Notice and Agenda
Regular Meeting of the Beaumont Basin Watermaster

Wednesday, April 13, 2022 at 11:00 a.m.

Meeting Location:
Beaumont-Cherry Valley Water District
560 Magnolia Avenue • Beaumont, California 92223

This meeting is hereby noticed pursuant to California Government Code Section 54950 et. seq.

Members of the Watermaster Committee:

City of Banning
City of Beaumont
Beaumont-Cherry Valley Water District
South Mesa Water Company
Yucaipa Valley Water District

COVID-19 NOTICE

This meeting of the Watermaster Committee is open to the public who would like to attend in person. COVID-19 safety guidelines are in effect pursuant to the Cal/OSHA COVID-19 Prevention Emergency Temporary Standards and the California Department of Public Health Recommendations

- **Face coverings are recommended for vaccinated and unvaccinated persons and must be properly worn over the nose and mouth at all times**
- **Maintain 6 feet of physical distancing from others in the building who are not in your party**
- **There will be no access to restrooms in the building**

Online Meeting Participation Link:
https://us02web.zoom.us/j/81638720446?pwd=UnNZcC9TbGZzTGFuMHdhVkRMblczQT09

Telephone: (669) 900-9128 / Meeting ID: 816-3872-0446 / Passcode: 636756
One-Tap Mobile: +16699009128,,81638720446#,,,,*636756#

*For Public Comment, use the **"Raise Hand"** feature if on the video call when prompted, if dialing in, please **dial *9 to "Raise Hand"** when prompted*

Meeting materials are available on the Watermaster website:
https://beaumontbasinwatermaster.org/

BEAUMONT BASIN WATERMASTER COMMITTEE – APRIL 13, 2022

I. Call to Order

II. Roll Call

Committee Member Agency	Primary Representative		Alternate	
City of Banning	Arturo Vela, Chair		Luis Cardenas	
City of Beaumont	Jeff Hart		Robert Vestal	
Beaumont-Cherry Valley Water District	Daniel Jaggers		Mark Swanson	
South Mesa Water Company	George Jorritsma		Dave Armstrong	
Yucaipa Valley Water District	Joseph Zoba		Jennifer Ares	

III. Pledge of Allegiance

IV. Public Comments At this time, members of the public may address the Beaumont Basin Watermaster on matters within its jurisdiction; however, no action or discussion may take place on any item not on the agenda. To provide comments on specific agenda items, please complete a Request to Speak form and provide that form to the Secretary prior to the commencement of the meeting, or, RAISE HAND electronically or Press *9 when prompted for public comment.

ACTION ITEMS

Action may be taken on any item on the agenda.

V. Consent Calendar

A. Resolution 2022-04: Authorizing Public Meetings to be Held via Teleconferencing Pursuant to Government Code Section 54953(e) and Making Findings and Determinations Regarding Same [Memorandum No. 22-11, Page 6]

B. Meeting Minutes

a. January 5, 2022 Special Meeting [Page 9]

b. February 2, 2022 Regular Meeting [Page 15]

c. March 10, 2022 Special Meeting [Page 21]

C. Status Report on Water Level Monitoring throughout the Beaumont Basin through March 21, 2022 [Page 28]

D. A Comparison of Production versus Extraction Credits through February 2022 [Page 38]

E. ALDA contract execution (Montoya) [Page 40]

VI. Reports

A. Report from Engineering Consultant - Hannibal Blandon, ALDA Engineering

B. Report from Hydrogeological Consultant - Thomas Harder, Thomas Harder & Co.

C. Report from Legal Counsel - Thierry Montoya/Keith McCullough, Alvarado Smith

VII. Discussion Items

A. Alvarado Smith Request for Rate Increase [Memorandum No. 22-12, Page 53]

Recommendation: Discuss and consider approval of an increase in rates for General Counsel Services provided by Alvarado Smith

B. Finalization of Return Flow Technical Memorandum [Memorandum No. 22-13, Page 56]

Recommendation: Approve the Memorandum

C. 2021 Consolidated Annual Report and Engineering Report – Presentation of Draft Report [Memorandum No. 22-14, Page 156]

Recommendation: None. For information purposes only.

D. Certification of Groundwater and Imported Water Use during Calendar Year 2021 [Memorandum No. 22-15, Page 398]

Recommendation: Certify groundwater production, imported water spreading, and change in storage in the Beaumont Groundwater Basin during CY 2021.

E. Consideration of a Request for Proposals to Provide Professional Administrative and Technical Support Services to the Beaumont Basin Watermaster [Memorandum No. 22-16, Page 400]

Recommendation: Authorize the release of the Request for Proposals

F. Independent Accountant's Financial Report of Agreed-Upon Procedures for the Beaumont Basin Watermaster [Memorandum No. 22-17, Page 410]

Recommendation: Receive and file the Independent Accountant's Financial Report for the period ending June 30, 2021

G. Consideration of the Watermaster Budget for Fiscal Year 2022-23 [Memorandum No. 22-18, Page 417]

Recommendation: Approve the budget for Fiscal Year 2022-23

H. Financial Status Report [Memorandum No. 22-19, Page 419]

Recommendation: Presentation only – no action required

VIII. Topics for Future Meetings

A. Development of a methodology and policy to account for groundwater storage losses in the basin / groundwater management

B. Incidental discharge

C. Development of a Recycled Water Policy

IX. Comments from the Watermaster Committee Members

X. Announcements

A. Special meeting / workshop date to be determined

B. The next regular meeting of the Beaumont Basin Watermaster is scheduled for Wednesday, June 1, 2022, at 11:00 a.m.

C. Future Meeting Dates:

- August 3, 2022, at 11:00 a.m.
- October 5, 2022, at 11:00 a.m.
- December 7, 2022, at 11:00 a.m.

