

Beaumont Basin Watermaster

2013 Annual Report

DRAFT

2013 Watermaster Board

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George Jorritsma, South Mesa Water Company, **Vice Chairman**

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Joseph Zoba, Yucaipa Valley Water District, **Treasurer**

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Alvarado Smith, **Legal Counsel**

ALDA Inc. in Association with Thomas Harder & Company, **Engineering**

Rogers, Anderson, Malody, and Scott. LLP, **Financial Auditors**

August 2014

ALDA Inc.

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August 6, 2014

Duane Burk, Chairman
Beaumont Basin Watermaster
560 Magnolia Avenue
Beaumont, CA 92223

Subject: **Beaumont Basin Watermaster
Draft Annual Report for Calendar Year 2013**

Dear Mr. Burk:

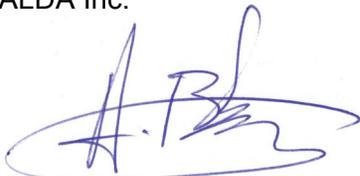
ALDA Inc., in association with Thomas Harder & Co. is pleased to submit to you, as Chairman of the Beaumont Basin Watermaster, the Beaumont Basin Watermaster Annual Report for Calendar Year 2013. This draft report expands on the earlier format of the annual report by incorporating information previously presented in the biannual Engineering Report. As such, this Annual Report summarizes all production, spreading, and storage activities that took place during calendar year 2013. Further, it documents changes in water levels and storage conditions, as well as, an estimate of the Basin Operating Safe Yield for 2013. Finally, the report presents an evaluation of water quality conditions for the 2009-2013 five year period.

We will make a formal presentation to the Watermaster Committee during the upcoming Board meeting on August 6th, 2014. We welcome your review and comments on this report and look forward to answering any questions you may have.

Should you have any questions on this matter, please contact us at 909-587-9916 during normal business hours.

Very truly yours

ALDA Inc.



F. Anibal Blandon, P.E.
Principal

Table of Contents

Section 1 Background	1-1
1.1 History of the Beaumont Basin Stipulated Judgment	1-1
1.2 Essential Elements of the Judgment	1-2
1.3 Watermaster Responsibilities	1-3
1.4 Watermaster Address	1-4
1.5 Watermaster Website	1-4
1.6 Mission Statement	1-5
Section 2 Watermaster Activities	2-1
2.1 Makeup of the Board	2-1
2.2 Watermaster Accomplishments and Activities During 2013	2-1
2.2.1 Watermaster Meetings	2-1
2.2.2 Watermaster Committee Resolutions	2-2
2.2.3 Items Discussed in 2013	2-2
2.2.4 Redetermination of Safe Yield	2-5
2.3 Storage Applications and Agreements	2-5
2.4 Rules and Regulations	2-6
2.5 Active Party List	2-6
2.6 Financial Management	2-6
2.6.1 Budget	2-6
2.6.2 Financial Audit	2-7
Section 3 Status of the Basin and Administration of the Judgment	3-1
3.1 Climate, Hydrology and Hydrogeology	3-1
3.1.1 Climate	3-1
3.1.2 Surface Water Hydrology	3-2
3.1.3 Hydrogeology	3-2
3.1.3.1 <i>Regional Geologic Context</i>	3-2
3.1.3.2 <i>Faults</i>	3-2
3.1.3.3 <i>Groundwater Occurrence and Flow</i>	3-2
3.2 Production	3-3
3.2.1 Appropriative Party Production	3-3
3.2.2 Overlying Party Production	3-4
3.2.3 2003-2012 Annual Production Summary	3-5
3.3 Groundwater Recharge	3-5
3.3.1 State Water Project Water Recharge	3-6
3.3.2 Recycled Water Recharge	3-7
3.3.3 New Yield Stormwater Recharge	3-7
3.4 Water Transfers and Adjustments of Rights	3-7
3.4.1 Transfers between Appropriators	3-7

3.4.2	Transfers of Overlying Rights for Service by an Appropriator	3-8
3.4.3	Allocation of Unused Overlying Water.....	3-8
3.5	Storage Accounting	3-9
3.5.1	Annual Storage Consolidation.....	3-9
3.6	Changes in Groundwater Levels in the Beaumont Basin	3-10
3.6.1	Analysis of Groundwater Level Changes	3-10
3.6.2	Analysis of Change in Groundwater Storage	3-10
3.7	Operating Safe Yield	3-11
3.8	Recommendations	3-13
Section 4 Water Quality Conditions		4-1
4.1	Comparison with Management Zone Objectives.....	4-1
4.1.1	Total Dissolved Solids	4-1
4.1.2	Nitrate-Nitrogen.....	4-2
4.1.3	Nitrate Studies in the Beaumont Management Zone	4-2
4.2	Comparison with Federal and State Drinking Water Standards	4-5
4.2.1	Trace Metals.....	4-6
4.2.3	pH	4-8
4.2.4	Turbidity.....	4-8
Section 5 Land Subsidence		5-1

List of Figures

Figure 3-1	Historical Precipitation (1912-2011) at Beaumont Station 013.....	3-15
Figure 3-2	Geology of the Beaumont Basin.....	3-16
Figure 3-3	Appropriator and Overlyer Wells in the Beaumont Basin	3-17
Figure 3-4	Annual Groundwater Production in the Beaumont Basin (2003-13)	3-18
Figure 3-5	Groundwater Elevation Contours in the Beaumont Basin – Fall 2012	3-19
Figure 3-6	Groundwater Elevation Contours in the Beaumont Basin – Fall 2013	3-20
Figure 3-7	Change in Groundwater Elevation - 2012-2013	3-21
Figure 3-8	Groundwater Level Trends at Key Wells.....	3-22
Figure 4-1	Wells with Water Quality Data in the Beaumont Basin.....	4-9
Figure 4-2	Total Dissolved Solids in Groundwater (Max Concentrations 2009 to 2013	4-10
Figure 4-3	Nitrate as N in Groundwater (Max Concentrations 2009 to 2013.....	4-11

List of Tables

Table 3-1A	Appropriator Producer Production Summary for CY 2003	3-23
Table 3-1B	Appropriator Producer Production Summary for CY 2004	3-24
Table 3-1C	Appropriator Producer Production Summary for CY 2005	3-25
Table 3-1D	Appropriator Producer Production Summary for CY 2006	3-26
Table 3-1E	Appropriator Producer Production Summary for CY 2007	3-27
Table 3-1F	Appropriator Producer Production Summary for CY 2008	3-28
Table 3-1G	Appropriator Producer Production Summary for CY 2009	3-29
Table 3-1H	Appropriator Producer Production Summary for CY 2010	3-30
Table 3-1I	Appropriator Producer Production Summary for CY 2011	3-31
Table 3-1J	Appropriator Producer Production Summary for CY 2011	3-32
Table 3-1K	Appropriator Producer Production Summary for CY 2011	3-33
Table 3-2A	Overlying Producer Production Summary for CY 2003.....	3-34
Table 3-2B	Overlying Producer Production Summary for CY 2004.....	3-35
Table 3-2C	Overlying Producer Production Summary for CY 2005.....	3-36

Table 3-2D	Overlying Producer Production Summary for CY 2006	3-37
Table 3-2E	Overlying Producer Production Summary for CY 2007	3-38
Table 3-2F	Overlying Producer Production Summary for CY 2008	3-39
Table 3-2G	Overlying Producer Production Summary for CY 2009	3-40
Table 3-2H	Overlying Producer Production Summary for CY 2010	3-41
Table 3-2I	Overlying Producer Production Summary for CY 2011	3-42
Table 3-2J	Overlying Producer Production Summary for CY 2012	3-43
Table 3-2K	Overlying Producer Production Summary for CY 2012	3-44
Table 3-3	Production Summary for Appropriator and Overlying Producers in the Beaumont Basin for Calendar Year 2013.....	3-45
Table 3-4	Annual Supplemental Recharge to the Beaumont Basin: Calendar Years 2003 through 2013	3-46
Table 3-5	City of Beaumont Recycled Water Deliveries to DP-001 and DP-007	3-47
Table 3-6	Summary of Unused Overlying Water: Calendar Years 2003 through 2013....	3-48
Table 3-7	Allocation of Unused Overlying Water: Calendar Years 2008 through 2018....	3-48
Table 3-8	Consolidation of Appropriator Production and Storage Accounts - Calendar Years 2003 through 2013	3-49

Appendices

- Appendix A Active and Interested Party List
- Appendix B FY 2010-11 Audit Letter
- Appendix C Production Estimation Methods for Unmetered Overlying Producers
- Appendix D Water Quality Analysis Summary (2009-2013) for Drinking Water Production Wells

Abbreviations

ac-ft	acre-feet
ac-ft/yr	acre-feet per year
Banning	City of Banning
Basin	Beaumont Basin
BCVWD	Beaumont-Cherry Valley Water District
Beaumont	City of Beaumont
CY	calendar year
du	dwelling unit
FY	fiscal year
IRWMP	Integrated Regional Water Management Program
Pass Agency	San Gorgonio Pass Water Agency
SMWC	South Mesa Water Company
STWMA	San Timoteo Watershed Management Authority
STWMP	San Timoteo Watershed Management Program
SWP	State Water Project
Watermaster	Beaumont Basin Watermaster Committee
YVWD	Yucaipa Valley Water District

Section 1

Background

The Tenth Annual Report of the Beaumont Basin Watermaster Committee (Watermaster) consolidates the information about the basin previously presented in Annual Reports with the information presented in the bi-annual Engineer's Report. Section 3 of the original annual report has been expanded and retitled as "Status of the Basin" to document the Administration of the Judgment as well as to provide an status of conditions in the basin addressing water production, water levels, and storage activities. In addition, a Water Quality section has been added to document historical water quality of selected compounds at selected wells, as well as, basin wide concentrations.

1.1 History of the Beaumont Basin Stipulated Judgment

In January 2001, the City of Beaumont (Beaumont), the Beaumont-Cherry Valley Water District (BCVWD), the South Mesa Water Company (SMWC), and the Yucaipa Valley Water District (YVWD) formed the San Timoteo Watershed Management Authority (STWMA). One of the initial tasks of STWMA was to develop a watershed-wide program to develop and implement a comprehensive management program for the San Timoteo watershed.

Phase I of the management program, documented in the San Timoteo Watershed Management Program, Phase I Report (WEI, 2002), included the following goals:

- Enhancing water supplies
- Protecting and enhancing water quality
- Optimizing the management of STWMA area groundwater basins
- Protecting riparian habitat in San Timoteo Creek and protecting/enhancing habitat in the STWMA area
- Equitably distributing the benefits and costs of developing the Integrated Regional Watershed Management Program for the San Timoteo watershed

One of the elements identified in the management plan to achieve the listed goals consisted in the establishment of a groundwater management entity for the Beaumont Basin. As a result of this initiative, two groups representing overlying users and water agencies with interest in this basin began negotiations in May 2002.

Over the next 18 months of negotiations, a Stipulated Agreement was developed and submitted to the Court. Honorable Judge Gary Tranbarger of the Superior Court of the State of California for the County of Riverside signed the Agreement, titled "San Timoteo Watershed Management Authority, vs. City of Banning, et al." (Case No. RIC 389197), on February 4, 2004, (the Judgment).

Pursuant to the Judgment, the Court appointed a five-member Watermaster Committee, consisting of representatives from each of the Appropriator parties: the City of Banning,

Beaumont, BCVWD, SMWC, and YVWD. The effective date of the Judgment for accounting purposes was retroactively established to July 1, 2003.

The Court gave the responsibility of managing the Basin to the Watermaster by approving the Stipulated Agreement but retained continuing jurisdiction should there be any future need to resolve difficult questions among the Parties.

1.2 Essential Elements of the Judgment

Elements of the 2004 Judgment are as follows:

- All producers shall be allowed to pump sufficient water from the Basin to meet their respective requirements.
- The Safe Yield of the Basin was established at 8,650 ac-ft/yr to be distributed among the Overlying Producers. The Safe Yield of the Basin is to be re-evaluated every 10 years, at a minimum.
- The Overlying Parties can extract a combined total of 8,650 ac-ft/yr. with individual rights set for each Overlying Producer. If an Overlying Party pumps more than five times its share of the operating safe yield in any five consecutive years, the overlying producer shall provide Watermaster with sufficient funds to replace the overproduction.
- A controlled overdraft of the basin is allowed to create enough additional storage capacity to prevent the waste of water. This controlled overdraft, also known as Temporary Surplus, allows Appropriators to extract up to 160,000 ac-ft of water from the basin over the 10-year period immediately following the Judgment inception. The Temporary Surplus will cease after the initial 10 years of operations.
- During the first ten years after adoption of the Judgment, the Appropriators have the right to extract, as a whole, a maximum of 16,000 ac-ft/yr not including storage credits from spreading supplemental water or transfers from Overlying Parties. The Temporary Surplus has been divided among the Appropriators as follows:

✓ Beaumont Cherry Valley WD	42.51 percent or 6,802 ac-ft/yr
✓ City of Banning	31.43 percent or 5,029 ac-ft/yr
✓ South Mesa Water Company	12.48 percent or 1,997 ac-ft/yr
✓ Yucaipa Valley Water District	13.58 or 2,173 ac-ft/yr
- After the first 10 years of operation, Appropriators can extract only the amount each has in storage or credited to them. An Appropriator shall provide Watermaster with sufficient funds to replace any amount of overproduction that may have occurred over a five-year consecutive period.
- The Watermaster has the authority to enter into Groundwater Storage Agreements with producers for the storage of supplemental water, wellhead protection and recharge, well abandonment, well construction, monitoring, replenishment, mitigation of overdraft, and collection of assessments.

- Supplemental replenishment water can be in the form of recycled water, imported State Project Water, or other imported water. Replenishment can be accomplished by spreading and percolation, injection, or in-lieu use of surface water or imported water.
- A minimum of 200,000 ac-ft of groundwater storage capacity shall be reserved for conjunctive use. Any person, party to the Judgment can make reasonable beneficial use of the groundwater storage capacity for storage of supplemental water provided that it is in accordance with a storage agreement with Watermaster.
- Minimal producers, those producing less than 10 ac-ft/yr from the basin, and not listed in the Judgment, are exempt from the provisions of the Judgment.

1.3 Watermaster Responsibilities

Under the Judgment, the Watermaster is granted discretionary powers to develop and implement a groundwater management plan for the Beaumont Basin, including water quality and quantity considerations and being reflective of the provisions of the Judgment.

In carrying out its duties, Watermaster is responsible for providing the legal and practical means of ensuring that the waters of the Basin are put to maximum beneficial use. Specific responsibilities are summarized below.

1.- Administer the Beaumont Basin Judgment. Watermaster operates under the Judgment and the Rules and Regulations, which were originally adopted June 8, 2004, and subsequently amended in 2006 and 2008. The Judgment and the Rules and Regulations establish the procedures by which Watermaster accounts for the water resources of the Basin. Watermaster has the power to collect administrative assessments from all Appropriators and replenishment assessments from those parties (Appropriative and Overlying) pumping in excess of their pumping right to fund its operations. Each year, Watermaster publishes an Annual Report, which documents production and recharge activities in the Beaumont Basin.

2.- Approve Producer Activities. All producers must notify and obtain approval, as necessary, from Watermaster for activities, such as recharging water, transferring or exchanging water, storing local water, and storing or recovering supplemental water.

3.- Maintain and Improve Water Supply. On an annual basis, Watermaster determines the amount of groundwater that each producer is entitled to pump from the Basin without incurring a replenishment obligation. Further, Watermaster is responsible for facilitating and coordinating the acquisition, recharge, and storage of imported water or other local supplemental water to replenish and/or conjunctively manage the Basin to increase local supplies.

4.- Monitor and Understand the Basin. Watermaster is responsible for collecting information from producers, and other cooperating agencies, in order to enhance its knowledge of how the Basin works and manage it more effectively. Information collected by the Watermaster includes:

- Water production, water level, and water quality information from the Appropriator Parties.
- Water production and water level information from the Overlying Parties.

- Water level and water quality data from the City of Beaumont, collected by the city as part of their Maximum Benefit and Monitoring Program.
- Ground surface elevations from periodic surveys conducted to determine whether ground subsidence may be occurring as a result of over pumping from the basin.

5.- Maintain and Improve Water Quality. Watermaster coordinates and participates in local efforts to preserve and/or enhance the quality of groundwater in the Basin. It assists and encourages regulatory agencies to enforce water quality regulations that may have an effect on the Basin groundwater sources and its surrounding resources. One of these programs is the Maximum Benefit Monitoring Program of the Beaumont Management Zone.

6.- Develop and Administer a Well Policy. Watermaster is responsible for developing a policy on the proper construction and abandonment of wells in the Basin. Through the adoption of Resolution 2004-04, the Watermaster adopted minimum standards for the construction, repair, abandonment and destruction of groundwater extraction wells in the Beaumont Basin. As part of this resolution, Watermaster adopted Riverside County Ordinance No. 682.3 and expanded it to require the installation of a sounding tube in order to facilitate the measurement of water levels on all future wells.

7.- Develop Contracts for Beneficial Programs and Services. Watermaster is responsible for developing and entering into contracts for programs and services that are beneficial to the Basin on behalf of the Parties to the Judgment. This includes programs for conjunctively utilizing the Basin for the storage of supplemental water with other agencies and programs to implement and expand the direct or indirect use of recycled water.

8.- Provide Cooperative Leadership. Watermaster may act jointly or cooperate with other local, state, and/or federal agencies to develop and implement regional scale programs for the management of the Basin and its surrounding resources.

1.4 Watermaster Address

For the purposes of conducting Watermaster business and maintaining records, Watermaster's official address remains as follows:

Office of the Watermaster Secretary
C/O Beaumont-Cherry Valley Water District
560 Magnolia Avenue
Beaumont, CA 92223

1.5 Watermaster Website

Watermaster website address is www.beaumontbasinwatermaster.org. This website is maintained by the YVWD and it is used by the Watermaster to communicate its activities to the Parties and the public. The website contains copies of the Judgment, the Rules and Regulations, Annual Reports, and Engineer's Reports. In addition, it contains meeting minutes, meeting agendas, and other documents of interest.

1.6 Mission Statement

Watermaster adopted the following mission statement in October 2004:

“Watermaster’s mission is to manage the yield of and storage within the Beaumont Basin to provide maximum bene fit to the people dependent on it.”

Section 2

Watermaster Activities

2.1 Makeup of the Board

During the September 21, 2012 regular meeting of the Beaumont Basin Watermaster, elections were held; the following officers to the Watermaster Committee were appointed:

- Mr. Duane Burk – Chairman
- Mr. George Jorritsma – Vice Chairman
- Mr. Eric Fraser – Secretary
- Mr. Joseph Zoba – Treasurer

The Committee Representatives serving each Appropriator Party during CY 2013 were as follows:

- City of Banning - Duane Burk, Director of Public Works
- City of Beaumont – Kyle Warsinski, as an alternate member
- Beaumont-Cherry Valley Water District – Eric Fraser, General Manager
- South Mesa Water Company - George Jorritsma, General Manager
- Yucaipa Valley Water District - Joseph B. Zoba, General Manager

Legal counsel during CY 2013 was provided by Alvarado Smith APC, represented by Keith McCullough, while Engineering Services were provided by ALDA Inc., represented by Hannibal Blandon, in association with Thomas Harder & Company, represented by Thomas Harder.

2.2 Watermaster Accomplishments and Activities During 2013

2.2.1 Watermaster Meetings

A total of eight meetings were held during CY 2013 on the following dates:

- January 9, 2013
- February 6, 2013
- March 25, 2013
- April 10, 2013
- June 5, 2013
- August 7, 2013
- October 2, 2013
- December 4, 2013

Agendas and approved minutes from each of the above meetings can be viewed at and/or downloaded from Watermaster's website or by making a request to the Watermaster Secretary. Pursuant to Resolution 2009-001, all of Watermaster's public records are open for inspection during office hours, provided that a written request to inspect said records has been submitted.

2.2.2 Watermaster Committee Resolutions

There were no resolutions considered or approved during Calendar Year 2013.

2.2.3 Items Discussed in 2013

This section is simply an unofficial summary of topics addressed at Watermaster meetings. The Beaumont Basin Watermaster maintains official meeting minutes that report the items discussed and actions taken during normal and special meetings. Official meeting minutes may be accessed at: www.beaumontbasinwatermaster.org

The following items were discussed during the eight meetings held in CY 2013 along with their resulting outcome.

Items Discussed During the January 9, 2013 Regular Watermaster Committee Meeting

- Presentation and adoption of Task Order No. 2 for ALDA Inc. to prepare the 2012 Annual Report and Operating Safe Yield [Memorandum 13-01]. Task Order No. 2 was approved for the amount of \$51,800.00.
- Presentation and adoption of Task Order No. 3 for ALDA Inc. to prepare a Groundwater Model Update and Redetermination of Safe Yield [Memorandum 13-02]. Task Order No. 3 was tabled for future discussion at the February meeting.
- Presentation and adoption of Task Order No. 4 for ALDA Inc. to provide On-Call Technical Support Services [Memorandum 13-03]. Task Order No. 4 was approved for the amount of \$20,000.00.

Items Discussed During the February 6, 2013 Regular Watermaster Committee Meeting

- Final presentation of the Annual Report for Calendar Year 2011 [Memorandum 13-04]. Motion was approved to receive and file this report.
- Final presentation of the Engineer's Report No. 3 for the 2008-2011 period [Memorandum 13-05]. Motion was approved to receive and file this report.
- Presentation and adoption of Task Order No. 3 for ALDA Inc. to prepare a Groundwater Model Update and Redetermination of Safe Yield [Memorandum 13-06]. Task Order No. 3 was approved for the amount of \$229,210.00.

Items Discussed During the March 25, 2013 Regular Watermaster Committee Meeting

- Watermaster Committee met in closed session with legal counsel to discuss the Existing Litigation (Government Code 54956.9[a]), Notice of and Motion for Enforcement of Judgment by the City of Beaumont, et. Al; Riverside County Superior Court; Case No. RIC 389197.

Items Discussed During the April 10, 2013 Regular Watermaster Committee Meeting

- Presentation on the status of the 2012 Annual Report and Operating Safe Yield [Memorandum 13-07]. A brief update was provided.

- Independent Accountant's Financial Report of Agreed-Upon Procedures for the Beaumont Basin Watermaster [Memorandum No. 13-08]. Motion was approved to receive and file the financial report.
- Review of Draft Application for Groundwater Storage Agreement [Memorandum 13-09]. Additional changes to the application were requested; revised application to be discussed at a later meeting.
- Presentation by the Beaumont Basin Overlyers Conservation Association. In a public workshop held after the regular Watermaster Committee meeting, the Beaumont Basin Overlyers Conservation Association discussed their concerns with the Committee Members.

Items Discussed During the June 5, 2013 Regular Watermaster Committee Meeting

- Amended Budget for Fiscal Year 2012-2013 [Memorandum No. 13-10]. Amended budget was approved.
- Proposed Budget for Fiscal Year 2013-2014 [Memorandum No. 13-11]. Proposed budget was approved.
- Amendment No. 1 to Task Order No. 4 with Alda, Inc. for On Call Technical Support Services [Memorandum 13-12]. Amendment No. 1 to this task order was approved to extend schedule through June 30, 2014.
- Review of the Draft Application for Groundwater Storage Agreement [Memorandum No. 13-13]. Revised application was discussed, but not approved by the Watermaster Committee.
- Application for Groundwater Storage Agreement from the Morongo Band of Mission Indians [Memorandum No. 13-14]. After much discussion by legal counsel and representatives of the Morongo Band of Mission Indians, application for storage agreement was approved.
- Status Report on the Preparation of the 2012 Annual Report and Operating Safe Yield [Memorandum 13-15]. Brief presentation was made by Mr. Blandon (ALDA Inc.) and comments requested.
- Status Report on the Groundwater Model Update and Redetermination of Safe Yield [Memorandum 13-16]. Mr. Blandon and Mr. Thomas (TH& Co.) made a brief presentation on the various topics to be addressed by the study.

Items Discussed During the August 7, 2013 Regular Watermaster Committee Meeting

- Independent Accountant's Financial Report of Agreed-Upon Procedures for the Beaumont Basin Watermaster [Memorandum No. 13-17]. Watermaster Committee approved to receive and file Independent Financial Report.
- Status Report on the Preparation of the 2012 Annual Report [Memorandum 13-18]. A brief presentation was made by Mr. Blandon.

- Review of the Draft Application for Groundwater Storage Agreement [Memorandum No. 13-19]. Revised application was discussed and approved by the Watermaster Committee.
- Overview of Data Collection for Groundwater Monitoring [Memorandum No. 13-20]. Motion was approved to have each member agency install meters for the overlyers within their service area boundaries within the Basin and seek reimbursement from the Watermaster for those costs.
- Status Report on the Groundwater Model Update and Redetermination of Safe Yield [Memorandum 13-21]. Mr. Harder provided an extensive presentation of the various aspects of the groundwater model.

Items Discussed During the October 2, 2013 Regular Watermaster Committee Meeting

- Status Report on the Preparation of the 2012 Annual Report [Memorandum 13-22]. An overview on the status of the report was provided by Mr. Blandon.
- Discussion Regarding Task Order No. 5 with ALDA Inc. for the Preparation of the 2013 Annual Report, Operating Safe Yield, and Associated Consulting Services [Memorandum 13-23]. Task Order No. 5 was approved for the amount of \$51,980.00.
- Discussion Regarding the Draft Memorandum of Understanding with the San Gorgonio Pass Regional Water Alliance [Memorandum 13-24]. An overview of the draft memorandum was made, but no action was taken.
- Status Report of the Groundwater Model Update and Redetermination of Safe Yield and Discussion Regarding Current and Projected Land Use Conditions in the Beaumont Area [Memorandum 13-25]. Mr. Harder discussed a number of issues associated with the calibration of the model that have resulted in schedule delays.

Items Discussed During the December 4, 2013 Regular Watermaster Committee Meeting

- Reorganization of the Beaumont Basin Watermaster Committee – Chairman, Vice-Chairman, Secretary, and Treasurer [Memorandum 13-26]. Positions held by current officers were reaffirmed for the ensuing calendar year as follows:

Chairman	Duane Burk
Vice-Chairman	George Jorritsma
Secretary	Eric Fraser
Treasurer	Joseph Zoba
- Adoption of the 2012 Annual Report [Memorandum 13-27]. Motion was approved to receive and file the 2012 Annual Report.
- Discussion Regarding a Revision to Task Order No. 5 with ALDA Inc. for the Preparation of the 2013 Consolidated Annual Report and Engineering Report, and Associated Consulting Services [Memorandum 13-28]. Initial Task Order No. 5 was revised to consolidate both

reports into a single report. The revised Task Order No. 5 was approved for the amount of \$72,940.00.

- Status Report of the Groundwater Model Update and Redetermination of Safe Yield and Discussion Regarding Current and Projected Land Use Conditions in the Beaumont Area [Memorandum 13-29]. Mr. Harder provided a brief presentation on additional groundwater modeling issues.

2.2.4 Redetermination of Safe Yield

Under the Judgment (2003) the Safe Yield of the Beaumont Basin was established at 8,650 ac-ft/yr. to be distributed among the Overlying Producers. The Judgment indicates that the Safe Yield of the basin needs to be re-evaluated every 10 years.

At the February 2013 Watermaster meeting, the Watermaster Committee authorized a study to develop a hydrologic model of the groundwater basin to be used as a tool in the re-evaluation of the safe yield of the basin. The study, to be completed in CY 2014, will determine the natural safe yield of the basin and the maximum amount of groundwater that Overlying Producers can extract from the basin over the ensuing 10-year period.

2.3 Storage Applications and Agreements

The first applications to use the Basin for storage purposes were approved in FY 2005-06 when Watermaster approved applications by Banning, BCVWD, SMWC, and YVWD to store up to 135,000 ac-ft of water in the Basin. The City of Beaumont's application to store water was approved by Watermaster in FY 2007-08 bringing the total storage allocation to 157,000 ac-ft. In FY 2009-10, Watermaster approved additional applications by Banning, BCVWD, Beaumont, and YVWD to increase the total storage allowed to 260,000 ac-ft. It is our understanding that the Watermaster Committee has not yet amended the respective Storage Agreements to reflect the current storage limits.

An application for a storage agreement was received by the Watermaster from the San Gorgonio Pass Water Agency (SGPWA) in mid 2010 and brought for discussion at the summer of 2012. The application was rejected because it was determined to be incomplete.

