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Water Supply Planning Committee Members:
Robert S. Brower, Sr.
Chair
Jeanne Byrne
David Pendergrass

Alternate:
Andrew Clarke

Staff Contact
David J. Stoldt,
General Manager

After staff reports have been distributed, if additional documents are produced by the District and provided to the Committee regarding any item on the agenda, they will be made available at 5 Harris Court, Building G, Monterey, CA during normal business hours. In addition, such documents may be posted on the District website at mpwmd.net. Documents distributed at the meeting will be made available in the same manner.

AGENDA
Water Supply Planning Committee
Of the Monterey Peninsula Water Management District

Tuesday, June 14, 2016, 2:00 pm
MPWMD Conference Room, 5 Harris Court, Bldg. G, Monterey, CA

Call to Order

Comments from Public - *The public may comment on any item within the District's jurisdiction. Please limit your comments to three minutes in length.*

Action Items – *Public comment will be received.*

1. Consider Adoption of Committee Meeting Minutes of May 24, 2016
2. Consider Adoption of Policy that will Address Monterey County General Plan Requirements for Carmel Valley Alluvial Aquifer

Discussion Item – *Public comment will be received.*

3. Discuss Possible District Water Entitlement Ordinance
4. Update on Aquifer Storage and Recovery Project Activities
5. Update on Pure Water Monterey Project
6. Update on California American Water Desalination Project
7. Update on Alternative Desalination Project

Suggestions from the Public on Water Supply Project Alternatives (15 min limit)

Set Next Meeting Date

Adjournment

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WATER SUPPLY PLANNING COMMITTEE**ITEM: ACTION ITEM****1. CONSIDER ADOPTION OF COMMITTEE MEETING MINUTES OF MAY 24, 2016****Meeting Date: June 14, 2016****From: David J. Stoldt,
General Manager****Prepared By: Arlene Tavani**

SUMMARY: Attached as **Exhibit 1-A** are draft minutes of the May 24, 2016 Water Supply Planning Committee meeting.**RECOMMENDATION:** The Committee should adopt the minutes by motion.**EXHIBIT****1-A** Draft Minutes of the May 24, 2016 Water Supply Planning Committee Meeting



EXHIBIT 1-A

DRAFT MINUTES Water Supply Planning Committee of the Monterey Peninsula Water Management District May 24, 2016

Call to Order The meeting was called to order at 10:00 am in the MPWMD conference room.

Committee members present: Robert S. Brower, Sr. - Committee Chair
 Jeanne Byrne
 David Pendergrass

Committee members absent: None

Staff members present: David Stoldt, General Manager
 Larry Hampson, Planning & Engineering Division Manager
 Joseph Oliver, Water Resources Division Manager
 Arlene Tavani, Executive Assistant

District Counsel present David Laredo

Comments from the Public: No comments.

Action Items

- 1. Consider Adoption of Committee Meeting Minutes of December 11, 2015, and also January 20, March 3 and April 8, 2016**
On a motion by Pendergrass and second of Bryne, minutes of the committee meetings presented were approved on a unanimous vote of 3 – 0 by Pendergrass, Byrne and Brower. No comments were directed to the committee during the public comment period on this item.

Discussion Items

- 2. Discuss Monterey County General Plan Requirements for Carmel Valley Alluvial Aquifer**
Following the discussion on this item, staff was directed to present a recommendation at the next committee meeting.

Summary of Discussion: Hampson reviewed information provided in the committee packet. The 2010 Monterey County General Plan states that discretionary permits issued for new subdivision projects must prove they can be served by a long-term sustainable water supply. The County has not yet adopted an ordinance that defines “sustainable.” However, the General Plan outlines several factors to consider when

making a determination of a sustainable water supply, including Policy PS-3.2 sections e and f to determine sustainability. The General Manager of the Monterey County Water Resources Agency (MCWRA) is charged with determining whether a supply is sustainable and in meetings between MCWRA staff and MPWMD staff, it was pointed out to MPWMD staff that: 1) the Carmel Valley Alluvial Aquifer (CVAA) is subject to seasonal overdraft; 2) the SWRCB has issued a Cease-and-Desist Order to significantly reduce Carmel River diversions in order to protect the resources of the river; and 3) there is no formal analysis or plan that describes how to reverse these trends that would allow MCWRA to make a determination of “long term sustainability” for supplies from the CVAA.

