Yucaipa Valley Water District

Notice and Agenda of a Board Workshop

Tuesday, March 29, 2016 at 4:00 p.m.

MEETING LOCATION:	District Administration Building 12770 Second Street, Yucaipa
MEMBERS OF THE BOARD:	Director Ken Munoz, Division 1 Director Bruce Granlund, Division 2 Director Jay Bogh, Division 3 Director Lonni Granlund, Division 4 Director Tom Shalhoub, Division 5

I. Call to Order

II. Public Comments At this time, members of the public may address the Board of Directors on matters within its jurisdiction; however, no action or significant discussion may take place on any item not on the meeting agenda.

III. Staff Report

IV. Presentations

A. Overview of the California Drought and Yucaipa Valley Water District's Action Plan Related to the State Water Resources Control Board Mandatory Restrictions to Achieve a 36% Reduction in Potable Urban Water Use [Workshop Memorandum No. 16-059 - Page 5 of 159]

B. Implementation of a Capacity Fee for New Development by the San Gorgonio Pass Water Agency within the City of Calimesa and Riverside County Portion of the Yucaipa Valley Water District [Workshop Memorandum No. 16-060 - Page 17 of 159]

C. Presentation of the Regional Water Allocation Agreement for Water Imported by the San Gorgonio Pass Water Agency [Workshop Memorandum No. 16-061 - Page 113 of 159]

V. Operational Updates

A. Purchase of Inland Empire Brineline Pipeline and Treatment Capacity from the San Bernardino Valley Municipal Water District [Workshop Memorandum No. 16-062 - Page 136 of 159]

VI. Capital Improvement Projects

A. Status Report on the Construction of a 6.0 Million Gallon Drinking Water Reservoir R-12.4 - Calimesa [Workshop Memorandum No. 16-063 - Page 140 of 159]

Any person with a disability who requires accommodation in order to participate in this meeting should telephone Erin Anton at (909) 797-5117, at least 48 hours prior to the meeting in order to make a request for a disability-related modification or accommodation.

Materials related to an item on this agenda submitted to the Board of Directors after distribution of the workshop packet are available for public inspection during normal business hours at the District office located at 12770 Second Street, Yucaipa. Meeting material is also be available on the District's website at www.yvwd.dst.ca.us

B. Status Report on the Digester Cleaning and Cover Replacement Project at the Wochholz Regional Water Recycling Facility [Workshop Memorandum No. 16-064 - Page 141 of 159]

VII. Policy Issues

A. Consideration of Policies Regarding the Purchase of Supplemental Water Supplies for the Yucaipa Valley Water District [Workshop Memorandum No. 16-065 - Page 146 of 159]

VIII. Administrative Issues

A. Rental of Bear Valley Mutual Water Company Stock Shares for the 2016 Irrigation Season [Workshop Memorandum No. 16-066 - Page 149 of 159]

IX. Director Comments

X. Adjournment

Staff Report

Yucaipa Valley Water District

Presentations

Yucaipa Valley Water District

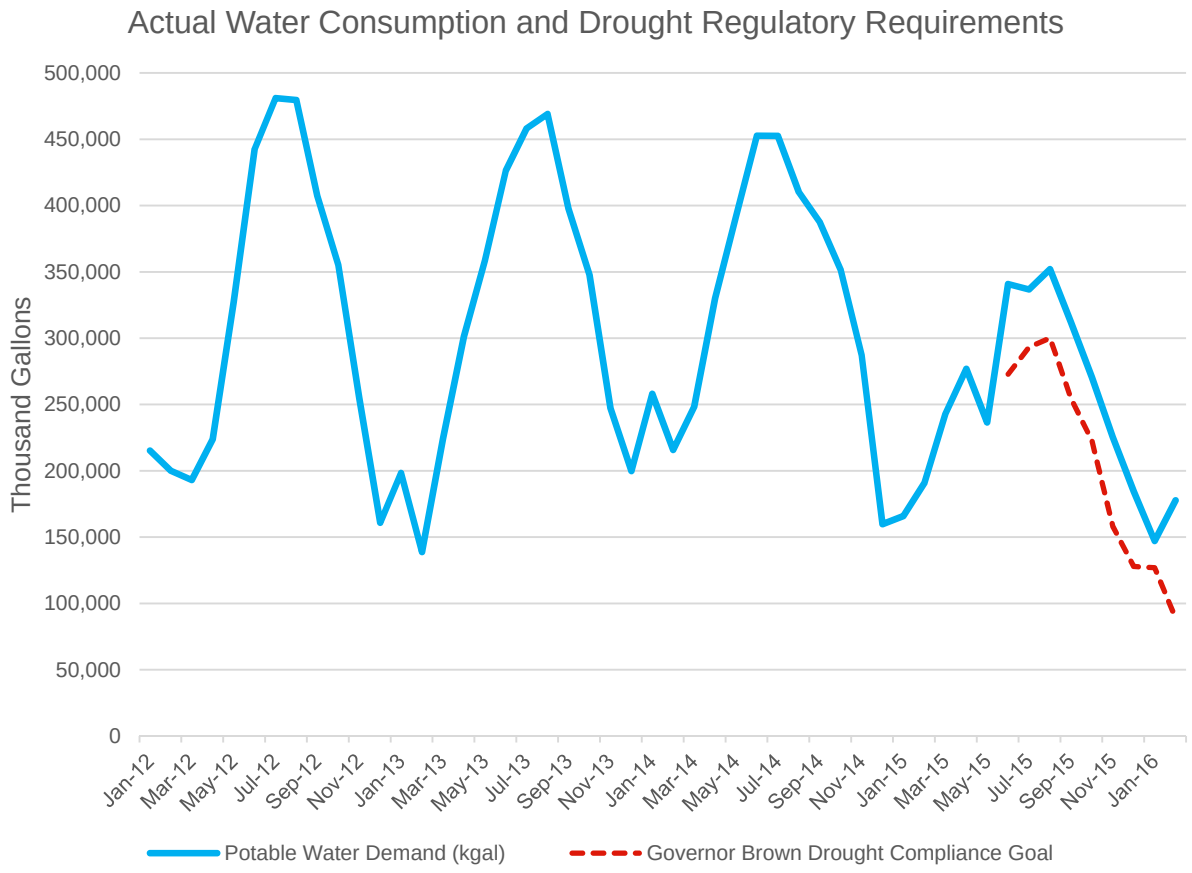
Yucaipa Valley Water District

Workshop Memorandum 16-059

Date: **March 29, 2016**

Subject: **Overview of the California Drought and Yucaipa Valley Water District's Action Plan Related to the State Water Resources Control Board Mandatory Restrictions to Achieve a 36% Reduction in Potable Urban Water Use**

On May 5, 2015, the State Water Resources Control Board ("SWRCB") adopted emergency regulations to achieve a 25% statewide reduction in potable urban water use. These stringent water use regulations will require the Yucaipa Valley Water District to achieve a 36% reduction from the amount of drinking water produced in 2013. In order to achieve this level of water conservation, the Yucaipa Valley Water District will need to provide water based on the following water demand curve.



The chart above illustrates the difference between Governor Brown's Drought Compliance Goal in 2014 at a 25% reduction, and in 2015 at a 36% reduction in potable water use based on the 2013 baseline period.

To achieve Governor Brown's Drought Compliance Goal of a 36% reduction in potable water use from the 2013 baseline period, the Yucaipa Valley Water District has initiated numerous drought conservation programs and conducted a series of monthly community workshops to provide information to our customers.

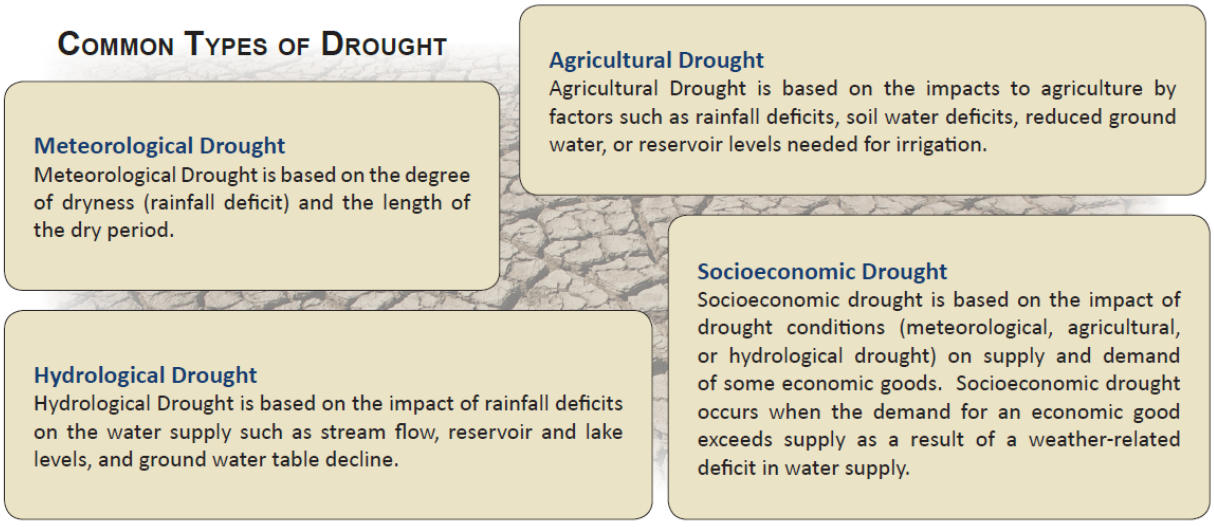
On February 2, 2016, the State Water Resources Control Board extended the water conservation regulations. While a great deal of press attention has been focusing on the relief provided by the State Water Resources Control Board, the following facts were developed prior to the adoption of the extended conservation regulations:

The purpose of this agenda item is to discuss the ongoing and evolving implementation strategy for our community.

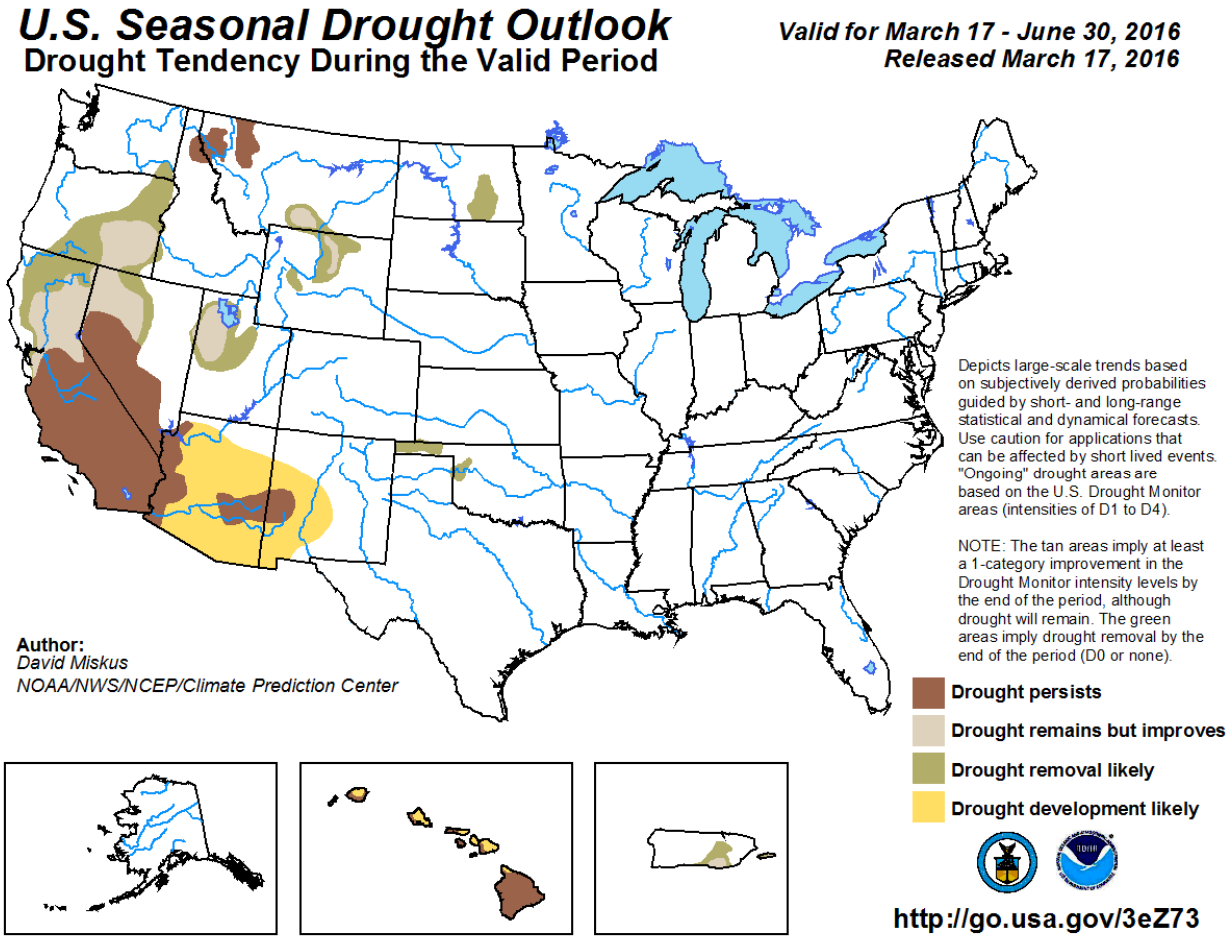
Drought Status and Update

The U.S. Seasonal Drought Outlook shows predicted trends for areas experiencing drought, as well as indicating areas where new droughts may develop. The NOAA Climate Prediction Center issues this monthly product in conjunction with their long-lead temperature and precipitation outlooks on the first and third Thursday of each month and when weather events warrant an interim update. The general large-scale trends depicted are based on numerous indicators, including short and long-range forecasts. A discussion detailing the atmospheric, hydrologic, and climatic conditions affecting the drought trends is included.

Human factors, such as water demand and water management, can exacerbate the impact that drought has on a region. Because of the interplay between a natural drought event and various human factors, drought means different things to different people. In practice, drought is defined in a number of ways that reflect various perspectives and interests.



Additional information can be found at: www.drought.unl.edu/DroughtBasics/TypesofDrought.aspx



Latest Seasonal Assessment - Mid-February through mid-March 2016 saw changing weather patterns in California and the Southern states. From mid-February, unusually dry conditions persisted into the start of March, then stormy and wet weather brought above-normal precipitation to the West, southern Great Plains, and lower Mississippi Valley, halting and reversing the declining moisture conditions. Unfortunately, too much rain (15-20 inches) produced severe flooding over northern Louisiana and southeastern Arkansas. The latter half of February brought surplus precipitation to much of the Northeast, eliminating all drought and trimming D0 down to two small areas in coastal New England and the central Appalachians. Significant rains, however, bypassed southeastern Georgia and north-central Florida during this period, leading to D0 expansion there. While most of the 4-week period was dry in the southern Plains, above-normal precipitation and temperatures were observed in the central and northern Plains, albeit that normal totals are low in the winter. But the mild air kept much of this region snow free, with concerns of early green-up period with limited moisture as spring progressed. Farther west, the Northwest, unlike California, experienced frequent storms with ample moisture during most of the Water Year (WY, since Oct. 1), leading to surplus precipitation, adequate snow pack, recharged soil moisture, and filling reservoirs which led to additional improvements since mid-February. In California and the Southwest, however, a lull in Pacific storms during much of February (normally a wet month) and the start of March stagnated WY precipitation, lowered snow pack and water content percentages, and slowed inflow into the reservoirs. Finally, back-to-back storms on March 5-7 and 10-13 halted the deterioration and improved conditions in northern and central

California, but unfortunately missed most of southern California and the Southwest, resulting in some deterioration. Outside the contiguous U.S., El Niño-induced dryness affected Hawaii (prompting drought expansion) while unseasonably heavy rains in Puerto Rico provided some relief.

With respect to conditions by the end of June, the Seasonal Drought Outlook is not expecting any development in the eastern half of the Nation (as no D1 and only a few small D0 areas existed in the March 15 U.S. Drought Monitor). Drought removal is expected in the south-central High Plains and North Dakota, with favorable probabilities of above-median precipitation in the first area and a wet AMJ climatology in the latter region. Similarly, a wet AMJ climatology plus good odds of above-median precipitation during April and AMJ should improve conditions in Wyoming and south-central Montana which are currently experiencing short-term drought and poor WYTD conditions. In contrast, northwestern Montana AMJ climatology is lower and precipitation probabilities were bordering on below-median (in the Pacific Northwest), thus persistence was kept. Recent precipitation and improved WYTD conditions in northern California and Oregon signal much better spring snow melt, stream flows, and reservoir levels as compared to recent past years, thus a 1-category improvement was predicted for these areas. Farther south, however, a subnormal WYTD has not improved conditions much, and some southern California reservoirs have declined since mid-February when they should be rising. With recent dryness and minimal snow pack left in Arizona and western New Mexico, the spring snow melt, stream flows, and reservoir recharge will be meager, leading to expected development here. Drought is expected to expand and worsen in Hawaii as El Niño-induced dryness lingers, but odds for near to above median rainfall in the Caribbean this spring and summer plus a decline of the El Niño should increase rainfall over Puerto Rico.

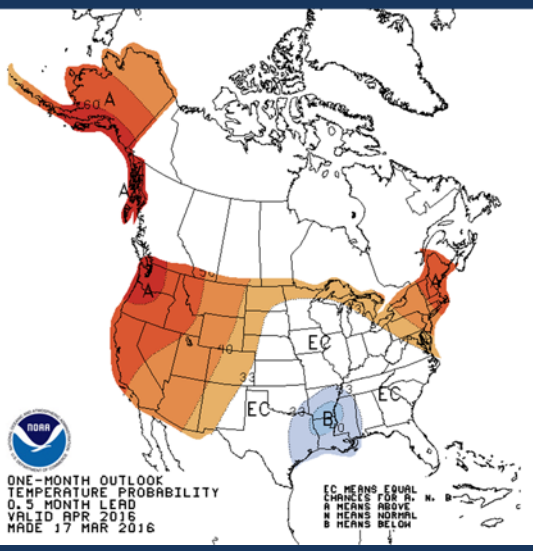
Forecaster: David Miskus

Next Seasonal Drought Outlook issued: April 21, 2016 at 8:30 AM EDT Source:

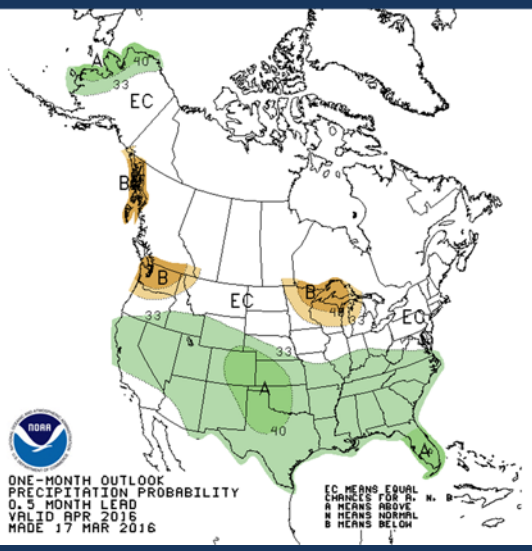
http://www.cpc.ncep.noaa.gov/products/expert_assessment/sdo_summary.php

The National Weather Service and the National Oceanic and Atmospheric Administration provides regular predictions for temperature and precipitation forecasts throughout the United States. The following charts show the temperature and precipitation probability for the next month, as well as a compilation of future forecasts for temperature and precipitation.

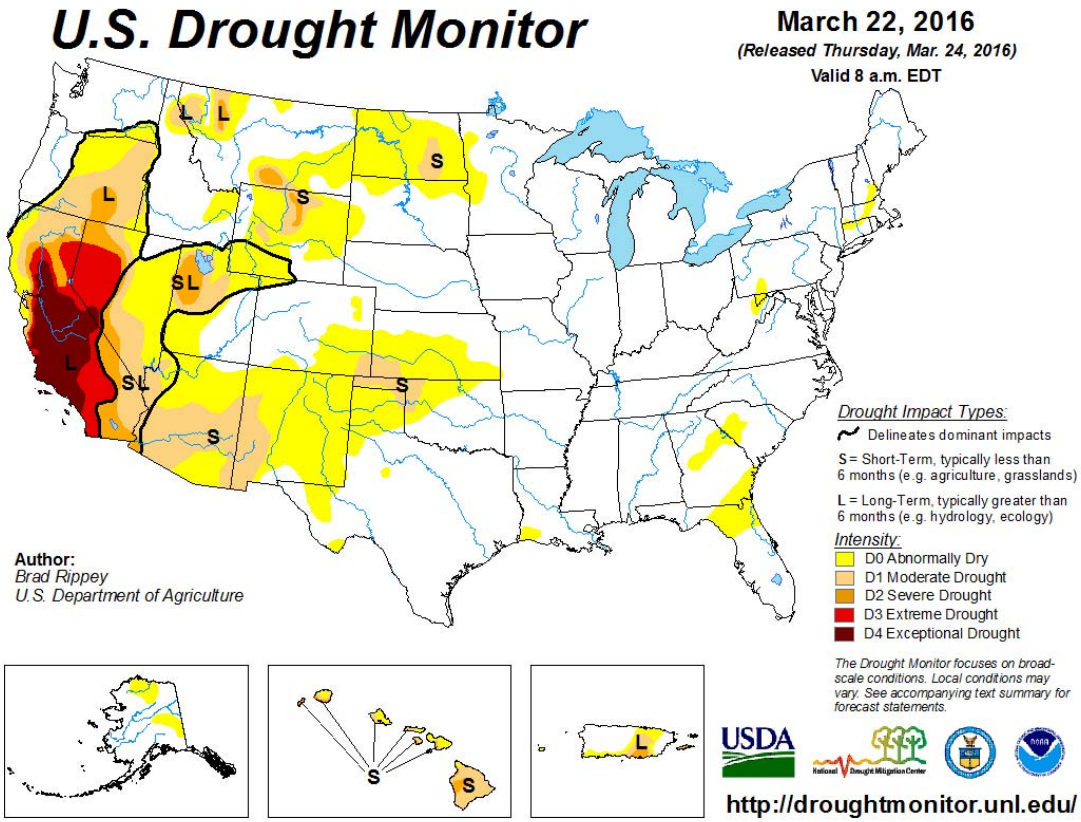
Temperature Probability
April 2016



Precipitation Probability
April 2016

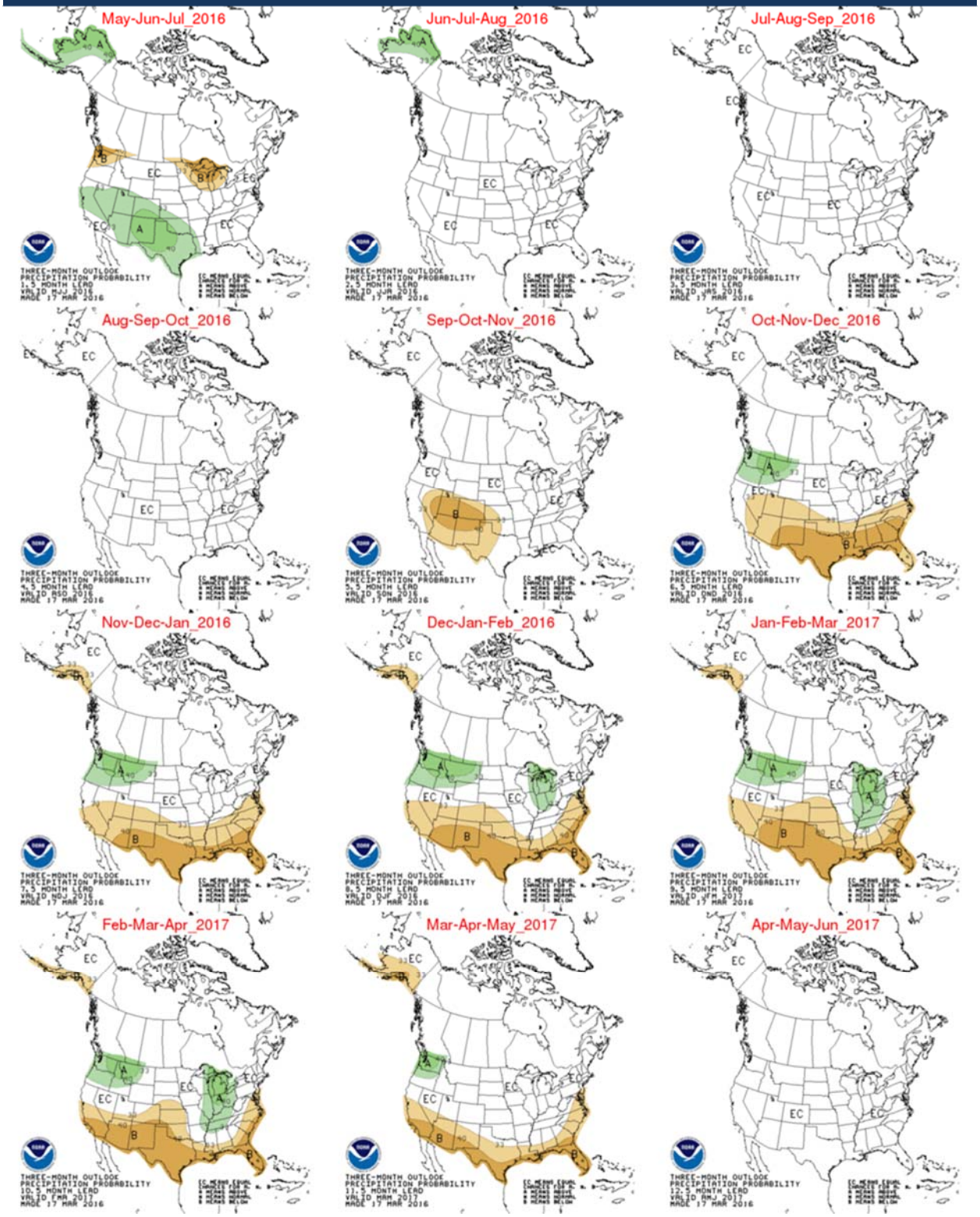


United Stated Drought Monitor Illustration



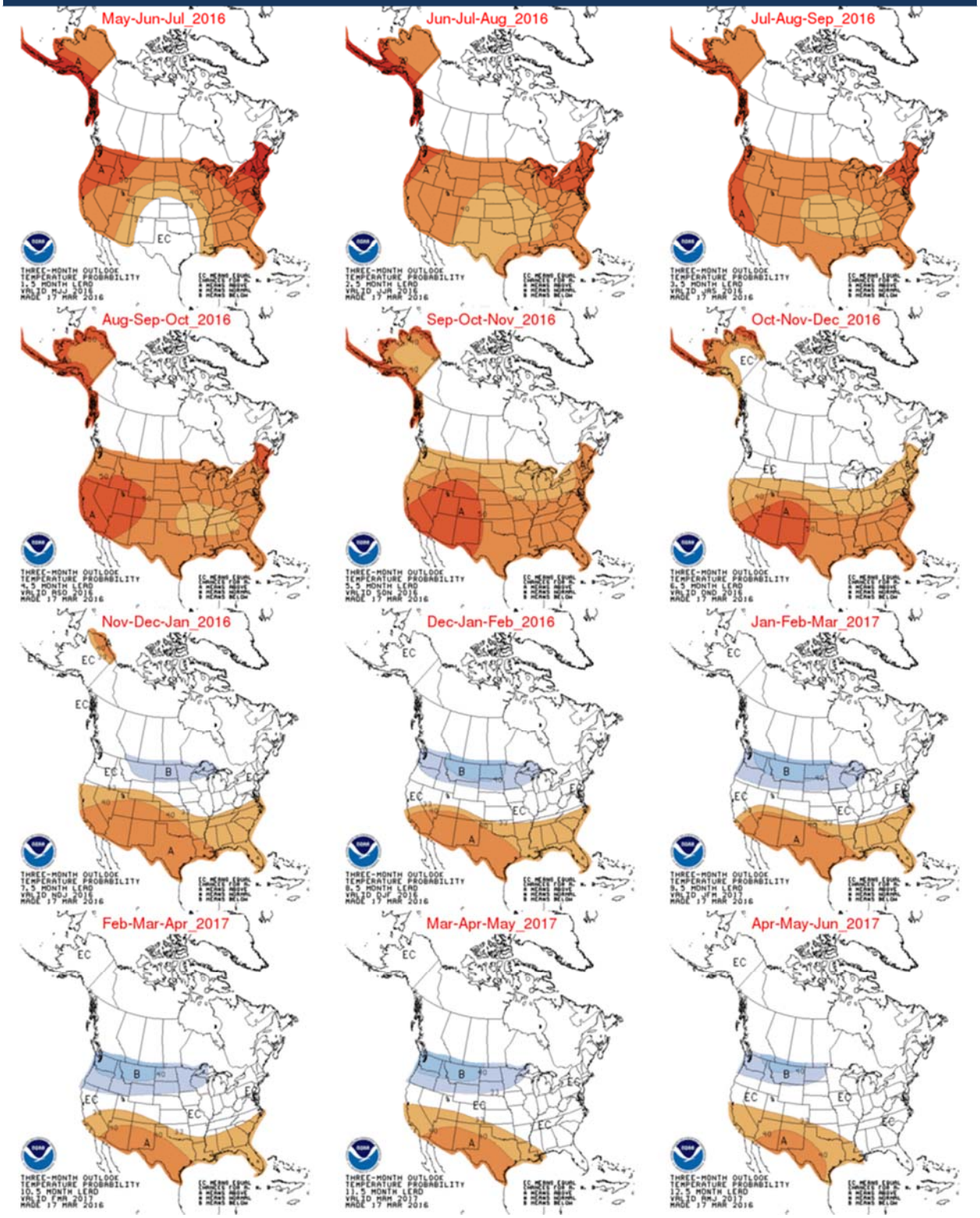
NOAA Multi-Season Precipitation Predictions - Three Month, Rolling Periods

http://www.cpc.ncep.noaa.gov/products/predictions/multi_season/13_seasonal_outlooks/color/p.gif



NOAA Multi-Season Temperature Predictions - Three Month, Rolling Periods

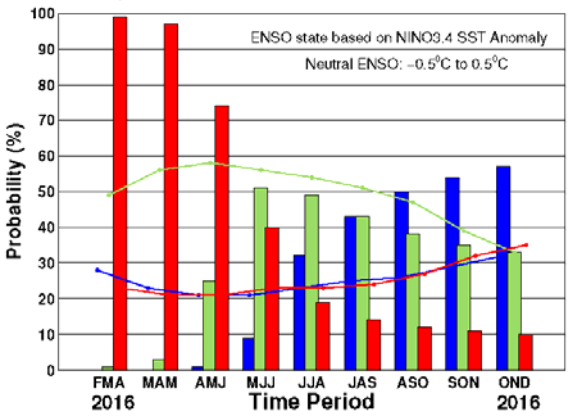
http://www.cpc.ncep.noaa.gov/products/predictions//multi_season/13_seasonal_outlooks/color/t.gif



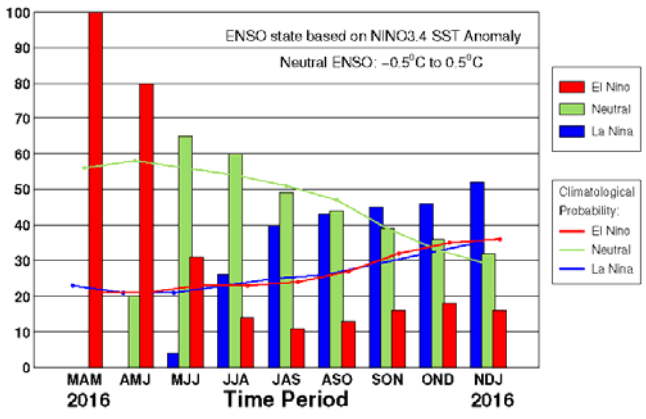
ENSO *QUICK LOOK* **March 17, 2016 A monthly summary of the status of El Niño, La Niña and the Southern Oscillation, or "ENSO",** based on NINO3.4 index (120-170W, 5S-5N)

During mid-March 2016 the tropical Pacific SST anomaly was weakening, but still at a strong El Niño level. All atmospheric variables continue to support the El Niño pattern, including weakened trade winds and excess rainfall in the central tropical Pacific, extending eastward. Most ENSO prediction models indicate continued weakening El Niño conditions over the coming several months, returning to neutral by late spring or early summer 2016, and a chance for La Niña development by fall.

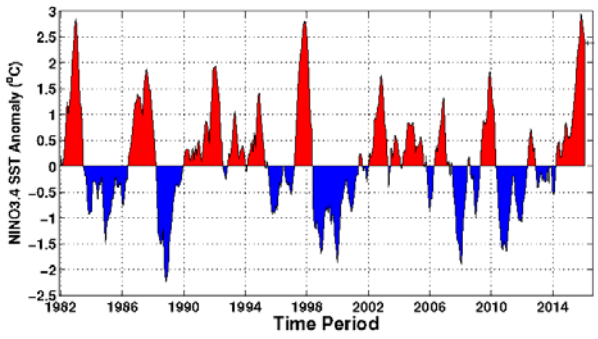
Early-Mar CPC/IRI Consensus Forecast[1]



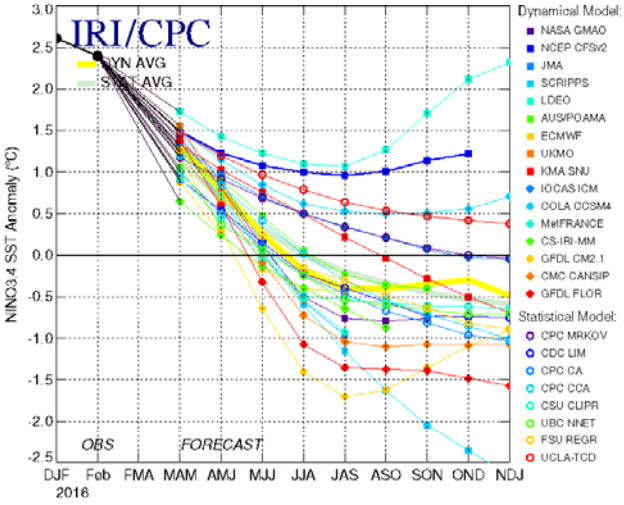
Mid-Mar IRI/CPC Model-Based Forecast[2]



Historical NINO3.4 SST Anomaly



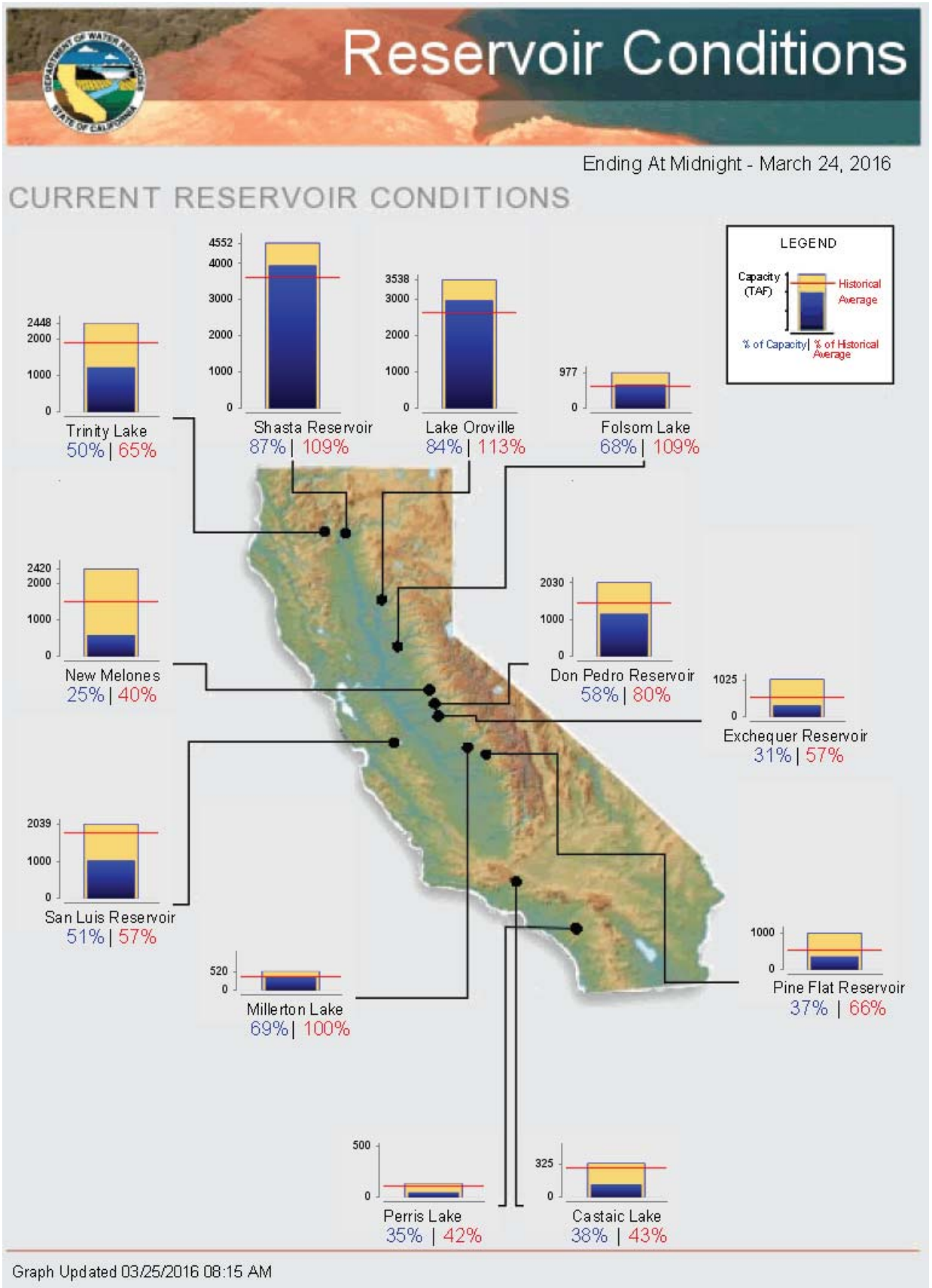
Mid-Mar 2016 Plume of Model ENSO Predictions