An application for a storage agreement was also received from the Morongo Band of Mission Indians at the December 2012 meeting. Watermaster deemed the application incomplete and requested further information from the applicant to address questions posed by members of the Watermaster Committee. The application was subsequently approved at the June 5, 2013 meeting allowing the Morongo Band of Mission Indians to store between 2,000 and 2,500 ac-ft/yr of imported water in the basin. No maximum storage limit was set at this time.

As of December 31, 2013, the total storage allowed stands at 260,000 ac-ft; storage limits by participant are as follows:

- City of Banning 80,000 ac-ft
- City of Beaumont 30,000 ac-ft

- Beaumont Cherry Valley WD 80,000 ac-ft
- South Mesa Water Company 20,000 ac-ft
- Yucaipa Valley Water District 50,000 ac-ft
- Morongo Band of Mission Indians 2,000 to 2,500 ac-ft/yr

A new application for Groundwater Storage Agreement was developed in early 2013; the application was presented and discussed at several Watermaster Committee meetings where input was received and questions were addressed. The new application was approved by the Watermaster Committee at the August meeting.

2.4 Rules and Regulations

The original Rules and Regulations of the Watermaster were adopted on June 8, 2004. The Judgment provides for their periodic update as deemed necessary by the Watermaster. In 2012, Resolution No. 2012-01 was introduced and adopted by the Board to amend the Rules and Regulations. This resolution amends Rule 2.2 of the Rules and Regulations to set a regular meeting date on the first Wednesday of every even numbered month. The meeting time of these dates would generally be at 10:00 a.m. at the current meeting location, but the time and location can change if needed. No changes to the Rules and Regulations were presented or discussed during CY 2013.

2.5 Active Party List

Part VII, Paragraph 1 of the Judgment, indicates that Watermaster shall maintain an updated list of parties to whom notices are to be sent for the purpose of service. Said list should include names, addresses for the Parties or their successors. A copy of the list has been included with this annual report as Appendix A.

2.6 Financial Management

The Watermaster must develop and administer a budget for all administrative, operational, and capital costs it incurs. The following discussion summarizes the budget established for the FY 2013 operations.

2.6.1 Budget

The FY 2013 Budget was initially approved at the June 6, 2012 Watermaster meeting for \$90,950.00. This budget was \$50,519.75 higher than the approved budget for FY 2012 of \$40,430.25 and was primarily developed to fund administrative expenses. The approved budget was funded through a combination of carryover funds from FY 2012 (\$15,143.75) and a water agency contribution of \$15,161.25. The adopted budget for FY 2013 added \$7,000.00 to the Reserve Fund.

The initial budget was amended on June 5, 2013 to reflect the approved contracts and expenses authorized by the Watermaster Committee earlier in the year. Operating revenues were increased to \$186,027.39; of this amount an estimated \$115,000.00 were used in FY 2013. Carryover funds in the amount of \$20,158.14 and a water agency contribution of

\$33,173.85 were used to fund the administrative expenses. In addition, \$239,210.00 in revenues were collected from the water agencies to fund the Groundwater Model Update and Redetermination of Safe Yield, as a special project. Assessment to the water agencies was based on their share of the operating safe yield; the City of Beaumont did not provide any funds for the special project. An estimated \$61,000.00, or approximately 25 percent, of the special project fund were allocated to FY 2013.

The proposed budget for FY 2014 includes \$107,060.00 for administrative expenses and \$180,710.00 for special projects. Funding for administrative expenses is expected to be cover from a carryover of \$71, 027.39 and water agencies contributions of \$7,206.52. Funding for the special project will be primarily funded from a carryover and a minor agency contribution.

The following table presents a comparison between the approved and amended budgets for FY 2012-13 and the proposed budget for FY 2013-14.

<i>Operating Expense</i>	<i>FY 2012-13 Approved Budget</i>	<i>FY 2012-13 Amended Budget</i>	<i>FY 2013-14 Proposed Budget</i>
<u>Administrative Expenses</u>			
Bank Fees and Interest	\$ 450.00	\$ 50.00	\$ 60.00
Miscellaneous and Meetings	\$ 1,000.00	\$ 450.00	\$ 500.00
Acquisition/computation & Annual Report	\$ 70,000.00	\$ 80,000.00	\$ 55,000.00
Annual Audit	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00
Engineering Services	\$ 0.00	\$ 3,000.00	\$ 17,000.00
Legal Expenses	\$ 10,500.00	\$ 22,500.00	\$ 22,500.00
Reserve Funding	\$ 7,000.00	\$ 7,000.00	\$ 10,000.00
	\$ 90,950.00	\$ 116,000.00	\$ 107,060.00
<u>Special Project Expenses</u>			
Engineering	\$ 0.00	\$ 51,000.00	\$ 178,210.00
Litigation	\$ 0.00	\$ 10,000.00	\$ 2,500.00
Total Operating Expense	\$ 90,950	\$ 176,000.00	\$ 287,770.00

2.6.2 Financial Audit

The Beaumont Basin Watermaster has a financial audit performed on annually on a fiscal year basis. The audit assists in properly accounting for the revenues and expenses of the Watermaster and tracking the financial resources of the agency. The detailed audit report for FY 2013, prepared by Rogers, Anderson, Malody, and Scott, LLP, was presented at the August 2013 Watermaster meeting. A copy of the audit is included under Appendix B.

Their independent auditors' report of the Watermaster's financial statements is that they fairly present the organization's financial position in all material aspects and its operations were conducted in conformity with generally accepted accounting principles.

At the beginning of the 2012-2013 fiscal year, the Beaumont Basin Watermaster had unrestricted net assets in the amount of \$20,158.00. During the fiscal year, the Watermaster collected \$405,155.00 in revenues and expended \$205,760.00. As of June 30, 2013, the Watermaster had unrestricted net assets in the amount of \$219,553.00.

No recommendations were provided as part of this audit; the results of the audit disclosed no instances of non-compliance or other matters that are required to be reported under Government Auditing Standards.

Section 3

Status of the Basin and Administration of the Judgment

The Beaumont Basin Watermaster is responsible for the accounting of groundwater production, recharge of supplemental water, groundwater transfers and storage activities. Since the inception of the Judgment accounting has been conducted on a fiscal year basis starting on July 1, 2003.

Through the adoption of Resolution No. 2011-01, on September 21, 2011, Watermaster changed the accounting from a fiscal year basis to a calendar year basis starting in CY 2011. The conversion of Fiscal Year basis to Calendar Year basis was documented in the Annual Report for CY 2011 that was adopted by the Board in early 2013. The annual report for CY 2013 builds on the information presented in previous annual reports.

3.1 Climate, Hydrology and Hydrogeology

3.1.1 Climate

The Beaumont Basin is located in a semi-arid region characterized by warm summers and mild winters with average summer high temperatures in the mid to upper 90s (Fahrenheit) and average winter low temperatures in the mid to low 40s. Precipitation in the region occurs as snowfall in the upper elevations of the San Bernardino Mountains to the north and rainfall in the Basin. Annual precipitation in the Beaumont Basin, as recorded at the County of Riverside's Beaumont Station 013 averaged 17.78 inches over the 100-year period between 1912 and 2011. On the average, 70 percent of precipitation falls during the winter between December and March.

Figure 2-1 illustrates annual precipitation at this station for the reporting period including a plot of the cumulative departure from the mean (CDFM) precipitation. This parameter is used to assess the occurrence, duration, and extent of wet and dry precipitation cycles. Upper trending periods in the graph represent periods with above average precipitation such as the 1913-46 period; average precipitation during this period was 20.5 inches or close to 16 percent above the long-term average. Other above average precipitation periods include the 1977-83 and 1990-98 periods. Conversely, down trending periods indicate periods of below average precipitation as in the 1947-77 period when average precipitation was only 15.2 inches. The 1984-90 period with seven consecutive years of below average precipitation was also characterized as a dry period.

Currently, the Basin is in a dry period that began in 1999. During this 12-year period two of the three years with the lowest precipitation ever recorded at Station 13 have occurred; 6.3 inches (lowest) in 1999 and 8.07 inches in 2009. It should be noted that the average precipitation during the base period (1997-2001) used to determine the safe yield of the Basin was 13.43 inches, close to 25 percent below the long-term average for the Basin.

3.1.2 Surface Water Hydrology

There are three significant drainage systems that overlie the Beaumont Basin: the San Timoteo Creek drainage system which is tributary to the Santa Ana River; the Potrero Creek drainage system in the San Jacinto watershed; and the Smith Creek drainage system tributary to the White Water River which is part of the Salton Sea drainage basin.

Surface water flows originate in the San Bernardino Mountains to the north of the Basin. The streams and creeks that flow into the Beaumont Basin are dry for most of the year with occasional runoff during rainfall events. There are no stream gages in the Basin that can be used to estimate surface water recharge to the Basin or discharge from the Basin.

3.1.3 Hydrogeology

3.1.3.1 Regional Geologic Context

The Beaumont Basin is located in the San Gorgonio Pass, a low-relief highland that is bordered on the north by the San Bernardino Mountains, on the southeast by the San Jacinto Mountains, and on the west by the San Timoteo Badlands. Surface sediments in the Beaumont Basin and nearby lowlands consist of unconsolidated to semiconsolidated Quaternary alluvium. Surrounding the alluvial sediments are semiconsolidated rocks of the San Timoteo Formation and igneous and metamorphic rocks that make up the San Jacinto and San Bernardino Mountains (see Figure 2-2). The San Timoteo Formation is composed primarily of sandstone, conglomerate, siltstone, and mudstone (Rewis, et al., 2007). The igneous and metamorphic rocks form the crystalline basement rocks in the area (Bloyd, 1971). The unconsolidated Quaternary alluvium and the upper portion of the underlying San Timoteo Formation constitute the water-bearing aquifer of the Beaumont Basin (Rewis, et al., 2007).

3.1.3.2 Faults

The boundaries of the Beaumont Basin are based on faults that often form barriers to groundwater flow (Bloyd, 1971). Major faults in the area include the Banning and Cherry Valley faults, which form the northern boundary of the basin (see Figure 2-2). Groundwater levels within the Beaumont Basin are generally lower than groundwater levels in the surrounding areas. Along the Banning Fault, groundwater levels on the north side of the fault and outside the basin are as much as 400 ft higher than groundwater levels on the south side of the fault and inside the basin. The same condition has been observed along the southern Beaumont Basin boundary.

3.1.3.3 Groundwater Occurrence and Flow

Groundwater in the Beaumont Basin occurs at depth in the Quaternary alluvium and the underlying San Timoteo Formation. Groundwater flow within the Beaumont Basin generally depends on location with respect to a groundwater flow divide which occurs in the center of the basin, approximately coincident with the Noble Creek drainage (see Figure 2-2). West of the Noble Creek drainage, groundwater generally flows to the northwest and ultimately as

underflow beneath San Timoteo Wash. East of the Noble Creek drainage, groundwater flows to the southeast towards the City of Banning.

The groundwater system in the Beaumont Basin is replenished from multiple sources. These include:

- Infiltration of precipitation within the unlined portions of natural streams
- Subsurface seepage across fault boundaries
- Return flow from irrigation and individual septic systems
- Artificial recharge in man-made basins (e.g. Noble Creek Recharge Facility).

Groundwater discharges from the Beaumont Basin primarily occur from:

- Groundwater production
- Underflow out of the basin at the downgradient margins
- Rising water in San Timoteo Creek
- Evapotranspiration

3.2 Production

The Beaumont Basin Watermaster is responsible for the tracking and accounting of groundwater production by all producers named in the Judgment regardless of the amount of groundwater produced. Other producers, not listed in the Judgment, and pumping less than 10 ac-ft /yr., also known as minimal producers, are exempt from the provisions of the Judgment. Figure 3-3 illustrates the location of all production wells that belong to the Appropriators and Overlying parties of the Judgment.

3.2.1 Appropriative Party Production

There are five Appropriative Producers; namely, Banning, Beaumont, the BCVWD, the SMWC, and the YVWD. The amount that each appropriator produces in any given year, without incurring a replenishment obligation, varies from year to year and results from a combination of:

- Their share of the Operating Yield, based on the Temporary Surplus of 16,000 ac-ft/yr for all Appropriators,
- Transfers from other Appropriators,
- Transfers of unused production from Overlying Producers,
- Water withdrawn from their storage account, and
- New yield created by the Appropriator.

Monthly and annual production by well for each of the five Appropriative Parties since 2003 are presented in a series of tables starting with Table 3-1A for CY 2003 and continuing on an annual basis through Table 3-1K for CY 2013. These tables also include the overall Temporary Surplus Allocation and the amount of unused production that is eligible for storage for each Appropriator.

It should be noted that all production by Appropriators is currently being metered; no information is available as to the accuracy of existing meters.

During CY 2013, Appropriators pumped a combined amount of 14,537 ac-ft of groundwater from the Beaumont Basin representing the third highest production year since the inception of the Judgment. Groundwater production by Appropriators in CY 2013 was over 17 percent higher than the 12,348 ac-ft recorded in CY 2012 (See Table 3-1J), but more than 13 percent lower than the highest production level of 16,505 ac-ft pumped in CY 2007 (See Table 3-1E). With the exception of BCVWD, all Appropriators pumped less than their share of the Operating Yield in CY 2013 thus resulting in the addition of 5,758.2 ac-ft of water to their storage accounts.

Amongst appropriators, production by the City of Banning and YVWD increased significantly from 2012; Banning's production jumped by over 100 percent and YVWD's by 47 percent. BCVWD's production increased by nine percent while production by SMWC decreased by 31 percent.

3.2.2 Overlying Party Production

Overlying Parties are defined in the Judgment as persons, or their assignees, that are part of the Judgment and who are owners of land which overlies the Beaumont Basin and have exercised Overlying Water Rights to pump therefrom. Overlying Parties include successors in interest and assignees. Overlying Producers were assigned a share of the Basin's Safe Yield, estimated in 2003 at 8,650 ac-ft/yr. Individual Overlying Producers may not pump more than five times their assigned share of the Basin's Safe Yield in any five-year consecutive period without incurring a replenishment obligation.

Currently, there are 17 Overlying Producers in the Basin pumping from 22 groundwater wells. The majority of the larger wells are metered; however, there is limited information as to the accuracy of these meters. Production meters at the wells at the Morongo Golf Club at Tukwet Canyon were calibrated at the end of 2012; copies of the results have been provided by the Morongo Band of Mission Indians.

The remaining wells did not have meters for some or most of 2013 and their production is estimated using the water duty method. This method was initially proposed by Wildermuth Environmental Inc. (WEI), during the preparation of the 2005-06 Annual Report. After being accepted by the Watermaster, an updated water duty method was developed by WEI and it has been used since. The estimate of unmetered production for the CY 2013 Annual Report uses the updated method developed by WEI as detailed in Appendix C.

It should be noted that production meters began to be installed at the end of 2013 as part of an effort by the Watermaster agencies to obtain a closer production accounting from overlying users. Installation of production meters at all wells is anticipated to be completed in CY 2014.

During CY 2013, five of the 17 Overlying Parties to the Judgment metered their wells. Production for the Tukwet Canyon Golf Course was reported by the Morongo Band of Mission Indians while production for the other four overlayers was collected and reported by BCVWD.

Production information for the remaining individual users was estimated as an average of the last two reporting years or using the water duty method. The year 2013 should be the last year in which production from some of the overlying users is estimated as new production meters are planned to be installed in early 2014.

Similar to the production reported for the Appropriators, a series of tables was developed to report monthly and annual production from the Overlying Producers on a calendar year basis. Starting with Table 3-2A for CY 2003 and continuing on an annual basis through Table 3-2K for CY 2013, these tables show the actual or estimated production by well and by user. In addition, their share of the safe yield and the amount of unused water for each Overlying Producer is shown. It should be noted that these tables have been revised to reflect updated production records for the Tukwet Golf Course wells since 2004.

During CY 2013, Overlying Producers produced an estimated 2,576 ac-ft; this level of production is approximately nine percent higher than the 2,361 ac-ft pumped in CY 2012 (See Table 3-2J), but close to 10 percent lower than the 2,838 ac-ft pumped in CY 2009 (See Table 3-2G). The amount of groundwater produced by Overlying Producers in CY 2013 represents approximately 29.8 percent of the safe yield of the basin initially estimated at 8,650 ac-ft/yr. All Overlying Producers pumped less than their respective share of the safe yield.

3.2.3 2003-2012 Annual Production Summary

The annual production on a calendar year basis for all Appropriators and Overlying users is shown in Table 3-3. It should be noted that production in 2003 only includes the second half of the year. Since July 2003, a total of 169,929 ac-ft have been pumped from the Beaumont Basin; approximately 81 percent of this total has been pumped by Appropriators. The percentage of groundwater production from Appropriators has steadily increased since the Judgment inception from a low of 74 percent registered in CY 2003 to a high of 84 percent in each of the last four calendar years including 2013.

Groundwater production peaked in CY 2007 when close to 20,000 ac-ft were pumped from the basin; since, it declined steadily through 2010 to approximately 14,000 ac-ft; however, production over the last three years has increased by 23 percent. Groundwater production since CY 2004 has averaged 16,042 ac-ft/yr. In CY 2013, a combined total of 17,114 ac-ft were pumped from the basin; of this total, 14,537 ac-ft, or approximately 85 percent, were pumped by Appropriators. Annual production for each of the Appropriators and for the Overlying Producers combined is depicted in Figure 3-4.

3.3 Groundwater Recharge

The Watermaster is responsible for maintaining an annual account of all water artificially recharged in the Beaumont Basin and any losses of water supplies or Safe Yield resulting from such recharge water. Sources of groundwater recharge include imported water from the State Water Project (SWP), recycled water, and new yield sources developed in the basin since the Judgment inception in July 2003. The Watermaster has maintained the accounting of groundwater recharge; however, losses from the basin, if any, have not been estimated.

Table 3-4 presents a summary of the annual groundwater recharge in the Beaumont Basin since 2003 on a calendar year basis.

3.3.1 State Water Project Water Recharge

BCVWD's Noble Creek spreading facility, located in the vicinity of Beaumont Avenue and Cherry Valley Boulevard, is the only facility in the Beaumont Basin where deliveries of imported water can be used to recharge the groundwater basin. The location of this spreading facility is depicted in Figure 3-3. Deliveries of imported water are conducted through the San Gorgonio Pass Water Agency, which is the State Water Contractor for this area.

The BCVWD began taking deliveries of imported water for groundwater recharge in the Fall of 2006 when 3,501 ac-ft were spread pursuant to the storage and recharge agreement on file with Watermaster. Deliveries of imported water for BCVWD increased over the next five years and peaked in CY 2011 at 7,979 ac-ft. Since, a slight decrease in imported water spreading has been recorded; in CY 2013 close to 7,400 ac-ft of imported water were delivered. Overall, a total of 42,034 ac-ft of imported water have been spread by the BCVWD since 2006 as illustrated in Table 3-4. Significant differences between the imported water deliveries provided by the BCVWD and those documented by the SGPWA were documented in the previous annual report. The inconsistencies between the BCVWD and SGPWA though CY 2011 have been addressed. Values provided by the SGPWA for CY 2012 and CY 2013 still need to be checked against information to be provided by the BCVWD.

The City of Banning began purchasing imported water for recharge at the BCVWD's Noble Creek facility in July 2008 and has since recharged 8,813 ac-ft. in accordance with their storage agreement on file with Watermaster. Over the last two years, the City of Banning has been spreading an average of 100 ac-ft per month.

In addition to imported water deliveries to BCVWD's Noble Creek facility, SGPWA has also delivered significant quantities of imported water at the Little San Gorgonio Creek Spreading Ponds. These spreading ponds are located outside the adjudicated boundary of the Beaumont Basin and to the north of the Banning Fault, as shown in Figure 3-3. Spreading of imported water at these spreading ponds may be a source of subsurface recharge to the Beaumont Basin; however, Watermaster has not adopted this finding. Subsurface recharge across the Banning Fault will be investigated as part of the Safe Yield of the Basin determination study, currently being conducted.

Deliveries of imported water by the SGPWA to the Little San Gorgonio Creek Spreading Ponds began in August 2003; the agency has since recharged a total of 10,464 ac-ft averaging 1,046 ac-ft/yr. Deliveries in CY 2013, at 881 ac-ft, were less than half of the amount spread in CY 2011 and CY 2012. It should be noted that the SGPWA applied to the Beaumont Basin Watermaster to develop a storage agreement, but the application was not approved.

3.3.2 Recycled Water Recharge

Prior to March 2010, Beaumont's recycled water from Wastewater Treatment Plant No. 1 was discharged at Discharge Point No. 1 (DP-001) in Cooper's Creek where it infiltrates into the San Timoteo Management Zone and outside the Beaumont Basin. In March 2010, Beaumont began deliveries of recycled water to Discharge Point No. 7 (DP-007), located along an unnamed tributary of Marshall Creek, as shown in Figure 3-3. It is believed that a portion of the recycled water discharged at this location reaches and recharges the Beaumont Basin; in which case, this would be considered a new source of supplemental water for which Beaumont should receive credit pursuant to the storage agreement with the Watermaster and Section 5.4 of the Rules and Regulations. Technical documentation of the amount of recycled water that reaches and recharges the Beaumont Basin would need to be prepared by Beaumont and considered and accepted by Watermaster.

In CY 2013, the City of Beaumont discharged an estimated 3,061 ac-ft of recycled water at DP-001 in Cooper's Creek and an estimated 530 ac-ft at DP-007. Monthly discharges at DP-007 vary slightly seasonally and averaged just over 0.5 mgd. Monthly recycled water discharges by the City of Beaumont since 2007 are summarized in Table 3-5.

3.3.3 New Yield Stormwater Recharge

Before accounting for any new yield resulting from the recharge of local surface water, not initially considered as part of the Basin Safe Yield, Watermaster needs to develop a methodology to quantify and credit the New Yield to the party that creates the new recharge. According to Part VI Paragraph 5.V of the Judgment, Watermaster shall make an independent scientific assessment of the estimated new yield created by each proposed project. It is our understanding that Beaumont has been recharging local waters at various locations in the Basin and would like to receive credit for the New Yield developed. For Beaumont to receive credit however, Watermaster will need to develop the methodology to compute and credit the New Yield dating back to February 20, 2003.

3.4 Water Transfers and Adjustments of Rights

Section 7 of the Watermaster Rules and Regulations provides for the adjustment of rights by and between Appropriators and Overlying Parties. This section indicates that Watermaster shall maintain an accounting for all transfers and include said transfers in the Annual Report or other relevant document. There are three types of transfers that Watermaster accounts for: a) transfer of water rights and/or water in storage between Appropriator Producers, b) transfer of water rights from Overlying Producers to an Appropriator Producer in exchange for water service, and c) the allocation of unused Overlying Water to the Appropriator Parties based on their share of the Operating Safe Yield.

3.4.1 Transfers between Appropriators

According to Section 7.3 of the Rules and Regulations, an Appropriator may transfer all or a portion of its production right or water in storage that exceeds its supply needs to another Appropriator. In January 2008, the SMWC and the BCVWD entered into a transfer agreement that allows BCVWD the option to purchase all water that SMWC determines to be

available for transfer from their storage account. As part of the agreement, each year the SMWC estimates the amount of water available for transfer and offers it to the BCVWD for purchase prior to offering it to other Appropriators. Since the beginning of the agreement, SMWC has transferred 9,500 ac-ft of water to BCVWD with 3,500 ac-ft transferred in CY 2011. SMWC also transferred 1,500 ac-ft of water to Banning in 2007. The purchase agreements and transfers between these agencies are on file with Watermaster. Water transfers between Appropriators were not reported during CY 2012 and CY 2013.

3.4.2 Transfers of Overlying Rights for Service by an Appropriator

The Judgment, under Part III, Paragraph 3, provides that to the extent an Overlying Party request water service from an Appropriator Party, and uses its adjudicated water rights to obtain said service; an equivalent volume of groundwater shall be reserved for the Appropriator Party providing the service to the Overlying Party. Further, Section 7 of the Rules and Regulations indicates that both the Overlying and Appropriator will file a Notice of Adjustments of Rights with Watermaster within 30 days after entering a service agreement.

The BCVWD has given verbal notification to Watermaster that is providing potable service to certain Overlying Parties; however, formal notification by either party for the adjustment of water rights has not been received by Watermaster. A formal notification will be required to complete the transfer of water rights from one or more Overlying Producers to BCVWD; the notification should be retroactive to the time service began. Upon formal completion of the transfer, Watermaster will be required to recalculate the allocation of unused Overlying Water to the Appropriators, as documented in Section 7 of the Rules and Regulations.

In early 2013, BCVWD provided detailed documentation of all the parcels now served by the District that were previously owned by Overlying Users including parcels owned by Oak Valley Partners, Southern California PGA, and Plantation on the Lake. The accounting of this information has been challenged by the Morongo Band of Mission Indians representatives. As of the time of this writing, the accuracy of the information has not been corroborated and it is therefore not included in this report.

3.4.3 Allocation of Unused Overlying Water

Section 7.8 of the Rules and Regulations, adopted on September 9, 2009, by Watermaster, outlines the process for distributing the volume of adjudicated water not produced by the Overlying Parties to the Appropriators. Under this section, if an Overlying Party produces less than five times of their share of the safe yield in any five-year period, the quantity of groundwater not produced by that Overlying Party shall be made available for allocation to the Appropriators. Transferring of unused production from Overlying Users does not diminish their legal right to produce in subsequent years.

Since the inception of the Judgment, transfers of unused production by Overlying Users has been made on a fiscal year basis coinciding with the preparation of the annual report. Preparing the annual report on a calendar year basis requires that the transfers of unused production also be made on the same basis. Based on the five-year format used in the Rules and Regulations, transfers to the Appropriator Parties for CY 2013 were based on unused

production from Overlying Users in CY 2008. This required the recalculation of Overlying Users production, back to July 2003, on a calendar year basis. Under this format, unused production from the second half of 2003, with adjusted water rights for half of the year, was transferred to Appropriators for CY 2008. Table 3-6 summarizes the volume of unused Overlying water for CY 2003 through CY 2013. While groundwater production by Overlying Users has decreased by close to 40 percent since 2004, the volume of unused overlying water has increased from approximately 5,000 ac-ft/yr in CY 2006 to well over 6,000 ac-ft/yr in each of the last four calendar years.

Table 3-7 presents the allocation of unused Overlying water to each Appropriator based on their shares of the safe yield and the schedule set forth under Section 7.8 of the Rules and Regulations. It should be noted that this schedule has been modified to reflect a calendar year basis for allocation. Under the modified schedule, unused production in CY 2008, estimated at 5,778 ac-ft, is allocated to Appropriators during CY 2013. Unused production during CY 2013, estimated at 6,073 ac-ft, would be allocated to Appropriators during CY 2018.

3.5 Storage Accounting

Section 6.7 of the Watermaster Rules and Regulations indicates that Watermaster shall calculate additions, extractions, and losses of all water stored and any losses of water supplies or Safe Yield resulting from such water stored. This section further indicates that Watermaster shall keep and maintain for public record an annual accounting thereof. While additions (spreading) and extractions (pumping) are easily quantifiable, losses from storage are more difficult to estimate. A methodology for estimating groundwater losses from the Basin will be developed as part of the on-going groundwater model update of the Beaumont Basin.

3.5.1 Annual Storage Consolidation

Consistent with the new reporting format to document extractions, spreading and other groundwater activities on a calendar year basis, Table 3-8 represents the consolidation of each Appropriator's storage account from CY 2003 through CY 2013. This table includes annual production by Appropriator, their share of Temporary Surplus, supplemental water recharge in its various forms, transfers between Appropriators, potable deliveries to parcels previously owned by Overlying Users, and transfers of unused water from Overlying Users. At the end of 2012, an overall total of 92,968 ac-ft of water were stored in the Basin; this amount increased by approximately 16,000 ac-ft in CY 2013 to a cumulative total of 108,813 ac-ft. It should be noted that the amount of water in storage reported in the Annual Report for Calendar Year 2012 for the BCVWD has been revised down to account for the approximately 6,000 ac-ft that were reported as potable deliveries to parcels previously owned by Overlying Users. This reduction may be adjusted in the future when this issue is resolved.

As of the end of CY 2013, the City of Banning has the largest share (45.4 percent of total storage) of water in storage with 49,439 ac-ft followed by the BCVWD with 36.5 percent of the total (39,761 ac-ft).