The Carmel River experiences drawdown due to summer diversions; however, flows typically exceed diversions in the winter months when the aquifer fills. The District’s policy for approving wells in the CVAA requires that water use for a project cannot exceed the 10-year average use on the site; therefore, water use does not increase over the long-term as a result of this policy. However, the policy does not reduce or reverse ongoing impacts during certain dry periods to aquatic species from diversion based on existing water rights.

During discussion of this item, comments were received from John Ford, Senior Planner at the Monterey County Planning Department, and Howard Franklin, Senior Hydrologist at Monterey County Water Resources Agency. **(a) Ford** - Suggested the Water Management District develop a management plan for the CVAA so that the County’s findings could state that a project is in compliance with that plan. **(b) Franklin** – The management plan must address all factors outlined in the general plan policy re a sustainable water supply. To simply reference the Water Management District CVAA well policy would not meet the general plan criteria. **(c) Ford** – The General Plan limits the number of new subdivision units that can be developed in Carmel Valley to 190. An alternative to preparation of a CVAA management plan would be for the Water Management District to acknowledge that its policy of permitting projects based on previous use differs from the County’s sustainability requirement. **(d) Franklin** – The County will develop its own requirement for proving sustainability in the CVAA if the Water Management District does not develop a policy that complies with the General Plan. **(e) Franklin** – Mitigation measures required by the Water Management District could possibly be utilized to meet the sustainability requirement, but they must be codified by policy. If the Water Management District’s goal is to reach a balanced or sustainable basin, the measures to be taken must be defined.

Comments by committee members and staff. **(a)** The CVAA is sustainable over the long-term because the aquifer recharges regularly. **(b)** Sustainability could be proven because: the long-term production trend is showing a reduction; the Water Management District could require that a percentage of historical production be retired for the benefit of the river; when the GS flow model is completed a determination could be made on the amount of reduction in production that each user must achieve; and a policy must be developed that sets a baseline in order to comply with Policy PS-3.2 sections e and f. **(c)** The County has land use authority in Carmel Valley and can promulgate regulations that are in addition to the Water Management District’s policies. **(d)** It is not yet known how the CVAA will be affected when California American Water reduces diversions to

meet its legitimate water right. (e) The Water Management District's policy disallows any increase in water production; therefore, it aligns with Policy PS-3.2.f. (f) MPWMD has historically required at least a 15% reduction in water use for discretionary permits. The requirement that a portion of historical production (or demand) be set aside for a drought reserve or to benefit the river meets the need to show a reverse in the trend of basin overdraft, so modeling may not be necessary. (g) A set aside should apply to all developments in the CVAA. (h) Suggest that any ordinance developed by the Water Management District to address the long-term sustainability issue include a sunset clause triggered by lifting of the CDO.

During the public comment period on this item, **Luke Coletti** addressed the committee. He suggested that when developing estimates of a project's historical annual water use, staff should use the median.

3. **Discuss Possible District Water Entitlement Ordinance**

Stoldt discussed with the committee the concept of a water entitlement ordinance. The issue was deferred to a future meeting. During the public comment period on this item, **Luke Coletti** asked if the Water Allocation Program will be abandoned after the CDO is lifted. *Stoldt responded that the Water Management District will make a decision at that time about development of an EIR and establishment of a new allocation plan, or making the water available on a first-come-first-served basis.*