XI. Adjournment

NOTICES

AVAILABILITY OF AGENDA MATERIALS - Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the Beaumont Basin Watermaster Committee in connection with a matter subject to discussion or consideration at an open meeting of the Committee are available for public inspection in the Office of the Watermaster Secretary, at 560 Magnolia Avenue, Beaumont, California ("Office"). If such writings are distributed to members of the Committee less than 72 hours prior to the meeting, they will be available on the Committee website at the same time as they are distributed to Members: website: https://beaumontbasinwatermaster.org/.

REVISIONS TO THE AGENDA - In accordance with §54954.2(a) of the Government Code (Brown Act), revisions to this Agenda may be made up to 72 hours before the Board Meeting, if necessary, after mailings are completed. Interested persons wishing to receive a copy of the set Agenda may pick one up at the Office, located at 560 Magnolia Avenue, Beaumont, California, or download from the website up to 72 hours prior to the Meeting.

REQUIREMENTS RE: DISABLED ACCESS - In accordance with §54954.2(a), requests for a disability related modification or accommodation, including auxiliary aids or services, in order to attend or participate in a meeting, should be made to the Office, at least 48 hours in advance of the meeting to ensure availability of the requested service or accommodation. The Office may be contacted by telephone at (951) 845-9581, email at info@bcvwd.org or in writing to the Beaumont Basin Watermaster Committee, c/o Beaumont-Cherry Valley Water District, 560 Magnolia Avenue, Beaumont, California 92223.

CERTIFICATION OF POSTING

A copy of the foregoing notice was posted near the regular meeting place of the Beaumont Basin Watermaster Committee and to its website at least 72 hours in advance of the meeting (Government Code §54954.2(a)).

Consent Calendar

BEAUMONT BASIN WATERMASTER
MEMORANDUM NO. 22-11

Date:	April 13, 2022
From:	Dan Jaggers, Secretary
Subject:	Consideration of Resolution No. 2022-04: Authorizing Public Meetings to be Held via Teleconferencing Pursuant to Government Code Section 54953(e) and Making Findings and Determinations Regarding Same
Recommendation:	Adopt Resolution No. 2022-04

This item has been placed on the agenda so that the Watermaster Committee can continue to meet via teleconference pursuant to the special Brown Act requirements outlined in AB 361. These requirements give local public agencies greater flexibility to conduct teleconference meetings when there is a declared state of emergency and either social distancing is mandated or recommended, or an in-person meeting would present imminent risks to the health and safety of attendees.

To continue to hold meetings under the special teleconferencing requirements, a legislative body of a local public agency must make two findings pursuant to Government Code Section 54953(e)(3). First, there must be a declared state of emergency and the legislative body must find that it has "reconsidered" the circumstances of such emergency. Second, the legislative body must find that such emergency continues to directly impact the ability of the legislative body's members to meet in person. Alternatively, for the second finding, the legislative body must find that state or local officials continue to impose or recommend social distancing measures. These findings must be made within 30 days after the legislative body teleconferences for the first time under AB 361 and on a monthly basis thereafter.

The Committee may consider the following findings:

1. The state of emergency due to the spread of COVID-19 in California as proclaimed by Governor Gavin Newsom on March 4, 2020, is still in effect

2. The California Department of Public Health has issued an indoor mask mandate

3. Cal/OSHA has issued Emergency Temporary Standards for Requirements to Protect Workers from Coronavirus which include recommendations for social distancing

RESOLUTION NO. 2022-04

A RESOLUTION OF THE BEAUMONT BASIN WATERMASTER AUTHORIZING PUBLIC MEETINGS TO BE HELD VIA TELECONFERENCING PURSUANT TO GOVERNMENT CODE SECTION 54953(E) AND MAKING FINDINGS AND DETERMINATIONS REGARDING SAME

WHEREAS, the Beaumont Basin Watermaster (BBWM) is committed to preserving public access and participation at its meetings which are open and public, as required by the Ralph M. Brown Act (Cal. Gov. Code 54950 – 54963), so that any member of the public may attend, participate, and observe; and

WHEREAS, pursuant to Assembly Bill 361 effective September 16, 2021, the Brown Act, Government Code section 54953(e), makes provisions for remote teleconferencing participation in meetings by members of a legislative body, without compliance with the requirements of Government Code section 54953(b)(3), subject to the existence the following conditions:

1. The legislative body holds a meeting during a proclaimed state of emergency, and state or local officials have imposed or recommended measures to promote social distancing.
2. The legislative body holds a meeting during a proclaimed state of emergency for the purpose of determining, by majority vote, whether as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees.
3. The legislative body holds a meeting during a proclaimed state of emergency and has determined, by majority vote, that, as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees.

WHEREAS, such conditions now exist in the area of jurisdiction of the Beaumont Basin Watermaster, specifically, a State of Emergency was proclaimed by California Governor Gavin Newsom on March 4, 2020 due to an outbreak of the COVID-19 respiratory illness due to a novel coronavirus; and

WHEREAS, the Riverside County / Riverside University Health System - Public Health has documented great spread of the coronavirus in the County of Riverside; and

WHEREAS, the California Department of Public Health has asserted that indoor settings are especially high risk for transmission, and that the COVID-19 respiratory illness continues to present imminent risk to health and safety of attendees at meetings; and

WHEREAS, the Centers for Disease Control and Prevention continue to advise that COVID-19 spreads more easily indoors than outdoors and that people are more likely to be exposed to COVID-19 when they are closer than six feet apart from others for longer periods of time; and

