SAN GORGONIO PASS WATER AGENCY
1210 Beaumont Avenue, Beaumont, CA
Board of Directors Engineering Workshop
Agenda
January 14, 2019 at 1:30 p.m.

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

2. **Public Comment:** Members of the public may address the Board at this time concerning items relating to any matter within the Agency's jurisdiction. To comment on specific agenda items, please complete a speaker's request form and hand it to the board secretary. Speakers are requested to keep their comments to no more than five minutes. Under the Brown Act, no action or discussion shall take place on any item not appearing on the agenda, except that the Board or staff may briefly respond to statements made or questions posed for the purpose of directing statements or questions to staff for follow up.

3. **Discussion of Agreement with SBVMWD and DWR Regarding Deliveries to Yucaipa Valley Water District* (p. 2)**

4. **Discussion of Continued Participation in Sites Reservoir for 2019* (p. 15)**

5. **Review of Draft 2017 Water Conditions Report* (p. 32)**

6. **Sustainable Groundwater Management Act (SGMA) Update* (p. 81)**

7. **Announcements**
   A. Regular Board Meeting, December 17, 2018 at 1:30 p.m.
   B. Finance and Budget Workshop, December 20, 2018 at 1:30 p.m.
   C. Office closed December 24th - 25th in observance of the Christmas Holiday
   D. Office closed December 31st – January 1st in observance of the New Year's Holiday

8. **Adjournment**

   A. Office closed **Monday,** January 21, 2019 in observance of Martin Luther King, Jr. Day
   B. Regular Board Meeting, **Tuesday,** January 22, 2019 at 1:30 p.m.
   C. Southern California Water Coalition Quarterly Luncheon
      Friday, January 25, 2019 at 12:00 p.m.
      Irvine Ranch Water District
      15600 Sand Canyon Avenue, Irvine
   D. Finance and Budget Workshop, January 28, 2019 at 1:30 p.m.

***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 BERNARDINO Valley MUNICIPAL WATER DISTRICT

DATE: December 11, 2018

TO: Board of Directors Workshop

FROM: Bob Tincher, Deputy General Manager - Resources

SUBJECT: Consider a Joint Agreement for the Delivery of State Water Project Water to the City of Calimesa in the San Gorgonio Pass Water Agency

The San Gorgonio Pass Water Agency (Pass Agency) and Valley District share the Yucaipa Valley Water District (YVWD) as a customer for imported water from the State Water Project (SWP). However, YVWD currently only has one delivery location and meter for deliveries of State Water Project water which is located in the Valley District service area. The attached, joint agreement is needed for the Department of Water Resources (DWR) to properly account for the YVWD SWP deliveries made in both the Valley District and Pass Agency service areas.

Background:

In 2003, the East Branch Extension of the State Water Project (SWP) was completed, enabling direct delivery of SWP water to YVWD and onto the Pass Agency. YVWD orders SWP water for direct delivery to a treatment plant and for recharge at the Wilson Spreading Basins, both of which are made through the same Valley District turnout and meter. Some of the water YVWD orders is for its service area within the Pass Agency so this delivery needs to come from the Pass Agency's SWP allocation and needs to be sold to YVWD at the Pass Agency's rate for SWP water. Each month, YVWD sends Valley District and the Pass Agency a calculation of the amount of SWP that was used in the Valley District service area and the amount used in the Pass Agency service area. A sample of this calculation is attached. Valley District invoices the Pass Agency for the cost of the SWP water delivered, on its behalf. The amount of water Valley District delivers on behalf of the Pass Agency averages about 275 acre-feet per year.

Although this procedure ensures that the Pass Agency reimburses Valley District for the monetary cost of SWP water delivered on its behalf, it does not allocate the water to the Pass Agency's DWR account. The attached joint agreement is needed to incorporate this special delivery condition into the DWR accounting system for SWP deliveries. Once this agreement has been executed, YVWD will provide their monthly calculation to DWR who will then bill Valley District and the Pass Agency for their portion of the water delivered and ensure that the water comes out of the correct SWP account.

Staff is also working with the Pass Agency and YVWD on a joint agreement for the calculation process YVWD uses each month to determine the amount of SWP water it delivers into the Valley District and Pass Agency service areas. This agreement will be brought back, at a later date, for consideration.

Fiscal Impact:

Since the Pass Agency has been paying Valley District for the SWP water delivered on its behalf, there is no fiscal impact anticipated.

Staff Recommendation:

Direct staff to place this item on an upcoming Board of Directors agenda for consideration.

Attachments:

1. Agreement Among the Department of Water Resources of the State of California, San Bernardino Valley Municipal Water District and San Gorgonio Pass Water Agency for a Change in Point of Delivery of a Portion of San Gorgonio Pass Water Agency's State Water Project Table A Water, SWPAO #16030
2. Sample YVWD calculation of SWP water used in the Valley District and the Pass Agency Service Areas

State of California
The Resources Agency
DEPARTMENT OF WATER RESOURCES

AGREEMENT AMONG THE DEPARTMENT OF WATER RESOURCES OF THE STATE OF CALIFORNIA, SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT AND SAN GORGONIO PASS WATER AGENCY FOR A CHANGE IN POINT OF DELIVERY OF A PORTION OF SAN GORGONIO PASS WATER AGENCY'S STATE WATER PROJECT TABLE A WATER

SWPAO #16030

THIS AGREEMENT is made this _____ day of_____, 20____, under the provisions of the California Water Resources Development Bond Act, and other applicable laws of the State of California, among the Department of Water Resources of the State of California (DWR), San Bernardino Valley Municipal Water District (SBVMWD), and San Gorgonio Pass Water Agency (SGPWA). DWR, SBVMWD and SGPWA may be referred to individually by name, as "Party" or collectively as "Parties."

RECITALS

A. DWR and SBVMWD have entered into a water supply contract, dated December 30, 1960, and subsequently amended, providing that DWR shall supply certain quantities of water to SBVMWD, providing that SBVMWD shall make certain payments to DWR, and setting forth the terms and conditions of such water deliveries and payments, hereinafter "SBVMWD's Water Supply Contract."

B. DWR and SGPWA have entered into a water supply contract, dated November 16, 1962, and subsequently amended, providing that DWR shall supply certain quantities of water to SGPWA, providing that SGPWA shall make certain payments to DWR, and setting forth the terms and conditions of such water deliveries and payment, hereinafter "SGPWA's Water Supply Contract."

C. Yucaipa Valley Water District (YVWD) serves customers located in both SBVMWD's and SGPWA's service areas. However, YVWD's only physical connection to the SWP system is located at SBVMWD's turnout at 3A of the California Aqueduct's East Branch Extension (Reach EBX-3A) from which SWP water is conveyed to YVWD's service area. Therefore, a change in point of delivery agreement is necessary for YVWD to receive SGPWA's SWP water for use in the SGPWA portion of YVWD's service area. SGPWA has estimated that up to 2,400 acre-feet per year of its SWP Table A water will be delivered and used by YVWD in SGPWA's service area.

D. SGPWA requests DWR's approval for a change in point of delivery of up to 2,400 acre-feet annually of SGPWA's approved SWP Table A water to SBVMWD's turnout at Reach EBX-3A for use in the SGPWA portion of YVWD's service area.

E. In compliance with the California Environmental Quality Act (CEQA), SGPWA, as lead agency, has determined that the change in point of delivery is categorically exempt from the requirements under CEQA Guidelines Section 15301 (exemption for the operation of existing facilities) and has filed a Notice of Exemption (NOE) with the State Clearinghouse (SCH) on January 4, 2017 (SCH # 2017018021). DWR, as the responsible agency, will file a NOE upon execution of this Agreement.

AGREEMENT

DWR approves a change in point of delivery of up to 2,400 acre-feet annually of SGPWA's approved SWP Table A water to SBVMWD's turnout at Reach EBX-3A of the California Aqueduct during the term of the Agreement, subject to the following terms and conditions:

TERM

1. This Agreement shall be effective upon execution by all Parties, and shall terminate on December 31, 2035, or upon final payment to DWR of all costs attributable to this Agreement, whichever occurs later. However, the liability, hold harmless and indemnification obligations in this Agreement shall remain in effect until December 31, 2039, or until any claim or litigation concerning this Agreement asserted to DWR, SBVMWD, or SGPWA as of December 31, 2039 is finally resolved, whichever occurs later. Extending the obligations in this paragraph of this Agreement beyond the termination dates in the long term SWP water supply contracts between DWR and SBVMWD and between DWR and SGPWA, and the use of the December 31, 2039 date in this Agreement, are not intended to have any legal effect on the termination dates of those or any other long term SWP water supply contracts.

UNIQUENESS OF AGREEMENT

2. DWR's approval under this Agreement is unique and shall not be considered a precedent for future agreements or DWR activities.

USE OF CALIFORNIA AQUEDUCT CAPACITY

3. Delivery of a portion of SGPWA's SWP Table A water to SBVMWD's turnout located on the California Aqueduct under this Agreement shall be in accordance with a schedule that has been reviewed and approved by DWR under applicable provisions of SGPWA's Water Supply Contract. Article 12(f) of SGPWA's Water Supply Contract shall govern the priority for delivery of such water.

APPROVALS

4. The delivery of water under this Agreement shall be contingent upon, and subject to, any necessary approvals and shall be governed by the terms and conditions of such approvals and any other applicable legal requirements. SGPWA and SBVMWD shall be responsible for complying with all applicable laws and legal requirements and for securing any required consent, approvals, permits, or orders. SGPWA and SBVMWD shall furnish to DWR copies of all approvals and agreements required for the delivery of water under this Agreement.

DELIVERY OF SGPWA'S TABLE A WATER

5. Under Article 15(a) of SGPWA's Water Supply Contract, DWR hereby consents to the delivery of a portion of SGPWA's SWP Table A water through SBVMWD's turnout under the terms and conditions of this Agreement and finds that such delivery will not materially impair SGPWA's capacity to make payments to DWR.

PRIOR WATER DELIVERIES

6. From 2005-2017, SBVMWD's SWP supplies were delivered to YVWD at Reach EBX-3A. However, a portion of that water was used in SGPWA's service area. SBVMWD and SGPWA internally coordinated the billing and tracking of the amount of water delivered to SGPWA's service area. However, DWR's water files did not reflect the correct amount of SWP water received by SBVMWD and SGPWA. In order to correctly reflect the activities between the two agencies in these years, DWR will reclassify water deliveries made to SBVMWD and SGPWA as shown in Attachment A.

SGPWA'S WATER DELIVERY TO SBVMWD'S TURNOUT

7. DWR will deliver up to 2,400 acre-feet annually of SGPWA's SWP Table A water to SBVMWD's turnout at Reach EBX-3A of the California Aqueduct.

8. The delivery of a portion of SGPWA's SWP Table A water under this Agreement shall be in accordance with a schedule approved by DWR. DWR's approval is dependent upon the times and amounts of the delivery and the overall delivery capability of the SWP. DWR shall not be obligated to deliver the water at times when such delivery would adversely impact SWP operations or facilities, or other SWP contractors.

9. The sum of deliveries scheduled under this Agreement, plus scheduled SGPWA SWP deliveries, plus deliveries to SGPWA under any other agreements, shall not exceed the quantities on which the proportionate Use-of-Facilities factors are based under SGPWA's Water Supply Contract, unless DWR determines that the deliveries will not adversely impact SWP operations or facilities, or other SWP contractors' Table A deliveries.

SOURCE OF WATER

10. SGPWA attests that the delivery of a portion of SGPWA's SWP Table A water to SBVMWD's turnout under this Agreement does not constitute a sale of its Table A water. Rather, SGPWA's SWP Table A water is delivered to SBVMWD's turnout on behalf of YVWD's customers that are within SGPWA's service area.

WATER DELIVERY SCHEDULES

11. All water delivery schedules and revisions under this Agreement shall be in accordance with Article 12 of SBVMWD's and SGPWA's respective Water Supply Contract.

12. SGPWA, in coordination with SBVMWD, shall submit monthly water delivery schedules for approval to the State Water Project Analysis Office (SWPAO), Water Deliveries Section, indicating timing and point of delivery requested under this Agreement with reference to SWPAO #16030. Delivery schedules shall be sent by electronic mail to SWPDeliveries@water.ca.gov or by FAX to (916) 653-9628, Attention: Chief, Water Deliveries Section.

13. SGPWA, in coordination with SBVMWD, shall submit weekly schedules for the delivery of water under this Agreement to the Southern Field Division, Water Operations Section, indicating timing and point of delivery requested with reference to SWPAO #16030. Schedules shall be sent by electronic mail to SFDwaterschedule@water.ca.gov or by FAX to (661) 294-3651, Attention: Chief, Water Operations Section.

14. All weekly water schedules described above shall be submitted by 10:00 a.m. Wednesday, for the following week, Monday through Sunday, to the Southern Field Division's Water Operations Section.

15. Weekly water schedules shall also be concurrently sent by electronic mail or faxed to the State Water Project Operations Control Office:

    a. Water Management Branch
    Water_deliv_sched@water.ca.gov
    FAX to (916) 574-2785
    Attention: Chief, Water Management Branch

    b. Power Management and Optimization Branch
    POCOptimization@water.ca.gov
    FAX to (916) 574-2785
    Attention: Chief, Power Management and Optimization Branch

    c. Pre-Scheduling Section
    Presched@water.ca.gov
    FAX to (916) 574-2782
    Attention: Chief, Pre-Scheduling Section

WATER DELIVERY RECORDS

16. DWR will maintain monthly records accounting for the delivery of water under this Agreement. SGPWA shall certify to SWPAO the quantity of water delivered to SBVMWD's turnout under this Agreement, by the 30th day after the delivery, with reference to SWPAO #16030.

CHARGES

17. SGPWA shall pay to DWR the charges associated with the delivery of water under this Agreement from the Delta to Reach EBX-3A. SGPWA shall pay to DWR the Variable Operation, Maintenance, Power, and Replacement Component of the Transportation Charge and the Off-Aqueduct Power Facilities cost for each acre-foot of water delivered from the Delta to the Reach EBX-3A. Charges shall be determined for the month the water is delivered.

18. In addition to the charges identified above, SGPWA agrees to pay to DWR any additional identified demonstrable increase in costs that would otherwise be borne by DWR or by the SWP contractors not signatory to this Agreement as a result of DWR providing service under this Agreement.

19. Payment terms under this Agreement shall be in accordance with SGPWA's Water Supply Contract.

NO IMPACT

20. This Agreement shall not be administered or interpreted in any way that would cause adverse impacts to SWP approved Table A water or to any other SWP approved water allocations, water deliveries, or SWP operations or facilities. SGPWA and SBVMWD shall be responsible, jointly and severally, as determined by DWR, for any adverse impacts that may result from water deliveries under this Agreement.

LIABILITY

21. DWR is not responsible for the use, effects or disposal of water under this Agreement once the water is delivered to the designated turnout(s). Responsibility shall be governed by Article 13 of SBVMWD's and/or SGPWA's respective Water Supply Contract, as applicable, with responsibilities under the terms of that article shifting from DWR to SGPWA and/or SBVMWD when the water is delivered to the designated turnout(s).

22. SGPWA and SBVMWD agree to defend and hold DWR, its officers, employees and agents harmless from any direct or indirect loss, liability, lawsuit, cause of action, judgment or claim, and shall indemnify DWR, its officers, employees and agents from all lawsuits, costs, damages, judgments, attorneys' fees, and liabilities that DWR, its officers, employees and agents incur as a result of DWR providing services under this Agreement, except to the extent resulting from the sole negligence or willful misconduct of DWR, its officers, employees and agents.

23. If uncontrollable forces preclude DWR from delivery of water under this Agreement, either partially or completely, then DWR is relieved from the obligation to deliver the water to the extent that DWR is reasonably unable to complete the obligation due to the uncontrollable forces. Uncontrollable forces shall include, but are not limited to, earthquakes, fires, tornadoes, floods, and other natural or human caused disasters. SGPWA and SBVMWD shall not be entitled to recover any administrative costs or other costs associated with delivery of water under this Agreement if uncontrollable forces preclude DWR from delivering the water.

DISPUTE RESOLUTION

24. In the event of a dispute regarding interpretation or implementation of this Agreement, the Director of DWR and authorized representatives of SGPWA and SBVMWD shall endeavor to resolve the dispute by meeting within 30 days after the request of a Party. If the dispute remains unresolved, the Parties shall use the service of a mutually acceptable consultant in an effort to resolve the dispute. Parties involved in the dispute shall share the fees and expenses of the consultant equally. If a consultant cannot be agreed upon, or if the consultant's recommendations are not acceptable to the Parties, and unless the Parties otherwise agree, the matter may be resolved by litigation and any Party may, at its option, pursue any available legal remedy including, but not limited to, injunctive and other equitable relief.

NO ASSIGNMENT OF AGREEMENT

25. Without the prior written consent of DWR, SGPWA and SBVMWD, this Agreement is not assignable by SGPWA and SBVMWD in whole or in part.

PARAGRAPH HEADINGS

26. The paragraph headings of this Agreement are for the convenience of the Parties and shall not be considered to limit, expand, or define the contents of the respective paragraphs.

OPINIONS AND DETERMINATION

27. Where the terms of this Agreement provide for actions to be based upon the opinion, judgment, approval, review, or determination of any Party, such terms are to be construed as providing that such opinion, judgment, approval, review, or determination be reasonable.

NO MODIFICATION OF AGREEMENT

28. No modification of the terms and conditions of this Agreement shall be valid unless made in writing and signed by the Parties to this Agreement.

NO MODIFICATION OF WATER SUPPLY CONTRACT

29. This Agreement shall not be interpreted to modify the terms or conditions of SGPWA's and SBVMWD's respective Water Supply Contract. Unless expressly provided herein, the terms and conditions of SGPWA's and SBVMWD's respective Water Supply Contract and any future amendments apply to this Agreement.

SIGNATURE CLAUSE

30. The signatories represent that they have been appropriately authorized to enter into this Agreement on behalf of the Party for whom they sign. A copy of any resolution or other documentation authorizing SGPWA and SBVMWD to enter into this Agreement, if such resolution or authorization is required, shall be provided to DWR before the execution of this Agreement.

EXECUTION IN COUNTERPART

31. This Agreement may be executed in counterpart. The Parties agree to accept facsimile or electronically scanned signatures as original signatures. This Agreement shall take effect as soon as all Parties have signed. Immediately after execution, SGPWA and SBVMWD shall transmit a copy of the executed Agreement by facsimile or electronic file to Pedro Villalobos, SWPAO Chief, at (916) 653-9628 or swpao-chief@water.ca.gov and to each other at:

a. San Gorgonio Pass Water Agency
Mr. Jeff Davis, General Manager
Fax: (951) 845-0281
Email: jdavis@sgpwa.com

b. San Bernardino Valley Municipal Water District
Mr. Douglas Headrick, General Manager
Fax: (909) 387-9247
Email: dough@sbvmwd.com

IN WITNESS WHEREOF, the Parties hereto have entered into this Agreement.

Approved as to Legal Form
and Sufficiency

_____
Chief Counsel
Department of Water Resources

_____
Date

State of California
Department of Water Resources

_____
Pedro Villalobos, Chief
State Water Project Analysis Office

_____
Date

San Gorgonio Pass Water Agency

_____
Name

_____
Title

_____
Date

San Bernardino Valley Municipal Water District

_____
Name

_____
Title

_____
Date

Attachment A

YEAR	Amount to Reclassify (AF)
2005	57
2006	159
2007	119
2008	287
2009	274
2010	123
2011	109
2012	164
2013	180
2014	102
2015	454
2016	647
2017	898

The above table shows the amount of water to be reclassified. SGPWA's and SBVMWD's deliveries for these years will be modified by increasing and decreasing amounts respectively. The charges will be adjusted accordingly. SGPWA will be billed and SBVMWD will be credited by an equal amount.

Supplemental Water Calculations for SBVMWD & SGPWA

Monday, November 05, 2018

$309.00
Effective 7/1/09

Potable Water Calculation:	Calculations	October 2018 SBVMWD	SGPWA	Total
Quantity of Imported Water Delivered to YVWD (AF)	[A]	--	--	770.60
Quantity of Filtered Water Delivered to Customers (AF)	[B]	--	--	656.41
Potable Water Consumption By County (kgal)	[C]	293,453	32,843	326,296
Percentage of Domestic Use per County	[D] = % of [C]	89.9%	10.1%	100.0%
Preliminary Allocation of Filtered Water (AF)	[E]=[B]*[D]	590.34	66.07	656.41
Well No. 35 Production (AF)	[F]	--	0.00	--
Well No. 40 Production (AF)	[G]	--	0.00	--
Well No. 48 Production (AF)	[H]	--	7.74	--
Well No. 61 Production (AF)	[I]	--	4.01	--
Calculation of Filtered Water Use in Riv. Co. (AF)	[J]=[E]-[F]-[G]-[H]-[I]	--	54.32	--
Revised Allocation of Filtered Water (AF)	**[K]**	**602.09**	**54.32**	**656.41**
Imported Water Allocated to YVWD (AF)	[L]	573.69	--	573.69
Imported Water Allocated to WHMWC (AF)	[M]	28.40	--	28.40

Recycled Water Calculation:		October 2018 SBVMWD	SGPWA	Total
Quantity of Recycled Water from Direct Imports (AF)	[N]=[A]-[B]	--	--	114.19
Amount of Recycled Water from B-8 at Wochholz RWRF (AF)	[O]	--	--	52.61
Actual Recycled Use in Riv. Co. (AF)	[P]	--	6.91	--
Revised Allocation of Recycled Water Use from YVRWFF (AF)	**[Q]**	**0.00**	**0.00**	**0.00**

Summary of Monthly Water Purchase from SGPWA	October 2018 SBVMWD	SGPWA	Total
	602.09	**54.32**	**656.41**

	Potable		54.32 AF
Checks paid to SGPWA	Check Number		
	Check Date		
	Check Amount	$309 AF	$16,784.88

	Recycled		0.00 AF
Checks paid to SGPWA	Check Number		N/A
	Check Date		N/A
	Check Amount	$309 AF	$0.00

10/31/2018 CHECK REQUEST		
02-5-01-51316	Potable (54.32 AF)	$16,784.88
02-5-01-51316	Recycled (0.00 AF)	$0.00
	SGPWA CHECK TOTAL	$16,784.88

July 2011 Forward charge all SGPWA water to GL #02-01-51316
per discussion between JZ and VE

SITES PROJECT AUTHORITY

2019 RESERVOIR PROJECT AGREEMENT

DATED AS OF APRIL 1, 2019

BY AND AMONG

SITES PROJECT AUTHORITY

AND

THE PROJECT AGREEMENT MEMBERS LISTED HEREIN

TABLE OF CONTENTS

THIS 2019 RESERVOIR PROJECT AGREEMENT is made effective as of April 1, 2019, by and among (a) the Sites Project Authority (the "Authority") and (b) certain Members and/or Non-Member Participating Parties, listed on the attached **Exhibit A** and is made with reference to the following facts:

RECITALS

A. Various public agencies in the Sacramento River Watershed created the Authority in 2010. Various public agencies in the Sacramento River Watershed, including certain Project Agreement Members, previously entered into the Fourth Amended and Restated Sites Project Authority Joint Exercise of Powers Agreement, dated November 21, 2016, pursuant to which they are developing the Sites Reservoir Project, which is contained in the CalFed Bay-Delta program Programmatic Record of Decision, August 28, 2000. The Joint Powers Agreement provides a mechanism for "Project Agreements" (as defined in the Joint Powers Agreement) to undertake specific work activities for the development of the Sites Reservoir Project. On September 17, 2018, the Authority's Board of Directors also adopted Bylaws for Phase 2 of the Sites Reservoir Project, which also address Project Agreements and their management through Reservoir Project Committees.

B. On April 11, 2016, certain Authority Members of the Authority entered into the PHASE 1 RESERVOIR PROJECT AGREEMENT which was amended and restated as of November 21, 2016.

C. The Authority and certain Project Agreement Members have undertaken a process to negotiate a 2019 Reservoir Project Agreement to undertake specific work activities.

D. The Project Agreement Members wish to continue development of the Project pursuant to a Work Plan approved by the Authority on November 19, 2018 and the Reservoir Project Committee on November 16, 2018 and a summary of which is described in **Exhibit B** attached hereto. The Project will be undertaken in the name of the Authority and in accordance with the Authority's stated Mission as set forth in the fourth Recital of the Joint Powers Agreement. The Project Agreement Members are entering into this Project Agreement to satisfy the requirements of Article VI of the Joint Powers Agreement.

E. All members of the Authority have also been given the opportunity to enter into this Project Agreement. The form of this Project Agreement was determined to be consistent with the Joint Powers Agreement and the Bylaws and approved by the Authority's Board of Directors on September 17, 2018.

F. The Authority and the Project Agreement Members acknowledge that one of the Authority's goals, in addition to providing environmental benefits, is to develop and make both a water supply and storage capacity available to water purveyors and landowners within the Sacramento River watershed, and in other areas of California, who are willing to purchase either or both a water supply and storage capacity from the Sites Reservoir Project, and that the Project Agreement Members should have a preference to the water supply or storage capacity.