4. **Update on Aquifer Storage and Recovery Project Activities**

Stoldt reported that diversions have ceased for the year for Aquifer Storage and Recovery (ASR), and the total amount of water produced for the year was 699 acre-feet. At the June 20, 2016 Board meeting, the directors will consider certification of an addendum to the EIR on the Pure Water Monterey Project and also the EIR on the ASR Project. This is needed in order to move ahead on approval of a pipeline for the Hilby Pump Station. The 36-inch pipeline is needed for: delivery of desalinated water; to transmit water around the hydraulic trough; to ensure maximization of water deliveries throughout the District; and to ensure maximization of ASR water deliveries throughout the District. One pipeline will run from the Carmel River to the pump station; another from GWR to the Seaside basin; and another from the proposed desalination plant to the Seaside Basin.

(a) **Brian LeNeve** addressed the Board during the public comment period on this item. He asked how much water could have been delivered through the ASR program if the pipe were larger. *Stoldt - No estimate at this time.* (b) **Luke Coletti** asked for an estimate of the cost to build the two source-water pipelines. *Stoldt noted that two pipelines are needed because guidelines for indirect potable reuse state the purified, recycled water is not reusable until it has been in the ground for six months; therefore, two pipelines, separately trenched, are needed. The conveyance pipelines will be paid for by Cal-Am; the costs will ultimately be passed on to the rate payers.*

5. **Update on Pure Water Monterey Project**

Hampson reported that the National Marine Fisheries Service (NMFS) and the California Department of Fish and Wildlife (CDFW) have filed protests to the application for the project. The local agencies have been working with NMFS and

CDFW to resolve those protests, which is a high priority for the State Water Resources Control Board. If the protests cannot be resolved at the staff level by June 2016, the issue may need to go to hearing. During the public comment period on this item, **Brian LeNeve** addressed the committee. He asked what percentage of Pure Water Monterey water would be sourced from the Blanco Drain. *Hampson responded that the amount has not been determined as many variables are involved.*

6. Update on California American Water Desalination Project

No report.

7. Update on Alternative Desalination Project

No report.

Suggestions from the Public on Water Supply Project Alternatives: No Discussion

Set Next Meeting Date: The meeting was scheduled for June 14, 2016, at 2 pm.

Adjournment: The meeting was adjourned at 11:30 am.

WATER SUPPLY PLANNING COMMITTEE

ITEM: ACTION

2. CONSIDER ADOPTION OF POLICY THAT WILL ADDRESS MONTEREY COUNTY GENERAL PLAN REQUIREMENTS FOR CARMEL VALLEY ALLUVIAL AQUIFER

Meeting Date: June 14, 2016

From: Dave Stoldt,
General Manager

Prepared By: Larry Hampson

SUMMARY: At the May 24, 2016 meeting, the Committee considered the MPWMD policy and the Monterey County General Plan policy for approving discretionary permits to use water produced from the Carmel Valley Alluvial Aquifer (CVAA) for new commercial and residential development projects. The Committee asked staff to develop a recommendation about modifying the District's current policy for Water Distribution System permits and permit amendments in light of General Plan Policy PS-3.2 requirements. This policy requires making a determination that a long-term sustainable water supply is available. The key question that must be addressed is whether the Carmel River (and associated CVAA) can be described as a long-term sustainable water supply using the factors set out in the General Plan policy.

STAFF RECOMMENDATION: 1) In order to continue to reduce diversions from the Carmel River, the Committee should consider a requirement for project proponents to provide an analysis of existing consumptive use that would set a historical baseline. A reduction factor should be applied to the baseline in setting a production limit for Water Distribution System permits that rely on the CVAA as a source of supply; and 2) The Committee should also consider if other measures to minimize impacts from diversions should be required. These could include: i) retaining continuing oversight and mandating future retrofits of structures and landscape irrigation to improve water efficiency, should such improvements be available; ii) making irrigation of the streamside corridor in areas affected by pumping a permanent required District activity.

