storage and Recovery = \$1,520 per AF

Does not include the \$107 million “Cal-Am Only Facilities” for distribution, transmission, and storage.

San Clemente Reservoir Reroute and Decommissioning



Projected Impact to Monterey Water Bills

Project	Usage (ccf)	2012 Current Monthly Bill	2017 Projected Monthly Bill Range	\$ Increase Related to Water Supply Project
25 th Percentile Bill	3	\$21.12	\$40 - \$56	\$17 - \$24
50 th Percentile Bill	5	\$28.90	\$54 - \$79	\$22 - \$33
75 th Percentile Bill	8	\$44.48	\$86 - \$120	\$35 - \$50
95 th Percentile Bill	16	\$146.58	\$308 - \$496	\$119 - \$198
Average Commercial Bill	62	\$348.97	\$709 - \$752	\$288 - \$317

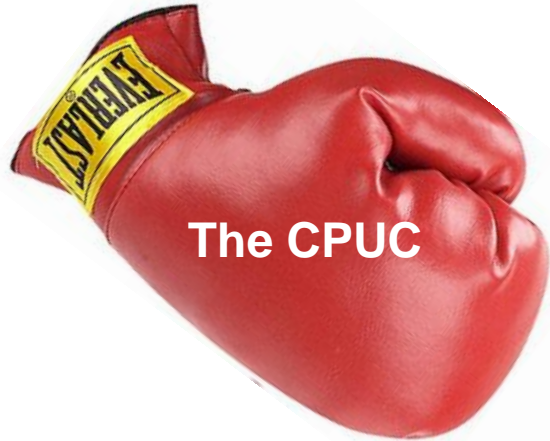
Assumptions:

- Usage = 1ccf = 100 cubic feet = 748 gallons
- Proposed 2017 bill includes multiple estimates
- Reflects data from May 2011

Section 5:

Calendar and Process Going Forward

Key Parties in CPUC A.12-04-019



The CPUC



**Business
Coalition**



**6 Citizens
Groups**



**4 Environmental
Groups**



**5 Public
Agencies**



**3 Agricultural
Organizations**



Cal-Am

Key Legal Issues Identified

- The Monterey County Ordinance Requiring **Public Ownership** of Desalination Facilities
- Claims over **Water Rights** with respect to the Salinas Valley Groundwater Basin and the County Agency

Cal-Am's January 11th Revision

Cal-Am's "Monterey Peninsula Water Supply Project" filed January 11, 2013

Desalination (6,252 AF)

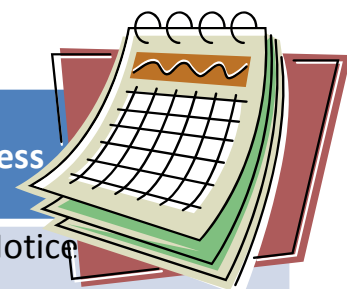
Aquifer Storage and Recovery (1,300 AF)

Groundwater Replenishment (3,500 AF)

Increase in size for Pebble Beach (325 AF), Economic Recovery (500 AF), and Legal Lots of Record (1,181 AF)

Cal-Am's January 11th Revision

April 2012 Filing		January 2013 Filing	
9.0 MGD 9,006 AF	\$260.4 million	9.0 MGD 9,752 AF	\$277.0 million
5.4MGD 5,500 AF	\$213.3 million	5.4MGD 6,252 AF	\$223.5 million



Timeline	CPCN Process	CEQA Process
Sept – Oct 2012	Discovery, voluntary meetings, proposed CPUC decision on preemption	Work on Draft EIR; Issue Notice Preparation (NOP)
October 1, 2012	Public agency participation proposals due	
October 24-25, 2012		Scoping Meetings in Monterey
October 26, 2012	Cal-Am reports on public agency proposals	
November 1, 2012	Cal-Am reports on contingency Plans	
November 15, 2012	Cal-Am reports on financial models	
November 28, 2012		Scoping report identifying alternatives
December 11-13, 2012	Workshops on project costs, cost of contingencies, financial modeling	Work on Draft EIR
January – March 2013	Testimony Phase	
April	Evidentiary Hearings	
May – June	Briefs filed	
July 1, 2013		Draft EIR circulated for comment
November 2013		Final EIR published
December 2013	Proposed decision mailed for comment	
January 2014	Commission acts on Proposed Decision	

A Region Known to Have Difficulties Getting Unstuck



Looking downstream to a 1958 (?)
Volkswagon at the end of
Schulte Road, April 2, 1958.
Photograph by Charles R. Walker