G. The Authority and the Project Agreement Members acknowledge that the approval and execution of this Project Agreement does not commit the Authority, the Project Agreement Members or any other party to any definite course of action regarding the Sites Reservoir Project. As

set forth in Section 6(a) of this Project Agreement, there are no assurances that the Sites Reservoir Project will be constructed. One of the prerequisites that would need to be fulfilled before the Sites Reservoir Project could be constructed is the completion of environmental review under the California Environmental Quality Act ("CEQA"). As part of this environmental review, the Authority, as the lead agency that is conducting the review, reserves all of its rights, responsibilities, obligations, powers, and discretion under the provisions of CEQA to: (i) evaluate the environmental impacts of the Sites Reservoir Project; (ii) deny and disapprove the Sites Reservoir Project if the environmental review reveals significant environmental impacts that cannot feasibly be mitigated; (iii) adopt feasible mitigation measures and/or an alternative to the Sites Reservoir Project to avoid or lessen significant environmental impacts; or (iv) determine that any significant environmental impacts that cannot feasibly be mitigated are outweighed by the economic, social or other benefits of the Sites Reservoir Project.

AGREEMENT

THEREFORE, in consideration of the facts recited above and of the covenants, terms and conditions set forth herein, the parties agree as follows:

Section 1 Definitions

"Authority" means the Sites Project Authority, a joint exercise of powers agency created pursuant to the Joint Powers Agreement.

"Authority Members" means the members of the Authority executing the Joint Powers Agreement, as such members may change from time-to-time in accordance with Section 3.3, Section 7.12 and Section 7.2 of the Joint Power Agreement.

"Board" means the Board of Directors of the Authority.

"Bylaws" means the Bylaws for Phase 2 of the Sites Reservoir Project adopted by the Authority on September 17, 2018, as such Bylaws may be amended or supplemented from time-to-time in accordance therewith.

"Committee" means the Reservoir Project Committee described in Section 3 of this Project Agreement.

"Fiscal Year" means the fiscal year of the Authority, which currently begins on January 1 of each calendar year and ends on December 31 of each calendar year, or such other twelve month period which may be designated by the Authority as its Fiscal Year.

"Joint Power Agreement" means the Fourth Amended and Restated Sites Project Authority Joint Exercise of Powers Agreement, dated November 21, 2016, as such agreement may be amended or supplemented from time-to-time in accordance therewith.

"Law" means Articles 1 through 4 (commencing with Section 6500), Chapter 5, Division 7, Title 1 of the California Government Code, as amended or supplemented from time-to-time.

"Material Change Item" shall have the meaning ascribed thereto in the Bylaws.

"Participation Percentage" means the Participation Percentages as set forth in **Exhibit A** hereto, as such Participation Percentages may be modified in accordance herewith.

"2019 Budget" means the 2019 Budget approved by the Committee on November 16, 2018 and the Authority on November 19, 2018, as such 2019 Budget may be amended or supplemented from time-to-time in accordance with the Joint Powers Agreement, this Project Agreement and the Bylaws.

"Project" or "Sites Reservoir Project" means the Sites Reservoir Project as described in **Exhibit B** hereto, as modified from time-to-time in accordance therewith.

"Project Agreement" means this Project Agreement, dated as of April 1, 2019, by and among the Authority and the Project Agreement Members listed on **Exhibit A** from time-to-time, as such Project Agreement may be amended or supplemented from time-to-time in accordance herewith.

"Project Agreement Members" means (a) the Authority Members listed in the attached **Exhibit A**, (b) the Non-Member Participating Parties listed in the attached **Exhibit A** and (c) additional Authority Members or Non-Member Participating Parties who execute this Project Agreement from time-to-time pursuant to Section 10 hereof.

"Work Plan" means the activities described in **Exhibit B** hereto as such description may be amended or supplemented from time-to-time.

Section 2 Purpose

The purpose of this Project Agreement is to permit the Authority and the Project Agreement Members to continue development of the Project in the name of the Authority consistent with the Joint Powers Agreement. The activities undertaken to carry out the purposes of this Project Agreement shall be those, and only those, authorized by the Authority and the Committee in accordance with this Project Agreement, the Joint Powers Agreement and the Bylaws. Without limiting in any way the scope of the activities that may be undertaken under this Project Agreement, such activities shall include funding the Authority's costs undertaken to carry out the directions of the Committee. Notwithstanding any other provision of this Project Agreement, no activity undertaken pursuant to this Project Agreement shall conflict with the terms of the Joint Powers Agreement or the Bylaws, nor shall this Project Agreement be construed in any way as creating an entity or combination of entities that is separate and apart from the Authority.

Section 3 Reservoir Project Committee

(a) Committee Membership. The business of the Project Agreement Members under this Project Agreement shall be conducted by a Committee consisting of one member appointed by each Project Agreement Member. Appointment of each member of the Committee shall be by action of the governing body of the Project Agreement Member appointing such member, and shall be effective upon the appointment date as communicated in writing to the Authority. Project Agreement Members may also appoint one or more alternate Committee members, which alternate(s) shall assume the duties of the Committee member in case of absence or unavailability of such member. Project Agreement Members may also appoint an alternate Committee member from a different Project Agreement Member for convenience in attending Committee meetings, who may

cast votes for such Project Committee Members, provided that no person shall represent more than five other Project Committee Members and more than 20% of the weighted vote as provided in Subsection 3(g) at any given meeting; provided however, that if the appointing Project Committee Member is an officer of the Committee, the appointed alternate Committee member shall not assume the capacity of such officer position. In order to serve as an alternate Committee member, a written evidence of such designation shall be filed with the Committee Secretary. Each member and alternate member shall serve on the Committee from the date of appointment by the governing body of the Project Agreement Member he/she represents and at the pleasure of such governing body.

(b) Officers. The Committee shall select from among its members a Chairperson, who shall annually act as presiding officer, and a Vice Chairperson, to serve in the absence of the Chairperson. There also shall be selected a Secretary, who may, but need not be, a member of the Committee and a Treasurer. All elected officers shall be elected and remain in office at the pleasure of the Committee, upon the affirmative vote of at least a majority of the total weighted vote as provided at Subsection 3(g);

(c) Treasurer. The Authority Treasurer shall serve as the Committee's Treasurer and shall act as the Committee's liaison to the Authority's General Manager and Authority Board on financial matters affecting the Committee. The Treasurer shall prepare and provide regular financial reports to the Committee as determined by the Committee. The Treasurer shall not be required to be a member of the Board of Directors of the Authority.

(d) General Manager. The Authority's General Manager shall (1) serve as the Project Director responsible for advancing the Sites Reservoir Project, (2) be a non-voting member of the Committee, (3) ensure coordination of activities between the Authority and Committee, (4) convene, on an as needed basis, legal representatives from the Project Agreement Members and Authority Members to advise the General Manager on legal matters that will be reported to the Committee and Authority on a timely basis, and (5) coordinate the activities between the Committee and both the United States Bureau of Reclamation and Department of Water Resources.

(e) Meetings. The Chairperson of the Committee or a majority of a quorum of the members of the Committee are authorized to call meetings of the Committee as necessary and appropriate to conduct its business under this Project Agreement. All such meetings shall be open to the public and subject to the requirements set forth in the Ralph M. Brown Act (Government Code Sections 54950 et seq.).

(f) Quorum. A majority of the Committee members based on the weighted vote provided in Subsection 3(g) shall constitute a quorum of the Committee.

(g) Voting. Notwithstanding any provisions of the Bylaws that might be construed otherwise, for purposes of this Project Agreement, the voting rights of each Project Agreement Member shall be determined as follows:

(i) an equal number of voting shares for each Project Agreement Member as defined in **Exhibit A**, that being for each Project Agreement Member, 1 divided by the total number of Project Agreement Members, multiplied by 50; plus

(ii) an additional number of voting shares for each Project Agreement Member equal to its respective Participation Percentage described in **Exhibit A**, multiplied by 50, using the version of **Exhibit A** in effect at the time the Committee votes.

The resulting weighted total of all voting shares shall equal 100. An Example of this weighted voting incorporating the formulas for determining participating percentages is attached at **Exhibit A**.

(h) Decision-making Thresholds. In accordance with Section 5.8 of the Bylaws, for purposes of this Project Agreement, approval by the Committee for material and non-material changes shall be as follows: for actions other than Material Change Items, action of the Committee shall be taken upon the affirmative vote of at least a majority of the total weighted vote as provided in Subsection 3(g); for Material Change Items, action shall be taken upon the affirmative vote of at least 75% of the total weighted vote as provided at Subsection 3(g).

(i) Delegation of Authority/Powers and Limitations Thereon. Subject to the direction of the governing bodies of the Project Agreement Members, the Committee shall undertake all actions necessary for carrying out this Project Agreement, including but not limited to setting policy for the Project Agreement Members acting under this Project Agreement with respect to the Project; recommending actions to be undertaken in the name of the Authority under this Project Agreement; determining the basis for calculation of the Participation Percentages for each fiscal year, and the timing required for payments of obligations hereunder; authorizing expenditure of funds collected under this Project Agreement within the parameters of the Work Plan and budget; and such other actions as shall be reasonably necessary or convenient to carry out the purposes of this Project Agreement. This Section 3(i) is subject to any and all limitations set forth in the Joint Powers Agreement and Bylaws, including but not limited to, any action that constitutes a material change as defined at Section 12.3 of the Bylaws requiring the approval of both the Committee and the Authority Board, and actions specified in Section 10 of the Bylaws which remain exclusively with the Authority Board.

Section 4 Funding

(a) Budget. The Committee shall, in cooperation with the Authority's Board, provide and approve both a Fiscal Year operating budget and reestablish a Phase 2 budget target, annually or more frequently as needed. On November 19, 2018, the Board approved the Fiscal Year 2019 operating budget. The Work Plan, including annual budget, dated November 19, 2018, is attached at Exhibit B, along with the budget approval process and requirements. The Project Agreement Members shall contribute their respective pro-rata share of the budgeted sums in accordance with Section 5 of this Project Agreement; provided, however, that in no event shall the amount paid by a Project Agreement Member exceed $60 per acre-foot without the approval of such Project Agreement Member.

(b) Fiscal Responsibilities. Exhibit B specifies the Authority's requirements regarding the fiscal responsibilities of the Committee.

(c) Allocation of Project Agreement Expenses. The Project Agreement Members agree that all expenses incurred by them and/or by the Authority under this Project Agreement are the costs of the Project Agreement Members and not of the Authority or the Project Agreement Members of the Authority that do not execute this Project Agreement, and shall be paid by the Project Agreement Members; provided, however, that this Section shall not preclude the Project

Agreement Members from accepting voluntary contributions and/or Authority Board's pre-approval of in-kind services from other Authority Members, or Project Agreement Members, and applying such contributions to the purposes hereof. The Project Agreement Members further agree to pay that share of any Authority costs reasonably determined by the Authority's Board to have been incurred by the Authority to administer this Project Agreement. Before the Authority's costs of administering this Project Agreement become payable, the Authority will provide its calculation of such costs to the Committee, which will have the right to audit those costs and provide comments on the calculation to the Authority Board. The Authority Board shall consider the Committee's comments, if any, including the results of any such audit, in a public meeting before the Authority Board approves a final invoice for such costs.

Section 5 Participation Percentages

Subject to Section 4(a), each Project Agreement Member shall pay that share of costs for activities undertaken pursuant to this Project Agreement, whether undertaken in the name of the Authority or otherwise, equal to such Project Agreement Member Participation Percentage as established in this Section 5. The initial Participation Percentages of the Project Agreement Member are set forth in the attached **Exhibit A**. These initial Participation Percentages are for the purpose of establishing the Reservoir Project Agreement Members respective responsibilities for costs under this Project Agreement and other amounts contained in the approved Fiscal Year budget and Phase 2 budget target, which is defined as the "Reservoir Total" on **Exhibit B**. The Participation Percentages of each Project Agreement Member will be modified by the Committee from time to time as the result of the admission of a new Project Agreement Member to this Project Agreement or the withdrawal of a Project Agreement Member, and **Exhibit A** shall be amended to reflect all such changes. Such amended **Exhibit A** shall, upon approval by the Committee, be attached hereto and upon attachment, shall supersede all prior versions of **Exhibit A** without the requirement of further amendment of this Project Agreement.

Section 6 Future Development of the Sites Reservoir Project

(a) The Project Agreement Members acknowledge that the Sites Reservoir Project is still in the conceptual stage and there are no assurances that the Sites Reservoir Project will be constructed or that any water supplies will be developed as a result of this Project Agreement. **Exhibit B** includes a partial list of some of the risks and uncertainties that underlie the lack of assurances. The Project Agreement Members therefore recognize that they are not acquiring any interest in the Sites Reservoir Project other than their interest in the specific permitting, design, engineering and other materials that will be in the Work Plan Project as described in **Exhibit B**, and that the Project Agreement Members are not acquiring under this Project Agreement any interest in any future water supply or access to any other services from the Sites Reservoir Project except as provided hereunder.

(b) Without limiting the foregoing, any Project Agreement Member that elects to continue participating in the development, financing, and construction of the Sites Reservoir Project to the time when the Authority offers contracts for a water supply or other services, will be afforded a first right, equal to that Project Agreement Member's Participation Percentage, to contract for a share of any water supply that is developed, and for storage capacity that may be available from, the Sites Reservoir Project. In any successor phase agreements, Project Agreement Members who are parties to this Project Agreement that submitted a proposal to participate before February 15, 2019, shall be granted rights to contract for a share of any water supply that is developed, and for storage capacity

that may be available from the Sites Reservoir Project prior to the rights of those becoming parties to this Project Agreement after that date. The Authority and the Project Agreement Members will cooperate on the drafting of provisions in the water supply contract that will allow a Project Agreement Member or other eligible entity that commits to purchase a Sites Reservoir Project water supply to transfer water that the entity may not need from time to time on terms and conditions acceptable to the such Project Agreement Member.

Section 7 Indemnity and Contribution

(a) Each Project Agreement Member, including Authority Members acting in their capacity as Project Agreement Members, shall indemnify, defend and hold the Authority, Authority Members and other Project Agreement Members and their directors, trustees, officers, employees, and agents harmless from and against any liability, cause of action or damage (including, without limitation, reasonable attorneys; fees) arising out of the performance of this Project Agreement multiplied by each Project Agreement Member's Participation Percentage. Notwithstanding the foregoing, to the extent any such liability is caused by the negligent or intentional act or omission of an Authority Member or a Project Agreement Member, such Authority Member or Project Agreement Member shall bear such liability.

(b) Each Project Agreement Member, including Authority Members acting in their capacity as Project Agreement Members, shall indemnify, defend and hold the Authority and the members of the Authority that do not execute this Project Agreement and their directors, trustees, officers, employees and agents harmless from and against any liabilities, costs or expenses of any kind (including, without limitation, reasonable attorney's fees) arising as a result of the activities described in or undertaken pursuant to this Project Agreement multiplied by each Project Agreement Member's Participation Percentage. All assets, rights, benefits, debts, liabilities and obligations attributable to activities undertaken under this Project Agreement shall be assets, rights, benefits, debts, liabilities and obligations solely of the Project Agreement Members in accordance with the terms hereof, and shall not be the assets, rights, benefits, debts, liabilities and obligations of the Authority or of those members of the Authority that have not executed this Project Agreement. Members of the Authority not electing to participate in the Project Agreement shall have no rights, benefits, debts, liabilities or obligations attributable to the Project Agreement.

Section 8 Term

(a) No provision of this Project Agreement shall take effect until this Project Agreement has been duly executed and delivered by the Authority and by one Project Agreement Member.

(b) The term of this Project Agreement shall continue until December 31, 2019, unless extended in writing by the parties hereto.

Section 9 Withdrawal From Further Participation

To withdraw from this Project Agreement, a Project Agreement Member shall give the Authority and other Project Agreement Members written notice of such withdrawal not less than 30 days prior to the withdrawal date. As of the withdrawal date, all rights of participation in this Project Agreement shall cease for the withdrawing Project Agreement Member. The financial obligation as prescribed in the Bylaws' Section 5.11 in effect on the withdrawal date, shall consist of the

withdrawing Member's share of the following costs: (a) payment of its share of all non-contract costs incurred prior to the date of the written notice of withdrawal, and (b) those contract costs associated with funds approved in either contract amendments or task orders that were approved prior to the date of the written notice of withdrawal for which the contractor's work extends beyond the withdrawal date. However, a withdrawing member shall have no liability for any change order or extensions of any contractor's work that the remaining Project Agreement Members agree to after the withdrawing Member provides written notice of withdrawal. Withdrawal from this Project Agreement shall not be considered a Material Change Item and shall not be subject to the Dispute Resolution process provided for in Section 13.3 of the Bylaws.

Section 10 Admission of New Project Agreement Members

Additional Members of the Authority and Non-Member Participating Parties may become Project Agreement Members upon (a) confirmation of compliance with the membership requirements established in the Bylaws, (b) the affirmative vote of at least 75% of the total weighted vote as provided at Subsection 3(g) of the then-current Project Agreement Members, (c) the affirmative vote of at least 75% of the total number of Directors of the Authority, and (d) upon such conditions as are fixed by such Project Agreement Members.

Section 11 Amendments

This Project Agreement may be amended only by a writing executed by the Authority and at least 75% of the total weighted vote as provided in Subsection 3(g) of the then-current Committee members.

Section 12 Assignment; Binding on Successors

Except as otherwise provided in this Project Agreement, the rights and duties of the Project Agreement Members may not be assigned or delegated without the written consent of the other Project Agreement Members and the Authority, which consent shall not be unreasonably withheld. Any attempt to assign or delegate such rights or duties in contravention of this Project Agreement shall be null and void. Project Agreement Members may assign and delegate their rights and duties under this Project Agreement to other Project Agreement Members, and they may assign, sell, trade, or exchange all or a fraction of the potential benefits (e.g. acre-feet of water supply, megawatt-hours of power) they expect to receive through their participation in this Project Agreement. Any approved assignment or delegation shall be consistent with the terms of any contracts, resolutions, indemnities and other obligations of the Authority then in effect. This Project Agreement shall inure to the benefit of, and be binding upon, the successors and assigns of the Authority and the Project Agreement Members.

Section 13 Counterparts

This Project Agreement may be executed by the Authority and each Project Agreement Member in separate counterparts, each of which when so executed and delivered shall be an original, but all such counterparts shall together constitute but one and the same instrument. Facsimile and electronic signatures shall be binding for all purposes.

Section 14 Merger of Prior Agreements

This Project Agreement and the exhibits hereto constitute the entire agreement between the parties and supersede all prior agreements and understanding between the parties relating to the subject matter hereof. This Project Agreement is intended to implement, and should be interpreted consistent with, the Joint Powers Agreement.

Section 15 Severability

If one or more clauses, sentences, paragraphs or provisions of this Project Agreement shall be held to be unlawful, invalid or unenforceable, the remainder of the Project Agreement shall not be affected thereby.

Section 16 Choice of Law

This Project Agreement shall be governed by the laws of the State of California.

Section 17 Notices

Notices authorized or required to be given under this Project Agreement shall be in writing and shall be deemed to have been given when mailed, postage prepaid, or delivered during working hours, to the addresses set forth **Exhibit E** ("**Notifications**"), or to such other address as a Project Agreement Member may provide to the Authority and other Project Agreement Members from time to time.

IN WITNESS WHEREOF, the Authority and Project Agreement Members hereto, pursuant to resolutions duly and regularly adopted by their respective governing bodies, have caused their names to be affixed by their proper and respective officers on the date shown below:

Dated: _____

SITES PROJECT AUTHORITY

By: _____
Name:
Title:

[PROJECT AGREEMENT MEMBER]

Dated: _____

_____

(Authority & Project Agreement Member)

By: _____
Name:
Title:

EXHIBIT A

PROJECT AGREEMENT MEMBERS

Participant	Participation (Annualized Acre-Foot) Preliminary	Percent
American Canyon, City of	~4,000	1.7%
Antelope Valley-East Kern Water Agency	~500	0.2%
Carter Mutual Water Company ‡	~500	0.2%
Coachella Valley Water District	~10,000	4.3%
Colusa County	~10,000	4.3%
Colusa County Water District	~13,100	5.6%
Desert Water Agency	~6,500	2.8%
Glenn-Colusa Irrigation District	~5,000	2.1%
Metropolitan Water District of S. CA	~50,000	21.4%
Pacific Resources Mutual Water Company ‡	~20,000	8.5%
Reclamation District 108	~5,000	2.1%
San Bernardino Valley Municipal Water District	~21,400	9.1%
San Gorgonio Pass Water Agency	~14,000	6.0%
Santa Clara Valley Water District	24,000	10.3%
Santa Clarita Valley Water Agency	~5,000	2.1%
TC-4: Cortina Water District	~300	0.1%
TC-4: Davis Water District	~2,000	0.9%
TC-4: Dunnigan Water District	~2,774	1.2%
TC-4: LaGrande Water District	~1,000	0.4%
Westside Water District	~15,000	6.4%
Wheeler Ridge-Maricopa Water Storage District	14,000	6.0%
Zone 7 Water Agency	~10,000	4.3%
Potential new participants	TBD	%
Total:	**234,074**	**100.0%**

Participation Percentages exclude State of California and United States Bureau of Reclamation share of the Project.

NOTE: Any annualized amounts listed for Phase 2 are preliminary and are based on best estimates received after participants' respective review of the draft financing plan and draft Phase 2 Reservoir Project Agreement. These amounts do not represent the results of any action having been taken by the participants' respective governing body to formally execute the Phase 2 Reservoir Project Agreements. Final participation amounts will be established after interim financing terms and conditions have been provided and incorporated into the final Phase 2 Reservoir Project Agreement.

‡ Denotes a non-public agency. Refer to California Corporations Code Section 14300 et. seq. with additional requirements provided in both the Public Utilities Code and Water Code.

EXHIBIT B

2019 WORK PLAN

2018 November 16 Reservoir Committee Meeting - Attachment A - Agenda Item 3-3

Category	(Multiple Items)
Action	(Multiple Items)
Funding Source	(Multiple Items)
Work Manager	(All)
Priority	(All)

Report: Reservoir Committee 2019 Work Plan & Budget
Report Date: 2018 Nov 12

Expense (-) or Revenue (+)	Cost Center	Task	Resource	Reprioritize Currently Approved Budget Sum of Total End of Phase 1	Proposed Budget Authority= 12 mon Res. Comm= 9 mon Sum of Total 2019
Expense	C.R. Policy			$ -	$ (2,067,094)
	Engagement			$ -	$ (135,000)
	Operations	Contingency		$ -	$ -
		Env Interests		$ (44,936)	$ (120,552)
		Exchange		$ -	$ (75,550)
		Modeling		$ (325,000)	$ (998,480)
		Op POA		$ (59,488)	$ (61,040)
		Staff+		$ (69,705)	$ (417,555)
		Storage		$ (17,824)	$ (136,300)
		Water Rights		$ (29,712)	$ (204,264)
		Water Rights+		$ (29,712)	$ (119,892)
	Operations Total			**$ (576,377)**	**$ (2,133,633)**
	Power	Grid Interconn+		$ -	$ (1,097,880)
		H2oPower+		$ -	$ (668,453)
		Staff Aug+		$ -	$ (632,880)
		Staff+		$ -	$ -
	Power Total			**$ -**	**$ (2,399,213)**
	Res. Comm. O	Advisory		$ (43,200)	$ (82,565)
		Office		$ -	$ (133,100)
		Participation		$ (109,800)	$ (210,600)
		PROCURE		$ -	$ (80,240)
		PROCURE-2		$ -	$ -
		Rebalance		$ (8,400)	$ (134,070)
		Staff		$ (6,000)	$ (1,739,573)
		Staff Aug		$ -	$ (4,237,495)
		Staff Aug+		$ -	$ (225,990)
		Staff+		$ -	$ -
		Support		$ (26,925)	$ (107,678)
		Technology		$ (3,330)	$ (13,280)
		USDA-1		$ (10,000)	$ (10,800)
		WSIP-1		$ (51,440)	$ (81,960)
	Res. Comm. OH Total			**$ (259,095)**	**$ (7,057,351)**
	Water	Dam Design		$ -	$ (8,776,500)
		Economics+		$ -	$ (329,880)
		EIR-EIS		$ (165,000)	$ (2,371,767)
		Field Studies		$ (200,000)	$ (887,876)
		Field Surveys		$ -	$ (91,980)
		Permit Coord		$ (590,000)	$ (8,095,900)
		Rights of Entry		$ (306,000)	$ (600,119)
	Water Total			**$ (1,261,000)**	**$ (21,154,022)**
Expense Total				**$ (2,096,472)**	**$ (34,946,312)**

Summary - Page 1 of 2

NOTE: 2019 proposed budget, which is applicable to this Agreement, was approved by the Reservoir Committee at their November 16, 2018 meeting with the Reservoir Committee's share of expenses listed on page B-2.