3.6 Changes in Groundwater Levels in the Beaumont Basin

3.6.1 Analysis of Groundwater Level Changes

Changes in groundwater flow and groundwater levels between 2012 and 2013 were evaluated using a calibrated groundwater flow model that was previously developed to reevaluate the safe yield of the Beaumont Basin (TH&Co, 2014). For this analysis, the existing calibrated model was updated with groundwater pumping, recharge, and groundwater levels through the end of 2013. A model-generated groundwater contour map was created for Fall 2013 and compared to the model-generated Fall 2012 groundwater contour map in order to evaluate changes in groundwater flow patterns and basin-wide changes in groundwater levels. The model-generated groundwater contour maps for 2012 and 2013 are shown on Figures 3-5 and 3-6, respectively.

Groundwater flow within the Beaumont Basin generally depends on location with respect to a groundwater flow divide which occurs in the center of the basin approximately coincident with the Noble Creek drainage. West of the Noble Creek drainage, groundwater generally flows to the northwest and ultimately towards San Timoteo Wash. East of the Noble Creek drainage, groundwater flows to the southeast towards the City of Banning. The groundwater flow directions did not change significantly between 2012 and 2013.

Basin-wide groundwater level trends in the Beaumont Basin were evaluated based on hydrographs from seven key wells and the groundwater level change map developed by subtracting the 2012 groundwater surface from the 2013 groundwater surface (see Figures 3-7 and 3-8). In the northwest portion of the basin, groundwater levels declined slightly between Fall 2012 and Fall 2013. In the north central portion of the basin (TW-1), groundwater levels declined in the beginning of 2013 but rose back up by the end of the year in response to artificial recharge at the Noble Creek Recharge Facility. In the south-central portion of the basin, groundwater levels at Oak Valley No. 1 increased in 2013 after declining in 2012. At Beaumont-Cherry Valley Water District (BCVWD) Well No. 2, groundwater levels remained stable until the end of 2013 where they began to increase. At Banning Well C-4 (southeast Beaumont Basin), groundwater levels have declined since 2012.

3.6.2 Analysis of Change in Groundwater Storage

Basin-wide change in groundwater storage between Fall 2012 and Fall 2013 was analyzed as a function of the difference in groundwater levels across the basin and the specific yield of the aquifer sediments. Groundwater level change across the basin was analyzed using the following procedure:

1. The Fall 2012 and Fall 2013 model-generated groundwater contour maps were each converted into three-dimensional raster surfaces.
2. The basin was discretized into 140-ft by 140-ft grid cells.
3. Attributes were assigned to each grid cell including groundwater level change and specific yield.

4. The resulting attribute table was processed in a Geographic Information System (GIS) for calculating the change in storage.

The specific yield distribution used for the analysis was obtained from the calibrated groundwater flow model used to evaluate the safe yield of the Beaumont Basin, as summarized in TH&Co (2014).

Results of the analysis show a decrease in groundwater storage within the adjudicated basin of approximately 783 acre-ft between Fall 2012 and Fall 2013. It is noted that, as with previous estimates of change in storage, the extreme northwest portion of the basin was not used in the analysis because there are little groundwater level data in this area.

3.7 Operating Safe Yield

For purposes of this TM, the annual operating safe yield (OSY) describes the net infiltration to the adjudicated groundwater basin (not including artificial recharge) for any given year. It is noted that the OSY is different than the Operating Yield, which is a function of the unused overlyer production (Appropriative Water) and Temporary Surplus, as described in the Beaumont Basin Judgment (San Timoteo Management Authority v. Banning et al., 2004).

Operating safe yield is estimated based on the following equation:

$$OSY = \frac{\Sigma P + \Delta S - \Sigma AR}{\Delta T}$$

where:	ΣP	=	The sum of groundwater production (ac-ft)
	ΔS	=	The change in groundwater storage (ac-ft)
	ΣAR	=	The sum of groundwater recharge (ac-ft)
	ΔT	=	The time over which the OSY is estimated (years)

Total Beaumont Basin groundwater production in calendar year 2013 was 17,114 acre-ft (see Table 1). Total artificial recharge in calendar year 2013 was 8,603 acre-ft (See Table 3-4). It is noted that only the Noble Creek Recharge Facility recharge was used in the analysis of OSY (recharge at the Little San Gorgonio Creek facility is not included because it is outside the adjudicated area). The change in groundwater storage estimate is based on the analysis of groundwater levels described in the preceding section. The period of time over which the OSY is evaluated is one year. The resulting OSY is estimated as:

$$OSY = \frac{17,114 + (-783) - 8,603}{1} = 7,728 \text{ ac-ft}$$

It is emphasized that the OSY, as presented herein, is based on one year of data. When evaluated on a long-term basis, this methodology can be used to estimate the long-term Safe Yield of the basin, as defined in the Beaumont Basin Judgment. As required by the Judgment, the Safe Yield of the basin was reevaluated in 2013.

It is also noted that there are a number of data limitations that could impact the OSY estimate. These limitations include:

- *Accuracy of Overlyer Production Data* – Production data from many of the Overlying Parties is not metered but is estimated based on a water duty method (Wildermuth Environmental, 2012). In addition to inherent limitations in this methodology, there are, in some cases, discrepancies between groundwater production estimated using the water duty method and production reported by individual parties to the California State Water Resources Control Board. Resolution of Overlyer Production is anticipated to affect the OSY (plus or minus) on the order of hundreds of ac-ft (not thousands). Further, potential discrepancies in estimated production will no longer be an issue in the future as production meters were installed in early 2014.
- *Change in Storage Calculation* – Although groundwater storage change estimates will always have inherent uncertainty, it is possible to develop more representative results through collection and analysis of additional data. These data include:
 - ✓ Static groundwater levels from dedicated non-pumping wells. There is evidence that groundwater levels measured in some wells had not recovered fully between pumping cycles in the well and were not, therefore, representative of true static conditions. This can be addressed by waiting longer after pumping to collect groundwater levels or constructing/designating non-pumping groundwater monitoring wells in strategic areas.
 - ✓ Measurement of surface water flow in selected drainages, hydrogeological data near Noble Creek and San Timoteo Creek, and hydrogeological analysis of faults in the basin to help achieve a better calibrated model, resulting in more accurate groundwater head distributions. Bettering our understanding of the hydrogeology of this area will help improve the accuracy of the model and its output.

3.8 Recommendations

The Rules and Regulations, initially adopted in June 2004, were developed with the understanding that they should be revisited and/or revised from time to time to make sure they were consistent with the provisions of the Judgment. Revisions to the Rules and Regulations have been made over the years with the latest revision changing the reporting of Watermaster activities from a fiscal year basis to a calendar year basis.

Since the completion of the previous report, Watermaster is in the process of conducting additional groundwater studies that may be used to address some of the recommendations from previous years including:

- The development of a methodology to account for new yield from capturing local stormwater in the basin.
- The development of a methodology to account for groundwater storage losses in the basin resulting from the spreading of additional water sources.
- The development of a methodology to account for recycled water recharge.

In preparing this annual report and through the review of previous annual reports, we have identified a number of issues/activities that should be considered by the Watermaster to ensure accurate accounting of production, transfers, recharge, and storage. It should be noted that many of the recommendations provided in this section have been previously documented in prior annual reports. Our recommendations are as follows:

- Consider adopting additional resolutions to address other accounting aspects related to the conversion of annual reporting from a fiscal year basis to a calendar year basis. The following issues should be reported on a calendar year basis:
 - ✓ Water transfers between Appropriators
 - ✓ Transfers of unused production from Overlying Parties to Appropriators
 - ✓ Spreading of imported water, recycled water, and new yield developed
- Develop a protocol to increase the accuracy and consistency of data reported to the Watermaster. Watermaster should identify a person and/or entity to be the central repository for data collection, transfer, and exchange. This person/entity shall be responsible for the collection and distribution of all groundwater production, water level, groundwater recharge, and water quality information. Quality control of the data in its various forms including checks for errors, omissions, and inconsistencies between the reporting agencies and/or parties should be part of this process.
- Develop a policy to account for transfers of water that may result when an Appropriator provides water service to an Overlying Party. Section 7 of the Rules and Regulations, Adjustments for Rights, provides initial guidelines to execute this transfer; however, it needs to be enhanced in the following areas: a) data requirements to complete the transfer, b) review process by Watermaster, c)

schedule for completion so that proper accounting of transfers can be given and documented in the annual report.

As indicated earlier, Watermaster should revisit the Rules and Regulations to ensure that its activities are consistent with the requirements of the Judgment. The following inconsistencies between guidelines provided in this document and current Watermaster activities were identified:

- Watermaster has not conducted a meter maintenance program, as required under Section 3.1 of the Rules and Regulations, to make sure groundwater production is reported accurately.
- Under Section 3.2 of the Rules and Regulations, producers producing in an excess of 10 ac-ft/yr. should report on a monthly basis by the 15th day of the ensuing month while those producing less should file on an annual basis by the 15th of July. In addition, this section indicates that proper supporting information should be provided. This provision of the Judgment is currently being addressed by Watermaster as water agencies are in the process of installing water meters at all wells owned by Overlyers listed in the Judgment. Starting in 2014, agencies will collect monthly production records from those overlyers within their service area.
- Watermaster has not enforced the procedures identified under Section 5 of the Rules and Regulations pertaining to the submittal of applications to recharge supplemental or new yield water in the Basin.
- Watermaster has not enforced the submittal of applications for the recapture of water in storage by Appropriators as defined in Sections 6.1 and 6.3 of the Rules and Regulations.
- Watermaster has not enforced the submittal of notices of transfers prior to accounting for said transfers as defined in Sections 7.1 through 7.5 of the Rules and Regulations.
- Watermaster has not filed its annual reports with the Court. The Watermaster Board should make a formal determination as to whether the annual reports should be filed with the Court.

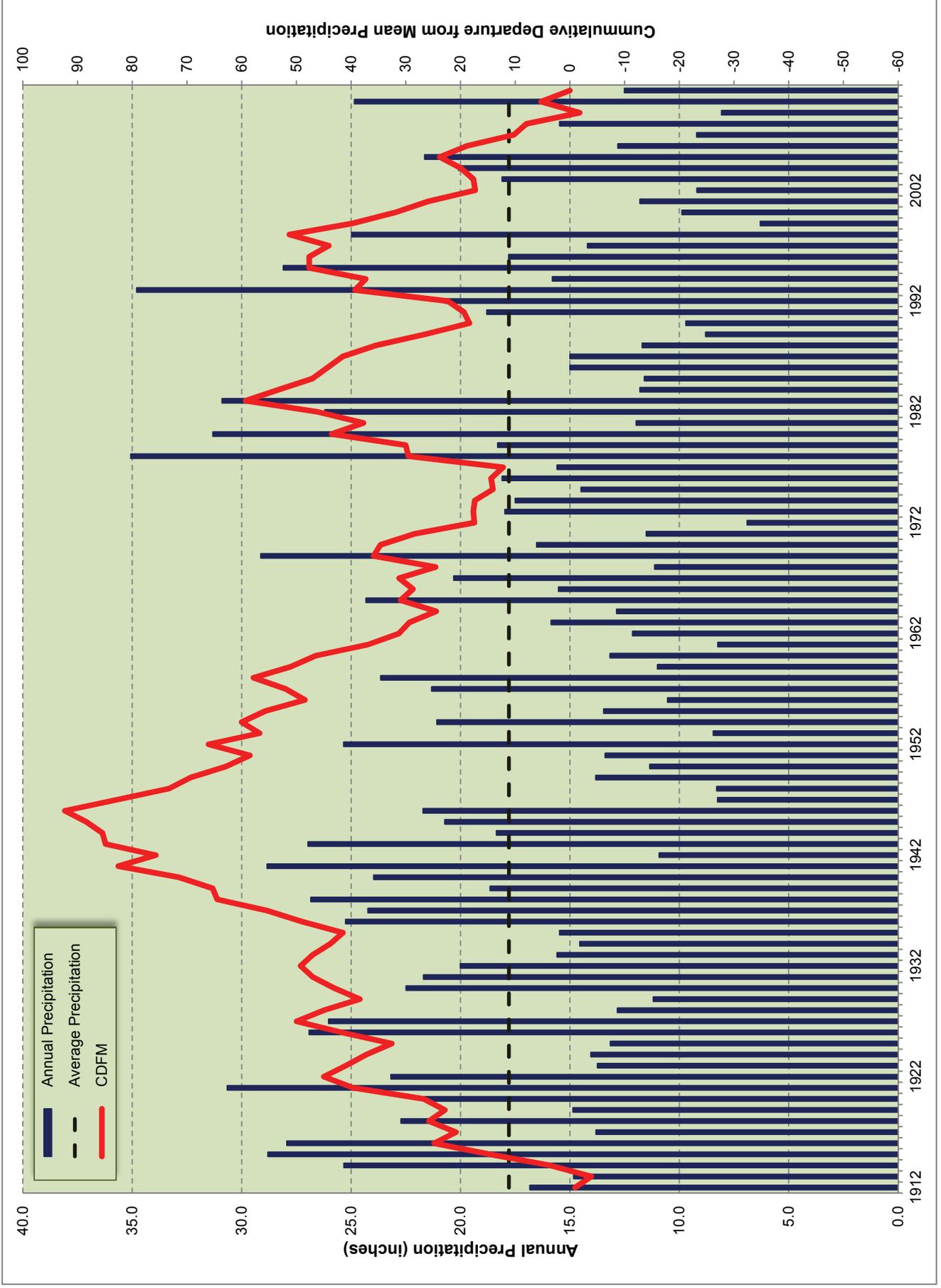
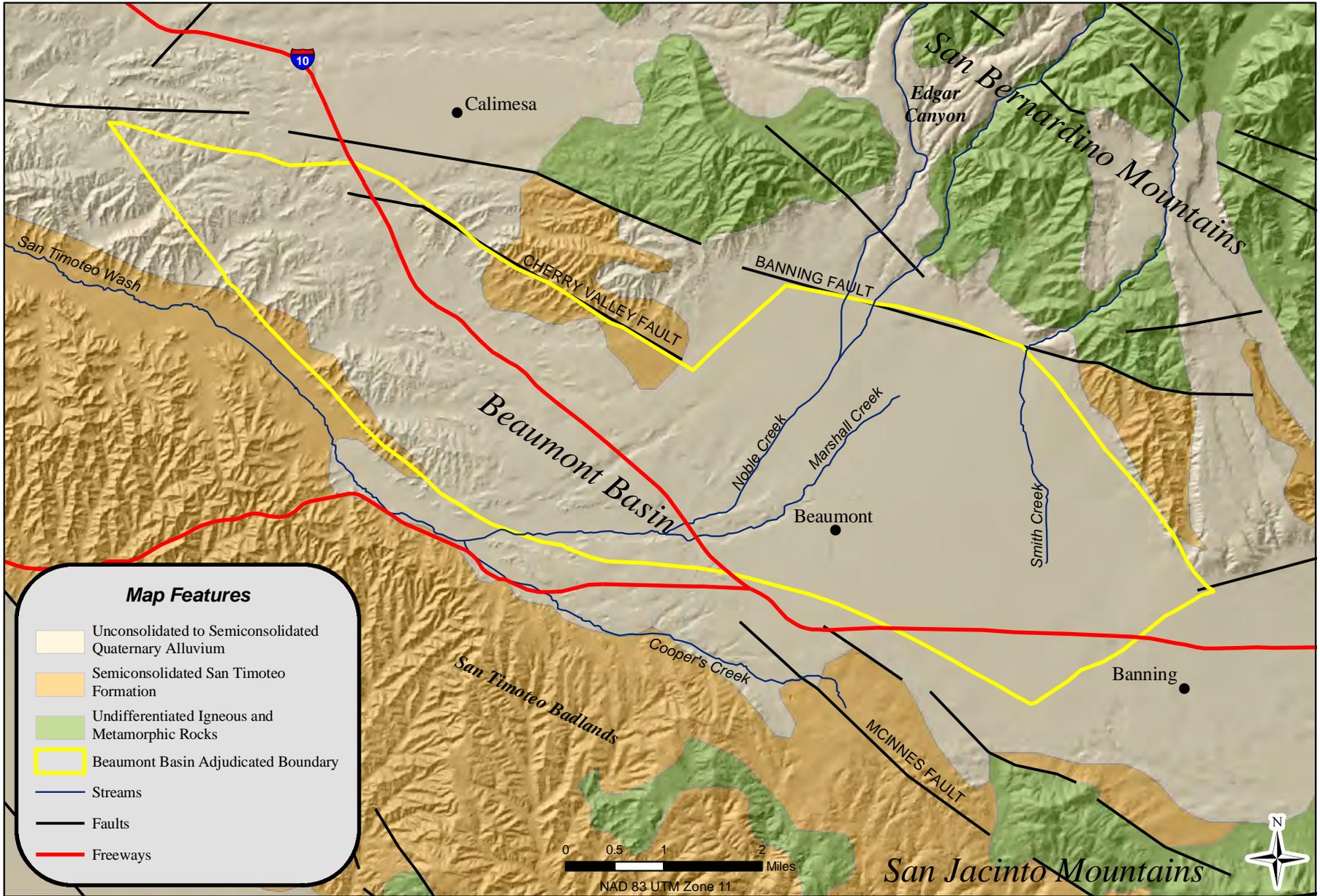
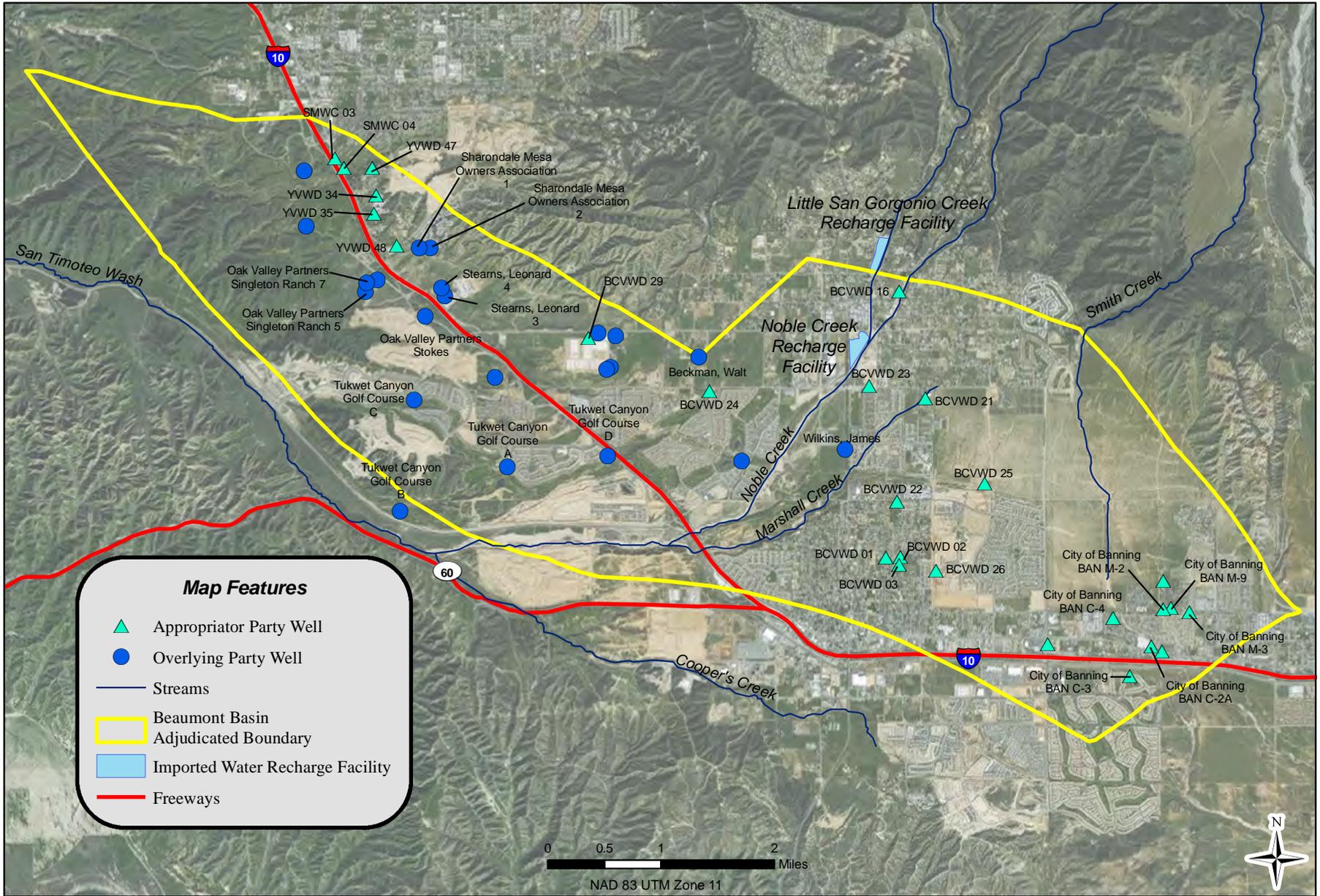


Figure 3-1
Annual Precipitation with Cumulative Departure from the Mean





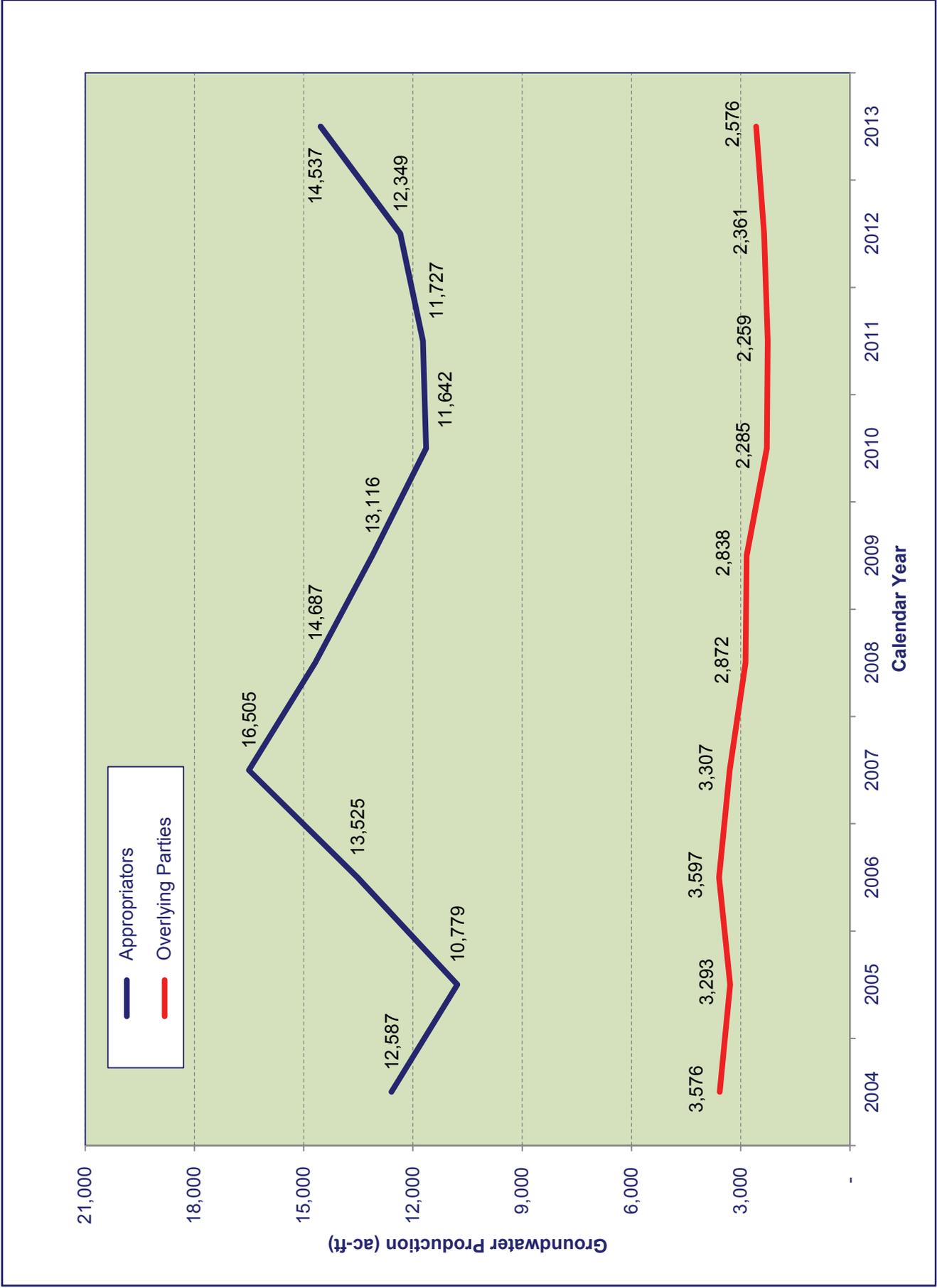
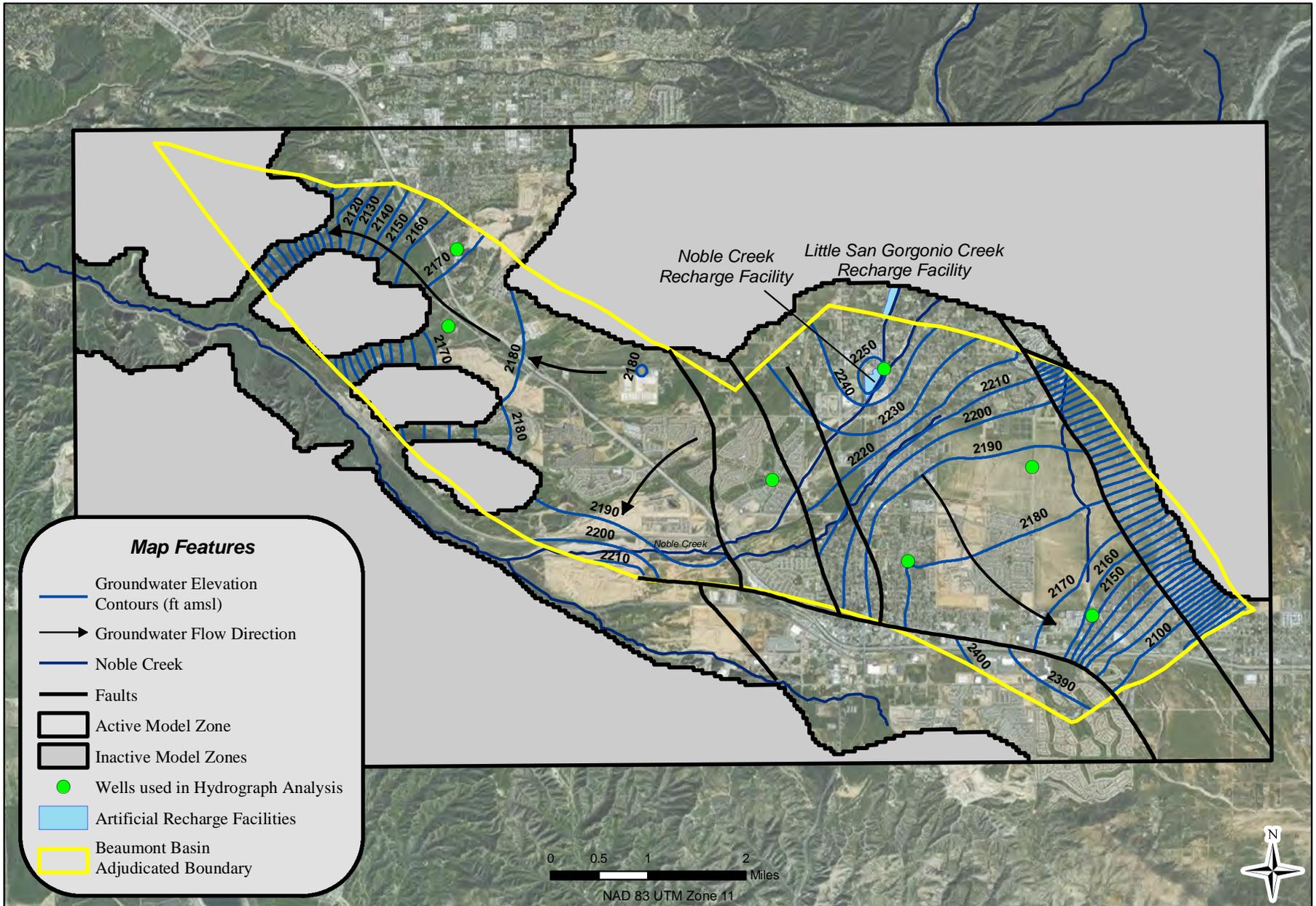


