

EXHIBIT 7-A



**CALIFORNIA
AMERICAN WATER**

Carmel River Operations: Post Desal

Presented to Carmel River Advisory Committee
August 4th, 2011



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Overview:

- Pumping, Treatment, and Storage infrastructure
- Current River Operations
- Higher demand year, lower demand recent year
- Post Desal Strategy – Challenges and Considerations
- Illustration of possible Post Desal Operations
- Dry year, average year, extremely wet year



CAW Infrastructure on the Carmel River

- **Production Wells**
- **Treatment Plants**
- **Dams**



Carmel River Wells

- **Russell Wells**
 - Considered surface water – treated at the CVFP
 - Use restricted by Conservation Agreement with NMFS.
- **Upper Carmel River Wells**
 - Pumped directly to the system after chlorination.
 - Use restricted by Conservation Agreement with NMFS.
 - Recent capacity – 4 MGD or 12 AFD
- **Lower Carmel River Wells**
 - Centrally Treated at the Begonia Iron Removal Plant. (not San Carlos)
 - Currently used year round.
 - Recent capacity – 12.7 MGD or 39 AFD



Carmel River Treatment Plants

- **Carmel Valley Filter Plant**
 - Surface Water Treatment Plant
 - Constructed 1940's – Renovated 1970's
 - 16 Horizontal Pressure Filters – original rated capacity of 32 AFD
- **Begonia Iron Removal Plant**
 - Iron and Manganese removal
 - Constructed 1975
 - 18 Horizontal Pressure Filters – rated capacity of 52 AFD
 - Currently operated 24/7



Carmel River Dams

- **San Clemente Dam**
 - Concrete arch dam – Constructed 1921
 - Deemed seismically unsound and unstable during PMF
 - Removal scheduled 2012-2015
- **Los Padres Dam**
 - Earth and rockfill embankment dam – Constructed 1949
 - Original storage capacity of 3,032 AF has since declined with siltation
 - Downstream fish passage improvements scheduled for 2012



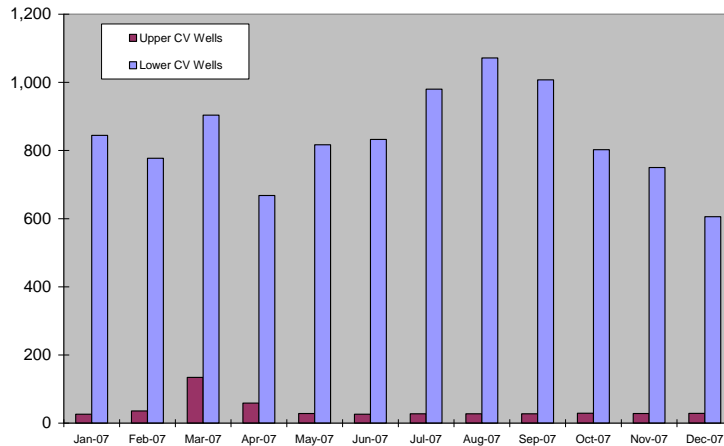
Current River Operations

- **Two scenarios presented to illustrate current operations**
 - Higher demand year (2007)
 - Lower demand year (2010)

- **Scenarios illustrate:**
 - Current summer/winter pumping
 - Mix of Upper and Lower Carmel Valley Wells
 - ASR Diversions

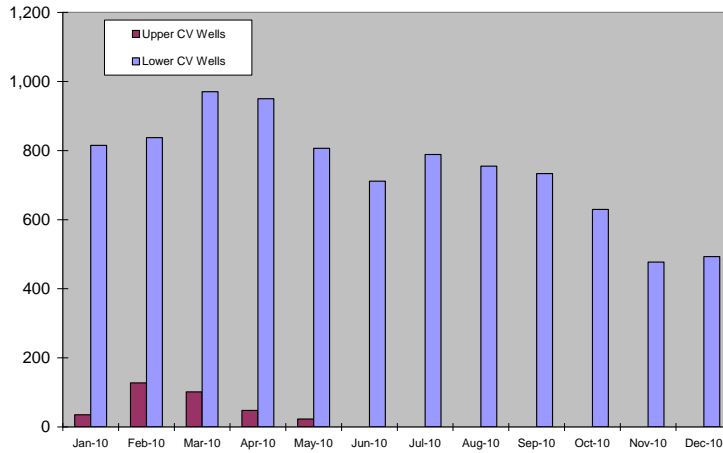


2007 - Carmel River Pumping (AF)
System Production = 14,640 AF, ASR = 12 AF





2010 - Carmel River Pumping (AF)
System Production = 12,170 AF, ASR = 1,047 AF



Carmel River Strategy – Post Desal:

- Diversions within CAW’s Carmel River water rights.
- Minimize pumping during the summer months.
- Maximize jointly held ASR water rights.