				Reprioritize Currently Approved Budget	Proposed Budget Authority= 12 mon Res. Comm= 9 mon
Expense (-) or Revenue (+)	Cost Center	Task	Resource	Sum of Total End of Phase 1	Sum of Total 2019
Revenue	Conversion			$ -	$ 2,067,094
	WIIN			$ -	$ 8,776,500
	WSIP			$ 821,603	$ 10,077,760
	Res. Comm.			$ -	$ 14,044,440
Revenue Total				**$ 821,603**	**$ 34,965,795**
Grand Total				**$ (1,274,870)**	**$ 19,482**

EXHIBIT C

NOTIFICATIONS

Attention: Mr. Steve Hartwig

City of American Canyon
4381 Broadway, Suite 201
American Canyon, CA 94503

Attention: Mr. Tom Charter
c/o Ms Jamie Traynham

Davis Water District
P.O. Box 83
Arbuckle, CA 95912

Attention: Mr. Dwayne Chisam

Antelope Valley-East Kern WA
6500 West Avenue N
Palmdale, CA 93551

Attention: Mr. Mark Krause

Desert Water Agency
1200 South Gene Autry Trail
Palm Springs, CA 92264

Attention: Mr. Ben Carter

Carter MWC
4245 River Road
Colusa, CA 95932

Attention: Mr. Bill Vanderwaal

Dunnigan Water District
P.O. Box 84
Dunnigan, CA 95937

Attention: Mr. Jim Barrett

Coachella Valley Water District
P.O. Box 1058
Coachella, CA 92236

Attention: Mr. Thad Bettner

Glenn-Colusa Irrigation District
P.O. Box 150
Willows, CA 95988

Attention: Ms. Wendy Tyler

Colusa County
547 Market St., Suite 102
Colusa, CA 95932

Attention: Mr. Matt LaGrande

LaGrande Water District
P.O. Box 370
Williams, CA 9598

Attention: Ms. Shelley Murphy

Colusa County Water District
P.O. Box 337
Arbuckle, CA 95912

Attention: Mr. Steve Arakawa

Metropolitan Water District of Southern California
1121 L Street, Suite 900
Sacramento, CA 95814

Attention: Mr. Jim Peterson

Cortina Water District
P.O. Box 489,
Williams, CA 95987

Attention: Mr. Preston Brittain

Pacific Resources MWC
4831 Calloway Drive, Ste. 102
Bakersfield, CA 93312
Bakersfield, CA 93312

Attention: Mr. Bill Vanderwaal

Reclamation District 108
P.O. Box 50
Grimes, CA 95950

Attention: Mr. Dirk Marks

Santa Clarita Valley Water Agency
27234 Bouquet Canyon Road
Santa Clarita, CA 91350

Attention: Mr. Doug Headrick

San Bernardino Valley Municipal Water District
380 East Vanderbilt Way
San Bernardino, CA 92408-3593

Attention: Dan Ruiz

Westside Water District
5005 State Hwy 20
Williams, CA 95987

Attention: Mr. Jeff Davis

San Gorgonio Pass Water Agency
1210 Beaumont Ave,
Beaumont, CA 92223

Attention: Robert Kunde

Wheeler Ridge-Maricopa Water Storage District
12109 Highway 166
Bakersfield, CA 93313

Attention: Ms. Cindy Kao

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3686
Attention: Mr. Dirk Marks

Attention: Ms. Valerie Pryor

Zone 7 Water Agency
100 North Canyons Parkway
Livermore, CA 945

San Gorgonio Pass Water Agency
Annual Report on Water Conditions
Reporting Period 2017

Prepared by

San Gorgonio Pass Water Agency
1210 Beaumont Avenue
Beaumont, CA 92223

January 2019

SAN GORGONIO PASS WATER AGENCY

Board of Directors

Ron Duncan	**President**
Leonard Stephenson	**Vice President**
Steve Lehtonen	**Treasurer**
Blair Ball	**Director**
David Castaldo	**Director**
David Fenn	**Director**
Mike Thompson	**Director**

On the cover:
Citrus Reservoir and Pump Station, part of Phase 2 of the East Branch Extension, are seen with the San Bernardino Mountains in the background.

List of Tables

List of Figures

1.0 Background

The San Gorgonio Pass Water Agency is a State Water Contractor and wholesale water agency that provides imported water to retail water purveyors within its service area, which extends from Calimesa on the west to Cabazon on the east. Its service area covers approximately 228 square miles, most of which is in Riverside County but which includes two small areas in San Bernardino County. One of these is unpopulated, adjoining the San Bernardino National Forest, and the other, in Edgar Canyon south of Oak Glen, includes a few residences. The service area is depicted on **Figure 1.**

The Agency was created by the San Gorgonio Pass Water Agency Act, passed by the California Legislature in 1961 and signed by Governor Pat Brown on July 12, 1961. The first Board of Directors, appointed by the Riverside County Board of Supervisors, held its initial formal meeting on October 10 of that year. It had previously met briefly on September 22 to elect Ted Silverwood as the first President of the Agency. The area had a population of approximately 21,000 at the time (today it is over 90,000, an increase of over 400%).

The San Gorgonio Pass is an elevated, relatively narrow land mass between the San Bernardino Mountains on the north and the San Jacinto Mountains on the south, connecting the San Bernardino Valley on the west to the Coachella Valley on the east. Both of these valleys are at much lower elevations than the Pass region. The region straddles two large watersheds. The western half of the service area is drained primarily by Little San Gorgonio Creek and Noble Creek, which are tributary to San Timoteo Creek and the Santa Ana River. The eastern half of the service area is drained by the San Gorgonio River, which is tributary to the Whitewater River and is part of the Colorado River Basin. A small portion of the region drains to the San Jacinto River which drains to Lake Elsinore, which is physically located in the Santa Ana watershed. **Figure 2** depicts the drainage basins and principal streams in the region.

This report, published annually by the Agency for over two decades, is intended to help monitor and make available to the public the quantity and quality of water in local groundwater basins. It is based on the Agency's extensive database as well as data from other sources. It includes data from 2017 as well as historical data, which provide a basis to put the most recent data into historical context.

Tables 1, 2, and 3 are extraction (production) summaries of groundwater pumping and surface water diversions within the Agency's service area, hereinafter referred to as the region. These tables summarize annual production for the past 13 years, and represent the heart of this report. These data were obtained from the State Water Resources Control Board, Division of Water Rights (State Board); local sources; or in some cases estimated by the Agency. The Agency does not independently verify the data. The State Board does not require reporting for well owners who extract less than 25 acre feet per year (about eight million gallons). Also, it is possible that some well owners do not file as required. The data in these tables represent the Agency's best

estimate of actual pumping, based on both actual data and production estimates. Most wells are not metered and therefore data from these wells must be estimated by various means.

The report also includes water quality data from the State Water Project's sampling station at Devil Canyon in San Bernardino. Devil Canyon is the Agency's delivery point for State Water Project water, and the closest sampling station to the region. It is representative of the water that the Agency receives from the State Water Project. The data, summarized in **Table 5,** reflect that the water quality varies from year to year and from month to month. It is primarily a function of water quality conditions in the Sacramento/San Joaquin Delta and of runoff in watersheds tributary to the Delta. That water quality in turn is largely a function of hydrology. In wet years and during wet periods within dry and average years, fresh water from upland rivers drains to the Delta and improves overall water quality.

The water quality constituent of greatest interest to the Agency and other local water agencies is TDS, or total dissolved solids (also known as salinity or salts). Salinity is heavily regulated by Regional Water Quality Control Boards throughout the State, especially as water agencies around the state have implemented recycled water systems. In order to maintain reasonable TDS levels in the lower reaches of the Santa Ana watershed (primarily Orange County), the Santa Ana Regional Water Quality Control Board must set standards for TDS at relatively low concentrations in the upper reaches of the watershed, where the western portion of the Agency's service area is located. Salinity is less of an issue in the eastern portion of the region, which is part of the Colorado River watershed and is more sparsely populated.

Sewage treatment plant effluent from Beaumont, Yucaipa, and Calimesa is discharged into tributaries to the Santa Ana River and is regulated by the Santa Ana Regional Board; effluent from Banning is currently regulated by the Colorado River Regional Board, though it is likely that the Santa Ana Regional Board may at some time regulate this discharge or portions thereof. This is due to the fact that the City of Banning has plans for a recycled water system, parts of which may overlie a portion of the Santa Ana watershed. While most of the City is in the Colorado Basin, a small portion of it is in the Santa Ana basin.

State legislation passed in 2009 requires more extensive groundwater elevation monitoring in basins throughout the State similar to what the Agency has performed for nearly two decades. The California Department of Water Resources has set up CASGEM (the California Statewide Groundwater Elevation Monitoring system). The Agency is the monitoring entity for the region. This represents a legislative mandate to perform the groundwater level monitoring that the Agency has performed on its own for many years. The data uploaded by the Agency to the CASGEM system represent a relatively small subset of the Agency's overall groundwater database.

Newer legislation passed in 2014 (the Sustainable Groundwater Management Act or SGMA) requires virtually all groundwater basins in California to have a plan to be managed sustainably by 2022. This could have a long-term impact on how groundwater basins in the region are managed. A Groundwater Sustainability Plan, or GSP, must be developed for all these basins by 2022. The Agency is playing an active role in implementing SGMA in the three groundwater basins within its service area—the Yucaipa, San Timoteo, and San Gorgonio Pass sub-basins.

2.0 Water Supply Conditions

There are three principal sources of water within the region—groundwater, which begins as precipitation in the form of rain and snow in the local mountains; imported water through the State Water Project; and recycled wastewater. A fourth source---local runoff of surface water—accounts for a small but important portion of the local water supply portfolio, primarily in Edgar and Banning Canyons. Even most of this runoff is typically recharged into local groundwater basins where it becomes part of the groundwater supply.

Recycled water from Yucaipa Valley Water District is in use in Calimesa. Two other retail water agencies, including the Beaumont Cherry Valley Water District and the City of Banning, have plans to implement recycled water systems in the next few years and have begun planning, designing, and constructing the needed infrastructure for these systems. The Beaumont Cherry Valley Water District is working with the City of Beaumont, who owns the wastewater treatment plant and the treated wastewater, to develop a recycled water system in its service area. In 2017, much progress was made by these two entities towards developing this system.

2.1 Precipitation

Annual precipitation in the Beaumont area since 1900 is shown on **Figure 4.** The long-term mean annual precipitation in Beaumont is approximately 17.0 inches. This average is down more than ½ inch in the past decade as the region has experienced a number of below normal years in precipitation. This figure depicts the variable nature of precipitation. Of the approximately 110 years of records, the precipitation in 46 years has exceeded the average, while 61 years have been relatively dry as compared to the average. The figure shows several periods—1900-1904, 1948-1952, 1960-1965, 1986-1992, 1999-2002, 2005-2009, and 2011-2017—with multiple consecutive dry years. The figure shows that 2007, 2009, 2013, 2014, and 2015 were among the driest on record in Beaumont (and in fact in all of Southern California), while 2010 was one of the wettest and 2011 and 2012 were below normal. The figure indicates that, since 1999, there have been only three years that met or exceeded the long-term average rainfall. In fact, since 2005 there has been only one "wet" year. This is dramatic evidence of the drought that has persisted in much of California and the West. While 2017 was extremely wet in northern California, with a series of atmospheric rivers pounding the Bay Area and the Sierras, much of Southern California was slightly above to slightly below long term average precipitation rates. The figure shows that 2017 was even drier than 2016 in the Pass, which about 12-inches of rainfall in Beaumont. Data presented are for Beaumont because the National Weather Service's official weather station in the region is located in Beaumont.

Precipitation is highly variable, both spatially and temporally. The National Weather Service's official station is at an elevation of about 2600 feet. It is highly likely that higher elevations receive more precipitation, including snow, and lower elevations receive relatively less precipitation. In addition, storms, particularly summer storms, can be highly concentrated and impact one area, while another area a mile or two away may get little or no rain. Thus, while the

long-term average rainfall may be approximately 17 inches in one part of the region, it could easily be an inch or two more or less at other locations in the same region. A rain gauge in Cabazon would show a lower average precipitation than a similar gauge in Calimesa. These gauges would show that climatic and hydrologic differences are present even within the region.

Local groundwater basins are able to naturally capture and store much, but not all, of the precipitation in wet years. During and after a rainfall event, runoff drains to streams where it runs into creeks and rivers. Some of this will recharge the local groundwater basins. During large storm events, much of the runoff will flow downstream. In this case, it will either flow from San Timoteo Creek into the Santa Ana River in Redlands, or it will flow from the San Gorgonio River into the Whitewater River in the Coachella Valley. A small portion of runoff from the region flows to the San Jacinto River in Hemet, which eventually runs to Lake Elsinore, a natural low spot. Cities and water agencies in the region have begun planning how to capture additional stormwater that currently runs down the Santa Ana River to Prado Dam in Chino and eventually to the Pacific Ocean. Some small scale stormwater capture facilities either have been constructed or are in the process of being constructed.

Stormwater capture represents a potential new source of water to the region. While additional sources of local water are always good for a region, stormwater capture requires a lot of land, and thus has been found to be too expensive for large-scale development in many areas, particularly where land prices are high. Large areas of land are required in order to construct ponds to settle out the particulate matter (silt and other dirt particles) that accompanies storm flows. Since large storms are not abundant every year, land acquired for large scale stormwater capture would not be used on a consistent basis, and therefore represents a large investment that does not reap benefits every year. A huge benefit in capturing stormwater is the fact that its salinity is very low, and any stormwater captured would improve the water quality of local groundwater basins.

2.2 The State Water Project

The San Gorgonio Pass Water Agency Act was signed by Governor Pat Brown in 1961, and the first Board of Directors held its initial meeting in September of that year. Within another year, the Agency had signed a contract with the State of California for 15,000 acre feet of water from what at the time was known as the Feather River Project. A year later, the Agency increased its contract amount, or Table A amount, to 17,300 acre-feet, an increase of 15%. The Agency's Board of Directors fought hard to get this additional amount, and made financial sacrifices to do so. The additional water increased the annual amount of debt service owed by the Agency, and the expenditure of these additional funds precluded the ability to begin construction on a pipeline to San Bernardino to take delivery of the water at that time.

The Agency began importing State Water Project water into the region in 2003, when Phase 1 of the East Branch Extension of the California Aqueduct was completed. Since that time, deliveries of State Water Project water within the region increased steadily until drought took hold. **Table 4** summarizes these deliveries. This table shows that the Agency delivered nearly 11,000 acre-feet in 2011 and 2012, dropping to less than 10,000 acre-feet in 2013, to just over 5,000 acre-feet in 2014, and under 4,000 acre-feet in 2015. This increased to just over 11,000 acre-feet in 2016,

and nearly 16,000 acre-feet in 2017, a very wet year in northern California (though as noted above, an average one in Southern California and a relatively dry one in the Pass). The 85% allocation of Table A water in 2017 was the highest since an 80% allocation in 2011, and enabled the Agency to deliver water that not only met local water demands, but that added to local banked groundwater as well. Even though the 35% allocation of water in 2012 was considerably less than the 80% from the year before, the Agency was able to deliver virtually the same amount as in 2011 due to its ability to carry over water from the previous year. This number dropped in 2013 as the Agency had less carryover water to deliver. The 5% allocation in 2014 was one of the lowest on record.

In 2017, after five years of drought, the Agency negotiated a deal with the Antelope Valley-East Kern Water Agency (AVEK) to lease 1700 acre-feet of 100% reliable water for 20 years, through 2036. This water was part of the nearly 16,000 acre-feet delivered last year through the State Water Project. This new supply will go a long way toward drought-proofing the region for the next two decades and will ensure that local groundwater basins will continue to be replenished with imported water each year. By expanding the Agency's water supply portfolio, the Board of Directors served notice that it will do whatever it takes to continue to meet the long-term water supply needs of the region.

The annual State Water Project Table A allocation is a function of hydraulic conditions in the Sacramento/San Joaquin delta as well as northern California hydrology. The average long-term reliability of the State Water Project is approximately 60%. For the Agency, this represents a long-term annual supply of approximately 10,400 acre-feet, nearly 7,000 acre-feet less than its contracted amount. And, this reliability is expected to decrease over time for a number of reasons. This points out the importance of being able to store water in those years when the Table A allocation is greater than 60%. The ability to import and store more water locally in wet years in the future will be a key to the sustainability of the region and to minimizing the amount of additional supplemental water that must be procured to meet projected water demands. The Department of Water Resources has proposed a $17 billion project, the Cal Water Fix, to improve the reliability of the State Water Project by improving the ability to move water across the Delta in average and wet years. The Agency strongly supports this project.

With the completion of Phase 2 of the East Branch Extension in 2017, the Agency can finally import its entire Table A allocation when it is available, plus additional supplies. Completion of this $250 million project has been a high priority for the Agency, the San Bernardino Valley Municipal Water District (Valley District), and the California Department of Water Resources, the Agency's partners in this project. With this project now online, the region is better equipped to face future droughts due to its ability to import more water in extremely wet years. A description of the project may be found in the 2016 Report on Water Conditions.

The Agency is preparing to advertise for construction of a new groundwater recharge facility at the corner of Beaumont Avenue and Brookside Avenue in Beaumont. This facility, when completed, will nearly double the capacity to deliver water to the region from the East Branch Extension. While the conveyance facility itself has a capacity of 64 cfs, the Agency currently has the ability to deliver only 20 cfs out of the pipeline, since only one connection exists. The new facility will include a second turnout. When completed, this facility, along with the completion of Phase 2 of the East Branch Extension and the procurement of the water from AVEK, will help ensure the long-term water sustainability of the region.

In addition to these projects, the Agency is considering purchasing capacity in the Valley District's proposed Bunker Hill Conjunctive Use Project, which would enable the Agency to store water in the Bunker Hill Basin in San Bernardino and deliver it to retail water agencies such as the Yucaipa Valley Water District and the South Mesa Water Company in dry years.

Overall, the Agency's actions related to procurement, delivery, and storage of imported water over the past two years have greatly improved the long-term water supply reliability of the region.

2.3 Wastewater

Three public agencies, plus one Native American tribe, discharge treated wastewater in the region—the cities of Beaumont and Banning, the Yucaipa Valley Water District, and the Morongo Band of Mission Indians. The annual discharges since 1988 for the three public sewage treatment entities are shown on **Figure 5.** Figures for the Morongo plant are not included. Unlike precipitation and the State Water Project, which are highly variable from year to year, wastewater discharges from the region have consistently increased over time, as the region has developed. They have been relatively constant over the past five years, with the exception of Beaumont, which has shown an increase over that time. Wastewater treatment plant discharges are a function of indoor water use, not hydrology or exterior water use. Hence they are considered to be relatively more reliable and stable than imported water or local runoff or stormwater.

Thus, treated wastewater, or recycled water, is an important asset to the region, because it can be a reliable water source in the future. All three of the public agencies mentioned above are in various stages of implementing recycled and/or non-potable water systems for irrigation, golf courses, parks, medians, etc., or to recharge it into local groundwater basins. The Yucaipa Valley Water District received its permit to deliver recycled water in 2016.

As mentioned in Section 1.0, salinity is a growing concern in California, and recycled water is high in dissolved solids or salinity. While recycled water is a huge potential benefit to the region, its use as a water supply will require desalting. Desalting is an expensive operation that requires brine disposal, a costly process. The Yucaipa Valley Water District has constructed a desalination plant and brine disposal pipeline. It is now able to utilize recycled water in lieu of groundwater or imported water for non-potable uses, primarily irrigation and construction water. The District has plans to use recycled water for exterior water use in most new homes in Calimesa, reducing the amount of potable water required for each new home.

Use of recycled water either for direct non-potable use or for recharge requires a permit from the Santa Ana Regional Water Quality Control Board. Such permits will be granted only when the Regional Board is convinced that the permit holder will take all required steps to meet its standards for salinity and other constituents based on its current Basin Plan.

3.0 Groundwater Conditions

Figure 3 shows the principal groundwater basins, sometimes referred to as storage units, in the region. The boundaries of these basins are as defined by the United States Geological Survey. It should be noted that these basins are different from the groundwater basins identified by the California Department of Water Resources in its Bulletin 118, which are the defined basins for implementation of SGMA. The Beaumont Basin is the largest and most productive of these local basins, is the only one that is adjudicated, and serves a large majority of the population in the region. An adjudicated basin is one in which a judge has ordered a limit on pumping. By the Bulletin 118 definition, the Beaumont Basin is partly in the San Timoteo Sub-basin of the Santa Ana Basin and partly in the San Gorgonio Pass Sub-basin of the Coachella Valley Basin. This emphasizes the point that the Agency's service area sits on a hydrologic divide for both groundwater and surface water.

The region is characterized by numerous faults, which make for complex geology. The Beaumont Basin is characterized by a number of smaller sub-basins, but can be viewed as one continuous basin, or storage unit, and has been modeled in that manner. East of the Beaumont Basin is the Banning Basin, and east of that is the Cabazon Basin. The Agency is in the process of expanding its model of the Beaumont Basin (developed by the United States Geologic Survey) eastward to include both the Banning and Cabazon basins, or storage units. This work should be completed and peer-reviewed by 2018.

The existing model is a tool that can be used to predict how various recharge scenarios will impact water levels in the Beaumont Basin.

As the Sustainable Groundwater Management Act (SGMA) is implemented by the Department of Water Resources, the Agency will place great emphasis on participating in Groundwater Sustainability Agencies (GSA's) for each of the basins within the Agency's service area. This will unfold over the next few years.

3.1 Groundwater Extractions (Production)

Table 1 summarizes groundwater production from the eleven basins in the region. **Table 2** summarizes reported production from each individual producer, whether public or private. **Table 3** provides a detailed breakdown of extractions by each reporting producer (including some based in San Bernardino County) for each basin for the thirteen most recent years of available data. Surface diversions from the Whitewater River are not included, as the Agency is not convinced the available data are reliable enough to report. In addition, they are outside the region. These diversions serve as an important water source for both the Banning Bench (through the Banning Heights Mutual Water Company) and the City of Banning.

Figure 6 illustrates the long-term trend in reported groundwater production in the region since 1947. **Figure 7** summarizes the same data since 1997, about the time significant growth started. While **Figure 6** shows a distinct increasing trend in groundwater extractions over the long term,

Figure 7 shows that production has not increased greatly over the past 19 years. While production increased from 1997 through 2007, it has decreased since that time. In fact, 2007 remains the peak production year in the region. While the population has increased since 1997, water use has largely remained constant, which shows the impact of water conservation. The results of these recent years show a sharp reduction in local extractions from 2008 to 2010, followed by gradual increases over the next four years, in contrast to decades of increases prior to 2008. Perhaps the most striking element of these figures is the sharp decline in production in 2015, continued in 2016, also characterized in Tables 1, 2, and 3. Production increased significantly in 2017, perhaps due to a combination of growth in the region and the wet year in northern California.

Figure 6 indicates that extractions remained relatively constant from the early 1960's to the mid 1980's. Extractions increased gradually from that point until the mid-1990's, when they started to increase significantly. **Figure 7** shows a significant increase from 1998 to 2007 (from less than 25,000 AF to over 35,000 AF, an increase of over 40%), and a significant decrease since that time, from over 35,000 AF to just under 31,000 AF in 2014, just under 23,000 AF in 2015, and just over 24,000 AF in 2016, increasing to nearly 27,000 AF in 2017 (a decrease of about 23% over 10 years).

Figure 8 illustrates the percentage share for each basin's total production within the region in 2017. This is only slightly different from the 2016 percentages, with the primary change being an increase in the Banning Canyon basin from 10.1% to 12.6%. This is likely due to the Banning Canyon basin having more runoff in 2017 than 2016. In 2012, the Beaumont Basin represented only 48% of all extractions, compared to 57% in 2015 and 56% in 2017. This increase was primarily at the expense of the Banning Canyon Basin (decreased from 14% to 13%), the Banning Bench Basin (decreased from 6% to 1%), and Edgar Canyon (reduced from 11% to 5%). The Beaumont Basin is the largest basin by far, with over half of all production. The Banning Canyon, Banning, and Edgar Canyon basins are next. The Banning Canyon Basin is fed largely by runoff from an interbasin transfer, the flows of which were greatly reduced during the drought. With smaller, shallower runoff-fed basins yielding less water, purveyors must make up the difference with more water from larger basins. This is reflected in the increased dependence on the Beaumont Basin, with its yield increasing from less than half to nearly 60% of all production during the five drought years.

Table 1 indicates that total production in the region increased about 11% from 2016 to 2017, after a 6% increase from 2015 to 2016. Compared to the peak year of 2007, when production totaled 35,474 acre-feet, this represents a 23% reduction in groundwater production over the past ten years, with most of this decrease coming in one year—2015. It should be noted that, in 2015, the State Water Resources Control Board implemented mandatory water conservation measures throughout the State. This was the primary reason for the large decrease in production from 2014 to 2015. The fact that production increased only 6% in 2016 indicates that residents in the region were continuing their water conservation practices. The 11% increase over the past year could indicate that these practices were no longer as popular, or that there were a significant number of new residents, or a combination of both.

In the Beaumont Basin, the region's largest, production increased about 11%, from 13,529 to 15,049 acre-feet. As can be seen from Table 3, virtually all of this increase can be attributed to increased production from the Beaumont Cherry Valley Water District (an increase of about 1400 acre-feet). All other producers only increased their pumping slightly.

The Cabazon Basin presents an interesting data set. According to the data submitted to the Agency, extractions from this basin decreased by approximately 55% from 2007 to 2012, yet increased by over 80% in 2013 and decreased by 12% in 2014 and another 18% in 2015. These numbers lead to a question of whether the data are correct every year, especially in 2012, when the data showed extractions of 654 acre-feet, compared to 900 acre-feet in 2011 and 1226 acre-feet in 2013. In verbal discussions with the General Manager of the Cabazon Water District, there was an indication that these numbers are in fact correct, and reflect a rapidly decreasing demand for a number of years, followed by an increase in demand when the outlet malls expanded and began taking water deliveries from the District. The 12% reduction in production from 2013 to 2014 is not readily explained, while the 18% decrease from 2014 to 2015 is readily explained by the aforementioned water conservation regulations. The 32% increase in 2017, from 9667 to 1277 AF, is also not easily explained.

Table 2 summarizes overall production by owner, regardless of basin. In reviewing the production by the major water agencies and overliers, the data are relatively consistent, with most owners showing only minor increases or decreases in production. Two retail water agencies, the City of Banning and the Beaumont Cherry Valley Water District, show distinct increases of 8% and 12%, respectively. Robertson's Ready Mix shows a large increase of 89%, almost doubling its production. This is likely due to the construction boom, necessitating a greater demand for concrete. Oak Valley Management's use nearly doubled as well, from 377 to 748 AF. This likely represents the increased use of construction water or increased irrigation of its golf course, each of which can be a sign of regional growth.