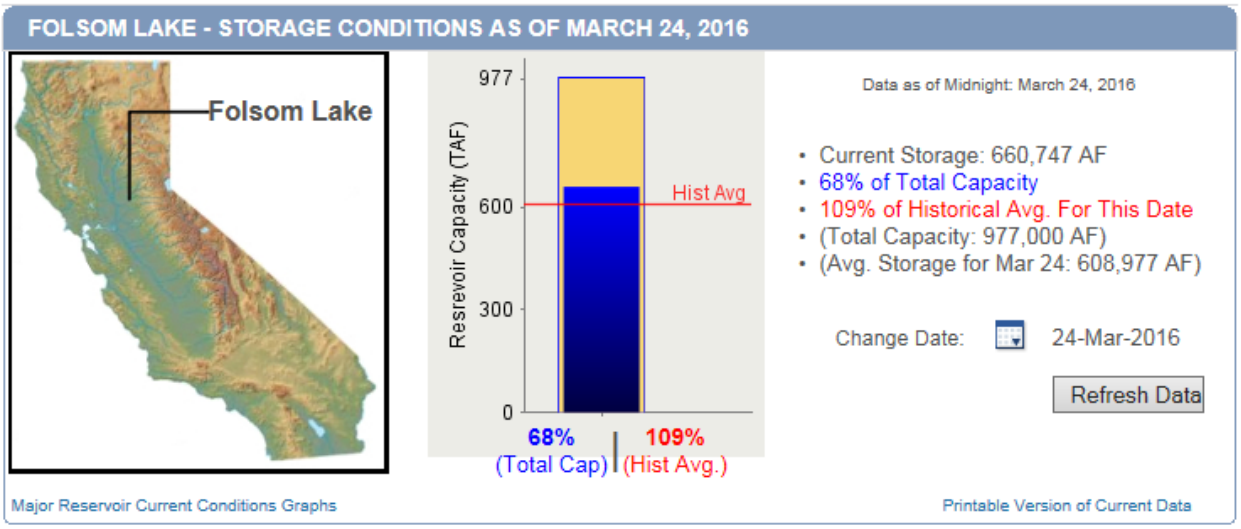


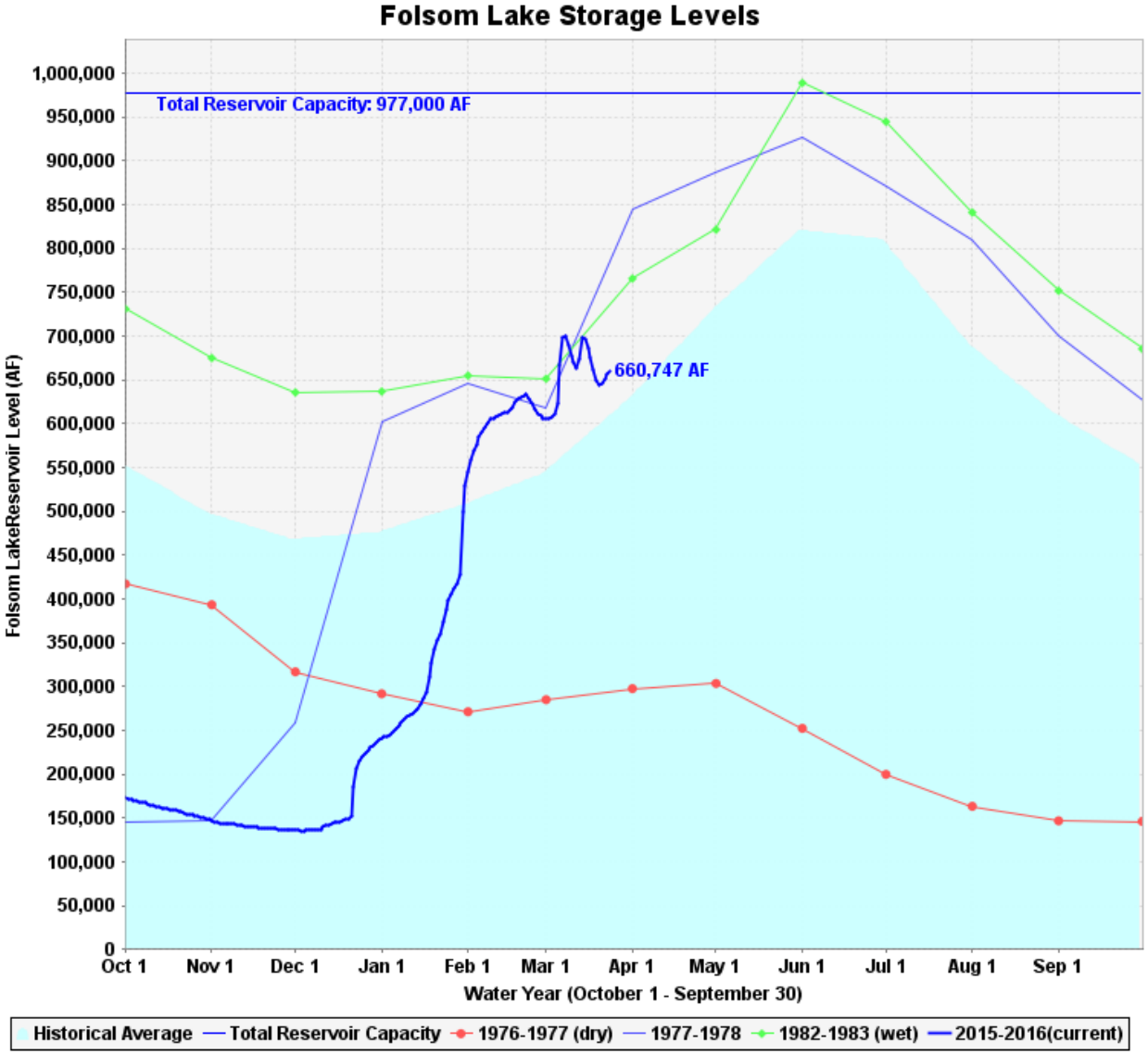
Historically Speaking

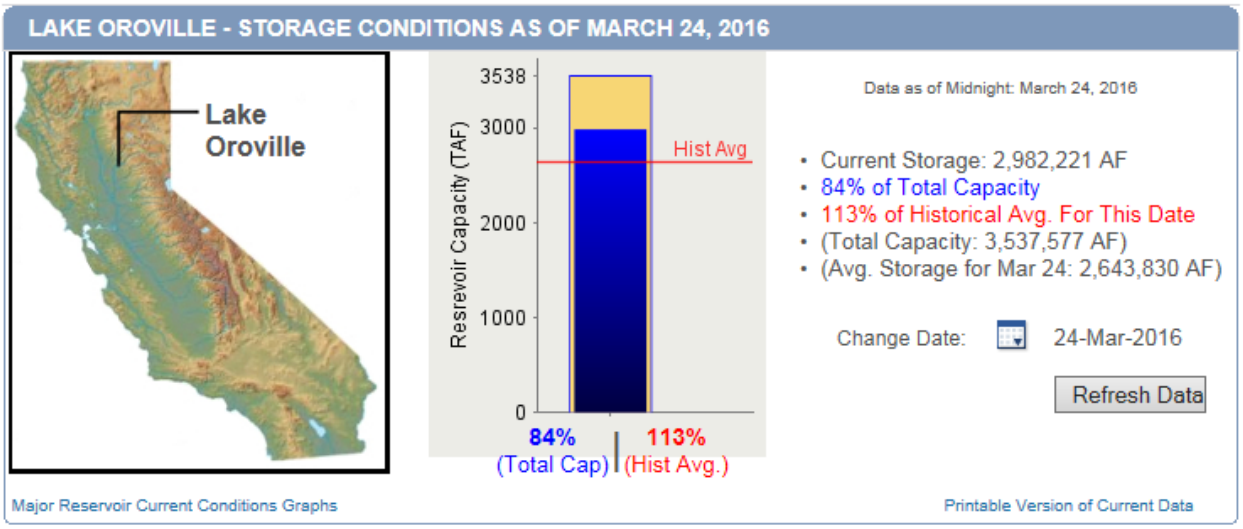
El Niño and La Niña events tend to develop during the period Apr-Jun and they:
- Tend to reach their maximum strength during Dec-Feb
- Typically persist for 9-12 months, though occasionally persisting for up to 2 years
- Typically recur every 2 to 7 years

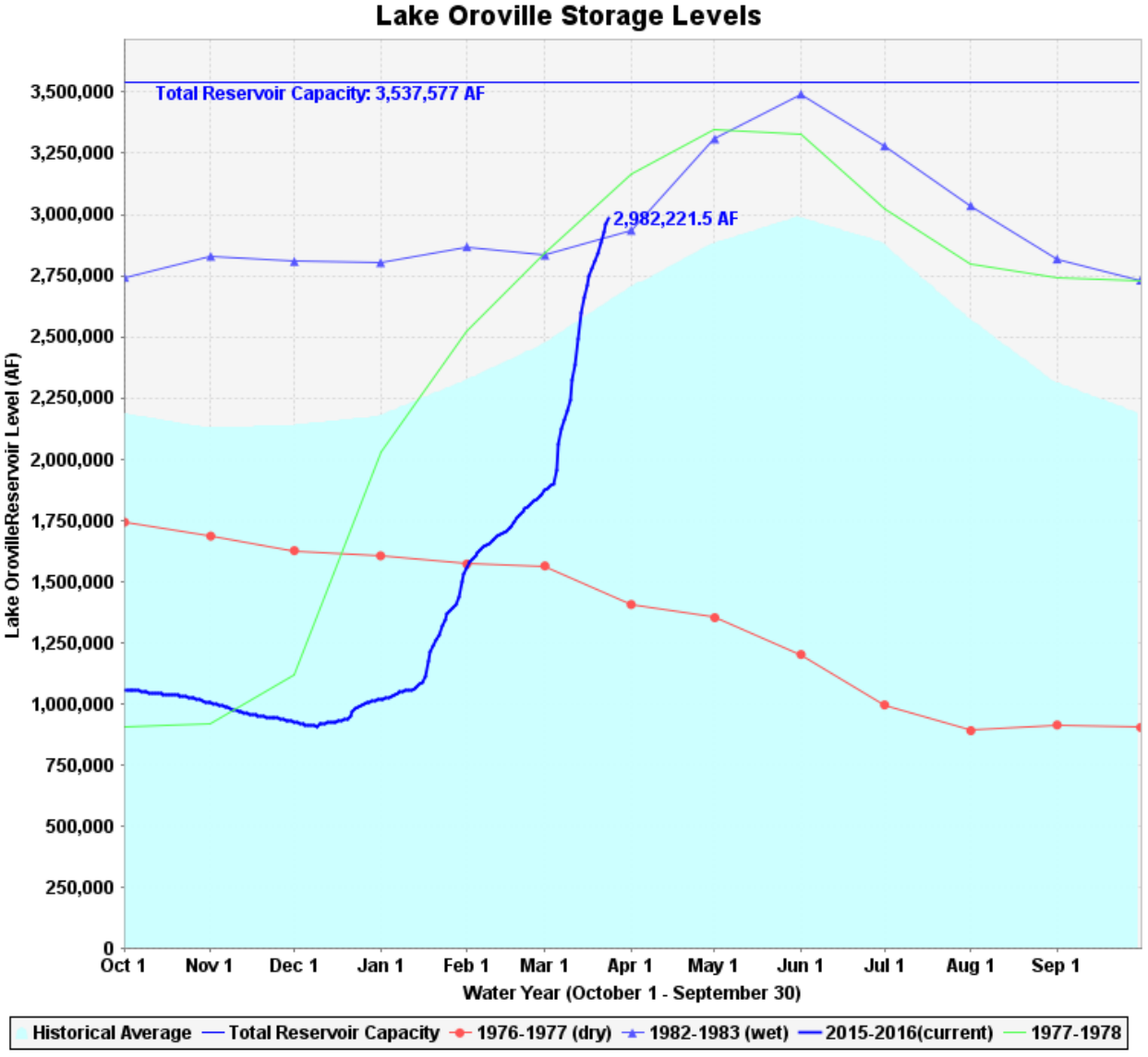
[1]Based on a consensus of CPC and IRI forecasters, in association with the official CPC/IRI ENSO Diagnostic Discussion.
[2]Purely objective, based on regression, using equally weighted model predictions from the plume.

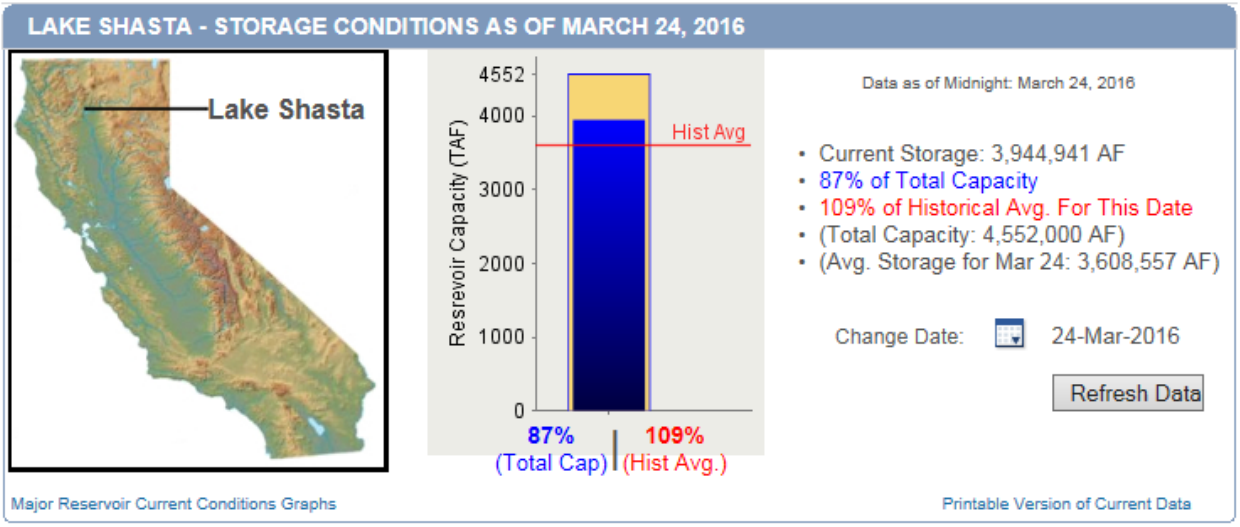

Reservoir Conditions
Ending At Midnight - March 24, 2016
CURRENT RESERVOIR CONDITIONS
LEGEND
Capacity (TAF)
Historical Average
% of Capacity
% of Historical Average
Trinity Lake
50% | 65%
Shasta Reservoir
87% | 109%
Lake Oroville
84% | 113%
Folsom Lake
68% | 109%
New Melones
25% | 40%
Don Pedro Reservoir
58% | 80%
Exchequer Reservoir
31% | 57%
San Luis Reservoir
51% | 57%
Millerton Lake
69% | 100%
Pine Flat Reservoir
37% | 66%
Perris Lake
35% | 42%
Castaic Lake
38% | 43%
Graph Updated 03/25/2016 08:15 AM

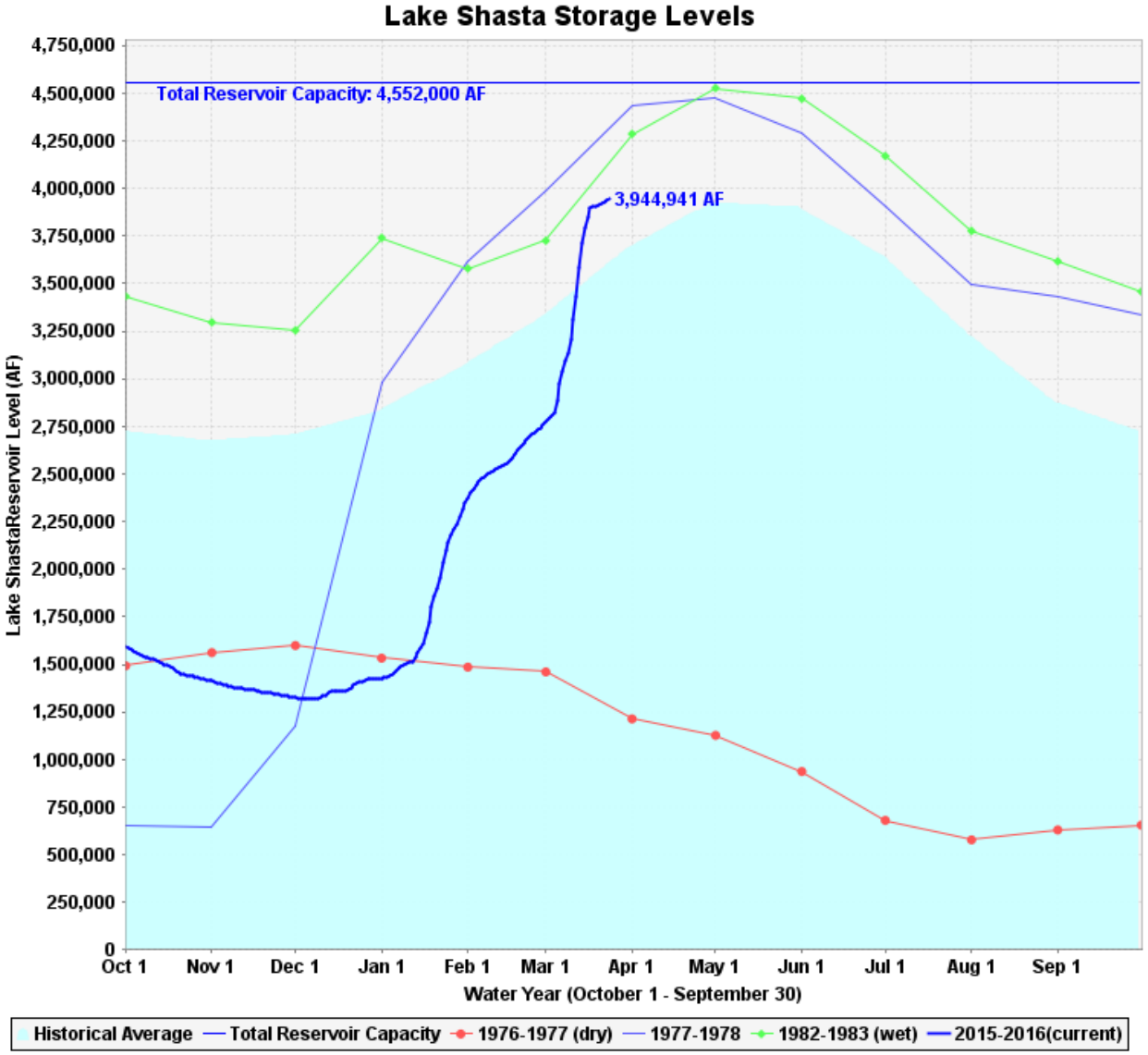

FOLSOM LAKE - STORAGE CONDITIONS AS OF MARCH 24, 2016
Folsom Lake
977
600
300
0
Resrevoir Capacity (TAF)
Hist Avg
68%
(Total Cap)
109%
(Hist Avg.)
Data as of Midnight: March 24, 2016
Current Storage: 660,747 AF
68% of Total Capacity
109% of Historical Avg. For This Date
(Total Capacity: 977,000 AF)
(Avg. Storage for Mar 24: 608,977 AF)
Change Date:
24-Mar-2016
Refresh Data
Major Reservoir Current Conditions Graphs
Printable Version of Current Data


Folsom Lake Storage Levels
Total Reservoir Capacity: 977,000 AF
660,747 AF
Folsom LakeReservoir Level (AF)
1,000,000
950,000
900,000
850,000
800,000
750,000
700,000
650,000
600,000
550,000
500,000
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
Oct 1
Nov 1
Dec 1
Jan 1
Feb 1
Mar 1
Apr 1
May 1
Jun 1
Jul 1
Aug 1
Sep 1
Water Year (October 1 - September 30)
Historical Average
Total Reservoir Capacity
1976-1977 (dry)
1977-1978
1982-1983 (wet)
2015-2016(current)


LAKE OROVILLE - STORAGE CONDITIONS AS OF MARCH 24, 2016
Lake Oroville
3538
3000
2000
1000
0
Resrevoir Capacity (TAF)
Hist Avg
84%
(Total Cap)
113%
(Hist Avg.)
Data as of Midnight: March 24, 2016
Current Storage: 2,982,221 AF
84% of Total Capacity
113% of Historical Avg. For This Date
(Total Capacity: 3,537,577 AF)
(Avg. Storage for Mar 24: 2,643,830 AF)
Change Date:
24-Mar-2016
Refresh Data
Major Reservoir Current Conditions Graphs
Printable Version of Current Data


Lake Oroville Storage Levels
Total Reservoir Capacity: 3,537,577 AF
2,982,221.5 AF
3,500,000
3,250,000
3,000,000
2,750,000
2,500,000
2,250,000
2,000,000
1,750,000
1,500,000
1,250,000
1,000,000
750,000
500,000
250,000
0
Lake OrovilleReservoir Level (AF)
Oct 1
Nov 1
Dec 1
Jan 1
Feb 1
Mar 1
Apr 1
May 1
Jun 1
Jul 1
Aug 1
Sep 1
Water Year (October 1 - September 30)
Historical Average
Total Reservoir Capacity
1976-1977 (dry)
1982-1983 (wet)
2015-2016(current)
1977-1978


LAKE SHASTA - STORAGE CONDITIONS AS OF MARCH 24, 2016
Lake Shasta
4552
4000
3000
2000
1000
0
Resrevoir Capacity (TAF)
Hist Avg
87%
(Total Cap)
109%
(Hist Avg.)
Data as of Midnight: March 24, 2016
Current Storage: 3,944,941 AF
87% of Total Capacity
109% of Historical Avg. For This Date
(Total Capacity: 4,552,000 AF)
(Avg. Storage for Mar 24: 3,608,557 AF)
Change Date:
24-Mar-2016
Refresh Data
Major Reservoir Current Conditions Graphs
Printable Version of Current Data


Lake Shasta Storage Levels
Total Reservoir Capacity: 4,552,000 AF
3,944,941 AF
4,750,000
4,500,000
4,250,000
4,000,000
3,750,000
3,500,000
3,250,000
3,000,000
2,750,000
2,500,000
2,250,000
2,000,000
1,750,000
1,500,000
1,250,000
1,000,000
750,000
500,000
250,000
0
Lake ShastaReservoir Level (AF)
Oct 1
Nov 1
Dec 1
Jan 1
Feb 1
Mar 1
Apr 1
May 1
Jun 1
Jul 1
Aug 1
Sep 1
Water Year (October 1 - September 30)
Historical Average
Total Reservoir Capacity
1976-1977 (dry)
1977-1978
1982-1983 (wet)
2015-2016(current)

Yucaipa Valley Water District

Workshop Memorandum 16-060

Date: **March 29, 2016**

Subject: **Implementation of a Capacity Fee for New Development by the San Gorgonio Pass Water Agency within the City of Calimesa and Riverside County Portion of the Yucaipa Valley Water District**

On July 27, 2015, the Board of Directors of the San Gorgonio Pass Water Agency (SGPWA) adopted a Facility Capacity Charge for new development within the boundaries of the San Gorgonio Pass Water Agency. The SGPWA Facility Capacity Fee consists of two components: (1) the Facility Component of the Facility Capacity Fee ("Facility Fee"); and (2) the Water Component of the Facility Capacity Fee ("Water Capacity Fee").

Facility Component of the SGPWA Facility Capacity Fee

The first component of the Facility Capacity Fee is the Facility Component which will be used for the construction of a new spreading basin and the purchase of additional pipeline capacity.

- The Beaumont Avenue Recharge Facility is a conjunctive use facility designed to take advantage of greater water supplies in wet years. With the reliability of the State Water Project decreasing, a regional conjunctive use project has value to current residents, enabling SGPWA as the regional water agency to import more water in those wet years and store it for future dry years.
- Based on current water demands and projections of future development to 2035, an additional 32 cfs capacity from SBVMWD is required solely to meet the demands of future development. Therefore the cost to purchase this additional capacity is allocated 100% to new development. Negotiations between SBVMWD and SGPWA are ongoing.

The cost for these facilities are shown in the table below from the David Taussig & Associates as the supporting documentation used to justify the Facility Capacity Charge adopted by the SGPWA.

Needs List and Estimate of Costs[1]

Facility Name	Cost Estimate	% Allocated To New Development	Cost to New Development
Beaumont Basin Recharge Facility	$ 5,460,000	80.00%	$ 4,368,000
Land Costs for Beaumont Basin Recharge Facility	$ 3,200,000	80.00%	$ 2,560,000
32 cfs capacity from SBVMWD	$ 4,000,000	100.00%	$ 4,000,000
Total Facility and Land Cost	$ 12,660,000		$ 10,928,000
Administrative fee @ 0.50%			$ 55,000
Grand Total			$ 10,983,000

1. Rounded to nearest $1,000

As indicated above, the estimated total facility cost allocated to new development is $10.9 million. This amount is divided by the total EDUs assigned to new development through 2035 to arrive at a cost per EDU of $170.04. Additionally, an administrative cost element is included for a total cost per EDU of $170.89. These unit costs are shown in the table below.

Facilites Cost Per EDU

Item	Cost	EDUs for New Development	Cost per EDU
New Water Facilities	$ 10,928,000	64,269	$ 170.04
Administrative Overhead	$ 55,000	64,269	$ 0.86
Totals	$ 10,983,000	64,269	$ 170.89

Water Supply Component of the SGPWA Facility Capacity Fee

The second component of the Facility Capacity Fee is the water component ("Water Supply Component"). To meet the demands of new growth with scarce water sources is exacerbated by the significant reduction in reliability of imported water deliveries from the SWP due to periodic drought conditions, regulatory and court case cutbacks in allocations. SGPWA will need to purchase new water rights and entitlements to insure that additional water supplies will be available in the future as the SGPWA service area experiences new development. It has been estimated that total water demand at build-out is expected to be in excess of local supplies and existing imported SWP water, with allowances for reduced reliability. This deficit will need to be balanced by the purchase of new water rights and entitlements.

In July of 2014, the San Gorgonio Pass Water Agency instructed a consultant to prepare a memorandum that updates the estimated cost of purchasing additional Table A water. The consultant estimated the market value of the cost for additional water rights and entitlements at $6,200 per acre-ft. The amount charged to new development as a Water Capacity Fee will be determined based on water demand, on a project by project basis. For example, using an annual drinking water amount of 0.548 acre feet per year, a hypothetical single family dwelling unit would pay a Water Capacity Fee of $3,414.59 (0.548 AFY x $6,231 per acre-foot).

The SGPWA also included an administrative overhead factor of 0.50% of the fee revenue, or $31.00 per acre-ft. This amounts to $31,000 for a purchase of 10,000 acre-ft of water, which is sufficient funding to cover the costs of administrative actions required for such a purchase.

Water Capacity Fee

Item	units	Fee
Fee for New Water Rights and Entitlements	$ per ac-ft	$ 6,200.00
Administrative Overhead	$ per ac-ft	$ 31.00
Total		$ 6,231.00

Therefore, based on the Facility Capacity Charges adopted by the Board of Directors of the San Gorgonio Pass Water Agency, a typical new home would be charged $171 for the Facility Component plus about $3,415 for the Water Supply Component for a total Facility Capacity Charge of $3,586 [$171 + 3,415 = $3,586].

The Yucaipa Valley Water District is in the process of completing an analysis of the adopted Facility Capacity Fees to determine how the adopted fee can be implemented based on the proposed implementation of dual-plumbed homes and the adoption of an allocation plan between with water retailers for the Calimesa portion of our service area.

For the Calimesa portion of the Yucaipa Valley Water District, there will need to be imported water for nearly 10,000 residential dwellings within the City of Calimesa and in portions of the County of Riverside within our sphere of influence.

TABLE 2.0-2
THEORETICAL BUILDOUT CONDITIONS FOR THE PROPOSED GENERAL PLAN PLANNING AREA

Housing and Population Factor	Existing Condition (2013)	Future Growth Potential	Total Theoretical Buildout Condition
Population	8,094[1]	31,746	39,840
Residential Units	3,715[1]	12,823	16,538
Nonresidential Factor	**Existing Condition (2013)**	**Future Growth Potential**	**Total Theoretical Buildout Condition**
Commercial Acreage	223	430.6	653.6
Industrial Acreage	22	35	57
Public, Quasi-Public, Park, and School Acreage	36	214	250
Open Space Acreage*	144	1,267	1,411
Road Acreage	455	196	651
Total Nonresidential Acreage	*880*	*2,142.6*	*3,022.6*

*Source: [1]DOF 2013. Notes: *Open Space is land that is not developed but is not necessarily public or private park or other recreational land. The Summerwind Ranch and Mesa Verde Estates specific plans provide for 1,267 acres of open space.*

***Source:** City of Calimesa, 2013 General Plan Update, Draft Environmental Impact Report, Page 2.0-27*

It is critical for the Yucaipa Valley Water District to calculate and determine the appropriate Facility Capacity Fee in order to provide the necessary water resources for new developments in the City of Calimesa.

MEMORANDUM

TO: Board of Directors

FROM: General Manager

RE: Adoption of Facility Capacity Fee

DATE: July 27, 2015

Summary:
The Agency has worked on adopting a facility capacity fee off and on for the past five years. The purpose of this proposed Board action is to consider the Nexus Study ("Study") and to formally adopt the fee that has been discussed on numerous occasions.

The Study prepared for the Board Hearing on July 27, 2015 has been updated as a result of the City of Calimesa revising its land use plans to increase planned industrial development from 412,000 square feet to 18,700,000 square feet by 2035 ("Calimesa Update"). The effect of this increase in industrial use demand for water has the effect of reducing the Facility Fee Component from $177.64 per EDU to $170.89 per EDU.

The Calimesa Update does not affect the ability of the Board to consider the adoption of the Findings and Facility Capacity Fee Study because its impact is to reduce the overall fee to all development and thus does not result in harm to potential new water users. The Study was revised and new calculations made to assure that the Facility Capacity Fee does not exceed the reasonable cost of providing the service for which the fee is charged.

As soon as the Calimesa Update was calculated to be included in the Study, the Riverside BIA was notified by email and a copy of the updated Study was sent to them on July 22, 2015.

Background:
The San Gorgonio Pass Water Agency Act empowers the Agency to adopt a facility capacity fee to fund infrastructure and additional water

supplies. This is similar to developer-based fees imposed by other public agencies, including water agencies, school districts, cities, and counties, throughout California. The need to adopt and implement such a fee is acute, as without it the Agency will not have sufficient funding to procure the additional water supplies needed to meet future water demands.

The Agency has considered various revenue generating options over the past two decades, including adopting a facility capacity fee and adopting a standby charge. Neither has been adopted by the Board, though the Board has discussed each of these over the years.

Approximately a year ago, the Board directed staff to update the previous capacity fee nexus study and to bring it to the Board for consideration. A workshop was held on June 26, 2014 to gather input from the public on the nexus study process. The Agency contracted with David Taussig & Associates, who produced an earlier facility capacity fee nexus study, to produce a new one that reflects current demographics and facility plans.

Detailed Report:

Details on the need for the fee and the nexus of the fee will be presented at the Board meeting. The fee is needed in order to fund procurement of additional long-term supplemental water supplies for the region. Most of the fee is in the cost of new long-term water rights. A small portion of the fee is associated with additional infrastructure needed to augment conveyance capacity to the region and storage of the additional water supplies.

Assuming the Board adopts the fee, the next step would be for staff to pursue cooperative agreements with either retail water agencies or land use planning agencies, as identified in the SGPWA Act, to enable the Agency to collect the fee on new construction. The cooperative agreements will include such issues as:

- Total water use for a new development would be calculated based on local retail water agency standards.
- Water purchased with funds from a particular project would be reserved for that project.

- Developers would receive credits upon payment to the Agency in the event of overlapping water supply capacity fees such that a developer would not have to pay twice for the same water.

Upon adoption of a cooperative agreement with another public agency, be it a city, county, or retail water agency, the Agency would ensure that future development within that entity's service area would be covered in the Agency's urban water management plan and that entity would have a right to expect future water supplies (subject to availability) to be provided by the Agency for that development.

The hearing of the Study has been noticed, published and made available to the public as required by law.

The nexus study identifies two components of the fee—a water supply component, based on the number of acre-feet that would be used by a new development, and a facility component. The amount of the facility component is approximately $171 per equivalent dwelling unit (EDU). The infrastructure to be funded through the fee includes additional capacity in the Foothill Pipeline and a storage facility in the Beaumont Basin. Other facilities considered in previous versions of the nexus study have been deleted in this version.

For the water component of the fee, the amount identified in the study is $6231 per acre-foot of new water. Thus, the amount of the fee for any new home would be based on the expected water use of that home and could vary depending on location, type of development, size of lot, number of bathrooms, etc. At this time, the average water use per single family home in the region is approximately 0.548 acre-feet per year. Using this as an average, the water component of the fee for a typical average home at this time would be approximately $3415. As homes become more water-smart in the future, this figure could be reduced significantly.

Fiscal Impact:
Adoption of the fee would have a net positive impact on the Agency. It would enable the Agency, assuming that cooperative agreements are successfully negotiated, to augment its revenues so that infrastructure and new water supplies could be funded. The capacity

fee revenues would combine with revenues from water sales and general fund tax revenues to purchase additional long-term water supplies. Facilities would be constructed using capacity fees and general fund revenues. No funds from water sales would be used to construct or purchase capacity in facilities.

Relationship to Strategic Plan:
The strategic plan calls for the Agency to develop a regional financing plan for the future. The capacity fee has long been an integral part of a regional financing plan, and is thus an integrated part of the Agency's strategic plan and 2010 urban water management plan. In addition, the capacity fee and Study are consistent with the Agency's 2010 urban water management plan.

Recommendation:
Staff recommends that the Board adopt Resolution 2015-05 adopting a capacity fee and directing staff to negotiate cooperative agreements with local water districts and/or land use planning agencies.

RESOLUTION NO. 2015-05

RESOLUTION OF THE BOARD OF DIRECTORS OF THE SAN GORGONIO PASS WATER AGENCY TO ADOPT FACILITY CAPACITY FEES FOR FACILITIES AND WATER

WHEREAS, the San Gorgonio Pass Water Agency (SGPWA) is a public agency formed and existing pursuant to Article 101 of the California Water Code Appendix (SGPWA Act) in 1961; and

WHEREAS, SGPWA entered into a contract with the California Department of Water Resources (DWR) in 1962 for a Table A amount of water capacity in the California State Water Project (SWP) which is currently 17,300 acre feet per year (AFY) to bring supplemental water to the SGPWA service area; and

WHEREAS, there is a need to meet future increasing demands for SGPWA supplemental water to the SGPWA service area which will require additional water facilities to be constructed to distribute water and to acquire additional water rights to meet future increasing demands; and

WHEREAS, the Board of Directors finds and determines that the present existing water importation, production, transportation, delivery facilities and water supplies are inadequate to meet anticipated demand; and

WHEREAS, Section 101 – 27.1(a) of the SGPWA Act authorizes SGPWA to impose a facility capacity fee, which is in the nature of a connection fee, for the right to make a new retail connection to the water distribution system of any retail water distributor that is located within the boundaries of the SGPWA and that obtains all or any portion of its water supplies from SGPWA; and

WHEREAS, Section 101- 27.1(c) also provides the facility capacity fee referred to in subdivision (a) shall be adopted, established, and imposed only following a public hearing and in accordance with the requirements set forth in Chapter 5 (commencing with Section 66000 of Division 1 of Title 7 of the Government Code as it now exists or may hereafter be amended; and

WHEREAS, the Facility Capacity Fee as set forth in the SGPWA Act, Sections 101 – 27.1 (a) through (i) will assist SGPWA to fund (1) the purchase of capacity in existing pipeline systems owned by other public agencies; (2) and additional basin recharge project for underground water storage in the Beaumont groundwater basin, including land purchases associated with such basin activity; and (3) the purchase of new water and/or water rights and entitlements to meet future water demand; and

WHEREAS, pursuant to Section 101 – 27.1 of the SGPWA Act, SGPWA has prepared a Capacity Fee Study (Study) to support the need for additional water facilities and new water and/or water rights in that the existing facilities are not adequate to meet the future increasing water needs in the SGPWA service area; and

WHEREAS, the Study meets the requirements of Section 101 – 27.1 and Government Code Section 66013 to ensure that the Facility Capacity Fee does not exceed the estimated reasonable cost of providing the service for which the fee is imposed and provides a clear and concise document that will serve as the basis for the proposed fee levels; and

WHEREAS, SGPWA has provided all of the notices prior to and conducted a public hearing on July 27, 2015 required by Section 101 – 27.1 (c) of the Agency Act; and

WHEREAS, SGPWA after close of the hearing considered the Study, and proposed Findings.

NOW THEREFORE BE IT HEREBY RESOLVED

1. The matters set forth in the recitals to this Resolution are true and correct statements and are made findings and determinations of the Board of Directors.

2. That the Findings as set forth on Attachment 1 concerning the Study are hereby adopted.

3. The Board of Directors finds that the Facility Capacity Fees as defined in the Study and the Findings are for the purpose of obtaining funds for capital projects necessary to maintain service within SGPWA as set forth in this Resolution and, therefore, the establishment of such fees is not subject to the California Environmental Quality Act.

4. That the Study is hereby approved.

5. That the Facility Capacity Fees as set forth in the Study and on Attachment 2 hereof are hereby adopted and shall take effect immediately.

6. The General Manager is authorized to contract with the counties in which it is located and with the cities within the SGPWA for the collection of the Facility Capacity Fee along with building permit fees or other fees related to the improvement of property, or may contract for collection of the Facility Capacity Fees by the water retail distributors (SGPWA Act 101 – 27.1 (f)).

7. The Facility Capacity Fee component shall be automatically adjusted without further action of the Board effective on July 1st of each year, beginning July 1, 2016, by a percentage equal to the change in Construction Cost Index for Los Angeles as published by Engineering New Record for the preceding twelve months as set forth in the Study.

8. The Facility Fee component of the facility capacity fee shall be reviewed periodically as determined by the General Manager to determine if changes are needed and reasonable in unit prices, facility requirements, and water demands and demographics in order to ensure that Facility Fee cost allocations are reasonable and that collections over time will fund the required facilities.

9. The Water Capacity Fee component shall be reviewed annually in the month of July, commencing July 1, 2016 to adjust the Water Capacity Fee by a reasonable percentage based on the cost of actual water purchases, an updated water rights appraisal or comparisons of recent

purchases of additional water rights by statewide municipalities and special districts over the preceding twelve months.

10. The General Manager is further authorized to take any and all other actions to implement and carry out this resolution.

11. All resolutions or administrative actions by the Board of Directors, or parts thereof that are inconsistent with any provision of this Resolution are hereby superseded only by this Resolution to the extent of such inconsistency.