DISCUSSION: Combined production from Cal-Am and non-Cal-Am wells in the CVAA likely peaked in the late 1980s as a result of the 1987-91 drought. Although Cal-Am has been required to report daily production data to MPWMD, accurate methods to determine non-Cal-Am production were not put in place until the early 1990s (e.g., see Ordinances 48 and 56).

Exhibit 2-A shows CVAA diversions for all diverters for the period from 1995 to 2015.¹ Total production from the aquifer did not drop off significantly until the issuance of Cease-and-Desist Order 2009-0060 by the State Water Resources Control Board and the adoption of a steeply tiered water rate structure for Cal-Am deliveries, also in 2009. Non-Cal-Am producers are not affected by either the CDO or Cal-Am rates and remained at nearly the same level (about 2,000 AFY) for the 1995-2015 period.

There are several factors to take into account in making a determination that there is a long-term sustainable water supply. Two of the key factors involved in determining whether the CVAA can be considered a long-term sustainable water supply include the following from Policy PS-3.2:

- “d. The source of supply and the nature of the rights(s) to water from the source;
- e. Cumulative impacts of existing and projected future demand for water from the source, and the ability to reverse trends contributing to an overdraft condition or otherwise affecting supply; and
- f. Effects of additional extraction or diversion of water on the environment including on instream flows necessary to support riparian vegetation, wetlands, fish or other aquatic life, and the migration potential for steelhead, for the purpose of minimizing impacts on the environment and to those resources and species.”

Current production levels include both authorized and unauthorized diversions and result in the CVAA being seasonally depleted; however, with few exceptions, seasonal depletions in the CVAA are fully replenished by winter rains and the river flows to the ocean in most years. Even in extended dry periods, with significantly more production from the CVAA than current levels, available water in storage has not dropped below 54% of usable aquifer storage capacity.²

Exhibit 2-B shows a graphical relationship between aquifer depletion, rainfall, and lagoon openings. Essentially, the aquifer is depleted during dry periods diversions exceed the volume of river flow from the upper watershed. When depletion is relatively low, the amount of rainfall and runoff needed to re-connect the river to the lagoon and cause the lagoon to open is low. When depletion is relatively high, it can take many months during the rainy season (usually

¹ Exhibit 2-A includes data from non-Cal-Am diversions, Cal-Am diversions of 3,376 AFA, and unauthorized diversions. The chart does not include diversions under recent water rights issued by the SWRCB that include meeting instream flow requirements in order to divert.

² MPWMD began monitoring and estimating aquifer storage in December 1987. The lowest usable storage recorded in the CVAA was in February 1991. In the recent severe drought of 2012-2015, the minimum usable storage capacity was 76%.

starting October 1) for recharge to occur and surface flow throughout the river resumes. Once the river does open to the ocean, the aquifer fully recharges within a few weeks. Since 1991, the lagoon has failed to open in only one year – WY2014; however, even in that year, usable aquifer storage reached 87% of capacity in April 2014. Thus, even with unauthorized diversions by Cal-Am, there is a very low risk in the future of the aquifer becoming so depleted that it cannot function as a source of supply.

With the issuance of Orders 95-10 and 2009-0060 by the State Water Resources Control Board, the seasonal trend in depletion of the aquifer is being reversed. Even though the severity of the 2012-2015 period approached the level of the 1997-1991 drought, the volume of groundwater storage in the CVAA was significantly higher than during the 1987-1991 drought. However, it is clear that for the foreseeable future the CVAA will continue to be pumped during dry periods, which will result in periods when the aquifer will be depleted and portions of the river will be dewatered.

This condition is not unusual for a Mediterranean climate. A simulation of unimpaired flows for the CVAA shows that in many years, flow out of the upper watershed could not have sustained a river that was fully connected and flowing to the lagoon throughout the year. There were likely periods when the main stem would pool up and be disconnected before the rainy season began. Aquatic and riparian species are adapted to this environment. In addition, diversions during periods when steelhead migration occurs (normally, December through May) have the potential to reduce flows necessary to allow migration. The Committee should consider a policy that minimizes the effects of diversions during migration periods, but especially during dry periods.