An examination of the groundwater production data demonstrates that, overall, economic conditions, annual precipitation, and temperature play large roles in determining water demand in any given year. The gradual increase in water production in the region over the four years from 2011 to 2014 can be explained in large measure by a gradually recovering economy, which causes higher water use. Per capita reductions in water use in homes over the three years prior to that could be explained either by cutbacks due to economic conditions during that time, reduced usage due to higher water rates, or water conservation efforts on the part of local residents. A detailed study would have to be performed to determine the specific impacts of these issues on the reduction in water demand during that three year period. The increased use in 2017 is likely a strong function of overall population growth amid a strong economy.

The reduction in production due to decreased water demand from 2008 to 2010, and especially the dramatic drop in 2015 and continuing to 2016, point out a major issue within the water industry. As water demand falls, water sales revenues fall, making it difficult for water agencies to meet financial obligations, especially fixed costs. Most of their costs (primarily labor) are fixed and do not decrease when water demand falls. These agencies have to make up for these lost revenues in other ways, either by changing their rate structures, by increasing water rates, by reducing their costs, or by drawing from reserves. Over the past several years, water districts

throughout California have gradually begun implementing tiered rate structures, which charge a higher rate for more water use. The Agency has held its wholesale water rate constant since 2009, one of the few water agencies in the state to be able to do so during the drought.

Review of the data for 2017 shows that mandatory water conservation measures imposed in 2015 are likely seen as old news for many people. Residents of the San Gorgonio Pass significantly decreased their water use in 2015 in response to the Governor's Executive Order and its implementation by the State Water Resources Control Board, and continued their water conservation efforts into 2016, but this did not continue into 2017. With new legislation proposed for 2018 that will make water conservation measures permanent, it remains to be seen if local residents (as well as residents throughout the state) can ramp down their per capita water use over time.

3.2 State of Overdraft

Overdraft of a groundwater basin refers to the amount of water pumped out in excess of its safe yield. Safe yield is the average annual replenishment of a basin through natural sources such as rainfall, runoff, snowmelt, and underflows from other groundwater basins, as well as man-made sources such as return flows from irrigation and septic tanks. Safe yield is difficult to establish and represents only an average. In a given year, natural replenishment of a groundwater basin could be more or less than the average safe yield, depending on local hydrology. As a basin changes, for example through development, or as its management changes, the safe yield can also change.

The Agency has been closely monitoring overdraft of the Beaumont Basin since at least 1988, when the Agency's first engineering investigation of the basin indicated that pumping significantly exceeded the basin's probable safe yield. Studies by the Agency have pointed to an estimated long-term average safe yield of about 5,000 to 6,100 acre feet per year for the Beaumont Basin (Boyle Engineering, 1995; Boyle Engineering, 2002). This is smaller than the safe yield of 8,650 acre feet that was defined in the 2004 Beaumont Basin Stipulated Judgment, a number which represents the sum of overlier water rights. Overlier water rights refer to rights based on historical production for water used on the land.

In order to remedy the possibility of long-term overdraft, the Judgment requires the Beaumont Basin Watermaster to "redetermine" the safe yield of the basin at least once every ten years, beginning ten years after the date of entry of the Judgment (no later than February 2014). If the redetermined safe yield were to be different from the 8,650 acre feet per year identified in the Judgment, it would change the amount of overdraft on an annual basis. Depending on the redetermined safe yield, this could be more or less than the current overdraft.

In April 2015, the Watermaster adopted a resolution determining the safe yield to be 6,700 acre-feet per year, after having a consultant model the basin. This is close to the Agency's earlier estimate of 6,100 acre-feet per year. This has broad-ranging implications for the future, as it means that less water will be able to be pumped out of the basin each year. However it also means that the Basin will be more sustainable in the long term, which will serve the region well.

According to the Judgment, the basin must be in balance after 2014. That is, the total amount pumped out in any given year cannot exceed the average safe yield as identified by the

Watermaster unless it is drawn out of storage accounts already in place at that time, or replenished from additional sources, including State Water Project water, recycled water, stormwater, or some other source.

Total production in 2017 from the basin, as reported, was 15,049 acre-feet. Therefore, the Beaumont Basin experienced an apparent overdraft of about 8,349 acre-feet, assuming an average safe yield of 6,700 acre-feet. This was more than offset, however, by importing 15,843 acre-feet of supplemental water. This is the sixth time in eight years that the volume pumped out of the basin was less than the sum of average natural recharge plus imported water. This is the biggest impact of the Agency on local water resources—reducing and eliminating groundwater overdraft.

In years when production exceeds the average safe yield plus imported water, such as 2015, the "apparent" overdraft is in fact not a true overdraft, as the excess production comes out of storage accounts. That is, water that was previously purchased from the Agency and added to basin storage through recharge was drawn out of storage, thus not counting against the safe yield.

Selecting 1997 as a base year (the year when significant increases in production began in the region), the cumulative overdraft in the Beaumont Basin since that time (assuming the Agency's original estimated safe yield of 6,100 acre-feet) would be approximately 180,000 acre-feet, an average of 9,000 acre-feet per year over the past 20 years, without importation of State Water Project water. **Figure 9a** depicts this graphically. Through 2017, the Agency has imported over 98,000 acre-feet of supplemental water (**Table 4**). This offsets the cumulative overdraft and reduces it to approximately 80,000 acre-feet over the same time period. This is depicted in **Figure 9b.** The difference in these two figures shows the immense impact that the State Water Project and the Agency have had on the region since water importation began in earnest in 2006.

Although other local groundwater basins are at similar risk of overdraft, the state of the overdraft of the Beaumont Basin is far more apparent (in part because it has been studied more) and, due to the large population served by the basin, more critical to the region. Since the safe yields of other basins in the region have not yet been defined, it is difficult to determine whether or not they are in overdraft at this time. However, monitoring of water levels in these basins shows that levels are decreasing in at least some of the eleven basins in the region.

The Agency is continuing studies of the Cabazon Basin and at some point in the next few years will likely define an average safe yield for this basin. It is estimated that this is the second largest basin in the region based on storage volume. Other basins will require additional studies over time to better understand their geology and hydrology. It is believed that most of them have storage volumes and safe yields far smaller than the Beaumont and Cabazon basins.

With the advent of the Sustainable Groundwater Management Act, passed by the Legislature in 2014, management of groundwater basins in California will change significantly. Virtually all basins will be required to have a plan to be managed sustainably by 2022. This means that a plan must be in place to ensure that each basin is in long-term balance. Each plan must detail a method for implementing this, either through reductions in production or through artificial recharge (recharge of the basin with non-native water, recycled water, or stormwater), or better management of the basin, or a combination of all three.

Implementation of SGMA will be by groundwater basins defined by the Department of Water Resources in its Bulletin 118. In that document, there are only two major groundwater basins in the Agency's service area—the San Gorgonio Pass sub-basin of the Coachella Valley Basin, and the San Timoteo sub-basin of the Santa Ana Basin. In addition, a small portion of the Yucaipa sub-basin is in the Agency's service area. As the Agency continues to publish this report every year, and as SGMA is gradually implemented over the next several years, some changes may be made in this report to reflect the fact that the DWR basin boundaries are the "official" groundwater basins of the State. In the meantime, the Agency will continue to report on the eleven separate and distinct groundwater basins within the region.

3.3 Groundwater Levels

The Agency monitors water levels in a large monitoring well network. Currently there are approximately 110 wells in the system, each of which is monitored for groundwater elevation twice a year, typically in May and November. The monitoring network is depicted on **Figure 10.**

Between Fall 2016 and Fall 2017, approximately 80 of the wells had water level changes, including a number of sites with multiple wells. Of these, eight sites had wells that recorded a water level increase of more than five feet, eight recorded a decline of more than five feet, and 58 recorded little or no change. Of the eight wells showing a large increase in water levels, six are in the Banning Canyon Basin, while two are in the Beaumont Basin. Of the eight wells showing declines of more than five feet, six of them are in the Cabazon Basin, and two are in the Beaumont Basin. These are depicted on **Figure 11.** Overall, this figure shows the continual decline of water levels in the Cabazon Basin. It is thought that this is a natural phenomenon but more will be known as the SGMA process progresses.

As of 2011, the Agency is part of the California State Groundwater Elevation Monitoring (CASGEM) system. This is a formal statewide groundwater monitoring system initiated through 2009 legislation. The Agency is the formal monitoring entity for two basins—the San Timoteo sub-basin and the San Gorgonio sub-basin—which roughly correspond to the Agency's boundaries. As noted above, the state uses different basin names because it views the statewide geology and hydrology on a larger scale, and aggregates smaller basins into larger ones. What is known in the CASGEM system as the San Timoteo sub-basin is essentially the Beaumont Basin, the Singleton Basin, the South Beaumont Basin, and the San Timoteo Basin, and what CASGEM labels the San Gorgonio sub-basin is essentially the Cabazon Basin, the Banning Bench Basin, the Banning Canyon Basin, the Banning Basin, and the Millard Canyon Basin. While the boundaries are not exact, they are similar. The Agency files water level data for selected wells through the Department of Water Resources into the CASGEM database. These data are available on the CASGEM web site. At some point in the future, the CASGEM data reporting will disappear, as it will be superseded by implementation of SGMA, which has a higher standard of sustainable groundwater basins, as opposed to the CASGEM standard of simply reporting groundwater elevation data.

Figures 12 through 17 show time-series groundwater elevations (hydrographs) for selected wells in five different basins within the Agency service area. In general, these same wells have been depicted in this report for the past several years.

The two wells shown in **Figure 12** are Banning production wells in the Banning Basin. Each shows great variability in groundwater elevation from 2002 to 2006. Both of these wells show a long-term trend of lower groundwater levels. However, both appear to be relatively stable over the past few years. The well depicted in **Figure 12a** appears to be holding at a water level between 350 and 400 feet below ground surface. The well in **Figure 12b** is down about 75 feet since 1998, but appears to be stable at approximately 375 feet below ground surface. The Banning Basin gets no artificial recharge of any kind.

The five wells depicted in **Figures 13-15** are in the Beaumont Basin. The wells in **Figures 13b and 15b** are in the same location, approximately 1000 feet east of Beaumont Avenue and 50 feet south of Cherry Valley Boulevard in Cherry Valley. This location is likely influenced by the past recharge at Little San Gorgonio Creek, and possibly by the recharge at Noble Creek. The upturn in water levels from 2008 to 2014 indicates that this is quite likely the case. The downturn since that time could be attributed to the fact that no water has been recharged at Little San Gorgonio during that time, or possibly to the drought during that time, in which less water was available for recharge at Noble Creek. Both wells show an increase in water level in 2017, when a lot of imported water was recharged into the Beaumont Basin at Noble Creek. The well in **Figure 13a** is on the Oak Valley Golf Course. After a steady drop over at least a decade, the water surface appears to be stabilizing over the past two years. This may be due to reduced production from Oak Valley Partners and/or Oak Valley Management, as indicated in **Table 2**.

The wells in **Figures 14 and 15a** are on Calimesa Boulevard near the western edge of the Beaumont Basin. These wells show continually falling water levels over the past decade and a half, with a possible leveling off in 2017. That portion of the Beaumont Basin would appear to not be influenced as yet by the ongoing recharge efforts and reduced production. While it is clear that ongoing recharge and reduced extractions have had an impact on at least some of the wells in the Beaumont Basin, water levels at other wells are still falling. There is some indication of some leveling out of the lengthy decline over the past year. It remains to be seen if this will be a trend or is simply an anomaly.

The two wells in **Figure 16** are both in the Cabazon Basin. The well in **Figure 16a** is a production well of the Mission Springs Water District, while the well in **Figure 16b** is a former production well currently used as a monitoring well in the Jensen area of South Cabazon. Both show severe drops in water surface elevation over the past 15 years. The well in **Figure 16a** shows a drop of more than 15 feet over the past ten years. The well in **Figure 16b** shows a drop of approximately 25 feet over the past nine years. These data would seem to indicate that, even though the wells are several miles away from each other, that water levels in the Cabazon Basin are dropping and have been for a number of years. This is somewhat surprising, given the decline in extractions from this basin over the past several years. This could mean that inflows to the basin have also declined over the same period of time. It could mean that any impact of reduced extractions just requires a longer period of time before the impact is seen in wells. It certainly means that there are other factors at work in this basin that impact water surface elevations that are beyond the scope of this report. It is possible that this is part of a natural cycle for this basin, that it drops for many years and then in one large storm refills itself. The Agency and other parties will model this basin as part of SGMA implementation and in a few years should have a better idea how it works.

This significant drop in water levels is one reason that the Agency has worked with the United States Geological Survey to extend its model of the Beaumont Basin to the Cabazon Basin. The Agency wishes to learn more about the Cabazon Basin and how it reacts to various hydrologic events. The basin is an important regional resource as a water supply source and storage reservoir and the Agency is trying to better understand the detailed workings of it. Implementation of SGMA will lead to a better understanding of the basin.

The wells depicted in **Figure 17** are in the Calimesa and Banning Canyon Basins. The data in **Figure 17b** show clearly that the Banning Canyon Basin is a shallow basin, and that water levels fluctuate more in such basins. The year 2006 was a wet one locally, and the figure shows that groundwater levels in the basin came up nearly 15 feet that year. The next three years, on the other hand, were dry ones, and the water level dropped nearly seven feet in that time. The level in this well is influenced by the amount of water imported to the basin through a trans-basin transfer and conveyed by a flume system that is over 100 years old. The system has transported much less water in recent years; this could have an impact on the continually declining water level in this well. The data for the well in the Calimesa Basin show that groundwater levels increased in 2006 and have remained relatively constant since, with a slight downward trend over the past 2-3 years. This could have to do with the Yucaipa Valley Water District's filtration plant, which came online in 2006. This event reduced extractions from the Calimesa Basin and likely contributed to the stabilization of the water level. The slight drop since 2014 could have to do with the drought from 2012-2016.

These figures represent only a small portion of all groundwater elevation data available in the region. These data indicate that, in general, groundwater elevations continue to decline except in certain areas where recharge of imported water or the switch to surface water is apparently stabilizing or even raising the water levels. Reductions in extractions over the past six years have in many cases slowed the rate of decline.

The implications of lower water levels are great. As water levels decline throughout the local basins, every well will have to pump water from a lower elevation, thus increasing power costs for well owners and rate payers. Some overliers' wells may be quite shallow, and as water levels decline further some of these wells may be in danger of going dry. This would necessitate a large expense to the overlier—either a new well, a deeper well, or connection to one of the water purveyors' systems.

In general, continually decreasing water levels can also lead to land subsidence (sinking) and the drying up of traditional wetlands or streambeds. In the region, most of these wet areas, to the extent that they existed, dried up decades ago. The Beaumont Basin Watermaster is charged with monitoring land elevations to determine if subsidence is occurring in the Beaumont Basin. As of this time, the Watermaster has not reported any appreciable land subsidence over the basin.

The Sustainable Groundwater Management Act (SGMA) will require Groundwater Sustainability Plans (GSP's) for all medium and high priority groundwater basins in California by 2022, with sustainability to be reached within 20 years after that time. It remains to be seen how SGMA may impact long-term groundwater levels, though it is likely that they will stabilize

over the next two decades. This report will continue to monitor water levels in part to determine if implementation of these GSP's will impact all wells, or some fraction thereof.

4.0 Water Quality

4.1 State Water Project

The Agency takes delivery of its State Water Project water at the Devil Canyon hydroelectric facility in San Bernardino and conveys it through the East Branch Extension to various delivery points. Water quality is a very important component of the Agency's supplemental water supply program.

Table 5 shows six common constituents and their measured monthly concentrations from the SWP system at Devil Canyon over the past four years. TDS, or total dissolved solids, is perhaps the most significant constituent in this table. It represents salinity, which is important to water agencies in California. It can be seen that TDS was mostly below 300 parts per million (ppm) or milligrams per liter (mg/l) through 2013. In 2014, the third consecutive year of drought, a number of readings above 300 appear; this is to be expected in dry years. This continued in 2015, another dry year, as the monthly average was above 300 every month that year. In 2016, a somewhat wetter year, the monthly average is above 300 for six of the twelve months. Many readings from 2011 through 2013 are in the 240-250 ppm range, and there are a number of readings in the 220 range and below. In 2011, which was a relatively wet year in northern California, TDS readings were very low after January. This is significant because the ambient salinity concentration of the Beaumont Basin is approximately 280 ppm, so the great majority of the time, importation of SWP water reduces the overall concentration of salinity in the Beaumont basin. The numbers show that 2017 was a very wet year in Northern California, as the TDS numbers are very low throughout the year. After January, the monthly average was under 200 ppm every month, and in July it was under 100 ppm. The large amount of State Water Project water imported in 2017 (over 15,000 AF) and the low salinity levels of this water likely had a significant positive impact on water quality in the Beaumont Basin.

Figure 18 shows the monthly average salinity concentration at Devil Canyon since 2006, while **Figure 19** shows the annual average since 1990. **Table 5** and **Figure 18** clearly show an outlier salinity concentration that is likely the result of an incorrect reading or analysis. The annual average shown in Figure 19 is useful because it indicates clearly that salinity is higher in dry years and lower in wet years. The two highest years, 1991 and 1992, were very dry and the last two years of a five year drought in California. The years 1996, 1997, 1998, 2006, 2011, and 2017 were all very wet years (in the case of 2011 and 2017, it was a wet year in northern California, where State Water Project water originates). Salinity in 2010 is significantly lower than the previous three years, which represented a three year drought in California. This inverse correlation between salinity and rainfall comes about because State Water Project water passes through the Sacramento/San Joaquin delta. In dry years, there is less fresh water available to flush out the system by pushing relatively more saline water to the ocean, so the fresh water/salt water interface is higher in the delta and hence salinity of SWP water is higher.

These figures also point out why it is advantageous to take more water in wet years when it is available—the water has a lower salinity in those years. In the long term, water quality (from a

salinity standpoint) is helped by hydrology, as more water is typically delivered in wet years when salinity is lower, and less water is delivered in dry years when salinity is higher.

4.2 Groundwater

The Santa Ana Regional Water Quality Control Board's Basin Plan has a maximum benefit goal of 330 ppm of salinity for the Beaumont Management Zone, which includes the Beaumont Basin. The current ambient salinity concentration in the Beaumont basin is approximately 280 ppm. The Basin Plan requires local entities to begin planning desalters when the ambient TDS concentration increases to 320 ppm or if other conditions are met. These desalters must be online within seven years after that time. The City of Beaumont is developing a plan to construct a desalter within the next few years

Groundwater quality in the region is very high. There is no known historical industrial or mining activity in the region that has generated harmful plumes of pollutants. In addition to salinity or TDS, nitrate is the only other constituent that needs to be monitored closely. This too is regulated by the Regional Board, but nitrate concentrations are currently well within the maximum benefit standards. Over the past few years there have been isolated incidents of high nitrates at individual wells for short periods of time, typically after a large rainstorm that causes flushing of the system. However these have not proven to be a health hazard.

Nitrates in ambient groundwater do not necessarily translate to a danger in drinking water. Nitrates in drinking water are regulated by the California Department of Public Health, not the Regional Board. Nitrates in groundwater can effectively be managed if needed through dilution. If nitrates were to become a persistent problem in a particular location, the local purveyor may consider installing wellhead treatment for nitrates. Such treatment is costly. However, there is no evidence that such treatment is needed in the region in the near future.

It should be noted that salinity in drinking water is regulated by a secondary water quality standard, while nitrate is regulated under a primary standard. Primary standards are for constituents that can directly impact human health. Secondary standards are for constituents that do not directly impact human health, but that may have aesthetic issues. Salinity is not harmful to human health and safety directly, while nitrate can be harmful at high concentrations, particularly to infants.

In 2013, the California Department of Public Health changed the maximum contaminant level (MCL) for chromium 6 in drinking water, lowering the standard. Because of this change in the standard, several wells in the region suddenly became unusable, as they produced water with chrome 6 that met the previous MCL, but not the new one. Chrome 6 is a naturally occurring contaminant that is present at some level in many areas of California, including the San Gorgonio Pass. Because of the more stringent standard, some wells owned by the City of Banning and the Beaumont Cherry Valley Water District were temporarily taken out of service, pending implementation of a fix to the problem. This water quality issue has had an impact on water supplies in the region, as those wells are now not able to produce potable water for those two purveyors. Those entities are currently taking steps to ensure that all drinking water served

meets this more stringent standard, and plan to meet the State's timeline for doing so, thus ensuring that drinking water meets all water quality standards.

4.3 Emerging Contaminants

There is a relatively new class of chemical constituents that has recently been found in the environment and in drinking water known as emerging contaminants. These are primarily pharmaceuticals and personal care products (PPCP's) that pass through human or animal bodies or get flushed and end up in sewage or septic flows. They have become known because of the technological ability to measure concentrations at increasingly smaller concentrations (parts per billion or even parts per trillion). Because of their presence in the environment, the Santa Ana Regional Water Quality Control Board has required that dischargers (those entities that own and operate sewage treatment plants) monitor for these constituents on an annual basis.

There is no evidence that these constituents are harmful to humans in their current concentrations in the environment. Some groups have claimed that these products could harm animals in the environment and thus have called for their regulation. At this point in time they are not regulated. Water agencies in the watershed are developing a database so that the number and concentrations of these constituents can be monitored on an ongoing basis.

Emerging contaminants are mentioned in this report not because they have any immediate impact on water quality in the region, or even that they are expected to have an impact in the near future. They are included because they are mentioned increasingly in the literature and by regulators as a growing issue for the water industry to be aware of.

5.0 SUMMARY

Reported groundwater extractions within the region increased significantly in 2017, following a slight increase the previous year. Total extractions in 2017 were up approximately 11% from 2016, or 23% below levels for 2007, the peak historical year for extractions in the region. This is likely due to continued conservation efforts following mandatory water conservation regulations imposed by the State Water Resources Control Board in 2015 but does reflect increased usage as the region grows and as a five year drought gets further in the rear view mirror.

Local retail water purveyors continue to make progress in implementing recycled water systems. These systems are complex and expensive to complete, and funding and water quality (salinity) are key issues that require attention. Implementation of these systems over the next few years should reduce groundwater extractions significantly. Such reductions began in 2016, when the Yucaipa Valley Water District received a permit to deliver recycled water. The Regional Water Quality Control Board has adopted a Basin Plan Amendment which will have an impact on the proposed recycled systems by changing water quality rules.

Another factor leading to reduced withdrawals is the reduction in the safe yield of the Beaumont Basin, as published by the Beaumont Basin Watermaster in early 2015.

Based on data in this report, there is evidence that groundwater levels have increased slightly in portions of the region over the past three to five years. In other areas, the rate of groundwater decline has slowed. At the same time, groundwater levels continue to drop in some areas within the region. Future reports will determine the significance of these data. Lower groundwater levels in shallow basins in dry years is not a long-term concern; however, continued falling groundwater levels in larger, deeper basins would be cause for concern.

The Sustainable Groundwater Management Act, passed by the Legislature and signed by the Governor in 2014, will require virtually all groundwater basins in California to have a plan to be managed sustainably by 2022. The Agency will actively participate in these plans for the basins in the region. These plans will be required to reduce long-term groundwater mining and require basins to be managed sustainably.

Over the past eight to ten years, retail water agencies in the region have done a good job of managing local water resources. The Yucaipa Valley Water District has built a surface water treatment plant in order to reduce its groundwater withdrawals, and also a desalter and brine line to facilitate use of recycled water for non-potable uses. The Beaumont Cherry Valley Water District has constructed a recharge facility in the Beaumont Basin and has purchased a large quantity of replenishment water from the Agency. The City of Banning has purchased water for replenishment as well, and is working with Southern California Edison, the Banning Heights Mutual Water Company, and the Agency to make improvements to a system that delivers runoff from the San Bernardino Mountains to the Banning Bench and the City of Banning. High Valleys Water District has replaced much of its old, leaky pipe, thus reducing its water losses significantly. The Cabazon Water District has also reduced its water losses significantly. The

South Mesa Water Company has drilled a new, more efficient well. Several water purveyors have implemented tiered rate structures, which tend to reduce water usage. Three major recycled water systems are in the planning, design, or construction phase. These are all positive steps that will help extend and preserve local groundwater basins into the future.

During this same time period, the Agency has increased its imported water deliveries to such an extent that, in six of the past eight years, more water was put into the Beaumont Basin than withdrawn from it. A three-year string was broken in 2014 and 2015 due to the fact that less water was available from the State Water Project, but in 2016 this trend returned. Since the completion of Phase I of the East Branch Extension in 2003, the Agency has increased its deliveries to the region every year, with the exception of 2005, 2013, 2014, and 2015 (the latter three being dry years). Overall, the Agency has delivered approximately 98,000 acre-feet of State Water Project water over the past fifteen years, either for replenishment, overdraft mitigation, or direct deliveries.

In the future, the local economy and local weather patterns will continue to play large roles in determining water demands each year. As new homes are constructed in the future, recent legislation will require lower water use landscaping. This should reduce per capita water consumption for future development, further extending the life of local water resources. Production data for 2015 and 2016 bear this out. The Legislature is considering mandating this reduced per capita usage through proposed legislation.

Based on data in this report and observation of ongoing events, it is apparent that the recession has ended, and construction of new homes in the region is increasing, thereby increasing water demands. The Agency and retail water purveyors will need to work together to continue to meet the increasing water demands of the region.

A newly adopted MCL for chrome 6 has had a negative impact on local groundwater supplies. Purveyors impacted by this will have to determine how to address this issue so that these supplies may be brought back online or replaced with other sources.