WHEREAS, the Watermaster Committee does hereby find that given the continued proclaimed state of emergency by the Governor of the State of California, and that the sustained transmission rate of coronavirus has caused, and will continue to cause, conditions of peril to the safety of persons within the area of the Beaumont Basin; and

WHEREAS, the Watermaster does hereby find that the legislative bodies of the BBWM shall conduct meetings without compliance with paragraph (3) of subdivision (b) of Government Code section 54953, as authorized by subdivision (e) of section 54953, and that such legislative bodies shall comply with the requirements to provide the public with access to the meetings as prescribed in paragraph (2) of subdivision (e) of section 54953; and

WHEREAS, BBWM will assure the right of the public to attend public meetings and address the Committee by continuing to provide teleconferencing access to meetings to the public via an identified call-in / internet-based option, allowing a public comment opportunity at meetings as required by the Brown Act; and

WHEREAS, in the event of a disruption in teleconferencing capability, the Watermaster Committee will take no action on agenda items until the technology issue is resolved,

NOW, THEREFORE, BE IT RESOLVED, by the Beaumont Basin Watermaster Committee that:

1. Recitals. The Recitals set forth above are true and correct and are incorporated into this Resolution by this reference.

2. Governor's Proclamation of a State of Emergency. The Committee members hereby acknowledge the proclamation of State of Emergency made on March 4, 2020.

3. Remote Teleconference Meetings. The members of the Watermaster Committee are hereby authorized and directed to take all actions necessary to carry out the intent and purpose of this Resolution including, conducting open and public meetings in accordance with Government Code section 54953(e) and other applicable provisions of the Brown Act.

4. Effective Date of Resolution. This Resolution shall take effect immediately upon its adoption and shall be effective for 30 days.

PASSED AND ADOPTED this _____ day of _____, 2022 by the following vote:

AYES:
NOES:
ABSTAIN:
ABSENT:

BEAUMONT BASIN WATERMASTER

BY: _____

ART VELA, CHAIR
BEAUMONT BASIN WATERMASTER

Record of the Minutes of the
Beaumont Basin Committee Meeting of the
Beaumont Basin Watermaster
Special Meeting
Wednesday, January 5, 2022

Meeting Location:

Due to the continued State of Emergency due to the spread of COVID-19, this meeting was held by teleconference only.

I. Call to Order

Chairman Arturo Vela called the meeting to order at 11:03 a.m.

II. Roll Call

City of Banning	*Arturo Vela*	*Present*
City of Beaumont	*Jeff Hart*	*Present*
Beaumont-Cherry Valley Water District	*Daniel Jaggers*	*Present*
South Mesa Water Company	*Dave Armstrong*	*Present*
Yucaipa Valley Water District	*Jennifer Ares*	*Present*

Hannibal Blandon was present as engineer for the BBWM.
Thierry Montoya was present as BBWM legal counsel.

Members of the public who registered and / or attended:
Ron Duncan, San Gorgonio Pass Water Agency
Lance Eckhart, San Gorgonio Pass Water Agency
Mark Swanson, Beaumont-Cherry Valley Water District
Cenica Smith, Beaumont-Cherry Valley Water District
Pam Lindgren
Madeline Chen
Madeline Blua, Yucaipa Valley Water District
Nyles O'Harra, Yucaipa Valley Water District
Joyce McIntire, Yucaipa Valley Water District
Larry Smith
Paul Rodrigues

III. Pledge of Allegiance

Chair Vela led the pledge.

IV. Public Comments:

None.

V. Action Item

A. Consideration of Resolution 2022-01: Authorizing Public Meetings to be Held via Teleconferencing Pursuant to Government Code Section 54953(e) and Making Findings and Determinations Regarding Same

Member Jaggers briefed the Committee on this resolution required every 30 days to allow the committee to implement the flexibility for teleconference meetings pursuant to AB 361. Counsel Montoya advised that he had reviewed the resolution and it is consistent with the Brown Act.

It was moved by Member Jaggers and seconded by Member Hart to approve Resolution 2022-01.

AYES:	Armstrong, Hart, Jaggers, Vela, Ares
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

VI. Consent Calendar

A. Meeting Minutes for October 6, 2021
B. Meeting Minutes for December 1, 2021

It was moved by Member Armstrong and seconded by Member Ares to approve the meeting minutes.

AYES:	Armstrong, Hart, Jaggers, Vela, Ares
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

VII. Reports

A. Report from Engineering Consultant – Hannibal Blandon, ALDA Engineering

Mr. Blandon briefed the Committee on the potential for the Plantation on the Lake well to be a monitoring well and related issues.

B. Report from Hydrogeological Consultant – Thomas Harder, Thomas Harder & Co.
No report.

C. Report from Legal Counsel – Thierry Montoya, Alvarado Smith
Nothing to report.

VIII. Discussion Items

A. Reorganization of the Beaumont Basin Watermaster Committee – Chair, Vice Chair, Secretary and Treasurer

Recommendation: That the Beaumont Basin Watermaster Committee either reaffirm the existing officers or conduct nominations for the appointment of new officers of the Beaumont Basin Watermaster.

It was moved by Member Jaggers and seconded by Member Armstrong to continue with the current officers:

- *Chair – Arturo Vela*
- *Vice-Chair – George Jorritsma*
- *Secretary – Dan Jaggers*
- *Treasurer – Joe Zoba*

and approved by the following vote:

AYES:	Armstrong, Hart, Jaggers, Vela, Ares
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

B. Consideration of Special Meeting / Workshop

Recommendation: That the Beaumont Basin Watermaster Committee consider setting a date and agenda for a special meeting /workshop

i. Review of Mission Statement:

Watermaster's mission is to manage the yield of and storage within the Beaumont Basin to provide maximum benefit to the people dependent on it.

ii. Topics for Discussion

iii. Engagement of Facilitator

Member Jaggers introduced the discussion. Chair Vela noted the possibility of engaging a facilitator. Member Hart offered to provide an outline and framework at the February 2 meeting.