12. If any section, subsection, clause, sentence, or phrase in this Resolution is for any reason held invalid, the validity of the remainder of this Resolution shall not be affected thereby. The Board hereby declares it would have passed this Resolution and each section, sentence, clause or phrase thereof, irrespective of the fact that all or more sections, subsections, clauses, sentences, or phrase are held invalid.

13. The Resolution shall take effect immediately.

AYES:

NOES:

DATE: July 27, 2015

SAN GORGONIO PASS WATER AGENCY

By _____
Secretary of the Board of Directors

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ATTACHMENT "1"
FINDINGS
SUPPORTING THE ADOPTION OF FACILITY CAPACITY FEES

I. INTRODUCTORY FINDINGS

a. The San Gorgonio Pass Water Agency ("Agency" or "SGPWA") is one of 29 State Water Contractors, and is a special act district formed, existing and exercising its powers and purposes pursuant to specific enactment by the California Legislature. (San Gorgonio Pass Water Agency Law, Water. Code-App. §101-1, *et seq.*, hereinafter referred to as the "Agency Act."). Its boundaries extend through the cities of Calimesa, Beaumont, and Banning and unincorporated Riverside County areas from Cherry Valley to Cabazon.

b. The Agency has a mandatory duty to import supplemental water and to protect and enhance local water supplies to serve the needs of present and future water users and to sell imported water to local water districts within the Agency service area, and in so doing to give the highest priority to eliminating groundwater overdraft conditions within any agency or district receiving State Water Project ("SWP") water delivered by the Agency. (Cal. Wat. Code-App. §§ 101-15 & 15.5; see also *Swanson v. Marin Municipal Water Dist.* (1976) 56 Cal.App.3d 512, 524 [water district has a "continuing obligation to exert every reasonable effort to augment its available water supply in order to meet increasing demands"]; *Glenbrook Development Co. v. City of Brea* (1967) 253 Cal.App.2d 267, 277 ["county water district has a mandatory duty of furnishing water to inhabitants within the district's boundaries."].)

c. The Agency is authorized to establish and impose a facility capacity fee ("FCF"), which is "in the nature of a connection fee, for the right to make a new retail connection to the water distribution system of any retail water distributor with the agency" that obtains any portion of its water supply from the Agency. (Cal. Wat. Code-App. § 101-27.1(a).)

d. The California Environmental Quality Act ("CEQA") requires public agencies to analyze the water supply impacts of projects, including estimations of project water demand and evidence of adequate long-term water supplies. Failure to do so can result in a court-ordered revocation of project approvals and permits. For example, in *Preserve Wild Santee v. City of Santee* (2012) 210 Cal.App.4th 260, the Court of Appeal determined that a water district water supply assessment failed to provide firm assurance of adequate water supplies for a residential project. This was based in part on uncertainties and a failure to discuss the contingent nature of identified supplies. As a result, the project's environmental impact report failed to meet CEQA's requirements. Similarly, in *Center for Biological Diversity v. County of San Bernardino* (2010) 185 Cal.App.4th 866, the Court of Appeal determined that a biological waste composting facility was required to have completed a water supply assessment and failure to do so resulted in an environmental impact report that

failed to adequately address the issue of water supply for the facility. This was due to the environmental impact report's identified water supplies being purely speculative.

e. The Agency Board of Directors ("Agency Board") has determined that "existing water importation, production, treatment, transportation, or delivery facilities or other related works are inadequate to meet anticipated demand." Therefore the Agency must develop facilities to meet the needs of retail water agencies within its service area as part of its "mandatory duty of furnishing water to [existing] inhabitants within the [Agency service area]" and its "continuing obligation to exert every reasonable effort to augment its available water supply in order to meet increasing demands." The proposed Facility Capacity Fees are necessary to fund such facilities (Cal. Wat. Code-App. § 101-27.1(b); *Glenbrook Development Co. v. City of Brea* 253 Cal.App.2d at p. 277; *Swanson v. Marin Municipal Water Dist.* 56 Cal.App.3d at p. 524.)

II. STATEMENT OF NEED

a. The Agency was formed in 1961with the knowledge that at some time in the future, water demand in its service area would exceed available local water supply. That is at hand and the Agency must plan ahead to have sufficient water supply available to support existing and new development.

b. In *San Timeteo Watershed Management Authority v. City of Banning* (RCSC Case No. RIC 389197) [the "Beaumont Basin Adjudication"], the court determined that pumping from the Beaumont Groundwater Basin ("BSU") to supply groundwater to local users exceeded the natural recharge of the basin. The court allowed the parties to continue to exceed the natural recharge of the BSU temporarily to create dewatered storage—essentially an underground reservoir—and to have time to find other ways to balance supply and demand. Once the "temporary surplus" called for in that adjudication is fully-withdrawn, however, water demand in dry years will outstrip currently available supply for existing and future development. A watermaster was appointed to manage the BSU through controlled overdraft (temporary surplus) through 2013. The BSU is now required to operate in a balanced condition, replacing an amount of water equal to the amount removed from the basin to meet local demands, over time. The Beaumont Basin Adjudication is an official document of the State of California, on file with the Riverside County Superior Court and on file with SGPWA.

c. The 2010 Urban Water Management Plan for the San Gorgonio Pass Water Agency ("2010 SGPWA UWMP"), adopted and published by the Agency Board in December 2010, is the main water planning document for the Agency in its service area, pursuant to law. The 2010 SGPWA UWMP projects estimates of water supply and demand for the Agency service area to the year 2035.

d. The Agency is mandated by the UWMP Act to provide reasonable, conservative estimates of water use based on demand projections provided by retail agencies

within its service area. The Agency is required by the UWMP Act to rely on these retail agency-provided numbers in its projections. Thus the 2010 SGPWA UWMP notes on page 2-2 that the demand numbers on which the plan relies "are derived entirely from data provided by each retail water agency in recent coordination activities...

e. The 2010 SGPWA UWMP charts the discrepancy between future demand and supply in its "Section 5 Water Reliability." In all dry year types, beginning in 2015, significant amounts of supplemental short-term water will be needed from the Agency to meet demands in the Agency service area. Any Agency water withdrawn from groundwater storage in dry years to meet these short-term needs must have been stored previously in wet years.

f. In order to facilitate storage and conjunctive use to benefit existing development in dry years or during periods of significant water supply interruption, the Agency must have additional storage, transmission, and groundwater percolation capacity to take advantage of peak water availability on short notice in wet months and/or years.

    i. For example, "Article 21" water is a classification under the Agency's contract for SWP water with the Department of Water Resources. This water is outside of various agencies percentages of "Table A" water that they are allocated every year. DWR declares when this type of "bonus" water is available on short notice. So if an agency desires to take advantage of Article 21 water when it becomes available, that agency must have sufficient pipeline capacity to move the water to its area and must have sufficient capacity to store it to use later. If an agency relies primarily on groundwater storage and not surface water in a reservoir, then the agency must have sufficient percolation capacity to recharge a substantial amount of water on short notice.

g. New development will need additional facilities for the same reliability purposes as existing development—that is, increased capacity to take more water on short notice when it is available to store it for when it is not available. New development, however, adds to total water demand. It thus adds to the capacity or size of the facilities needed by existing development. It also creates the need for some facilities solely on its own. Some, but not all, new development will also need new permanent water rights (see Section IV.d.ii, below). Section **5** of the **2010** SGPWA UWMP projects that new development will require additional permanent water rights prior to **2035** to meet long-term average annual demand.

h. The 2010 SGPWA UWMP notes that existing "facilities do not provide sufficient capacity to recharge all imported water supply that may be available in a given year. Conditions in the SWP may require that SGPWA use its Table A allocation over a shorter period of time (e.g. a six month window as opposed to spread evenly over the course of the year). This would require SGPWA to plan for surplus capacity. Moreover, SGPWA plans to obtain supplemental sources of

imported water and to use SWP Article 21 water whenever possible. The timing of supplemental sources of imported water are *[sic]* not known, but could also require deliveries to occur over a shorter time-period. Article 21 water is declared on a weekly basis, thus its use is highly limited by the capacity of conveyance and recharge facilities."

i. The Agency Board finds that a need exists for new facilities to convey and store water when it is available to increase water supply reliability for existing and future development. The Agency Board finds substantial evidence in the record to support this conclusion.

III. REGIONAL, INTEGRATED SYSTEM

a. SGPWA owns and maintains the Regional, Integrated System ("SGPWA System") consisting of water storage and conveyance facilities that provide benefit to all lands within SGPWA boundaries by providing access to an imported water supply through the SWP. Each facility within the system provides delivery of water for groundwater basin replenishment, storage for local use when imported water is in short supply, or direct delivery to retail agencies. SGPWA will need to construct new facilities within this system to augment current storage capacity and delivery capabilities in order to meet the demands of current and future development. Thus, imported water stored in the Beaumont Basin, or any other groundwater basin, by SGPWA can be locally used as part of a conjunctive use program in time of shortage, allowing SGPWA imported water supplies to be beneficially used by water users within the SGPWA service area. The integrated system will provide the central core access to a water supply for lands that would not otherwise have such access during prolonged periods of limited imported water deliveries and during years of surplus. For example, the Beaumont Basin Recharge Facility, more fully described in Section V.1 of the Study, provides an interconnected system of water delivery to local water agencies that overlie the Beaumont and Banning groundwater basins. The Beaumont Basin Recharge Facility adds recharge capacity and storage to an overdrafted basin in order to provide reliable water supplies to both new and existing development within the entire SGPWA service area.

b. The SGPWA System will increase reliability for all development, both existing and future, throughout the Agency service area in wet, average, and dry years through conjunctive use. The SGPWA System will provide additional capacity, conveyance, recharge, and storage facilities for SWP water that may be filled in wet months and/or years, and drawn down in dry months and/or years.

    i. In wet years the Agency will be able to take all of its available Table A allotment, any future acquired short- or long-term water transfers, and even "bonus" Article 21 water because the SGPWA System provides the capacity to move, recharge, and store that water. This capability is currently nonexistent.

ii. Conjunctive use of the abundant groundwater storage in the Agency service area provides the flexibility needed for the Agency to manage its supply and protect users in its service area from significant supply shortfalls.

1. The Beaumont Basin Recharge Facility will benefit future development by increasing the BSU's recharge capacity to take advantage of dewatered storage to store supplemental water when future water demand reaches the point where it becomes necessary. Through conjunctive use the Agency will be able to store water when it is available during wet months or years and then withdraw that water as needed during dry months and/or years.

iii. The SGPWA System will benefit both existing and future development by providing increased reliability and supply in wet, average, and dry years through conjunctive use. Through conjunctive use the Beaumont Avenue Recharge Facility will act as an additional storage facility for SWP water that may be filled in wet months and/or years, and drawn down in dry months and/or years.

iv. The 32 cubic foot per second ("CFS") Capacity from San Bernardino Valley Municipal Water District will benefit future development by providing the needed capacity to bring in supplemental water when future water demand reaches the point where it becomes necessary.

c. As Appendix B of the July 21, 2015 Capacity Fee Study for San Gorgonio Pass Water Agency ("Study") notes, "in order to meet average delivery of SWP water to the Agency's service area, the Agency must have the ability to convey and store SWP water during the multiple-wet years to utilize this water during multiple-dry years. The implementation of recharge facilities in the Beaumont groundwater basin will provide the Agency the terminal storage to implement the required conjunctive use program to fully utilize the Agency's Table A amount and be able to provide water to its retail customers during protracted drought periods."

d. The Agency Board finds that the SGPWA System is necessary to fulfill the Agency's legislative mandate to import supplemental water and to protect and enhance local water supplies to serve the needs of present and future water users. The Agency Board finds substantial evidence in the record to support this conclusion.

IV. THE STUDY REPRESENTS A FAIR ALLOCATION OF THE COSTS OF THE SGPWA SYSTEM AND FUTURE PERMANENT WATER PURCHASES

a. The purpose of the Study is to ensure that the FCF does not exceed the estimated reasonable cost of providing the service for which the fee is imposed and to

provide a clear and concise document that will serve as the basis for the proposed fee level.

b. The Study calculates the need for new water facilities through the year 2035. It does so for two reasons: 1) the Agency Board determined that projecting demand for facilities through that year (vs. ultimate buildout) is reasonable because it is consistent with local agency UWMPs and water demand estimates, and; 2) that year allowed the Study to draw from and be consistent with the 2010 SGPWA UWMP, the main water planning document for the Agency service area.

c. The City of Calimesa notified the Agency it had updated its land use plan on July 20, 2015 ("Calimesa Update") which increased its industrial square footage from 412,000 square feet to18,700,000 square feet in 2035. Upon verifying the impact of the Calimesa Update on the Study, the Agency modified the Study to include such information on July 21, 2015. It is fair and reasonable to proceed with the hearing on the Study and adoption of the findings and the Resolution adopting the Study and implementing the FCF on July 27, 2015 for the following reasons:

1. All notices, publication and availability of the study as required by law have been complied with by the Agency.

2. Only Riverside BIA requested a special notice of the hearing which was provided by the Agency on July 13, 2015

3. A copy of the Study was sent to the Riverside BIA on July13, 2015.

4. As soon as the Calimesa Update impact on the Study was verified on July 21, 2015, the Agency notified Riverside BIA by e-mail on July 22, 2015.

5. A copy of the Updated Study was sent by e-mail to riverside BIA on July 22, 2015.

6. The result of the Calimesa Update on the Study was to reduce the FCF component from $178 per EDU to $171 per EDU.

7. The calculation of the effect of the Calimesa Update reducing the fee to $171 per EDU was completed using the same methodology applied in a consistent manner as the calculation to derive the cost of $178 per EDU.

8. The reduction in the FCF does not harm the users to which the fee is charged because it reduces their costs.

9. It is reasonable for the public to expect that hearings on Facility Capacity Fees will result in changes to the fee based on comments and concerns of the Agency Directors, Agency staff, other public agencies and members of the public.

10. The reduction of the fee from $178 per EDU to $171 per EDU is only a 4% change in the fee which is not a material change and does not deprive any affected

party or member of public of it rights to provide meaningful information at the hearing.

11. Other than Riverside BIA, there has been no requests of the Agency for a copy of the Study.

12. The Board finds substantial evidence in the record to support the conclusion to proceed with the adoption of the Facility Capacity fee on July 27, 2015.

d. To accurately allocate costs in accordance with the law, the Study allocates the cost of the SGPWA System between existing development and new development, and allocates the costs by type of development by using a single metric: equivalent dwelling units ("EDUs") for new construction.

e. The Study also breaks up the FCF into two components: the facility capacity fee component and the water capacity fee component.

i. The facility capacity fee component will be required of all new development, regardless of the water capacity fee component. Regardless of the amount of water required, all new development will benefit from the increased reliability provided by the SGPWA System.

ii. The water capacity fee component will only be required of new development if the retail agency tasked with supplying water to that development determines that additional supplemental water is needed. Whether sufficient supply will be able meet a specific project's demand will be determined on a project-by-project basis in coordination with retail water distributors.

f. The Study divides the cost of some of the SGPWA System Facilities between existing development and new development, given the water supply reliability needs of both groups. The facility capacity fee component is only required of new development. Existing development will pay for its share of the cost of the facilities through water rates and other sources of SGPWA revenues and assets.

iii. As detailed in Section V of the Study, to determine the benefit to new development of the Agency portion of the SGPWA System, the Study divided the total projected water demand in the year 2035 by the amount of that total demand attributable to new development. This new development is responsible for a portion of the costs of the facilities listed above as follows: new development is responsible for 80% of the costs of the Beaumont Basin Recharge Facility and 100% of the 32 CFS capacity from San Bernardino Valley Municipal Water District ("SBVMWD") because the 32 CFS capacity from SBVMWD will only benefit new development.

g. When the estimated total SGPWA System cost allocated to new development ($10,983,000) is divided by the estimated demand for facilities created by that

new development by 2035, the result is a facility capacity fee component of $170.04 per equivalent dwelling unit ("EDU").

h. The Agency received appraisal information from Lynn Takaichi of Kennedy/Jenks Consultants. Mr. Takaichi is one of the leading experts on the subject of water transfers and water pricing in the State of California. Mr. Takaichi estimated that the cost of additional water rights (the water capacity fee component) to be $6200.00 per acre-foot. This information is included in the study as Appendix D entitled "Water Rights Appraisal."

i. The Agency Board finds that the allocation of the cost of the SGPWA System between existing development and new development, and the allocation by type of development does not exceed the estimated reasonable cost of providing the service for which the fee is imposed. The Agency Board finds substantial evidence in the record to support this conclusion.

V. AGENCY ADMINISTRATIVE OVERHEAD

a. The Agency is entitled by law to recover the reasonable costs associated with administrating the facility capacity fee program as part of the "estimated reasonable cost of providing the service for which the fee or charge is imposed..." (Cal. Gov. Code § 66013(a); Cal. Wat. Code-App. § 101-27.1(d).) The Agency Board determined that the reasonable cost of administering the FCF program is .50%.

b. As detailed in Tables 9 and 12 of the Study, the administrative overhead for the facility capacity fee component is $.86 per EDU and the administrative fee for the water capacity fee component is $31.00 per acre-foot respectively. As described more fully in the Study, these represent reasonable administrative overhead costs for the maintenance of these funds and for administrative costs associated with the procurement of a new water source.

c. The total facility capacity fee component, including administrative overhead, is $170.89 per EDU.

d. The total water capacity fee component, including administrative overhead, is $6,231.00 per acre-foot.

e. The Agency Board finds that the administrative overhead does not exceed the estimated reasonable cost of providing the service for which the fee is imposed. The Agency Board finds substantial evidence in the record to support this conclusion.

VI. PERIODIC FEE REVIEW

a. To continue to collect sufficient funds to cover the costs of new facilities, the facility capacity fee component will be automatically increased without further Board action in the month of July of each year, beginning July 1, 2016, by a

percentage equal to the change in Construction Cost Index for Los Angeles as published by Engineering News Record for the preceding twelve months.

b. The Agency Board recognizes in accordance with California law that some level of uncertainty is a permanent, inherent feature of modern water management, and as such, long-term water planning involves expectations and not certainties. The Agency Board thus will periodically review the FCF structure and adjust the fee to reflect the estimated reasonable cost of providing the service for which the fee is charged.

i. The Facility Capacity Fee component shall be reviewed periodically as determined by the General Manager to determine if changes are needed and reasonable in unit prices, facility requirements, water demands and demographics in order to ensure that Facility Fee cost allocations are reasonable and that collections over time will fund the required facilities.

ii. The Water Capacity Fee component shall be reviewed annually in the month of July, commencing 2016 to adjust the Water Capacity Fee by a reasonable percentage based on the cost of actual water purchases, an updated water rights appraisal or comparisons of recent purchases of additional water rights by statewide municipalities and special districts over the preceding twelve months.

iii. The General Manager is further authorized to take any and all actions to implement and carry out the FCF program and its implementing resolution. The Agency Board finds that its review process will prevent the FCF from exceeding the estimated reasonable cost of providing the service for which the fee is charged. The Agency Board finds substantial evidence in the record to support this conclusion.

VII. FACILITY CAPACITY FEE ACCOUNT

a. As required by law, the Agency Board will deposit all funds from the FCF program except agency overhead in a separate FCF account. (Cal. Gov. Code. § 66013(c).)

b. The Agency Board will account for the FCF funds in a manner to avoid any commingling with other funds of the Agency, except for investments, and shall expend facility capacity fee funds solely for the purposes for which they were collected. (Cal. Gov. Code. § 66013(c).)

c. Any interest income earned from the investment of funds in the FCF account should be deposited in that account. (Cal. Gov. Code. § 66013(c).)

d. The Agency Board will include the following information in its annual financial report (Cal. Gov. Code. § 66013(e).):

i. A description of the funds deposited in the FCF account. (Cal. Gov. Code. § 66013(d)(1).)

ii. The beginning and ending balance of the account and the interest earned from investment of funds in the account. (Cal. Gov. Code. § 66013(d)(2).)

iii. The amount of FCF revenue collected in that fiscal year. (Cal. Gov. Code. § 66013(d)(3).)

iv. An identification of each of the following:

1. Each water facility or water right on which funds were expended and the amount of the expenditure for each facility or water right, including the percentage of the total cost of the facility or water right that was funded with FCF funds if more than one source of funding was used. (Cal. Gov. Code. § 66013(d)(4)(A).)

2. Each water facility or water right on which funds were expended that was completed during that fiscal year. (Cal. Gov. Code. § 66013(d)(4)(B).)

3. Each water facility or water right purchase that is anticipated to be undertaken in the following fiscal year. (Cal. Gov. Code. § 66013(d)(4)(C).)

v. A description of each interfund transfer or loan made from the FCF account. The information provided in the case of an interfund transfer shall identify the water facilities or water rights on which the transferred funds are, or will be, expended. The information shall include the date on which the loan will be repaid and the rate of interest that the fund will receive on the loan. (Cal. Gov. Code. § 66013(d)(5).)

VIII. REASONABLENESS OF FACILITY CAPACITY FEE

a. There is a reasonable relationship between the FCF and the benefit to new and existing development within the Agency service area. Those benefits include, but are not limited to, the need to ensure water reliability for both existing and new development and the need to supply water to new development.

b. The FCF set forth in Resolution 2015-05 does not exceed the estimated reasonable cost to the Agency of providing the service for which the fee is charged.

c. The allocation of costs to existing development to pay for a percentage of the costs of new water facilities is proportional to the benefits received from those facilities by existing development.

d. The Agency Board finds that the FCF will not exceed the estimated reasonable cost of providing the service for which the fee is charged. The Agency Board finds substantial evidence in the record to support this conclusion.

IX. PROPOSITION 218 DOES NOT APPLY TO FACILITY CAPACITY FEES UNDER GOVERNMENT CODE § 66013

a. In *Richmond v. Shasta Community Services District* (2004) 32 Ca1.4th 409, the California Supreme Court held that facility capacity fees are not property-related fees under Article XIII D of the California Constitution (Proposition 218) because they are only charged to development that elects to connect to the local agency's water infrastructure. Therefore the FCF only goes into effect at the election of the development.

b. The Agency Board finds that the FCF is not a property-related fee and is thus not subject to the requirements of Proposition 218. The Agency Board finds substantial evidence in the record to support this conclusion.

DAVID TAUSSIG & Associates, Inc.

CAPACITY FEE STUDY FOR SAN GORGONIO PASS WATER AGENCY

JULY 21, 2015

Public Finance
Facilities Planning
Urban Economics

Newport Beach
Riverside
San Francisco
Chicago

CAPACITY FEE STUDY
FOR
SAN GORGONIO PASS WATER AGENCY

JULY 21, 2015

Prepared for

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Executive Summary

The San Gorgonio Pass Water Agency ("SGPWA" or "Agency") is a State Water Project ("SWP") contractor located in the northwest portion of Riverside County east of San Bernardino, California. The mission of SGPWA "is to import supplemental water and to protect and enhance local water supplies for use by present and future water users and to sell imported water to retail water distributors within the service areas of the SGPWA service area."[1] The SGPWA provides, or can potentially provide, wholesale water service within its boundaries to and including the City of Banning, the Beaumont-Cherry Valley Water District, Cabazon Water District, South Mesa Water Company, Banning Heights Mutual Water Company, High Valleys Water District, Mission Springs Water District, and Yucaipa Valley Water District.

To provide capacity in SGPWA's system, sufficient water supply and levels of service to existing and future development over the next twenty years consistent with the mission of the Agency, SGPWA will need to invest at least $12.6M in infrastructure during this period. This infrastructure will include a basin recharge facility and the purchase of additional capacity in existing pipelines that convey SWP water along the route from the SWP turnout at Devil Canyon to the SGPWA service area. Also, due to uncertainties related to the quantity of SWP allotments year to year, SGPWA will need to purchase additional water rights outside of the SWP contract. The current price of additional water rights is estimated at $6,200 per acre-ft and will be purchased on an as-needed basis. To ensure that new development pays its fair share of these costs, SGPWA will implement a facility capacity fee as authorized by SGPWA Law (Water Code App. §101-27.1) and consistent with California Government Code Section §66013, which requires that the "…capacity fee shall not exceed the estimated reasonable cost of providing the service for which the fee or charge is imposed."

In 2011 a nexus study was prepared that proposed the implementation of a Facility Capacity Fee to be imposed on new development. The SGPWA board approved the nexus study, however the fee was not adopted at that time. This nexus study is a new and independent evaluation of (1) current demographics; (2) reconciliation of various local demographic estimates; (3) assessment of facilities and water supplies needed to serve new and expanded development; (4) and the allocation of costs reflecting current demographics and current cost estimates of facilities; and (5) calculation of new fee schedules.

The proposed capacity fee has two components: the Facility Fee, and the Water Capacity Fee. The Facility Fee will fund a portion of the new infrastructure and the Water Capacity Fee will fund a portion of the purchase of new water rights and/or entitlements.

The future capital projects are evaluated on a project-by-project basis to determine the costs that should be allocated to future development. Based on this approach, projects that are required to only meet the needs of future development are allocated 100% to such development. Projects that benefit both existing demands and future development are allocated to both existing demands and future development proportionally according to appropriate factors.

[1] The SGPWA Mission Statement as indicated in the Agency's website

The Table below shows the proposed fee per residential dwelling unit that represents the reasonable fair share contribution of new ***residential*** development to the cost of the required infrastructure.

Residential Facilty Fee

Land Use	Facility Element ($ unit)	Admin Element ($ per Unit)	Total Facility Fee per DU
Single Family	$ 170.04	$ 0.86	$ 170.89
Multi-Family	$ 83.01	$ 0.42	$ 83.43

The fees for the ***non-residential*** uses (commercial/retail and industrial) are determined in a similar manner. Because water demand from commercial/retail and industrial uses varies widely with building uses, meter size is a reasonable indicator of water demand and basis for allocation. The allocations to non-residential uses in the 2011 Study used building size and water use factors to allocate costs based on equivalent dwelling units ("EDUs"). This Study converts the non-residential allocations to meter size, using a 5/8 inch meter (typical of a single family residence) as the baseline, whose demand is equivalent to a single family dwelling unit, or one (1) EDU. The Table below shows the proposed fee structure that represents the reasonable fair share contribution of new non-residential development to the cost of the required infrastructure.

Non-Residential Facilty Fee

Meter Size	Facility Element	Admin Element	Total Facility Fee
5/8"	$ 170.04	$ 0.86	$ 170.89
3/4"	$ 187.04	$ 0.94	$ 187.98
1"	$ 238.05	$ 1.20	$ 239.25
1-1/2"	$ 306.06	$ 1.54	$ 307.60
2"	$ 493.10	$ 2.48	$ 495.58
3"	$ 1,870.39	$ 9.41	$ 1,879.80
4"	$ 2,380.49	$ 11.98	$ 2,392.48
6"	$ 3,570.74	$ 17.97	$ 3,588.71
8"	$ 4,931.02	$ 24.82	$ 4,955.84

Finally, to maintain reliability for the benefit of future development, SGPWA will need to purchase additional water rights and entitlements outside of its SWP contract. The Table below shows the recommended fee charged to new development to fund the purchase of ***new water rights and entitlements*** over the twenty-year period.

Water Capacity Fee

Item	units	Fee
Fee for New Water Rights and Entitlements	$ per ac-ft	$ 6,200.00
Administrative Overhead	$ per ac-ft	$ 31.00
Total		$ 6,231.00

Please note that the above tables represent the maximum fee that the board can adopt and impose on new development, based on the cost of facilities and water rights or entitlements planned to be constructed or acquired prior to 2035 and identified in this Study. Also, it is recommended that SGPWA review these fee structures periodically to adjust for changes in demographics, water demands, and facility requirements, as well as adjustments for inflation. Based on the above fee structures, a typical single family house would pay a Facility Fee of $170.89, and using an average water use factor of 0.548 acre-feet per year, that same single family house would be subject to a water capacity fee of $3,414.59 ($6,231.00 per acre-feet per year x 0.548), for a total of $3,585.48.

I. Background

In 1961 SGPWA was formed pursuant to Chapter 101 of the California Water Code Appendix as a result of the approval by the voters of the Burns-Porter Act, which authorized the financing and construction of the SWP. SGPWA entered into a contract with the Department of Water Resources ("DWR") in 1962 for Table A Water capacity in the SWP, which is currently 17,300 acre-ft per year ("AFY"), to bring supplemental water to the SGPWA service area. The SWP system originates at Oroville Reservoir in Northern California and water is delivered through a series of dams, pipelines, rivers, Sacramento Delta canals, sloughs, reservoirs and pumping stations to the SGPWA turnout at Devil Canyon in San Bernardino County. From that point it is delivered by pipeline, pump stations and reservoir to the SGPWA SWP terminus at Cherry Valley, in Northern Riverside County.

The primary source of local water supply to the SGPWA service area at the present time is natural surface runoff and groundwater basins. The major groundwater basin is the Beaumont Storage Unit ("BSU"), which serves the City of Beaumont and the community of Cherry Valley through the Beaumont-Cherry Valley Water District ("BCVWD"), the City of Calimesa through the Yucaipa Valley Water District ("YVWD"), the City of Banning and the South Mesa Water Company ("SMWC"). The BSU was determined by the Riverside Superior Court in 2004 to be in overdraft and a Watermaster was appointed to manage the BSU through controlled overdraft (temporary surplus) through 2013.[2] The BSU is now required to operate in a balanced condition, replacing an amount of water equal to the amount removed from the basin to meet local demands, over time. The Beaumont Basin Adjudication is an official document of the State of California, on file with the Riverside County Superior Court as Case No. RIC 389197, and on file with SGPWA.

Increased demand from new development and decreasing reliability of imported water supplies will continue to exert pressure on the ability of SGPWA to deliver supplemental water on a reliable basis. Adjudication of the BSU, requiring a balanced operating condition, will also exert pressure on the SGPWA to find additional reliable sources of water to meet increasing demands. Revenue from the proposed Facility Capacity Fee program is necessary to provide reliable water service to new development by helping fund new capacity in delivery pipelines, new recharge basins, related land acquisitions and the purchase of new water rights and entitlements. These investments are necessary to continue to provide an adequate level of service and reliability to retail agencies over time. No revenues from this Facility Capacity Fee program will be used to fund the correction of existing deficiencies in the system.

[2] See also, San Gorgonio Pass Water Agency Report on Water Conditions (Reporting Period 2013), dated December 2014.

II. Introduction to Analysis

The San Gorgonio Pass Water Agency ("SGPWA" or "Agency"), a State Water Project ("SWP") Contractor, authorized David Taussig & Associates, Inc. ("DTA") to prepare a nexus study ("Study") for proposed Facility Capacity Fees that the appropriate retail water agencies and/or land use planning agencies would collect from new development on behalf of SGPWA. These fees will provide a source of revenue for SGPWA needed to mitigate the regional water related impacts of such new development.

California Government Code §66000 et seq ("Mitigation Fee Act") governs the imposition by a local agency of a fee or charge to a development project for "...the purpose of defraying all or a portion of the cost of public facilities related to the development project...". California Government Code §66013(b)(3) further defines a *Capacity Charge* as "... charges for new public facilities to be acquired or constructed in the future that are of proportional benefit to the person or property being charged." New public facilities are further defined in Section 66002 as "facilities for the storage, treatment and distribution of non-agricultural water."

California Water Code §101-27.1 authorizes SGPWA to impose a Facility Capacity Fee, which is in the nature of a connection fee, for the right to make a new retail connection to the water distribution system of any retail water distributor that is located within the boundaries of the SGPWA and that obtains all or any portion of its water supplies from SGPWA.

For the purposes of this Study, the term "Facility Capacity Fee" shall mean *Capacity Charge* as defined in the Mitigation Fee Act. The Facility Capacity Fee is imposed and authorized in California Water Code §101-27.1 and will meet the requirements of California Government Code Section §66013, and will achieve the following goals related to said Section:

- Ensure that the Facility Capacity Fee does not exceed the estimated reasonable cost of providing the service for which the fee is imposed; and

- Provide a clear and concise document that will serve as the basis for the proposed fee levels.

The Board of Directors of SGPWA may contract with the counties in which SGPWA is located, and cities and retail water distributors located within the boundaries of SGPWA, for the collection of the Facility Capacity Fees subject to certain conditions. SGPWA water made available through facilities built, and/or water rights acquired, with capacity fee revenue will be sold to retail water distributors who in turn serve SGPWA water to new and expanded water users.

This Study and the resulting fee structure will focus on the use of the SGPWA Facility Capacity Fee to fund (1) the purchase of capacity in existing pipeline systems owned by other public agencies; (2) an additional basin recharge project for underground water storage in the Beaumont groundwater basin, including land purchases associated with such basin facility; and (3) the purchase of new water and/or water rights and entitlements to meet future water demand. The underlying principle that supports the identification and allocation of costs to new development for these facilities and new water rights or entitlements is that new development throughout the SGPWA service will have access to additional water delivery capacity, additional storage capacity

and additional water rights and entitlements necessary to meet the demands of future development. This is more fully discussed in Section V, "Facility Component of the Facility Capacity Fee."

The Facility Capacity Fee will consist of two components:

- the **Facility Component of the Facility Capacity Fee** ("Facility Fee"). This component will fund the facilities identified in items (1) and (2) above; and

- the **Water Component of the Facility Capacity Fee** ("Water Capacity Fee"). This component will fund the purchase of new water and/or water rights or entitlements, as identified in item (3) above.

The Facility Fee will be charged to all new development within the SGPWA service area (except the Morongo Tribal Land as discussed in Section IV, "Demographics") and is designed to fund the cost of facilities needed to mitigate the cost of facilities needed to meet the additional demands of such new development through the year 2035. The steps followed in calculating the Facility Fee component include:

- **Demographic Assumptions**: Identify future development through 2035 that represents the increased demand for facilities. The demographic assumptions are discussed in Section IV, "Demographics."

- **Facility Needs and Costs**: List the public facilities that can be clearly identified and have a reasonably accurate estimate of costs, that best mitigate the demands of new development through 2035. The needs list and estimate of costs are presented in Section V.1, "Facility Costs."

- **Cost Allocation**: Allocate costs between new and existing residential and non-residential development based on estimated percentage utilization factors related to a proposed conjunctive use facility and additional capacity in the East Branch Extension ("EBX" pipeline system owned by other public agencies). Further allocate costs between single family and multi-family land use by equivalent dwelling unit ("EDU") methodology, and between non-residential buildings by meter sizes. A detailed discussion of the cost allocation methodology is included in Section V.2, "Methodology."

- **Fee Schedule**: Calculate the fee per residential unit or per non-residential meter size based on weighted average water usage factors, providing a uniform fee structure for the SGPWA service area. The resulting Facility Fee component structure is presented in Section V.3 "Fee Structure."

The Water Capacity Fee will be charged to new development based upon the amount of new water capacity needed to serve such development. The steps to calculate the Water Capacity Fee is discussed in Section VI, "Water Component of the Facility Capacity Fee."

It is important to note that all new development will be required to pay the Facility Fee and the Water Capacity Fee. While the Facility Fee is a fixed amount, depending upon land use, the Water Capacity Fee will be calculated based on expected water demands on a project by project basis. This revenue is required for SGPWA to build the proposed facilities and purchase the necessary

water rights and entitlements discussed herein that are needed to provide reliable water deliveries to water retailers.

It is expected that the SGPWA will review both the Facility Fee and the Water Capacity Fee at reasonable intervals to incorporate changes in prices, facility requirements, water demands and demographics in order to ensure that the Facility Capacity Fees are allocated fairly and continue to generate sufficient revenues.

The Facility Capacity Fee program will work in conjunction with SGPWA's other sources of revenue to play a part in a coordinated financing plan that provides a balance of rates and charges needed to fund current and future costs of service. For instance, the current commodity rate structure – the amount charged for actual water deliveries – includes an allocation to partially fund the purchase of new water rights and entitlements needed to enhance the reliability of water deliveries for existing development. Thus the commodity rates will work in conjunction with Water Capacity Fee revenues and other general fund revenue to fund the purchase of new water rights and entitlements over time that are needed to provide an ongoing reliable water source for both new and existing development.

III. Definitions

The following key defined terms are used throughout this Study:

Acre-foot ("AF") – a volumetric unit of measurement commonly used for water supply purposes. It is the amount of water required to cover one acre of land one foot deep, one acre being equal to 43,560 square feet. For illustrative purposes, it is the amount of water required to cover a football playing field, including end zones, 9 inches deep.

AFY – Acre-feet per year. A unit of measurement commonly used for large scale water supply purposes to represent flow, or volume of water over a period of time.

BSU - the Beaumont Storage Unit, an adjudicated groundwater basin underlying a portion of the SGPWA service area.

Build Out or Build Out Condition – The state of development within the SGPWA service area in which there are no longer any undeveloped parcels or lots identified as residential or non residential uses on approved local land use plans from which capacity fees can be collected.

Conjunctive Use – is the interactive use of SWP supplemental water and local groundwater for water deliveries. The recharge of groundwater basins with SWP and local surface water during years of surplus and the pumping of stored groundwater to augment SWP allocations during years of deficit assist SGPWA in providing water deliveries on a reliable basis.

cfs - cubic feet per second, a measure of volumetric rate of water conveyance

DTA – David Taussig & Associates, Inc., the public finance consulting firm that prepared the 2011 Capacity Fee Study and this current Capacity Fee Study.

DWR - State of California ("State") Department of Water Resources, the agency that contracts on behalf of the State with SGPWA to deliver water through the SWP under the terms of "Contract Between the State of California Department of Water Resources and San Gorgonio Pass Water Agency, For Water Supply."

EDU Factor – the ratio of the water demand for a unit of a given land use to the baseline water demand for a single family residential unit.

Equivalent Dwelling Unit ("EDU") – for given land uses, a method of comparison of that land use to a baseline land use, using a common demand variable. A demand variable is a measurable factor that is directly related to the required size or extent of a public facility. For the purposes of this Study the demand variable used is water demand, in gallons per day or acre-feet per year ("AFY"), and the baseline demand is that of a single family residential unit, which is the assumed baseline land use. For non-residential uses costs are allocated by meter size. A 5/8" meter is assumed as the baseline, equivalent in demand to a single family unit.

Existing Development - residential and non-residential land use improvements that exist as of June, 2014, within the SGPWA service area. The sources of data used to quantify the extent of such improvement includes local agency permit activity and studies, local UWMPs and County of Riverside demographic data.

Facility Capacity Fee – a charge imposed by a local water agency on new development, or increased usage (such as remodels or expansions), to fund or to recover the estimated reasonable cost of providing water, water conveyance or water storage facilities to the person or property being charged. For purposes of this Study the Facility Capacity Fee consists of two components: the facility component ("Facility Component of the Facility Capacity Fee" or "Facility Fee") and the water component ("Water Component of the Facility Capacity Fee" or "Water Capacity Fee").