San Gorgonio Pass Water Agency
Totals by Basin
Non-Verified Production Data
(in acre feet)

Basin	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Banning	1,485	1,787	2,512	1,999	2,787	1,782	1,845	1,715	1,759	2,180	1,734	2,607	2,651
Banning Bench	2,332	2,987	2,199	1,299	1,415	1,561	1,395	1,719	1,776	1,076	723	312	162
Banning Canyon	3,649	3,464	2,662	3,237	2,771	3,941	3,820	4,091	3,216	2,636	2,491	2,450	3,376
Beaumont	13,390	17,140	19,032	17,264	14,643	13,158	13,600	14,302	16,236	17,970	12,954	13,529	15,049
Cabazon	1,379	1,314	1,466	1,412	1,258	1,054	900	654	1,226	1,076	983	967	1,277
Calimesa (2)	1,575	1,445	1,532	1,133	1,315	1,114	993	1,169	950	853	767	943	904
Edgar Canyon (1)	2,766	3,872	3,085	3,140	2,784	3,100	3,467	3,313	2,813	2,502	1,460	1,457	1,402
Millard Canyon (3)	595	707	842	757	750	750	750	750	850	850	750	750	750
San Timoteo	2,132	1,904	1,384	1,533	1,367	1,329	1,297	1,312	1,062	982	722	751	784
Singleton	636	645	666	471	382	405	412	448	312	443	217	353	368
South Beaumont	85	83	94	79	97	119	115	102	92	103	34	31	31
Totals	**30,024**	**35,348**	**35,474**	**32,324**	**29,569**	**28,313**	**28,594**	**29,575**	**30,292**	**30,671**	**22,835**	**24,150**	**26,754**

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Notes:
Amounts shown are rounded to nearest acre-foot
Amounts as reported to the SWRCB Division of Water Rights, made available by a purveyor, reported by Beaumont Basin Watermaster or estimated by SGPWA
Data revised to agree with basin boundaries as defined in USGS 2004 report
(1) Includes wells located in Upper Edgar Canyon in San Bernardino County
(2) Includes wells located in Riverside and San Bernardino County
(3) Estimate only

Table 1: Groundwater Production in San Gorgonio Pass Water Agency by Basin (2005 through 2017 as reported)

San Gorgonio Pass Water Agency
Totals by Owner
Non-Verified Production Data
(in acre feet)

Owner	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Albor Properties III, LP	165	170	175	200	193	174	177	4	51	7	7	6	6
Banning Heights Mutual Water Co.	73	21	22	31	4	17	13	45	69	78	29	21	8
Banning, City of (1)	9082	10162	10223	9583	8996	8415	8454	8576	8743	8468	6722	7036	7575
Beaumont-Cherry Valley Water District (1)	7070	11748	13031	12744	10849	10975	11698	12153	12829	13284	10613	11507	12902
Beckman, Dave		116	83	13									
Brinton, Barbara	10		10	10	10	10	10	10	10	10	10	10	10
Cabazon Water District	1069	966	923	875	905	710	509	269	854	628	515	497	508
Dowling, Frances M. Jr.	85	83	94	79	72	96	92	79	69	80	11	8	8
El Casco LLC c/o Riv. Land Conserv(4)	160	165	165	165	165	165	160	165	10	10	10	10	10
Hudson, Merton Lonnie	430	435	445	435	430	430	410	485	521	540	130	130	79
Illy, Katharina	267	267	265	265	265	270	270	270	270	270	270	260	240
Lane, Christie	1												
Merlin Properties, LLC	500	100	100	150	175	100	150	200	5	5	10	10	10
Mission Spring Water District	171	190	206	164	162	144	150	146	148	155	146	145	156
Morongo Band of Mission Indians (3) (6)	1822	2530	2326	1890	1908	1541	1634	1736	1949	2076	1649	1709	1741
Oak Valley Management	991	965	742	781	753	546	573	821	597	625	512	377	748
Oak Valley Partners	350	312	312	311	311	311	12	12		24	24	24	2
Perisits, Jack	40												
Plantation on the Lake (2)	40	47	46	47	49	43	46	48	50	50	40	45	45
Rar 5 Calimesa Mobile Home Ranch	60	61	61	40	40	42	42	24	24	16	16	26	30
Riv 9 le County Parks Department							50	50	50	50	50	50	50
Rob 1 on's Ready Mix	139	158	337	373	191	200	241	239	224	293	322	325	613
Ror 8 Catholic Bishop	70	70	70										
Sha 4 lale Mesa Owners Association	181	189	183	196	154	131	133	145	147	130	94	84	118
Shiloh's Hill LLC	160	146	150	61	172	200	229	193					
South Mesa Water Co.	2551	2711	2839	2681	2514	2222	2224	2376	1889	1918	1424	1705	1743
Summit Cemetery District	65	65	65	65	90	88	88	88	88	88	88	88	88
Sun Cal Companies	839	555											
Sunny-Cal Egg & Poultry, Inc.	1153	50	50	50	50	25	28	28		1	22		
Wildlands Conservancy, The	283	301	9	21	40	16	8	7	20	17	0		
Yucaipa Valley Water District	1854	2422	2072	659	685	949	665	901	1266	1344	121	77	64
Totals	**29,681**	**35,005**	**35,004**	**31,889**	**29,183**	**27,820**	**28,066**	**29,070**	**29,883**	**30,167**	**22,835**	**24,150**	**26,754**

Notes:

Amounts shown are rounded to nearest acre-foot

Amounts as reported to the SWRCB Division of Water Rights, made available by a purveyor, reported by Beaumont Watermaster or estimated by SGPWA

Data revised to agree with basin boundaries as defined in USGS 2004 report

(1) Amount adjusted for production in 2006, 2007, 2008 & 2009 by BCVWD for City of Banning from co-owned wells

(2) 2010 Data not reported - Preceeding year (2009) data used

(3) Previous Well Owners - Arrowhead Mtn Spring Bottling Co. & East Valley Golf Club LLC

(4) El Casco Lake Ranch merged with Riverside Land Conservancy

(5) Desert Hills Premium Outlets merged with Cabazon Water District

(6) Estimate only

Table 2: Groundwater Production in San Gorgonio Pass Water Agency by Purveyor (2005 through 2017, as reported)

San Gorgonio Pass Water Agency
Totals by Owner by Basin
Non-Verified Production Data
(in acre feet)

Owner	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
BANNING BASIN													
Banning, City of	1,485	1,787	2,512	1,999	2,787	1,782	1,845	1,715	1,759	2,180	1,734	2,607	2,651
TOTALS FOR BANNING BASIN	1,485	1,787	2,512	1,999	2,787	1,782	1,845	1,715	1,759	2,180	1,734	2,607	2,651
BANNING BENCH BASIN													
Banning, City of	2,257	2,922	2,124	1,224	1,340	1,486	1,320	1,644	1,701	1,001	648	237	87
Brinton, Barbara	10	0	10	10	10	10	10	10	10	10	10	10	10
Summit Cemetery District	65	65	65	65	65	65	65	65	65	65	65	65	65
TOTALS FOR BANNING BENCH BASIN	2,332	2,987	2,199	1,299	1,415	1,561	1,395	1,719	1,776	1,076	723	312	162
BANNING CANYON BASIN													
Banning Heights Mutual Water Co.	73	21	22	31	4	17	13	45	69	78	29	21	8
Banning, City of	3,575	3,443	2,640	3,206	2,767	3,924	3,807	4,046	3,147	2,558	2,462	2,429	3,368
Lane, Christie	1	0	0	0	0	0	0						
TOTALS FOR BANNING CANYON BASIN	3,649	3,464	2,662	3,237	2,771	3,941	3,820	4,091	3,216	2,636	2,491	2,450	3,376
BEAUMONT BASIN													
Albor Properties III, LP	165	170	175	200	193	174	177	4	51	7	7	6	6
Banning, City of (1)	1,765	2,010	2,947	3,154	1,623	1,223	1,482	1,171	2,136	2,729	1,878	1,763	1,469
Beaumont-Cherry Valley Water District (1)	5,607	9,200	11,096	10,617	9,643	9,100	9,539	10,163	11,096	11,959	9,333	10,230	11,629
Dave Beckman		116	83	13	0	0	0	0	0	0	0	0	0
Merlin Properties, LLC	500	100	100	150	175	100	150	200	5	5	10	10	10
Morongo Band of Mission Indians (2)	1,227	1,823	1,484	1,133	1,158	791	884	986	1,099	1,226	899	959	991
Oak Valley Management, LLC	991	965	742	781	753	546	573	821	597	625	512	377	748
Oak Valley Partners	350	312	312	311	311	311	12	12	0	24	24	24	2
Plantation on the Lake	40	47	46	47	49	43	46	48	50	50	40	45	45
Rancho Calimesa Mobile Home Ranch	60	61	61	40	40	42	42	24	24	16	16	26	30
Roman Catholic Bishop	70	70	70	0	0	0	0	0	0	0	0	0	0
Sharondale Mesa Owners Association	181	189	183	196	154	131	133	145	147	130	94	84	118
Sunny-Cal Egg & Poultry, Inc.	1,153	50	50	50	50	25	28	28	0	1	22	0	0
Yucaipa Valley Water District	1,281	2,027	1,683	572	494	672	534	700	1,031	1,198	119	5	1
TOTALS FOR BEAUMONT BASIN	13,390	17,140	19,032	17,264	14,643	13,158	13,600	14,302	16,236	17,970	12,954	13,529	15,049
CABAZON BASIN													
Cabazon Water District	1,069	966	923	875	905	710	509	269	854	628	515	497	508
Mission Springs Water District	171	190	206	164	162	144	150	146	148	155	146	145	156
Robertson's Ready Mix	139	158	337	373	191	200	241	239	224	293	322	325	613
TOTALS FOR CABAZON BASIN	1,379	1,314	1,466	1,412	1,258	1,054	900	654	1,226	1,076	983	967	1,277

Table 3: Groundwater Production in San Gorgonio Pass Water Agency by Purveyor by Basin (2005 through 2017 as reported)

San Gorgonio Pass Water Agency
Totals by Owner by Basin
Non-Verified Production Data
(in acre feet)

Owner	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
CALIMESA BASIN													
Illy, Katharina	267	267	265	265	265	270	270	270	270	270	270	260	240
South Mesa Water Co.	782	882	954	842	930	653	675	781	525	503	495	611	601
Yucaipa Valley Water District	486	296	313	26	120	191	48	118	155	80	2	72	63
TOTALS FOR CALIMESA BASIN	1,535	1,445	1,532	1,133	1,315	1,114	993	1,169	950	853	767	943	904
EDGAR CANYON BASIN													
Beaumont-Cherry Valley Water District	1,463	2,548	1,935	2,127	1,685	1,875	2,159	1,990	1,733	1,325	1,280	1,277	1,273
Hudson, Merton Lonnie	430	435	445	435	430	430	410	485	521	540	130	130	79
Riverside County Parks Department							50	50	50	50	50	50	50
TOTALS FOR EDGAR CANYON BASIN	1,893	2,983	2,380	2,562	2,115	2,305	2,619	2,525	2,304	1,915	1,460	1,457	1,402
MILLARD CANYON BASIN													
Morongo Band of Mission Indians (3) (4)	595	707	842	757	750	750	750	750	850	850	750	750	750
TOTALS FOR MILLARD CANYON BASIN	595	707	842	757	750	750	750	750	850	850	750	750	750
SAN TIMOTEO BASIN													
El Casco LLC c/o Riv Land Conserv	160	165	165	165	165	165	160	165	10	10	10	10	10
Morongo Band of Mission Indians (2)	0	0	0	0	0	0	0	0	0	0	0	0	0
South Mesa Water Co.	1,133	1,184	1,219	1,368	1,202	1,164	1,137	1,147	1,052	972	712	741	774
SunCal Companies	839	555	0	0	0	0	0	0	0	0	0	0	0
TALS FOR SAN TIMOTEO BASIN	1,972	1,739	1,219	1,368	1,202	1,164	1,137	1,147	1,062	982	722	751	784
GLETON BASIN													
South Mesa Water Co.	636	645	666	471	382	405	412	448	312	443	217	353	368
TOTALS FOR SINGLETON BASIN	636	645	666	471	382	405	412	448	312	443	217	353	368
SOUTH BEAUMONT BASIN													
Dowling, Frances M. Jr.	85	83	94	79	72	96	92	79	69	80	11	8	8
Summit Cemetery District					25	23	23	23	23	23	23	23	23
TOTALS FOR SOUTH BEAUMONT BASIN	85	83	94	79	97	119	115	102	92	103	34	31	31
TOTALS FOR ALL BASINS	**28,951**	**34,294**	**34,604**	**31,581**	**28,735**	**27,353**	**27,586**	**28,622**	**29,783**	**30,084**	**22,835**	**24,150**	**26,754**

Notes:

Amounts shown are rounded to nearest acre-foot

Amounts as reported to the SWRCB Division of Water Rights, made available by a purveyor, reported by Beaumont Basin Watermaster or estimated by SGPWA

Data revised to agree with basin boundaries as defined in USGS 2004 report

(1) Amount adjusted for production in 2006, 2007, 2008 & 2009 by BCVWD for City of Banning from co-owned wells

(2) Previous Well Owner - East Valley Golf Club LLC

(3) Previous Well Owner - Arrowhead Mountain Spring Water Bottling Co.

(4) Estimate only

Table 3: Groundwater Production in San Gorgonio Pass Water Agency by Purveyor by Basin (2005 through 2017 as reported)

State Water Project Deliveries to
San Gorgonio Pass Water Agency Service Area

Calendar Year	Amount in Acre-Feet	Allocation
2003 (1)	116	90%
2004	814	65%
2005	687	90%
2006 (2)	4420	100%
2007 (2)	4815	60%
2008 (2)	4905	35%
2009 (2)	6609	40%
2010 (2)	8403	50%
2011 (2)	10,730	80%
2012 (2)	10,974	65%
2013 (2)	9,695	35%
2014 (2)	5,131	5%
2015 (2)	3,930	20%
2016 (2)	11,461	60%
2017 (2)	15,843	85%
TOTAL	***98,533***	

(1) Start Up / Partial Year
(2) Includes deliveries to Yucaipa Valley Water District

Deliveries to Beaumont Cherry Valley Water District began in September 2006
Source: San Bernardino Valley Municipal Water District Operations Manager

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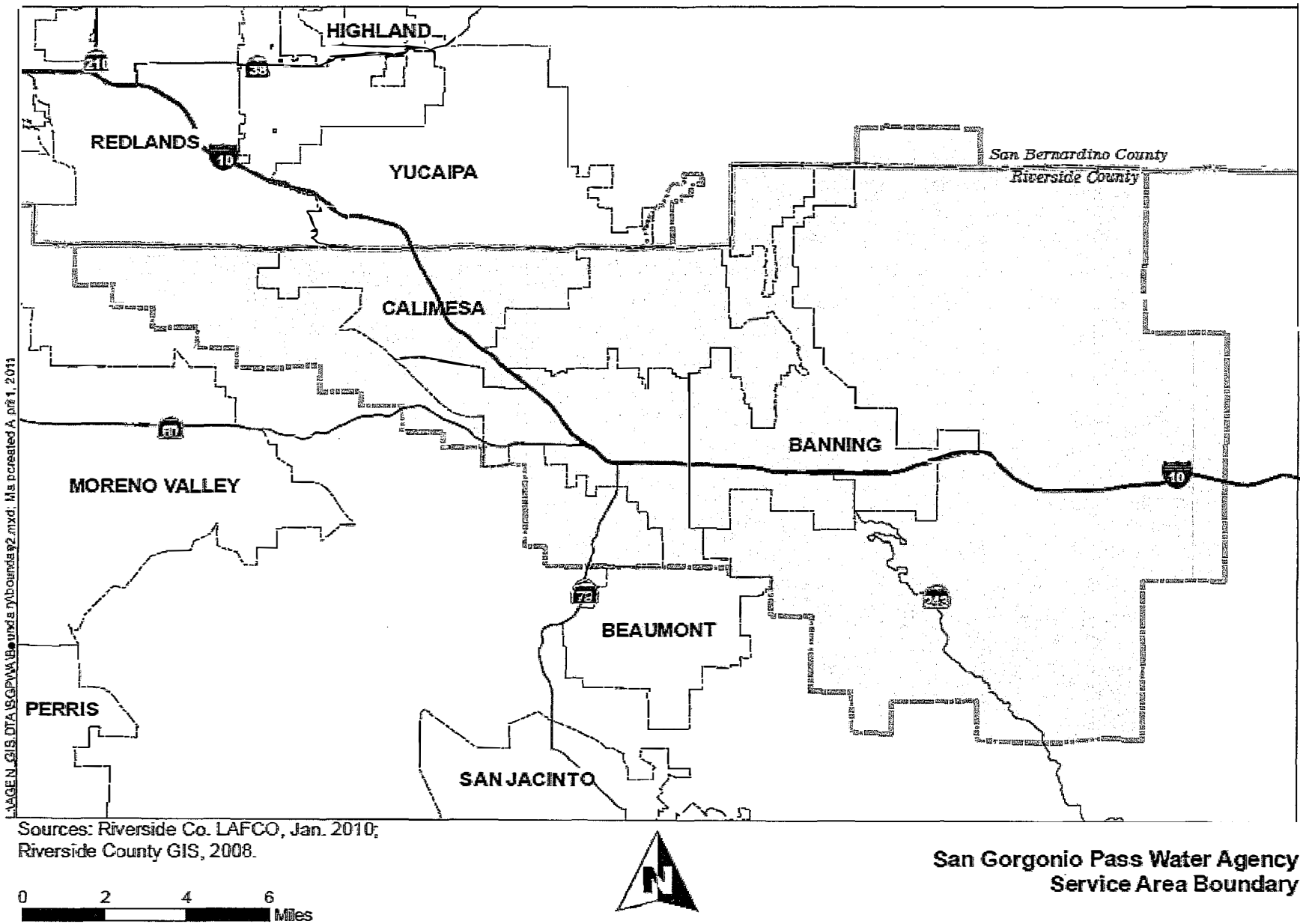
Table 4: State Water Project Deliveries to
San Gorgonio Pass 59 / 84 ency Service Area

WATER QUALITY ANALYSIS AT DEVIL CANYON AFTERBAY

DATE	Chloride mg/L	Nitrate+Nitrite mg/L as N	Sodium mg/L	Sulfate mg/L	TDS mg/L	Nephelometric Turbidity Units
Jan-14	91	0.60	68	47	296	1
Feb-14	88	0.48	71	50	317	< R.L.
Mar-14	85	0.64	68	50	316	< R.L.
Apr-14	84	0.64	71	53	312	2
May-14	77	0.43	69	55	298	1
Jun-14	72	0.51	68	58	292	< R.L.
Jul-14	66	0.46	67	63	1184	3
Aug-14	77	0.24	67	67	323	2
Sep-14	84	0.32	68	67	331	1
Oct-14	86	0.32	71	68	336	2
Nov-14	87	0.41	83	72	344	2
Dec-14	85	0.45	77	71	329	1
Jan-15	81	0.58	76	73	347	< R.L.
Feb-15	80	0.39	79	71	379	< R.L.
Mar-15	67	0.85	66	71	310	1
Apr-15	69	0.58	71	75	311	1
May-15	72	0.58	64	72	310	< R.L.
Jun-15	74	0.55	72	71	322	< R.L.
Jul-15	76	0.44	68	70	317	1.45
Aug-15	83	0.08	74	66	329	4.73
Sep-15	89	0.18	76	69	356	1.43
Oct-15	87	0.14	74	70	342	1.71
Nov-15	88	0.07	77	75	348	3
Dec-15	95	0.56	82	82	363	1.73
Jan-16	97	0.56	84	80	362	< R.L.
Feb-16	94	0.57	78	76	360	1
Mar-16	84	0.8	80	81	349	1.36
Apr-16	64	0.56	59	60	280	1.33
May-16	71	0.47	63	61	294	1.33
Jun-16	97	0.22	71	63	344	2.27
Jul-16	79	0.22	59	46	289	1.62
Aug-16	68	0.11	50	36	246	1.23
Sep-16	n/a	n/a	n/a	n/a	n/a	n/a
Oct-16	89	0.19	63	25	266	1.11
Nov-16	105	0.26	70	29	310	1.07
Dec-16	104	0.36	68	32	312	1.33
Jan-17	97	0.42	68	30	291	2.76
Feb-17	52	0.88	40	30	199	7
Mar-17	29	0.74	24	26	149	5
Apr-17	23	1.1	21	21	123	3
May-17	19	0.34	16	15	109	5.89
Jun-17	23	0.28	18	14	107	4
Jul-17	15	0.29	13	11	83	4
Aug-17	24	0.25	19	14	118	2.31
Sep-17	26	0.22	22	14	124	1.52
Oct-17	39	0.39	30	18	170	1.88
Nov-17	47	0.53	37	21	180	< R.L.
Dec-17	37	0.62	29	22	168	1.23

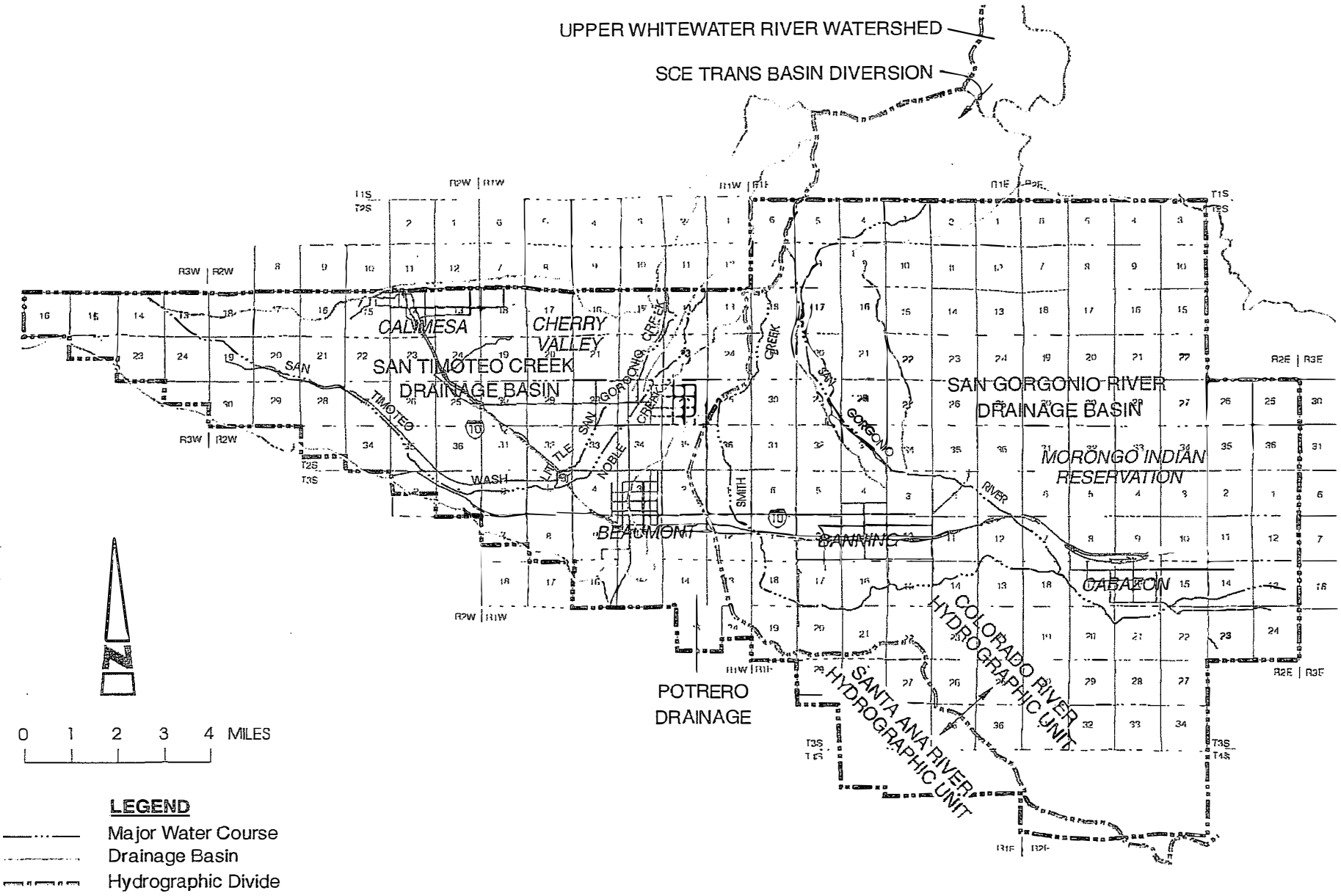
mg/L: milligrams per liter
Source: SWP/DWR Water Quality Data Reports
NR: Not Reported

Table 5: Water Quality Analysis at Devil Canyon Afterbay near San Bernardino
(Selecte 6 0 / 8 4 uents)



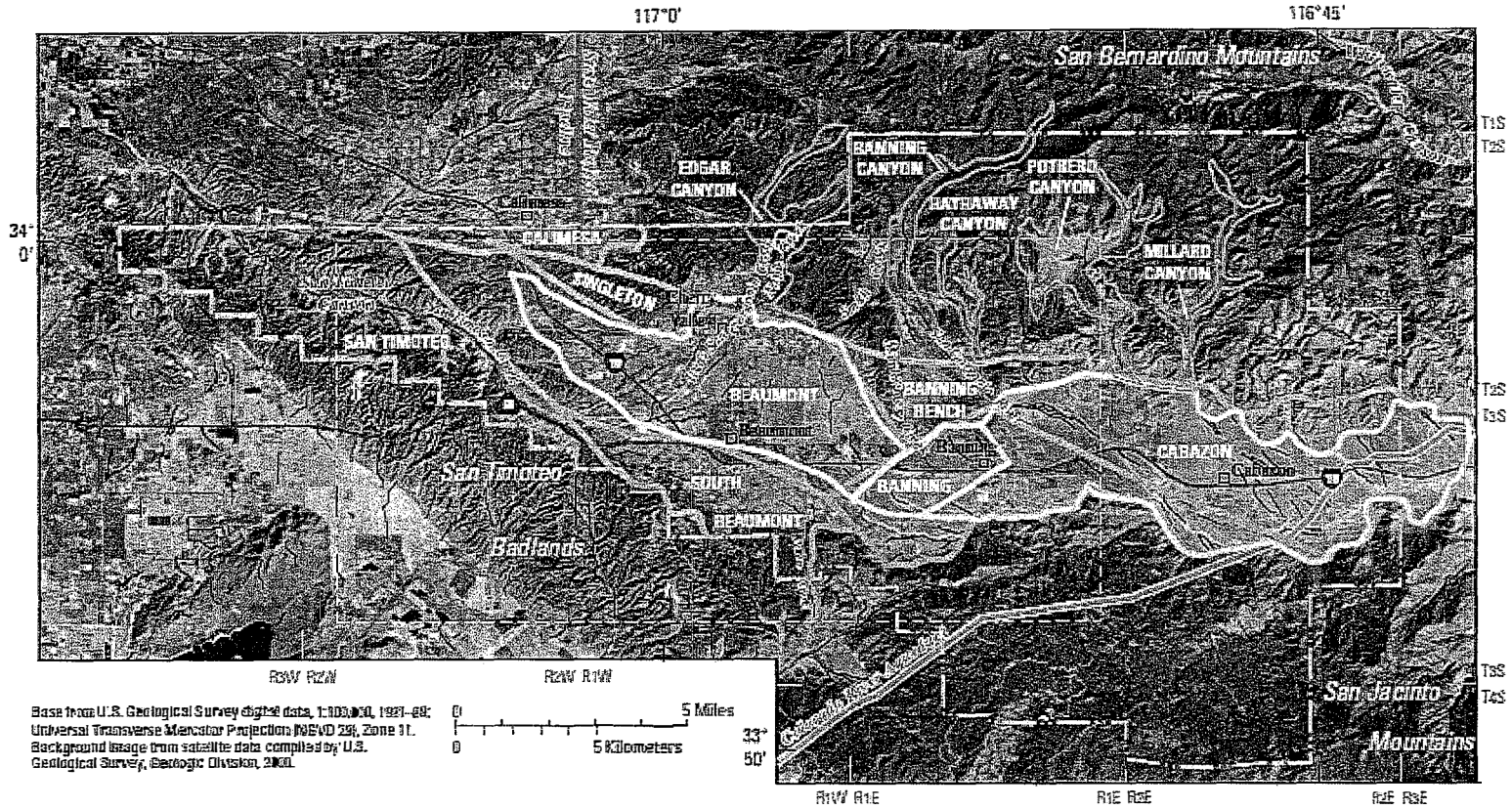
Albert A. WEBB Associates

Figure 1: San Gorgonio Pass Water Agency



62/84

Figure 2: Drainage Basins and Principal Streams



Base from U.S. Geological Survey digital data, 1:100,000, 1981–88; Universal Transverse Mercator Projection NAD 27, Zone 11. Background image from satellite data compiled by U.S. Geological Survey, Geologic Division, 2000.