Challenges and Considerations:

- Water budgeting / water accounting.
- Impact on BIRP of significantly reduced summer usage.
- Maintaining wells in stand-by during summer months.

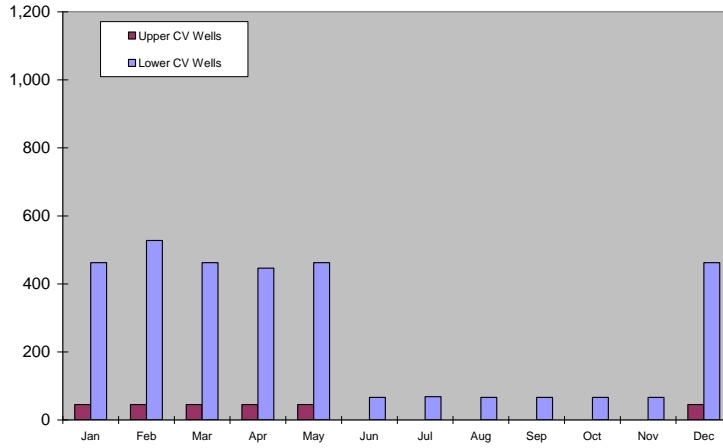


Illustration of Possible Post Desal Operations

- Three scenarios developed following the post-desal strategy, dry year, average year, extremely wet year.
- Data contains many assumptions and simplifications, for example:
 - Summer maintenance flow through BIRP of 2.2 AFD (500 gpm).
 - Winter maintenance flow of 1.5 AFD (340 gpm) from UCV wells.
 - During injection days, assumed maximum rate of 28.6 AFD (6,500 gpm = 20808A + 20808C permits).
 - Best case scenario – no consideration given to equipment failures, down time, etc.
 - No discounting for reliability - Largest well out of service.
 - Actual operations and hydrologic conditions can vary.



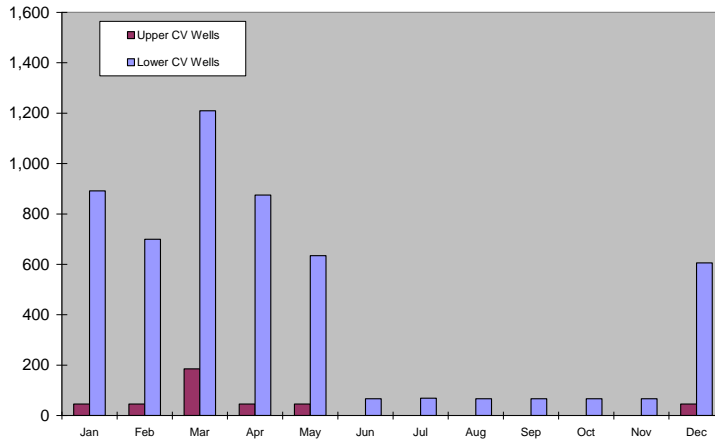
Dry Year - Carmel River Pumping Post Desal (AF)
ASR = 114 AF



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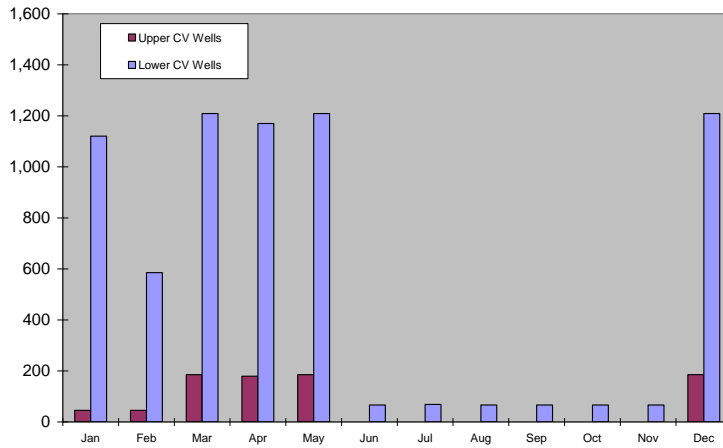
Average Year - Carmel River Pumping Post Desal (AF)
ASR = 2,345 AF



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Extremely Wet Year - Carmel River Pumping Post Desal (AF)
ASR = 4,347 AF



Questions?