Facility Component of the Facility Capacity Fee – for the purposes of this Study and hereafter referred to as the "**Facility Fee**", is a facility capacity fee imposed on new development to pay that development's fair share of the costs to construct water storage and conveyance facilities that benefit such development.

Floor Area Ratio ("FAR") – is the ratio of useable non-residential building square feet to the area, in square feet, of the property within whose boundaries the building is located. For the purposes of this Study a FAR of 0.40 for commercial/retail uses and an FAR of 0.20 for industrial uses was assumed, these ratios being common industry norms and generally accepted where site specific local investigations related to non-residential densities do not exist.

Future Development - projected residential and non-residential land use improvements within the SGPWA service area anticipated to occur by the year 2035. The sources of data used to quantify the extent of such improvement includes local agency demographic projections, local UWMPs and County of Riverside demographic studies.

KSF – the unit of measurement used for non–residential building size equal to one thousand square feet.

SBVMWD - San Bernardino Valley Municipal Water District

State Water Project ("SWP") – the system of dams, reservoirs, channels, pipelines, pumping stations, delivery structures and all other conveyance systems whose purpose is to convey and deliver water from the Sacramento-San Joaquin Delta to the various water contractors, including SGPWA. Specific to SGPWA such deliveries are in accordance with the terms of "Contract Between the State of California Department of Water Resources and San Gorgonio Pass Water Agency, For Water Supply."

Table A Water - The total annual amount of SWP water, entitled by DWR to SGPWA under the terms of "Contract Between the State of California Department of Water Resources and San Gorgonio Pass Water Agency, For Water Supply", Amendment No. 18 dated December 26, 2007. Table A of that contract, as amended by Amendment No. 18, indicates that the current maximum annual entitlement to SGPWA is 17,300 Acre-feet.

UWMP – is an Urban Water Management Plan. California Water Code §10610 et. seq. directs certain water agencies to carry out long term planning to ensure that adequate water supplies are

available to both existing demand and new development. Agencies that are required by this code to produce this plan must document its long-term planning effort in an Urban Water Management Plan. This planning document is required to be updated every five years.

Water Component of the Facility Capacity Fee - for the purposes of this Study and hereafter referred to as the "**Water Capacity Fee**", is a facility capacity fee imposed on new development to pay that development's fair share of the costs to purchase new water or new water rights or entitlements necessary to meet future water demands and ensure acceptable levels of reliability with regard to the ability of the servicing agency or special district to deliver water in the future.

Water Use Factor ("WUF") – a measure of average water demand for a given land use within a given area, expressed as Acre-feet per year per acre (AFY/acre).

2011 Study – a capacity fee nexus study prepared by David Taussig & Associates, Inc. for SGPWA in 2011. This study was adopted by SGPWA but not implemented. The demographic analysis for existing residential units and non-residential building square feet in the 2011 Study is used in this Study as the baseline demographics for Existing Development through 2009.

IV. Demographics

The SGPWA boundary includes the areas within the Cities of Banning, Beaumont, and Calimesa, the communities of Cabazon, Cherry Valley, Poppet Flat, the Morongo Indian Reservation, and other portions of the unincorporated area of Riverside County ("County"). A small area of undeveloped land within the service area at the headwaters of the San Gorgonio River extends into San Bernardino County. At the eastern edge of the SGPWA the Mission Springs Water District straddles the boundary line, serving a portion of the community of Verbania. Water is provided or is planned to be provided to retail customers by various retail water agencies, including the City of Banning, Beaumont Cherry Valley Water District, Cabazon Water District, South Mesa Water Company, Banning Heights Mutual Water Company, High Valleys Water District, Mission Springs Water District, and Yucaipa Valley Water District. As noted in this Study, certain of these agencies will require additional water deliveries and the facilities to convey that water sooner while other agencies may not require additional water and facilities until after the planning period used in this Study. Note that, for purposes of this Study, any property designated as Morongo Tribal Land has been excluded from our analysis because the Morongo Band of Mission Indians is a sovereign nation. Property within the Morongo Tribal lands will not be subject to either component of the Facility Capacity Fee. Therefore, the demographic analysis as described below reflects the property located within the three cities mentioned above and the unincorporated area of Riverside County excluding the Morongo Tribal Land.

For purposes of this Study David Taussig & Associates, Inc. ("DTA") categorized developed residential land uses as Single Family Residential and Multi-Family Residential units. Single Family Residential units include detached and attached residential units, while Multi-Family Residential units include those units with two or more living units on one Assessor's parcel as well as mobile homes. Non-residential land uses are categorized as Commercial/Retail or Industrial.

Because it is difficult to assign a specific year in the distant future in which the Build Out state (as identified by the various local agencies) is realized, the year 2035 was determined to present a reasonable horizon to achieve funding and construction goals. This planning horizon is also consistent with 2035 horizons identified in county and local city studies and local water district UWMPs.

1. Existing Number of Residential Units and Non-Residential Square Footage

The estimate of the number of current residential units and non residential square feet in the Cities of Beaumont, Banning, and the unincorporated areas emanate from the 2011 Study and are used as a baseline level of development (see Appendix A). The numbers for residential units and non-residential square footage in the 2011 Study represented existing development through 2009. DTA then added to the 2009 baseline numbers the number of residential units and non-residential square footage indicated by building permits issued, not necessarily constructed, within the three cities and the unincorporated area for the years 2010 to mid 2014 to establish the present baseline. The permit data was provided by the respective planning departments. The City of Calimesa provided existing land use data as of year 2014 and projected land use data at build out conditions.

A detailed discussion of the demographic assumptions and methods used to determine the increase in development from 2009 to mid 2014 can be found in Appendix A of this Study.

The estimated existing residential units by jurisdiction and by single family and multi-family land uses are shown in Table 1 below:

TABLE 1

Existing Residential Units Through June 2014[1]

Residential Land use	City of Banning	City of Beaumont	City of Calimesa	Unincorporated Area	Total Existing Residential Units
Single Family	9,900	12,700	2,200	6,200	31,000
Multi-Family	2,300	1,500	1,500	1,400	6,600
Totals	12,200	14,200	3,700	7,600	37,600

1. Rounded to the nearest 100 units

The estimated existing non-residential building square feet, rounded to the nearest 1,000, by jurisdiction and by Commercial/Retail and Industrial land uses is shown in Table 2 below:

TABLE 2

Existing Non-Residential Square Feet Through June 2014[1]

Non-Residential Land use	City of Banning	City of Beaumont	City of Calimesa	Unincorporated Area	Total Existing Non Residential Square Feet
Comercial/Retail	4,536,000	3,639,000	1,482,000	3,780,000	13,437,000
Industrial	4,231,000	1,982,000	412,000	60,000	6,685,000
Totals	8,767,000	5,621,000	1,894,000	3,840,000	20,122,000

1. Rounded to the nearest 1,000 square feet

2. Future Residential and Non-Residential Development

Although projections for Build-Out conditions can be found in studies by various other sources, it was felt that the year 2035 is consistent with local studies and provides a period from which a reasonable prediction of new development growth may be estimated. This quantified estimate of growth may then be used to allocate the cost of facilities that SGPWA staff has determined are needed at this time to mitigate the impacts of current and future demands.

There are several sources that project future residential and non-residential demographics for various horizons within SGPWA boundaries, including housing elements from City General Plans, Urban Water Management Plans ("UWMP") and development projections from interested agencies such as the Southern California Association of Governments ("SCAG"). Differing development trends unique to jurisdictional areas within the Agency boundary suggest that the local retail water agencies' UWMP projections or projections from independent studies might be the most in tune with actual development trends within their purview. Specifically, the growth projections for the Cities of Beaumont and Banning

were taken from the Beaumont Cherry Valley Water District UWMP and the City of Banning UWMP, respectively; however the City of Calimesa provided current growth projections based on its own independent study.

Development projections for unincorporated areas within the Agency are more difficult to determine using local UWMP's as a source. Some retail water districts include unincorporated areas within their boundaries. Those areas may or may not be within the Agency. Also, there are unincorporated areas within the SGPWA that are not covered by a local UWMP. For this reason the County of Riverside was contracted to provide a special study, or addendum, to their 2013 Progress Report that compiles data from only unincorporated areas within census tracts that lie within the SGPWA boundary. In this special study the County estimated the housing units in such census tracts in the year 2035. The results of this study are shown graphically in Figure 1, Appendix A, "Demographic Background."

Furthermore, the Yucaipa Valley Water District UWMP does not segregate water demands from the parts of its service area that lie within the City of Calimesa and the County of Riverside. In addition, the South Mesa Water Company services portions of the City of Calimesa but does not have a UWMP. For these reasons, development projections for the City of Calimesa were provided by the City of Calimesa staff and are based on City General Plan projections and current development trends considering active development projects at various stages of planning.

The following sources were used to project total new housing units to 2035:

- City of Banning UWMP (2010)
- Beaumont Cherry Valley Water District UWMP (2010)
- City of Calimesa planning data provided by City staff
- Riverside County 2013 Progress Report, with a special study that includes unincorporated areas within SGPWA boundaries (2014). See Figure 1, Appendix A

For the City of Banning, their 2010 UWMP provides a total housing projection of 17,988 units in 2035. However, a breakdown of single family and multi family units was not provided. Using projected water usage and water usage factors provided in the UWMP, the 17,988 total units was broken down into single family and multi family units in proportion to each category's water usage.

In similar fashion, the Beaumont Cherry Valley Water District UWMP (2010) projects total residential units in 2035 at 21,958 units, however it does not break that figure down to single family and multi-family units. Again, projected water usage for multi-family units in 2035 and water usage factors were used to calculate the percentage split between single family housing units and multi-family housing units in 2035. The resulting number of housing units were then rounded to the nearest 500 housing units and entered into Table 3 below (see Appendix A, Section A-5).

The City of Calimesa staff provided the number of existing and projected single family and multi-family housing units within the City limits[3]. The City projects 12,100 new residential dwelling units between 2014 and 2035. The City projects over 23,000,000 new commercial building square feet and over 18,000,000 new industrial square feet by 2035.

For the unincorporated areas the special study by the County of Riverside, mentioned above, projected a total of 10,068 residential units in 2035. It is assumed that most of the growth between 2015 and 2035 will be single family units. DTA assumed a 2% cumulative growth in multi-family units during this period, with the balance being single family units.

A detailed discussion of the analysis used to estimate the number of future residential units can be found in Appendix A of this Study. Table 3 below summarizes the expected residential units within the study area at year 2035

TABLE 3

Projected Residential Units in 2035[1]

Residential Land Use	City of Banning[2]	City of Beaumont	City of Calimesa	Unincorporated Area	Total Residential Units
Single Family	15,707	20,500	11,500	8,700	56,400
Multi-Family	2,281	1,500	4,300	1,400	9,500
Total	17,988	22,000	15,800	10,100	65,900

1. Rounded off to the nearest 100 units
2. Total units are not rounded. The 17,988 is taken directly from the City of Banning UWMP, Table 3-1.

The UWMP's that cover the Cities of Banning and Beaumont do not provide projections for non-residential building square feet. Their projections consisted of growth in water demand, as it should for water planning purposes. The percentage growth in water demand for the land use categories within the city limits was applied to the data for existing development to project building square feet in 2035. The City of Calimesa staff provided projections for non-residential building square feet in 2035. Table 4 below summarizes the total expected non-residential square feet within the study area in 2035.

TABLE 4

Projected Non-Residential Building Square Feet in 2035[1]

Non-Residential Land Use	City of Banning	City of Beaumont	City of Calimesa	Unincorporated Area	Total Non-Residential SF
Commercial/Retail	7,018,000	4,921,000	24,895,000	5,112,000	41,946,000
Industrial	6,546,000	2,493,000	18,700,000	75,000	27,814,000
Total	13,564,000	7,414,000	43,595,000	5,187,000	69,760,000

1. Rounded off to the nearest 1,000 square feet

[3] Letter from City of Calimesa to San Gorgonio Pass Water Agency dated July 15, 2015. Subject line reads "CITY OF CALIMESA LAND USE PROJECTIONS".

A detailed discussion of projected residential units and non-residential building square feet can be found in Appendix A of this Study. The numbers found in Table 3 and 4 above represent total numbers through 2035. To determine the amount of growth between 2014 and 2035 the data in Tables 1 and 2 (existing development) must be subtracted from the corresponding data in Tables 3 and 4 (total projected at 2035). This difference is shown in column (5), Table 7, Section V below.

V. Facility Component of the Facility Capacity Fee

The estimated reasonable cost to SGPWA of providing water supplies to new development is divided into two components: the Facility Component of the Facility Capacity Fee ("Facility Fee") and the Water Component of the Facility Capacity Fee (Water Capacity Fee"). This section will address the identification, the cost, the method of cost allocation, and the fee structure for new water facilities.

SGPWA owns and maintains an integrated system of water storage and conveyance that provides benefit to all lands within SGPWA boundaries by providing access to an imported water supply through the SWP. Each facility within the system provides delivery of water for groundwater basin replenishment, storage for local use when imported water is in short supply, or direct delivery to retail agencies. SGPWA will need to construct new facilities within this system to augment current storage capacity and delivery capabilities in order to meet the demands of current and future development. Thus, imported water stored in the Beaumont Basin, or any other groundwater basin, by SGPWA can be locally used as part of a conjunctive use program in times of shortage, allowing SGPWA imported water supplies to be beneficially used by water users within the SGPWA service area. The integrated system will provide the central core access to a water supply for lands that would not otherwise have such access during prolonged periods of limited imported water deliveries and during years of surplus. For example, the Beaumont Basin Recharge Facility, more fully described in Section V.1 herein, provides an interconnected system of water delivery to local water agencies that overlie the Beaumont and Banning groundwater basins. The Beaumont Basin Recharge Facility adds recharge capacity and storage to an overdrafted basin in order to provide reliable water supplies to both new and existing development within the entire SGPWA service area.

In July, 2015 Webb Associates submitted a letter report to SGPWA included herein as Appendix B, ("Implementation Update"). This document included detailed cost estimates, list of facilities, and detailed graphics that describe the location of recharge basins and alignments of interconnecting pipelines.

The fair share allocation of the cost of facilities anticipated to be needed during this planning horizon is discussed in detail in Section V.2, "Methodology" herein.

1. Facility Costs

For purposes of the Facility Fee calculation, SGPWA decided at this time to include only the facilities related to conjunctive use of the Beaumont Basin and the purchase of additional capacity from San Bernardino Valley Municipal Water District ("SBVMWD") because these facilities will be needed prior to the year 2035 based on projected water demands for that year. The facilities to be financed consist of (1) the purchase of additional capacity in existing pipeline systems owned by others, and (2) an additional basin recharge project for underground water storage in the Beaumont basin, including land purchases associated with that basin facility. Itemized facility costs totaling $12.66M were provided

by Webb Associates in its Implementation Update document prepared for SGPWA. See Appendix B herein.

The East Branch Extension Phase II project by DWR will include pipelines, pump station additions and expansions, and a reservoir that will convey SWP water from Highland to the SGPWA service area. SGPWA is negotiating with SBVMWDfor the purchase of an additional 32 cubic feet per second ("cfs") capacity in the SBVMWD pipeline between Highland and Devil Canyon. This purchase will provide additional capacity for SGPWA, increasing its capacity from 32 cfs to 64 cfs for the entire East Branch Extension. It has been determined by SGPWA that the full additional 32 cfs capacity will be needed to meet the demands of expected development through 2035. The estimated cost of this capacity, as indicated in the Implementation Update (see Appendix B) is $4M.

Beaumont Basin Recharge Facility – SGPWA proposes to construct a 54 acre recharge basin (also known as the Beaumont Avenue Recharge Facility) at the intersection of Beaumont Avenue and Brookside Avenue for the purpose of storing SWP water conveyed through a 6,000 lineal feet pipeline. Water will be used to recharge the Beaumont Basin, thereby replenishing water used to meet the demands of expected development. The estimated cost to improve the site, not including land purchase costs, as indicated in the Implementation Update, is $5.46M. This facility will provide additional storage that can be filled in wet years and drawn down in dry years. The land cost for Beaumont Basin Recharge Facility is $3.2M .

Table 5 below provides a summary of the list of facilities and the respective estimated costs that will be financed, or partially financed, by the revenue from the Facility Fee recommended in this Study. Maps showing the location of each facility can be found in the Implementation Update, found in Appendix B of this Study. Part of the additional capacity provided by the Beaumont basin recharge facility is needed for new development. This additional capacity will also provide a benefit to existing development. The total additional capacity from SBVMWD is required to meet the demands of new development. Therefore, only a portion of the cost of the basin recharge facility is allocated to new development and the full cost of the additional capacity from SBVMWD is allocated to new development. The allocations are more fully described in Section V.2, "Methodology."

TABLE 5

Needs List and Estimate of Costs[1]

Facility Name	Cost Estimate	% Allocated To New Development	Cost to New Development
Beaumont Basin Recharge Facility	$ 5,460,000	80.00%	$ 4,368,000
Land Costs for Beaumont Basin Recharge Facility	$ 3,200,000	80.00%	$ 2,560,000
32 cfs capacity from SBVMWD	$ 4,000,000	100.00%	$ 4,000,000
Total Facility and Land Cost	$ 12,660,000		$ 10,928,000
Administrative fee @ 0.50%			$ 55,000
Grand Total			$ 10,983,000

1. Rounded to nearest $1,000

An Administrative Cost Component is included in the total cost to be financed in order to cover the costs incurred by SGPWA associated with the administration of the Facility

Capacity Fee program. Administrative costs include staff time associated with fee collection, maintenance of trust funds into which the fees are deposited, preparation of annual reports, and negotiation and implementation of agreements between SGPWA and the retail agencies or land use planning agencies. A budget of 0.50% of the total facility cost is a reasonable number to spread over the next twenty years of development, amounting to $55,000. This represents approximately one man-hour per month over the next twenty years. The revenue to fund these activities will be a component of the Facility Fees collected.

2. Methodology

The Beaumont Basin Recharge Facility discussed above will benefit both existing and new development within the SGPWA boundaries while the additional capacity in the SBVMWD pipeline is needed solely to meet the demands of new development. Because the reliability of SWP deliveries is partially dependent upon weather trends, regulations and court cases, uncertainty becomes a major factor in the management of wholesale water deliveries. Also, the Beaumont Basin is now in balance and the adjudicated requirement that the basin cannot be in overdraft on a continual basis substantiates the need for SGPWA to find additional water rights and entitlements to improve reliability. The Beaumont Basin Recharge Facility will rely on imported water to operate as planned.

The Beaumont Avenue Recharge Facility is a conjunctive use facility designed to take advantage of greater water supplies in wet years. With the reliability of the State Water Project decreasing, a regional conjunctive use project has value to current residents, enabling SGPWA as the regional water agency to import more water in those wet years and store it for future dry years. However, this value will increase substantially as the area grows, as more water supplies will be required and hence the value of being able to import and store more water in wet years increases greatly.

With current water demands the conjunctive use facility might be used once in five years, providing a 20% utilization rate. That rate will increase in future years as additional supplies are obtained for the growing region. As the region grows and the Agency obtains additional water supplies, the facility will likely be used every year, increasing the utilization rate to 100%. Since in the near term it might only be used an average of 20% of the time, it makes sense to have 20% of the cost of the facility funded by current residents. With additional growth causing the facility to eventually be used continuously at 100% capacity, the remaining 80% should be funded by that growth. Thus the funding of the cost of the Beaumont Avenue Recharge Basin Facility and its land cost are components of the Facility Fee. The allocated costs are shown in Table 5 above.

Based on current water demands and projections of future development to 2035, an additional 32 cfs capacity from SBVMWD is required solely to meet the demands of future development. Therefore the cost to purchase this additional capacity is allocated 100% to new development. Negotiations between SBVMWD and SGPWA are ongoing. The Implementation Update (see Appendix B) indicates that a $4M purchase price for this additional capacity is a reasonable estimate. Refer to Section V.1 above.

To fairly distribute the cost of new facilities allocated to the various land use designations for new development, a distribution based on an Equivalent Dwelling Unit ("EDU") methodology will be used whereby water demand will serve as the unit of comparison. The water demand for a residential dwelling or one thousand square feet ("KSF") of building floor area is compared as a ratio of that value to the demand for a single family residential unit. This ratio is defined as the EDU factor and is used to calculate the total existing EDUs, as shown in Table 6 below, and the increase in EDUs through 2035, as shown in Table 7 below.

Data for projected residential and non residential development to 2035 is subtracted from the corresponding existing data as of 2014 to identify the growth in development from 2014 to 2035, as shown in Table 7. Converting this growth into EDUs, the allocated costs can then be distributed to the various land uses. Table 7 shows that the total growth in EDUs from 2014 to 2035 is 61,828 EDUs.

Table 6 below shows the calculation for total existing EDUs, while Table 7 below shows similar calculations for future EDUs through 2035. Water use factors ("WUF"), in acre-ft of water demand per year ("AFY") per acre, are shown in column (1) of both tables and the values are taken from Table 1-7 of the Webb Implementation Plan (see Appendix C) that was made a part of the 2011 Study, where the value entered for "Unincorporated Areas and Others" is the average of the values shown for "Riverside County" and "Cabazon Area". In column (2) of both tables, "Density (DU per acre or FAR)", the residential densities are assumed to be the higher end of the range given for "Residential Low" and "Residential High" given in Table 1-7 of the Webb Implementation Plan for Single Family and Multi-Family land use designations, respectively. This is a reasonable and more conservative method to calculate the estimated densities in that it generates higher EDU counts, resulting in lower calculated residential fees. The densities for Commercial/Retail and Industrial categories use floor area ratios ("FARs") of 0.20 and 0.40 respectively, which are also conservative for the same reasons discussed above for residential uses. In column (3) of both tables the unit water use, in AFY per DU for residential uses or AFY per KSF for non-residential uses, for each land use category was then calculated from the values in the columns (1) and (2).

For example, for the City of Banning, single family land use for existing development, as shown in Table 6, the WUF shown in column (1) is divided by the density shown in column (2). Thus 2.73 AFY/acre divided by 5 DU per acre equals 0.546 AFY per DU. In a similar manner, for City of Banning, Commercial/Retail land use in Table 6, the WUF shown in column (1) is divided by the density in column (2), the result then divided by the 43.560 KSF per acre conversion factor[4]. Thus 5.76 AFY per acre divided by 0.20, the result then divided by 43.560 KSF per acre equals 0.662 AFY per KSF, as shown in column (3). The EDU factor in column (4) was determined by dividing each unit water use in column (3) by the unit water use for a single family dwelling unit in the City of Banning, Beaumont or Calimesa (0.546). For example, the unit water use calculated above for commercial/retail use, 0.662 in column (3) is divided by 0.546 for single family also shown in column (3) to produce an EDU factor of 1.21, shown in column (4).

[4] 1 acre = 43,560 square feet, or 43.560 KSF

In Table 6 below, the total existing residential dwelling units and the total existing non-residential building area in KSF shown in column (5) was taken from Tables 1 and 2. For instance, for the City of Banning, single family land use, the value of 9,936 DU's corresponds to the same value shown for the City of Banning, single family land use in Table 1. The total EDUs for existing development for the various agencies and land uses shown in column (6) were calculated by multiplying the residential dwelling units and commercial/industrial KSF shown in column (5) by the corresponding EDU factors shown in column (4).

TABLE 6
EDU Calculation - Existing Development

	(1)	(2)	(3)	(4)	(5)	(6)
Land Use	Water Use Factor (AFY/Ac)	Density (DU per acre or FAR)	Water Use (AFY per DU or KSF)	EDU Factor	DU or KSF	EDU[1]
City of Banning:						
Single Family	2.73	5	0.546	1.00	9,936	9,936
Multi-Family	5.34	20	0.267	0.49	2,281	1,115
Commercial/Retail	5.76	0.20	0.662	1.21	4,536	5,497
Industrial	1.27	0.40	0.073	0.13	4,231	565
Total						17,113
City of Beaumont:						
Single Family	2.73	5	0.546	1.00	12,681	12,681
Multi-Family	5.34	20	0.267	0.49	1,463	715
Commercial/Retail	5.76	0.20	0.662	1.21	3,639	4,410
Industrial	1.27	0.40	0.073	0.13	1,982	265
Total						18,071
City of Calimesa:						
Single Family	2.73	5	0.546	1.00	2,200	2,200
Multi-Family	5.34	20	0.267	0.49	1,500	734
Commercial/Retail	5.76	0.20	0.662	1.21	1,482	1,796
Industrial	1.27	0.40	0.073	0.13	412	55
Total						4,785
Unincorporated Areas & others						
Single Family	2.85	5	0.570	1.04	6,208	6,481
Multi-Family	5.44	20	0.272	0.50	1,363	679
Commercial/Retail	5.79	0.20	0.664	1.22	3,780	4,598
Industrial	1.29	0.40	0.074	0.14	60	8
Total						11,766
1. totals are rounded					Total Existing EDUs =	51,735
					% of total	44.60%

The total EDUs for new development shown in Table 7 below are calculated in a similar manner as Table 6 while using future development to 2035. The new development ("growth") value is the difference between 2035 and existing residential DUs or non-residential square feet from Tables 1 through 4.

TABLE 7

EDU Calculation - Future Development

	(1)	(2)	(3)	(4)	(5)	(6)
Land Use	Water Use Factor (AFY/Ac)	Density (DU per acre or FAR)	Water Use (AFY per DU or KSF)	EDU Factor	DU or KSF	EDU
City of Banning:						
Single Family	2.73	5	0.546	1.00	5,771	5,771
Multi-Family	5.34	20	0.267	0.49	0	0
Commercial/Retail	5.76	0.20	0.662	1.21	2,482	3,008
Industrial	1.27	0.40	0.073	0.13	2,315	309
Total						9,088
City of Beaumont:						
Single Family	2.73	5	0.546	1.00	7,819	7,819
Multi-Family	5.34	20	0.267	0.49	37	18
Commercial/Retail	5.76	0.20	0.662	1.21	1,282	1,553
Industrial	1.27	0.40	0.073	0.13	511	68
Total						9,458
City of Calimesa:						
Single Family	2.73	5	0.546	1.00	9,300	9,300
Multi-Family	5.34	20	0.267	0.49	2,800	1,369
Commercial/Retail	5.76	0.20	0.662	1.21	23,413	28,371
Industrial	1.27	0.40	0.073	0.13	18,288	2,441
Total						41,481
Unincorporated Areas & others						
Single Family	2.85	5	0.570	1.04	2,492	2,602
Multi-Family	5.44	20	0.272	0.50	37	18
Commercial/Retail	5.79	0.20	0.664	1.22	1,332	1,620
Industrial	1.29	0.40	0.074	0.14	15	2
Total						4,242
					Total Future EDUs =	64,269
					% of total	55.40%
					Total EDU's =	116,004

Based on the numbers shown in Table 6 and Table 7, it is anticipated that in the year 2035 there will be 116,004 EDUs within the SGPWA service area (51,735 existing EDUs plus 64,269 future EDUs).

The summary of existing EDUs and growth EDUs at 2035 by land use is shown below in Table 8, "EDU Summary at 2035":

TABLE 8
EDU Summary at 2035

Land Use	Existing EDUs	New Growth Between 2015 and 2035 EDUs	Total EDUs at 2035
Single Family	31,298	25,492	56,790
Multi-Family	3,243	1,405	4,648
Commercial/ Retail	16,301	34,552	50,853
Industrial	893	2,820	3,713
Totals	51,735	64,269	**116,004**
% of Total EDU's at 2035	44.60%	55.40%	100.00%

3. Facility Fee Structure

As indicated in Table 5 in this Section, the estimated total facility cost allocated to new development is $10.9M. This amount is divided by the total EDUs assigned to new development through 2035 to arrive at a cost per EDU of $170.04. The administrative cost element is calculated in a similar fashion to be $0.89 per EDU. The total cost per EDU is $170.89. These unit costs are shown in Table 9 below:

TABLE 9
Facilites Cost Per EDU

Item	Cost	EDUs for New Development	Cost per EDU
New Water Facilities	$ 10,928,000	64,269	$ 170.04
Administrative Overhead	$ 55,000	64,269	$ 0.86
Totals	$ 10,983,000	64,269	$ 170.89

The proposed Facility Fee for the respective land uses is determined by multiplying the cost per EDU by the appropriate EDU factor. Because the EDU factors and the WUFs upon which the EDUs are based do vary between local service areas, as shown in Table 10, it is reasonable that weighted average WUFs are used to calculate uniform SGPWA service area EDU factors. This will result in one uniform fee structure to be used throughout the service area. Table 10 also shows the method for determining weighted average WUF for each land use. The WUF for each agency is weighted by the ratio of future EDUs for such agency to the total future EDUs. For example the City of Banning has 9,088 future EDUs, which represents 14.14% of the total future EDUs (refer to Table 7, "EDU Calculation – Growth at 2035" for EDU totals). Each land use within a given agency has its own specific WUF, which is multiplied by the weighting ratio specific to that agency (14.14% for the City of Banning). The weighted average WUF for each land use within the SGPWA service area is calculated by summing the weighted average WUF for each agency, by land use, and this value is shown in bold in the extreme right column labeled "Total" in Table 10.

Since EDUs are based on water demand, weighting based on EDUs presents a fair and rational means of determining service area wide EDU factors. For any of the four land use designations, the variation between EDU factors calculated by this weighted average method and the EDU factor determined on an individual retail agency basis, as shown in Table 10, is less than 4%, therefore use of the weighted average is reasonable. The calculation of the weighted average WUF for each land use designation is shown in Table 10 below:

TABLE 10
Weighted Average Water Use Factors

WUF by LandUse	City of Banning	City of Beaumont	City of Calimesa	Unincor-porated Areas and Other	Total
Weighting Factors:					
subtotal of EDUs	9,088	9,458	41,481	4,242	64,269
% of total EDUs	14.14%	14.72%	64.54%	6.60%	100.00%
Single Family:					
Water Use Factor ("WUF")	2.73	2.73	2.73	2.85	
Weighted WUF	0.39	0.40	1.76	0.19	**2.74**
Multi-Family:					
Water Use Factor ("WUF")	5.34	5.34	5.34	5.44	
Weighted WUF	0.76	0.79	3.45	0.36	**5.35**
Commercial/Retail:					
Water Use Factor ("WUF")	5.76	5.76	5.76	5.79	
Weighted WUF	0.82	0.85	3.72	0.38	**5.77**
Industrial:					
Water Use Factor ("WUF")	1.27	1.27	1.27	1.29	
Weighted WUF	0.18	0.19	0.82	0.09	**1.27**

If future data show that water use within the SGPWA service area is significantly different than the WUFs used in this study, it is recommended that SGPWA update the Facility Fee portion of this Update to reflect such changes.

For residential land uses the Facility Fee is determined based on a per unit water demand, whereby a dwelling unit in a multi-family building would demand less water by volume than that demanded by a single family dwelling unit. In Table 11A below the weighted average WUFs, the densities, the resulting water uses and EDU factors were used to calculate a uniform Facility Fee structure for residential land uses only. In column (1) the weighted average WUFs were taken from Table 10 above. The densities in column (2), the water usages in column (3) and the EDU factors in column (4) are the same as used in Tables 6 and 7. The fee for each of the two land uses was calculated by multiplying the cost per EDU from Table 9 of $170.04 by the service area wide EDU factor. For instance, the Facility Fee for a multi-family dwelling unit is found by multiplying the unit facility cost by 0.49, the EDU factor.

TABLE 11A
Residential Facilty Component Fee Structure

Land Use	(1) Weighted Ave. WUF (AFY/Ac)	(2) Density (DU per acre)	(3) Water Use (AFY per DU)	(4) EDU Factor	(5) Facility Element ($ unit)	(6) Admin Element ($ per Unit)	(7) Total Facility Fee per DU
Single Family	2.74	5	0.548	1.00	$ 170.04	$ 0.86	$ 170.89
Multi-Family	5.35	20	0.267	0.49	$ 83.01	$ 0.42	$ 83.43

Commercial and industrial land uses include any one of many specific building uses, ranging from low water demand uses such as retail, office and warehouse to high demand uses such as commercial laundry and car wash. Consequently, a fee structure based on building meter size is reasonable and prudent. A 5/8" meter size is typical for a single family unit, therefore a 5/8" meter is assigned one EDU. EDU factors for larger meter sizes are determined by the ratio of meter operational capacities, as determined by values given by the American Water Works Association, Manual M-1[5]. Table 11B below lists the various EDU factors, by meter size, and the corresponding Facility Fee. The facility element and the administration fees are calculated by multiplying the EDU factor by the costs per EDU from Table 9.

TABLE 11B
Non-Residential Facilty Component Fee Structure

Meter Size	AWWA Demand Ratio[1]	EDU Factor	Facility Element	Admin Element	Total Facility Fee
5/8"	1.0	1.0	$ 170.04	$ 0.86	$ 170.89
3/4"	1.1	1.1	$ 187.04	$ 0.94	$ 187.98
1"	1.4	1.4	$ 238.05	$ 1.20	$ 239.25
1-1/2"	1.8	1.8	$ 306.06	$ 1.54	$ 307.60
2"	2.9	2.9	$ 493.10	$ 2.48	$ 495.58
3"	11.0	11.0	$ 1,870.39	$ 9.41	$ 1,879.80
4"	14.0	14.0	$ 2,380.49	$ 11.98	$ 2,392.48
6"	21.0	21.0	$ 3,570.74	$ 17.97	$ 3,588.71
8"	29.0	29.0	$ 4,931.02	$ 24.82	$ 4,955.84

1. American Water Works Association, Manual M-6

It is recommended that SGPWA include in its fee resolution a provision to automatically increase the Facility Fee on July 1st of each year, beginning July 1, 2016 by a percentage equal to the change in Construction Cost Index for Los Angeles as published by Engineering News Record for the preceding twelve months. It is also recommended that SGPWA review the Facility Fee levels at reasonable intervals to incorporate changes in unit prices, facility requirements, water demands and demographics in order to ensure that Facility Fee cost allocations are reasonable and that collections over time will fund the required facilities. Finally, the Facility Fee is a requirement of all new development or redevelopment in the SGPWA service area, irrespective of whether a Water Capacity Fee (discussed in Section VI below) is required.

[5] Principles of Water Rates, Fees and Charges, Manual M-1, and Water Meters- Selection, Installation, Testing and Maintenance, Manual M-6, American Water Works Association.

VI. Water Component of the Facility Capacity Fee

The second component of the Facility Capacity Fee is the water component ("Water Capacity Fee"). The task of meeting the demands of new growth with scarce water sources is exacerbated by the significant reduction in reliability of imported water deliveries from the SWP due to periodic drought conditions, regulatory and court case cutbacks in allocations. SGPWA will need to purchase new water rights and entitlements to insure that additional water supplies will be available in the future as the SGPWA service area experiences new development. It has been estimated that total water demand at build-out is expected to be in excess of local supplies and existing imported SWP water, with allowances for reduced reliability. This deficit will need to be balanced by the purchase of new water rights and entitlements. The water rights and entitlements (authorized by SGPWA Act 101 – 27.1(b), (d) and (g)) that are needed to meet the demands of new development shall be purchased with funds provided by new development in the form of a Water Capacity Fee.

In July of 2014 SGPWA instructed Water Consultancy to prepare a memorandum that updates the estimated cost of purchasing additional Table A water (see Appendix D). Water Consultancy, by this July 2014 memorandum, estimates the market value of the cost of additional water rights and entitlements at $6,200 per acre-ft. The amount charged to new development as a Water Capacity Fee will be determined based on water demand, on a project by project basis, by SGPWA in cooperation with the permitting agency that has jurisdiction over the project. Administrative overhead is estimated to be 0.50% of the fee revenue, or $31.00 per acre-ft. This amounts to $31,000 for a purchase of 10,000 acre-ft of water, which is sufficient funding to cover the costs of administrative actions required for such purchase. See Table 12 below:

TABLE 12
Water Capacity Fee

Item	units	Fee
Fee for New Water Rights and Entitlements	$ per ac-ft	$ 6,200.00
Administrative Overhead	$ per ac-ft	$ 31.00
Total		$ 6,231.00

For example, using an annual water use amount of 0.548 AFY as indicated in Table 11A, a hypothetical single family dwelling unit would pay a Water Capacity Fee of $3,414.59 (0.548 AFY x $6,231 per acre-foot).

It is recommended that SGPWA include in its fee resolution a provision to review the Water Capacity Fee on July 1st of each year, beginning July 1, 2016, and adjust the Water Capacity Fee by a reasonable percentage based on the cost of actual water purchases, an updated water rights appraisal, or comparisons of recent purchases of additional water rights by statewide municipalities and special districts over the preceding twelve months.

Appendix A:

Demographic Background

Appendix A – Demographic Background

The purpose of this appendix is to document the methodology used to process raw residential dwelling unit data and non-residential building square feet data provided by local agencies in order to update existing development data given in the 2011 Study to mid 2014 levels. This Study will project residential and non-residential development to a 2035 development horizon. These changes are necessary in order to calculate a fee structure for the Facility Fee, as discussed in Section V of this Study. The Water Capacity Fee is not affected by updated demographic information, since this fee is based on expected water usage on a project by project basis, as discussed in Section VI of this Study. The updated existing development data and the revised projected development levels at 2035 will yield growth data that will ultimately affect the proposed Facility Fee structure. This demographic data was updated in order to recommend a Facility Fee structure that will insure that new development will pay its reasonable fair share of the cost of wholesale water delivery systems necessary to continue to meet the demand in the SGPWA service area. The Facility Fee will be implemented based on a fee per new residential unit and a fee by meter size for new non-residential buildings.

A.1 Existing Development

Existing residential units and non-residential building square feet as of 2009 are shown in Tables 1 and 2 of the 2011 Study. In order to update these numbers for existing development to June 2014, it was determined that building permit activity between 2009 and June 2014, where available, would be the best data source to add to the 2009 numbers.