Figure 3-4
Annual Production by Appropriators and Overlying Users (2003-13)



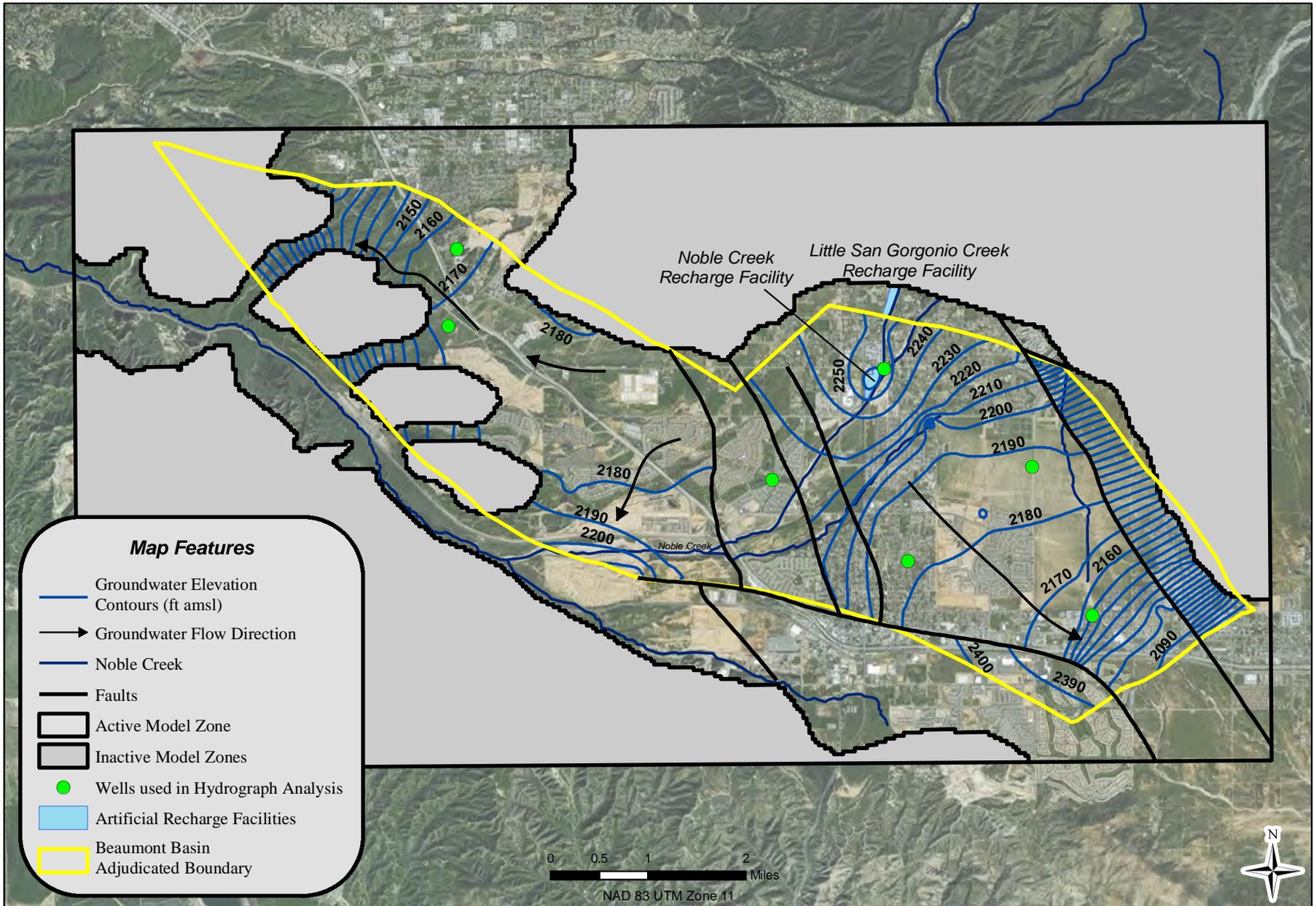
Alda, Inc. in association with



DRAFT

**Groundwater Elevation Contours
in the Beaumont Basin - Fall 2012**

Figure 3-5



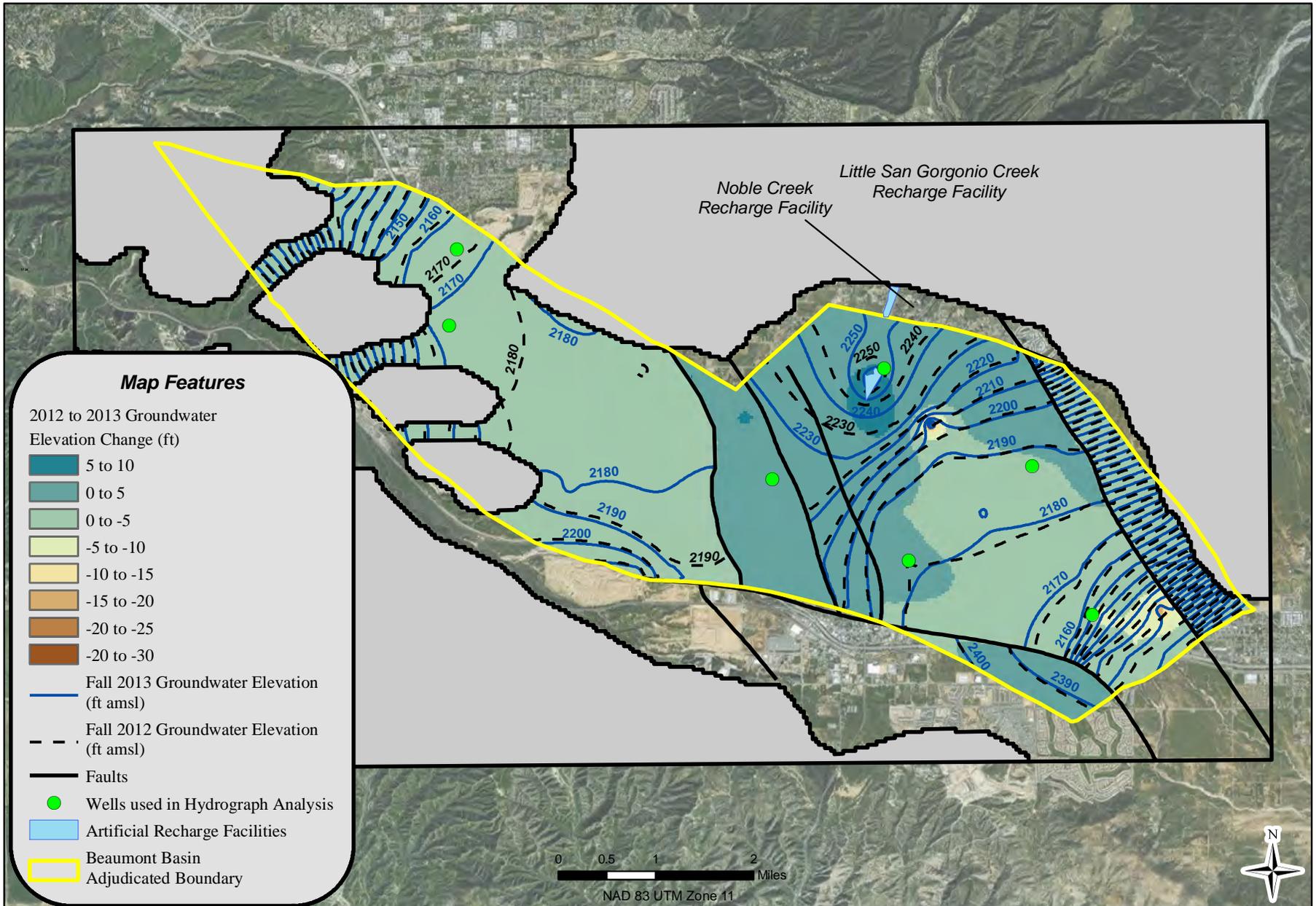
Alda, Inc. in association with



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**Groundwater Elevation Contours
in the Beaumont Basin - Fall 2013**

Figure 3-6



Alda, Inc. in association with

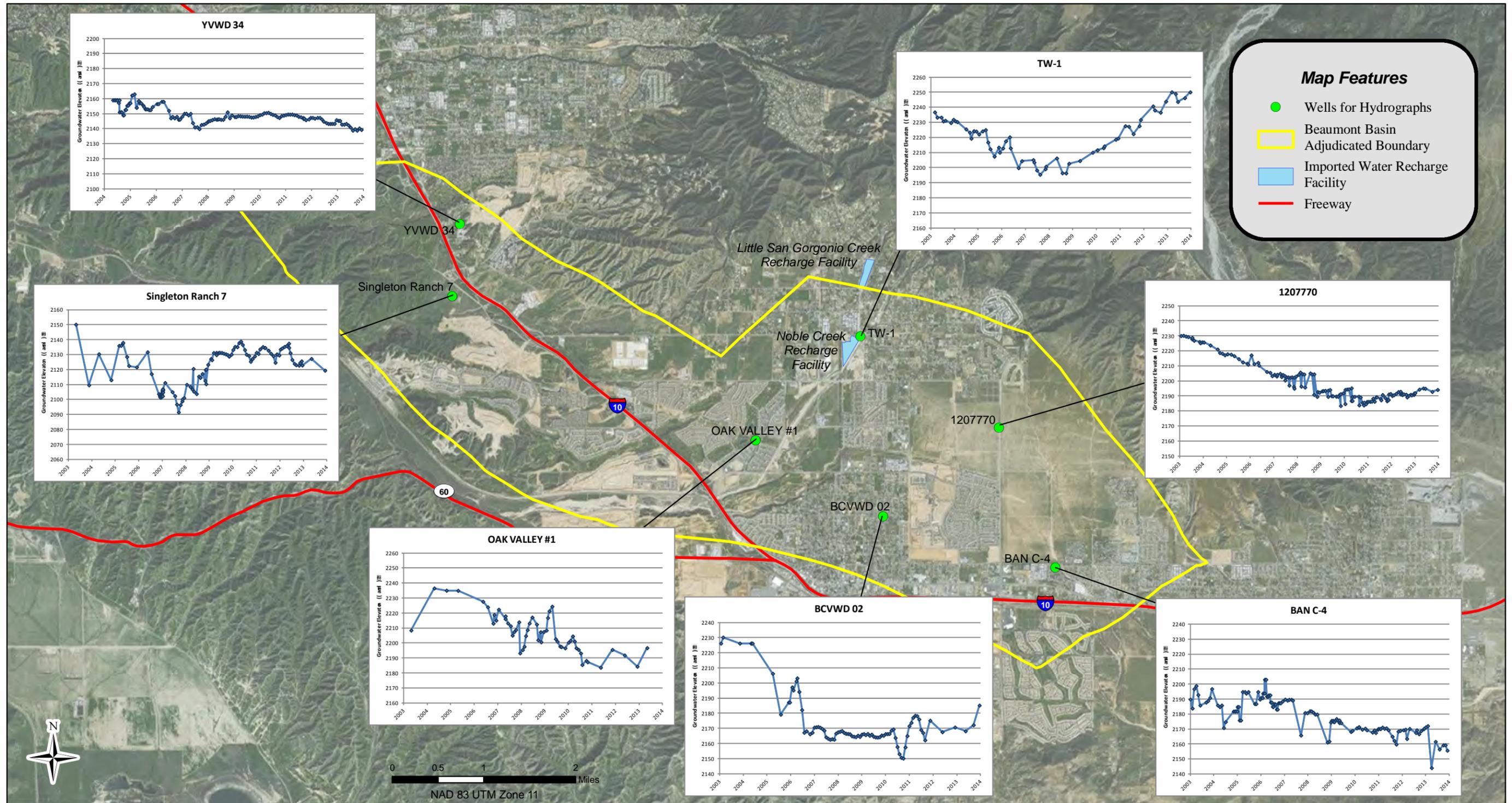


DRAFT

Change in Groundwater Elevation

2012 - 2013

Figure 3-7



**Table 3-1A
Appropriator Producer Summary of Production for Calendar Year 2003 (ac-ft)**

Owner & Well Name	Water Production by Appropriator (ac-ft)						Total Production	Temp ³ Surplus Allocation	Eligible for Storage
	Jul	Aug	Sep	Oct	Nov	Dec			
Banning, City of									
Well C2-A	107.5	99.1	118.7	108.5	82.9	102.5	619.2		
Well C3	112.9	100.9	103.1	88.1	36.6	76.1	517.7		
Well C4	102.1	111.0	74.0	77.6	64.9	18.7	448.3		
Well M3	76.4	162.1	129.8	146.7	10.7	0.0	525.7		
Well M9	62.2	1.1	0.0	0.0	0.0	0.0	63.3		
From BC\WWD ²	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Subtotal	461.1	474.2	425.6	420.9	195.1	197.3	2,174.2	2,514.5	340.3
Beaumont-Cherry Valley Water District									
Well 1	0.0	0.0	0.0	0.0	0.6	5.3	5.9		
Well 2	167.9	181.2	193.8	151.1	115.0	151.2	960.2		
Well 3	152.7	163.6	173.0	118.0	43.6	24.2	675.1		
Well 16	108.3	110.9	114.5	94.0	59.0	67.9	554.6		
Well 21	201.0	209.3	218.0	172.6	31.9	0.0	832.8		
Well 22	152.7	110.9	50.3	135.9	33.5	0.0	483.3		
To Banning ²	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Subtotal	782.6	775.9	749.6	671.6	283.6	248.6	3,511.9	3,401.0	0.0
South Mesa Water Company									
3rd No. 4 Well	65.2	47.0	51.3	25.5	18.0	16.2	223.2		
Subtotal	65.2	47.0	51.3	25.5	18.0	16.2	223.2	998.0	774.8
Yucaipa Valley Water District									
Well 35	25.3	18.8	10.4	1.9	0.7	1.8	58.9		
Well 48	234.5	239.1	220.9	164.3	123.8	120.9	1,103.5		
Subtotal	259.8	257.9	231.3	166.2	124.5	122.7	1,162.4	1,086.5	0.0
Total	1,568.7	1,555.0	1,457.8	1,284.2	621.2	584.8	7,071.7	8,000.0	1,115.1

1 - All values rounded and subject to revision based on receipt of more accurate information

2 - Pursuant to Part I, Paragraph 3 B of the Judgment, and a separate Agreement (a copy of which is on file with the Watermaster).

3.- Temporary surplus based on 8,000 ac-ft or half of the 16,000 ac-ft/yr allocated

**Table 3-1D
Appropriator Producer Summary of Production for Calendar Year 2006 (ac-ft)**

Owner & Well Name	Water Production by Appropriator (ac-ft) ¹												Total Production	Temp ³ Surplus Allocation	Eligible for Storage	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec				
Banning, City of																
Well C2-A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0	2.1	6.8			
Well C3	2.0	0.1	0.9	2.6	34.8	10.5	36.4	44.7	61.1	26.5	6.1	9.7	235.3			
Well C4	6.6	40.4	1.4	19.1	11.4	12.6	61.4	32.3	50.5	11.2	19.9	10.0	276.8			
Well M3	43.8	9.9	20.4	34.1	65.8	65.5	84.8	82.2	88.2	74.9	69.7	32.6	671.9			
Well M9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
From BCVWD ²	1.1	28.4	0.0	0.0	74.3	111.2	104.4	105.3	105.6	61.6	44.8	0.0	636.7			
Subtotal	53.4	78.8	22.7	55.8	186.4	199.8	287.0	284.5	310.0	174.2	140.5	54.6	1,827.5	5,029.0	3,201.5	
Beaumont-Cherry Valley Water District																
Well 1	51.7	0.3	1.5	0.0	105.2	215.6	186.4	169.6	141.3	92.6	137.8	47.2	1,149.1			
Well 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Well 3	0.0	0.0	0.0	0.0	83.1	194.2	190.9	51.0	6.3	4.6	163.4	56.1	749.7			
Well 16	28.7	51.3	47.6	1.9	0.0	61.7	119.6	113.6	101.4	12.0	0.0	0.0	537.7			
Well 21	176.7	132.6	8.5	1.5	28.4	360.0	320.3	306.4	263.1	120.3	196.2	82.3	1,996.3			
Well 22	60.2	65.7	35.1	1.5	45.2	140.6	176.4	159.7	139.6	77.3	100.7	60.6	1,062.6			
Well 23	0.8	9.1	6.1	0.1	41.6	305.7	699.4	0.0	304.0	191.4	295.2	110.4	1,963.9			
Well 24	33.4	235.3	212.4	165.6	68.0	204.5	276.6	247.8	298.6	172.9	211.0	105.6	2,231.7			
To Banning ²	-1.1	-28.4	0.0	0.0	-74.3	-111.2	-104.4	-105.3	-105.6	-61.6	-44.8	0.0	-636.7			
Subtotal	350.4	465.9	311.3	170.5	297.2	1,371.0	1,865.2	942.7	1,148.7	609.4	1,059.5	462.2	9,054.1	6,802.0	0.0	
South Mesa Water Company																
3rd No. 4 Well	42.8	38.6	42.8	29.4	31.6	56.2	81.3	76.5	65.1	55.9	53.7	42.1	616.0			
Subtotal	42.8	38.6	42.8	29.4	31.6	56.2	81.3	76.5	65.1	55.9	53.7	42.1	616.0	1,996.0	1,380.0	
Yucaipa Valley Water District																
Well 35	1.4	1.6	1.4	0.6	15.9	39.9	47.5	40.1	34.1	20.1	15.0	2.4	220.0			
Well 48	22.9	56.5	19.0	31.9	157.9	228.7	244.3	240.0	227.9	229.1	227.8	121.2	1,807.2			
Subtotal	24.3	58.1	20.5	32.5	173.8	268.6	291.8	280.2	262.0	249.2	242.8	123.5	2,027.3	2,173.0	145.7	
Total	471.0	641.4	397.2	288.2	689.1	1,895.6	2,525.3	1,563.9	1,785.8	1,088.7	1,496.4	682.3	13,524.9	16,000.0	4,727.2	

1 - All values rounded and subject to revision based on receipt of more accurate information

2 - Pursuant to Part 1, Paragraph 3 B of the Judgment, and a separate Agreement (a copy of which is on file with the Watermaster).

3 - Temporary surplus based on 16,000 ac-ft/yr allocated

**Table 3-1E
Appropriator Producer Summary of Production for Calendar Year 2007 (ac-ft)**

Owner & Well Name	Water Production by Appropriator (ac-ft) ¹												Total Production	Temp ³ Surplus Allocation	Eligible for Storage	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec				
Banning, City of																
Well C2-A	0.6	0.4	0.7	0.5	0.0	30.3	86.2	87.9	58.6	20.3	0.4	2.2	288.1			
Well C3	3.7	0.1	9.2	17.9	48.1	59.3	80.6	74.3	47.8	100.2	59.0	11.4	511.6			
Well C4	13.2	5.1	2.0	10.8	61.3	156.3	100.8	98.7	106.3	99.9	17.5	2.1	673.9			
Well M3	40.3	12.8	23.8	23.7	23.8	42.7	115.2	113.9	104.1	64.8	108.9	52.0	726.0			
Well M9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
From BCVWD ²	0.0	0.0	43.3	55.4	71.3	59.0	43.0	56.0	55.0	62.0	63.0	65.0	572.9			
Subtotal	57.8	18.4	79.0	108.3	204.5	347.6	425.8	430.8	371.8	347.2	248.8	132.7	2,772.6	5,029.0	2,256.4	
Beaumont-Cherry Valley Water District																
Well 1	74.5	53.6	116.0	13.3	82.5	130.6	134.9	179.8	212.5	128.5	101.6	55.9	1,283.8			
Well 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Well 3	80.7	55.1	42.8	82.4	86.0	148.2	154.1	205.6	270.5	176.5	55.4	0.0	1,357.3			
Well 16	0.0	0.1	17.4	0.0	0.0	12.3	68.4	103.8	117.6	14.7	1.5	12.6	348.3			
Well 21	190.1	98.6	91.8	114.9	183.8	214.8	215.5	306.3	392.5	285.0	205.2	126.2	2,424.7			
Well 22	43.0	21.2	60.5	47.4	97.1	127.6	125.4	161.7	197.8	92.3	59.3	23.5	1,056.8			
Well 23	187.4	53.8	167.8	190.3	274.2	272.8	272.4	419.4	523.9	314.2	257.5	84.6	3,018.3			
Well 24	78.8	280.5	186.4	173.2	208.6	236.7	130.1	274.6	360.7	282.1	166.6	88.9	2,467.1			
To Banning ²	0.0	0.0	-43.3	-55.4	-71.3	-59.0	-43.0	-56.0	-55.0	-62.0	-63.0	-65.0	-572.9			
Subtotal	654.5	562.8	639.3	566.1	860.9	1,084.0	1,057.8	1,595.2	2,020.5	1,231.3	784.1	326.7	11,383.3	6,802.0	0.0	
South Mesa Water Company																
3rd No. 4 Well	42.5	32.6	48.6	53.1	69.4	70.7	82.1	76.6	60.1	58.7	55.3	16.1	665.8			
Subtotal	42.5	32.6	48.6	53.1	69.4	70.7	82.1	76.6	60.1	58.7	55.3	16.1	665.8	1,996.0	1,330.2	
Yucaipa Valley Water District																
Well 35	1.4	0.0	4.4	1.5	27.7	46.9	39.0	28.0	5.5	8.3	0.5	0.7	163.8			
Well 48	53.2	18.3	130.5	122.1	222.4	230.9	232.4	183.3	126.7	132.5	47.4	19.4	1,519.1			
Subtotal	54.6	18.3	134.9	123.6	250.1	277.8	271.4	211.3	132.2	140.8	47.9	20.1	1,682.9	2,173.0	490.1	
Total	809.4	632.0	901.8	851.1	1,384.9	1,780.0	1,837.1	2,313.9	2,584.6	1,778.0	1,136.1	495.6	16,504.6	16,000.0	4,076.7	

1 - All values rounded and subject to revision based on receipt of more accurate information

2 - Pursuant to Part 1, Paragraph 3 B of the Judgment, and a separate Agreement (a copy of which is on file with the Watermaster).

3 - Temporary surplus based on 16,000 ac-ft/yr allocated

**Table 3-1H
Appropriator Producer Summary of Production for Calendar Year 2010 (ac-ft)**

Owner & Well Name	Water Production by Appropriator (ac-ft) ¹												Total Production	Temp ³ Surplus Allocation	Eligible for Storage
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Banning, City of															
Well C2-A	0.5	0.0	2.6	0.3	0.4	0.3	1.6	1.3	9.6	8.4	0.9	1.0	26.8		
Well C3	35.4	12.7	8.9	49.4	119.2	107.0	113.8	120.6	114.8	47.1	76.1	38.1	843.0		
Well C4	3.4	0.4	2.9	0.6	0.5	0.6	3.5	22.3	14.3	0.3	1.6	1.1	51.4		
Well M3	1.1	0.2	7.3	0.3	0.2	11.4	30.5	21.4	1.9	3.5	0.4	1.8	80.0		
Well M9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
From BCVWD ²	65.8	59.3	17.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	142.5		
Subtotal	106.3	72.6	39.0	50.6	120.2	119.3	149.3	165.6	140.5	59.3	78.9	42.0	1,143.6	5,029.0	3,885.4
Beaumont-Cherry Valley Water District															
Well 1	36.7	50.6	53.3	48.2	73.9	98.7	115.0	87.5	116.1	68.5	46.3	14.3	809.1		
Well 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Well 3	44.3	60.7	57.3	57.2	91.1	116.5	155.6	119.1	73.7	0.0	0.0	0.0	775.6		
Well 16	0.3	1.2	0.5	2.6	0.0	0.6	2.5	0.5	0.7	1.5	0.7	0.9	11.9		
Well 21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.2	0.0	1.5	0.0	8.7		
Well 22	52.4	43.0	41.6	20.0	6.4	11.3	69.1	42.5	80.4	9.0	4.6	1.4	381.7		
Well 23	96.5	45.7	106.0	156.3	182.2	203.0	271.3	217.3	296.4	146.1	101.6	108.1	1,930.4		
Well 24	110.2	293.4	148.8	166.2	226.2	219.2	243.5	178.7	255.7	88.3	128.1	141.4	2,199.6		
Well 25	12.5	0.0	25.2	44.1	155.0	191.8	250.0	209.1	196.7	138.3	66.8	11.0	1,300.4		
Well 26	85.9	59.3	69.7	97.2	150.6	144.3	159.9	124.0	167.1	66.6	96.8	90.8	1,312.2		
Well 29	39.1	0.0	0.0	0.0	0.5	89.6	165.8	131.7	177.9	92.7	86.9	50.2	834.4		
To Banning ²	-65.8	-59.3	-17.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-142.5		
Subtotal	412.0	494.6	485.1	591.8	885.9	1,075.0	1,432.7	1,110.3	1,371.8	611.0	533.1	418.1	9,421.3	6,802.0	0.0
South Mesa Water Company															
3rd No. 4 Well	18.1	14.9	16.6	23.0	32.1	52.4	53.8	58.2	56.5	32.5	32.4	14.5	405.0		
Subtotal	18.1	14.9	16.6	23.0	32.1	52.4	53.8	58.2	56.5	32.5	32.4	14.5	405.0	1,996.0	1,591.1
Yucaipa Valley Water District															
Well 35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Well 48	6.4	0.9	21.5	18.0	59.6	84.2	127.4	115.6	137.3	44.3	33.6	23.6	672.4		
Subtotal	6.4	0.9	21.5	18.0	59.6	84.2	127.4	115.6	137.3	44.3	33.6	23.6	672.4	2,173.0	1,500.6
Total	542.7	583.0	562.1	683.3	1,097.9	1,331.0	1,763.2	1,449.8	1,706.1	747.1	678.0	498.2	11,642.3	16,000.0	6,977.0

1 - All values rounded and subject to revision based on receipt of more accurate information

2 - Pursuant to Part 1, Paragraph 3 B of the Judgment, and a separate Agreement (a copy of which is on file with the Watermaster).

3 - Temporary surplus based on 16,000 ac-ft/yr allocated

**Table 3-2A
Overlying Producer Summary of Production for Calendar Year 2003 (ac-ft)**

Owner and Well Name	Metered	Monthly Water Production by Overlying Producers ¹					Total ² Production (Jul-Dec)	Overlying Water Right FY 03/04	Overlying Water Right (Jul-Dec) 2003	Unused Overlying Allocation in 2003
		Jul	Aug	Sep	Oct	Nov				
Beckman, Walter M.	No						16.20 (6)	75.00	37.50	21.30
California Oak Valley Golf and Resort LLC³										
Oak Valley #1	Yes									
Oak Valley #2	Yes									
Subtotal							736.20 (6)	950.00	475.00	0.00
Merlin Properties	No						3.60 (6)	550.00	275.00	271.40
Oak Valley Partners, LP⁴										
Haskell Ranch-Main	N/A						29.40			
Singleton Ranch #5	No						180.00			
Singleton Ranch #7	Yes						85.80			
Irrigation Stokes	No						6.00			
Subtotal							301.20 (6)	1,806.00	903.00	601.80
Plantation on the Lake LLC	Yes	26.80	38.00	38.10	31.60	25.50	18.60	581.00	290.50	111.90
Rancho Calimesa Mobile Home Park	No							150.00	75.00	39.60
Roman Catholic Bishop of San Bernardino	No							154.00	77.00	30.20
Sharondale Mesa Owners Association										
Well No.1	Yes	24.20	20.90	27.30	15.60	5.10	5.50	98.60		
Well No.2	Yes	0.00	0.00	0.00	0.00	0.00	5.70	5.70		
Subtotal		24.20	20.90	27.30	15.60	5.10	11.20	104.30	100.00	0.00
So Calif Section of the PGA of America⁵										
Well A	Yes	35.79	38.59	25.89	18.33	7.65	4.56	130.80		
Well B	No							0.00		
Well C	Yes							0.00		
Well D	Yes	174.71	158.81	133.75	115.29	43.79	34.27	660.63		
Subtotal		210.50	197.40	159.64	133.62	51.44	38.83	791.43	2,200.00	308.57
Stearns, Leonard M. and Dorothy D.	No							200.00	100.00	98.95
Sunny-Cal Egg and Poultry Company								1,784.00	892.00	666.00
TOTAL							2,440.78	8,650.00	4,325.00	2,149.72

1.- All values rounded and subject to revision based on receipt of more accurate information.