EXPLANATION

- Study area boundary
- San Gorgonio Pass Water Agency boundary
- San Gorgonio Pass ground-water basin
- Storage unit boundary—Dashed where uncertain. Bloyd, 1971.
- Canyon storage unit boundary—Bloyd, 1971.
- Banning — Name of storage unit; Town or community and name
- River or creek
- Recharge pond—Along Little San Gorgonio Creek

Source USGS Scientific Investigations Report 2006-5026

Figure 3: Groundwater Storage Units

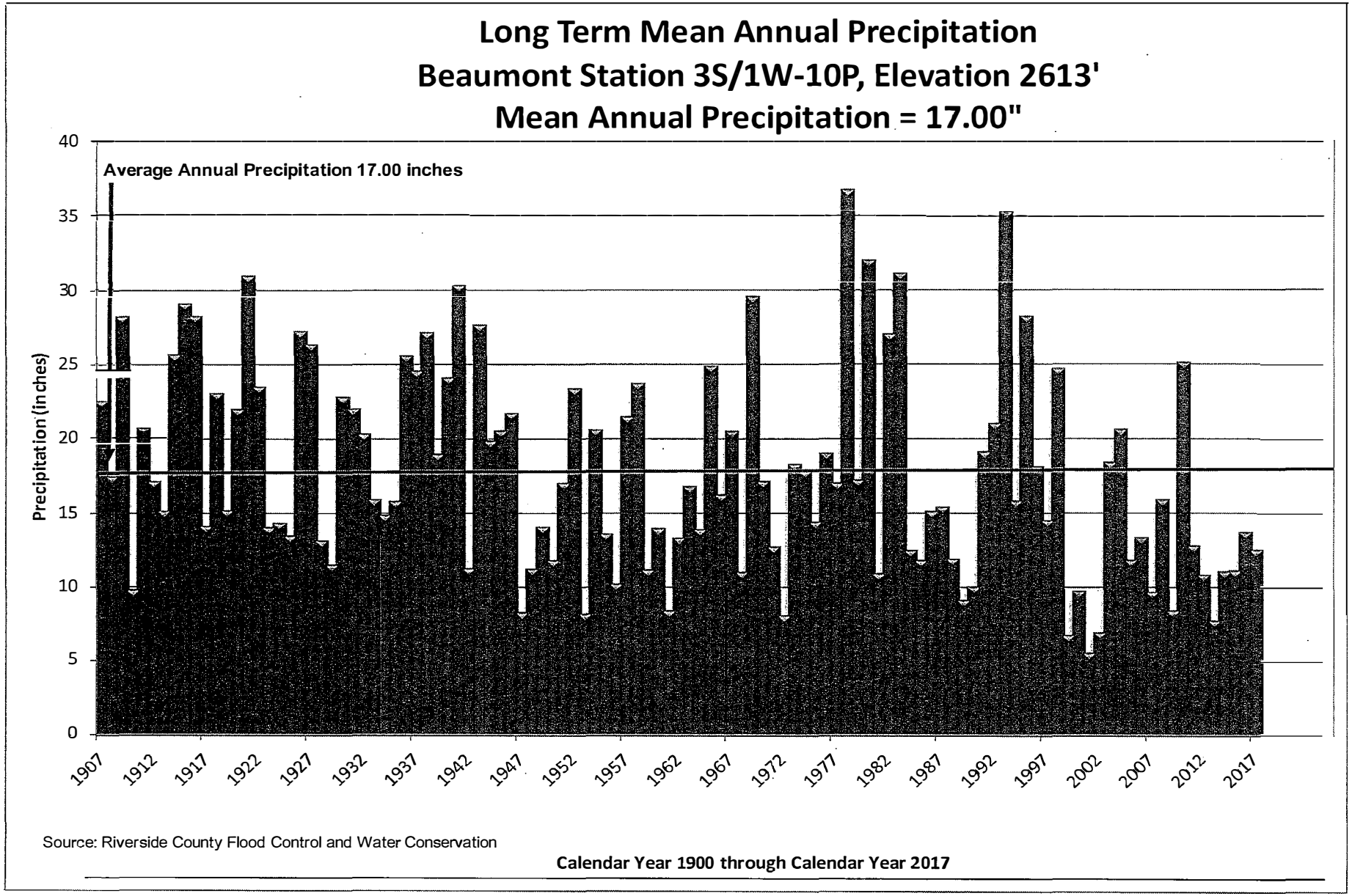


Figure 4: Long Term Mean Annual Precipitation at Beaumont

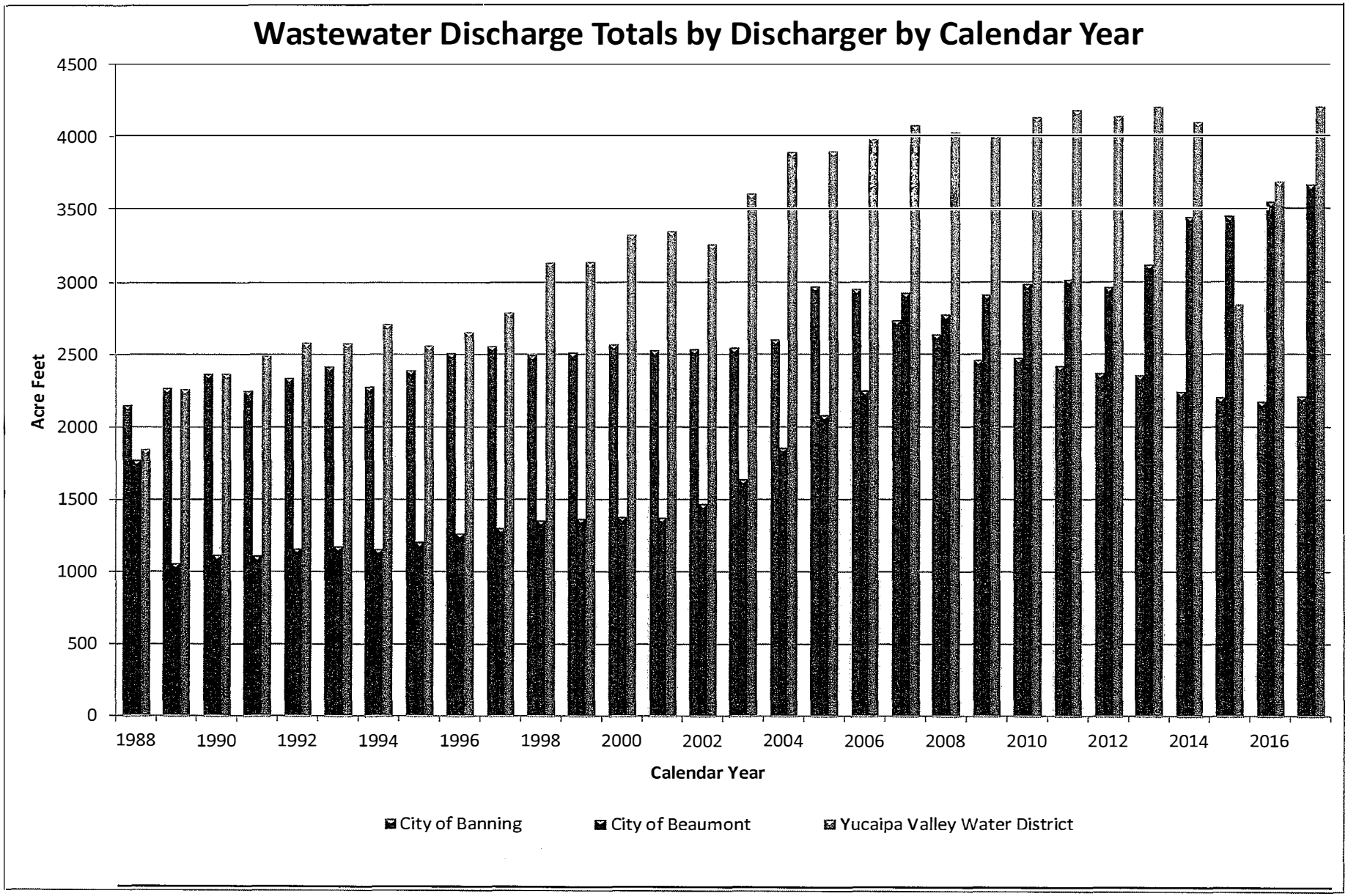


Figure 5: Wastewater Discharge Totals by Discharger by Calendar Year

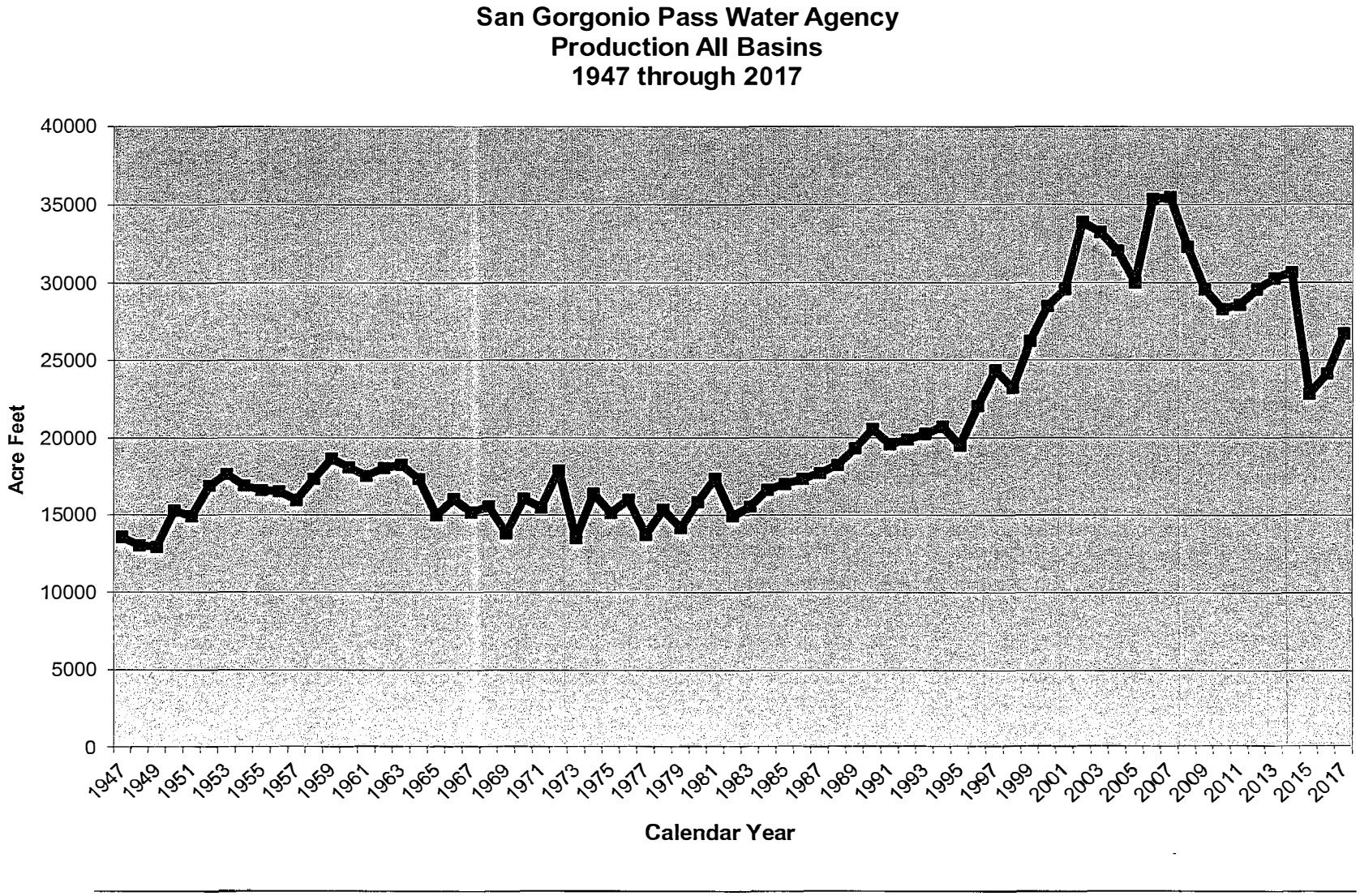


Figure 6: Historical Groundwater Production All Basins 1947 through 2017
(as reported)

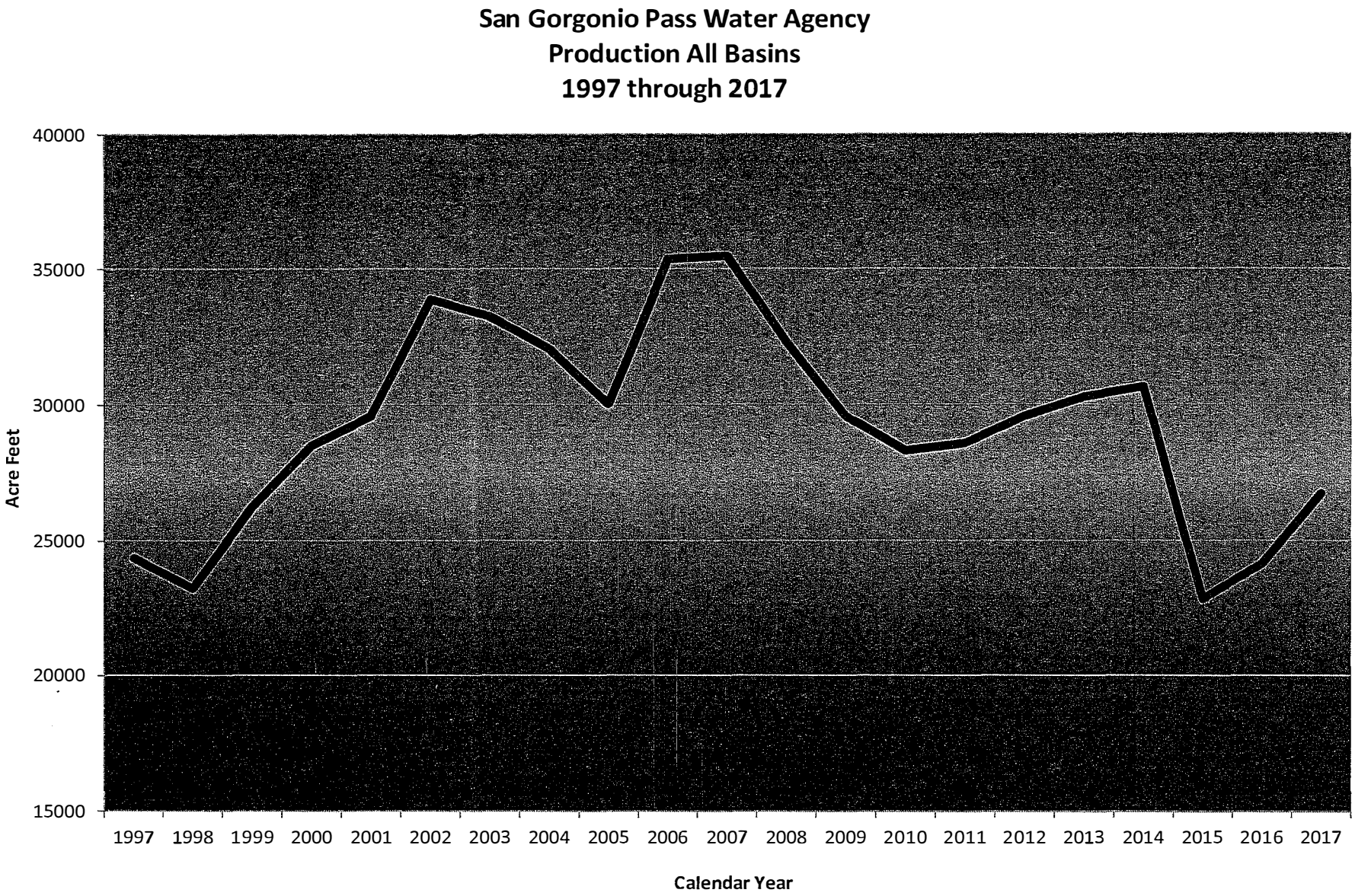


Figure 7: Historical Groundwater Production All Basins 1997 through 2017
(as reported)

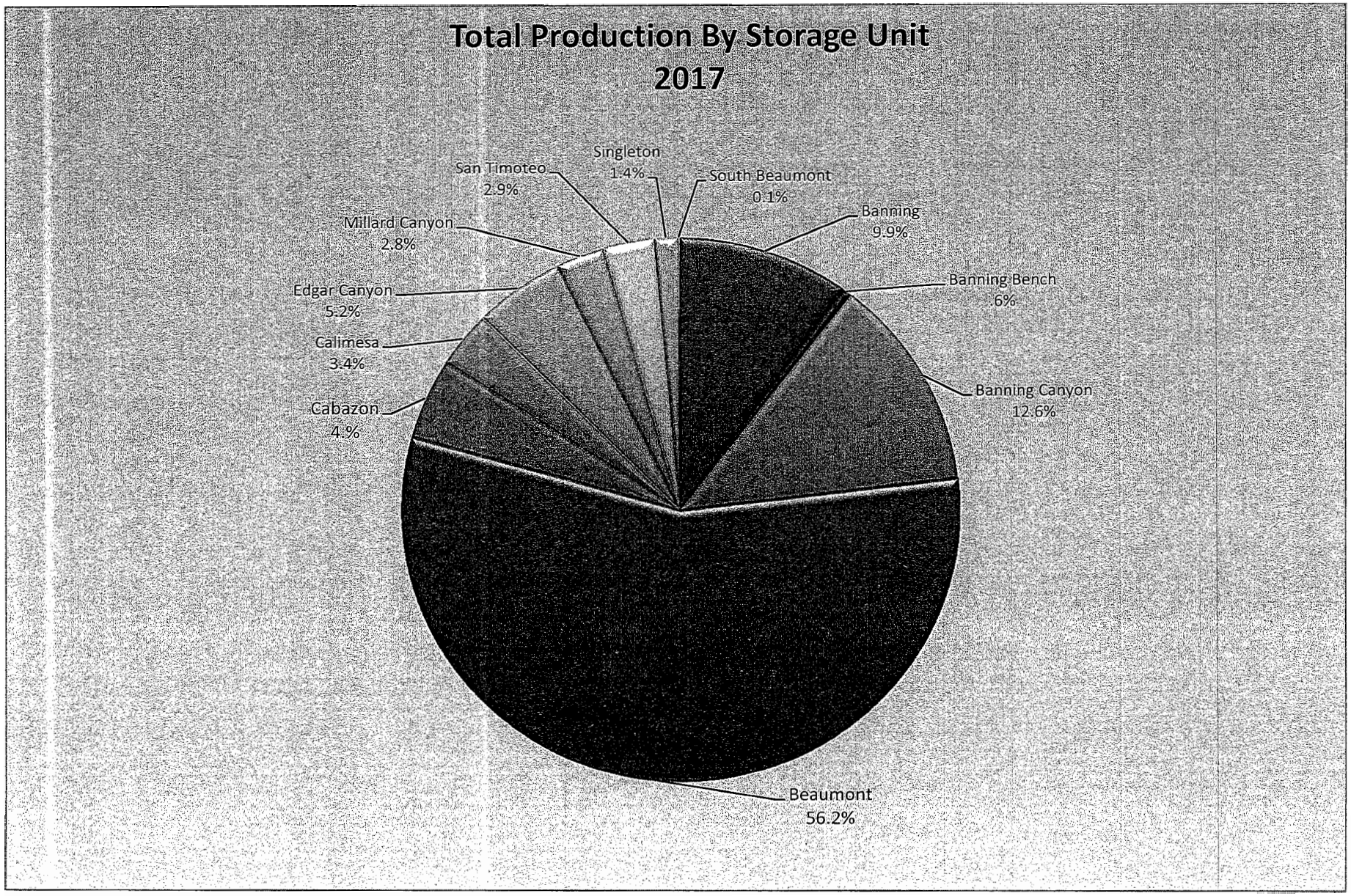


Figure 8: Total Production by Storage Unit in 2017 (as reported)