A.1.1 Existing Residential Units

Table 1 of the 2011 Study lists the total single family and multi-family residential units in the Cities of Banning, Beaumont and Calimesa, and a portion of the unincorporated area of Riverside County that lies within the SGPWA service area, as of 2009. Annual permit data provided by the Cities and the County of Riverside was used to sum the number of new residential units permitted from 2009 to mid 2014. These numbers were then added to the data found in the 2011 Study to determine the extent of existing residential development as of June 2014. See Table A1 below:

TABLE A1

Existing Residential Units

Residential Land use	City of Banning	City of Beaumont	City of Calimesa	Unincorporated Area	Total Existing Residential Units
Single Family Thru 2009	9,927	11,421	2,200	6,201	29,749
Single Family from 2010 Thru June 2014	9	1,260	0	7	1,276
Total Existing Single Family	9,936	12,681	2,200	6,208	**31,025**
Multi Family Thru 2009	2,281	1,463	1,500	1,363	6,607
Multi Family from 2010 Thru June 2014	0	0	0	0	0
Total Existing Multi Family	2,281	1,463	1,500	1,363	**6,607**
Total	12,217	14,144	3,700	7,571	37,632

A.1.2 Existing Non-Residential Building Square Footage

In a manner similar to the method discussed above for updating existing residential units within the study area, permit activity for non-residential square feet between 2009 and June 2014 was added to the non-residential building square feet through 2009. The permit activity for the cities of Banning, Beaumont and Calimesa was provided by the respective City Building and Safety Departments while permit activity for the unincorporated areas within the SGPWA service area was provided by the County of Riverside. The numbers for existing development as of 2009 were taken from the 2011 Study. See Table A2 below:

TABLE A2

Existing Non-Residential Square Feet[1]

Non-Residential Land Use	City of Banning	City of Beaumont	City of Calimesa	Unincorporated Area	Total Existing Non-Residential SF
Comercial/Retail Thru 2009	4,502,000	3,624,000	1,482,000	3,471,000	13,079,000
Commercial /Retail from 2010 Thru June 2014	34,000	15,000	0	309,000	358,000
Total Existing Commercia/Retail	4,536,000	3,639,000	1,482,000	3,780,000	**13,437,000**
Industrial Thru 2009	4,231,000	1,982,000	412,000	60,000	6,685,000
Industrial from 2010 Thru June 2014	0	0	0	0	0
Total Existing Industrial	4,231,000	1,982,000	412,000	60,000	**6,685,000**
Total	8,767,000	5,621,000	1,894,000	3,840,000	20,122,000

1. Actual numbers rounded to the nearest 1,000 square feet

A.2 Future Residential and Non-Residential Development

Section IV of this Study, "Demographics", refers to revising the development horizon to 2035. Many sources of information are available for selecting or computing residential units and non residential square feet in year 2035, such as local city planning departments, county planning and GIS department, and local water district planning departments and Urban Water Management Plans ("UWMPs"), for example:

City of Banning	City of Beaumont	City of Calimesa
County of Riverside	Yucaipa Valley WD	Beaumont Cherry Valley WD

Since this Study relates to the recommendation of a facility capacity fee, in most cases UWMP's from retail water agencies within SGPWA boundaries were used as the primary source of 2035 demographic data.

Reconciliation of Various Demographic Estimates

Upon review the form of the data available from all sources is not consistent and easily related to residential units or non-residential square feet. For instance, the Banning UWMP lists total residential units (17,988), but lists projected water use for single family, multi family, commercial and industrial land uses in 2035. Therefore a calculation must be made to convert water use to residential units and non residential square feet. A similar approach is used for the City of Beaumont and the Community of Cherry Valley whereby total household data and water delivery projections in the Beaumont Cherry Valley Water District UWMP ("BCVWD UWMP") are used in order to determine a reasonable projection for residential units and non residential square feet.

The Yucaipa Valley Water District UWMP ("YVWD UWMP") provides water demand projections for 2035 but does not break down the data into local agencies or communities within the district, including the City of Calimesa and unincorporated areas of the County. Consequently, the City of Calimesa staff provided projected residential housing units and non-residential building square feet to the year 2035[1]. Approximately 75% of the residential housing unit projection was based on current projects before the City planning department at various stages of planning. City staff also provided projections to build out conditions for Commercial/Retail and Industrial building square feet.

In several cases, using common conversion factors such as water use factors and persons per household to convert data to the desired units, the results led to possible inconsistencies that can be easily reconciled. For instance, the City of Banning shows no additional multi-family units during the period from 2009 to June 2014 and therefore has 2,281 multi-family units as of June 2014, according to Table 3 of this report. However, using Banning UWMP data and converting to residential units, this approach calculates only 711 units. A three-fold reduction in multi-family units is unreasonable. See Table

[1] Letter from the City of Calimesa to San Gorgonio Pass Water Agency dated July 15, 2015. Subject line reads: "CITY OF CALIMESA LAND USE PROJECTIONS."

A3 below for the calculation using water usage to arrive at the 711 units. Similar disconnects lead one to believe that there is not one independent source of raw demographic data (population or households and building square feet) and not one set of conversion factors (per capita water use, persons per household) that is used by local agencies and retail water districts alike to determine water projections, residential units and non residential square feet. It should not be expected that universal conversion factors be used and residential and non-residential data be provided, as the primary objectives of local UWMP's is to identify projected water demands and water sources, not necessarily in terms of dwelling units and building square feet.

Listed below are a few of the factors that can vary by agency depending on local conditions. To the extent that these factors become variable across agencies within the Agency, it becomes necessary to reconcile differences in demographic projections when comparing data.

Persons per Household	Water Growth Rates	Per Capita Water Use
Population Growth Rates	Floor Area Ratios	Service Area Water Demand

Projections for residential dwelling units for the Cities of Banning, Beaumont and Calimesa are found in the various UWMP's that cover those areas. Projections for residential units for the unincorporated areas of Riverside County are found in special studies conducted by County staff. Projections for non-residential building square feet are basically projections of water usage converted to building square feet with the use of reasonable water use factors accepted in the 2011 Study. The methodology used to convert this data into single family and multi-family units and non-residential square feet is discussed below by jurisdiction.

City of Banning

Table 3-1 of the City of Banning UWMP projects the level of residential development in 2035 to be 17,988 units. This is based on the City's 2008 Housing Element and this number is consistent with Table 2-3 in Banning UWMP, which bases population projections on a 2% per year population increase from 2010 and an average of 2.7 persons per household. Table 3-1 does not break down the total units into single family and multi-family units. However, Table 3-1 does project the annual water demand for single family and multi-family dwelling units by multiplying a water use factor of 0.52 AFY per dwelling unit by 17,988 total units. This product is then broken down into single family and multi-family demand by applying percentages based on historical usage. These water demands are converted back to dwelling units by applying the water use factor 0.52 AFY. See Table A3 below:

Table A3

Residential Dwelling Units in the City of Banning per Table 3-1, 2010 UWMP:

	2030			2035		
	Water use[1] (AF/yr)	%	Dwelling Units[2]	Water use[1] (AF/yr)	%	Dwelling Units[2]
Single Family	8,141	96.05%	15,648	8,988	96.05%	17,277
Multi Family	335	3.95%	644	370	3.95%	711
totals	8,476	100.00%	16,292	9,358	100.00%	17,988

Notes:

1. City of Banning, 2010 UWMP, Table 3-1
2. City of Banning, 2010 UWMP, Table 3-1 and Table 2-3

Table A1 indicates that 2,281 multi-family units exist in the City of Banning as of June 2014. Table A3 above indicates that there are only 711 units projected for 2035 based on water demand. It is not plausible to expect a three-fold reduction in multi-family units to occur over the next twenty years. Therefore, for the purposes of this Study it will be assumed that the growth in residential units over the next twenty years will occur solely within the single family category, with the total housing unit count to remain at 17,988 as indicated in the City of Banning UWMP. See Table A4 below:

Table A4.1

City of Banning - Projected Residential Units

	2030	2035
Single Family	14,011	15,707
Multi Family	2,281	2,281
Total	16,292	17,988

Table 3-1 of the City of Banning 2010 UWMP also indicates projected water usage for commercial and industrial uses for future years in 5 year increments. Using average increases during these intervals and prorating this average over the twenty year study period, an increase of 54.72% over current levels is calculated. That percentage increase is applied to existing levels to estimate non-residential levels of development in 2035. See Table A4.2 below:

Table A4.2

City of Banning Non-Residential Square Feet

	2014	2035
Commercial	4,536,000	7,018,004
Industrial	4,231,000	6,546,115
Total	8,767,000	13,564,119

City of Beaumont and Cherry Valley

Table 2-11 of the Beaumont Cherry Valley Water District Urban Water Management Plan ("BCVWD UWMP") shows 21,958 households in 2035. However Table 2-11 does not break down the households into single family and multi-family categories. Table 3-8c of the BCVWD UWMP projects water deliveries (acre-ft per yr) in 2035 for single family and multi family categories. Using water use factors (acre-ft per year per DU) for each

category from Table 7 of the 2011 Study for SGPWA, the number of single family and multi-family units were projected based on water use. Since the total number of units determined by water use does not match the 21,958 units found in Table 2-11, the percentage split from the water use information was applied to the 21,958 total units to split single family and multi-family categories, as shown in Table A5.1 below:

Table A5.1

City of Beaumont - Projected Residential Units

	projected water deliveries (acre-ft/yr)[1]	water use factors (acre-ft/yr/DU)[2]	DU's	%	DU's in 2035
Single Family	14,658	0.546	26,846	93.86%	20,610
Multi Family	469	0.267	1,757	6.14%	1,348
	15,127		28,603	100.00%	21,958

Notes:

1. From Table 3-8c, BCVWD UWMP, year 2035
2. From Table 6, Capacity Fee Study for SGPWA, 2011

The BCVWD UWMP does not provide data for projected non-residential building square feet, however, Tables 3-8b and 3-8c of the BCVWD UWMP indicate water usage in AFY for 2015 and 2035. The calculated percentage increases were then applied to the 2015 levels of existing commercial and industrial building square feet to project the corresponding 2035 levels. See Table A5.2 below:

Table A5.2

City of Beaumont Non-Residential Square Feet

	2015	2035	increase	2015	2035
Commercial	88	119	35.23%	3,639,000	4,920,920
Industrial	93	117	25.81%	1,982,000	2,493,484
Totals	181	236		5,621,000	7,414,404

see Table 3-8b and Table 3-8c, BCVWD UWMP

City of Calimesa

The City of Calimesa General Plan is not clear with regards to demographic projections to the year 2035. Table 3-13 of the Yucaipa Valley Water District UWMP indicates projected water demands from areas within their district that lie within the SGPWA service boundary. For year 2035, water demand for domestic water, conjunctive use and long term supply sustainability is projected to be 1,453.7 MG. However, this data does not break down into land use categories. The Yucaipa Valley Water District UWMP demands include areas of Calimesa and portions of the unincorporated area of Riverside County that lie within SGPWA boundaries. In addition, the City of Calimesa is served in part by the South Mesa Water District. By segregating demographic data from the two Districts that apply only to the City of Calimesa results in projections for the City of Calimesa that would be inaccurate and possibly incomplete. For this reason it is

determined that projections provided by City staff would represent the latest and best data regarding growth within the City of Calimesa limits.

Table A6

City of Calimesa - Projections to 2035

	Dwelling Units	Building S.F.
Single Family	11,500	
Multi-Family	4,300	
Commercial		24,895,000
Industrial		18,700,000

Unincorporated Areas of Riverside County (not including Cherry Valley)

The County of Riverside ("County"), Information Technology and Center for Demographic Research publishes a progress report that contains a wide range of demographic information for cities lying within the County limits as well as unincorporated areas within the County. However, the data in the progress report for the unincorporated area is countywide, and does not breakdown the areas within wholesale water districts. At the direction of SGPWA staff, Webb Associates contracted with County staff to have County staff prepare a special study that compiles population data and housing data for unincorporated areas that lie within the SGPWA service area. In November of 2014 the County submitted their study in the form of an area map and table of population and housing data for the years 2010, 2020 and 2035. See Figure 1 below:

FIGURE 1

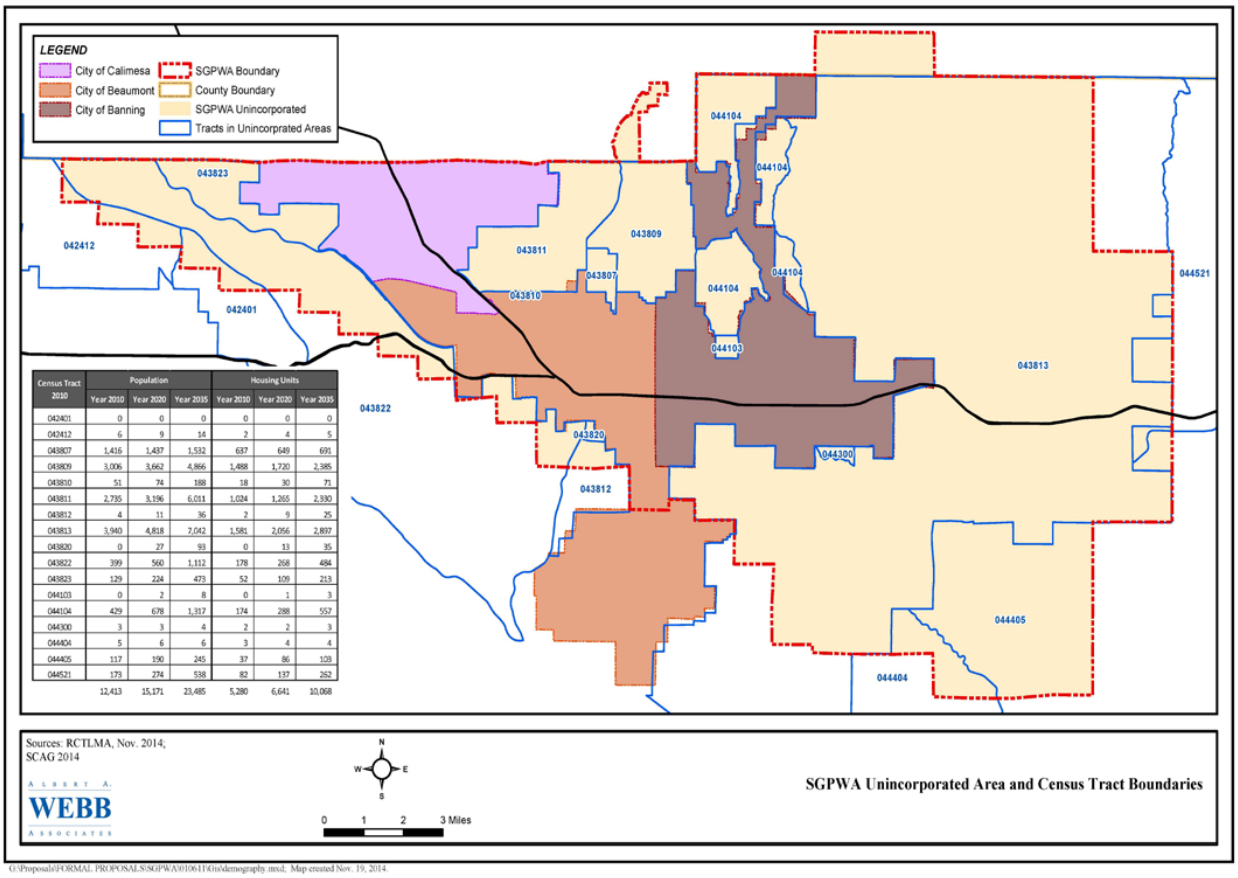

Figure 1 above indicates that there are 10,068 housing units projected for the year 2035 that lie within unincorporated areas of the County that are within SGPWA service area. Based on current development trends, it is very unlikely that there will be much new multi-family development in the unincorporated areas. Therefore it is assumed that the current level of multi-family development (1,363 units) will increase by only 2% total over the next twenty years, and the remainder of the 10,068 projected units will fall into the single family residential category. See Table A7 below:

Table A7

Unincorporated Areas - Residential

	2014	2035
Single Family	6,208	8,678
Multi Family	1,363	1,390
totals	7,571	10,068

The County progress report does not include non-residential data. However the Beaumont Cherry Valley Water District UWMP does indicate levels of water deliveries in 2015 and

2035, by land use categories. The study area in this UWMP includes undeveloped unincorporated areas in addition to the City of Beaumont. Similar to the method used for non-residential property within the City of Beaumont, it is reasonable to assume that the non-residential growth in these areas will be uniform and the magnitude of which is a percentage increase in the development that exists as of mid 2014. Also, it is assumed that the increase in water deliveries projected by the UWMP is a reflection of the judgment of BCVWD with regard to growth in its service area. Using these percentage increases in deliveries and applying those increases to current building square feet (in 1,000 square feet units, or KSF), 2035 projected commercial and industrial building square feet can be estimated. See Table A8 below:

Table A8

Unincorporated Areas - Non Residential

	2015 water deliveries	2035 water deliveries1	increase	Existing KSF	projected KSF
Commercial	88	119	35.23%	3,780	5,112
Industrial	93	117	25.81%	60	75

1. Tables 3-8b and 3-8c, BCVWD UWMP

Appendix B:

Facility Costs – Letter to Jeff Davis from Webb Associates, July 17, 2015

ALBERT A. WEBB ASSOCIATES

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3788 McCray Street
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W.O. No.: 2009-0033

July 17, 2015

Mr. Jeff Davis, General Manager
San Gorgonio Pass Water Agency
1210 Beaumont Avenue
Beaumont, CA 92223

Subject: San Gorgonio Pass Water Agency
Capacity Fee Improvement Cost Update

Dear Mr. Davis:

San Gorgonio Pass Water Agency (SGPWA) has retained the services of David Taussig & Associates, Inc. to conduct a Capacity Fee Nexus study. In order to provide the most current project cost data to Taussig & Associates, the Agency requested Webb Associates to update Webb's October 2010 "Implementation Plan for Capacity Fee Study" to reflect current cost data.

In this update, the Agency has decided to not include any Cabazon facilities in the fee, so this update will only apply to the Beaumont basin recharge facility and the acquisition of additional capacity in the Foothill Pipeline.

The Agency is currently in negotiations with San Bernardino Valley Municipal Water District (SBVMWD) for the purchase of 32 cubic feet per second (cfs) capacity in their Foothill Pipeline. The Agency has indicated that SBVMWD has initially agreed to a lower purchase price than previously discussed due to the age of the Foothill Pipeline and other factors.

As a result of these recent developments, the Agency has requested a redetermination of Webb's 2010 project cost estimate of the Beaumont Recharge Basin facilities.

As detailed in the SGPWA October 2010 "Implementation Plan for Capacity Fee" planning document prepared by Webb Associates, the projects were summarized as follows:

- Banning Pipeline Upsizing
- Beaumont Basin Recharge Facility
- Cabazon Pipeline
- Cabazon Basin Recharge Facility
- 32 cfs Capacity Purchase in the Foothill Pipeline from San Bernardino Valley Municipal Water District (SBVMWD)

As indicated above, this update study only includes the project cost for the Beaumont Basin and acquisition of additional capacity in the Foothill Pipeline.

The Beaumont Recharge Basin and its ancillary facilities along with the acquisition of additional capacity in the Foothill Pipeline are needed in order to meet average delivery of SWP water to the Agency's service area. The Agency must have the ability to convey and store SWP water during wet years to utilize this water during dry years. The implementation of recharge facilities in the Beaumont Basin will provide the Agency the terminal storage to implement the required conjunctive use program to fully utilize the Agency's Table A amount and be able to provide water to its retail customers during drought periods.

Refer to **Plate 1** for the project locations. The projects are in various states of development, from conceptual planning, design, and contract documents, and construction. Therefore, a varying degree of cost analysis was applied. The following summarize the recommended costing analysis:

- Beaumont Basin Recharge Facility
  - Engineering and Planning Costs for Recharge Facility and Offsite Pipeline
  - Bid Cost for Offsite Pipeline
  - Construction Management & Inspection (CM&I) Costs for Offsite Pipeline
  - Engineer's Estimate for Beaumont Recharge Facility
  - Estimated CM&I Costs for Beaumont Recharge Facility
  - Land Purchase for Beaumont Recharge Facility
  - Service Connection
- 32 cfs Capacity Purchase (Foothill Pipeline) from SBVMWD
  - Based upon preliminary discussion with SBVMWD

BEAUMONT BASIN RECHARGE FACILITY

This project has the following two components:

1. Ground Water Basin Recharge Facility (**Plate 2**)
2. Offsite Delivery Pipeline (**Plate 2**) and Service Connection

The Beaumont Basin Recharge Facility project has gone through a siting study, concept planning layout, land purchase, design and preparation of contract documents. This project is planned to be advertised and bid towards the end of 2015 or early 2016. At this level of planning and design, the cost basis will be the actual engineering design cost and contract level engineer's estimate. Additionally the estimated construction phase management and inspection support costs has been provided. The following **Table 2** summarizes these costs.

Table 2
Beaumont Recharge Basin Costs

Description	Costs
Planning and Engineering	$ 51,700
Design and Contract Documents	$ 182,900
Contract Level Engineer's Estimate	$2,833,415
Construction Management and Inspection	$ 300,000
TOTAL COST[1]	**$3,370,000**

The Beaumont Basin Recharge Facility's associated offsite pipeline went through the same planning efforts and recently completed construction and includes the Service Connection. These costs were provided per the Agency's August 19, 2014 and subsequent September 4, 2014 e-mails. The following **Table 3** summarizes these costs (see **Attachment A** for detailed breakdown of these costs).

[1] Rounded to the nearest $10,000.

Table 3
Beaumont Recharge Basin Offsite Pipeline Costs

Description	Costs
Engineering and Planning	$152,600
Contractor's Bid	$1,345,000
Construction Management and Inspection	$191,400
TOTAL COST	**$1,690,000**

Per the Agency's August 19, 2014 e-mail, the land purchase cost was $3,200,000. Summarized in **Table 4** is the total cost for the Beaumont Recharge Basin Project.

Table 4
Beaumont Recharge Basin Facilities Costs

Description	Costs
Beaumont Recharge Basin	$3,370,000
Offsite Pipeline	$1,690,000
Land Purchase	$3,200,000
Service Connection	$ 400,000
TOTAL COST[2]	**$8,660,000**

32 CFS CAPACITY PURCHASE OF THE FOOTHILL PIPELINE FROM SBVMWD

The Agency and SBVMWD have had lengthy discussions on the value of purchasing 32 cfs capacity in SBVMWD's Foothill Pipeline. Citing concerns with the age of the delivery pipelines among other reasons, the current negotiated amount is $4,000,000. Though there has not been a finalized executed agreement between the Agency and SBVMWD, for planning purposes, the amount of $4,000,000 will be utilized for this letter report.

[2] Rounded to the nearest $10,000.

PROJECT COST SUMMARY

Table 5 summarizes all the updated cost impacting the capacity fee.

Table 5

San Gorgonio Pass Water Agency

Updated Project Costs

Description	Costs[3]
Beaumont Basin Recharge Facility	$ 8,660,000
32 cfs Capacity Purchase from SBVMWD	$ 4,000,000
TOTAL PROJECT COST	**$12,660,000[4]**

Should you have any questions, please feel free to contact our office at 951-686-1070.

Sincerely,

ALBERT A. WEBB ASSOCIATES

Sam I. Gershon, RCE
Senior Vice President

Enclosures

[3] Rounded to the nearest $10,000

[4] Please note that pursuant to the American Association of Cost Engineers, our "project cost" is defined as an "Order of Magnitude Estimate. An approximate estimate made without detailed engineering data.... An estimate of this type is normally expected to be accurate within plus 50 percent or minus 30 percent." Please note the "Order of Magnitude Estimate" definition does not apply to the Beaumont Basin Recharge Facilities since this project is partially under construction and the balance has been designed.

ATTACHMENT A

Beaumont Avenue Recharge Facility

COST ESTIMATE

Date: 12-10-2013

Item No.	Description	Unit	Qty	Unit Price	Amount
1	Mobilization	LS	1	$50,000.00	$75,000
2	Clearing and Miscellaneous Work	LS	1	$25,000.00	$25,000
3	Water Pollution Control (SWPPP)	LS	1	$10,000.00	$10,000
4	Overexcavation and Recompaction	CY	165,000	$2.00	$330,000
5	Excavation and Grading (Excavation/Cut)	CY	196,000	$5.50	$1,078,000
6	Install 24" RCP Class IV	LF	730	$125.00	$91,250
7	Construct Inlet Structure	EA	5	$4,000.00	$20,000
8	Construct Outlet Structure	EA	4	$3,000.00	$12,000
9	Construct Spillway (W=15')	EA	4	$10,000.00	$40,000
10	Construct Spillway (W=20')	EA	1	$12,500.00	$12,500
11	Install Rip Rap	CY	900	$75.00	$67,500
12	Construct Access Stairway	EA	5	$1,000.00	$5,000
13	Construct SPPWC Std. 304-3 Grate Catch Basin (including concrete apron)	EA	3	$2,500.00	$7,500
14	Construct SPPWC Std. 304-3 Grate Catch Basin (including concrete apron)	EA	1	$2,500.00	$2,500
15	Construct Downdrain	LF	195	$30.00	$5,850
16	Construct Manhole NO.1 per RCFC&WCD MH251	EA	1	$2,500.00	$2,500
17	Construct Driveway Entrance	EA	1	$6,500.00	$6,500
18	Construct Seepage Cutoff Collar	EA	30	$750.00	$22,500
19	Construct TS No. 3 Per RCFC&WCD Std. TS303	EA	1	$2,000.00	$2,000
20	Construct Splash Wall	CY	8	$450.00	$3,600
21	Construct Concrete Collar Per RCFC&WCD Std. M803	EA	1	$750.00	$750
22	24" dia. C-905 PVC pipe	LF	825	$170.00	$140,250
23	20" dia. C-905 PVC pipe	LF	3,301	$160.00	$528,160
24	18" dia. C-905 PVC pipe	LF	1,182	$140.00	$165,480
25	14" dia. C-905 PVC pipe	LF	140	$120.00	$16,800
26	12" dia. C-900 PVC pipe	LF	145	$95.00	$13,775
27	8' dia. manhole/inlet structure	EA	1	$18,000.00	$18,000
28	Energy Dissipators	EA	10	$3,500.00	$35,000
29	14" BFV	EA	2	$3,500.00	$7,000
30	12" BFV	EA	3	$3,000.00	$9,000
31	18" Meter Assembly	EA	5	$16,000.00	$80,000
	Optional Items:				
XX	Install Perimeter Fence and Gates	LF			$0
XX	Hydroseed Exterior Slopes and Pads	SY			$0
	Total				**$2,833,415**

San Gorgonoio Pass Water Agency
Beaumont Recharge Basin Project
Estimated Construction Management and Inspection Services for Recharge Basin

Description of Effort	Hours [1]	Unit Cost	Cost
Construction Management 15 Hr/Week	386	$140	$54,000
Construction Management Support 10 Hr/Week	257	$110	$28,286
Construction Inspection 40 Hr/Week for 20 Weeks	800	$110	$88,000
Geotech 40Hr/Week for 12 Weeks	480	$120	$57,600
Survey 40Hr/Week for 3 Weeks	120	$240	$28,800
Geotech Report			$10,000
Potential Other Subconsultants			$20,000
Expences			$10,000
Total [2] Rounded to the Nearest $10,000:			**$300,000**

[1] *Contract duration per project specifications is 180 calendar days converted to weeks:*
(180 Calendar Day = 26 weeks)

[2] *This construction support effort is reflective of the Estimated Cost only and may need to be updated upon actual construction duration and re-evaluation of scoping efforts.*

San Gorgonoio Pass Water Agency
Beaumont Recharge Basin Project
Project Costs - Recharge Basin

Effort Type	Time Duration	Costs
Site Analysis, Conceptual, Planning	2008 to 2011	$51,700
Design and Constrctuction Documents	2012	$182,900
Engineer's Estimate	2013	$2,833,415
Construction Services	2014	$300,000
Project Cost Rounded to the Nearest $10,000:		**$3,370,000**

This project cost is reflective of Webb's Actual Costs, Engineer's, Estimate, and estimated construciton support costs and does not account for budget expended by the Agency's Staff.

San Gorgonoio Pass Water Agency
Beaumont Recharge Basin Project
Project Costs - Offsite Pipeline

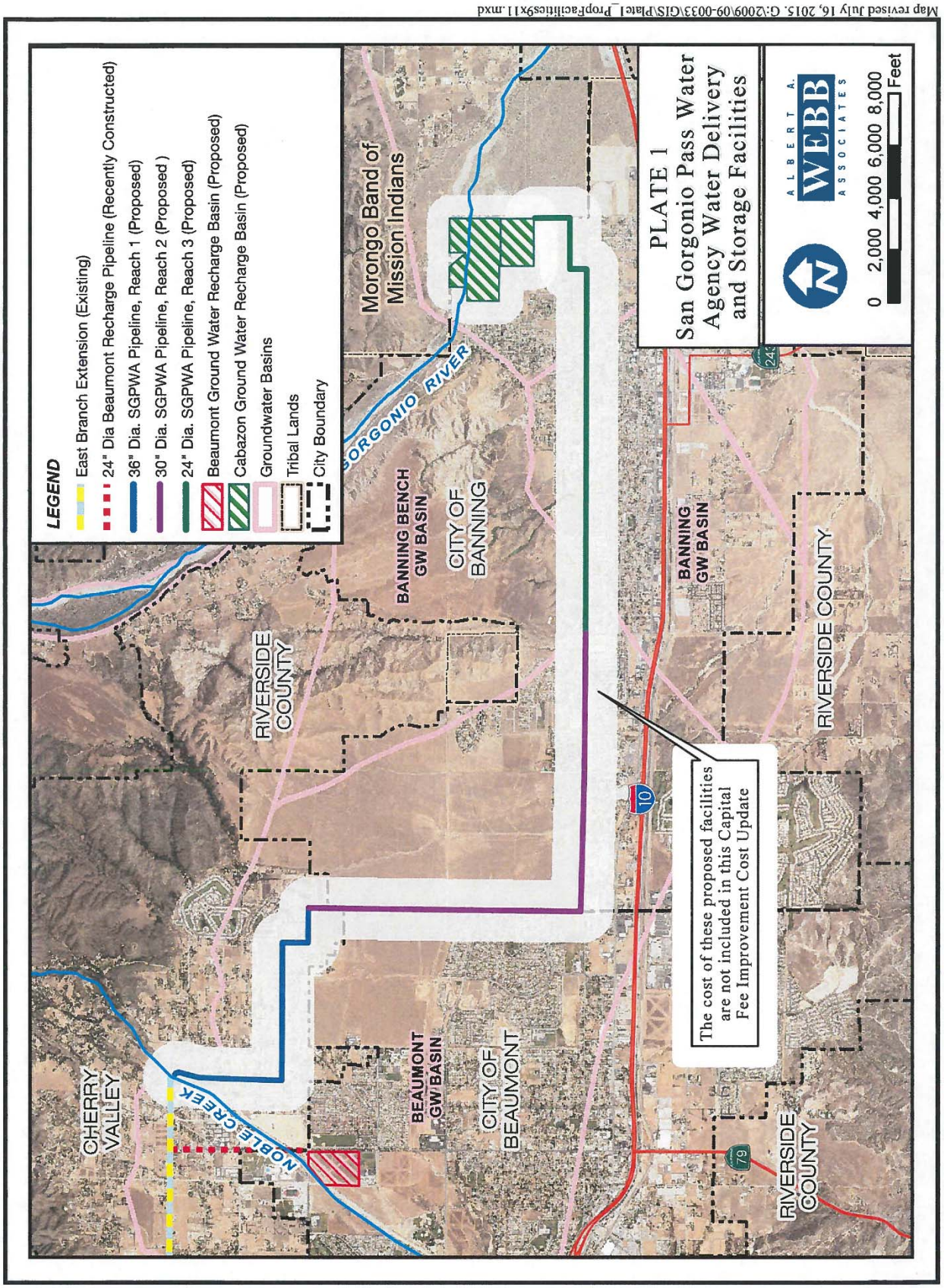
Effort Type	Time Duration	Costs
Design and Constrctuction Documents	2012	$152,600
Engineer's Estimate	2013	$1,345,000
Construction Services	2014	$191,400
Project Cost Rounded to the Nearest $10,000:		**$1,690,000**

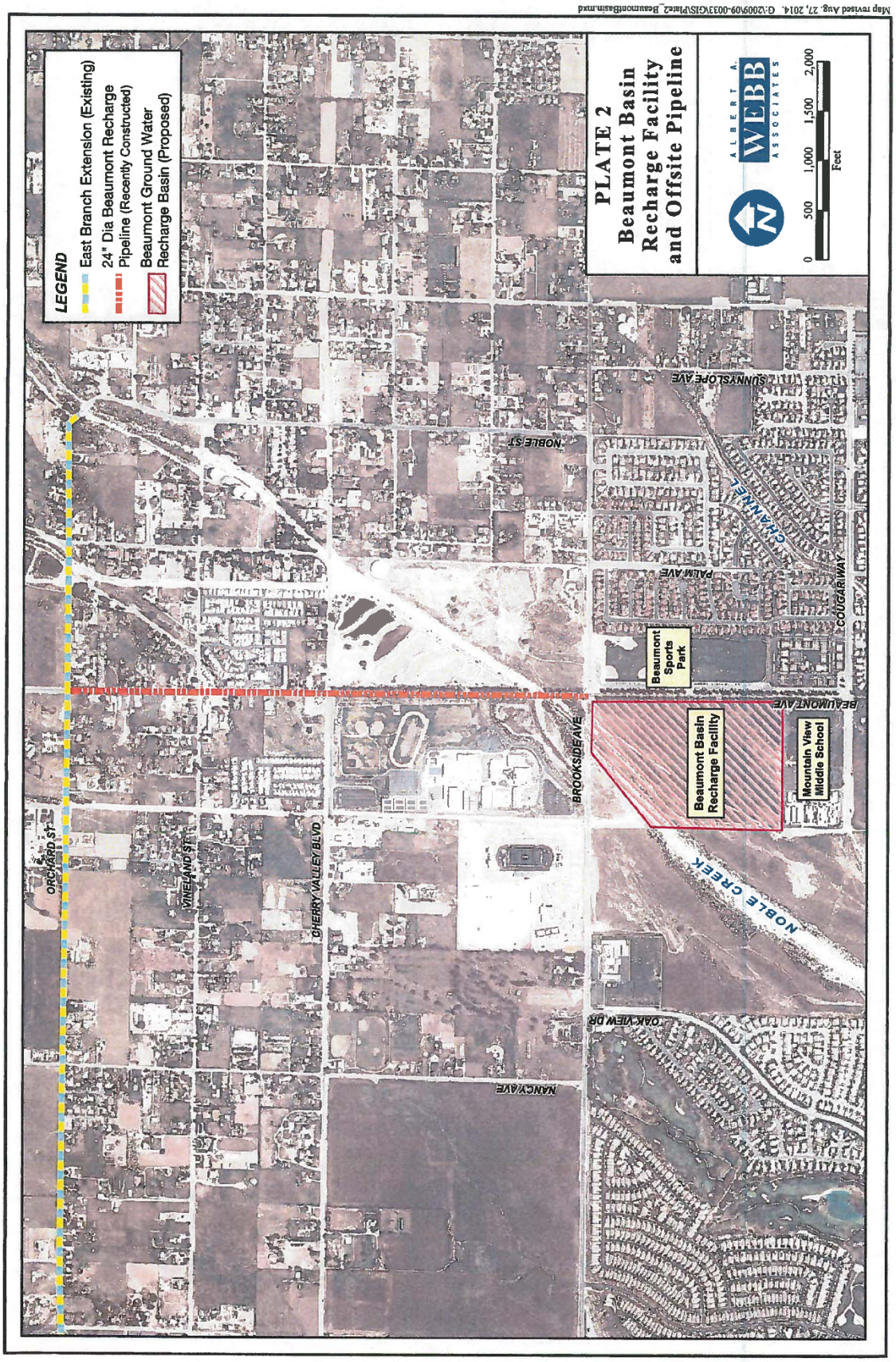
This project cost is reflective of Actual Costs of Design Consultants, Contractor's Bid, and Budget for Construciton Support Consultant and does not account for budget expended by the Agency's Staff.

Beaumont Recharge Basin Total Facilities Costs

Description	Costs
Beaumont Recharge Basin	$3,370,000
Offsite Pipeline	$1,690,000
Land Purchase	$3,200,000
Service Connection	$400,000
Project Cost Rounded Nearest $10,000:	**$8,660,000**

PLATES


Map revised July 16, 2015. G:\2009\09-0033\GIS\Plate1_PropFacilities9x11.mxd
LEGEND
East Branch Extension (Existing)
24" Dia Beaumont Recharge Pipeline (Recently Constructed)
36" Dia. SGPWA Pipeline, Reach 1 (Proposed)
30" Dia. SGPWA Pipeline, Reach 2 (Proposed)
24" Dia. SGPWA Pipeline, Reach 3 (Proposed)
Beaumont Ground Water Recharge Basin (Proposed)
Cabazon Ground Water Recharge Basin (Proposed)
Groundwater Basins
Tribal Lands
City Boundary
PLATE 1
San Gorgonio Pass Water Agency Water Delivery and Storage Facilities
ALBERT A. WEBB ASSOCIATES
0 2,000 4,000 6,000 8,000 Feet
Morongo Band of Mission Indians
SAN GORGONIO RIVER
BANNING BENCH GW BASIN
CITY OF BANNING
BANNING GW BASIN
RIVERSIDE COUNTY
CHERRY VALLEY
NOBLE CREEK
BEAUMONT GW BASIN
CITY OF BEAUMONT
The cost of these proposed facilities are not included in this Capital Fee Improvement Cost Update
10
79
243


Map revised Aug. 27, 2014 G:\2009\09-0033\GIS\Plate2_BeaumontBasin.mxd
PLATE 2
Beaumont Basin Recharge Facility and Offsite Pipeline
LEGEND
East Branch Extension (Existing)
24" Dia Beaumont Recharge Pipeline (Recently Constructed)
Beaumont Ground Water Recharge Basin (Proposed)
ALBERT A. WEBB ASSOCIATES
0 500 1,000 1,500 2,000
Feet
Beaumont Basin Recharge Facility
Mountain View Middle School
Beaumont Sports Park
BEAUMONT AVE
COUGAR WAY
PALM AVE
SUNNYSLOPE AVE
CHANNEL
NOBLE ST
BROOKSIDE AVE
CHERRY VALLEY BLVD
VINELAND ST
ORCHARD ST
NANCY AVE
OAK VIEW DR
NOBLE CREEK

Appendix C

Section 1 of Implementation Plan For Capacity Fee, Webb Associates, October 2010

Implementation Plan for Capacity Fee

San Gorgonio Pass Water Agency

Prepared for

San Gorgonio Pass Water Agency

October 2010

ALBERT A. WEBB ASSOCIATES

SAN GORGONIO PASS WATER AGENCY

IMPLEMENTATION PLAN FOR CAPACITY FEE

Prepared By:

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Sam I. Gershon, R.C.E.
R.C.E. No. C14489

October, 2010

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SECTION 1 - GUIDANCE FOR DETERMINATION OF UNIT WATER USE

INTRODUCTION

This section provides the guidance for the evaluation and determination of the Unit Water Use Factors for the San Gorgonio Pass Water Agency.