2.- Total production is estimated for Overlying parties with un-metered wells.

3.- Metering began in late 2004 and was not reported monthly. One total production value for each well was reported to Watermaster for FY 2003/04. For the conversion to CY accounting, it was assumed that CY 2004 production for this entity was equal to FY 2003/04 production (1,227.4 acre-ft).

4.- Provided copies of state filing with annual calendar-year totals for each well. Production values for Singleton Ranch #5 and Irrigation Stokes are estimated by Oak Valley Partners.

5.- Actual monthly production provided by the Morongo Band of Mission Indians - March 2014

6.- Production for the Jul-Dec 2003 period estimated as 60 percent of the annual production. This is based on average production for the Jul-Dec period for similar users.

7.- Production for the Jul-Dec 2003 period was based on 1,200,000 chickens and 66.4 irrigated acres, similar to 2004 quantities.

Table 3-2B
Overlying Producer Summary of Production for Calendar Year 2004 (ac-ft)

Owner and Well Name	Metered	Monthly Water Production by Overlying Producer ¹												Total ² Production	Overlying Water Right	Unused Overlying Allocation in 2004				
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec							
Beckman, Walter M.	No																27.00	75.00	48.00	
California Oak Valley Golf and Resort LLC ³	Yes																			
Oak Valley #1	Yes																			
Oak Valley #2	Yes																			
Subtotal																				
Mertin Properties	No	Water Duty Method Used to Estimate Annual Production																		
Oak Valley Partners, LP ⁴	N/A																			
Haskell Ranch-Main	No																			
Singleton Ranch #5	Yes																			
Singleton Ranch #7	No																			
Irrigation Stokes	No																			
Subtotal																				
Plantation on the Lake LLC	Yes	18.3	21.7	13.2	24.1	30.3	35.1	35.9	41.4	40.7	37.8	21.8	20.5							
Rancho Calimesa Mobile Home Park	No	Water Duty Method Used to Estimate Annual Production																		
Roman Catholic Bishop of San Bernardino	No	Water Duty Method Used to Estimate Annual Production																		
Sharondale Mesa Owners Association	Yes																			
Well No.1	Yes	5.0	3.4	5.9	7.4	10.0	14.4	19.4	12.0	9.2	8.0	8.5	7.9							
Well No.2	Yes	5.0	3.4	5.9	9.1	22.0	19.6	27.1	21.6	15.8	12.3	8.5	7.9							
Subtotal																				
So Calif Section of the PGA of America ⁵	Yes																			
Well A	No	6.41	13.66	35.85	25.60	43.13	45.27	24.64	5.59	16.98	28.90	5.14	16.89							
Well B	Yes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
Well C	Yes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
Well D	Yes	36.51	14.05	56.44	64.85	113.66	147.98	208.31	193.95	143.74	41.01	12.98	45.17							
Subtotal																				
Stearns, Leonard M. and Dorothy D.	No	Water Duty Method Used to Estimate Annual Production																		
Sunny-Cal Egg and Poultry Company	N/A	Water Duty Method Used to Estimate Annual Production																		
TOTAL																				

1.- All values rounded and subject to revision based on receipt of more accurate information.
2.- Total production is estimated for Overlying parties with un-metered wells.
3.- Metering began in late 2004 and was not reported monthly. One total production value for each well was reported to Watermaster for FY 2003/04. For the conversion to CY accounting, it was assumed that CY 2004 production for this entity was equal to FY 2003/04 production (1,227.4 acre-ft).
4.- Provided copies of state filing with annual calendar year totals for each well. Production values for Singleton Ranch #5 and Irrigation Stokes are estimated by Oak Valley Partners.
5.- Actual monthly production provided by the Morongo Band of Mission Indians - March 2014

Table 3-2C
Overlying Producer Summary of Production for Calendar Year 2005 (ac-ft)

Owner and Well Name	Metered	Monthly Water Production by Overlying Producer ¹												Total ² Production	Overlying Water Right	Unused Overlying Allocation in 2005				
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec							
Beckman, Walter M.	No																22.40	75.00	52.60	
California Oak Valley Golf and Resort LLC ³																				
Oak Valley #1	Yes	41.15		6.10		150.20	92.90		29.13		122.63		81.07				523.18			
Oak Valley #2	Yes		18.70		82.20	39.30		13.10		27.40		0.00		0.00			180.70	950.00	246.12	
Subtotal		41.15	0.00	24.80	0.00	232.40	132.20	0.00	42.23	0.00	150.03	0.00	81.07	0.00	0.00	0.00	703.88	950.00	246.12	
Merlin Properties	No	Water Duty Method Used to Estimate Annual Production												1.55	550.00	548.45				
Oak Valley Partners, LP ⁴	No	Water Duty Method Used to Estimate Annual Production												300.00						
Singleton Ranch #5	Yes	Water Duty Method Used to Estimate Annual Production												40.22						
Singleton Ranch #7	No	Water Duty Method Used to Estimate Annual Production												10.00						
Irrigation Stokes	No	Water Duty Method Used to Estimate Annual Production												350.22	1,806.00	1,455.78				
Subtotal		23.00	11.94	8.27	16.80	20.21	34.28	35.25	42.90	35.85	32.56	25.39	23.73	0.00	0.00	0.00	310.19	561.00	270.81	
Plantation on the Lake LLC	Yes	Water Duty Method Used to Estimate Annual Production												68.25	150.00	81.75				
Rancho Calimesa Mobile Home Park	No	Water Duty Method Used to Estimate Annual Production												55.60	154.00	98.40				
Roman Catholic Bishop of San Bernardino	No	Water Duty Method Used to Estimate Annual Production																		
Sharondale Mesa Owners Association																				
Well No.1	Yes	5.24	5.90	2.54	8.75	9.20	13.28	7.00	13.87	12.81	9.56	4.43	5.81				98.39			
Well No.2	Yes	0.00	0.00	4.30	5.15	7.22	8.13	15.97	7.18	12.64	6.76	9.56	5.65				82.56			
Subtotal		5.24	5.90	6.84	13.90	16.42	21.41	22.97	21.05	25.45	16.32	13.99	11.46	0.00	0.00	0.00	180.95	200.00	19.05	
So Calif Section of the PGA of America ⁵																				
Well A	Yes	2.76	1.88	6.42	0.00	41.77	0.00	69.33	34.27	31.90	12.59	8.15	8.11				217.17			
Well C	Yes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00			
Well D	Yes	8.84	18.53	18.90	184.94	0.00	144.73	124.14	145.20	127.72	67.85	79.35	75.72				985.94			
Subtotal		11.59	20.41	25.32	184.94	41.77	144.73	193.48	179.48	159.62	80.44	87.50	83.83	0.00	0.00	0.00	1,213.11	2,200.00	986.89	
Stearns, Leonard M. and Dorothy D.	No	Water Duty Method Used to Estimate Annual Production												1.05	200.00	198.95				
Sunny-Cal Egg and Poultry Company	No	Water Duty Method Used to Estimate Annual Production												385.44	1,784.00	1,398.56				
TOTAL																	3,292.63	8,650.00	5,357.37	

1- All values rounded and subject to revision based on receipt of more accurate information.
2- Total production is estimated for Overlying parties with un-metered wells.
3- Initially, production not reported monthly. Blank values indicate no report in that month. Production reported for January 2005 was 164.6 acre-ft, but represented four months of production (October 2004 through January 2005). To estimate January value of 41.15 acre-ft, the total production was assumed to be equal across all four months.
4- Provided copies of state filing with annual calendar year totals for each well. Production values for Singleton Ranch #5 and Irrigation Stokes are estimated by Oak Valley Partners. Meter reads were provided to the Watermaster, but c to inconsistent reporting, annual state recordation data was used.
5- Actual monthly production provided by the Morongo Band of Mission Indians - March 2014

Table 3-2D
Overlying Producer Summary of Production for Calendar Year 2006 (ac-ft)

Owner and Well Name	Metered	Monthly Water Production by Overlying Producer ¹												Total ² Production	Overlying Water Right	Unused Overlying Allocation in 2006
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Beckman, Walter M.	Yes	0.73	0.33	0.62	0.06	0.41	2.01	1.88	1.99	1.51	0.71	1.06	0.18	0.18	75.00	63.51
California Oak Valley Golf and Resort LLC ³																
Oak Valley #1	Yes	73.32	31.97	34.00	0.00	44.60	166.10	33.38	53.63	16.07	0.00	0.50	0.00	0.00	453.58	
Oak Valley #2	Yes	0.00	0.00	0.10	0.00	6.10	11.40	90.90	47.10	84.40	43.00	66.80	28.10	28.10	377.90	
Subtotal		73.32	31.97	34.10	0.00	50.70	177.50	124.28	100.73	100.47	43.00	67.30	28.10	28.10	950.00	118.53
Merlin Properties	No	Water Duty Method Used to Estimate Annual Production												1.56	550.00	548.42
Oak Valley Partners, LP ⁴	No	Water Duty Method Used to Estimate Annual Production												300.00		
Singleton Ranch #5	Yes															2.14
Singleton Ranch #7	No															10.00
Irrigation Stokes																312.14
Subtotal															1,806.00	1,493.86
Plantation on the Lake LLC	Yes	27.64	21.64	20.66	12.03	20.37	28.76	39.65	41.53	40.76	35.49	32.04	29.51	29.51	581.00	230.91
Rancho Calimesa Mobile Home Park	No	Water Duty Method Used to Estimate Annual Production												68.25	150.00	81.75
Roman Catholic Bishop of San Bernardino	No	Water Duty Method Used to Estimate Annual Production												58.97	154.00	95.03
Sharondale Mesa Owners Association																
Well No.1	Yes	5.07	6.63	2.10	4.31	8.67	14.21	5.54	11.63	12.56	10.24	9.08	6.98	6.98	97.02	
Well No.2	Yes	4.81	3.42	4.04	4.67	7.67	8.95	22.35	13.08	10.69	7.01	3.48	1.43	1.43	91.60	
Subtotal		9.88	10.05	6.14	8.98	16.34	23.16	27.89	24.71	23.25	17.25	12.56	8.41	8.41	200.00	11.38
So Calif Section of the PGA of America ⁵																
Well A	Yes	8.37	5.70	3.10	14.34	0.65	2.90	2.64	3.13	6.71	6.99	195.20	92.00	92.00	341.74	
Well C	Yes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Well D	Yes	75.58	15.00	10.00	147.17	169.91	218.21	196.21	163.49	212.94	92.11	29.12	81.90	81.90	1,411.64	
Subtotal		83.95	20.70	13.10	161.51	170.56	221.11	198.86	166.62	219.65	99.10	224.32	173.90	173.90	2,200.00	446.62
Stearns, Leonard M. and Dorothy D.	No	Water Duty Method Used to Estimate Annual Production												1.05	200.00	198.95
Sunny-Cal Egg and Poultry Company	No	Water Duty Method Used to Estimate Annual Production												2.63	1,439.50	1,436.87
Sunny-Cal North - Mannheim, Manheim & Berman	No	Water Duty Method Used to Estimate Annual Production												13.22	300.00	286.78
Nikodinov, Nick	No	Water Duty Method Used to Estimate Annual Production												0.74	20.00	19.26
McAmis, Ronald L.	No	Water Duty Method Used to Estimate Annual Production												0.54	5.00	4.46
Aidama, Nicolas and Amalia	No	Water Duty Method Used to Estimate Annual Production												0.83	7.00	6.17
Gutierrez, Hector, et al.	No	Water Duty Method Used to Estimate Annual Production												1.37	10.00	8.63
Darmont, Boris and Miriam	No	Water Duty Method Used to Estimate Annual Production												0.35	2.50	2.15
TOTAL															3,596.7	8,650.0

1.- All values rounded and subject to revision based on receipt of more accurate information.

2.- Total production is estimated for Overlying parties with un-metered wells.

3.- Production reported for January 2006 includes production from December 2005.

4.- Provided copies of stable filings with annual calendar year totals for each well. Production values for Singleton Ranch #6 and Irrigation Stokes are estimated by Oak Valley Partners. Meter reads were provided to the Watermaster, but due to inconsistent reporting, annual state recordation data was used.

5.- Actual monthly production provided by the Morongo Band of Mission Indians - March 2014

Table 3-2E
Overlying Producer Summary of Production for Calendar Year 2007 (ac-ft)

Owner and Well Name	Metered	Monthly Water Production by Overlying Producer ¹												Total ² Production	Overlying Water Right	Unused Overlying Allocation in 2007
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Beckman, Walter M.	Yes	0.30	0.17	0.24	0.31	0.41	0.51	0.53	0.87	2.19	1.48	0.99	0.31	8.31	75.00	66.69
California Oak Valley Golf and Resort LLC																
Oak Valley #1	Yes	0.00	0.00	0.00	20.08	16.61	0.00	0.00	0.00	26.00	41.00	58.00	20.00	181.68		
Oak Valley #2	Yes	35.60	20.70	46.60	21.90	56.70	85.80	89.00	109.00	90.00	42.00	0.00	0.00	597.30		
Subtotal		35.60	20.70	46.60	41.98	73.31	85.80	89.00	109.00	116.00	83.00	58.00	20.00	778.98	950.00	171.02
Merlin Properties	No	Water Duty Method Used to Estimate Annual Production												1.59	550.00	548.41
Oak Valley Partners, LP ³	No													300.00		
Singleton Ranch #5	Yes	0.16	0.10	0.10	0.12	0.03	0.00	0.55	0.27	0.30	0.17	0.18	0.12	2.10		
Singleton Ranch #7	No													10.00		
Irrigation Stokes	No													312.10	1,806.00	1,493.90
Subtotal		21.63	21.14	16.88	31.72	23.72	38.11	44.40	39.10	45.60	30.90	2.20	28.80	344.19	581.00	236.81
Plantation on the Lake LLC	Yes	Water Duty Method Used to Estimate Annual Production												69.30	150.00	80.70
Rancho Calimesa Mobile Home Park	No	Water Duty Method Used to Estimate Annual Production												0.70	154.00	153.30
Roman Catholic Bishop of San Bernardino	No															
Roman Catholic Bishop of San Bernardino	No															
Sharondale Mesa Owners Association																
Well No.1	Yes	5.05	7.25	12.44	13.70	2.87	14.15	15.00	26.80	12.40	2.90	13.20	4.30	130.06		
Well No.2	Yes	1.89	0.00	0.00	0.00	17.79	5.60	6.00	0.00	7.00	14.00	0.00	0.00	52.28		
Subtotal		6.94	7.25	12.44	13.70	20.66	19.75	21.00	26.80	19.40	16.90	13.20	4.30	182.34	200.00	17.66
So Calif Section of the PGA of America ⁴																
Well A	Yes	4.26	79.48	60.00	72.00	52.50	51.35	0.40	1.23	3.09	2.95	0.69	1.17	329.12		
Well C	Yes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Well D	Yes	79.48	36.97	95.76	106.54	112.17	189.49	163.17	148.82	132.93	98.87	72.73	33.02	1,269.93		
Subtotal		83.74	116.45	155.76	178.54	164.67	240.84	163.58	150.04	136.02	101.81	73.42	34.19	1,599.05	2,200.00	600.95
Stearns, Leonard M. and Dorothy D.	No	Water Duty Method Used to Estimate Annual Production												1.05	200.00	198.95
Sunny-Cal Egg and Poultry Company	No	Water Duty Method Used to Estimate Annual Production												2.68	1,439.50	1,436.82
Albor Properties III, LP ⁵	No	Water Duty Method Used to Estimate Annual Production												2.33	300.00	297.67
Nikodrinov, Nick	No	Water Duty Method Used to Estimate Annual Production												0.75	20.00	19.25
McAmis, Ronald L.	No	Water Duty Method Used to Estimate Annual Production												0.55	5.00	4.45
Aldama, Nicolas and Amalia	No	Water Duty Method Used to Estimate Annual Production												0.84	7.00	6.16
Gutierrez, Hector, et al.	No	Water Duty Method Used to Estimate Annual Production												1.39	10.00	8.61
Darmon, Boris and Miriam	No	Water Duty Method Used to Estimate Annual Production												0.35	2.50	2.15
TOTAL														3,306.5	8,650.0	5,343.5

1.- All values rounded and subject to revision based on receipt of more accurate information.

2.- Total production is estimated for Overlying parties with un-metered wells.

3.- As reported to state as annual totals. Production values for Singleton Ranch #5 and Irrigation Stokes are estimated by Oak Valley Partners.

4.- Actual monthly production provided by the Morongo Band of Mission Indians - March 2014

5.- Formerly Sunny-Cal North - Manheim, Manheim & Burman.

Table 3-2F
Overlying Producer Summary of Production for Calendar Year 2008 (ac-ft)

Owner and Well Name	Metered	Monthly Water Production by Overlying Producer ¹												Total ² Production	Overlying Water Right	Unused Overlying Allocation in 2008
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Beckman, Walter M.	Yes	0.21	0.31	0.43	1.43	0.72	1.66	1.9	1.7	1.7	0.9	1.3	0.4	12.69	75.00	62.31
California Oak Valley Golf and Resort LLC																
Oak Valley #1	Yes	8.00	15.00	45.00	87.00	52.00	96.00	117.5	68.4	77.0	31.1	0.0	0.0	596.93		
Oak Valley #2	Yes	0.00	0.00	0.00	0.00	0.00	0.00	0.2	30.3	27.0	58.8	54.5	12.7	183.50		
Subtotal		8.00	15.00	45.00	87.00	52.00	96.00	117.7	98.7	104.0	89.9	54.5	12.7	780.43	950.00	169.57
Mertin Properties	No	Water Duty Method Used to Estimate Annual Production												1.60	550.00	548.40
Oak Valley Partners, LP ³	No													300.00		
Singleton Ranch #5	Yes	0.04	0.03	0.01	0.04	0.03	0.07	0.1	0.0	0.0	0.1	0.1	0.1	0.51		
Singleton Ranch #7	No													10.00		
Irrigation Stokes														310.51	1,806.00	1,495.49
Subtotal		15.80	18.20	17.70	23.50	30.70	35.40	38.7	43.5	40.8	34.9	32.1	22.8	354.04	581.00	226.96
Plantation on the Lake LLC	Yes	Water Duty Method Used to Estimate Annual Production												69.30	150.00	80.70
Rancho Calimesa Mobile Home Park	No	Water Duty Method Used to Estimate Annual Production												0.70	154.00	153.30
Roman Catholic Bishop of San Bernardino	No															
Roman Catholic Bishop of San Bernardino	No															
Sharondale Mesa Owners Association																
Well No.1	Yes	0.24	5.70	5.17	9.77	17.56	0.00	12.6	12.2	17.6	9.6	7.9	4.6	102.91		
Well No.2	Yes	3.00	0.00	4.00	3.00	0.00	21.00	14.4	10.3	15.0	7.9	7.4	4.3	90.39		
Subtotal		3.24	5.70	9.17	12.77	17.56	21.00	27.0	22.5	32.6	17.6	15.3	8.9	193.30	200.00	6.70
East Valley Golf Club ⁴																
Well A	Yes	1.03	1.04	2.06	1.64	0.20	0.20	1.9	0.6	0.4	0.4	1.0	0.7	11.18		
Well C	Yes	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.00		
Well D	Yes	19.84	21.00	78.85	98.85	131.60	128.86	220.1	181.6	89.3	85.3	60.3	10.7	1,126.41		
Subtotal		20.87	22.04	80.91	100.48	131.80	129.06	221.94	182.27	89.78	85.73	61.27	11.45	1,137.59	2,200.00	1,062.41
Stearns, Leonard M. and Dorothy D.	No	Water Duty Method Used to Estimate Annual Production												1.05	200.00	198.95
Sunny-Cal Egg and Poultry Company	No	Water Duty Method Used to Estimate Annual Production												4.19	1,439.50	1,435.31
Albor Properties III, LP ⁵	No	Water Duty Method Used to Estimate Annual Production												2.34	300.00	297.66
Nikodinov, Nick	No	Water Duty Method Used to Estimate Annual Production												0.75	20.00	19.25
McAmis, Ronald L.	No	Water Duty Method Used to Estimate Annual Production												0.55	5.00	4.45
Aldama, Nicolas and Amalia	No	Water Duty Method Used to Estimate Annual Production												0.85	7.00	6.15
Gutierrez, Hector, et al.	No	Water Duty Method Used to Estimate Annual Production												1.40	10.00	8.60
Darmon, Boris and Miriam	No	Water Duty Method Used to Estimate Annual Production												0.35	2.50	2.15
TOTAL														2,871.6	8,650.0	5,778.4

1.- All values rounded and subject to revision based on receipt of more accurate information.

2.- Total production is estimated for Overlying parties with un-metered wells.

3.- As reported to state as annual totals. Production values for Singleton Ranch #5 and Irrigation Stokes are estimated by Oak Valley Partners.

4.- Formerly the So Calif Section of the PCA of America. Actual monthly production provided by the Morongo Band of Mission Indians - March 2014

5.- Formerly Sunny-Cal North - Manheim, Manheim & Burman.

**Table 3-2G
Overlying Producer Summary of Production for Calendar Year 2009 (ac-ft)**

Owner and Well Name	Metered	Monthly Water Production by Overlying Producer ¹												Total ² Production	Overlying Water Right	Unused Overlying Allocation in 2009
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Beckman, Walter M.	Yes	0.66	0.29	0.34	1.28	1.28	1.37	1.79	2.21	1.93	0.75	0.84	0.14	12.88	75.00	62.12
California Oak Valley Golf and Resort LLC																
Oak Valley #1	Yes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.77	9.57	49.35	0.00	135.69		
Oak Valley #2	Yes	32.50	25.70	27.50	86.10	77.00	66.30	108.10	104.67	42.73	43.92	8.05	8.41	630.98		
Subtotal		32.50	25.70	27.50	86.10	77.00	66.30	108.10	104.67	119.50	53.49	57.40	8.41	766.67	950.00	183.33
Merlin Properties	No	Water Duty Method Used to Estimate Annual Production												1.58	550.00	548.42
Oak Valley Partners, LP ³																
Singleton Ranch #5	No													300.00		
Singleton Ranch #7	Yes	0.01	0.02	0.03	0.02	0.04	0.10	0.11	0.08	0.06	0.04			0.51		
Irrigation Stokes	No													10.00		
Subtotal		15.51	17.41	13.52	26.58	37.84	34.79	36.78	33.98	33.98	33.98	33.98	33.98	310.51	1,806.00	1,495.49
Plantation on the Lake LLC	Yes													352.31	581.00	228.70
Rancho Calimesa Mobile Home Park	No	Water Duty Method Used to Estimate Annual Production												69.30	150.00	80.70
Roman Catholic Bishop of San Bernardino	No	Water Duty Method Used to Estimate Annual Production												0.70	154.00	153.30
Sharondale Mesa Owners Association																
Well No.1	Yes	4.46	2.73	5.04	6.76	7.75	7.73	8.79	10.23	9.70	8.35	7.02	1.74	80.30		
Well No.2	Yes	4.11	2.77	4.81	6.21	6.84	6.81	7.75	8.26	8.49	7.36	6.02	4.55	73.98		
Subtotal		8.57	5.50	9.85	12.97	14.59	14.54	16.54	18.49	18.19	15.71	13.04	6.29	154.28	200.00	45.72
East Valley Golf Club ⁴																
Well A	Yes	10.05	12.52	14.06	12.13	8.41	14.32	40.86	45.10	13.27	14.00	10.65	9.00	204.36		
Well C	Yes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-		
Well D	Yes	32.00	28.37	80.60	93.47	114.15	87.45	142.35	122.16	111.32	80.00	45.00	17.37	954.24		
Subtotal		42.05	40.89	94.66	105.60	122.56	101.76	183.21	167.26	124.59	94.00	55.65	26.37	1,158.60	2,200.00	1,041.40
Stearns, Leonard M. and Dorothy D.	No	Water Duty Method Used to Estimate Annual Production												1.05	200.00	198.95
Sunny-Cal Egg and Poultry Company	No	Water Duty Method Used to Estimate Annual Production												4.19	1,439.50	1,435.31
Albor Properties III, LP ⁵	No	Water Duty Method Used to Estimate Annual Production												2.27	300.00	297.73
Nikodimov, Nick	No	Water Duty Method Used to Estimate Annual Production												0.73	20.00	19.27
McAmis, Ronald L.	No	Water Duty Method Used to Estimate Annual Production												0.54	5.00	4.46
Aldama, Nicolas and Amalia	No	Water Duty Method Used to Estimate Annual Production												0.83	7.00	6.17
Gutierrez, Hector, et al.	No	Water Duty Method Used to Estimate Annual Production												1.37	10.00	8.63
Darmont, Boris and Miriam	No	Water Duty Method Used to Estimate Annual Production												0.35	2.50	2.15
TOTAL														2,838.16	8,650.0	5,811.8

1- All values rounded and subject to revision based on receipt of more accurate information.

2- Total production is estimated for Overlying parties with un-metered wells.

3- Oak Valley Partners has not submitted data to the Watermaster since October 2009. Assumed annual production for Singleton Ranch #5 and Irrigation Stokes was the same as reported for 2004 through 2008.

4- Formerly the So Calif Section of the PGA of America. Actual monthly production provided by the Morongo Band of Mission Indians - March 2014

5- Formerly Sunny-Cal North - Manheim, Manheim & Burman.

Table 3-2H
Overlying Producer Summary of Production for Calendar Year 2010 (ac-ft)

Owner and Well Name	Metered	Monthly Water Production by Overlying Producer ¹												Total ² Production	Overlying Water Right	Unused Overlying Allocation in 2010
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Beckman, Walter M.	Yes	0.45	0.06	0.30	0.18	0.91	0.61	1.09	0.81	1.22	0.24	0.30	0.20	6.37	75.00	68.63
California Oak Valley Golf and Resort LLC																
Oak Valley #1	Yes	5.18	7.81	9.45	6.14	57.30	24.61	45.63	24.61	94.27	25.28	3.95	0.00	304.23		
Oak Valley #2	Yes	13.48	0.00	24.04	15.30	36.52	26.93	41.38	59.10	4.38	0.13	30.39	9.24	260.89		
Subtotal		18.66	7.81	33.49	21.44	93.82	51.54	87.01	83.71	98.65	25.41	34.34	9.24	565.12	950.00	384.88
Merlin Properties	No	Water Duty Method Used to Estimate Annual Production												1.54	550.00	548.46
Oak Valley Partners, LP ³	No													300.00		
Singleton Ranch #5	Yes													1.05		
Singleton Ranch #7	No													10.00		
Irrigation Stokes	No													311.05	1,806.00	1,494.95
Subtotal																
Plantation on the Lake LLC	Yes	33.98	12.40	12.43	24.33	25.59	33.23	33.15	39.52	20.33	49.86	28.86	23.51	337.19	581.00	243.82
Rancho Calimesa Mobile Home Park	No	Water Duty Method Used to Estimate Annual Production												69.30	150.00	80.70
Roman Catholic Bishop of San Bernardino	No	Water Duty Method Used to Estimate Annual Production												0.00	154.00	154.00
Sharondale Mesa Owners Association																
Well No.1	Yes	0.14	1.52	2.96	3.10	7.36	9.80	9.11	10.37	9.70	5.22	4.81	3.60	67.69		
Well No.2	Yes	5.13	1.53	2.85	4.89	6.33	7.79	7.77	8.60	8.14	4.30	4.47	2.84	64.64		
Subtotal		5.27	3.05	5.81	7.99	13.69	17.59	16.88	18.97	17.84	9.52	9.28	6.44	132.33	200.00	67.67
Tukwet Canyon Golf Club ⁴																
Well A	Yes	1.50	2.46	4.89	1.69	8.74	28.22	16.43	26.75	11.56	3.28	10.04	3.08	118.64		
Well C	Yes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Well D	Yes	19.49	24.93	30.37	65.07	99.82	119.82	84.15	16.75	192.74	31.99	21.93	26.10	733.16		
Subtotal		20.99	27.39	35.27	66.77	108.57	148.03	100.57	43.49	204.30	35.27	31.98	29.18	851.81	2,200.00	1,348.19
Stearns, Leonard M. and Dorothy D.	No	Water Duty Method Used to Estimate Annual Production												0.70	200.00	199.30
East Valley Golf Club ⁵	No	Water Duty Method Used to Estimate Annual Production												3.80	1,439.50	1,435.70
Albor Properties III, LP ⁵	No	Water Duty Method Used to Estimate Annual Production												2.12	300.00	297.88
Nikodinov, Nick	No	Water Duty Method Used to Estimate Annual Production												0.70	20.00	19.30
McAmis, Ronald L.	No	Water Duty Method Used to Estimate Annual Production												0.53	5.00	4.47
Aldama, Nicolas and Amalia	No	Water Duty Method Used to Estimate Annual Production												0.79	7.00	6.21
Gutierrez, Hector, et. al.	No	Water Duty Method Used to Estimate Annual Production												1.32	10.00	8.68
Darmon, Boris and Miriam	No	Water Duty Method Used to Estimate Annual Production												0.35	2.50	2.15
TOTAL														2,285.0	8,650.0	6,365.0

1- All values rounded and subject to revision based on receipt of more accurate information.