Mr. Jaggers reminded that the impetus for this special meeting was to schedule the workshop and agreed that a framework to assist with decision making would be helpful

Member Ares agreed and said something in writing would be helpful. She pointed to suggestions from the consultant regarding things that need to be addressed and rolled into a Request for Proposal. She indicated there may not be need for a facilitator as all understand the path forward. Hart agreed that should be part of the workshop discussion. He reminded that in the past, the Watermaster had a general manager who could facilitate discussion and disseminate information. He noted that challenges of the Committee are lack of staff to handle certain things and assuring compliance with the Brown Act.

Mr. Jaggers added that another challenge for the technical consultant is taking all member input and formulating it and allowing for different viewpoints. Having a third entity to focus all activities and facilitate discussion and resolution may be a way to insulate an entity from trying to maintain balance while performing the technical work.

Member Hart pointed to the RFPs and suggested it may be beneficial to have a facilitator or coordinator to assure there is proper buy-in from all members.

Chair Vela invited public comment. Mr. Lance Eckhart of the San Gorgonio Pass Water Agency pointed to the technical collaboration and opportunities for public input related to the area's Groundwater Sustainability Plan process and the constraints due to the Brown Act. Any way to work with the area technical managers to bring good collaborative solutions quickly is better, he advised.

Chair Vela indicated the potential for a Technical Advisory Committee to meet outside of the Brown Act and present information to the Board.

Member Jaggers suggested that "facilitator" be changed to "coordinator" and Chair Vela agreed.

Chair Vela tabled the item to the February 2, 2022 meeting.

C. Authorize Preparation and Release of a Request for Proposal for annual reporting services

Recommendation: That the Watermaster Committee form an ad hoc committee to develop a Request for Proposal and authorize release of same

Chair Vela reminded the Committee of the discussion at the December 1, 2021 meeting and the vote to extend the term of the contract with

ALDA Inc. There was discussion of the need to go to bid for the services since the original bid was advertised in 2011.

Member Jaggers noted that Member Hart has a draft document, and they need to meet to review.

Member Hart also noted there is a procurement policy to review. He offered to provide a draft RFP, indicating the two are related. Ideally, the procurement policy would be formed in order to utilize it for engagement of a consultant.

Chair Vela tasked the current ad hoc procurement policy committee of Member Jaggers and Member Hart with development of a Request for Proposal.

IX. Topics for Future Meetings

a. Development of a methodology and policy to account for groundwater storage losses in the basin / Groundwater management

b. Scope of work and Request for Proposal for a workshop facilitator / consultant

c. Incidental discharge

d. Effect of Court ruling on Production vs Extraction Credits

e. Development of a recycled water policy

X. Comments from the Watermaster Committee Members

None.

XI. Announcements

a. Special Meeting / workshop date: None set.

b. The next regular meeting of the Beaumont Basin Watermaster is scheduled for Wednesday, February 2, 2022 at 11:00 a.m.

c. Future Meeting Dates:

i. April 6, 2022 at 11:00 a.m.

ii. June 1, 2022 at 11:00 a.m.

iii. August 3, 2022 at 11:00 a.m.

iv. October 5, 2022 at 11:00 a.m.

v. December 7, 2022 at 11:00 a.m.

XI. Adjournment

Chairman Vela adjourned the meeting at 11:36 a.m.

Attest:

DRAFT UNTIL APPROVED

_____
Daniel Jaggers, Secretary
Beaumont Basin Watermaster

Record of the Minutes of the
Beaumont Basin Committee Meeting of the
Beaumont Basin Watermaster
Regular Meeting
Wednesday, February 2, 2022

Meeting Location:

The meeting was held via teleconference only.

I. Call to Order

Chairman Arturo Vela called the meeting to order at 11:02 a.m.

II. Roll Call

City of Banning	*Arturo Vela*	*Present*
City of Beaumont	*Jeff Hart*	*Present*
Beaumont-Cherry Valley Water District	*Daniel Jaggers*	*Present*
South Mesa Water Company	*Davis Armstrong*	*Present*
Yucaipa Valley Water District	*Jennifer Ares*	*Present*

Hannibal Blandon and Thomas Harder were present as engineers for the BBWM.
Thierry Montoya was present as BBWM legal counsel.

Members of the public who registered and / or attended:
Cenica Smith, Beaumont-Cherry Valley Water District
Mark Swanson, Beaumont-Cherry Valley Water District
Joyce McIntire, Yucaipa Valley Water District
Thaxton Van Belle, City of Beaumont
Albert Maldonado
Angela Shelton, City of Banning
Bob Bowcock
James Bean, Beaumont-Cherry Valley Water District
Lance Eckhart, San Gorgonio Pass Water Agency
Larry Smith, San Gorgonio Pass Water Agency
Madeline Blua, Yucaipa Valley Water District
Madeline Chen
Mia Preciado
Mike Kostelecky
Paul Rodriguez

III. Pledge of Allegiance

Chair Vela led the pledge.

IV. Public Comments:

None.

V. Consent Calendar

A. Resolution 2022-02: Authorizing Public Meetings to be Held via Teleconferencing Pursuant to Government Code Section 54953(e) and Making Findings and Determinations Regarding Same Meeting Minutes for January 5, 2022

C. Status Report on Water Level Monitoring throughout the Beaumont Basin through January 19, 2022

It was moved by Member Jaggers and seconded by Member Armstrong to approve Consent Calendar items A and C.