To address recent State water use reduction requirements (Water Conservation Requirements, SBX 7 7), San Gorgonio Pass Water Agency (SGPWA) has reviewed and evaluated publications and references and applied applicable standards and requirements for the determination of residential and non-residential water use factors.

As a requirement of SBX 7 7, many Water Agencies and Districts are developing and adopting ordinances in order to attain the recommended 20-percent water reduction by the year 2020. The water retailers within SGPWA service area have adopted ordinances based on model ordinances that were developed by the State and County. SGPWA's projected water demand, calculated herein, was based upon current water conservation criteria for indoor or interior water use and the local prevailing ordinance for outdoor water use.

It is noted that these water use factors should be generally applied to planned developments as well as to individual developments.

RESIDENTIAL DEVELOPMENTS

The estimated indoor water demand is based on the following:

- Indoor water use is based on an average water use of 57.6 gallons per day per capita (gpcd) taking into account the use of ultra low flush toilets, low flow showerheads and faucets

and installation of other current water-efficient fixtures and appliances as required by current plumbing codes and state and federal law.

- Outdoor water use is based on applicable ordinances as adopted by the water retailers within the Agency's service area.

Indoor Water Use

The indoor water use is based on a study prepared by the American Water Works Association Research Foundation (AWWARF, 1999) which showed that the average per capita indoor water use was 69.3 gpcd, including a mix of homes with older and newer plumbing; although based on the data presented, homes utilizing ultra low flush toilets and low flow shower heads could be expected to use 57.6 gpcd (including leakage) (Appendix A). As water savings devices such as high efficiency toilets, clothes washers and dishwashers are currently being utilized by many households and are typically required for new developments, it is reasonable to expect that residential water use would be 57.6 gpcd or less.

In computing the indoor demand, the average residential occupancy for the area should be utilized for the Agency's areas. Riverside County Transportations and Land Management Agency, 2009 Progress Report (Appendix B) indicates an average of 3.06 persons per occupied housing unit. For guidance purposes, this evaluation will assume the household occupancy rate is 3 persons per occupied housing unit (Table 1-1).

Table 1-1: Household Occupancy Rate[1]

Criteria	Persons Per Occupied Housing Unit
3 Bed/2 Bath	3

The indoor water use factors are applied to the designated residential land use based on the zoning requirements and converted to acre-feet per year per acre basis. An example of such a conversion is as follows:

[1] For housing units having greater than 3 bedrooms, it should be considered that each additional bedroom shall add a water demand of 0.065 Acre-feet/Bedroom/Year.

Water Retailer: Yucaipa Valley Water District (YVWD)

Zoning: Residential High A (Res HA) 14 to 20 dwelling units per acre, City of Calimesa General Plan Land Use as utilized in the SGPWA Supplemental Water Supply Study.

Occupancy: 3 persons per household

Water Use: 57.6 gpdc

Based on these parameters, the acre-feet equivalent of water usage per year per dwelling unit is 0.194 ac-ft/yr/DU. For the zone designation of Res HA, assuming the maximum numbers of dwelling units per acre, the indoor unit Water Use Factor for Res H within the YVWD is 3.87 ac-ft/ac/yr.

The following Table 1-2 summarizes the indoor unit water use factors for the jurisdictions within SGPWA's service area.

Table 1-2: Indoor Unit Use Factor per Residential Landuse Designation (Acre-Feet/Acre/Year)[2]

Residential Landuse Designations	Unit Use Factor
Residential Agriculture (1DU per 10 Acres)	0.02
Residential Rural (1 DU per Acre)	0.19
Residential Very Low (2 DU per Acre)	0.39
Residential Low (3-5 DU per Acre)	0.97
Residential Medium (5-12 DU per Acre)	2.32
Residential High A (12-20 DU per Acre)	3.87
Residential High B (20-29 DU per Acre)	5.61

Outdoor Water Use

Outdoor demand is based on compliance with the local adopted ordinances for outdoor water use. These ordinances typically establish a maximum water allowance for landscape irrigation which is based on the potential evapotranspiration (ETo) area.

Some jurisdiction's ordinances require a "dual plumbing" system which involves a separate water system for outdoor use, particularly for landscaping purposes, while some do not, but have guides for types of plants and turf landscaping, and provide calculations for determining outdoor water

[2] Based upon a 3 bedroom/two bath house with 3 occupants.

usage. The following Table 1-3 summarizes the jurisdictions' outdoor water use ordinances (Appendix C). For areas that are outside a City's boundaries, the Riverside County Ordinance No. 859.2 as adopted on October 22, 2009 would apply.

Table 1-3: Jurisdictions' Outdoor Water Use Ordinances

Jurisdiction	Applicable Ordinance	Water Retailer(s)
Banning	City of Banning's adopted Resolution No. 2010-06 – Water Conservation in Landscaping Act (AB1881) which found that the City's water efficient landscape Ordinance No. 1339 (adopted Feb. 14, 2006) contained most of the elements that correspond to the requirements of AB 1881. A chart provided with Resolution No. 2010-06 identified the requirement of AB 1881 and the corresponding City regulation or program that meets that requirement.	City of Banning Water Department
Beaumont	Modified Version of Riverside County's Ordinance, Ordinance No. 963, adopted on Nov. 2009	Beaumont Cherry Valley Water District
Calimesa	State Model Ordinance, City adopted State's Model on Dec. 2009	Yucaipa Valley Water District
Riverside County	County Ordinance, Ordinance No. 859.2, adopted on Oct., 2009	Cabazon Water District, Banning Heights Mutual Water Company, High Valley Water District, South Mesa Water Company

Upon review of the various ordinances, there was a common formula for the determination of outdoor water use (Appendix C):

Maximum Applied Water Allowance (MAWA) is the upper limit of the annual applied water for the established landscaped areas in gallons per year. The MAWA formula is as follows:

MAWA = (ETo x 0.62) x [(0.7 x LA) + (0.3 x SLA)]

ETo = Reference EvapoTranspiration, per 1999 CIMIS Zone Maps (inches per year) (Appendix D)
0.62 = Conversion factor (to gallons)
0.7 = ET Adjusted Factor (ETAF)
LA = Landscaped Area (square feet)
SLA = Special Landscaped Area (square feet)
0.3 = Additional Water Allowance for SLA

For the purpose of simplifying the determination of the unit water use factors, it is assumed that there are no SLA's, therefore the formula is revised as follows:

MAWA = (ETo x 0.62) x (0.7 x LA)

The following Table 1-4 summarizes the evapotranspiration (ETo) rates for a given area. It is noted that the ETo rate the areas within SGPWA's service area varies from 55.1 to 62.5.

Table 1-4: EvapoTranspiration Rates

County/City	ETo Rate (inches/year)
Riverside County	55.1
City of Calimesa	55.1
City of Beaumont	55.1
City of Banning[3]	55.1
Cabazon Area	62.5

The amount of area to be landscaped (LA) was assumed based on review of the number of dwelling units within an acre and utilizing Plate E-6.3 entitled "Impervious Cover for Developed Areas" of the RCFC&WCD Hydrology Manual (Appendix E). Plate E-6.3 provides for an estimated range of impervious cover and assumes the pervious cover would be irrigated. The higher end of the pervious percentage cover was used. The following Table 1-5 summarizes these assumptions and provides the landscaped area value.

Table 1-5: Outdoor Landscape Areas Per Lot, Including Common Parkway Areas

Residential Landuse Designations	Sq. Foot	Pervious Areas
Residential Agriculture (1DU per 10 Acres)	37000	Assumed 85% of 1 Acre
Residential Rural (1 DU per Acre)	37000	85% of 1 Acre
Residential Very Low (2 DU per Acre)	14200	65% of 1/2 Acre
Residential Low (3-5 DU per Acre)	4800	55% DU of Lot
Residential Medium (5-12 DU per Acre)	2000	55% DU of Lot
Residential High A (12-20 DU per Acre)	1000	45% DU of Lot
Residential High B (20-29 DU per Acre)	500	35% DU of Lot

[3] As per January 26, 2010 City Council Consent Item regarding Resolution No. 2010-06, Water Conservation in Landscaping Act 9AB 1881), Attachment 1, Exhibit "A", Chapter 17.32, page 608, there was reference to an attached evapotranspiration (ETo) map, though a map was not attached. Additionally, the sample calculations listed an ETo rate as high as 75.0 inches/year. The ETo rate for Banning would require verification as the listed rate on the sample calculation is greater than the highest listed rate on the 1999 CIMIS Evapotranspiration Map (Appendix D).

Utilizing the formula for determining the MAWA and applying the area's associated ETo rates and the estimated LA's for a given landuse designation, yields outdoor unit water use as summarized in the following Table 1-6. It is noted that the upper range of the number of dwelling units were utilized. For example, for Residential High B with 20 to 29 dwelling units per acre, 29 dwelling units per acre was utilized in the calculation.

Table 1-6: Outdoor Unit Use Factors per Residential Landuse Designation (Acre-Feet/Acre/Year)

Residential Landuse Designations (MAWA)	Riverside County	Calimesa Beaumont Banning	Cabazon Area
Residential Agriculture (1 DU per 10 Acres)	2.72	2.72	3.08
Residential Rural (1 DU per Acre)	2.72	2.72	3.08
Residential Very Low (2 DU per Acre)	2.08	2.08	2.36
Residential Low (3-5 DU per Acre)	1.76	1.76	2.00
Residential Medium (5-12 DU per Acre)	1.76	1.76	2.00
Residential High A (12-20 DU per Acre)	1.47	1.47	1.66
Residential High B (20-29 DU per Acre)	1.06	1.06	1.21

The following Table 1-7 summarizes the total indoor and outdoor water use factors per respective residential landuse designation.

Table 1-7: Indoor & Outdoor Unit Use Factor per Residential Landuse Designation (Acre-Feet/Acre/Year)

Residential Landuse Designations (MAWA)	Riverside County	Calimesa, Beaumont, & Banning	Cabazon Area	Table 2-5 Oct. '09 Supplemental Water[4]
Residential Agriculture (1 DU per 10 Ac.)	2.74	2.74	3.10	2.09
Residential Rural (1 DU per Ac.)	2.91	2.91	3.27	2.29
Residential Very Low (2 DU per Ac.)	2.47	2.47	2.75	2.21
Residential Low (3-5 DU per Ac.)	2.73	2.73	2.97	2.46
Residential Medium (5-12 DU per Ac.)	4.08	4.08	4.32	3.76
Residential High A (12-20 DU per Ac.)	5.34	5.34	5.54	4.60
Residential High B (20-29 DU per Acre)	6.68	6.68	6.82	5.38

It is noted that the City of Calimesa is in Yucaipa Valley Water District's (YVWD) Service Area. If YVWD has a separate outdoor water system utilizing recycled water (dual plumbing), then the Unit Use Factor would not include Outdoor Unit Use per Table 1-7 above. Therefore the following Table 1-8 summarizes the unit use factors for City of Calimesa, if YVWD implements a dual plumbing program.

Table 1-8: Indoor Unit Use Factor per Residential Landuse Designation (Acre-Feet/Acre/Year)

Residential Landuse Designations	City of Calimesa
Residential Agriculture (1DU per 10 Acres)	0.02
Residential Rural (1 DU per Acre)	0.19
Residential Very Low (2 DU per Acre)	0.39
Residential Low (3-5 DU per Acre)	0.97
Residential Medium (5-12 DU per Acre)	2.32
Residential High A (12-20 DU per Acre)	3.87
Residential High B (20-29 DU per Acre)	5.61

[4] These unit use factors were utilized in Table 2-5 of the October 2009 SGPWA Supplemental Water Report prepared by Webb Associates.

NON-RESIDENTIAL DEVELOPMENTS

Non-residential developments include commercial, institutional and recreational developments. Indoor water use for these developments should be based on the specific type of use proposed and appropriate indoor water use factors. In 2000, the American Water Works Association Research Foundation (AWWARF, 2000) (Appendix F) prepared a study of commercial and institutional water use. This study identified a range of efficient water use for five types of commercial/institutional establishments (restaurants, hotel/motels, offices, supermarkets and schools. Typical water use factors are shown in the following Table 1-9.

Table 1-9: Indoor Water Use for Commercial/Industrial Use[5]

Type of Use	Usage Range (gpd)	Unit of Application
Restaurants	0.36 - 0.91	Sq. ft. of building Area
Hotels and Motels	60 - 115	Occupied room
Offices	0.07 - 0.10	Sq. ft. of building Area
Supermarkets	0.07 - 0.14	Sq. ft. of building Area
Schools	0.02 - 0.04	Sq. ft. of building Area

Indoor Water Use

In order to equate a building's square footage to usage in terms of acres, various ratios were utilized for the types of commercial land uses. These ratios were estimated based on typical projects. The following Table 1-10 summarizes the percent building (structure) area of a given landuse designation and the associated indoor unit water use.

Table 1-10: Indoor Unit Use Factor per Commercial Landuse Designation (Acre-Feet/Acre/Year)

Commercial Landuse Designations	Percent Building Area	Unit Water Use
Restaurant	30%	13.32
Hotels and Motels	60%	7.32
Offices	40%	1.95
Supermarkets	50%	3.42
Schools (assumed structures 15%)	15%	0.29

Outdoor Water Use

For determining commercial outdoor use, the same methodology utilized to determine the residential outdoor water use was applied, such as using the RCFC&WCD Hydrology Manual for determining the irrigation area and the ordinance's formula for calculating the MAWA. It is noted that an ETo of 55.1 was utilized for Riverside County, Banning, Beaumont and Calimesa,

[5] Reference: AWWA RF 2000. Commercial and Institutional End Uses of Water.

and ETo of 62.5 was utilized for the Cabazon Area for this evaluation. The following Table 1-11 summarizes the percent area landscaped and the outdoor water use.

Table 1-11: Outdoor Landscape Areas Unit Water Use Factors per Commercial Landuse Designation (Acre-Feet/Acre/Year)

Commercial Landuse Designation	Pervious Area in Percent	Riverside County, Calimesa, Beaumont, & Banning	Cabazon Area
Restaurant	10	0.32	0.36
Hotels and Motels	10	0.32	0.36
Offices	15	0.48	0.54
Supermarkets	15	0.48	0.54
Schools (assumed 50% for turf areas)	50	1.60	1.81

The following Table 1-12 summarizes the total indoor and outdoor water use factor per respective commercial landuse designation. If the commercial development is within the YVWD's service area and YVWD implements a dual plumbing program, then the unit water uses summarized in the previous Table 1-10 would apply.

Table 1-12: Indoor & Outdoor Unit Use Factor per Commercial Designation (Acre-Feet/Acre/Year)

Commercial Landuse Designations	Riverside County, Calimesa Beaumont, Banning	Cabazon Area
Restaurant	13.64	13.68
Hotels and Motels	7.64	7.68
Offices	2.43	2.50
Supermarkets	3.90	3.96
Schools	1.89	2.11
Airport[6]	0.60	
Commercial[6]	1.21	
Industrial[6]	1.27	
Public Facilities[6]	1.76	

[6] AWWARF 2000 addressed the unit use factors for restaurant, hotels and motels, offices, supermarkets and schools. For additional non-residential developments that may not fall into the AWWARF 2000 designations, these landuse designations and associated unit use factors, from the SGPWA October, 2009 Supplemental Water Supply Planning Study, may be utilized.

Golf Courses

The ordinances listed in Table 1-3 did not cover golf courses. Though for guidance purposes, the unit water use was estimated utilizing the same methodology for determining outdoor commercial and residential water uses, such as using the RCFC&WCD Hydrology Manual for determining the irrigation area and the ordinances' formula for calculating the MAWA. The following Table 1-13 summarizes the unit water uses per a given ETo rate.

Table 1-13: Unit Use Factor for Turf Irrigation of Golf Courses (Acre-Feet/Acre/Year)

Location of Golf Course	ETo Rate	Unit Water Use
Riverside Co, Calimesa, Beaumont, Banning	55.1	3.20
Cabazon Area	62.5	3.63

The unit use factors listed in Tables 1-11 and 1-13 should be considered as a basis of evaluation and it is up to the developer to provide plans and calculations for determining the actual water demand for outdoor landscape areas for commercial landuse areas and golf courses on a case by case basis.

As the irrigation demand for golf courses can be substantial, the developers may want to review the use of a non-potable water supply.

Appendix D

Updated Water Rights Appraisal – Memo from Water Consultancy, July 20, 2014

Water Consultancy

20 July 2014

Memorandum

To: Mr. Jeff Davis, General Manager
San Gorgonio Pass Water Agency

From: Lynn Takaichi

Subject: Updated Valuation of State Water Project Table A Amount
WC- 003

In accordance with our agreement dated July 10, 2014, Water Consultancy is pleased to provide the following updated valuation of State Water Project (SWP) Table A Amount for the San Gorgonio Pass Water Agency (SGPWA).

Background

SGPWA is currently considering the implementation of a wholesale facility capacity fee and is developing the technical support for the development of the fee. One element of the capital program to be funded by the fee is the acquisition of additional water supplies. Because SGPWA is a State Water Project (SWP) contractor, it is likely that any acquired water supply will be additions to its SWP Table A Amount (as defined in SGPWA's contract with the California Department of Water Resources). To establish the estimated cost of potential additions to SGPWA's Table A Amount, SGPWA authorized Water Consultancy to prepare this updated valuation to the valuation prepared in 2010 by Kennedy/Jenks Consultants. The valuation, like the previous one, is based on the financial terms of previous Table A transfers and adjusted to 2014 dollars. The valuation does not assure the availability of potential future Table A transfers; however, such transfers are currently being discussed among the SWP contractors.

Fair Market Value

As defined by the Code of Civil Procedure Section 1263.320, "The fair market value of the property taken is the highest price on the date of the valuation that would be agreed by the seller, being willing to sell; and a buyer being ready, willing, and able to buy under no particular or urgent necessity for so doing, each dealing with the other with full knowledge of all the uses and purposes for which property is reasonably adaptable and available."

This definition implies that the fair market value is the highest price that a willing buyer would pay a willing seller if sold on the open market without the force of condemnation or the threat of condemnation. Sections 815 through 821 of the Evidence Code provide several allowable considerations when establishing the value of property. These considerations include sales of the subject property, comparable sales, leases of the subject property, comparable leases, capitalization of income, reproduction cost and conditions in the general vicinity of the subject property.

Method of Valuation

There are several methods of valuation that are commonly utilized in determining the fair market value of a property. However, not all of these methods may be appropriate in determining the value of water rights. The commonly used and most appropriate method of valuation for water rights is the comparable sales method.

The Comparable Sales method of valuation can also be used to value water rights or other real property. However, it is somewhat difficult to find comparable sales since water rights are often not comparable. Under this method, the value of the water rights is determined by comparing relevant factors of prior sales with those of the water rights being appraised.

Market Value by the Comparable Sales Method

Because of their different financial characteristics, permanent Table A transfers are distinguished from short-term Table A transfers for the purpose of this valuation. Short-term Table A transfers are not addressed in this valuation. In addition, please note that prior Table A transfers have occurred at different years. Accordingly, adjustments of the transfer prices are necessary to compare the transactions. These adjustments are presented in a subsequent section of this valuation.

Various SWP contractors (or their member agencies) hold contractual SWP Table A Amounts in excess of their demands. Due to the high annual fixed costs of their SWP Table A Amounts, some of these agencies have arranged to sell all or part of this excess to other contractors. Such Table A Amounts are subject to the SWP annual allocation and SWP delivery reliability constraints. In the majority of cases, sellers have been San Joaquin Valley agricultural contractors, for whom the fixed costs of their SWP Table A Amounts are too high. Buyers have included various southern California and Bay Area water agencies, as well as real estate interests and developers (who sometimes finance the transfer for a water agency that would subsequently serve their residential or commercial development projects).

Financial terms are variable, but recent "face value" costs have ranged from $1,500/AF to over $5,000/AF. The buyer assumes all prospective SWP Transportation Minimum, Capital, O&M and variable power cost payments to DWR from the time the Table A sale is effective, through the life of the SWP contract (to 2035 and beyond).

A summary of permanent Table A transfers is presented below.

Devils Den Water District to Castaic Lake Water Agency (CLWA), 1991: CLWA purchased the entire 12,700 AF of the Devils Den Water District Table A Amount by purchasing the majority (90%) of the District lands. The purchase price of the land was $5.0 million. Assuming the value of the Table A was the primary basis for the purchase price, the cost of the Table A transfer was $394/AF. This was the first permanent "ag to urban" Table A transfer transaction under the terms of the SWP contracts.

Kern County Water Agency (KCWA) to Mojave Water Agency (MWA), 1998: This transfer was the first "ag to urban" transfer processed under the Monterey Amendment to the SWP Contracts. Transfer amount was 25,000 AF, at $1,000/AF.

KCWA (Wheeler Ridge-Maricopa WSD) to CLWA, 1999: The Table A Amount transferred was 41,000 AF and price was $1,000/AF (A Monterey Amendment transfer).

KCWA to Palmdale Water District, 2000: 4,000 AF of Table A Amount at $1,000/AF (A Monterey Amendment transfer).

KCWA to Zone 7 Water Agency (Zone 7), 2000/2001: This Monterey transfer was composed of amounts from several KCWA member agencies: Berrenda Mesa Water District: 7,000 AF; Lost Hills Water District: 15,000 AF; Belridge Water Storage District: 10,000 AF. Total Table A transfer was 32,000 AF at $1,000/AF.

KCWA to Solano County Water Agency, 2001: 5,756 AF of Table A Amount was transferred under the Monterey Amendment at a purchase price of $1,055/AF.

KCWA to Napa County Flood Control and Water Conservation District, 2001: The Table A transfer was 4,025 AF at $1,000/AF (A Monterey Amendment transfer).

Tulare Lake Basin Water Storage District (TLBWSD) to Dudley Ridge Water District (DRWD), 2002: The Table A transfer was 3,973 AF (Not a Monterey Amendment Transfer). Although the purchase price was not available, it was estimated to be $1,500/AF (TLBWSD, personal communication).

TLBWSD to Antelope Valley-East Kern Water Agency (AVEK), 2002: 3,000 AF of Table A Amount was transferred for a price of $1,100/AF (Not a Monterey Amendment transfer).

TLBWSD to Zone 7, 2003: The price of this 400 AF Table A transfer was $1,600/AF, plus reimbursement to the landowner seller for his obligation to TLBWSD fixed infrastructure buy-out fees. The total cost to Zone 7 was approximately $1,782/AF (Not a Monterey Amendment transfer).

KCWA to Zone 7, 2003: This Table A transfer was for 2,219 AF at a price of $1,500/AF, plus a 6% per annum increase from January 1, 2001 to closing. The transaction closed on October 31, 2003; the final cost to Zone 7 was $1,755/AF (A Monterey Amendment transfer).

TLBWSD to Kings County, 2004: This Table A transfer was for 5,000 AF (Not a Monterey Amendment transfer). Although the purchase price was not available, it was estimated to be $1,500/AF (TLBWSD, personal communication).

TLBWSD to Coachella Valley Water District (CVWD), 2004: This Table A transfer was for 9,900 AF at $2,150/AF (Not a Monterey Amendment transfer).

KCWA (Berrenda Mesa Water District) to CVWD, 2008: This was the final Monterey Amendment "ag to urban" transfer. Total Table A Amount transferred was 16,000 AF at $3,000/AF.

DRWD to MWA, 2009: 14,000 AF of Table A Amount is being transferred, at $5,250/AF. The transfer will take place in increments over a ten-year period.

DRWD to AVEK, 2012; This transfer was 1993 AF at $ 5850/AF (D. Melville, personal communication.

TLBWSD to AVEK, 2012; This transfer was 1993 AF at $ 5850/AF (D. Melville, personal communication).

Economic Evaluation

To compare the identified Table A transfers, the transaction costs must be adjusted for the differing transaction dates. Accordingly, an inflation rate of 3.3 percent is utilized to express prior transaction costs in 2014 dollars. This rate is the approximate average annual increase in SWP costs as well as the long-term average annual increase in the Consumer Price Index. The results of this evaluation are presented in Table 1 and shown graphically on Figure 1. The linear regression analysis indicates that the projected cost of a permanent Table A transfer is approximately $ 6197/AF in 2014. It should be noted that these cost do not include the cost of conveyance, storage, or treatment which could vary widely depending on the location of the buyer and seller and the end use of the transferred water.

Based on the historical Table A transfers, it should be noted that since permanent Table A transfers were initiated, the normalized costs of the transfers have steadily increased until the most recent transfers, which appear to be higher than the long-term trend line for these transfers. Whether these transfers are anomalous or a precursor to higher price points is unknown.

The projected cost of a permanent transfer is significantly affected by the most recent Table A transfers. The estimated cost of these transfers is over $ 6,200 in 2014 dollars. Accordingly, another economic evaluation was performed excluding these transfers. The results of this evaluation is shown in Figure 2. The linear regression analysis indicates the projected cost of a permanent Table A transfer is approximately $4,091 in 2014. Also, note that including the recent data increases the correlation coefficient (R2) from 0.73 to 0.80. This increase supports the observation that the recent transfers would represent a new and higher price point for permanent Table A transfers.

Opinion of Value

In developing an opinion of "fair market value," consideration was given to the market values based on the Comparable Sales method of valuation. Although the trend analysis indicates that the values of SWP Table A Amounts should range from $ 4,091 to $ 6,197/AF, there appears to be sufficient evidence that a new price point has developed. Accordingly, in my opinion, the fair

Water Consultancy

Memorandum

Mr. Jeff Davis, San Gorgonio Pass Water Agency
20 July 2014
Page 5

market value of a long-term SWP Table A transfer, as of 30 June 2014, is $6,200/AF of Table A Amount.

t/wc-projects/wd-00

TABLE 1 - HISTORICAL COST OF PERMANENT TABLE A TRANSFERS

Seller and Buyer	Year		n	AF	Cost/AF	Sale Price	Adjusted Cost/AF ($ 2010)
Devils Den Water District To Casitas Lake Water Agency	1991	2014	23.25	17,000	$394	$6,698,000	$838
Kern County Water Agency (KCWA) to Mojave Water Agency	1998	2014	16.25	25,000	$1,000	$25,000,000	$1,695
KCWA (Wheeler Ridge-Maricopa WSD) to CLWA	1999	2014	15.25	41,000	$1,000	$41,000,000	$1,641
KCWA to Palmdale Water District	2000	2014	14.25	4,000	$1,000	$4,000,000	$1,588
KCWA to Zone 7 Water Agency	2001	2014	13.25	4,000	$1,000	$4,000,000	$1,538
KCWA to Solano County Water Agency	2000	2014	14.25	5,756	$1,055	$6,072,580	$1,676
KCWA to Napa County Flood Control and Water Conservation District	2001	2014	13.25	4,024	$1,000	$4,024,000	$1,538
Tulare Lake Basin Water Storage District (TLBWSD) to Dudley Ridge Water District	2002	2014	12.25	3,973	$1,500	$5,959,500	$2,233
TLBWSD to Antelope Valley-East Kern Water Agency	2002	2014	12.25	3,000	$1,100	$3,300,000	$1,637
TLBWSD to Zone 7	2003	2014	11.25	400	$1,782	$712,800	$2,568
KCWA to Zone 7 Water Agency	2003	2014	11.25	2,219	$1,755	$3,894,345	$2,529
TLBWSD to Kings County	2004	2014	10.25	5,000	$1,500	$7,500,000	$2,092
TLBWSD to Coachella Valley Water District	2004	2014	10.25	9,900	$2,150	$21,285,000	$2,999
KCWA (Berrenda Mesa Water District) to Coachella Valley Water District	2008	2014	6.25	16,000	$3,000	$48,000,000	$3,675
Dudley Ridge Water District to Mojave Water Agency	2009	2014	5.25	14,000	$5,250	$73,500,000	$6,226
Dudley Ridge Water District to AVEK	2012	2014	2.25	1,993	$5,850	$11,659,050	$6,293
TLBWSD to AVEK	2012	2014	2.25	1,993	$5,850	$11,659,050	$6,293

Yucaipa Valley Water District

Workshop Memorandum 16-061

Date: **March 29, 2016**

Subject: **Presentation of the Regional Water Allocation Agreement for Water Imported by the San Gorgonio Pass Water Agency**

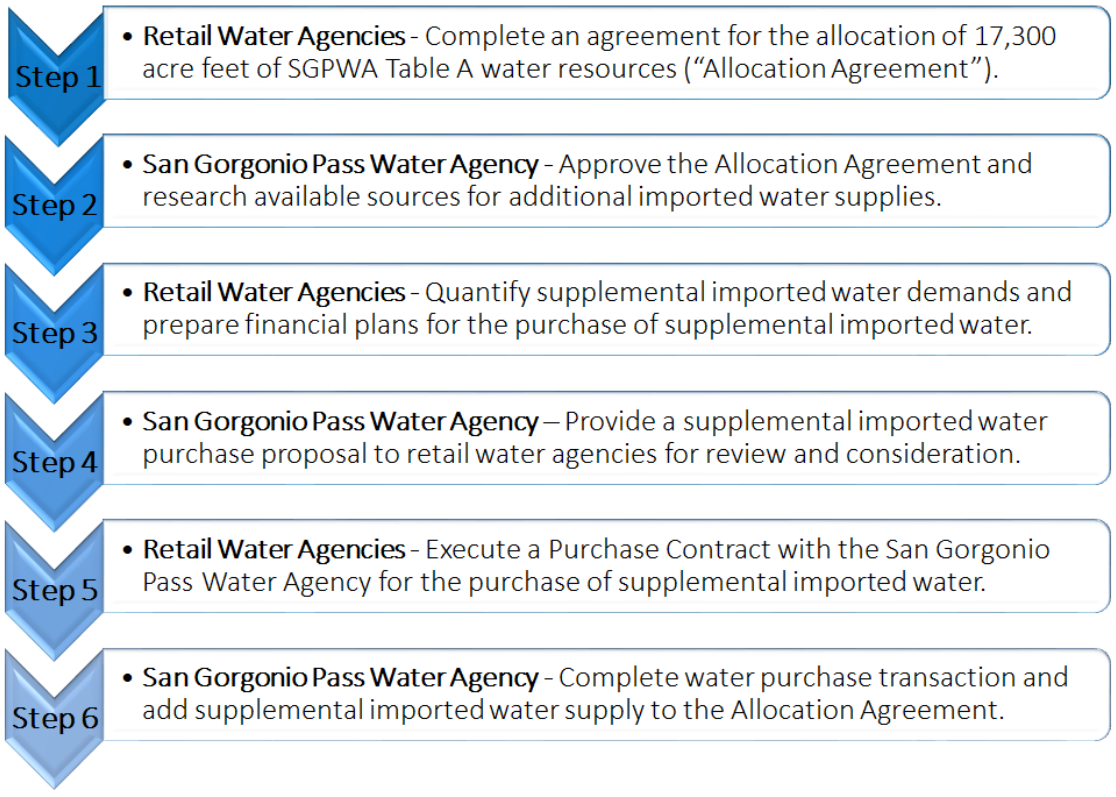
On November 3, 2010, a presentation was provided to the San Gorgonio Pass Water Agency regarding an allocation concept that would provide rules and a structure for the distribution of imported water by retail water agencies in the region. At this time the Board of Directors of the San Gorgonio Pass Water Agency directed the Agency staff to work out the details of the allocation plan and report back to the Board of Directors. As the development of this public policy was debated with water managers in the region, the Agency staff declined to participate further in the development of the public policy due to their perceived "…inherent unfairness in allocating water". While the process was open for anyone interested in participating, the absence of representatives from the San Gorgonio Pass Water Agency and other water managers choosing not to be a part of the deliberations did not stop a group of retail water agencies interested in creating solutions to the ongoing water issues with the creation of consistent and fair rules to address the allocation issue.

On April 5, 2012, the San Gorgonio Pass Water Agency, water retailers, and elected officials from throughout the region were invited to a presentation at the City of Banning to discuss a proposed allocation plan. The proposed allocation plan distributed the existing 17,300 acre foot Table "A" entitlement of the San Gorgonio Pass Water Agency equally over all parcels paying property taxes within the boundary of a water retailer (the water retailers are capable of converting imported water to drinking water and conveying the drinking water to the property owners paying property taxes to the San Gorgonio Pass Water Agency). The simple analogy for this allocation methodology is that the allocation plan is like rainfall being equally distributed across the service area of the San Gorgonio Pass Water Agency. If a retail water agency does not make use of the imported water, any remaining (available) imported water is redistributed upon those areas that need the additional supply. Additionally, the Department of Water Resources allocation to the San Gorgonio Pass Water Agency (like the current 45% DWR allocation will only provide 7,785 acre feet for the San Gorgonio Pass Water Agency) is the responsibility and burden of the retail water agency to secure additional supplies from the San Gorgonio Pass Water Agency if needed.

Following this presentation, some elected officials in opposition to the proposed methodology instead advocated spreading the existing 17,300 acre foot Table "A" entitlement of the San Gorgonio Pass Water Agency based on the amount of ad valorem taxes collected by the San Gorgonio Pass Water Agency. This proposed methodology suggests that a home worth $450,000 should receive three times as much imported water from the San Gorgonio Pass Water Agency as a home worth $150,000. While the distribution of imported water based on assessed valuation may be logical to some, this system becomes problematic when a water retailer attempts to predict the future assessed valuation of all communities within the San Gorgonio Pass Water Agency in order to determine the ultimate amount of water distributed to a water retailer. Using this method, the last community to develop will generally have a higher assessed valuation and will therefore receive a larger allocation of the imported water available from the San Gorgonio Pass Water Agency.

Following further discussion about the policy with retail water managers in the area and the San Gorgonio Pass Water Agency, the Yucaipa Valley Water District ultimately adopted the Allocation Agreement on June 20, 2013.

There was no further discussion about the allocation plan by the San Gorgonio Pass Water Agency until a presentation at a San Gorgonio Pass Water Agency meeting on December 14, 2015. At this meeting, the Yucaipa Valley Water District provided a presentation that was focused on specifically illustrating the relationship between the allocation plan and the purchase of additional water supplies for the region. Specifically, the Board of Directors of the San Gorgonio Pass Water Agency were provided the following illustration showing how the allocation plan is needed to complete the nexus for setting supplemental water facility capacity charges by retail water providers.



There continued to be no specific action by the San Gorgonio Pass Water Agency regarding this issue until March 21, 2016, when the SGPWA Board of Directors voted to hire and rely on the opinion(s) of a consultant that will analyze the existing and alternative public policies related to the distribution and allotment of imported water by the San Gorgonio Pass Water Agency to retail water customers. The San Gorgonio Pass Water Agency authorized the use of a consultant to fulfill the following scope of services for an expected cost of $5,000:

> The proposed scope of the consultant would be to study the Agency's current allocation methodology, the plan presented by retail agencies, and other allocation methodologies used by other wholesale water agencies with similar governance and finance structures; to manage one or more workshops; and to write up a final report for the Board.

Unfortunately, at the same board meeting, the San Gorgonio Pass Water Agency Board of Directors elected by a 6 to 1 vote to discontinue the involvement and participation in joint board meetings with retail water agencies in the area. Instead, the Board of Directors of the San Gorgonio Pass Water Agency favor the use of facilitated meetings and the hiring an additional consultant to act as an interpreter to filter and focus the discussions with elected officials from the retail water agencies (customers of the San Gorgonio Pass Water Agency).

On March 31, 2016, the water agencies in the region will be conducting a joint board meeting to discuss the allocation plan. Based on the recent action by the San Gorgonio Pass Water Agency, the District staff does not expect the Board of Directors from the San Gorgonio Pass Water Agency to actively participate in the discussion.

The purpose of this agenda item is to discuss the functional operation of an Allocation Plan by the San Gorgonio Pass Water Agency and to determine if any refinements are needed prior to providing the plan to the SGPWA consultant for their review and interpretation of the needs and importance of this document for the Yucaipa Valley Water District and the City of Calimesa.

SAN GORGONIO PASS WATER AGENCY
1210 Beaumont Avenue, Beaumont, CA
Board Capacity Fee Workshop
Agenda
November 3, 2010 at 1:30 p.m.

1. **Call to Order, Flag Salute and Roll Call**

2. **Adoption and Adjustment of Agenda**

3. **Public Comment**
Members of the public may address the Board at this time concerning items not on the agenda. To comment on specific agenda items, please complete a speaker's request form and hand it to the Board secretary.

4. **Discussion of Principles of Cooperative Agreements**

5. **Discussion of Proposed Flexible Allocation**

6. **Presentation of Draft Nexus Study (Andrea Roess, DTA)**

7. **Announcements**
   A. Board Engineering Workshop, November 8, 2010 at 1:30 p.m.
   B. Office Closed – Veterans Day, November 11, 2010
   C. Regular Board Meeting, November 15, 2010 at 1:30 p.m.
   D. Board Finance and Budget Workshop, November 22, 2010 at 1:30 p.m.

8. **Adjournment**

*Information included in Agenda Packet

(1) Materials related to an item on this Agenda submitted to the Board of Directors after distribution of the agenda packet are available for public inspection in the Agency's office at 1210 Beaumont Avenue, Beaumont during normal business hours. (2) Pursuant to Government Code section 54957.5, non-exempt public records that relate to open session agenda items and are distributed to a majority of the Board less than seventy-two (72) hours prior to the meeting will be available for public inspection at the Agency's office, located at 1210 Beaumont Avenue, Beaumont, California 92223, during regular business hours. When practical, these public records will also be made available on the Agency's Internet Web site, accessible at http://www.sgpwa.com." (3) Any person with a disability who requires accommodation in order to participate in this meeting should telephone the Agency (951 845-2577) at least 48 hours prior to the meeting in order to make a request for a disability-related modification or accommodation.

SAN GORGONIO PASS WATER AGENCY
1210 Beaumont Avenue, Beaumont, California 92223
Minutes of the
Board of Directors Capacity Fee Workshop
November 3, 2010

Directors Present: John Jeter, President
Ted Haring, Vice President
David Dysart, Treasurer (arrived at 1:37 p.m.)
Bill Dickson, Director
Ray Morris, Director
Carl Workman, Director
Barbara Voigt, Director

Staff and Consultants Present:
Jeff Davis, General Manager
Thomas Todd, Jr., Finance Manager (arrived at 1:34 p.m.)
Cheryle Rasmussen, Executive Assistant
Ken Falls, Operations & Maintenance Manager
Russ Behrens, Legal Counsel
Andrea Roess, David Taussig & Associates
Sam Gershon, Webb Associates

1. **Call to Order and Roll Call:** The Capacity Fee workshop of the San Gorgonio Pass Water Agency Board of Directors was called to order by Board President John Jeter at 1:30 p.m., November 3, 2010 in the Agency Boardroom at 1210 Beaumont Avenue, Beaumont, California. President Jeter led the Pledge of Allegiance to the flag. A quorum was present.