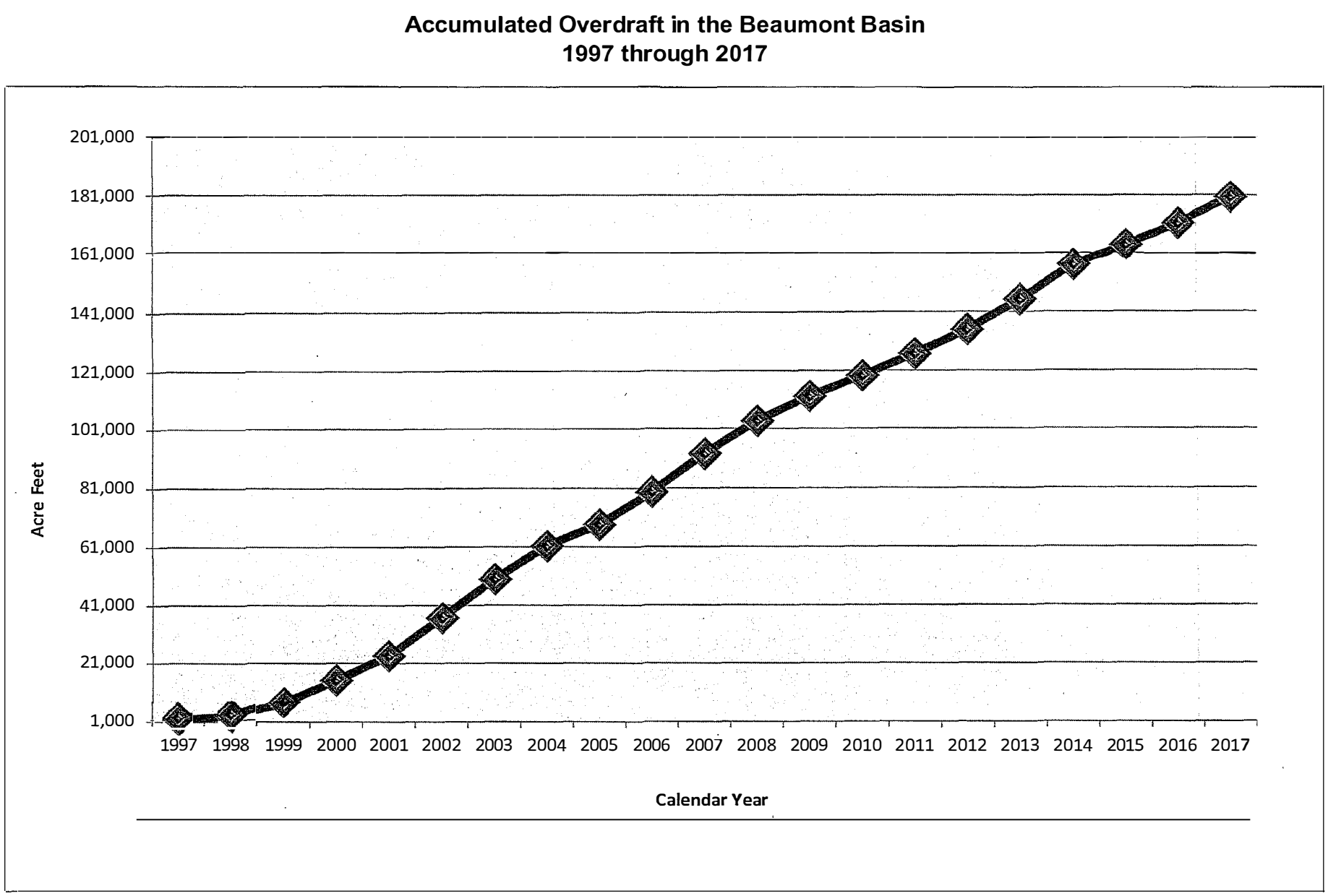


Figure 9a: Accumulated Overdraft in the Beaumont Basin 1997 through 2017

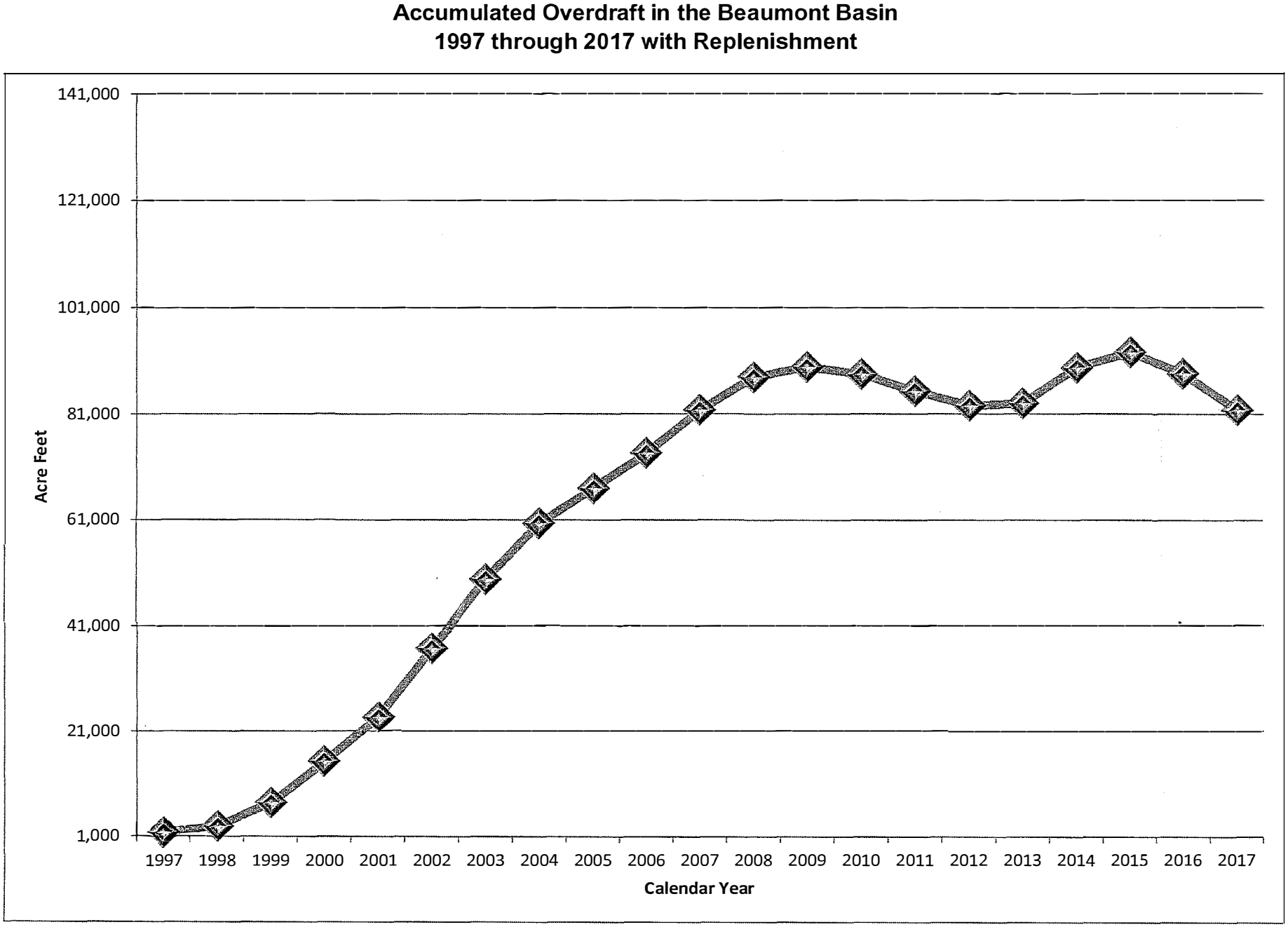
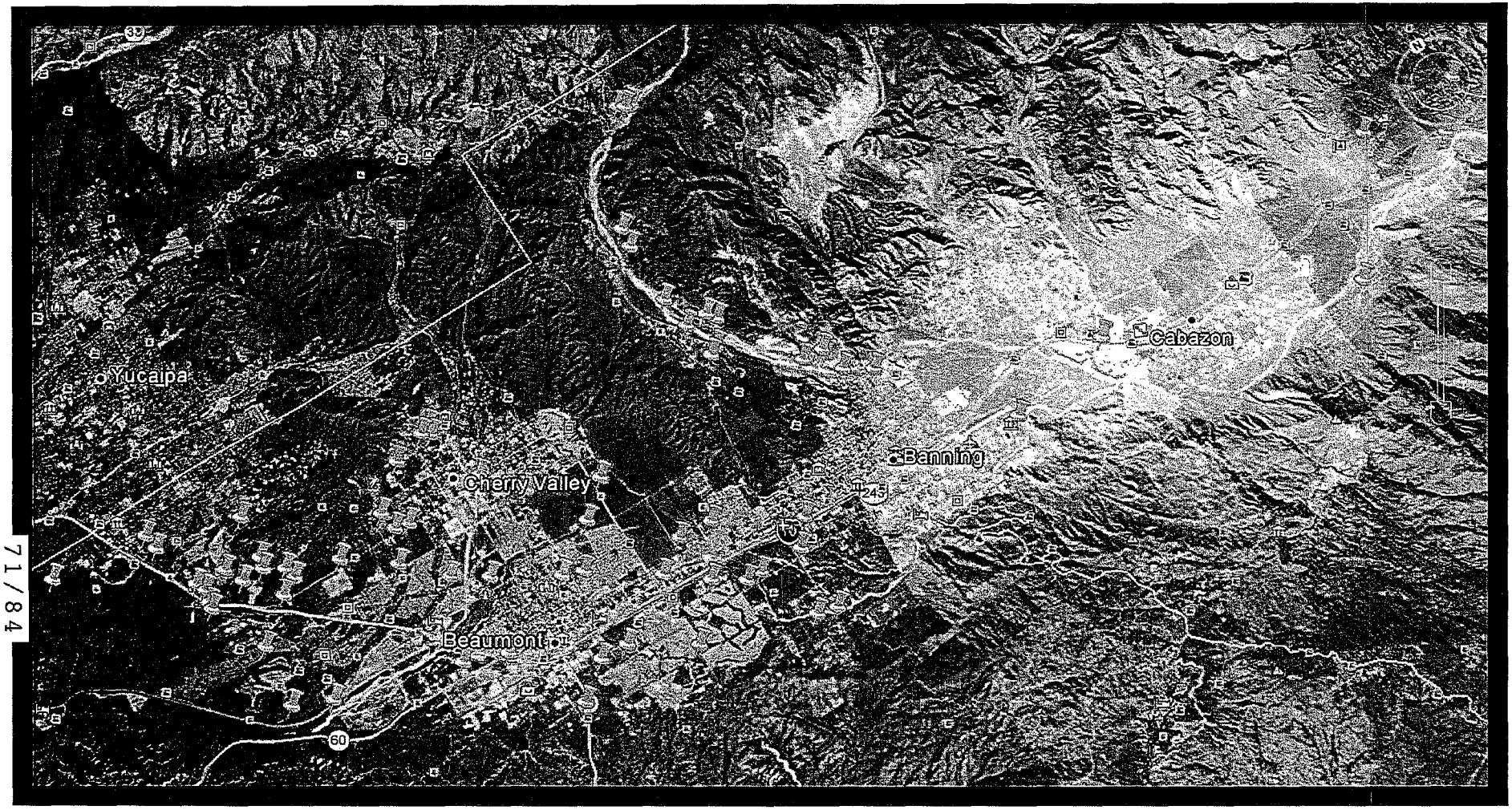


Figure 9b: Accumulated Overdraft in the Beaumont Basin 1997 through 2017 with Replenishment



SGPWA Monitoring Wells

Figure 10: San Gorgonio Pass Water Agency Monitoring Wells

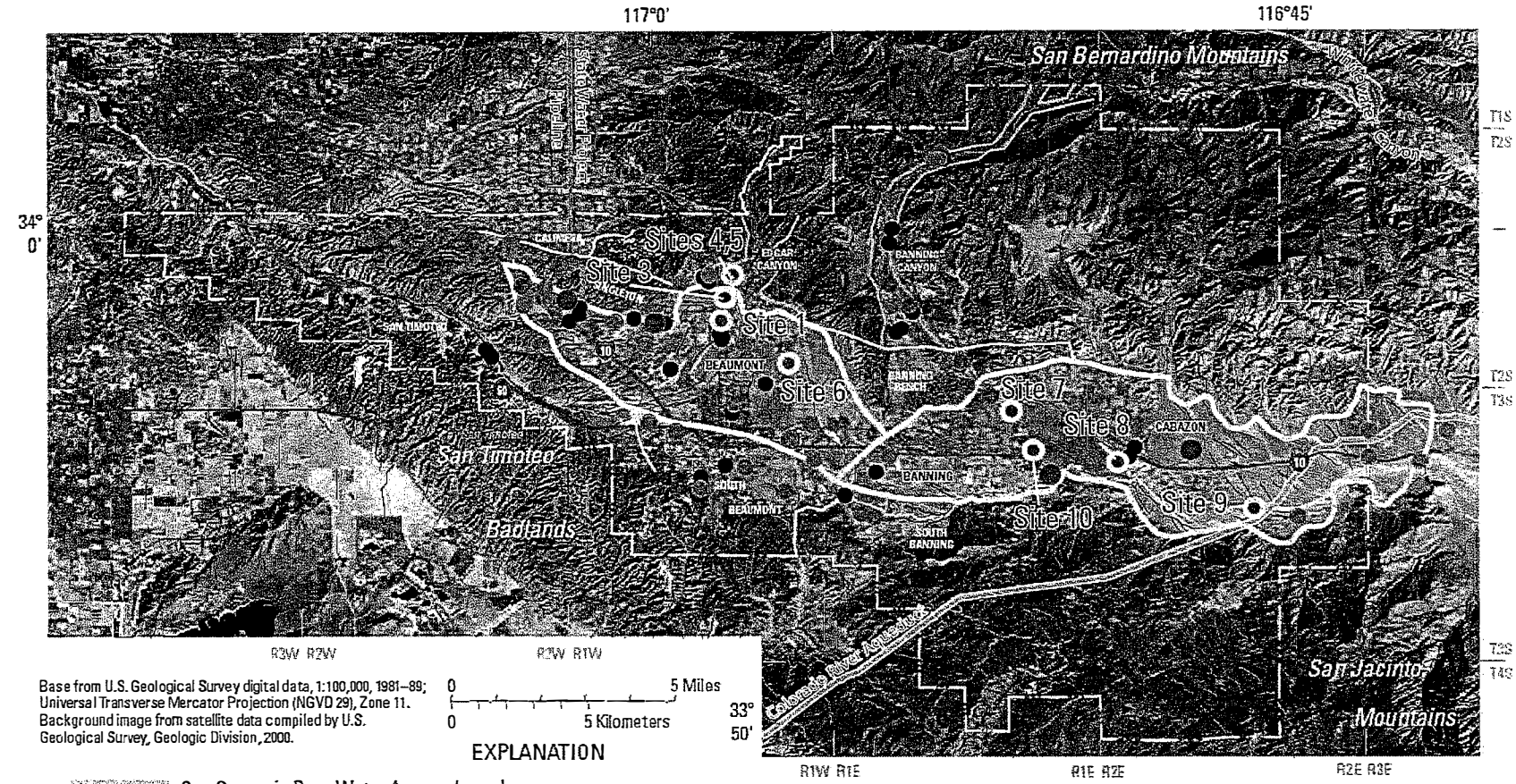
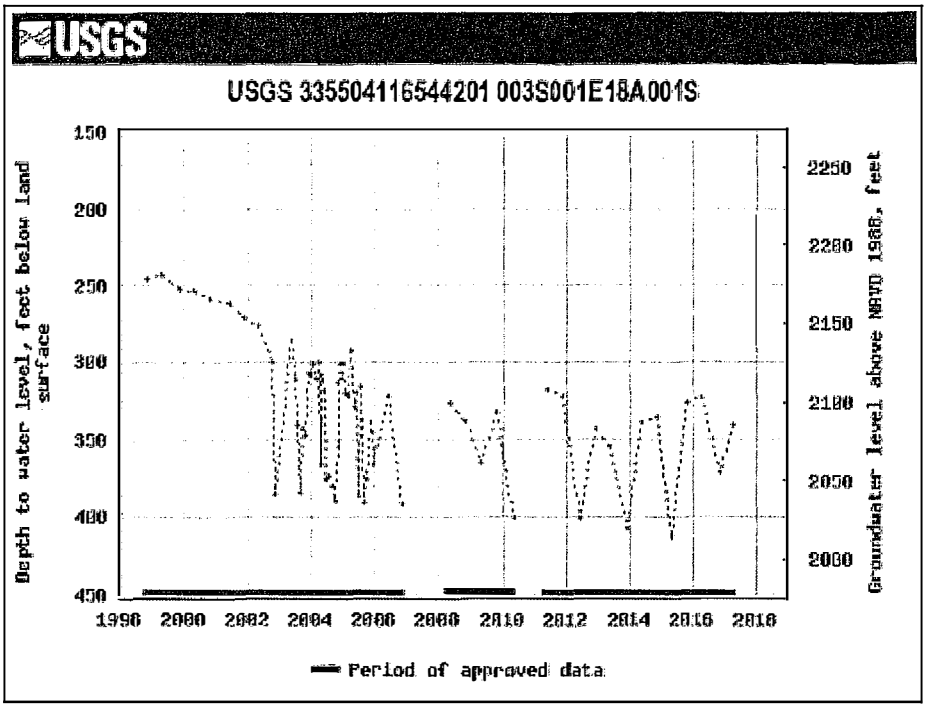


Figure 1. Map showing the water-level network and water-level change between fall 2017 and fall 2016 at selected wells.



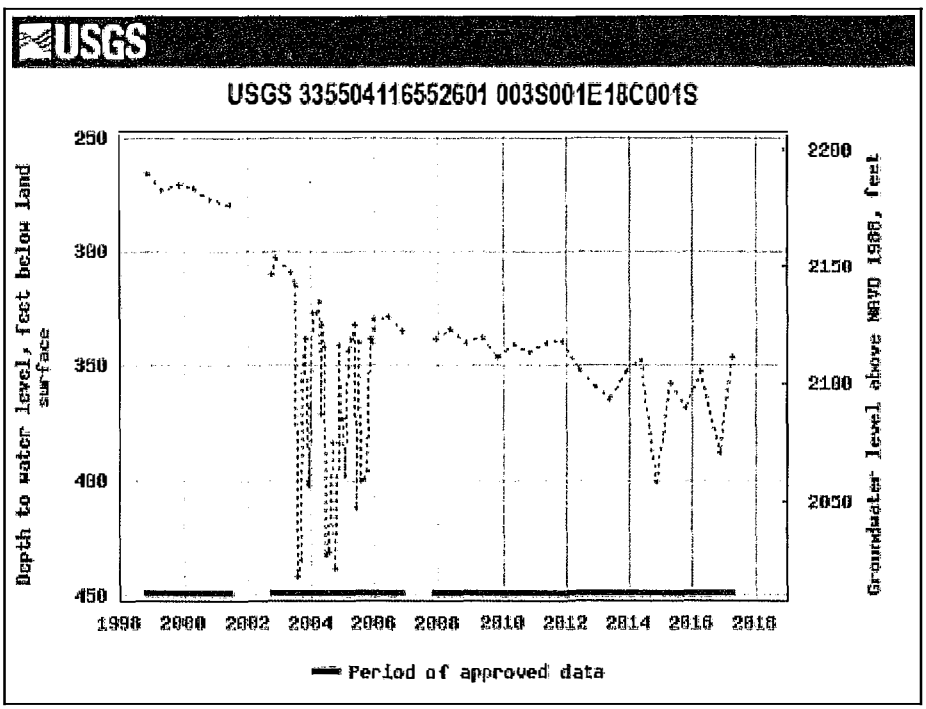
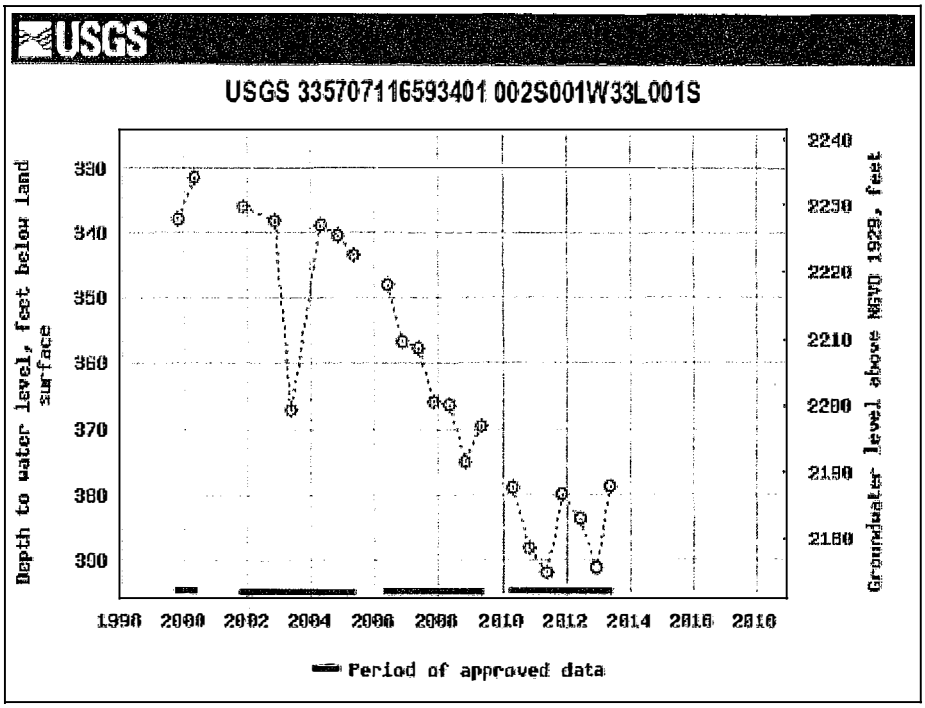


Figure 12: Groundwater Hydrographs – Banning Basin
3S/1E-18A0 7 3 / 8 4 '1E-18C01



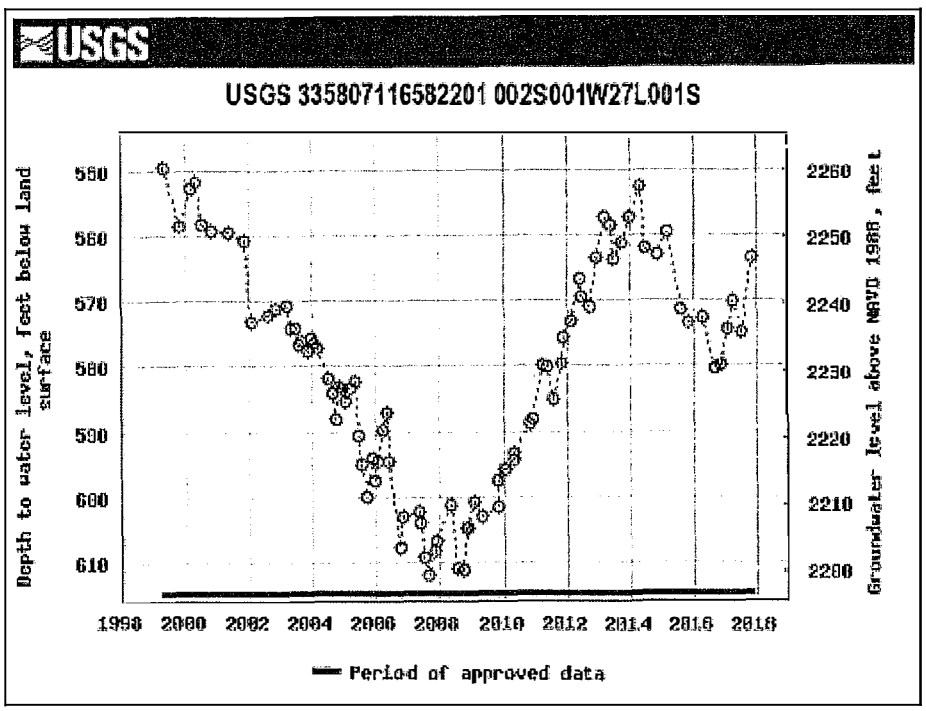


Figure 13: Groundwater Hydrographs – Beaumont Basin
2S/1W-33L0[illegible]/1W-27L01

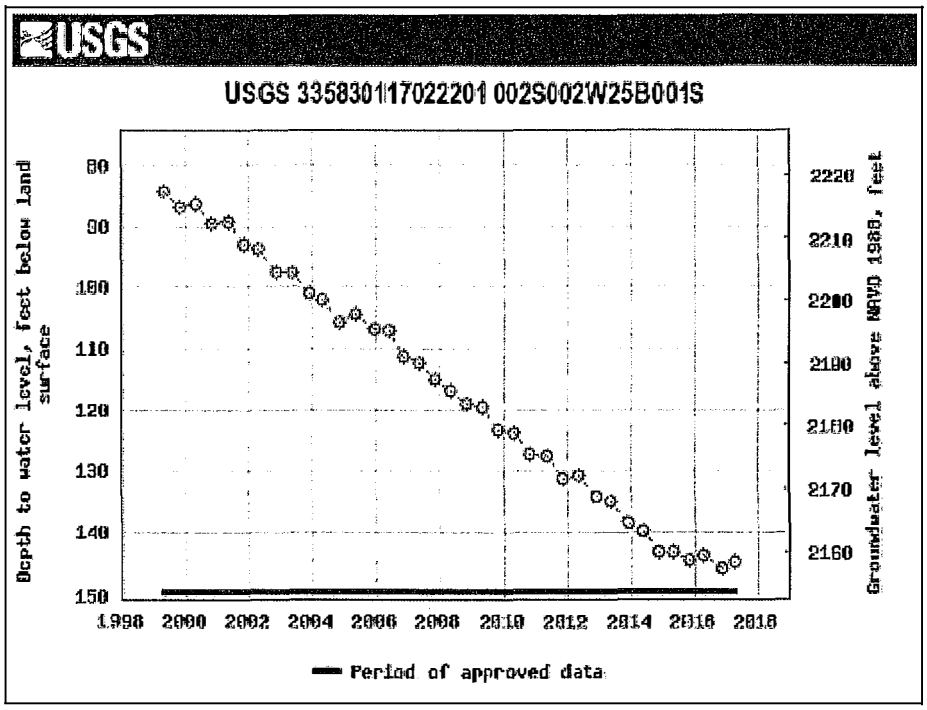
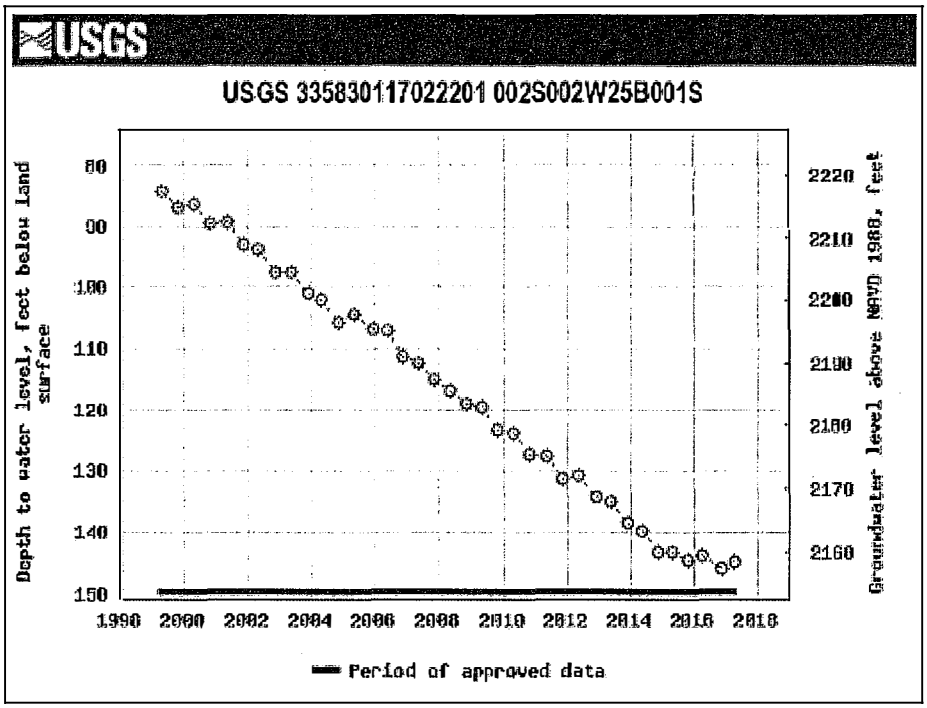