2- Total production is estimated for Overlying parties with un-metered wells.

3- Oak Valley Partners has not submitted data to the Watermaster since October 2009. Assumed annual production for Singleton Ranch #5 and Irrigation Stokes was the same as reported for 2004 through 2008. Assumed production for Singleton Ranch #7 was equal to the average of the last four years of reported (2006-2009) production.

4- Formerly known as the East Valley Golf Course, prior to that known as the Southern California Section of the PGA of America. Actual monthly production provided by the Morongo Band of Mission Indians - March 2014

5- Formerly Sunny-Can North - Manheim, Manheim & Burman.

Table 3-21
Overlying Producer Summary of Production for Calendar Year 2011 (ac-ft)

Owner and Well Name	Metered	Monthly Water Production by Overlying Producer ¹												Total ² Production	Overlying Water Right	Unused Overlying Allocation in 2011
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Beckman, Walter M. ³	Yes	0.20	0.20	0.17	0.17	0.17	0.40	1.79	2.21	1.93	0.75	0.84	0.14	8.98	75.00	66.02
California Oak Valley Golf and Resort LLC ³																
Oak Valley #1	Yes	10.65	1.00	0.23	0.00	0.00										
Oak Valley #2	Yes	0.30	9.55	0.56	15.36	72.15	12.58									
Subtotal		10.95	10.55	0.79	15.36	72.15	12.58	97.56	94.19	109.08	39.45	45.87	8.83	517.35	950.00	432.66
Merlin Properties	No	Water Duty Method Used to Estimate Annual Production														
Oak Valley Partners, LP ⁴	No															
Singleton Ranch #5	Yes	300.00														
Singleton Ranch #7	Yes	0.00														
Irrigation Stokes	No	10.00														
Subtotal														310.00	1,806.00	1,496.00
Plantation on the Lake LLC ³	Yes	16.09	23.37	15.94	20.68	24.09	34.30	35.24	45.73	27.15	41.92	31.42	28.74	344.67	581.00	236.33
Rancho Calimesa Mobile Home Park	No	Water Duty Method Used to Estimate Annual Production														
Roman Catholic Bishop of San Bernardino	No	Water Duty Method Used to Estimate Annual Production														
Sharondale Mesa Owners Association ³																
Well No.1	Yes	3.36	2.69	2.78	4.14	5.71	8.03	11.31	9.61							
Well No.2	Yes	3.25	2.58	2.54	4.12	6.16	6.45	6.60	8.81							
Subtotal		6.61	5.27	5.32	8.26	11.87	14.48	17.91	18.42	9.70	6.79	5.92	2.67	113.21	200.00	86.79
Tukwet Canyon Golf Club ⁵																
Well A	Yes	2.26	2.06	14.74	2.81	22.57	18.12	33.91	15.57	3.78	1.35	0.76	0.47	118.40		
Well C	Yes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Well D	Yes	35.81	23.04	13.59	42.91	21.43	97.66	130.08	130.71	128.94	70.25	27.57	42.53	764.51		
Subtotal		38.07	25.10	28.33	45.72	44.01	115.77	163.99	146.28	132.71	71.60	28.33	43.00	882.91	2,200.00	1,317.09
Stearns, Leonard M. and Dorothy D.	No	Water Duty Method Used to Estimate Annual Production														
Sunny-Cal Egg and Poultry Company	No	Water Duty Method Used to Estimate Annual Production														
Albor Properties III, LP	No	Water Duty Method Used to Estimate Annual Production														
Nikodinov, Nick	No	Water Duty Method Used to Estimate Annual Production														
McAmis, Ronald L.	No	Water Duty Method Used to Estimate Annual Production														
Aldama, Nicolas and Amalia	No	Water Duty Method Used to Estimate Annual Production														
Gutierrez, Hector, et al.	No	Water Duty Method Used to Estimate Annual Production														
Darmont, Boris and Miriam	No	Water Duty Method Used to Estimate Annual Production														
TOTAL														2,259.1	8,650.0	6,390.9

1- All values rounded and subject to revision based on receipt of more accurate information.

2- Total production is estimated for Overlying parties with un-metered wells.

3- Monthly production was estimated for a portion of the year based on 2009-10 monthly averages.

4- Oak Valley Partners has not submitted data to the Watermaster since October 2009. Assumed annual production for Singleton Ranch #5 and Irrigation Stokes was the same as reported for 2004 through 2008. Assumed production for Singleton Ranch #7 was equal to the average of the last four years of reported (2006-2009) production.

5- Formerly known as the East Valley Golf Course, prior to that known as the Southern California Section of the PGA of America. Actual monthly production provided by the Morongo Band of Mission Indians - March 2014

Table 3-2J
Overlying Producer Summary of Production for Calendar Year 2012 (ac-ft)

Owner and Well Name	Metered	Monthly Water Production by Overlying Producer ¹												Total ² Production	Overlying Water Right	Unused Overlying Allocation in 2012
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Beckman, Walter M. ³	Yes	0.20	0.20	0.17	0.17	0.17	0.40	1.79	2.21	1.93	0.75	0.84	0.14	8.98	75.00	66.02
California Oak Valley Golf and Resort LLC ³																
Oak Valley #1	Yes															
Oak Valley #2	Yes	10.95	10.55	0.79	15.36	72.15	12.58	97.56	94.19	109.08	39.45	45.87	8.83	517.35	950.00	432.66
Subtotal																
Merlin Properties	No	Water Duty Method Used to Estimate Annual Production														
Oak Valley Partners, LP ⁴	No															
Singleton Ranch #5	Yes													300.00		
Singleton Ranch #7	Yes													0.00		
Irrigation Stokes	No													10.00		
Subtotal														310.00	1,806.00	1,496.00
Plantation on the Lake LLC ³	Yes	16.09	23.37	15.94	20.68	24.09	34.30	35.24	45.73	27.15	41.92	31.42	28.74	344.67	581.00	236.33
Rancho Calimesa Mobile Home Park	No	Water Duty Method Used to Estimate Annual Production														
Roman Catholic Bishop of San Bernardino	No	Water Duty Method Used to Estimate Annual Production														
Sharondale Mesa Owners Association ³																
Well No.1	Yes															
Well No.2	Yes	6.61	5.27	5.32	8.26	11.87	14.48	17.91	18.42	9.70	6.79	5.92	2.67	113.21	200.00	86.79
Subtotal																
Tukwet Canyon Golf Club ⁵																
Well A	Yes	0.47	0.58	0.83	0.59	20.36	44.05	38.86	36.60	29.52	28.86	16.30	0.45	217.47		
Well C	Yes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Well D	Yes	51.36	27.39	28.12	47.64	93.11	118.17	113.83	102.25	86.26	70.99	17.37	10.37	766.84		
Subtotal		51.82	27.97	28.95	48.23	113.47	162.21	152.69	138.85	115.78	99.85	33.67	10.82	984.32	2,200.00	1,215.69
Stearns, Leonard M. and Dorothy D.	No	Water Duty Method Used to Estimate Annual Production														
Sunny-Cal Egg and Poultry Company	No	Water Duty Method Used to Estimate Annual Production														
Albor Properties III, LP	No	Water Duty Method Used to Estimate Annual Production														
Nikodinov, Nick	No	Water Duty Method Used to Estimate Annual Production														
McArnis, Ronald L.	No	Water Duty Method Used to Estimate Annual Production														
Aldama, Nicolas and Amalia	No	Water Duty Method Used to Estimate Annual Production														
Gutierrez, Hector, et al.	No	Water Duty Method Used to Estimate Annual Production														
Darmont, Boris and Miriam	No	Water Duty Method Used to Estimate Annual Production														
TOTAL														2,360.9	8,650.0	6,289.1

1- All values rounded and subject to revision based on receipt of more accurate information.

2- Total production is estimated for Overlying parties with un-metered wells.

3- Monthly production was estimated based on 2009-10 monthly averages.

4- Oak Valley Partners has not submitted data to the Watermaster since October 2009. Assumed annual production for Singleton Ranch #5 and Irrigation Stokes was the same as reported for 2004 through 2008. Assumed production for Singleton Ranch #7 was equal to the average of the last four years of reported (2006-2009) production.

5- Formerly known as the East Valley Golf Course, prior to that known as the Southern California Section of the PGA of America. Actual monthly production provided by the Morongo Band of Mission Indians - March 2014

Table 3-2K
Overlying Producer Summary of Production for Calendar Year 2013 (ac-ft)

Owner and Well Name	Metered	Monthly Water Production by Overlying Producer ¹												Total ² Production	Overlying Water Right	Unused Overlying Allocation in 2013	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec				
Beckman, Walter M. ³	Yes	0.0	0.0	0.0	0.3	0.3	0.4	0.6	0.0	0.4	0.1	0.0	0.0	0.0	2.1	75.0	72.9
California Oak Valley Golf and Resort LLC ³																	
Oak Valley #1	Yes	11.5	12.4	12.5	11.4	55.2	66.1	97.7	0.0	0.0	0.0	0.0	0.0	0.0	266.8		
Oak Valley #2	Yes	1.3	0.7	1.1	0.8	0.0	0.0	2.5	68.9	49.7	70.4	53.3	110.4		359.0		
Subtotal		12.8	13.1	13.6	12.1	55.2	66.1	100.1	68.9	49.7	70.4	53.3	110.4		625.8	950.0	324.2
Merlin Properties	No	Water Duty Method Used to Estimate Annual Production															
Oak Valley Partners, LP ⁴	No	3000.0															
Singleton Ranch #5	Yes	0.0															
Singleton Ranch #7	No	10.0															
Irrigation Stokes	No	310.0															
Subtotal															344.7	581.0	236.3
Plantation on the Lake LLC ³	Yes	16.1	23.4	15.9	20.7	24.1	34.3	35.2	45.7	27.2	41.9	31.4	28.7		344.7	581.0	236.3
Rancho Calimesa Mobile Home Park	No	Water Duty Method Used to Estimate Annual Production															
Roman Catholic Bishop of San Bernardino	No	Water Duty Method Used to Estimate Annual Production															
Sharondale Mesa Owners Association ³	Yes	6.6															
Well No.1	Yes	5.3															
Well No.2	Yes	5.3															
Subtotal		6.6	5.3	5.3	8.3	11.9	14.5	17.9	18.4	9.7	6.8	5.9	2.7		113.2	200.0	86.8
Tukwet Canyon Golf Club ⁵																	
Well A	Yes	6.6	6.2	15.6	29.9	33.8	39.6	0.0	0.0	5.2	25.4	15.7	20.0		198.1		
Well C	Yes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0		
Well D	Yes	20.2	13.3	35.3	70.2	86.0	111.1	152.8	143.9	117.1	77.7	41.6	31.2		900.3		
Subtotal		26.9	19.4	50.9	100.0	119.8	150.6	152.8	143.9	122.3	103.1	57.3	51.2		1,098.4	2,200.0	1,101.6
Stearns, Leonard M. and Dorothy D.	No	Water Duty Method Used to Estimate Annual Production															
Sunny-Cal Egg and Poultry Company	No	Water Duty Method Used to Estimate Annual Production															
Albor Properties III, LP	No	Water Duty Method Used to Estimate Annual Production															
Nikodinov, Nick	No	Water Duty Method Used to Estimate Annual Production															
McAmis, Ronald L.	No	Water Duty Method Used to Estimate Annual Production															
Aldama, Nicolas and Amalia	No	Water Duty Method Used to Estimate Annual Production															
Gutierrez, Hector, et al.	No	Water Duty Method Used to Estimate Annual Production															
Darmont, Boris and Miriam	No	Water Duty Method Used to Estimate Annual Production															
TOTAL															2,576.5	8,650.0	6,073.5

1- All values rounded and subject to revision based on receipt of more accurate information.

2- Total production is estimated for Overlying parties with un-metered wells.

3- Monthly production provided by the BCVWD - Jan 2014

4- Oak Valley Partners has not submitted data to the Watermaster since October 2009. Assumed annual production for Singleton Ranch #5 and Irrigation Stokes was the same as reported for 2004 through 2008. Assumed production for Singleton Ranch #7 was equal to the average of the last four years of reported (2006-2009) production.

5- Formerly known as the East Valley Golf Course, prior to that known as the Southern California Section of the PGA of America. Actual monthly production provided by the Morongo Band of Mission Indians - March 2014

**Table 3-4
Annual Supplemental Recharge to the Beaumont Basin -- Calendar Year Accounting**

Year	Supplemental Recharge (ac-ft)				Total
	Banning ¹	Beaumont ²	BCVWD ¹	SGPWA ³	
2003	-	-	-	-	-
2004	-	-	-	813.8	813.8
2005	-	-	-	687.4	687.4
2006	-	-	3,501.0	777.7	4,278.7
2007	-	-	4,501.0	541.3	5,042.3
2008	1,534.0	-	2,399.0	1,047.4	4,980.4
2009	2,741.2	-	2,741.2	823.4	6,305.8
2010	1,338.0	-	5,727.0	1,222.3	8,287.3
2011	800.0	-	7,979.0	1,842.0	10,621.0
2012	1,200.0	-	7,783.0	1,827.2	10,810.2
2013	1,200.0	-	7,403.0	881.8	9,484.8
Totals	8,813.2	-	42,034.2	10,464.3	61,311.7

1.- SWP water recharged in the BCVWD Noble Creek Recharge Facility

2.- The City of Beaumont is seeking credit for recycled water recharge in the Beaumont Basin from DP-007 in an unnamed tributary to Marshall Creek. A technical demonstration of the estimated amount of recharge in the Beaumont Basin is pending.

3.- SWP water recharged in the Pass Agency's Little San Geronio Creek Spreading Ponds

Table 3-5
City of Beaumont Wastewater Treatment Plant - Monthly Discharges Since 2007

Recycled Water Daily Average Discharges to DDP1 - Coopers's Canyon

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average (mgd)	Annual ac-ft
2007	2.32	2.17	2.25	2.23	2.61	2.57	2.57	2.66	2.66	2.67	2.63	2.50	2.49	2,786
2008	2.44	2.79	2.49	2.65	2.55	2.59	2.55	2.59	2.60	2.50	2.57	2.65	2.58	2,889
2009	2.52	2.66	2.56	2.58	2.59	2.56	2.44	2.63	2.60	2.61	2.63	2.69	2.59	2,902
2010	2.83	2.65	2.66	2.60	2.00	1.88	1.94	1.96	1.94	2.00	2.04	2.22	2.23	2,495
2011	2.07	2.12	2.06	2.01	2.04	2.25	2.23	2.13	2.10	2.08	2.19	2.13	2.12	2,371
2012	2.19	2.64	2.19	2.23	2.29	2.24	2.28	2.29	2.24	2.70	2.38	2.33	2.33	2,614
2013	2.76	2.80	2.80	2.81	2.78	2.78	2.81	2.82	2.89	2.83	2.21	2.50	2.73	3,061

Recycled Water Daily Average Discharges to DDP7 - Marshall's Canyon

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average (mgd)	Annual ac-ft
2010			0.82	0.67	0.57	0.62	0.70	0.69	0.69	0.70	0.67	0.65	0.68	633
2011	0.66	0.63	0.63	0.63	0.58	0.45	0.52	0.63	0.64	0.60	0.55	0.54	0.59	660
2012	0.54	0.54	0.52	0.47	0.45	0.45	0.45	0.49	0.50	0.47	0.41	0.53	0.49	545
2013	0.48	0.52	0.45	0.43	0.25	0.44	0.52	0.61	0.33	0.69	0.57	0.41	0.47	530

Table 3-6
Summary of Unused Overlying Water - Calendar Year Accounting (ac-ft)

Watermaster Accounting Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual Overlying Water Right	4,325.0	8,650.0	8,650.0	8,650.0	8,650.0	8,650.0	8,650.0	8,650.0	8,650.0	8,650.0	8,650.0
Annual Overlying Production	2,440.8	3,576.3	3,292.6	3,596.7	3,306.5	2,871.6	2,838.2	2,285.0	2,259.1	2,360.9	2,576.5
Annual Deliveries by Appropriators			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unused Overlying Water Right	1,884.2	5,073.7	5,357.4	5,053.3	5,343.5	5,778.4	5,811.8	6,365.0	6,390.9	6,289.1	6,073.5

Table 3-7
Allocation of Unused Overlying Water -- Calendar Year Accounting (ac-ft)

Appropriator Party	Share of Safe Yield	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Banning, City of	31.43%	592.2	1,594.7	1,683.8	1,588.2	1,679.5	1,816.1	1,826.7	2,000.5	2,008.7	1,976.7	1,908.9
Beaumont, City of	0.00%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beaumont Cherry Valley Water District	42.51%	801.0	2,156.8	2,277.4	2,148.1	2,271.5	2,456.4	2,470.6	2,705.8	2,716.8	2,673.5	2,581.8
South Mesa Water Company	12.48%	235.2	633.2	668.6	630.6	666.9	721.1	725.3	794.3	797.6	784.9	758.0
Yuccaipa Valley Water District	13.58%	255.9	689.0	727.5	686.2	725.6	784.7	789.2	864.4	867.9	854.1	824.8
Total	100.00%	1,884.2	5,073.7	5,357.4	5,053.3	5,343.5	5,778.4	5,811.8	6,365.0	6,390.9	6,289.1	6,073.5

**Table 3-8
Consolidation of Appropriator Production and Storage Accounts
Calendar Year Accounting (ac-ft)**

Calendar Year	Storage Account Balance at Beginning of CY	Share of Surplus Water	Groundwater Production for CY	Under Production ¹	Overlying Users Parcel Conversion	Unused Overlying Production Allocation	Additions to Storage Account				Local Recharge	Total Additions to Storage Account	Ending Account Balance	
							Transfers Among Appropriators	SWP Water Recharge	Supplemental Water Recycled Water Recharge	Supplemental Water				
South Mesa Water Company - Authorized Storage Account: 20,000 ac-ft														
2003	0.0	998.0	223.2	774.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	774.8	774.8
2004	774.8	1,996.0	482.5	1,513.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,513.5	2,288.3
2005	2,288.3	1,996.0	663.2	1,332.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,332.8	3,621.1
2006	3,621.1	1,996.0	616.0	1,380.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,380.0	5,001.1
2007	5,001.1	1,996.0	665.8	1,330.2	0.0	0.0	-3,000.0	0.0	0.0	0.0	0.0	0.0	-1,669.8	3,331.3
2008	3,331.3	1,996.0	470.9	1,525.2	0.0	235.2	-2,500.0	0.0	0.0	0.0	0.0	0.0	-739.7	2,591.6
2009	2,591.6	1,996.0	382.2	1,613.8	0.0	633.2	-2,000.0	0.0	0.0	0.0	0.0	0.0	247.0	2,838.6
2010	2,838.6	1,996.0	405.0	1,591.1	0.0	668.6	0.0	0.0	0.0	0.0	0.0	0.0	2,259.6	5,098.3
2011	5,098.3	1,996.0	419.9	1,576.1	0.0	630.6	-3,500.0	0.0	0.0	0.0	0.0	0.0	-1,293.3	3,805.0
2012	3,805.0	1,996.0	448.5	1,547.5	0.0	666.9	-3,500.0	0.0	0.0	0.0	0.0	0.0	-1,285.6	2,519.4
2013	2,519.4	1,996.0	308.4	1,687.7	0.0	721.1	0.0	0.0	0.0	0.0	0.0	0.0	2,408.8	4,928.2
Yucaipa Valley Water District - Authorized Storage Account: 50,000 ac-ft														
2003	0.0	1,086.5	1,162.4	-75.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-75.9	-75.9
2004	-75.9	2,173.0	1,833.7	339.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	339.3	263.4
2005	263.4	2,173.0	1,281.3	891.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	891.7	1,155.1
2006	1,155.1	2,173.0	2,027.3	145.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	145.7	1,300.8
2007	1,300.8	2,173.0	1,682.9	490.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	490.1	1,790.9
2008	1,790.9	2,173.0	572.0	1,601.0	0.0	255.9	0.0	0.0	0.0	0.0	0.0	0.0	1,856.8	3,647.8
2009	3,647.8	2,173.0	504.4	1,668.6	0.0	689.0	0.0	0.0	0.0	0.0	0.0	0.0	2,357.6	6,005.4
2010	6,005.4	2,173.0	672.4	1,500.6	0.0	727.5	0.0	0.0	0.0	0.0	0.0	0.0	2,228.1	8,233.5
2011	8,233.5	2,173.0	534.1	1,638.9	0.0	686.2	0.0	0.0	0.0	0.0	0.0	0.0	2,325.1	10,558.6
2012	10,558.6	2,173.0	700.1	1,472.9	0.0	725.6	0.0	0.0	0.0	0.0	0.0	0.0	2,198.5	12,757.1
2013	12,757.1	2,173.0	1,030.8	1,142.2	0.0	784.7	0.0	0.0	0.0	0.0	0.0	0.0	1,926.9	14,684.1
Totals														
2003	0.0	8,000.0	7,071.7	928.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	928.3	928.3
2004	928.3	16,000.0	12,587.4	3,412.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,412.6	4,340.9
2005	4,340.9	16,000.0	10,778.6	5,221.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,221.4	9,562.3
2006	9,562.3	16,000.0	13,524.9	2,475.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,976.1	15,538.3
2007	15,538.3	16,000.0	16,504.6	-504.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,996.4	19,534.8
2008	19,534.8	16,000.0	14,687.0	1,313.0	0.0	1,884.2	0.0	0.0	0.0	0.0	0.0	0.0	7,130.2	26,665.0
2009	26,665.0	16,000.0	13,115.6	2,884.4	0.0	5,073.7	0.0	0.0	0.0	0.0	0.0	0.0	13,440.6	40,105.6
2010	40,105.6	16,000.0	11,642.3	4,357.7	0.0	5,357.4	0.0	0.0	0.0	0.0	0.0	0.0	16,780.1	56,885.7
2011	56,885.7	16,000.0	11,727.1	4,272.9	0.0	5,053.3	0.0	0.0	0.0	0.0	0.0	0.0	18,105.2	74,990.9
2012	74,990.9	16,000.0	12,348.9	3,651.1	0.0	5,343.5	0.0	0.0	0.0	0.0	0.0	0.0	17,977.6	92,968.5
2013	92,968.5	16,000.0	14,537.2	1,462.8	0.0	5,778.4	0.0	0.0	0.0	0.0	0.0	0.0	15,844.2	108,812.7

1 -- Negative values of under production indicate that the appropriator pumped more than its share of the operating yield.

Section 4

Water Quality Conditions

The purpose of this section is to document the water quality conditions in the Beaumont Basin during the 2009-2013 reporting period. TDS and nitrate concentrations in the basin are compared against groundwater quality objectives for anti-degradation and maximum benefit as established by the Regional Board for TDS and nitrate-nitrogen in the Beaumont Management Zone (BMZ). In addition, water quality concentrations for a number of compounds are compared against Federal and State Drinking Water Standards. Figure 4-1 depicts all the wells that have groundwater quality data for the reporting period.

4.1 Comparison with Management Zone Objectives

Groundwater quality objectives for antidegradation and maximum benefit have been established by the Regional Board for TDS and nitrate-nitrogen in the BMZ, which encompasses portions of the Beaumont Basin, the Singleton and South Beaumont basins, and limited portions of Edgar Canyon above the Banning Fault as illustrated in Figure 4-1. The antidegradation objectives are based on the historic ambient TDS and nitrate-nitrogen concentration of 230 mg/L and 1.5 mg/L respectively.

The maximum benefit objectives were adopted by the Regional Board in 2004 at the request of STWMA and Beaumont to allow for recharge of imported water and the reuse of recycled water. The maximum benefit objectives, set to 330 mg/L for TDS and 5.0 mg/L for nitrate-nitrogen, are relatively low compared to other basins and are protective of the beneficial uses of the Basin groundwater. According to the Basin Plan, salt mitigation will be required once the ambient TDS and nitrate-nitrogen concentration exceeds the BMZ maximum benefit objectives.

4.1.1 Total Dissolved Solids

Figure 4-2 shows the maximum TDS concentrations measured at Basin wells during the 2009-2013 reporting period for 42 wells including 21 potable wells. The maximum TDS concentrations for potable wells ranged from 199 to 415 mg/L and averaged 282 mg/L; this average value is 27 mg/L higher than the average maximum TDS concentration reported in the 2008-11 Engineering Report. Of the 21 potable wells, only one well (Ban C-3) had a maximum concentration below the antidegradation objective, 17 wells were between the antidegradation and maximum benefit objectives, and 3 wells exceeded the maximum benefit objective for the BMZ. None of the production wells samples exceeded the secondary federal or state drinking water standard for TDS (500 mg/L).

Maximum TDS concentrations for the non-potable wells had a much wider range from 100 to 768 mg/L and averaged 319 mg/L just below the maximum benefit objectives. Average concentrations were slightly below those previously reported in the 2008-11 Engineering Report. Of the 21 non-potable wells, 3 had a maximum TDS concentration below the antidegradation objective, 13 wells were between the antidegradation and maximum benefit

objectives, and 5 exceeded the maximum benefit objective; two of these wells also exceeded the secondary drinking standard of 500 mg/L.

Most of the wells with the highest TDS concentrations, include those that exceeded drinking water standards are located within the BMZ, but outside the Beaumont Basin.

4.1.2 Nitrate-Nitrogen

Figure 4-3 shows the maximum Nitrate-N concentrations measured at Basin wells during the 2009-2013 reporting period for 44 wells including 21 potable wells. The maximum Nitrate-N concentrations for production wells ranged from 1.1 to 8.7 mg/L and averaged 3.9 mg/L. Of the 22 production wells, four had a maximum concentration below the antidegradation objective, 11 wells were between the antidegradation and maximum benefit objectives, and six wells exceeded the maximum benefit objective for the BMZ. Four of these wells (Sharondale Mesa No. 2, BCVWD No. 16 and 21, and Rancho Calimesa Mobile Home Park No. 2) also exceeded the 80 percent MCL for Nitrate-N, which is considered as a threshold level that CDPH uses to begin considering potential blending and/or treatment alternatives to address high nitrate concentrations in drinking water. None of the potable wells exceeded the primary federal and state drinking water standard for nitrate-nitrogen of 10 mg/L.

Maximum Nitrate-N concentrations in the 23 non-potable wells ranged from 0.3 to 21.3 mg/L. Average maximum concentrations for these wells (5.5 mg/L) exceeded the maximum benefit objective for the BMZ. Of these wells, three had maximum concentrations below the antidegradation objective, but nine exceeded the maximum benefit objective. In addition, five of these wells had maximum concentrations equals to or higher than the primary federal and state drinking water standard.

The highest Nitrate-N concentration within the Beaumont Basin was observed at BCVWD Well No. 21 at 8.7 mg/L. Wells exceeding the current MCL are mainly located in the South Beaumont Basin.

4.1.3 Nitrate Studies in the Beaumont Management Zone

Rising nitrate concentrations observed in 2005 along the northern portion of the Basin prompted STWMA to launch an investigation in 2006 to determine the potential impact on groundwater quality from on-site waste disposal systems (OSWDS) commonly used in the Cherry Valley Community of Interest (CVCOI). STWMA retained the services of Wildermuth Environmental Inc. (WEI) to conduct this study.