Currently, most non-Cal-Am pumpers in the CVAA have riparian rights to divert flow. The SWRCB declined to evaluate riparian rights in Order 95-10, stating that there was not enough information provided by non-Cal-Am pumpers; however, MPWMD requires an evaluation and demonstration of riparian rights in order to process a WDS permit or amendment for wells in the CVAA. This is not a determination of a right, but is a basis for MPWMD to confirm that the permittee has a long-term right to divert flow.

Riparian pumpers generally return a variable portion of the applied water and a portion of indoor water use back into the aquifer (the latter amount through septic system return flow in areas not served by the Carmel Area Wastewater District). The amount of applied water returned depends on land use. For example, agricultural production may require a different volume of water per acre than either turf irrigation or domestic landscape irrigation. To reverse the trend in seasonal dewatering, a baseline amount of water use should be established and a reduction factor applied to the baseline. Staff recommends that project proponents be required to provide an analysis of the consumptive use of water on the property under existing conditions for a period of 10 years

(note that the consumptive use amount will be less than the historical pumped amount). The consumptive use amount would become the baseline. Staff recommends that the Committee consider applying a minimum of a 15% reduction to the baseline in order to continue reversing the trend of dewatering of the aquifer and reducing flows when steelhead are migrating through the river.

To minimize impacts of new development on water supplies, the District currently requires that all new construction and new structures meet stringent rules concerning water efficiency for both indoor and outdoor water use (e.g., see MPWMD Rules 142 and 143). In June 2016, the MPWMD Board will be considering changes to Rule 142 that will incorporate provisions of the State Model Water Efficient Landscape Ordinance.

The District's Mitigation Program includes irrigation of the streamside corridor in reaches that are dewatered where vegetation stress occurs. The Committee should consider whether it should be a permanent policy of the District to continue this program.

During dry and critically dry periods aquifer depletion can significantly delay the opening of the lagoon and reduce the migration period for steelhead. The Committee could consider whether reductions in water use from the CVAA should occur during dry periods. The usable storage in the alluvial aquifer is estimated to be about 28,500 AF. Concerning new development, a total of 190 new units can be approved under the County General Plan Update. Given the stringent water efficiency requirements, the total use for these units is not likely to exceed about 100 AFY, which is about 0.3% of aquifer storage. It is not likely that reducing water use in a dry period at new developments would have a significant benefit by itself. In order to achieve a significant benefit from cutbacks in dry periods, it is likely that all pumpers would need to share in a reduced amount of diversions.

Future Operations in the Carmel Valley Alluvial Aquifer

A large step toward long-term sustainability will be taken when Cal-Am completely ceases its unauthorized diversions. However, this is not likely to occur until about 2021 and there are currently no water supply projects that are approved to be built that would offset the unauthorized diversions. When replacement supplies are built, the total production from the CVAA is likely to drop into a range of about 5,500 AFY to 6,000 AFY. Because Cal-Am proposes to take much of its authorized diversions during the winter, total production by Cal-Am and non-Cal-Am wells in the dry season is likely to be about one-third of the future annual production total or about 1,870 AF to 2,160 AF; however, even this lowered production will result in a substantial portion of dry season flows being diverted downstream of Don Juan Bridge (River Mile 10.8). It should be noted that historical dry season flows at Don Juan Bridge include the effect of seasonal releases from storage at Los Padres Reservoir.