AYES:	Hart, Jaggers, Armstrong, Vela, Ares
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

Member Armstrong requested to table Item B and pull Item D for discussion.

B. Meeting Minutes for January 5, 2022

Chair Vela continued this item to the April 6, 2022 meeting.

D. A Comparison of Production versus Extraction Credits through December 2021

In response to Member Armstrong, Chair Vela explained that the table evolved to this current form on the Consent Calendar and reminded that Engineer Hannibal Blandon previously presented this as a report.

Mr. Blandon noted that the intent of the report was to give the appropriators an idea of where they stood throughout the year on production versus extraction credits, including any water that might have been imported for spreading. He reviewed the data for South Mesa Water Company, noting that at the end of 2020, the agency had 10,134 acre-feet in storage.

Member Jaggers noted the value of the updates.

Chair Vela declared Item D received and filed.

VI. Reports

A. Report from Engineering Consultant – Hannibal Blandon, ALDA Engineering

Mr. Blandon advised of an issue with sounding equipment being trapped in Beaumont-Cherry Valley Water District (BCVWD) Well 29 and need for replacement. He also advised that Bonita Vista Well 2 seems to have collapsed. Possible replacements would be Bonita Vista 1 or 3, and he will coordinate with BCVWD staff to determine the best solution.

Blandon also noted an issue with a 2 percent discrepancy in water transfers between BCVWD and the City of Banning due to differing meter reading dates. He is working toward establishing an accurate quantity.

Chair Vela asked about the sounding equipment. Mr. Blandon explained that the probe is installed permanently in the well and records water levels every hour, on the hour. The sounder is deployed to determine the pumping level of water at the time. Well 29 does not have a probe, as it was lost when the well was pulled recently. There is no issue with accuracy, or with impacting well production, he assured. Mr. Jaggers indicated that it is hoped when the well is restarted, the vibration may loosen the equipment, and BCVWD staff will attempt to pull it.

B. Report from Hydrogeological Consultant – Thomas Harder, Thomas Harder & Co.

Mr. Harder reminded the Committee that the Return Flow Technical Memorandum is still a draft report, but most comments have been addressed.

C. Report from Legal Counsel – Thierry Montoya, Alvarado Smith

Mr. Montoya reminded the Committee about the appointment of an alternate for the City of Beaumont and requested anyone interested contact him to have the declaration prepared and submitted to the Court.

He also advised of an email received on January 26 from Jean Sabin at the Regional Water Quality Control Board and sent to the Board. Much of the information being requested is available on the Watermaster website, he explained, but it may behoove the Watermaster to draft a water well monitoring procedure to provide to the requester.

VII. Discussion Items

A. Consideration of Special Meeting / Workshop

Recommendation: Consider setting a date and agenda for a special meeting / workshop.

Member Hart introduced the framework for discussion and feedback to make the workshop as fruitful as possible. He suggested starting with a look at the mission and vision statement, followed by objectives, strategies, and action plan.

Member Ares indicated that topic for discussion would be most time consuming and said she is still on the fence about the coordinator. She said she hoped it would be an in-person meeting.

Mr. Jaggers agreed, but advised that the BCVWD office is currently closed due to COVID-19 case numbers. He said he hopes to reopen in the next week or two and can make the board room available.

Jaggers commented on the worthwhile content of the framework and said he looks forward to robust dialogue to make sure the Watermaster continues to keep its approach fresh and current, address the items listed, and make sure the region has an opportunity to be successful regarding the Beaumont Basin.

Member Armstrong requested a more detailed document including the purpose and intended accomplishment. Mr. Hart indicated that this was the starting point to achieve something more detailed and suggested determining the expected outcome as a group.

Chair Vela agreed and suggested developing the plan with the goal and intent to develop organically.

Jaggers suggested adding discussion of recharge location review under strategies.

Chair Vela indicated the mission statement is good but could be polished and suggested a bullet point for imported water, as it plays such an important role in managing the basin.

The workshop was set for Thursday, March 10, 2022 from 11 a.m. to 1 p.m.

B. Discussion of Regional Water Quality Control Board's questions regarding well monitoring / basin modeling procedures

Recommendation: None.

Watermaster Counsel Thierry Montoya reviewed the question from Ms. Sabin at the Regional Water Quality Control Board regarding whether the Watermaster has a standardized procedure in place for communicating, supporting, and verifying modeling activities as well as contacting well representatives and doing testing.

This was brought about by Plantation on the Lake, he explained. When staff is going to private wells, there must be a way to have someone representing the private property accompany Mr. Blandon and observe to assure the concern is addressed.

Mr. Blandon indicated that he visits 15 wells in the Basin every other month accompanied by a representative of one of the water agencies to assure there is understanding of what is being done. There has never been an issue, he reported. Of the 15 wells, 13 are dedicated monitoring wells not used for groundwater production, which is preferred, he noted. Only BCVWD Well 25 and 29 are production wells, used because there are no other options in that location.

Blandon reported to the Committee a request from Mr. Jim Kruger for information on static water levels at the Plantation on the Lake and vicinity. Blandon explained the attempt to gauge water level using their well and subsequent inquiry from the Regional Water Quality Control Board implying that the well producers were being forced to have the equipment installed. Ms. Sabin indicated concern about contamination and water quality, then contacted Member Armstrong by email.

Chair Vela advised that the email mentions concern about disinfection of the probe. Mr. Jaggers will create a draft document and Counsel Montoya will respond with a formal letter detailing procedures.

Mr. Blandon added that he advises the agencies a week ahead of his visit.