Figure 14: Groundwater Hydrographs – Beaumont Basin



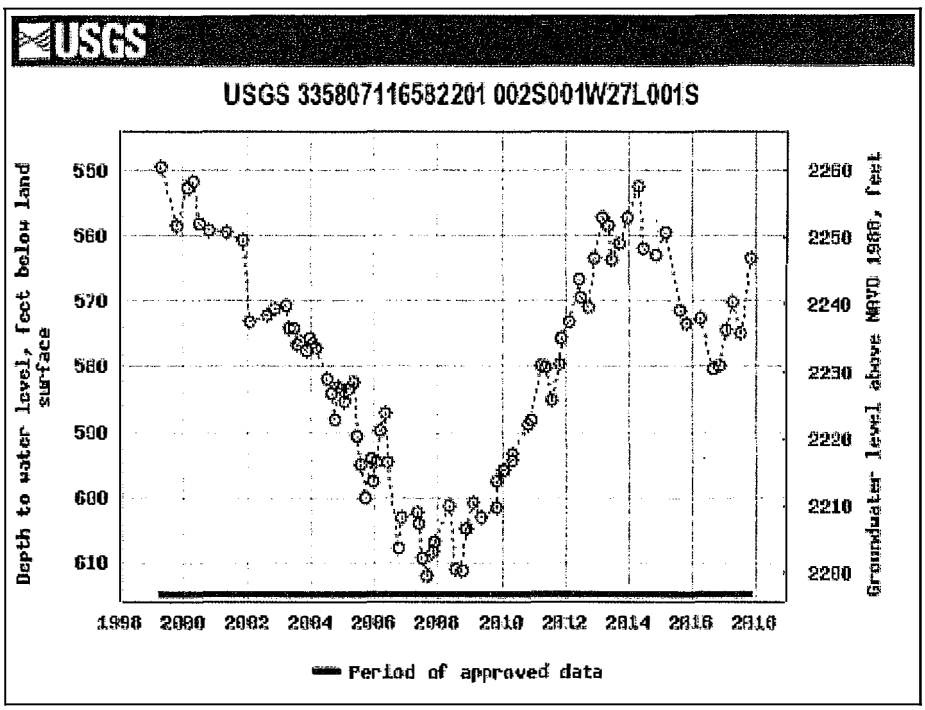
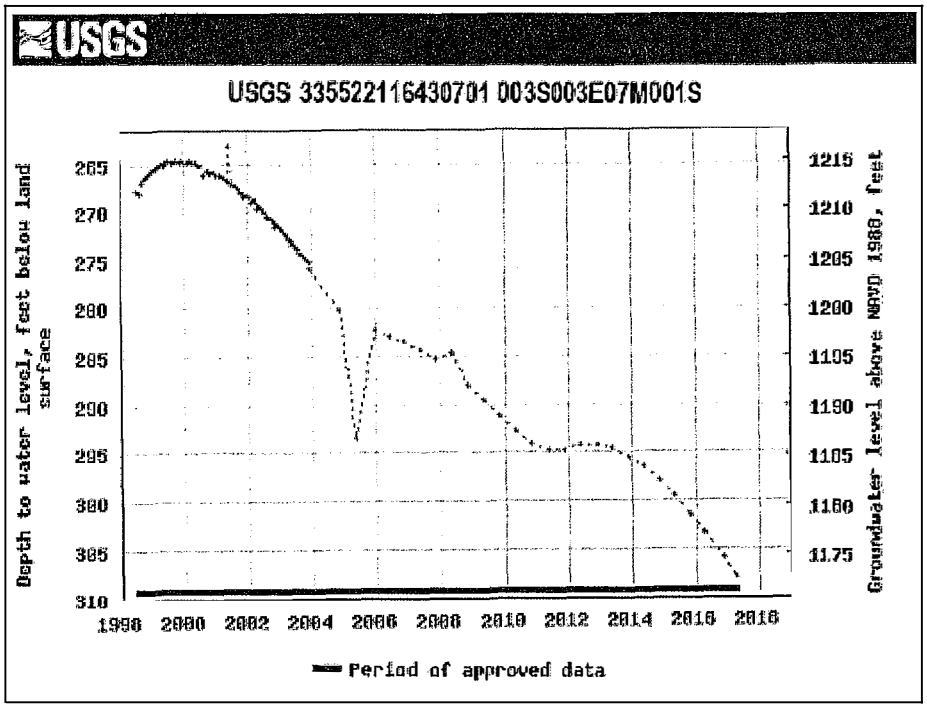


Figure 15: Groundwater Hydrographs – Beaumont Basin
2S/2W-25B0 76/84 1W-27L01



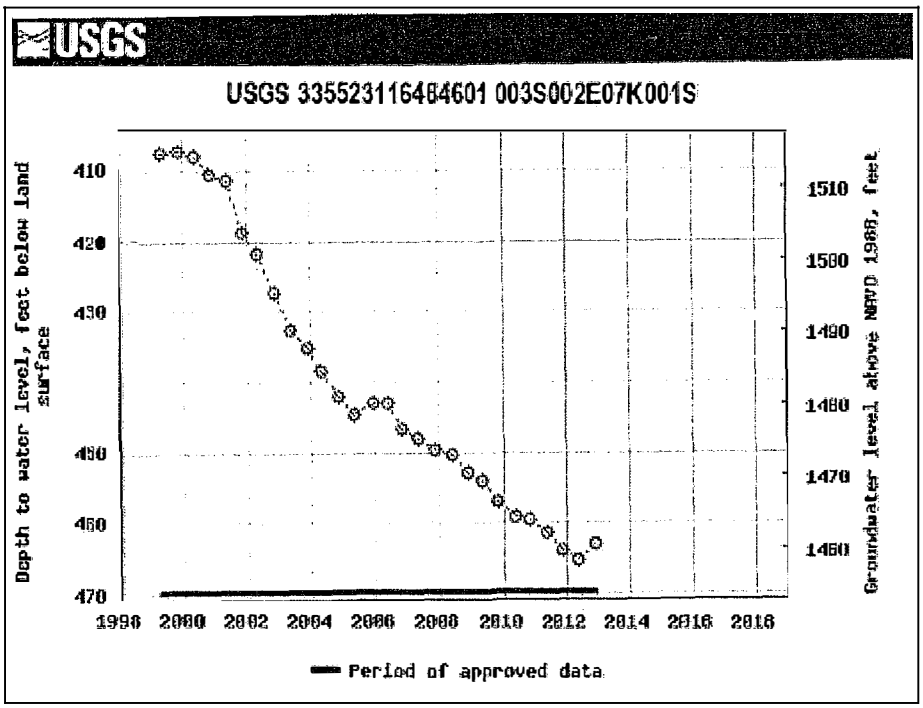
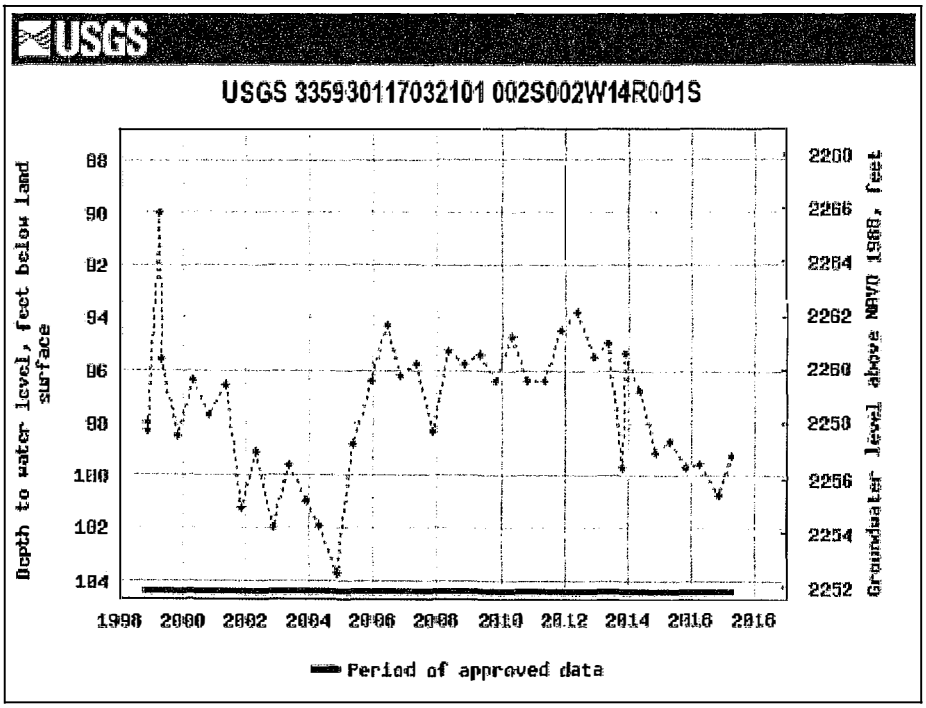


Figure 16: Groundwater Hydrographs – Cabazon Basin
3S/3E-07M01 and 3S/2E-07K01



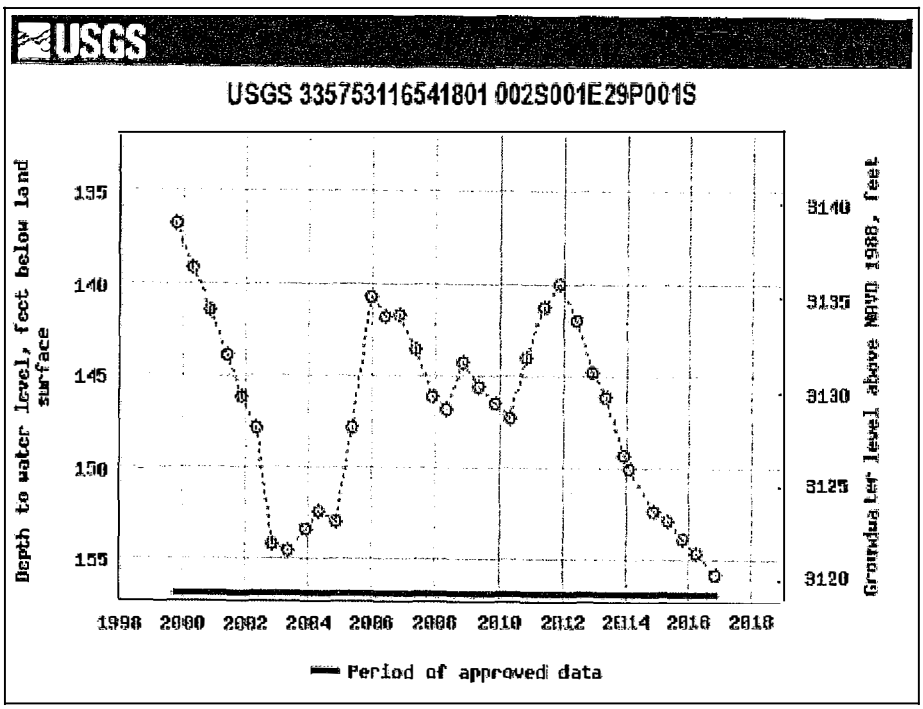


Figure 17: Groundwater Hydrographs – Calimesa and Banning Canyon Basins 2S/2W-14R01 and 2S/1E-29P01

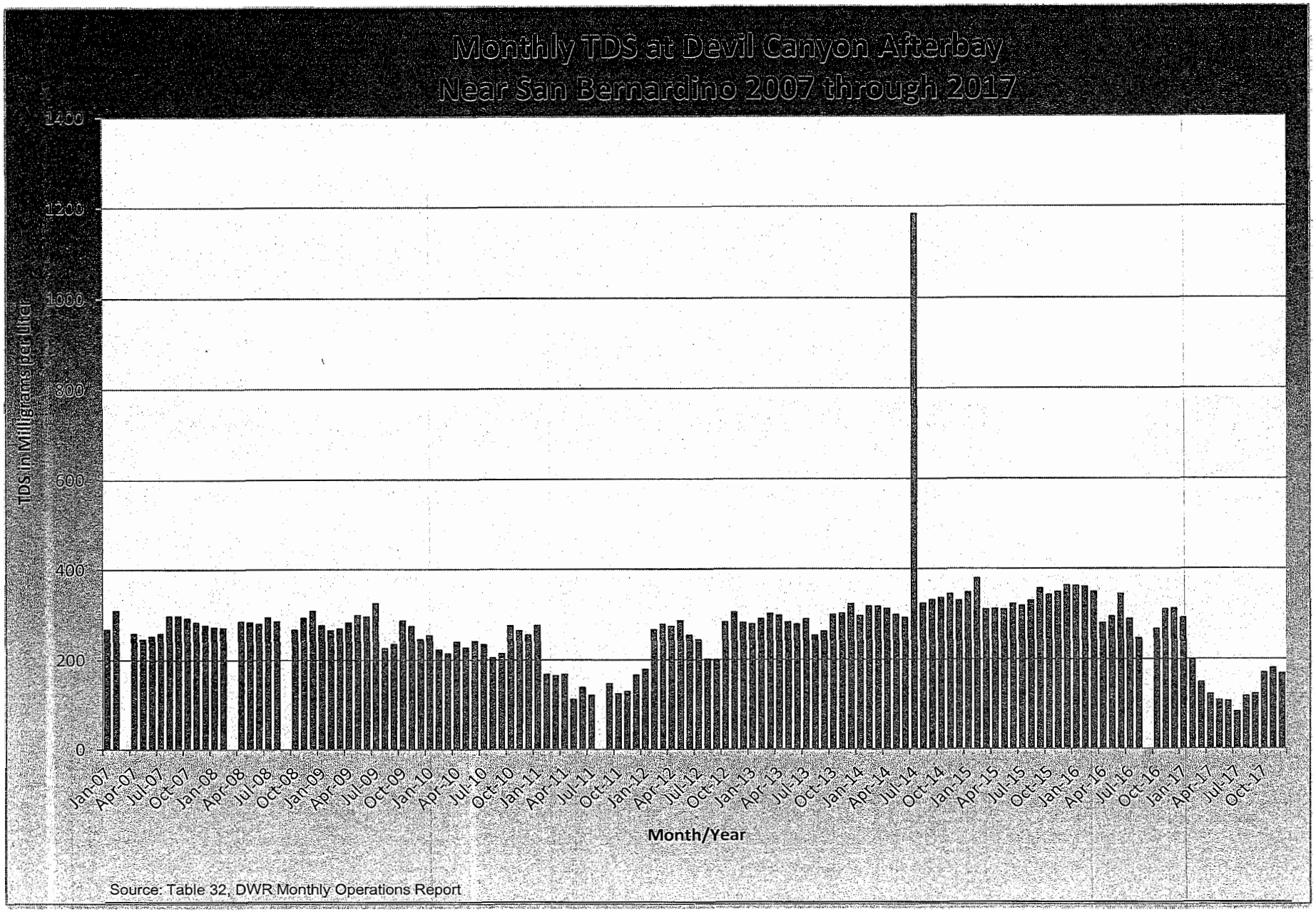


Figure 18: Monthly TDS at Devil Canyon Afterbay near San Bernardino 2007 through 2017

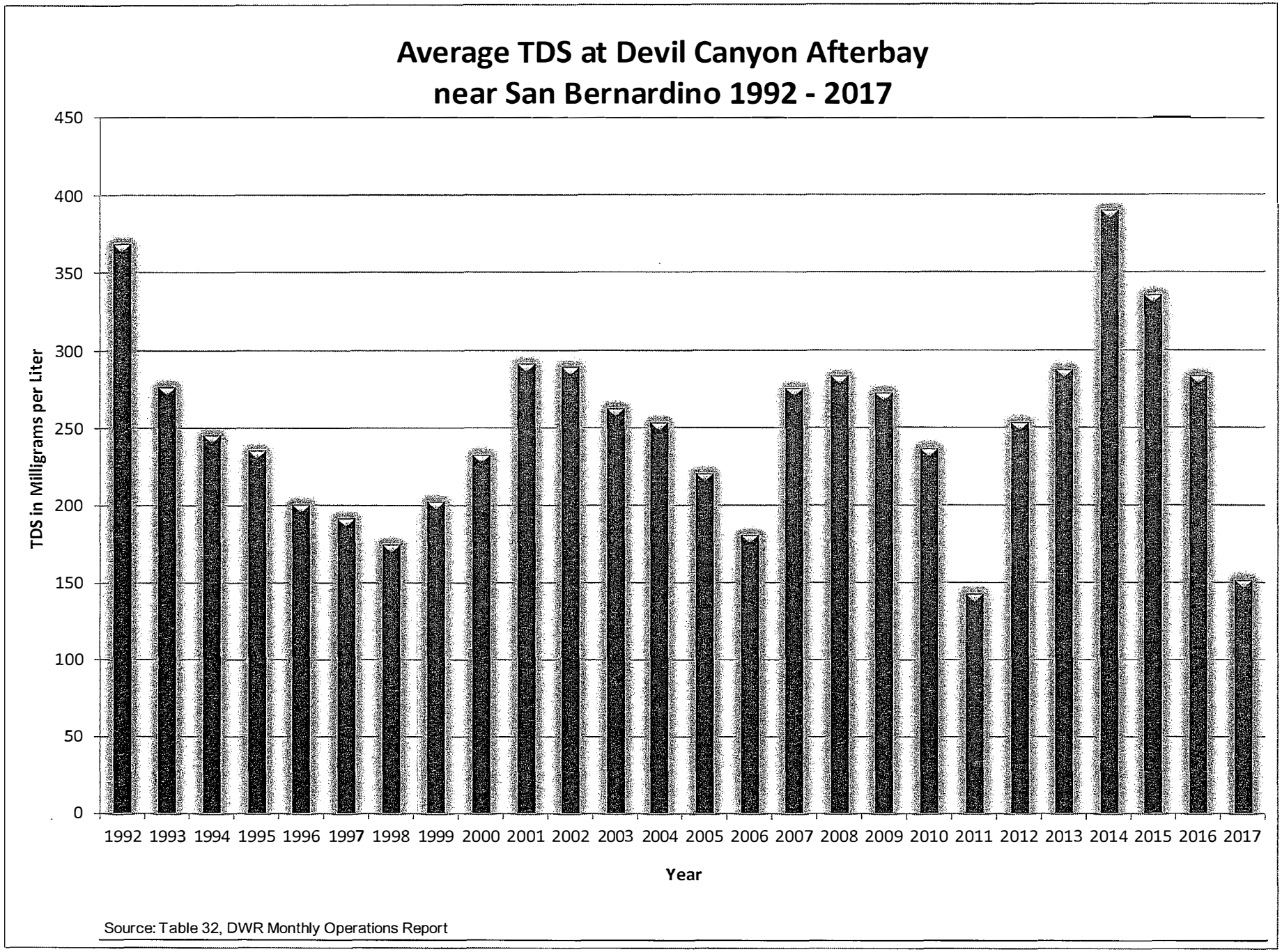


Figure 19: Average TDS at Devil Danyon Afterbay near San Bernardino 1992 through 2017

San Gorgonio Pass Subbasin
Groundwater Sustainability Plan Working Group

Rules of Conduct

I. Purpose

Pursuant to the 2017 "Memorandum of Agreement to form a Groundwater Sustainability Agency for a Portion of the San Gorgonio Pass Subbasin and to Coordinate with Other Groundwater Sustainability Agencies" ("MOA"), the San Gorgonio Pass Water Agency (SGPWA), Cabazon Water District, City of Banning, and Banning Heights Mutual Water Company (collectively, the San Gorgonio Pass Sustainable Water Agency or SGP-GSA), Mission Springs Water District (together with the SGPWA, the Verbenia SGA) and Desert Water Agency Sustainable Groundwater Agency (DWA GSA) have agreed to work together to develop a single groundwater sustainability plan (GSP) for the San Gorgonio Pass groundwater subbasin (Basin). Pursuant to the MOA, each member agency of each GSA has named a principal contact to coordinate with the representatives of the other member agencies to undertake the activities necessary to develop the GSP for the Basin. These representatives shall be known as the Groundwater Sustainability Plan Working Group (GSP Working Group).

The purpose of the GSP Working Group is to develop a groundwater sustainability plan for the sustainable management of the Basin, in accordance with the requirements of the Sustainable Groundwater Management Act, to be submitted to the governing boards of the member agencies of the GSAs for approval and adoption.

These Rules of Conduct set forth the rules the GSP Working Group members agree to follow for:

- Ensuring stakeholder engagement in the process of developing the GSP;
- Reaching consensus on issues relevant to GSP development;
- Finalizing a GSP for submission to the governing boards of the GSA member agencies for approval and adoption.

II. Roles and Responsibilities

A. The GSA Member Agencies

The member agencies of the SGP-GSA, the Verbenia GSA and DWA GSA shall make the final decision whether to adopt the GSP prepared by the GSP Working Group for the Basin or, in case of disagreement, as to their respective portions of the Basin. The GSA member agencies have the discretion to delegate to their designated representatives to the GSP Working Group any other decision-making authority as each deems appropriate.

B. GSP Working Group

The GSP Working Group is composed of representatives of the GSA member agencies for the purpose of conducting the day-to-day work of developing in the GSP. The representatives of the GSP Working Group may make certain decisions to advance the preparation of the GSP.

Tasks to be undertaken by the GSP Working Group include, but are not necessarily limited to:

- Developing a cost-sharing agreement
- Selecting a consultant or consultants to prepare the GSP
- Overseeing preparation of the GSP
- Developing and maintaining a list of interested persons, pursuant to SGMA Section 10723.4
- Developing a stakeholder communications and engagement plan
- Creation and maintenance of a GSA website

III. Decision-Making

The GSP Working Group will be consensus-seeking and the members will strive to reach consensus on its recommendations to the GSA member agencies. Consensus may be in the form of strong support, neutrality, abstention, or acceptance without agreement (i.e., "I can live with this" or "I will let this go forward"). The members of the GSP Working Group commit to make every effort to reach consensus and to resolve disputes in a manner that achieves the best result for the Basin.

If members are unable to reach consensus on any issue, the dissenting member(s) shall provide a written alternative proposal five days in advance of the next designated meeting. The alternative written proposal shall be designed to achieve the same or substantially the same goals and outcomes as the original proposal, or resolve the issue(s) in dispute, which if implemented would allow the GSP Working Group to move forward. If more than one member dissents, the dissenting members should work together to present an alternative proposal. This does not preclude any member from presenting an independent position.

If consensus cannot be reached, the members may utilize alternative dispute resolution procedures, including but not necessarily limited to retention of an independent facilitator, to try to resolve the issue.

The members agree that the entity or entities acting as the GSA for each management area, as those are defined by the GSP, shall have final decision-making authority over those portions of the GSP related to the applicable management area.

IV. New Members

Any new member to any GSA that becomes a participant in the GSP Working Group agrees to abide by any and all decisions reached prior to the new member's admission to the GSP Working Group.

V. Stakeholder Engagement/Public Participation

The GSP Working Group will periodically hold meeting meetings to which members of the public will be invited to attend and will be encouraged to actively participate. The purpose of the public meetings will be to inform the public of the progress in the development of the GSP and to solicit public feedback and input on the same.

A. Notices of the meetings and meeting agendas will be posted on the GSA website no less than three days before the meeting.

B. The GSP Working Group will actively solicit the participation of stakeholder groups. A list of interested persons will be maintained and meeting notices will be sent directly via email communication to any interested persons who request such notice.

In addition to public meetings, the GSP Working Group may periodically meet with discrete stakeholder groups to solicit input to assist in the development of the GSP.

VI. Process Agreements

In order to ensure a successful process, all GSP Working Group members agree to the procedures that the GSP Working Group will use, as well as the following ground rules:

- Everyone agrees to participate in good faith.
- Everyone agrees to address the issues and concerns of the participants and strive to reach agreement and resolve disagreements.
- Everyone agrees to attend and participate fully in all meetings, to the extent possible.

VII. Participation Agreements

The GSP Working Group members agree to work together to create a problem-solving environment and agree to the following ground rules:

- Use common courtesy
- All ideas and points of view have value and will be respected
- Be honest, fair and candid
- Avoid editorials
- Honor time and be concise
- Think innovatively and welcome new ideas
- Invite humor and good will

The undersigned, on behalf of their respective entities, agree to abide by these Rules of Conduct.

San Gorgonia Pass Water Agency

_____
Signature

_____
Title

Cabazon Water District

_____
Signature

_____
Title

City of Banning

_____
Signature

_____
Title

Banning Heights Mutual Water Company

_____
Signature

_____
Title

Desert Water Agency

_____
Signature

_____
Title

Mission Springs Water District

_____
Signature

_____
Title