EXHIBITS

- 2-A** Carmel Valley Alluvial Aquifer Water Production
Within the Monterey Peninsula Water Management District (Draft)
- 2-B** Comparison of Carmel River Lagoon Openings with Aquifer Depletion and Antecedent
Rainfall

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Carmel Valley Alluvial Aquifer Water Production Within the Monterey Peninsula Water Management District 1995 - 2015 DRAFT

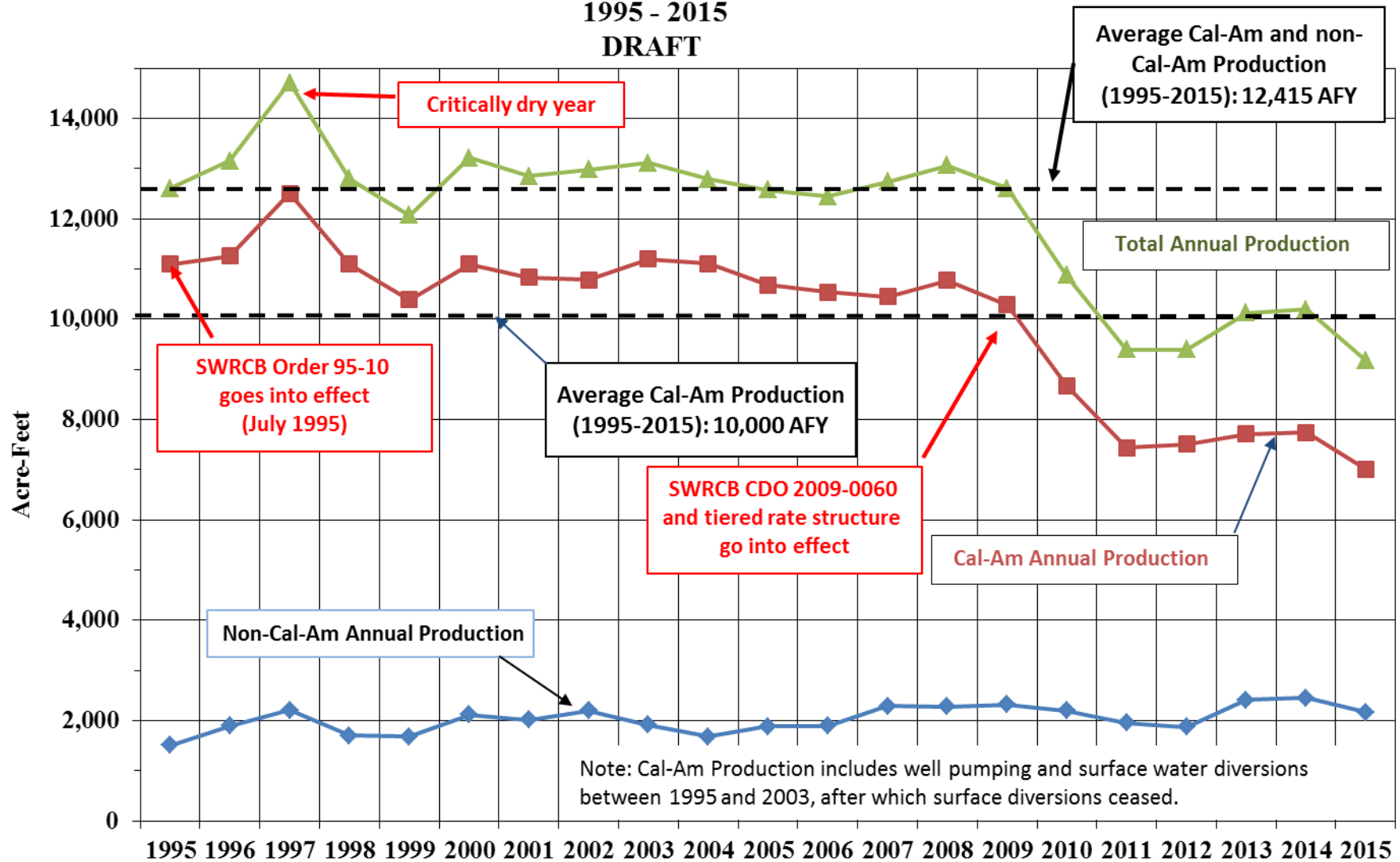


Exhibit 2-B

Comparison of Carmel River Lagoon Openings with Aquifer Depletion and Antecedent Rainfall