VIII. Topics for Future Meetings

a. Development of a methodology and policy to account for groundwater storage losses in the basin / Groundwater management

b. Incidental discharge

c. Development of a recycled water policy

d. Finalization of Return Flow Technical Memorandum

e. Presentation of draft 2021 Annual Report (April 6)

IX. Comments from the Watermaster Committee Members

Mr. Jaggers noted that BCVWD is now preparing the Committee agendas and advised that agendas will be compiled the Wednesday prior to the meeting.

X. Announcements

a. Special meeting / workshop date: Thursday, March 10 at 11 a.m.

b. The next regular meeting of the Beaumont Basin Watermaster is scheduled for Wednesday, April 6, 2022 at 11:00 a.m.

c. Future Meeting Dates:

i. June 1, 2022 at 11:00 a.m.
ii. August 3, 2022 at 11:00 a.m.
iii. October 5, 2022 at 11:00 a.m.
iv. December 7, 2022 at 11:00 a.m.

XI. Adjournment

Chairman Vela adjourned the meeting at 11:53 a.m.

Attest:

_____
Daniel Jaggers, Secretary
Beaumont Basin Watermaster

Record of the Minutes of the
Beaumont Basin Committee Meeting of the
Beaumont Basin Watermaster
Special Meeting
Thursday, March 10, 2022

Meeting Location:

Beaumont-Cherry Valley Water District
560 Magnolia Avenue
Beaumont, CA 92223

The meeting was also available via teleconference.

I. Call to Order

Chairman Arturo Vela called the meeting to order at 11:00 a.m.

II. Roll Call

City of Banning	*Arturo Vela*	*Present*
City of Beaumont	*Jeff Hart*	*Present*
Beaumont-Cherry Valley Water District	*Daniel Jaggers*	*Present*
South Mesa Water Company	*Dave Armstrong*	*Present*
Yucaipa Valley Water District	*Joe Zoba*	*Present*

Hannibal Blandon was present as engineer for the BBWM.
Thierry Montoya was present as BBWM legal counsel.

Members of the public who registered and / or attended:
Lance Eckhart, San Gorgonio Pass Water Agency

III. Pledge of Allegiance

Chair Vela led the pledge.

IV. Public Comments:

None.

V. Consent Calendar

A. Consideration of Resolution 2022-03: Authorizing Public Meetings to be Held via Teleconferencing Pursuant to Government Code Section 54953(e) and Making Findings and Determinations Regarding Same

It was moved by Member Zoba and seconded by Member Jaggers to approve the Consent Calendar.

AYES:	Armstrong, Hart, Jaggers, Vela, Zoba
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

VI. Reports

A. Report from Legal Counsel – Thierry Montoya, Alvarado Smith
Effect of Court Ruling on Production versus Extraction Credits

Counsel Montoya advised that he analyzed the Court's ruling regarding motions filed as to overlier and appropriator transfer and the procedural creation of Rule 7.3 and its implementation. Whether the Court's ruling could have any bearing on issues discussed relative to production vs. extraction credits. He drew attention to the memo included in the agenda packet regarding the ruling, which applies to issues when the pleadings cover the issues considered by the Court. Here, the Court's ruling was without prejudice, which means that some of the issues could have survived based on new facts. Survival depends on when or if there are new facts; an issue to be determined if it ever arises within the context of the prior pleadings.

The key is that the Court focused on the implementation of Rule 7.3 and found no evidence at the time the issue was before it of any inconsistency between Rule 7.3 and the physical solution, and its implementation did not cause harm to the Basin, and did not negatively impact the use of overlying water rights. The Court had some very helpful language in the order: findings that the Watermaster has freedom within the ambit of the judgment to come up with a physical solution, water plans, amendments, and to address those issues. The Court noted it is a stipulated judgment, so it isn't entirely fluid; however, there is room to move and for the Court to reasonably interpret and amend concepts that have a footing within the judgment.

This is good in terms of moving forward with discussion on the issues of water in storage accounts. All basins lose water, Montoya said, and there are lots of ways to address the issue. It should continue to be discussed. Within the language of the order, it would run afoul of the order if it were said that the storage accounts have no foundation. But what has been done with the accounts regarding pumping or not, those issues are wide open.

Prior discussion regarding giving credit to overlying water rights holders for what is in the storage account seems inconsistent with one of the judge's findings that the implementation of Rule 7.3 does not hamper the water rights granted under the judgment. Overliers are still free to use their water right and to transfer their water, and it appears that giving credit under those circumstances would be a fundamental shift from the amended judgment.

Watermaster discussion is enhanced by having some latitude from the Court, but the Committee can move forward with issues as to how best to implement Rule 7.3, not to set it aside.

Montoya said he would give guidance if certain issues arose within the amended judgment and within the order.

VII. Discussion Items

A. Draft Groundwater Water Well Level Measuring Procedures and Review of Draft Response Letter to the Regional Water Quality Control Board

Recommendation: Review, comment and provide direction.

Member Jaggers reminded the Committee about communication received and responded to from the Regional Board. In response, he prepared a draft concept on how the procedure may fit into BBWM Rules and Regulations as a starting point for discussion

Member Zoba suggested a section on applicability to consultants, or a non-appropriator well site, trusting that all Committee members have their own processes and procedures in place. One stop further might be for each to collect their own data and submit to the consultant, he noted.

Jaggers noted the applicability of a general procedure / reference for all staff for consistency. Zoba agreed it could serve as a foundation, but suggested loosening some language to allow for other processes agencies may use. He suggested staff review.

Jaggers indicated he would be willing to compile comments and input from staff and spearhead the effort to complete the policy.

Member Armstrong noted it is a good guideline. Chair Vela recommended a notification process or timeline for the owner of the well, i.e., 24- or 48-hours' notice. In addition to naming specific equipment, Vela suggested adding "or available and approved measuring devices."