The results of this study were disputed by the Beaumont Board of Supervisors' Groundwater Quality Evaluation Committee (Committee) as they identified potential shortcomings in sampling design and project execution. The Committee recommended that an independent assessment be conducted. They recommended that the second study should expand the study area, consider reasonable build-out projections and other sources of groundwater contamination. This independent study was conducted by scientist at the University of California, Riverside and funded as a Supplemental Environmental Project by the State Water

Resources Control Board. The results of this study were published in early 2012. A brief summary and their findings is presented below for information purposes only.

Summary of Wildermuth Environmental Inc. Study

This study is titled: "*Water Quality Impacts from On-Site Waste Disposal Systems in the Cherry Valley Community of Interest*" (WEI, 2007). The bases for this study include the following:

- A review of scientific literature,
- A field study to estimate nitrogen concentrations in soil water below selected OSWDS,
- A tracer study of nitrogen isotope and pharmaceutical and personal care products (PPCP) to confirm the presence of effluent from OSWDS,
- An estimation of current and future discharge from OSWDS to groundwater,
- A planning-level evaluation of basin impacts using the groundwater flow and nitrate transport model, and
- A review of the threshold used in California to compel sewerage when OSWDS contaminate or threaten to contaminate groundwater

The results of the investigation are summarized as follows:

- Parcel density in the CVCOI violates the minimum half-acre parcel size requirement of the Regional Board to be on a septic system.
- Water produced from high nitrate wells in the area has a nitrogen isotopic signature and contain PPCPs consistent with discharge from OSWDS.
- Present contribution of OSWDS discharges is estimated at 665 ac-ft/yr.; this represents about five percent of total recharge to the BMZ. At ultimate buildout, there will be between 4,900 to 8,800 OSWDS in the CVCOI. Discharge contribution from these OSWDS is estimated between 1,700 and 3,100 ac-ft/yr. representing 13 to 21 percent of total recharge to the BMZ.
- At 4,900 lots, the contributions from OSWDS will significantly impact water quality to the point that well head treatment will be required at certain well locations in order to meet drinking water standards. At 8,800 lots, the contributions from OSWDS will rendered the entire BMZ non-potable.
- Left unmitigated, OSWDS discharges will contribute enough nitrate to exceed the Basin Plan objectives for the BMZ.
- There is sufficient evidence of groundwater contamination by OSWDS to warrant the Regional Board to issue a prohibition on new OSWDS in the CVCOI.

According to WEI, as a result of this investigation, the County of Riverside issued a moratorium, followed by a permanent prohibition on the installation of septic systems in Cherry Valley unless the septic system is designed to remove at least 50 percent of the nitrogen in the

wastewater. In 2009, the County passed a new ordinance that removed the prohibition on conventional OSWDS. WEI further indicates that the Regional Board initiated a process in 2009 that may lead to amending the Basin Plan prohibiting conventional OSWDS and regulating the discharges to meet antidegradation objectives.

Summary of University of California, Riverside Study

This study is titled: *“Water Quality Assessment of the Beaumont Management Zone: Identifying Sources of Groundwater Contamination Using Chemical and Isotopic Tracers” (UCR, 2012).*

The study divides the BMZ into four distinct zones; their location is depicted in Figure 2 of the UCR report (not included here). A brief description of the zones is as follows:

Zone 1 – Region Influenced by Wastewater Treatment Plant Effluent. This zone occupies the southernmost area of the BMZ. Water quality in this zone is influenced by effluent from the City of Beaumont wastewater treatment plant.

Zone 2 – Wildland and Low Density Septic Disposal Region. This zone is defined as the area uphill of Edgar Canyon to the north of Cherry Valley. Water quality in this area had low to moderate concentrations of TDS and nitrate.

Zone 3 – Urban Region with On-site Septic Disposal Systems. This zone overlies the Cherry Valley area including the area around the Noble Creek and Little San Geronio Spreading Ponds. Human waste from homes and business in this zone is primarily disposed of in on-site waste disposal systems.

Zone 4 – Urban Region with Consolidate Sewer System. Zone 4 comprises those portions of the City of Beaumont utilizing a municipal wastewater system.

The UCR report attempted to answer a series of questions; the questions and a summary of their response is provided below.

1.- Can different groundwater regions within the BMZ be defined using isotope, PPCP, and general chemical parameters?

According to the study,

- Zone 1 was characterized by relatively high levels of PPCPs and it has the highest likelihood for nitrate contamination from human waste.
- Zone 2 had detectable levels of some PPCPs. Septic contributions to groundwater are relatively minor.
- Zone 3 had several wells with clear signs of contamination by septic systems. Groundwater in the central portion of Cherry Valley appeared to be more strongly affected by septic systems than on the periphery of Cherry Valley.
- Zone 4 shows the fewest signs of human waste as most homes are served by consolidated sewer systems.

1A.- Do areas with septic systems have different chemistry than areas with sewers?

The report indicates that there are statistically significant differences between groundwater in areas with septic systems and groundwater where sewer service is available. The concentrations of PPCPs, TDS, Nitrate-nitrogen, the sum of base cations, Boron, and Isotopes of Nitrate were all significantly higher in areas with septic systems than in areas with sewer service.

1B.- Do areas where groundwater recharge with water from the State Water Project or wastewater treatment plant effluent have different chemistry from other areas?

Strong evidence of nitrate deriving from human waste was detected in Zone 1 as well as strong biological attenuation of nitrate transported in groundwater.

2.- What sources contribute nitrate to groundwater of the BMZ?

The report indicates that in Zone 1 the isotopes of nitrate values overlap those expected for human or animal waste. Similarly, in Zone 3 the isotopic composition of water suggest a high probability of inputs of nitrate from human or animal waste. The presence of PPCPs in most samples indicates the possibility that septic systems are contaminating groundwater within the central part of Cherry Valley.

3.- How much nitrate from human waste is making its way into the groundwater of the BMZ?

The report documents the following findings:

- Mixing models suggest that between 18 to 30 percent of the nitrate in central Cherry Valley groundwater is derived from septic systems.
- If septic systems were completely phased out, nitrate concentrations in central Cherry Valley groundwater could decline by 30 percent once a steady state condition is achieved. The time to reach a steady state is anticipated to be shorter than in other portions of the BMZ due to relatively high rates of recharge in Zone 3.
- Mass balance calculations show that nitrate-nitrogen inputs from septic systems is one of the largest inputs of nitrogen to groundwater in the BMZ.
- If the waste from septic tanks were to be conveyed to the City of Beaumont WWTP, about 30 percent of the current input of nitrate from human waste to groundwater would be removed.

4.2 Comparison with Federal and State Drinking Water Standards

The California Department of Health Services (CDPH) maintains an active water quality database of all public and private drinking water wells throughout the state. This database, available at CDPH's website, was assessed for the 2009-2013 reporting period for 33 wells including 22 production wells in the Beaumont Basin. The objective of this analysis was to determine whether any of these potable and non-potable wells had exceeded the Primary or Secondary Federal and State standards or the notification levels set by the state. Federal

standards are set by the United States Environmental Protection Agency (USEPA) while state standards in California are set by CDPH. Primary standards at the federal and state level are enforceable criteria that have been established to protect the public against consumption of drinking water contaminants that present a risk to human health. Secondary standards are not enforceable standards; they have been established for aesthetic qualities of water, such as taste, color, and other. Contaminants with a secondary MCL are not considered to present a risk to human health at the established maximum level. Notification levels (NL) are not enforceable standards; however, they require that municipal water suppliers notify the public if the NL for a chemical has been exceeded.

A total of 2,712 water quality results were extracted from the CDPH database for the 33 production wells in the Beaumont Basin. Results were obtained for 114 analytes sampled between 2009 and 2013. The results of the analysis indicate that not a single production well exceeds either the primary or secondary federal and state standards during the reporting period. However, the California Notification Limit for Vanadium was exceeded once at SMWC Well No. 4 during the reporting period.

Additional water quality information from 2008 through 2011 was obtained from WEI as part of the Maximum Benefit Monitoring Program. A total of 710 water quality results were analyzed to determine if the water quality at the monitoring wells exceeded drinking water standards. Drinking standards were exceeded for a limited number of constituents as follows:

- Nitrate-N – Three of the 17 monitoring wells sampled for Nitrate-N exceeded this federal and state primary MCL of 10 mg/L – Total of 46 readings. All of these wells are located outside the Beaumont Basin.
- pH – Two of the 16 monitoring wells sampled for pH exceeded this secondary federal MCL of 8.5 – Total of 39 readings. One of these wells is located in the Beaumont Basin.
- Total Dissolved Solids – Two of the 16 monitoring wells exceeded this federal and state secondary MCL of 500 mg/L – Total of 39 readings. Both wells located outside the Beaumont Basin.
- Turbidity – None of the eight monitoring wells sampled for turbidity exceeded this secondary California MCL of 5 NTU – Total of nine readings.

Appendix D contains summary statistics of the analytical results for the 2009-2013 period for all chemicals that have a federal or state drinking water standard whether maximum contaminant levels were exceeded.

4.2.1 Trace Metals

As indicated earlier, not a single production well exceeds either the primary or secondary federal and state standards during the reporting period. This represents a significant improvement over previous reporting periods when several wells exceeded the MCL for trace metals. Trace metals are briefly discussed here and compared to previous reporting periods.

Aluminum. There were 48 water samples taken during the reporting period and tested for aluminum. Aluminum concentration at all wells was below 50 ug/L, significantly below the secondary MCL of 200 ug/L. Aluminum above the MCL can add color to water. One well exceeded the MCL during the FY 2004-08 reporting period.

Arsenic. There were 54 water samples collected and tested for arsenic during the reporting period. The highest arsenic concentration was observed at SMWC's Well No. 4; arsenic concentration at this well has increased from 4.2 mg/L in 2009, to 4.6 mg/L in 2012, to the latest value of 5.2 mg/L in April 2013. This highest value is slightly over 50 percent the current primary MCL of 10 mg/L. One well exceeded the MCL during the FY 2004-08 reporting period.

Iron. A total of 48 water samples were taken during the reporting period and tested for iron. Iron concentration in all but one case was below 100 ug/L., which is significantly below the current secondary MCL of 300 ug/L. Highest iron concentration was recorded at BCVWD Well No. 4A at 120 ug/L. Iron at a concentration above the MCL can impact color, odor, and taste in water. Five wells exceeded the MCL during the FY 2004-08 reporting period.

Lead. There were 47 water samples collected and tested for lead during the reporting period. The highest concentration reported were 0.0065 mg/L at BCVWD Well No. 25 and 0.005 mg/L at Rancho Calimesa Mobile Home Park Well No. 1. Both of these concentrations are significantly below the current primary MCL for Lead of 0.015 mg/L. Lead concentrations in water above the MCL can have significant impacts on human health. One well exceeded the MCL during the FY 2004-08 reporting period.

Manganese. There were 49 water samples taken during the reporting period and tested for Manganese. Manganese concentration at all wells was below 20 ug/L, significantly below the secondary MCL of 50 ug/L. Manganese can significantly impact color and taste in water at concentrations above the MCL. One monitoring well exceeded the MCL during the FY 2004-08 reporting period.

Total Chromium. A total of 46 water samples were taken during the reporting period and tested for total chromium. The highest reported concentration of total chromium was 0.02 ug/L (BCVWD Well No. 3), which is significant less that the current state primary MCL of 0.05 ug/L. One well exceeded the state primary MCL during the FY 2004-08 reporting period.

Vanadium. Two water samples were tested for vanadium during the reporting period from SMWC's Well 4. Vanadium at this well increased significantly during the reporting period from 17 ug/L in March 2010 to 84 ug/L in April 2013. This latest value exceeds the state notification level of 50 ug/L.

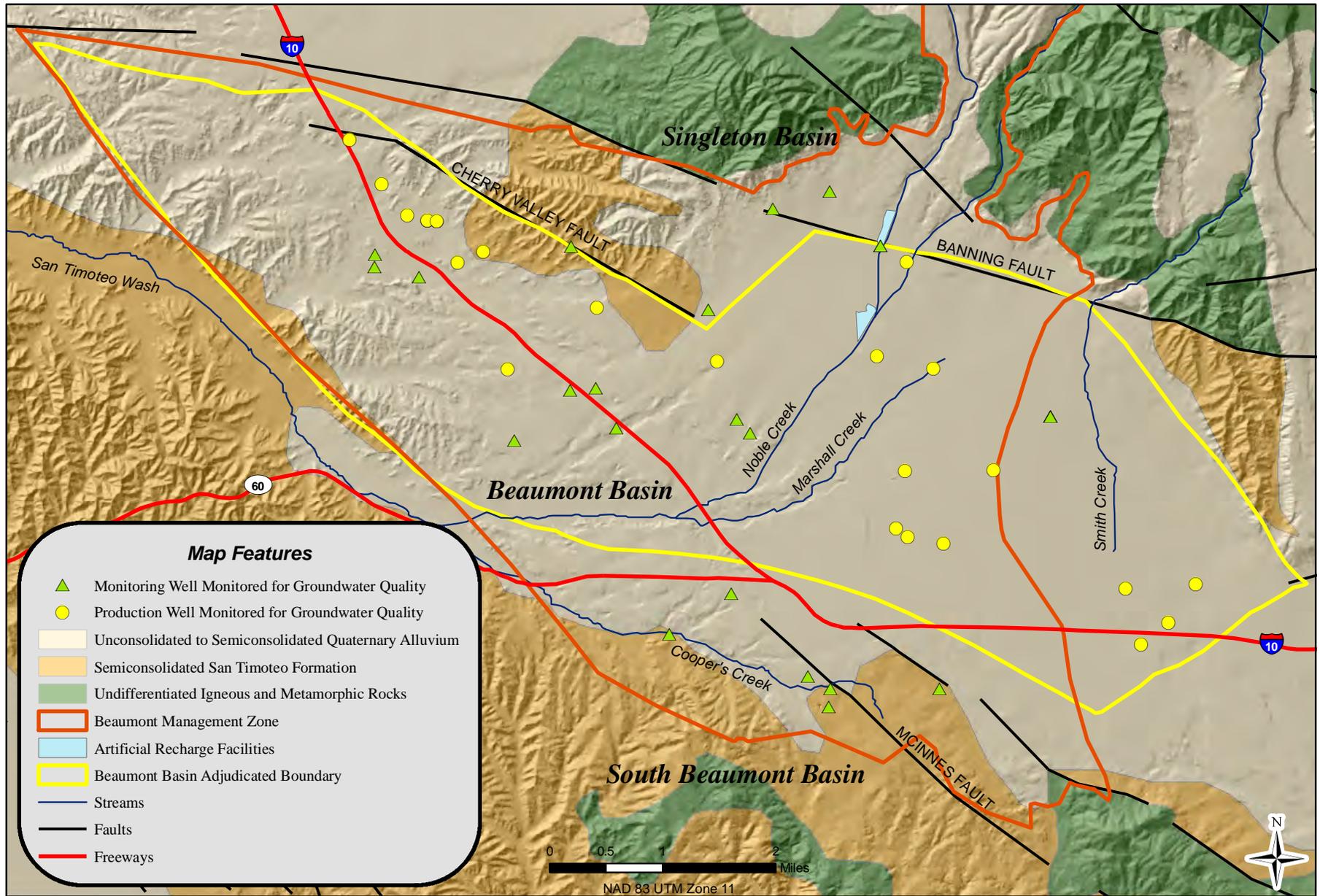
Copper. There were 48 water samples collected and tested for copper during the reporting period. The highest reported concentration of Copper was 62 ug/L at the Rancho Calimesa Mobile Home Park Well No. 2; all other wells have concentrations below 50 ug/L, which is significantly below the state primary MCL of 1,300 ug/L. This is consistent with previous reporting periods.

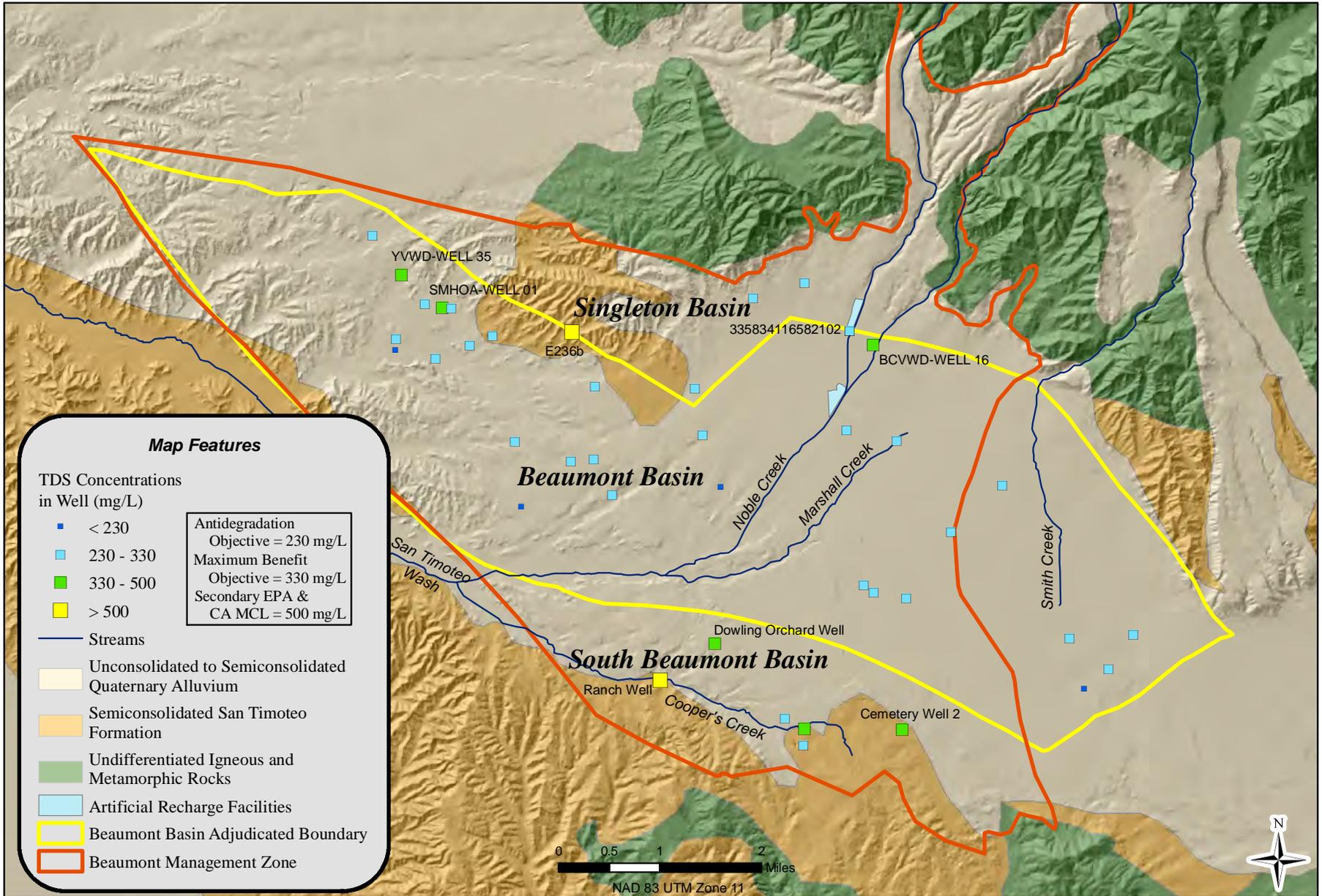
4.2.3 pH

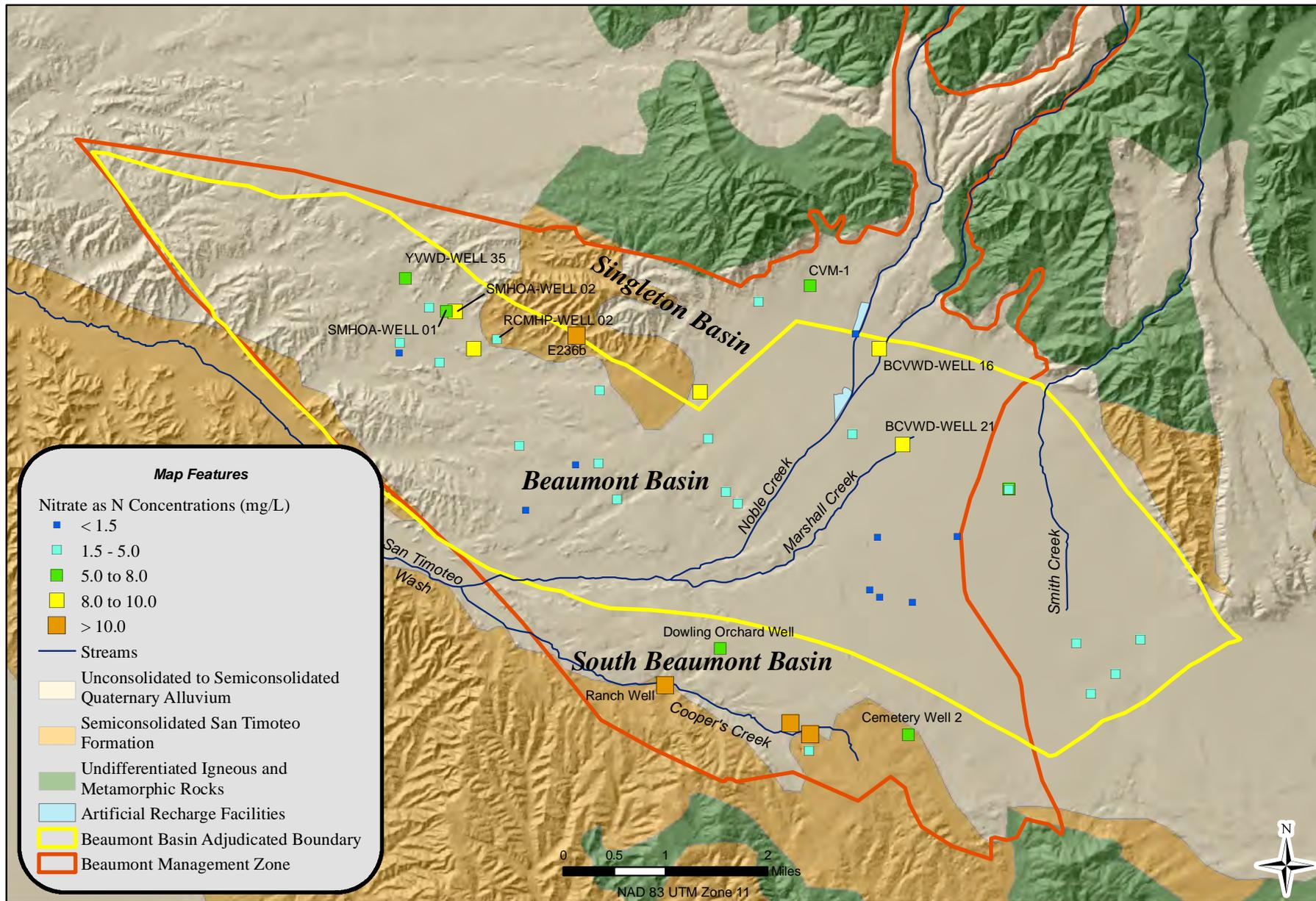
There are two secondary standards for pH, a lower limit of 6.5 and an upper limit of 8.5. With the exception of one well, all other production wells were within these limits with pH concentrations ranging from a low of 6.8 to a high of 8.2. The highest pH was recorded at SMWC Well No. 4 at 8.9. Four wells in the basin exceeded the upper limit for pH during the FY 2004-08 reporting period.

4.2.4 Turbidity

Turbidity is a measure of the cloudiness of water, and is used to indicate water quality and filtration effectiveness. All production wells in the Basin were tested for turbidity and none exceeded the primary federal and state MCL of 5 NTU.







Section 5

Land Subsidence

In the first ten years of operations under the Judgment, a temporary surplus was established that allows up to 160,000 acre-ft of overdraft within the Basin. The purpose of the temporary surplus was to create room for the safe storage of supplemental water and to reduce losses from the basin. A major concern is that overdraft of the groundwater basin may lead to the lowering of groundwater levels and, subsequently, to land subsidence and ground fissuring. To proactively address this concern, the STWMA and the Watermaster developed a monitoring program specifically to assess the occurrence of subsidence from past groundwater pumping and future pumping. To implement this program, the STWMA, on behalf of the Watermaster, successfully applied for an AB303 Grant from the California Department of Water Resources (DWR)

The Subsidence Monitoring Program was established in 2005. Initially, ground level information for the 1928 to 2000 period was analyzed. In mid to late 2006, 72 benchmark monuments were installed across the Basin and in nearby basins and an initial ground-level survey conducted to establish the initial elevations of all benchmarks. A second survey was conducted in 2007. A comparison analysis of the two surveying efforts reveals little vertical change; in addition, this minimum subsidence was fairly evenly distributed across the Basin. According to the program, the ground level survey of all benchmarks was to be conducted on a tri-annual basis with the next round of survey scheduled for the spring of 2009. The 2009 survey was not conducted by Watermaster since it was determined that the level of subsidence was minimal. No additional surveys are scheduled at this time.

Appendix A

Active and Interested Party List

Beaumont Basin - 2013 Active and Interested Party List

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Appendix B

Fiscal Year 2012-13 Audit Letter

BEAUMONT BASIN WATERMASTER
INDEPENDENT ACCOUNTANT'S REPORT ON APPLYING
AGREED-UPON PROCEDURES
ON THE BEAUMONT BASIN WATERMASTER SCHEDULES

June 30, 2013



ROGERS, ANDERSON, MALODY & SCOTT, LLP
CERTIFIED PUBLIC ACCOUNTANTS, SINCE 1948



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INDEPENDENT ACCOUNTANT'S REPORT ON APPLYING AGREED-UPON PROCEDURES

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Peter E. Murray, CPA
Seong-Hyea Lee, CPA, MBA
Charles De Simoni, CPA

Yucaipa Valley Water District as treasurer
of the Beaumont Basin Watermaster
Yucaipa, California

We have performed the procedures enumerated below, which were agreed to by the Yucaipa Valley Water District (District), as treasurer of the Beaumont Basin Watermaster (Watermaster), solely to assist the District in evaluating certain amounts reported in the Watermaster Schedules (Schedules), attached as Exhibit A and Exhibit B, on the full accrual basis of accounting as of June 30, 2013 and for the year then ended. The District and Watermaster are responsible for the accuracy of the Schedules. This agreed-upon procedures engagement was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. The sufficiency of the procedures is solely the responsibility of those parties specified in the report. Consequently, we make no representations regarding the sufficiency of the procedures described below, either for the purpose for which this report has been requested or for any other purpose.

Our procedures and findings are as follows:

1. Procedure

Agree the opening equity on Exhibit B to the ending equity noted on the trial balance for the fiscal year ended June 30, 2012.

Finding

No exceptions were noted as a result of applying the procedure.

2. Procedure

Agree the cash balance reported on Exhibit A to the bank reconciliation, bank statement and trial balance. Select all of the deposits in transit and outstanding checks and trace their clearing to the subsequent month's bank statement.

Finding

No exceptions were noted as a result of applying the procedure.

MEMBERS

American Institute of
Certified Public Accountants

*PCPS The AICPA Alliance
for CPA Firms*

*Governmental Audit
Quality Center*

California Society of
Certified Public Accountants

3. Procedure

Trace all member agency assessments recorded in the schedule to invoices and the bank statements.

Finding

No exceptions were noted as a result of applying the procedure.

4. Procedure

Compare the ending check number for the fiscal year ended June 30, 2012 to the beginning check number for the period beginning on July 1, 2012. Note any breaks in check sequence for the period of July 1, 2012 through June 30, 2013.

Finding

No exceptions were noted as a result of applying the procedure. No breaks in check sequence were noted during the period of July 1, 2012 through June 30, 2013.

5. Procedure

Based on the population of checks issued during July 1, 2012 through June 30, 2013, select all payments and trace the check to supporting invoice noting whether the activity pertains to the Watermaster. Agree the dollar amount and vendor on the invoice to the check for accuracy.

Finding

No exceptions were noted as a result of applying the procedure.

6. Procedure

Obtain the general ledger detail for the period of July 1, 2012 to June 30, 2013. Select all journal entries and trace the transaction to an approved journal entry and documentation supporting the nature and rationale of the journal entry.

Finding

No exceptions were noted as a result of applying the procedure.

We were not engaged to, and did not conduct an audit, the objective of which would be the expression of an opinion on the schedules of assets, liabilities and equity (Exhibit A) and assessments and expenses (Exhibit B) or the related internal control structure. Accordingly, we do not express such an opinion. Had we performed additional procedures, other matters might have come to our attention that would have been reported to you.