2. **Adoption and Adjustment of Agenda:** Director Dickson moved, seconded by Director Haring, to adopt the Agenda as presented. Motion passed unopposed.

3. **Public Comment:** No members of the public requested to speak at this time.

4. **Discussion of Principles of Cooperative Agreements:** General Counsel, Russ Behrens provided the Board and the public with an outline of the Cooperative Agreement provisions. Attorney Behrens stated that a Cooperative Agreement is required by the County of Riverside for unincorporated areas. He reviewed the provisions with the Board. Attorney Behrens took questions from the Board members and from the public.

5. **Discussion of Proposed Flexible Allocation:** General Manager Davis provided a PowerPoint presentation (a handout of the presentation was provided to the Board members and the public) to the Board on the Proposed Imported Water Allocation. This presentation was prepared by YVWD, on the behalf of BCVWD, City of Banning and YVWD. The data used in the proposal was provided by the SGPWA's October 2009 Supplemental Water Supply Planning Study. General Manager Davis and YVWD General Manager Joe Zoba answered questions from the Board members and attendees. The Board instructed staff to work out the details with the retailers and to report back for final action.

San Gorgonio Pass Water Agency
A California State Water Project Contractor
1210 Beaumont Avenue • Beaumont, CA 92223
Phone (951) 845-2577 • Fax (951) 845-0281

April 20, 2012

City of Banning Director of Public Works
Yucaipa Valley Water District General Manager
Beaumont- Cherry Valley Water District General Manager
Banning Heights Mutual Water Company President
Cabazon Water District General Manager
High Valleys Water District General Manager
South Mesa Mutual Water Company General Manager

Gentlemen:

The San Gorgonio Pass Water Agency (Agency) would like to respond to the Allocation Plan as proposed by the retail agencies herein addressed. The Agency was initially asked at the staff level to develop an allocation plan but declined due to inherent unfairness in allocating water. Thereafter, the Agency was not invited to be a participant in the development of the proposed plan. The Agency Board of Directors has not taken any action relative to development of a plan at this time. We appreciate being invited to your meeting of April 5, 2012, at the Banning City Hall to listen to the presentation of your proposed plan.

As a State Water Contractor, our legislative mandate is very specific with respect to how the Agency "allocates" the water as contracted for from the State Water Project within its service area. Our primary responsibility pursuant to Section 15.5 of the Agency Act is to exercise discretion to give the highest priority to eliminating overdraft conditions, as well as to provide water for the benefit of our entire service area. The situation that now confronts us is how to best meet the water demands of the region, particularly when so many water agencies will need to take more imported water in the future to meet their respective demands. As the wholesale water agency for this region, we understand the desire for certainty with respect to present and future imported water supplies.

The Agency will be taking up the issue of "allocation" as it relates to its water supply obligations in the near future. We believe that there are multiple factors that will need to be considered as a part of any new plan. These factors include but are not limited to the following:

- Although the Agency's SWP Table A amount is set at 17,300 acre feet annually, we will need to work with an adjusted quantity that averages 60% of our Table A amount and is not expected to grow much beyond that for the foreseeable future and may in fact decrease.
- Future supplemental supplies for the region must be acquired to meet the projected demands of the region.
- Related to the item above regarding the need for additional water supply, further investigation of needed capital improvements will need to be undertaken that includes a financing component.
- Existing water supply planning laws such as the Urban Water Management Planning Act, Water Supply Assessments (SB 610), and Written Verification of Water Supply (SB 221), provide for continuous and coordinated planning between the Agency and our retail customers who rely on us as a source of water.
- As the region prepares for future growth, municipal agencies that are not retail water providers have requested a portion of Agency water. The Agency will need to review existing policy and determine how to best respond to this need.
- Any water supply distribution plan to obligate the Agency's water supply will need to have an accompanying set of operating principles or rules and regulations that guide the use of the water supply between the Agency and the various retail and municipal agencies. These operating principles, along with obligating our water to various retail customers, may be linked to acquisition of future water supplies.

The Agency looks forward to working with the various stakeholders to best determine how to meet the long-term water supply of the region. I will be working with our Board of Directors and legal counsel on a process as we move forward and will keep each of you informed.

Respectfully,

Jeff Davis
General Manager

Cc

San Gorgonio Pass Water Agency Board of Directors
Banning City Council
Beaumont Cherry Valley Water District Board of Directors
Yucaipa Valley Water District Board of Directors
Cabazon Water District Board of Directors
High Valleys Water District Board of Directors
Banning Heights Mutual Water Company Board of Directors
South Mesa Mutual Water Company Board of Directors
John Covington, Morongo Band of Mission Indians

Alan Kapanikas, Beaumont City Manager
Randy Anstine, Calimesa City Manager
Andy Takata, Banning City Manager
George Spiliotis, Riverside LAFCO
Patsy Reeley, CVAN

MEMORANDUM

TO: Board of Directors

FROM: General Manager

RE: Potential Methodology for Discussing Alternate Allocation Methods

DATE: March 21, 2016

Background:
At the Engineering workshop on March 14, during a discussion of the Joint Board Meeting of March 10, the General Manager mentioned that if the Board wished to consider allocating water differently from the current method, one of the best ways to do so would be to discuss the concept in a workshop format with an outside water industry expert bringing his expertise to the meeting. The Board expressed an interest in this possibility and asked that it be included on the agenda for this Board meeting.

Detailed Report:
The Agency has a plan and methodology for allocating its water to retail water agencies. The methodology is defined by various ordinances and policies adopted by the Board over the past few years. The allocation methodology is based on orders from retail water agencies that purchase water from the Agency and sets priorities based on whether the request is for potable direct deliveries, replenishment deliveries, or other. Orders must be consistent with urban water management plans formally adopted by retail water agencies.

This methodology is similar to methodologies used by regional water agencies around the State and takes into consideration retailers' need for water and impact on groundwater basins. It also allows requests to increase over time to reflect new growth within the service area of a retail water agency.

Based on the discussion at the Engineering workshop, the Board appears to be willing to consider other alternative methodologies that make sense for the Agency and for the region. The Board has not committed to changing its current methodology, but has only expressed a desire to determine if there may be other alternative methodologies that it may want to consider as an alternative.

Staff believes that the best format for discussing such alternatives would be under the guidance of a seasoned water industry veteran who is knowledgeable about such issues and can manage a meeting where various points of view are presented. Such an outsider would be less likely to have "baggage" associated with being an employee of the Agency or one of the local retail water agencies, and could speak on the subject of allocation with authority.

The purpose of this proposed Board action item is to determine if the Board wishes to try this methodology to explore other opportunities to allocate Agency water using a different methodology. The proposed workshop (or, possibly, multiple workshops) would be managed by the outside consultant, whose deliverable at the end of the process would be a report summarizing the various alternatives discussed during the process, with pros and cons of each.

The proposed scope of the consultant would be to study the Agency's current allocation methodology, the plan presented by retail agencies, and other allocation methodologies used by other wholesale water agencies with similar governance and finance structures; to manage one or more workshops; and to write up a final report for the Board.

This process would be outside of and separate from the facilitated process the Board has elected to pursue with other entities. That process would explore multiple issues, including allocation, and would include ad hoc committees of various public agencies.

The Board may want to consider if it wants these two processes going on simultaneously, or possibly to wait for one of them to end prior to beginning the other.

Fiscal Impact:

The fiscal impact of this proposal, if implemented by the Board, would be minimal. It would employ a consultant for one or more meetings, to prepare for the meetings, and to write a final report. It is anticipated that this will cost well under $5000. This is not budgeted for this year. However, the Board could choose to implement a budget revision to account for this. It would not have a significant impact on the Agency's budget for this year.

Relationship to Strategic Plan:
The strategic plan calls for the Agency to be a regional leader and to implement a communication plan. The methodology proposed in this action could be considered an effort to show leadership and to communicate better with other local public agencies, including retail water agencies.

Recommendation:
Staff has no recommendation. The Board has three options:

- Authorize the General Manager to move forward with this proposal immediately.
- Wait to see how the facilitated process turns out and then decide if it wants to move forward with this proposal.
- Do not implement this proposal at all, with the expectation that the facilitated process will deal sufficiently with this and other issues of contention.

REGIONAL WATER ALLOCATION AGREEMENT FOR WATER IMPORTED BY THE SAN GORGONIO PASS WATER AGENCY

This Agreement, effective January 1, 2013, by and between, the San Gorgonio Pass Water Agency, a State Water Contractor (hereinafter referred to as "SGPWA"); the City of Banning, a California municipal corporation; Banning Heights Mutual Water Company, a California mutual water company; Beaumont Cherry Valley Water District, a California irrigation district; Cabazon Water District, a California water district; High Valley Water District, a California water district; South Mesa Mutual Water Company, a California mutual water company; and Yucaipa Valley Water District, a California county water district; each individually referred to or collectively referred to in this Agreement as "Party" or "Parties".

The term Water Retailers refers to the following Parties to this Agreement: City of Banning; Banning Heights Mutual Water Company; Beaumont Cherry Valley Water District; Cabazon Water District; High Valley Water District; South Mesa Mutual Water Company; and Yucaipa Valley Water District.

RECITALS

A. California's water law and policy, Article X, Section 2 of the California Constitution requires that all uses of the State's water be both reasonable and beneficial. Specifically, this section of the Constitution states in part, "It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use of unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare.

B. On November 16, 1962 the State of California, acting by and through the Department of Water Resources, and the San Gorgonio Pass Water Agency entered into a Water Supply Contract pursuant to the provisions of the California Water Resources Development Bond Act and the State Central Valley Project Act and other applicable laws.

C. The Water Supply Contract between the Department of Water Resources and the San Gorgonio Pass Water Agency has been amended eighteen times, with the latest amendment dated December 26, 2007. The Water Supply Contract provides a Maximum Annual Table "A" Allocation of 17,300 acre feet per year of imported water from the State Water Project to the San Gorgonio Pass Water Agency.

D. The San Gorgonio Pass Water Agency Law codified as Chapter 101 of the California Water Code specifically provides for the San Gorgonio Pass Water Agency to "...sell water under the control of the agency to cities, and to other public corporations and public agencies within the agency...for use within said agency without any preference…".

E. The Urban Water Management Planning Act (California Water Code Section 10610 et. seq.) requires California's urban water suppliers to ensure adequate water supplies are

available to meet existing and future water demands. Every urban water supplier that either provides over 3,000 acre-feet of water annually or serves more than 3,000 or more connections is required to assess the reliability of its water sources over a 20-year planning horizon considering normal, dry, and multiple dry years. Therefore, the implementation of reliable and prudent long-term water resource management plans require Water Retailers within the service area of the San Gorgonio Pass Water Agency, regardless of size or number of customers, to be able to anticipate a given quantity of imported water to meet the water demands within the service area of each retail water customer.

F. The Parties recognize that an Agreement allocating imported water from the San Gorgonio Pass Water Agency will: (1) provide certainty for Water Retailers thereby enabling better water resource planning in the future; (2) support the ability for each Water Retailer to establish community specific policies and goals based on uniform and consistent rules pertaining to the delivery of imported water; (3) promote improved water management since an imported water allocation will enable each Water Retailer to implement and directly benefit from specific policies related to sustainability, dual plumbing and conjunctive use; and (4) improve coordination and confidence between the Water Retailers and the San Gorgonio Pass Water Agency.

AGREEMENT

1. **Allocation of Water from the State Water Project.** The Parties acknowledge that the following provision of the San Gorgonio Pass Water Agency Law, codified as Chapter 101, Section 15.5 of the Appendix to the California Water Code, is integrated into this Agreement to ensure the allocation of imported water is consistent with the intent of the Legislature. "It is the intent of the Legislature that, in allocating water received from the State Water Project pursuant to this act, the highest priority shall be given to eliminating groundwater overdraft conditions within any agency or district receiving the water."

2. **Boundaries of the Parties.** The service area of the San Gorgonio Pass Water Agency encompasses a portion or the entire service area of each Water Retailer that is a Party to this Agreement.

   2.1. The Parties agree to utilize that portion of the sphere of influence of each Water Retailer within the boundary of the San Gorgonio Pass Water Agency as the basis of the imported water allocation methodology provided herein. The Sphere of Influence boundary is utilized since this boundary line represents the reasonable planning boundary of each Water Retailer's legal boundary and designates the Water Retailer's ultimate service area.

   2.2. The Parties acknowledge that the Local Agency Formation Commission of Riverside County will periodically review the Sphere of Influence of each Water Retailer and adjust these boundaries based on factors such as current and future land use, current and future need and capacity for service, municipal service reviews, and any relevant communities of interest. Any such change in the Sphere of Influence shall also change the baseline allocation of water as provided in Section 4.5.

2.3. The Sphere of Influence boundary area for each Water Retailer within the boundary of the San Gorgonio Pass Water Agency is as follows:

Table 1 - Boundary Summary

Water Retailer	Sphere of Influence Boundary Area (Acres)	Percentage of Area for Each Water Retailer
Banning Heights Mutual Water Company	876	1.2%
South Mesa Mutual Water Company	974	1.4%
High Valley Water District	5,287	7.4%
Cabazon Water District	7,990	11.1%
Yucaipa Valley Water District	17,388	24.2%
City of Banning	19,644	27.3%
Beaumont Cherry Valley Water District	19,693	27.4%
Morongo Band of Mission Indians	34,611	Not Applicable
Unincorporated Riverside County	34,043	Not Applicable
Unincorporated San Bernardino County	1,910	Not Applicable
SGPWA Service Area	**142,416**	**100.0%**
Total Area of Water Retailers	71,852	

Source: San Gorgonio Pass Water Agency Supplemental Water Supply Planning Study, Albert A. Webb Associates, October 2009.

3. **State Water Project Reliability.** For planning purposes, the availability of water from the State Water Project is based on a long-term average reliability. The California Department of Water Resources routinely prepares a *State Water Project Delivery Reliability Report* to describe current and future deliveries from the State Water Project.

3.1. The Water Retailers understand the annual fluctuations in the availability of water deliveries from the State Water Project and further acknowledge that these fluctuations will create variations in the actual quantity of water available to the region from the State Water Project.

3.2. The Parties agree that any increase or decrease of the reliability of the State Water Project will be reflected in the annual allocation of imported water available to each Water Retailer.

3.3. Prior to the completion of the East Branch Extension of the State Water Project, the San Gorgonio Pass Water Agency and the California Department of Water Resources agreed to a reduction in the Maximum Annual Table "A" Allocation of 17,300 acre feet. In the future, the San Gorgonio Pass Water Agency agrees not

to reduce the current Maximum Table "A" Allocation of 17,300 acre feet without prior consent from the Water Retailers.

4. **Baseline Water Resource Allocation.** The San Gorgonio Pass Water Agency maintains a contract with the California Department of Water Resources for a Maximum Table "A" Allocation of 17,300 acre feet per year from the State Water Project.

4.1. The Parties agree to use the Sphere of Influence of each Water Retailer in the service area of the San Gorgonio Pass Water Agency to calculate the Baseline Water Resource Allocation as follows:

Table 2 - Baseline Water Resource Allocation

Water Retailer	Percentage of Area for Each Water Retailer (Table 1)	Baseline Water Resource Allocation (Acre Feet)
Banning Heights Mutual Water Company	1.2%	211
South Mesa Mutual Water Company	1.4%	235
High Valley Water District	7.4%	1,273
Cabazon Water District	11.1%	1,924
Yucaipa Valley Water District	24.2%	4,187
City of Banning	27.3%	4,730
Beaumont Cherry Valley Water District	27.4%	4,742
Morongo Band of Mission Indians	Not Applicable	Not Applicable
Unincorporated Riverside County	Not Applicable	Not Applicable
Unincorporated San Bernardino County	Not Applicable	Not Applicable
Maximum SGPWA Table "A" Allocation		**17,300**

4.2. The Baseline Water Resource Allocation for each Water Retailer represents the maximum quantity of imported water from the San Gorgonio Pass Water Agency that each Water Retailer shall use for planning purposes unless augmented with additional imported water supplies as provided herein. Using the quantity of imported water allocated as the Baseline Water Resource Allocation for planning purposes will insure that the Water Retailers do not oversubscribe the Maximum Table "A" Allocation of 17,300 acre feet provided by contract to the San Gorgonio Pass Water Agency.

4.3. The purchase of any additional water supplies or rights by the San Gorgonio Pass Water Agency shall be automatically added to the existing Maximum Table "A" Allocation amount of 17,300 acre feet and distributed to the Water Retailers resulting in an increase of the Baseline Water Resource Allocation for all Water Retailers based on the Percentage of Area for Each Water Retailer. The quantity, quality and reliability of additional water supplies purchased by the San

Gorgonio Pass Water Agency shall be combined with the existing Maximum Table "A" Allocation of 17,300 acre feet in a manner that benefits or impacts all Parties equally without preference.

4.4. No portion of the Baseline Water Resource Allocation can be sold, traded, exchanged or transferred between the Parties except as provided below.

4.5. The Parties acknowledge that any adjustment of the Sphere of Influence boundary of any Water Retailer after the effective date of this Agreement will result in a recalculation of the Baseline Water Resource Allocation.

4.5.1. Any proposed administrative action by the Local Agency Formation Commission that will change the Sphere of Influence boundary of any Water Retailer shall be distributed to the Parties 60 days prior to the scheduled action by the Local Agency Formation Commission.

4.5.2. A merger or consolidation of a Party to this Agreement will result in an adjustment to the Sphere of Influence boundary that will necessitate a recalculation of the Baseline Water Resource Allocation.

4.6. The Baseline Water Resource Allocation will not be amended to provide any portion of the existing Maximum Table "A" Allocation of 17,300 acre feet from the State Water Project to any existing retail water agency, new retail water agency, or other entity not a Party to this Agreement.

4.6.1. The San Gorgonio Pass Water Agency agrees that a retail water agency, or other entity not a Party to this Agreement shall be required to purchase a sufficient quantity of physical water rights and complete pipeline improvements to the existing conveyance and delivery system(s) such that no Party to this Agreement is damaged, impacted, or subordinated with respect to additional expenses, water conveyance, water supply, water quality, or other any other matter under the authority, ability and discretion of the San Gorgonio Pass Water Agency.

4.7. Any improvement to the capital assets owned, operated or controlled by the San Gorgonio Pass Water Agency or the California Department of Water Resources that provides additional imported water resources or improves reliability will be reflected in the Baseline Water Resource Allocation and distributed to the Parties.

4.8. The San Gorgonio Pass Water Agency will only provide imported water to Water Retailers and no other entity within or outside of the boundary of the San Gorgonio Pass Water Agency.

5. Adjusted Baseline Water Resource Allocation. The Baseline Water Resource Allocation amount allocated to each Water Retailer can be further adjusted at any time as follows:

5.1. Purchase of Additional Sources of Supply. Each Water Retailer may elect, at the sole and absolute discretion of each entity, to purchase additional imported water

sources of supply that will be added to the Baseline Water Resource Allocation amount. The purchase of any additional source of supply pursuant to this Agreement by any Water Retailer shall remain the property of the Water Retailer in the event this Agreement is terminated pursuant to Section 10.2.

5.1.1. The purchase of additional imported water source of supply or water rights by a Water Retailer(s) shall increase the amount of imported water delivered above the Baseline Water Resource Allocation amount to the specific Water Retailer(s) purchasing the additional supply or rights. The additional source of supply will be added to the quantity of water used for planning purposes and identified as a separate quantity of imported water from the Baseline Water Resource Allocation.

5.1.2. The quantity, quality and reliability of any water purchased as an additional source of supply shall be identified independently from the Baseline Water Resource Allocation such that any degradation of water quality, reliability or other parameter shall not impact any other Party to this Agreement. The additional source of supply will be considered to be generally equivalent to the quantity and quality of imported water delivered as part of the Maximum Table "A" Allocation of 17,300 acre feet if the supply originates from the same location and conveyed using the same facilities. In this case, the quantity, quality and reliability shall be considered equal to the Baseline Water Resource Allocation.

5.1.3. A Water Retailer shall not be restricted from using funds collected by the San Gorgonio Pass Water Agency as a component of the imported water rate for the purchase of additional water supplies and rights at any time.

5.1.4. No portion of the annual amount of water delivered as the Adjusted Baseline Water Resource Allocation can be sold, traded, exchanged or transferred between the Parties except as provided below.

6. **Annual Water Resource Allocation.** The Annual Water Resource Allocation is the total amount of water available to each Water Retailer from the Baseline Water Resource Allocation and the Adjusted Baseline Water Resource Allocation each year based on the actual and independent availability of the specific source of supply.

6.1. The Parties acknowledge that the annual amount of imported water available from all sources of supply are variable based on factors such as seasonality, climatic changes, precipitation, snowpack, and drought. These changes will cause variability in the amount of water available to each Water Retailer on an annual basis.

6.2. The amount of water available from the State Water Project is adjusted throughout each water year based on notices issued by the California Department of Water Resources. Any notice issued by the California Department of Water Resources that changes the Maximum Table "A" Allocation amount shall be effective on the date of issuance of the notice from the Department of Water Resources.

6.3. Baseline Water Resource Allocation. The Annual Water Resource Allocation for water available from the Baseline Water Resource Allocation shall generally be based upon the availability of imported water from the State Water Project as determined by the California Department of Water Resources.

6.3.1. The Baseline Water Resource Allocation for each Water Retailer shall also be adjusted throughout the water year based on notices issued by the California Department of Water Resources and shall include other water quantities provided to the San Gorgonio Pass Water Agency such as the Turn-Back Water Pool Program and the Article 21 Program. These programs will be allocated on the same percentage basis as provided in Section 4 above (Baseline Water Resource Allocation).

6.4. Adjusted Baseline Water Resource Allocation. The Annual Water Resource Allocation for imported water allocated from the Adjusted Baseline Water Resource Allocation shall be based upon the availability of each specific source of supply.

7. **Unused Annual Water Resource Allocation.** In the event a Water Retailer is unable to make use of their specific Annual Water Resource Allocation as provided herein, then the amount of unused imported water shall be reallocated proportionally to the other Water Retailers using the total amount of water allotted to each Water Retailer pursuant to the Adjusted Baseline Water Resource Allocation amount.

8. **Prohibitions to Exchange, Transfer or Sale (Secondary Market).** The Parties agree that any water made available to the San Gorgonio Pass Water Agency pursuant to this Agreement shall be used by the Water Retailer within their respective Sphere of Influence and not assigned, exchanged, transferred or sold to create or support a secondary water market, speculation, or similar activity for any public or private entity, developer, investor, agricultural interest or speculator.

9. **Excess Conveyance Capacity in State Water Project Facilities.** During times of water shortages, there will be excess pipeline conveyance capacity in the State Water Project. The Parties agree to cooperate and maximize the use and availability of excess State Water Project conveyance facilities to augment the water supplies within the service area of the San Gorgonio Pass Water Agency based on the rate schedule utilized for routine deliveries of imported water.

General Provisions

10. **General Provisions.** The following General Provisions have been incorporated herein:

10.1. Termination. This Agreement shall terminate immediately upon a vote of the Parties consisting of a collective total combined land area of more than 75% of the total acreage at the time of termination within the Sphere of Influence of all Water Retailers in the service area of the San Gorgonio Pass Water Agency.

10.1.1. The Baseline Water Resource Allocation of Water Retailers electing not to execute this Agreement shall be maintained pursuant to the methodology provided in Section 4. The Annual Water Resource Allocation for a Party electing not to execute the Agreement shall be considered unused and distributed to the Parties pursuant to Section 7.

10.2. Notices. All notices and demands which any Party is required or desires to give to the others pursuant to this Agreement shall be given in writing by certified mail, return receipt requested with appropriate postage paid, by personal delivery, by facsimile or by private overnight courier service to the business address of the other Party.

10.3. Entire Agreement. This Agreement, together with all Exhibits and documents referred to herein, constitutes the entire Agreement among the Parties with respect to the subject matter hereof, and supersede all prior understandings or agreements.

10.4. Amendments. This Agreement may be modified or amended only by agreement of those Parties that form a consensus of more than 66% of the total amount of water allotted to each Water Retailer pursuant to the Adjusted Baseline Water Resource Allocation amount.

10.5. No Assignments. This Agreement and the rights, duties and benefits given in it, may not be assigned.

10.6. Partial Invalidity. If any provision of this Agreement is held by a court of competent jurisdiction to be invalid or unenforceable, the remainder of the Agreement shall continue in full force and effect and shall in no way be impaired or invalidated, and the Parties agree to substitute for the invalid or unenforceable provision a valid and enforceable provision that most closely approximates the intent and economic effect of the invalid or unenforceable provision.

10.7. Governing Law. This Agreement shall be governed by the laws of the State of California.

10.8. Attorneys' Fees. Each Party shall bear its own attorneys' fees and expenses in the preparation and review of this Agreement. In the event that any party hereto institutes an action or proceeding for a declaration of the rights of the Parties under this Agreement, for injunctive relief, for an alleged breach or default of, or any other action arising out of, this Agreement, or the transactions contemplated herein, or in the event any party is in default of its obligations pursuant thereto, whether or not suit is filed or prosecuted to final judgment, the non-defaulting party or prevailing party shall be entitled to its actual attorneys' fees and to any court costs incurred, in addition to any other damages or relief awarded by the court.

10.9. Successors and Assigns; No Assignment. This Agreement shall inure to the benefit of and be binding on the parties to this Agreement and their respective successors and assigns.

10.10. Covenants, Conditions or Remedies. The waiver by one Party of the performance of any covenant, condition or promise, or of the time for performing any act, under this Agreement shall not invalidate this Agreement nor shall it be considered a waiver by such party of any other covenant, condition or promise, or of the time for performing any other act required, under this Agreement. The remedies set forth in this Agreement are cumulative and not exclusive to any other legal or equitable remedy available to a party. The exercise of any remedy provided in this Agreement shall not be a waiver of any consistent remedy provided by law, and the provisions of this Agreement for any remedy shall not exclude any other consistent remedies unless they are expressly excluded.

10.11. Exhibits. All exhibits to which reference is made in this Agreement are deemed incorporated in this Agreement whether or not actually attached. The following exhibits are attached to this Agreement:

- Exhibit "A" - San Gorgonio Pass Water Agency Aerial Boundary Map.
- Exhibit "B" - San Gorgonio Pass Water Agency Map of Major Water Retailers.

10.12. Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which, taken together, shall constitute one and the same instrument.

10.13. Legal Advice. Each Party has received independent legal advice from its attorneys with respect to the advisability of executing this Agreement and the meaning of the provisions. The provisions of this Agreement shall be construed as to the fair meaning and not for or against any party based upon preparation of the document, or any attribution of such party as the sole source of the language in question.

Exhibit "A"

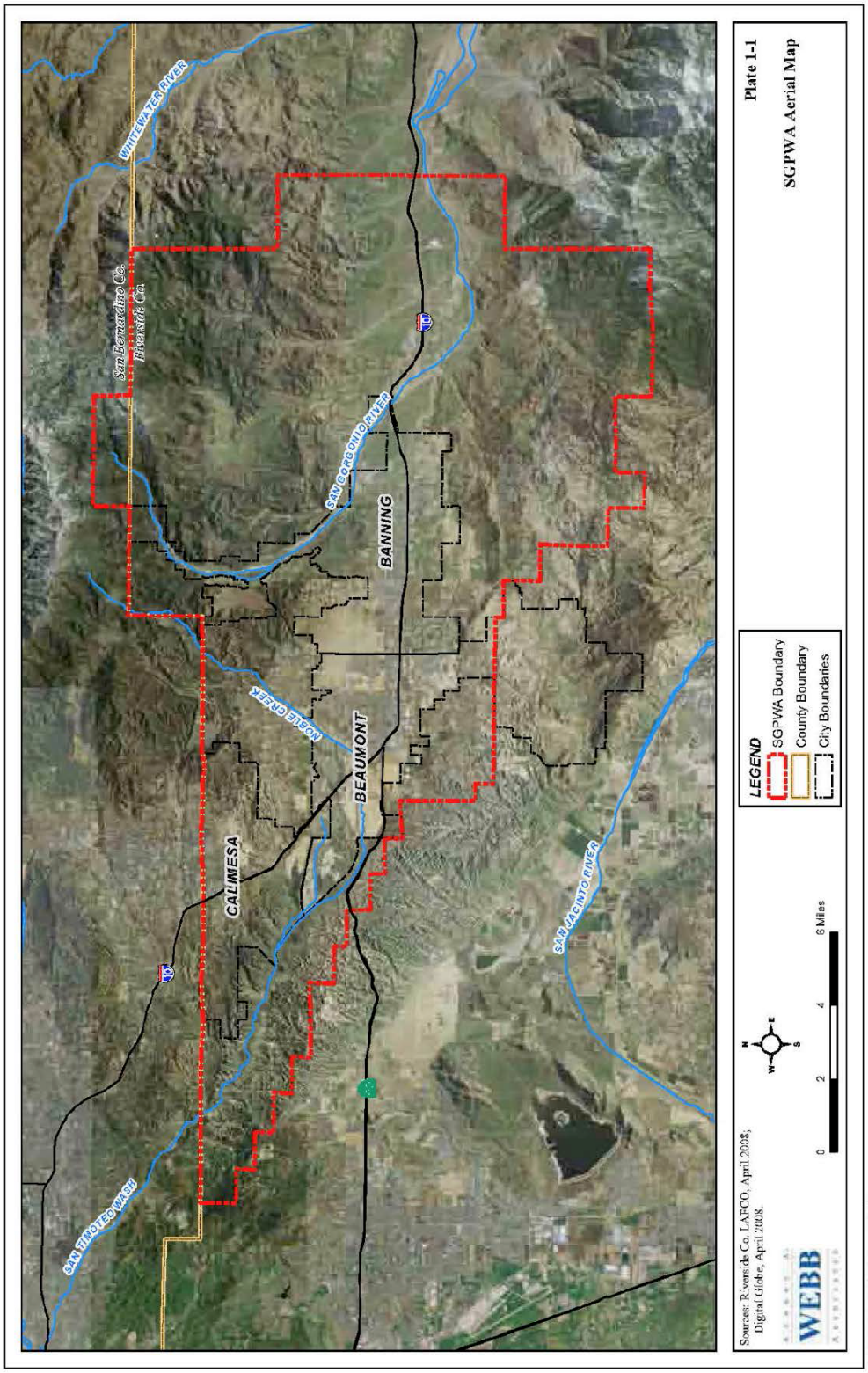

WHITEWATER RIVER
San Bernardino Co.
Riverside Co.
SAN GORGONIO RIVER
BANNING
NOBLE CREEK
BEAUMONT
CALIMESA
SAN JACINTO RIVER
SAN TIBURCIO WASH
10
LEGEND
SGPWA Boundary
County Boundary
City Boundaries
Plate 1-1
SGPWA Aerial Map
Sources: Riverside Co. LAFCO, April 2008; Digital Globe, April 2008.
0
2
4
6 Miles
WEBB

Exhibit "B"

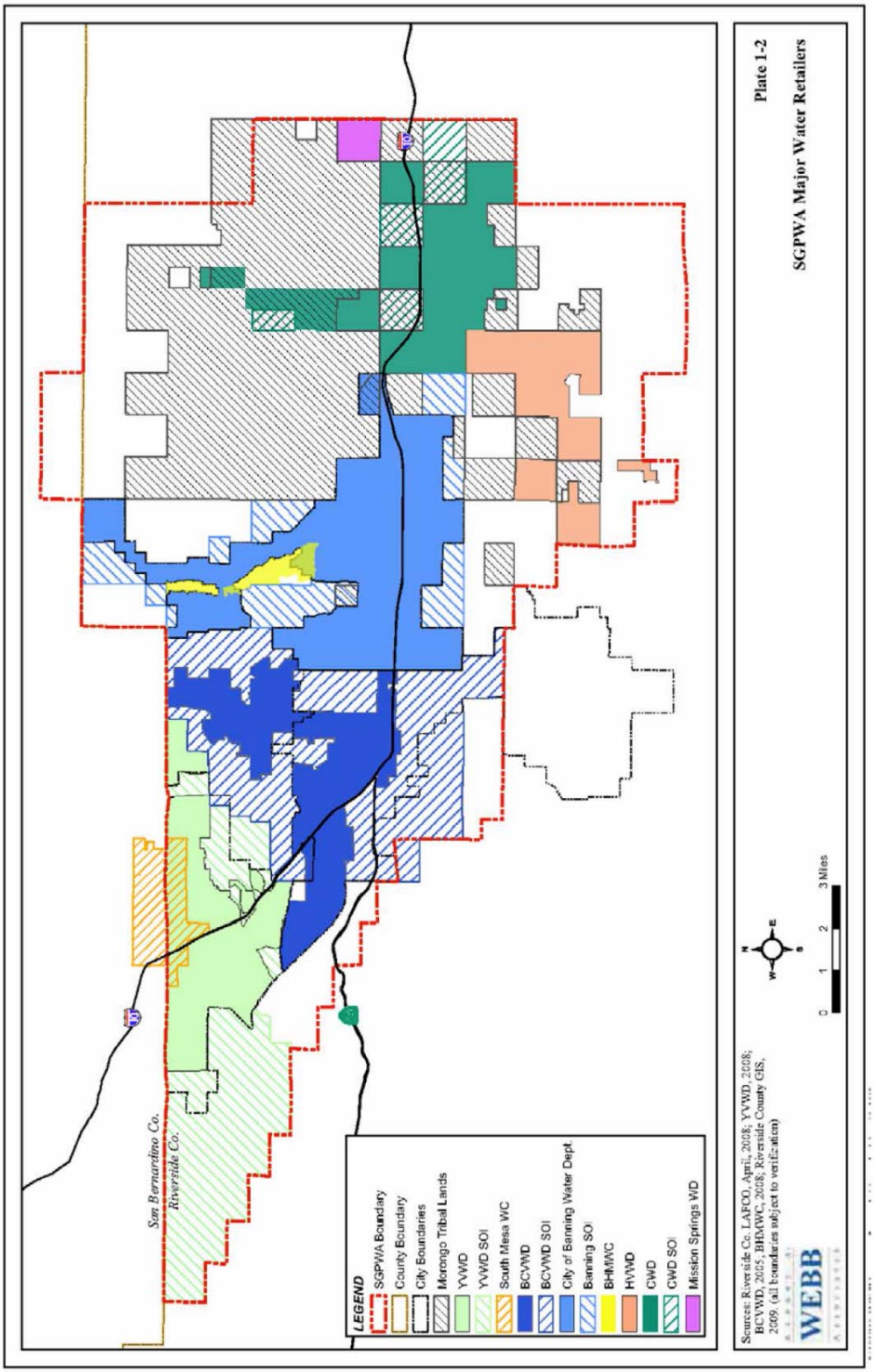


Plate 1-2
SGPWA Major Water Retailers
LEGEND
SGPWA Boundary
County Boundary
City Boundaries
Morongo Tribal Lands
YVWD
YVWD SOI
South Mesa WC
BCVWD
BCVWD SOI
City of Banning Water Dept.
Banning SOI
BHMWC
HVWD
CWD
CWD SOI
Mission Springs WD
San Bernardino Co.
Riverside Co.
0 1 2 3 Miles
Sources: Riverside Co. LAFCO, April, 2008; YVWD, 2008; BCVWD, 2005; BHMWC, 2008; Riverside County GIS, 2009. (all boundaries subject to verification)
WEBB

Operational Updates

Yucaipa Valley Water District

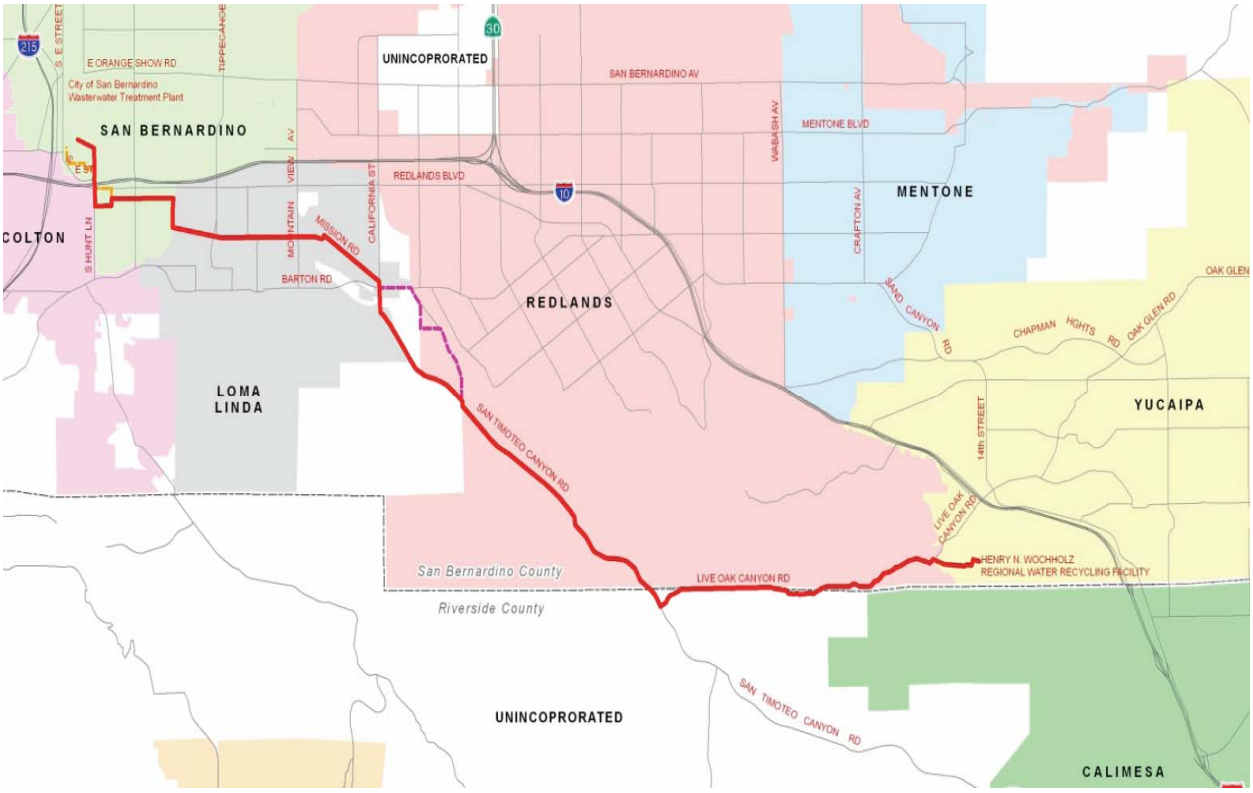
Yucaipa Valley Water District **Workshop Memorandum 16-062**