Engineer Tom Harder said that as the one who is interpreting the data, he agreed with Member Jaggers that a common minimum standard of measuring water level in the wells would allow some assurance that there is quality associated with the measurement. He noted the importance of reliable data and said he would review the procedure.

Member Hart expressed concern that this should not create hardship for other agencies. It was suggested to later discuss a standard to set up wells for a fixed base survey.

Engineer Hannibal Blandon recommended GPS coordinates for all wells in the Basin to provide a good ground elevation basis. He acknowledged Jaggers' point on the potential of inaccurate tape length. In his conversations with staff, Blandon said he learned that staff rarely waits 24 hours of pump idle time to collect samples, especially in the summertime when wells must be active. The data they provide might not be true statis data, he explained.

Blandon also noted the frequency of data collection should be every 60 minutes, not 10 minutes.

Members will provide comments to Jaggers. Chair Vela continued the item to the April 6, 2022 meeting.

B. Transfer of Water from San Gorgonio Pass Water Agency Storage Account to Beaumont-Cherry Valley Water District Storage Account

Recommendation: Receive and file.

Member Jaggers introduced the letters from San Gorgonio Pass Water Agency (SGPWA) and BCVWD regarding the transfer of water. He requested memorialization of the transfer. Mr. Lance Eckhart indicated this is a movement of water and accounts have been adjusted. Everyone received their fair ration; it is just a different source of water, he stated.

This is the first year that SGPWA has used its storage account and moved it to one of the retailers, Eckhart said. He added that he is pleased that the 580 acre-feet was pre-stored, and there is $500 million in this year's budget to buy excess water; but there is none available.

Member Jaggers noted the need for discussion on how to proceed moving forward and suggested a running total to be kept of such transfers. Member Zoba pointed out a form for such transfers; Jaggers indicated the form for transfers between appropriators could be modernized and use.

For purposes of the annual report, the transfer will be memorialized in 2022, Blandon noted.

C. Workshop: Review of Watermaster Foundations and Setting of Goals and Objectives

Recommendation: Discussion

Member Jaggers directed attention to the February 2, 2022 memo from the City of Beaumont. Member Hart indicated that the intention was to provide a basic framework for initiation of discussion. He reviewed the suggested items for discussion and the objective of the discussion.

Chair Vela emphasized the effort necessary to dive into the topics in preparation for the workshops and suggested working on the easier items and waiting for a facilitator / coordinator to guide others.

Member Hart suggested beginning with a higher-level examination of the mission statement, vision statement and some of the goals and objectives to help define more detailed stages to tackle some of the items, as some are not as pressing as others. He said the intent was to assure all are on the same page and working toward a common goal.

Vela noted that some items will have related technical analysis which may get rolled into the efforts to redetermine the safe yield.

Jaggers cautioned that the high-level outline is needed, but the other pieces must not be forgotten moving forward. These things do not happen without effort, he explained, and acknowledged Member Zoba's efforts. The long-term solution is probably not for one entity but for a consultant or subcategory of the next round of work, he noted. Being demonstrated here is how much there is to tackle, he added. Moving forward, a strategy that serves the needs of the Watermaster is needed, and it cannot be one entity's staff. He suggested the Committee members parse up the work or retain a consultant.

Member Zoba recalled that the agency previously had a Chief of Watermaster Services, an employee that was funded by all agencies who did a great job. After a while, YVWD took on the role to push out agendas, but there is a lot to do, he noted. He suggested an RFP for a position that would be able to provide research, memorandums, and recommendations. Jaggers, Vela and Hart concurred regarding the need for expertise and assistance. Mr. Zoba will develop an RFP for the position with Memorandum 22-06 attached.

Mr. Harder commented that Member Hart's outline looks similar to a Groundwater Sustainability Plan or a Basin Management Plan. It is beneficial from the technical side to have a clear understanding of needs,

goals and operation of the Basin before any technical studies or modeling is done, he said, and recommended a formal action plan.

Chair Vela agreed and noted it further justifies assistance with development of scope and assistance through the RFP process, and manage whoever is hired.

It is a lot like the Sustainable Groundwater Management Act, but there is a judgment here and protection of storage is important, as all have built groundwater management plans around it, Member Armstrong stated.

Chair Vela continued the item to a future meeting.

D. Consideration of Engagement of Coordinator / Facilitator to lead future Workshops

Recommendation: Direct staff to identify an available candidate or candidates and bring back information to the April 6, 2022 meeting

Chair Vela indicated that this ties into the RFP to be produced. He continued the item to the next meeting.

VIII. Comments from the Watermaster Committee Members

Member Zoba noted the construction of an industrial building on Cherry Valley Boulevard and advised of an arrangement between Beaumont-Cherry Valley Parks and Recreation District and YVWD for use of the groundwater well. Recycled water pipeline is also being extended for the landscaping needs, he noted.

Member Jaggers advised that the intent is to continue to offer hybrid teleconference and in-person meetings at the BCVWD office. The AB 361 item will continue to be agendized.

In response to Chair Vela, Counsel Montoya advised that the term extension amendment to the contract for completion of the annual report should be agendized on the April 6, 2022 meeting. Jaggers reminded that the work was authorized for 2022 and an RFP would be created as part of the workshop activities. Mr. Montoya reminded about outstanding tasks and the need for a new contract moving forward.

IX. Announcements

a. Special Meeting / workshop date: None set.

b. The next regular meeting of the Beaumont Basin Watermaster is scheduled for Wednesday, April 6, 2022 at 11:00 a.m.

c. Future Meeting Dates:

i. June 1, 2022 at 11:00 a.m.

ii. August 3, 2022 at 11:00 a.m.

iii. October 5, 2022 at 11:00 a.m.

iv. December 7, 2022 at 11:00 a.m.