This report is intended solely for the use of the Watermaster and the District and is not intended to be and should not be used by anyone other than the specified party.

Rogers Anderson Maloney & Scott, LLP

July 16, 2013

Beaumont Basin Watermaster
Schedule of Assets, Liabilities and Net Assets
(Unaudited)
June 30, 2013

Assets

Cash and cash equivalents

\$ 219,553**Liabilities**

Accounts payable

-**Net assets**

Unrestricted

\$ 219,553

**Beaumont Basin Watermaster
Schedule of Assessments and Expenses
(Unaudited)
For the year ended June 30, 2013**

Revenues	
Assessments	\$ 405,080
Interest	<u>75</u>
Total revenues	<u>405,155</u>
Expenses	
Special projects	
Acquisition/computation and annual report	118,943
Engineering	50,621
Litigation	7,466
Administrative	
Meetings and miscellaneous	289
Legal and professional	28,436
Bank charges	<u>5</u>
Total expenses	<u>205,760</u>
Change in net assets	199,395
Unrestricted net assets, beginning of year	<u>20,158</u>
Unrestricted net assets, end of year	<u><u>\$ 219,553</u></u>

Appendix C

Production Estimation Methods for Unmetered Overlying Producers

Production Estimation for Un-metered Overlying Producers

Introduction

The Water Duty Method is a method used to estimate groundwater production for individual Overlying Users whose wells do not have water meters. The method was initially developed by Wildermuth Environmental Inc. (WEI) during the preparation of the 2005-06 Annual Report for the Watermaster. This method was later updated by WEI and it has been used since.

This appendix presents a list of un-metered Overlying Users, a summary of the Water Duty Method, and updated production estimates.

Unmetered Overlying Users

The Water Duty Method was applied to the following un-metered Overlying Users:

- Merlin Properties
- Rancho Calimesa Mobile Home Park
- Roman Catholic Bishop of San Bernardino County
- Leonard M. and Dorothy D. Stearns
- Sunny-Cal Egg and Poultry Company
- Albor Properties III, LP
- Nick Nikodinov
- Ronald L. McAmis
- Nicolas and Amalia Aldama
- Hector Gutierrez, Luis Gutierrez, and Sebastian Monroy
- Boris and Miriam Darmont

Water Duty Method

The following is a summary of the main elements of the water duty method.

- The method is used to estimate groundwater pumping for indoor, outdoor, and agricultural use.
- Indoor water use is estimated based on the number of dwelling units on each producer's property. From historical water sales records in the BCVWD's service area, indoor water used was estimated 0.35 ac-ft/yr per dwelling unit. This consumption rate was applied to each Overlying User based on the number of dwelling units in their property.
- Outdoor water uses the Crop Water Requirement approach to estimate, based on the acreage of irrigated landscape, the volume of water pumped on each producer's property. This approach uses evapotranspiration records from the CIMIS Station 44,

located at the University of California, Riverside, and crop type to determine the amount of water required for landscape use; an irrigation efficiency of 70 percent is then used to estimate the volume of water pumped.

- Agricultural water use was limited to the operations of the former Sunny-Cal Egg and Poultry Company. The approach considers the water consumption of chickens and the amount of water used for washing ranch facilities. A water consumption rate of 60 gallons per day per 1,000 chickens was used, based on published daily nutritional requirements. Water for washing of ranch facilities was considered to be equal to the amount use for landscape irrigation on a per acre basis.

Estimated Water Production

The estimate of groundwater production from un-metered Overlying Users is presented for each user in the tables attached. It should be noted that very small differences exists between the amounts published in previous reports and the numbers presented here. The differences are based on the evapotranspiration values obtained from the CIMIS station; some published values currently used were slightly different than those used in the past for selected months.

**University of California Riverside - CIMIS Station 44
Monthly Evapotranspiration Values - 2002 through 2013**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2002	2.65	3.60	4.68	4.88	6.34	7.13	7.55	6.95	5.66	3.13	3.15	2.01	57.73
2003	3.05	2.57	4.61	5.00	5.65	5.16	7.05	7.46	5.54	4.08	2.23	2.07	54.47
2004	2.49	2.76	4.81	5.90	7.10	6.50	7.55	6.81	5.83	3.39	2.44	2.30	57.88
2005	2.02	2.21	3.93	5.41	6.47	6.49	7.28	6.68	5.32	3.65	2.84	2.15	54.45
2006	2.92	3.35	3.42	4.26	6.02	7.16	7.73	7.20	5.70	3.95	3.14	2.94	57.79
2007	3.28	2.91	5.02	5.04	6.47	7.16	7.57	7.09	5.44	4.34	2.81	2.24	59.37
2008	1.69	2.31	5.30	6.04	6.28	7.59	7.53	7.23	5.79	5.02	3.14	1.89	59.81
2009	3.32	2.41	4.62	5.58	6.32	5.37	7.60	6.68	5.89	4.40	3.18	2.08	57.45
2010	2.35	2.44	4.67	5.11	6.18	6.25	6.57	6.99	5.45	2.10	3.22	1.78	53.11
2011	2.91	2.91	4.22	5.57	6.67	6.95	7.76	7.65	5.47	4.03	2.45	2.82	59.41
2012	3.02	3.41	4.51	5.85	7.00	7.62	7.93	7.83	6.44	4.38	2.72	1.70	62.41
2013	2.72	3.18	4.80	5.71	7.01	7.36	7.13	7.37	6.14	4.27	2.76	2.80	61.25

Crop Coefficient (Warm Season Bermuda Grass)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Kc	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7

Monthly Water Requirements (inches)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2004	1.74	1.93	3.37	4.13	4.97	4.55	5.29	4.77	4.08	2.37	1.71	1.61	40.52
2005	1.41	1.55	2.75	3.79	4.53	4.54	5.10	4.68	3.72	2.56	1.99	1.51	38.12
2006	2.04	2.35	2.39	2.98	4.21	5.01	5.41	5.04	3.99	2.77	2.20	2.06	40.45
2007	2.30	2.04	3.51	3.53	4.53	5.01	5.30	4.96	3.81	3.04	1.97	1.57	41.56
2008	1.18	1.62	3.71	4.23	4.40	5.31	5.27	5.06	4.05	3.51	2.20	1.32	41.87
2009	2.32	1.69	3.23	3.91	4.42	3.76	5.32	4.68	4.12	3.08	2.23	1.46	40.22
2010	1.65	1.71	3.27	3.58	4.33	4.38	4.60	4.89	3.82	1.47	2.25	1.25	37.18
2011	2.04	2.04	2.95	3.90	4.67	4.87	5.43	5.36	3.83	2.82	1.72	1.97	41.59
2012	2.11	2.39	3.16	4.10	4.90	5.33	5.55	5.48	4.51	3.07	1.90	1.19	43.69
2013	1.90	2.23	3.36	4.00	4.91	5.15	4.99	5.16	4.30	2.99	1.93	1.96	42.88

Indoor Water Use: 0.35 ac-ft/yr/du
Irrigation Efficiency: 70%

Estimated Pumping - All Unmetered Accounts

Year	Total Use (ac-ft/yr)
2004	534.36
2005	511.89
2006	149.53
2007	81.53
2008	83.08
2009	82.77
2010	81.15
2011	81.97
2012	82.37
2013	82.28

Estimated Pumping by Merilin Properties

Year	Parcel Size (acres)	No. DU	Indoor Water Use (ac-ft/yr)	Irrigated Acres	Irrigation Requirement (ac-ft/yr)	Outdoor Water Use (ac-ft/yr)	Total Use (ac-ft/yr)
2004	48	3	1.05	0.11	0.37	0.53	1.58
2005	48	3	1.05	0.11	0.35	0.50	1.55
2006	48	3	1.05	0.11	0.37	0.53	1.58
2007	48	3	1.05	0.11	0.38	0.54	1.59
2008	48	3	1.05	0.11	0.38	0.55	1.60
2009	48	3	1.05	0.11	0.37	0.53	1.58
2010	48	3	1.05	0.11	0.34	0.49	1.54
2011	48	3	1.05	0.11	0.38	0.54	1.59
2012	48	3	1.05	0.11	0.40	0.57	1.62
2013	48	3	1.05	0.11	0.39	0.56	1.61

Estimated Pumping by Rancho Calimesa

Year	Parcel Size (acres)	No. DU	Indoor Water Use (ac-ft/yr)	Irrigated Acres	Irrigation Requirement (ac-ft/yr)	Outdoor Water Use (ac-ft/yr)	Total Use (ac-ft/yr)
2004	29	195	68.25	0.00	0.00	0.00	68.25
2005	29	195	68.25	0.00	0.00	0.00	68.25
2006	29	195	68.25	0.00	0.00	0.00	68.25
2007	29	198	69.30	0.00	0.00	0.00	69.30
2008	29	198	69.30	0.00	0.00	0.00	69.30
2009	29	198	69.30	0.00	0.00	0.00	69.30
2010	29	198	69.30	0.00	0.00	0.00	69.30
2011	29	198	69.30	0.00	0.00	0.00	69.30
2012	29	198	69.30	0.00	0.00	0.00	69.30
2013	29	198	69.30	0.00	0.00	0.00	69.30

Estimated Pumping by Roman Catholic Bishop of San Bernardino

Year	Parcel Size (acres)	No. DU	Indoor Water Use (ac-ft/yr)	Irrigated Acres	Irrigation Requirement (ac-ft/yr)	Outdoor Water Use (ac-ft/yr)	Total Use (ac-ft/yr)
2004	34	2	0.70	12.10	40.85	58.36	59.06
2005	34	2	0.70	12.10	38.43	54.90	55.60
2006	34	2	0.70	12.10	40.79	58.27	58.97
2007	34	2	0.70	0.00	0.00	0.00	0.70
2008	34	2	0.70	0.00	0.00	0.00	0.70
2009	34	2	0.70	0.00	0.00	0.00	0.70
2010	34	0	0.00	0.00	0.00	0.00	0.00
2011	34	0	0.00	0.00	0.00	0.00	0.00
2012	34	0	0.00	0.00	0.00	0.00	0.00
2013	34	0	0.00	0.00	0.00	0.00	0.00

Estimated Pumping by Leonard Stearns

Year	Parcel Size (acres)	No. DU	Indoor Water Use (ac-ft/yr)	Irrigated Acres	Irrigation Requirement (ac-ft/yr)	Outdoor Water Use (ac-ft/yr)	Total Use (ac-ft/yr)
2004	91	3	1.05	0.00	0.00	0.00	1.05
2005	91	3	1.05	0.00	0.00	0.00	1.05
2006	91	3	1.05	0.00	0.00	0.00	1.05
2007	91	3	1.05	0.00	0.00	0.00	1.05
2008	91	3	1.05	0.00	0.00	0.00	1.05
2009	91	3	1.05	0.00	0.00	0.00	1.05
2010	91	2	0.70	0.00	0.00	0.00	0.70
2011	91	2	0.70	0.00	0.00	0.00	0.70
2012	91	2	0.70	0.00	0.00	0.00	0.70
2013	91	2	0.70	0.00	0.00	0.00	0.70

Estimated Pumping by Sunny Cal

Year	Parcel Size (acres)	No. DU	Indoor Water Use (ac-ft/yr)	Number of Chickens	Chicken Water Use (ac-ft/yr)	Irrigated Acres	Irrigation Requirement (ac-ft/yr)	Outdoor Water Use (ac-ft/yr)	Total Use (ac-ft/yr)
2004	200	10	3.50	1,200,000	80.65	66.40	224.19	320.27	404.42
2005	200	10	3.50	1,200,000	80.65	66.40	210.90	301.29	385.44
2006	185	2	0.70	0.00	0.00	0.40	1.35	1.93	2.63
2007	185	2	0.70	0.00	0.00	0.40	1.39	1.98	2.68
2008	185	2	0.70	0.00	0.00	0.70	2.44	3.49	4.19
2009	185	2	0.70	0.00	0.00	0.70	2.35	3.35	4.05
2010	185	2	0.70	0.00	0.00	0.70	2.17	3.10	3.80
2011	185	2	0.70	0.00	0.00	0.70	2.43	3.47	4.17
2012	185	2	0.70	0.00	0.00	0.70	2.55	3.64	4.34
2013	185	2	0.70	0.00	0.00	0.70	2.55	3.64	4.34

Water consumption per chicken estimated at 6.0 gal/100 chickens

Estimated Pumping by Albor Properties

Year	Parcel Size (acres)	No. DU	Indoor Water Use (ac-ft/yr)	Irrigated Acres	Irrigation Requirement (ac-ft/yr)	Outdoor Water Use (ac-ft/yr)	Total Use (ac-ft/yr)
2004	0	0	0.00	0.00	0.00	0.00	0.00
2005	0	0	0.00	0.00	0.00	0.00	0.00
2006	122	2	0.70	2.60	8.76	12.52	13.22
2007	122	1	0.35	0.40	1.39	1.98	2.33
2008	122	1	0.35	0.40	1.40	1.99	2.34
2009	122	1	0.35	0.40	1.34	1.92	2.27
2010	122	1	0.35	0.40	1.24	1.77	2.12
2011	122	1	0.35	0.40	1.39	1.98	2.33
2012	122	1	0.35	0.40	1.46	2.08	2.43
2013	122	1	0.35	0.40	1.43	2.04	2.39

Estimated Pumping by Nikodinov

Year	Parcel Size (acres)	No. DU	Indoor Water Use (ac-ft/yr)	Irrigated Acres	Irrigation Requirement (ac-ft/yr)	Outdoor Water Use (ac-ft/yr)	Total Use (ac-ft/yr)
2004	0	0	0.00	0.00	0.00	0.00	0.00
2005	0	0	0.00	0.00	0.00	0.00	0.00
2006	10	1	0.35	0.08	0.27	0.39	0.74
2007	10	1	0.35	0.08	0.28	0.40	0.75
2008	10	1	0.35	0.08	0.28	0.40	0.75
2009	10	1	0.35	0.08	0.27	0.38	0.73
2010	10	1	0.35	0.08	0.25	0.35	0.70
2011	10	1	0.35	0.08	0.28	0.40	0.75
2012	10	1	0.35	0.08	0.29	0.42	0.77
2013	10	1	0.35	0.08	0.29	0.41	0.76

Estimated Pumping by McAmis

Year	Parcel Size (acres)	No. DU	Indoor Water Use (ac-ft/yr)	Irrigated Acres	Irrigation Requirement (ac-ft/yr)	Outdoor Water Use (ac-ft/yr)	Total Use (ac-ft/yr)
2004	0	0	0.00	0.00	0.00	0.00	0.00
2005	0	0	0.00	0.00	0.00	0.00	0.00
2006	0.9	1	0.35	0.04	0.13	0.19	0.54
2007	0.9	1	0.35	0.04	0.14	0.20	0.55
2008	0.9	1	0.35	0.04	0.14	0.20	0.55
2009	0.9	1	0.35	0.04	0.13	0.19	0.54
2010	0.9	1	0.35	0.04	0.12	0.18	0.53
2011	0.9	1	0.35	0.04	0.14	0.20	0.55
2012	0.9	1	0.35	0.04	0.15	0.21	0.56
2013	0.9	1	0.35	0.04	0.14	0.20	0.55

Estimated Pumping by Aldama

Year	Parcel Size (acres)	No. DU	Indoor Water Use (ac-ft/yr)	Irrigated Acres	Irrigation Requirement (ac-ft/yr)	Outdoor Water Use (ac-ft/yr)	Total Use (ac-ft/yr)
2004	0	0	0.00	0.00	0.00	0.00	0.00
2005	0	0	0.00	0.00	0.00	0.00	0.00
2006	1.4	1	0.35	0.10	0.34	0.48	0.83
2007	1.4	1	0.35	0.10	0.35	0.49	0.84
2008	1.4	1	0.35	0.10	0.35	0.50	0.85
2009	1.4	1	0.35	0.10	0.34	0.48	0.83
2010	1.4	1	0.35	0.10	0.31	0.44	0.79
2011	1.4	1	0.35	0.10	0.35	0.50	0.85
2012	1.4	1	0.35	0.10	0.36	0.52	0.87
2013	1.4	1	0.35	0.10	0.36	0.51	0.86

Estimated Pumping by Gutierrez

Year	Parcel Size (acres)	No. DU	Indoor Water Use (ac-ft/yr)	Irrigated Acres	Irrigation Requirement (ac-ft/yr)	Outdoor Water Use (ac-ft/yr)	Total Use (ac-ft/yr)
2004	0	0	0.00	0.00	0.00	0.00	0.00
2005	0	0	0.00	0.00	0.00	0.00	0.00
2006	2	2	0.70	0.14	0.47	0.67	1.37
2007	2	2	0.70	0.14	0.48	0.69	1.39
2008	2	2	0.70	0.14	0.49	0.70	1.40
2009	2	2	0.70	0.14	0.47	0.67	1.37
2010	2	2	0.70	0.14	0.43	0.62	1.32
2011	2	2	0.70	0.14	0.49	0.69	1.39
2012	2	2	0.70	0.14	0.51	0.73	1.43
2013	2	2	0.70	0.14	0.50	0.71	1.41

Estimated Pumping by Damont

Year	Parcel Size (acres)	No. DU	Indoor Water Use (ac-ft/yr)	Irrigated Acres	Irrigation Requirement (ac-ft/yr)	Outdoor Water Use (ac-ft/yr)	Total Use (ac-ft/yr)
2004	0	0	0.00	0.00	0.00	0.00	0.00
2005	0	0	0.00	0.00	0.00	0.00	0.00
2006	0.5	1	0.35	0.00	0.00	0.00	0.35
2007	0.5	1	0.35	0.00	0.00	0.00	0.35
2008	0.5	1	0.35	0.00	0.00	0.00	0.35
2009	0.5	1	0.35	0.00	0.00	0.00	0.35
2010	0.5	1	0.35	0.00	0.00	0.00	0.35
2011	0.5	1	0.35	0.00	0.00	0.00	0.35
2012	0.5	1	0.35	0.00	0.00	0.00	0.35
2013	0.5	1	0.35	0.00	0.00	0.00	0.35

Appendix D
Water Quality Analysis Summary (2009-2013)
for Production Wells

**Beaumont Basin Watermaster
Water Quality Analysis Summary (2009-2013) for Drinking Water Production Wells**

Analyte	Units	Federal Primary MCL	Federal Secondary MCL	California Primary MCL	California Secondary MCL	Public Health Goal	DLR	Wells Sampled	Wells Exceeding CA MCLs	Average Value	Maximum Value
Color, Apparent (Unfiltered)	UNITS		15		15			33	0	3	5
Odor Threshold @ 60 C	TON		3		3		1	33	0	1	1
Specific Conductance (E.C.)	umhos				900			33	0	418	730
pH, Laboratory	Std Units		8.5					33		8	8.9
Bicarbonate (as HCO3)	mg/L							33		199	280
Carbonate (as CO3)	mg/L							33		3	16
Nitrite as Nitrogen (N)	ug/L	1000		1000		1000	400	33	0	94	100
Calcium (Ca)	mg/L							33		40	55
Magnesium (Mg)	mg/L							33		13	23
Sodium (Na)	mg/L							33		26	62
Potassium (K)	mg/L							30		2	2.3
Chloride	mg/L		250		250			33	0	11	39
Sulfate (SO4)	mg/L		250		250		0.5	33	0	18	63
Fluoride (F) (Natural-Source)	mg/L	4	2	2			0.1	33	0	0	1
Arsenic	ug/L	10		10		zero	2	33	0	2	5.2
Barium (Ba)	ug/L	2000		1000		2000	100	33	0	94	100
Beryllium	ug/L	4		4		4	1	33	0	1	1
Boron	ug/L						100	1		0	0
Cadmium (Cd)	ug/L	5		5		5	1	33	0	1	1
Chromium (Total Cr)	ug/L	100		50		100	10	33	0	9	20
Copper (Cu)	ug/L		1000		1000	1300	50	33	0	47	62
Iron (Fe)	ug/L		300		300		100	33	0	94	120
Lead (Pb)	ug/L					zero	5	33	0	5	6.5
Manganese (Mn)	ug/L		50		50		20	33	0	19	20
Thallium	ug/L	2		2		0.5	1	33	0	1	1
Nickel	ug/L			100			10	33	0	9	14
Silver (Ag)	ug/L		100		100		10	33	0	9	10
Vanadium	ug/L						3	1		51	84
Zinc (Zn)	ug/L		5000		5000		50	33	0	51	250
Antimony	ug/L	6		6		6	6	33	0	6	6
Aluminum (Al)	ug/L		200	1000	200		50	33	0	47	50
Selenium (Se)	ug/L	50		50		50	5	33	0	5	5
Cyanide	ug/L	200		150			100	30	0	88	100
Gross Alpha	pCi/L	15		15			3	10	0	1	2.55
Uranium	pCi/L	30		20		zero	1	4	0	1	1.72
Carbon Tetrachloride	ug/L	5		0.5		zero	0.5	31	0	0	0.5
Toluene	ug/L	1000		150		1000	0.5	31	0	0	0.5
Benzene	ug/L	5		1		zero	0.5	31	0	0	0.5
Benzo(a)pyrene	ug/L	0.2		0.2		zero	0.1	15	0	0	0.1
Monochlorobenzene (Chlorobenzene)	ug/L	100		70		100	0.5	31	0	0	0.5
Ethyl Benzene	ug/L	700		300			0.5	31	0	0	0.5

**Beaumont Basin Watermaster
Water Quality Analysis Summary (2009-2013) for Drinking Water Production Wells**

Analyte	Units	Federal Primary MCL	Federal Secondary MCL	California Primary MCL	California Secondary MCL	Public Health Goal	DLR	Wells Sampled	Wells Exceeding CA MCLs	Average Value	Maximum Value
Hexachlorocyclopentadiene	µg/L	50		50		50	1	6	0	1	1
Dichloromethane (Methylene Chloride)	µg/L	5		5			0.5	31	0	0	0.5
Tetrachloroethylene (PCE)	µg/L	5		5		zero	0.5	31	0	0	0.5
Trichlorofluoromethane (FREON 11)	µg/L			150			5	31	0	5	5
1,1-Dichloroethane (1,1-DCA)	µg/L			5			0.5	31	0	0	0.5
1,1-Dichloroethylene (1,1-DCE)	µg/L	7		6			0.5	31	0	0	0.5
1,1,1-Trichloroethane (1,1,1-TCA)	µg/L	200		200		200	0.5	31	0	0	0.5
1,1,2-Trichloroethane (1,1,2-TCA)	µg/L	5		5		3	0.5	31	0	0	0.5
1,1,2,2-Tetrachloroethane	µg/L			1			0.5	31	0	0	0.5
1,2-Dichloroethane (1,2-DCA)	µg/L	5		0.5			0.5	31	0	0	0.5
1,2-Dichlorobenzene (o-DCB)	µg/L	600		600			0.5	31	0	0	0.5
1,2-Dichloropropane	µg/L	5		5			0.5	31	0	0	0.5
trans-1,2-Dichloroethylene (t-1,2-DCE)	µg/L	100		10			0.5	31	0	0	0.5
1,2,4-Trichlorobenzene	µg/L	70		5	70		0.5	31	0	0	0.5
1,3-Dichloropropene, Total	µg/L			0.5			0.5	31	0	0	0.5
1,4-Dichlorobenzene (p-DCB)	µg/L	75		5			0.5	31	0	0	0.5
Dichlorodifluoromethane (Freon 12)	µg/L						0.5	30		1	0.5
2,3,7,8-TCDD (Dioxin)	pg/L	0.00003		30			5	4	0	0	0
Naphthalene	µg/L						0.5	30		1	0.5
Foaming Agents (MBAS)	mg/L		0.5		0.5			33	0	0	0.14
Dalapon	µg/L	200		200			10	6	0	10	10
Propachlor	µg/L						0.5	6	6	1	0.5
Bentazon (BASAGRAN)	µg/L			18			2	6	0	2	2
Dibromochloropropane (DBCP)	µg/L	0.2		0.2			0.01	27	0	0	0.01
Oxamyl (Vydate)	µg/L	200		50		200	20	4	0	0	0
Endothall	µg/L	100		100			45	4	0	45	45
Pentachlorophenol (PCP)	µg/L	1		1		zero	0.2	6	0	0	0.2
Atrazine (AATREX)	µg/L	3		1		3	0.5	27	0	1	0.5
2,4,5-TP (SILVEX)	µg/L	50		50		50	1	6	0	1	1
Simazine (PRINCEP)	µg/L	4		4		4	1	27	0	1	1
Diethylhexylphthalate (DEHP)	µg/L	6		4		zero	3	15	0	3	3
Vinyl Chloride (VC)	µg/L	2		0.5		zero	0.5	31	0	0	0.5
Trichloroethylene (TCE)	µg/L	5		5		zero	0.5	31	0	0	0.5
Lindane (gamma-BHC)	µg/L	0.2		0.2		0.2	0.2	6	0	0	0.2
Chlordane	µg/L	2		0.1		zero	0.1	6	0	0	0.1
Endrin	µg/L	2		2		zero	0.1	6	0	0	0.1
Toxaphene	µg/L	3		3		zero	1	6	0	1	1
Heptachlor	µg/L	0.4		0.01		zero	0.01	6	0	0	0.01
Heptachlor Epoxide	µg/L	0.2		0.01			0.01	6	0	0	0.01
Methoxychlor	µg/L	40		30		40	10	6	0	10	10
Polychlorinated Biphenyls, Total, as DCB	µg/L	0.5		0.5		zero	0.5	6	0	1	0.5

Beaumont Basin Watermaster
Water Quality Analysis Summary (2009-2013) for Drinking Water Production Wells

Analyte	Units	Federal Primary MCL	Federal Secondary MCL	California Primary MCL	California Secondary MCL	Public Health Goal	DLR	Wells Sampled	Wells Exceeding CA MCLs	Average Value	Maximum Value
Hexachlorobenzene	µg/L	1		1		zero	0.5	6	0	1	0.5
Picloram	µg/L	500		500		500	1	6	0	1	1
2,4-D	µg/L	70		70			10	6	0	10	10
Methyl tert-Butyl Ether (MTBE)	µg/L			13	5		3	31	0	3	3
Total Filterable Residue @ 180 C (TDS)	mg/L		500		500			33	0	237	380
Mercury (Hg)	µg/L	2		2		2	1	33	0	1	1
cis-1,2-Dichloroethylene (c-1,2-DCE)	µg/L	70		6			0.5	31	0	0	0.5
Styrene	µg/L	100		100		100	0.5	31	0	0	0.5
1,2,4-Trimethylbenzene	µg/L							30		1	0.5
Isopropylbenzene (Cumene)	µg/L						0.5	30		1	0.5
n-Propylbenzene	µg/L						0.5	30		1	0.5
1,3,5-Trimethylbenzene	µg/L						0.5	30		1	0.5
sec-Butylbenzene	µg/L						0.5	30		1	0.5
tert-Butylbenzene	µg/L						0.5	30		1	0.5
Ethylene Dibromide (EDB)	µg/L	0.05		0.05			0.02	27	0	0	0.02
Alachlor (ALANEX)	µg/L	2		2		zero	1	13	0	1	1
Diquat	µg/L	20		20			4	4	0	0	0
Glyphosate	µg/L	700		700			25	4	0	0	0
Dinoseb (DNBP)	µg/L	7		7			2	6	0	2	2
Carbofuran (FURADAN)	µg/L	40		18		40	5	4	0	0	0
Total Xylenes (m, p, & o)	µg/L	10000		1750		10000		31	0	0	0.5
Methyl Isobutyl Ketone (MIBK)	µg/L						5	30		5	5
Trichlorofluoroethane (FREON 113)	µg/L			1200			10	31	0	10	10
Asbestos	MFL	7		7		7 MFL	0.2	4	0	0	0.2
Turbidity, Laboratory	NTU		5		5			28	0	0	0.96
Molinate (ORDRAM)	µg/L			20			2	8	0	2	2
Thiobencarb (BOLERO)	µg/L			70	1		1	12	0	1	1
2-Chlorotoluene	µg/L						0.5	30		1	0.5
4-Chlorotoluene	µg/L						0.5	30		1	0.5
n-Butylbenzene	µg/L						0.5	30		1	0.5
Di(2-ethylhexyl) Adipate	µg/L	400		400			5	15	0	5	5
Perchlorate	µg/L			6			4	33	0	4	4

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