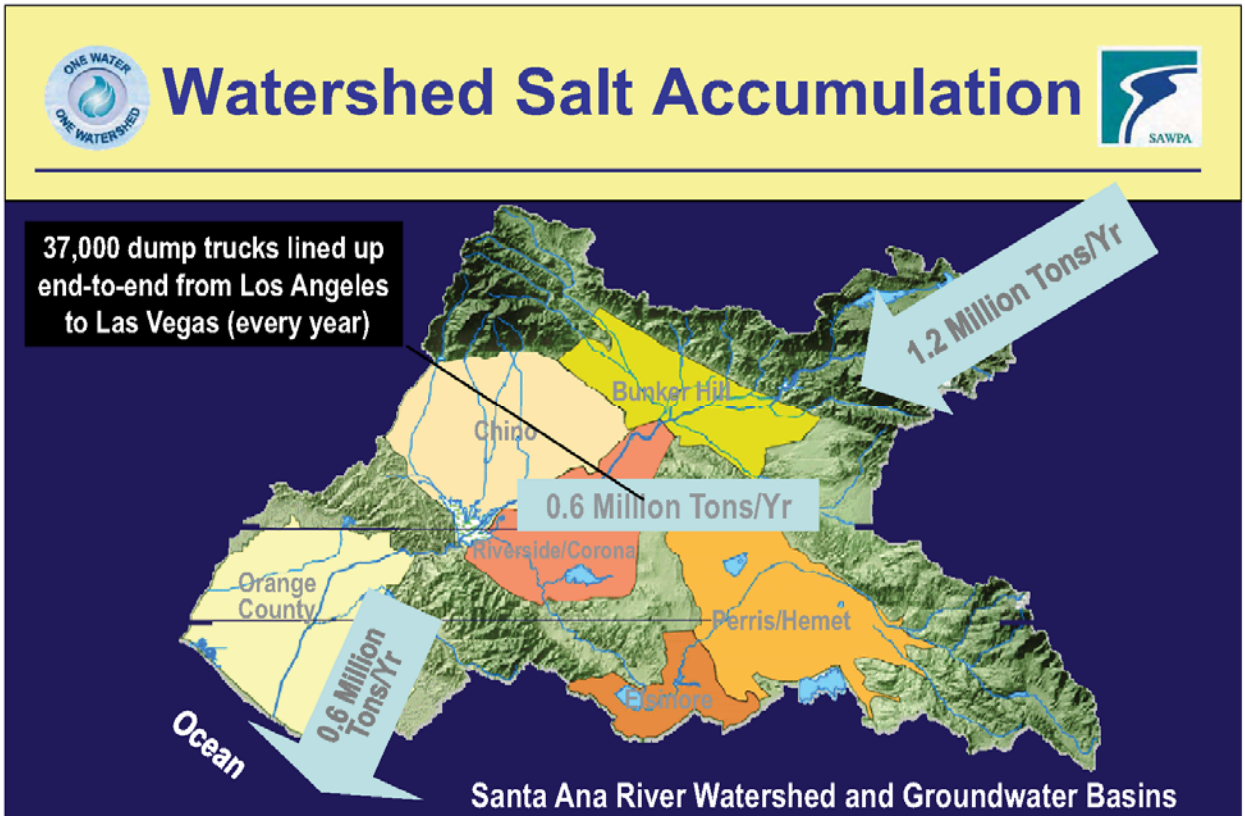
Date: **March 29, 2016**

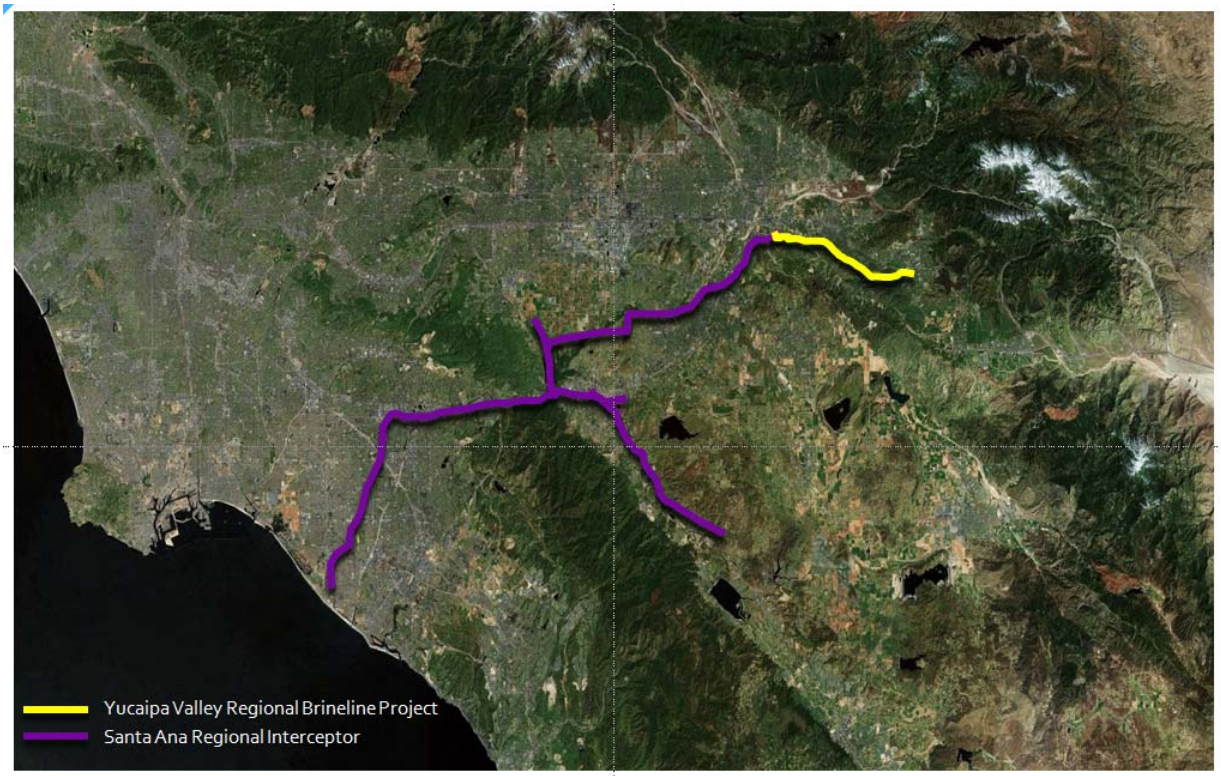
Subject: **Purchase of Inland Empire Brineline Pipeline and Treatment Capacity from the San Bernardino Valley Municipal Water District**

The Yucaipa Valley Water District has constructed a reverse osmosis treatment process at the wastewater treatment plant to comply with the water quality objectives set by the Santa Ana Regional Water Quality Control Board ("Regional Board"). The reverse osmosis treatment process enables the District to remove salts and minerals from the recycled water supply which results in an exceptionally pure quality recycled water source. The salt water waste produced from the reverse osmosis system, referred to as brine or reverse osmosis concentrate, must be conveyed in a pipeline to lower portions of the Santa Ana Watershed so it does not impact fresh water supplies.

In 2013, the Yucaipa Valley Water District completed the construction of the Yucaipa Valley Regional Brineline which extends from Yucaipa to San Bernardino. This pipeline is essential for the disposal of brine generated from the production of recycled water that meets the water quality requirements of the Regional Board.



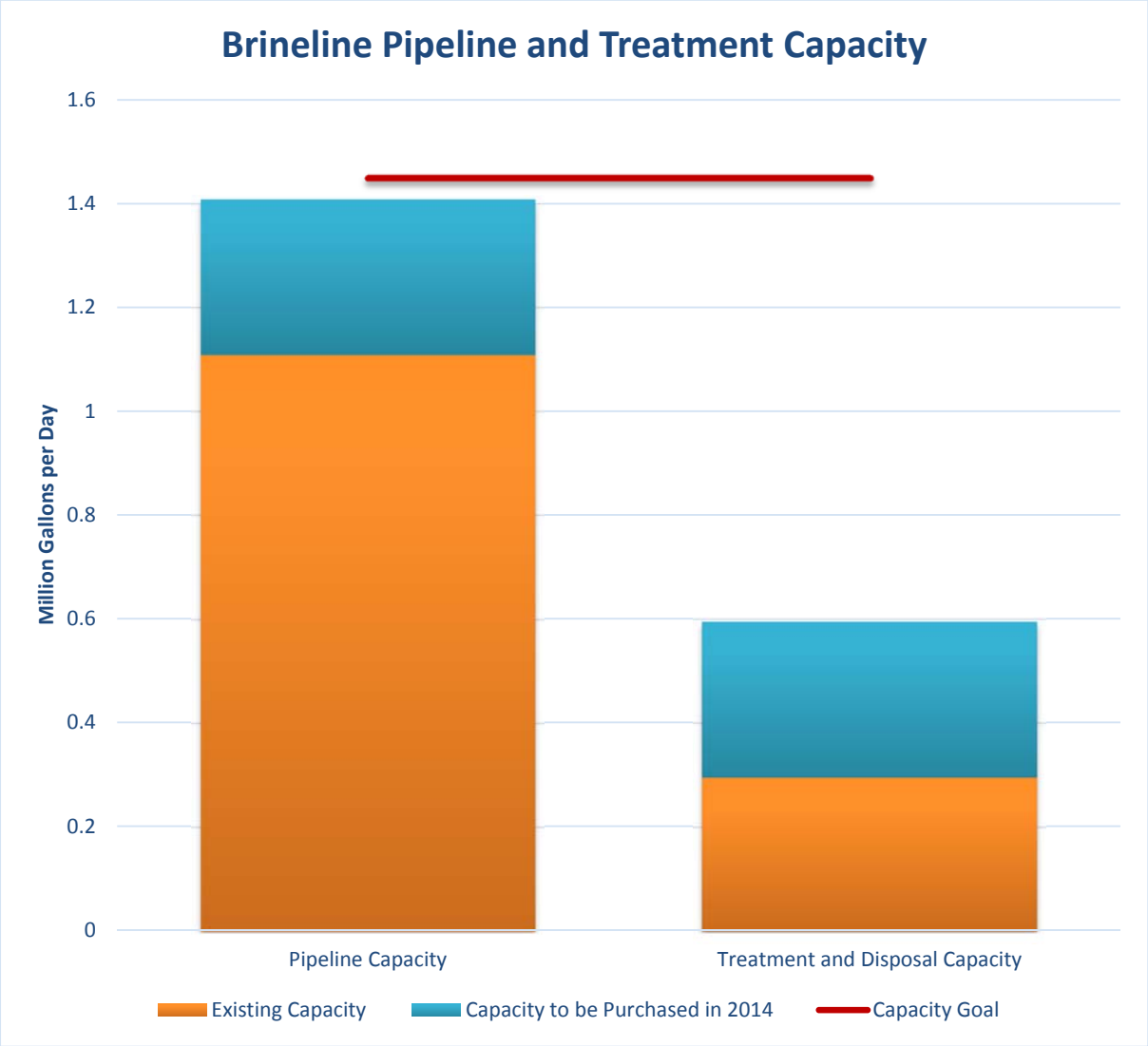




Yucaipa Valley Regional Water Supply Renewal Project

The Yucaipa Valley Water District currently owns 1.108 million gallons per day of brineline pipeline capacity in the Inland Empire Brineline, formally referred to as the Santa Ana Regional Interceptor (SARI). The District purchased 0.108 million gallons per day of pipeline capacity in 1993 and made a second purchase of pipeline capacity of 1.0 million gallons per day in 2006.

In 2013, the Yucaipa Valley Water District purchased 0.295 million gallons per day of treatment and disposal capacity at the Orange County Sanitation District's facilities.



The Yucaipa Valley Water District has been working with the San Bernardino Valley Municipal Water District for the purchase of an additional 300,000 gallons per day of pipeline and treatment capacity for brine disposal. The purpose of this workshop item is to provide an update on the status of the purchase arrangement.

Capital Improvement Projects

Yucaipa Valley Water District

Yucaipa Valley Water District

Workshop Memorandum 16-063

Date: **March 29, 2016**

Subject: **Status Report on the Construction of a 6.0 Million Gallon Drinking Water Reservoir R-12.4 - Calimesa**

At the regular meeting on July 16, 2014, the Board authorized the solicitation of bids for the construction of a 6.0 Million Gallon R-12.4 Reservoir located on Singleton Road in Calimesa [Director Memorandum No. 14-060]. On November 19, 2014, the Board of Directors awarded the construction contract for the reservoir facility to Gateway Pacific Contractors [Director Memorandum No. 14-091].

The purpose of this agenda item is to provide an update on the progress of the reservoir construction project.

Yucaipa Valley Water District

Workshop Memorandum 16-064

Date: **March 29, 2016**

Subject: **Status Report on the Digester Cleaning and Cover Replacement Project at the Wochholz Regional Water Recycling Facility**

The Yucaipa Valley Water District operates and maintains four anaerobic digesters for sludge conditioning, each with a diameter of 45 feet and a side water depth of 22 feet, yielding a working capacity of approximately 262,000 gallons per digester. The digesters treat sludge drawn from both the primary clarifiers and from the dissolved air flotation thickeners. Digested sludge flows by gravity and can be stored temporarily in a sludge holding tank before being conveyed to the belt presses for dewatering. To keep the digesters functioning properly they should be cleaned every 8-10 years in order to remove the accumulated build-up of sand, grit, and other debris.

Projects	Construction Timeline	Summary of Work
Wastewater Treatment Plant	1976-design 1984-constr	• Construction of Digester Nos. 1 and 2 and appurtenant equipment, (e.g. heaters) • Digester No. 1 equipped with a fixed cover and Digester No. 2 equipped with a floating cover
Stage I Expansion Project	1992	• Construction of Digester Nos. 3 and 4 • Both Digester No. 3 and Digester No. 4 equipped with fixed covers
Digester No. 2 Cover Modifications	1994	• Digester No. 2 cover converted from floating to fixed configuration
Digester Cleaning	2004	• Digester Nos. 1-4 Cleaning
Digester Coating	2005	• Digester Nos. 1-4 Coating of Cover
Digester and Sludge Holding Tank Modifications Project	2005	• Digester Nos. 1-4 and Digester Holding Tank Pump Mix System installation

When the digesters were cleaned in 2005, the District staff assessed the condition of the digesters and related equipment. Based on corrosion identified at this time, the District made a decision to replace at least two covers the next time the digesters were scheduled to be cleaned.

In 2015, the District staff worked with RMC to develop a construction bid schedule that included a series of construction alternatives for cleaning and/or replacement of the digester covers. After carefully evaluating the cleaning/construction bids received for this project, the Board of Directors decided to award a construction contract to Pascal & Ludwig for the cleaning and replacement of four digester covers for a sum not to exceed $2,175,000. [DM 15-041]

The purpose of this agenda item is to provide an update on the status of the construction project.


SCHMIDT


DOOSAN

Policy Issues

Yucaipa Valley Water District

Yucaipa Valley Water District

Workshop Memorandum 16-065

Date: **March 29, 2016**

Subject: **Consideration of Policies Regarding the Purchase of Supplemental Water Supplies for the Yucaipa Valley Water District**

On August 17, 2011, the Board of Directors adopted Resolution No. 18-2011 setting rates, fees and charges for drinking water, sewer and recycled water. Section 4.2 of Resolution No. 18-2011 is currently being analyzed for compliance with the San Juan Capistrano tiered rate case. Based on this case, the District may need to consolidate the current tiered rate structure into a flat unit rate for drinking water service.

4.2 Potable Water Commodity Charge. The water commodity charge rate is the charge per one thousand gallons (kgal) for all water registered by the customer's water meter in a monthly billing cycle and is herein established as follows:

Potable Water Consumption (kgal)	Commodity Rate ($/kgal)
1 – 15 Billing Units	$1.429
16 – 60 Billing Units	$1.919
61 – 100 Billing Units	$2.099
101 and greater Billing Units	$2.429

Resolution No. 18-2011 also established a calculation methodology for the purchase of imported water as a pass-through rate structure from water wholesale agencies. This calculation adjusts automatically to keep current with the imported water rates charged by the San Bernardino Valley Municipal Water District and the San Gorgonio Pass Water Agency.

The formula included in Section 4.4.2 is based on the purchase of imported water at a ratio of 70% of the drinking water consumed by our customers. Applying this methodology to the imported water rates set by wholesale agencies, customers in Yucaipa pay $0.27/kgal and customers in Calimesa pay $0.66/kgal. The disparity in rates is not unusual given the fact that the two wholesale agencies have different rate factors, priorities and methodologies used to set their imported water rates.

4.4.2 Calculation Methodology. The calculation definitions and methodology is applicable to the Imported Water Rates charged by both the San Bernardino Valley Municipal Water District and the San Gorgonio Pass Water Agency as follows.

$$Imported\ Water\ Commodity\ Charge = (0.7)x\left(\frac{Imported}{Water\ Rate}\right)x(0.00307)$$

Definitions:

- *Imported Water Commodity Charge* (expressed in units of $/kgal) represents the calculated charge implemented by the Yucaipa Valley Water District and applied to customer utility bills within the respective service area of the San Bernardino Valley Municipal Water District and the San Gorgonio Pass Water Agency.
- *Imported Water Rate* (expressed in units of $/acre-foot) represents the rate charged by the San Bernardino Valley Municipal Water District and the San Gorgonio Pass Water Agency for water delivered to the Yucaipa Valley Regional Water Filtration Facility.

In order to provide the necessary funding for the storage of imported water in the Bunker Hill, Yucaipa and Beaumont basins under the adjudicated rules and conjunctive use projects, the Board of Directors should discuss and consider setting policies that provide a slow and steady change from the current 70% factor to a 100% factor (or 115% considering the District's sustainability policy) to ensure that sufficient water is purchased and stored to supply water to the community for long-term stress of water systems, outages of the State Water Project, and future droughts. This factor may also be re-established to include the necessary funding for the recharge of recycled water at the Wilson Creek Spreading basins.

Administrative Issues

Yucaipa Valley Water District

Yucaipa Valley Water District

Workshop Memorandum 16-066

Date: **March 29, 2016**

Subject: **Rental of Bear Valley Mutual Water Company Stock Shares for the 2016 Irrigation Season**

The District has received inquiries about the rental of Bear Valley Mutual Water Company stock shares for the 2016 irrigation season.

The purpose of this workshop agenda item is to discuss the rental of shares to assist property owners in the region that need the District's shares of Bear Valley stock for this irrigation season.

Director Comments

Yucaipa Valley Water District

Adjournment

Yucaipa Valley Water District

Yucaipa Valley Water District

FACTS ABOUT THE YUCAIPA VALLEY WATER DISTRICT

Service Area Size: 40 square miles (sphere of influence is 68 square miles)

Elevation Change: 3,140 foot elevation change (from 2,044 to 5,184 feet)

Number of Employees:
5 elected board members
62 full time employees

Operating Budget:
Water Division - $13,397,500
Sewer Division - $11,820,000
Recycled Water Division - $537,250
Total Annual Budget - $25,754,750

Number of Services:
12,434 water connections serving 17,179 units
13,559 sewer connections serving 20,519 units
64 recycled water connections

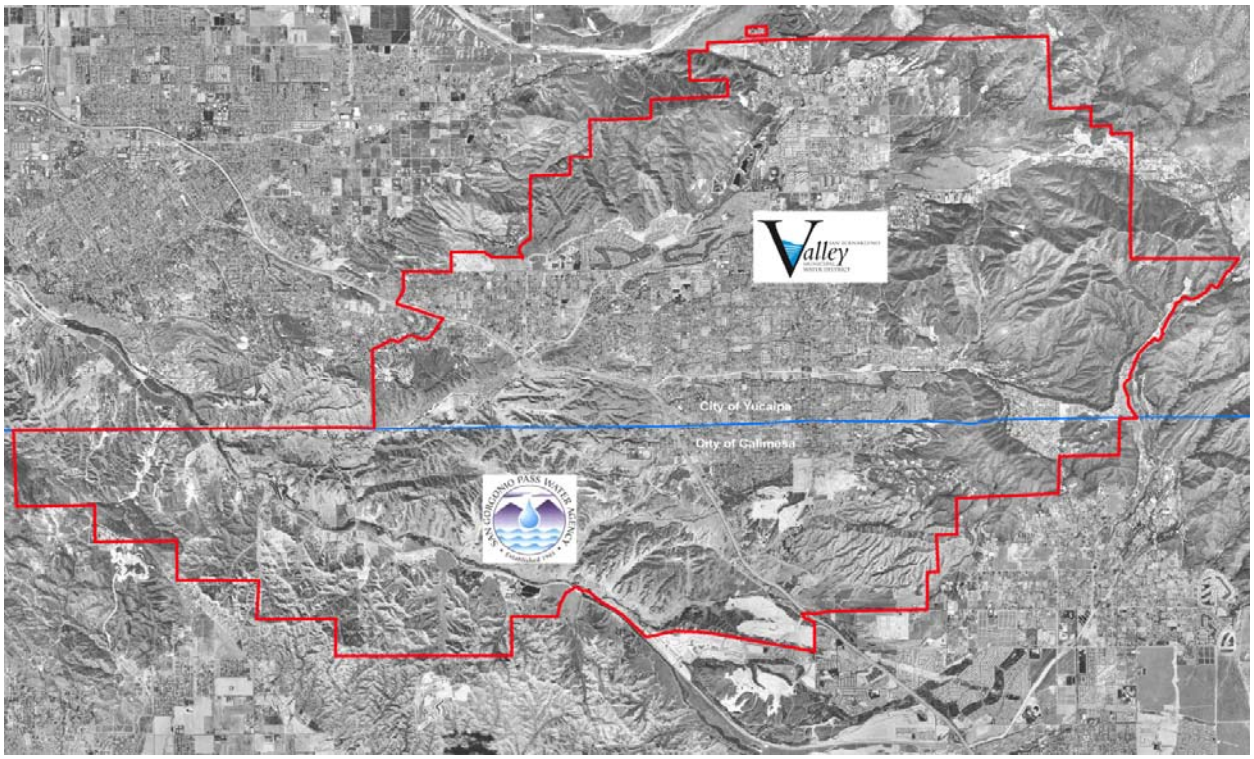
Water System:
215 miles of drinking water pipelines
27 reservoirs - 34 million gallons of storage capacity
18 pressure zones
12,000 ac-ft annual water demand (3.9 billion gallons)
Two water filtration facilities:
- 1 mgd at Oak Glen Surface Water Filtration Facility
- 12 mgd at Yucaipa Valley Regional Water Filtration Facility

Sewer System:
8.0 million gallon treatment capacity - current flow at 4.0 mgd
205 miles of sewer mainlines
5 sewer lift stations
4,500 ac-ft annual recycled water prod. (1.46 billion gallons)

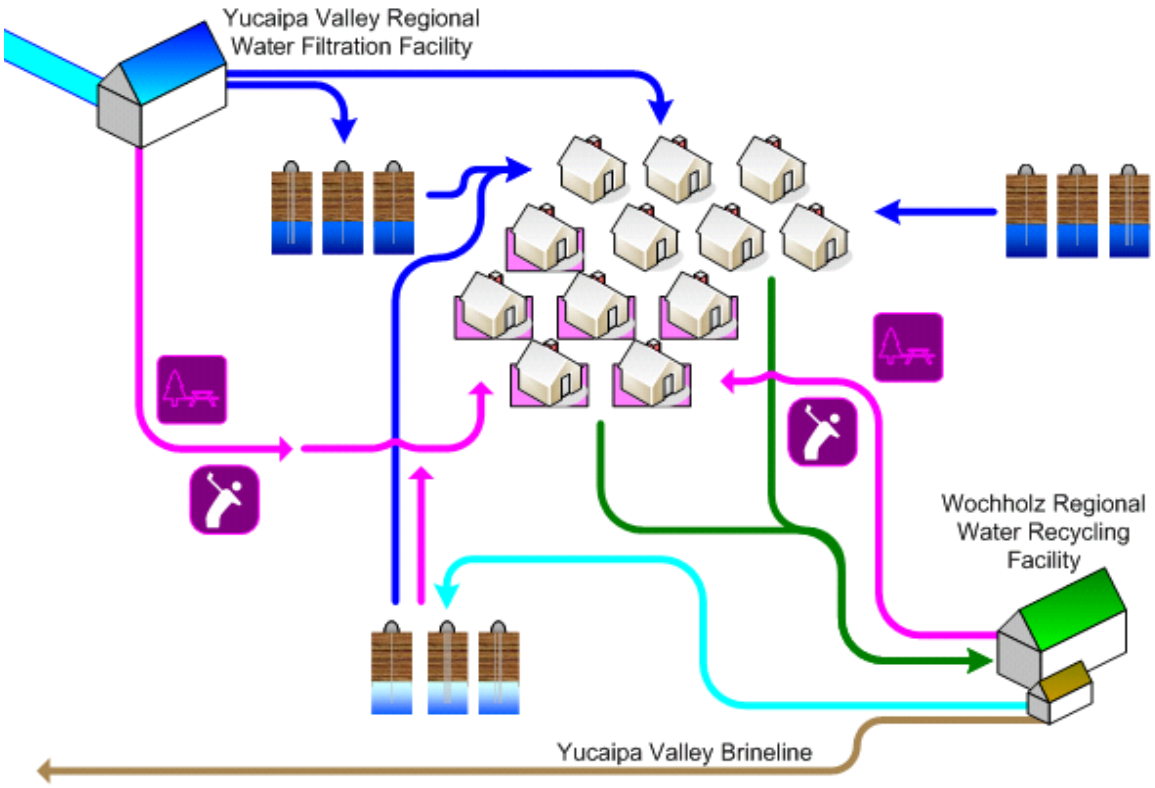
Recycled Water:
22 miles of recycled water pipelines
5 reservoirs - 12 million gallons of storage
1,200 ac-ft annual recycled demand (0.4 billion gallons)

Brine Disposal:
2.2 million gallon desalination facility at sewer treatment plant
1.108 million gallons of Inland Empire Brine Line capacity
0.295 million gallons of treatment capacity in Orange County

State Water Contractors: San Bernardino Valley Municipal Water District
San Gorgonio Pass Water Agency



Sustainability Plan: A Strategic Plan for a Sustainable Future: The Integration and Preservation of Resources, adopted on August 20, 2008.



Yucaipa Valley Water District

THE MEASUREMENT OF WATER PURITY

One part per hundred is generally represented by the percent (%).
This is equivalent to about fifteen minutes out of one day.

One part per thousand denotes one part per 1000 parts.
This is equivalent to about one and a half minutes out of one day.

One part per million (**ppm**) denotes one part per 1,000,000 parts.
This is equivalent to about 32 seconds out of a year.

One part per billion (**ppb**) denotes one part per 1,000,000,000 parts.
This is equivalent to about three seconds out of a century.

One part per trillion (**ppt**) denotes one part per 1,000,000,000,000 parts.
This is equivalent to about three seconds out of every hundred thousand years.

One part per quadrillion (**ppq**) denotes one part per 1,000,000,000,000,000 parts.
This is equivalent to about two and a half minutes out of the age of the Earth (4.5 billion years).

Yucaipa Valley Water District

GLOSSARY OF COMMONLY USED TERMS

Every profession has specialized terms which generally evolve to facilitate communication between individuals. The routine use of these terms tends to exclude those who are unfamiliar with the particular specialized language of the group. Sometimes jargon can create communication cause difficulties where professionals in related fields use different terms for the same phenomena.

Below are commonly used water terms and abbreviations with commonly used definitions. If there is any discrepancy in definitions, the District's Regulations Governing Water Service is the final and binding definition.

Acre Foot of Water - The volume of water (325,850 gallons, or 43,560 cubic feet) that would cover an area of one acre to a depth of 1 foot.

Activated Sludge Process – A secondary biological sewer treatment process where bacteria reproduce at a high rate with the introduction of excess air or oxygen, and consume dissolved nutrients in the wastewater.

Annual Water Quality Report - The document is prepared annually and provides information on water quality, constituents in the water, compliance with drinking water standards and educational material on tap water. It is also referred to as a Consumer Confidence Report (CCR).

Aquifer - The natural underground area with layers of porous, water-bearing materials (sand, gravel) capable of yielding a supply of water; see Groundwater basin.

Backflow - The reversal of water's normal direction of flow. When water passes through a water meter into a home or business it should not reverse flow back into the water mainline.

Best Management Practices (BMPs) - Methods or techniques found to be the most effective and practical means in achieving an objective. Often used in the context of water conservation.

Biochemical Oxygen Demand (BOD) – The amount of oxygen used when organic matter undergoes decomposition by microorganisms. Testing for BOD is done to assess the amount of organic matter in water.

Biosolids – Biosolids are nutrient rich organic and highly treated solid materials produced by the sewer treatment process. This high-quality product can be used as a soil amendment on farm land or further processed as an earth-like product for commercial and home gardens to improve and maintain fertile soil and stimulate plant growth.

Catch Basin – A chamber usually built at the curb line of a street, which conveys surface water for discharge into a storm sewer.

Capital Improvement Program (CIP) – Projects for repair, rehabilitation, and replacement of assets. Also includes treatment improvements, additional capacity, and projects for the support facilities.

Collector Sewer – The first element of a wastewater collection system used to collect and carry wastewater from one or more building sewer laterals to a main sewer.

Coliform Bacteria – A group of bacteria found in the intestines of humans and other animals, but also occasionally found elsewhere and is generally used as an indicator of sewage pollution.

Combined Sewer Overflow – The portion of flow from a combined sewer system, which discharges into a water body from an outfall located upstream of a wastewater treatment plant, usually during wet weather conditions.

Combined Sewer System– Generally older sewer systems designed to convey both sewage and storm water into one pipe to a wastewater treatment plant.

Conjunctive Use - The coordinated management of surface water and groundwater supplies to maximize the yield of the overall water resource. Active conjunctive use uses artificial recharge, where surface water is intentionally percolated or injected into aquifers for later use. Passive conjunctive use is to simply rely on surface water in wet years and use groundwater in dry years.

Consumer Confidence Report (CCR) - see Annual Water Quality Report.

Cross-Connection - The actual or potential connection between a potable water supply and a non-potable source, where it is possible for a contaminant to enter the drinking water supply.

Disinfection By-Products (DBPs) - The category of compounds formed when disinfectants in water systems react with natural organic matter present in the source water supplies. Different disinfectants produce different types or amounts of disinfection byproducts. Disinfection byproducts for which regulations have been established have been identified in drinking water, including trihalomethanes, haloacetic acids, bromate, and chlorite

Drought - a period of below average rainfall causing water supply shortages.

Dry Weather Flow – Flow in a sanitary sewer during periods of dry weather in which the sanitary sewer is under minimum influence of inflow and infiltration.

Fire Flow - The ability to have a sufficient quantity of water available to the distribution system to be delivered through fire hydrants or private fire sprinkler systems.

Gallons per Capita per Day (GPCD) - A measurement of the average number of gallons of water use by the number of people served each day in a water system. The calculation is made by dividing the total gallons of water used each day by the total number of people using the water system.

Groundwater Basin - An underground body of water or aquifer defined by physical boundaries.

Groundwater Recharge - The process of placing water in an aquifer. Can be a naturally occurring process or artificially enhanced.

Hard Water - Water having a high concentration of minerals, typically calcium and magnesium ions.

Hydrologic Cycle - The process of evaporation of water into the air and its return to earth in the form of precipitation (rain or snow). This process also includes transpiration from plants, percolation into the ground, groundwater movement, and runoff into rivers, streams and the ocean; see Water cycle.

Infiltration – Water other than sewage that enters a sewer system and/or building laterals from the ground through defective pipes, pipe joints, connections, or manholes. Infiltration does not include inflow. See *Inflow.*

Inflow - Water other than sewage that enters a sewer system and building sewer from sources such as roof vents, yard drains, area drains, foundation drains, drains from springs and swampy areas, manhole covers, cross connections between storm drains and sanitary sewers, catch basins, cooling towers, storm waters, surface runoff, street wash waters, or drainage. Inflow does not include infiltration. See *Infiltration*.

Inflow / Infiltration (I/I) – The total quantity of water from both inflow and infiltration.

Mains, Distribution - A network of pipelines that delivers water (drinking water or recycled water) from transmission mains to residential and commercial properties, usually pipe diameters of 4" to 16".

Mains, Transmission - A system of pipelines that deliver water (drinking water or recycled water) from a source of supply the distribution mains, usually pipe diameters of greater than 16".

Meter - A device capable of measuring, in either gallons or cubic feet, a quantity of water delivered by the District to a service connection.

Overdraft - The pumping of water from a groundwater basin or aquifer in excess of the supply flowing into the basin. This pumping results in a depletion of the groundwater in the basin which has a net effect of lowering the levels of water in the aquifer.

Peak Flow – The maximum flow that occurs over a specific length of time (e.g., daily, hourly, instantaneously).

Pipeline - Connected piping that carries water, oil or other liquids. See Mains, Distribution and Mains, Transmission.

Point of Responsibility, Metered Service - The connection point at the outlet side of a water meter where a landowner's responsibility for all conditions, maintenance, repairs, use and replacement of water service facilities begins, and the District's responsibility ends.

Potable Water - Water that is used for human consumption and regulated by the California Department of Public Health.

Pressure Reducing Valve - A device used to reduce the pressure in a domestic water system when the water pressure exceeds desirable levels.

Pump Station - A drinking water or recycled water facility where pumps are used to push water up to a higher elevation or different location.

Reservoir - A water storage facility where water is stored to be used at a later time for peak demands or emergencies such as fire suppression. Drinking water and recycled water systems will typically use concrete or steel reservoirs. The State Water Project system considers lakes, such as Shasta Lake and Folsom Lake to be water storage reservoirs.

Runoff - Water that travels downward over the earth's surface due to the force of gravity. It includes water running in streams as well as over land.

Sanitary Sewer System - Sewer collection system designed to carry sewage, consisting of domestic, commercial, and industrial wastewater. This type of system is not designed nor intended to carry water from rainfall, snowmelt, or groundwater sources. See *Combined Sewer System*.

Sanitary Sewer Overflow – Overflow from a sanitary sewer system caused when total wastewater flow exceeds the capacity of the system. See *Combined Sewer Overflow*.

Santa Ana River Interceptor (SARI) Line – A regional brine line designed to convey 30 million gallons per day of non-reclaimable wastewater from the upper Santa Ana River basin to the sewer treatment plant operated by Orange County Sanitation District.

Secondary Treatment – Biological sewer treatment, particularly the activated-sludge process, where bacteria and other microorganisms consume dissolved nutrients in wastewater.

Supervisory Control and Data Acquisition (SCADA) - A computerized system which provides the ability to remotely monitor and control water system facilities such as reservoirs, pumps and other elements of water delivery.

Service Connection - The water piping system connecting a customer's system with a District water main beginning at the outlet side of the point of responsibility, including all plumbing and equipment located on a parcel required for the District's provision of water service to that parcel.

Sludge – Untreated solid material created by the treatment of sewage.

Smart Irrigation Controller - A device that automatically adjusts the time and frequency which water is applied to landscaping based on real-time weather such as rainfall, wind, temperature and humidity.

Special District - A political subdivision of a state established to provide a public services, such as water supply or sanitation, within a specific geographic area.

Surface Water - Water found in lakes, streams, rivers, oceans or reservoirs behind dams.

Total Suspended Solids (TSS) – The amount of solids floating and in suspension in water or sewage.

Transpiration - The process by which water vapor is released into the atmosphere by living plants.

Trickling Filter – A biological secondary treatment process in which bacteria and other microorganisms, growing as slime on the surface of rocks or plastic media, consume nutrients in primary treated sewage as it trickles over them.

Underground Service Alert (USA) - A free service that notifies utilities such as water, telephone, cable and sewer companies of pending excavations within the area (dial 8-1-1 at least 2 working days before you dig).

Urban Runoff - Water from city streets and domestic properties that typically carries pollutants into the storm drains, rivers, lakes, and oceans.

Valve - A device that regulates, directs or controls the flow of water by opening, closing or partially obstructing various passageways.

Wastewater – Any water that enters the sanitary sewer.

Water Banking - The practice of actively storing or exchanging in-lieu surface water supplies in available groundwater basin storage space for later extraction and use by the storing party or for sale or exchange to a third party. Water may be banked as an independent operation or as part of a conjunctive use program.

Water cycle - The continuous movement water from the earth's surface to the atmosphere and back again; see Hydrologic cycle.

Water Pressure - Pressure created by the weight and elevation of water and/or generated by pumps that deliver water to the tap.

Water Service Line - The pipeline that delivers potable water to a residence or business from the District's water system. Typically the water service line is a 1" to 1½" diameter pipe for residential properties.

Watershed - A region or land area that contributes to the drainage or catchment area above a specific point on a stream or river.

Water Table - The upper surface of the zone of saturation of groundwater in an unconfined aquifer.

Water Transfer - A transaction, in which a holder of a water right or entitlement voluntarily sells/exchanges to a willing buyer the right to use all or a portion of the water under that water right or entitlement.

Water Well - A hole drilled into the ground to tap an underground water aquifer.

Wetlands - Lands which are fully saturated or under water at least part of the year, like seasonal vernal pools or swamps.

Wet Weather Flow – Dry weather flow combined with stormwater introduced into a combined sewer system, and dry weather flow combined with infiltration/inflow into a separate sewer system.

Yucaipa Valley Water District

COMMONLY USED ABBREVIATIONS

AQMD	Air Quality Management District
BOD	Biochemical Oxygen Demand
CARB	California Air Resources Board
CCTV	Closed Circuit Television
CWA	Clean Water Act
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
FOG	Fats, Oils, and Grease
GPD	Gallons per day
MGD	Million gallons per day
O & M	Operations and Maintenance
OSHA	Occupational Safety and Health Administration
POTW	Publicly Owned Treatment Works
PPM	Parts per million
RWQCB	Regional Water Quality Control Board
SARI	Santa Ana River Inceptor
SAWPA	Santa Ana Watershed Project Authority
SBVMWD	San Bernardino Valley Municipal Water District
SCADA	Supervisory Control and Data Acquisition system
SSMP	Sanitary Sewer Management Plan
SSO	Sanitary Sewer Overflow
SWRCB	State Water Resources Control Board
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
WDR	Waste Discharge Requirements
YVWD	Yucaipa Valley Water District