XI. Adjournment

Chairman Vela adjourned the meeting at 12:17 p.m.

Attest:

DRAFT UNTIL APPROVED

_____
Daniel Jaggers, Secretary
Beaumont Basin Watermaster

BEAUMONT BASIN WATERMASTER

Date: April 13th, 2022

From: Hannibal Blandon, ALDA Inc.

Subject: Status Report on Water Level Monitoring throughout the Beaumont Basin through March 21, 2022

Recommendation: Presentation - No recommendation.

At the present time, there are 14 monitoring wells collecting water level information on an hourly basis at various locations throughout the basin. In addition, there are two monitoring probes collecting barometric pressures at opposite ends of the Beaumont Basin. The location of active monitoring wells is depicted in the attached Figure No. 1. The location of two potential monitoring wells currently being considered are identified in red in this figure.

Water levels at selected locations are depicted in Figures 2 through 7 and are described as follows:

- ✓ Figure No. 2 – Water levels at YVWD Well No. 34 and Oak Valley Well No. 5 are considered representative of basin conditions in the Northwest portion of the basin. Through the summer of 2019 water levels at these two wells have been fairly steady; however, over the two years a significant declined has been observed. A 14-foot decline has been recorded at YVWD 34 over this period. The decline at Oak Valley 5 has been steeper with a drop 24 feet in the first half of 2020 alone despite of the fact that this well has not been pumped since the fall of 2019. This monitoring well is no longer monitored and it has been destroyed.

- ✓ Figure No. 3 – Two of the Noble Creek observation wells are presented in this figure representing the shallow and deep aquifers. From the summer of 2016 through the spring of 2018, the water level in the shallow aquifer monitoring well increased over 90 feet to an elevation of 2,422 ft. Water level continued to increase, although at a lower rate, over the ensuing 18 months reaching a peak elevation of 2,431 ft in the fall of 2019. Since it has declined 61 feet to the current elevation of 2,370 ft. In the deeper aquifer, the increase in water level was steady from the summer of 2016 through the spring of 2020 reaching a peak elevation of 2,302 ft.; a decline of 23 feet has been recorded since to the current elevation of 2,279 ft.

- ✓ Figure No. 4 – Southern Portion of the Basin. Water level at the Summit Cemetery well is highly influenced by a nearby pumping well that is used to irrigate the cemetery grounds. The water level at this well continues to fluctuate over a 20-foot band. Conversely, the water level at the Sun Lakes well has fluctuated minimally over the same period and it has been at the same elevation of 2,413 ft until this past November, when it began to drop. Over the last four months, water level elevation has dropped by seven feet. Currently it is an elevation of 2,406 ft.

- ✓ Figure No. 5 illustrates water levels at three wells owned by the City of Banning in the Southeast portion of the basin. While water level at the Old Well No. 15 (Chevron Well) has been fairly flat over the last six years, a somewhat significant and steady decline, close to 33 feet, has been recorded at Banning M-8 between the summer of 2015 and the present to its current elevation of 2,047 ft. Water level at Banning M-9 has fluctuated in a 19-foot range, between 2,128 ft and 2,147 ft. since monitoring began in the summer of 2015. Since the beginning of the year, the water level at this well has declined 11 feet to the current elevation of 2,128 ft. Since the summer of 2021, two communications cables have been replaced at this well due to a water seal at the bottom of the cable. According to the manufacturer, this issue has been addressed.

- ✓ Figure No. 6 illustrates recorded water level at BCVWD No. 2 and BCVWD No. 25. Water level at BCVWD No. 25 tend to peak at the beginning of the winter decreasing into the early summer to rise again over the following fall. While the pattern is similar to BCVWD No. 2, the timing is different. At BCVWD No. 2, water level tends to peak in the spring declining into the summer months and early fall. During our visit to BCVWD No. 2, the communications cable was pulled out of the well to determine the exact length since recorded readings have been inconsistent with observed levels by BCVWD staff. The difference in levels has been exacerbated by pumping at BCVWD No. 3, located a few hundred feet to the south of this well. The measured length of the cable was 500 ft exactly, which is 50 feet shorter than the assumed length of 550 ft. This difference, coupled with a formula error in the spreadsheet resulted in overestimating levels at BCVWD No. 2. The recorded level at this well during our March 21 visit matched values observed by staff. Current water level at BCVWD No.2 and at BCVWD No. 25 are 2,172 ft and 2,207 ft. respectively.

- ✓ Figure No. 7 depicts the recorded water level at the two newest observation wells, BCVWD No. 29 and Tukwet Canyon Well "B". BCVWD No. 29 is a pumping well that is now more actively used to meet peak summer demands. A decline in water level of nine feet has been recorded at this well since monitoring began in the spring of 2019. During the May 2021 visit, the communications cable could not be pulled and information from the water level probe could not be downloaded as reported in the June and August meetings. During our January visit, the water level meter got lodged between the pump column and the well casing and could not be removed; it has been there since. When this well starts again in the summer there is a chance that the water level meter may be dislodge from its current location. Tukwet B is a dedicated monitoring well in the southern portion of the basin with minimal fluctuations in levels since the probe was installed in the spring of 2019. Data from the data logger could not be downloaded from this well due to coordination issues.

New Monitoring Wells

No additional monitoring wells were added during this reporting period.

New Equipment Installation

The communications cable at Banning M-9 was replaced with a new cable provided by Solinst. Defective cable will be mailed to manufacturer.

Troubleshooting Issues

The following malfunctioning issues were encountered during our field visit last month.

- ✓ Bonita Vista Well No. 2 has been replaced with Bonita Vista No. 3; however, this is not an optimal location due to the existence of a production well nearby.

Potential Monitoring Sites

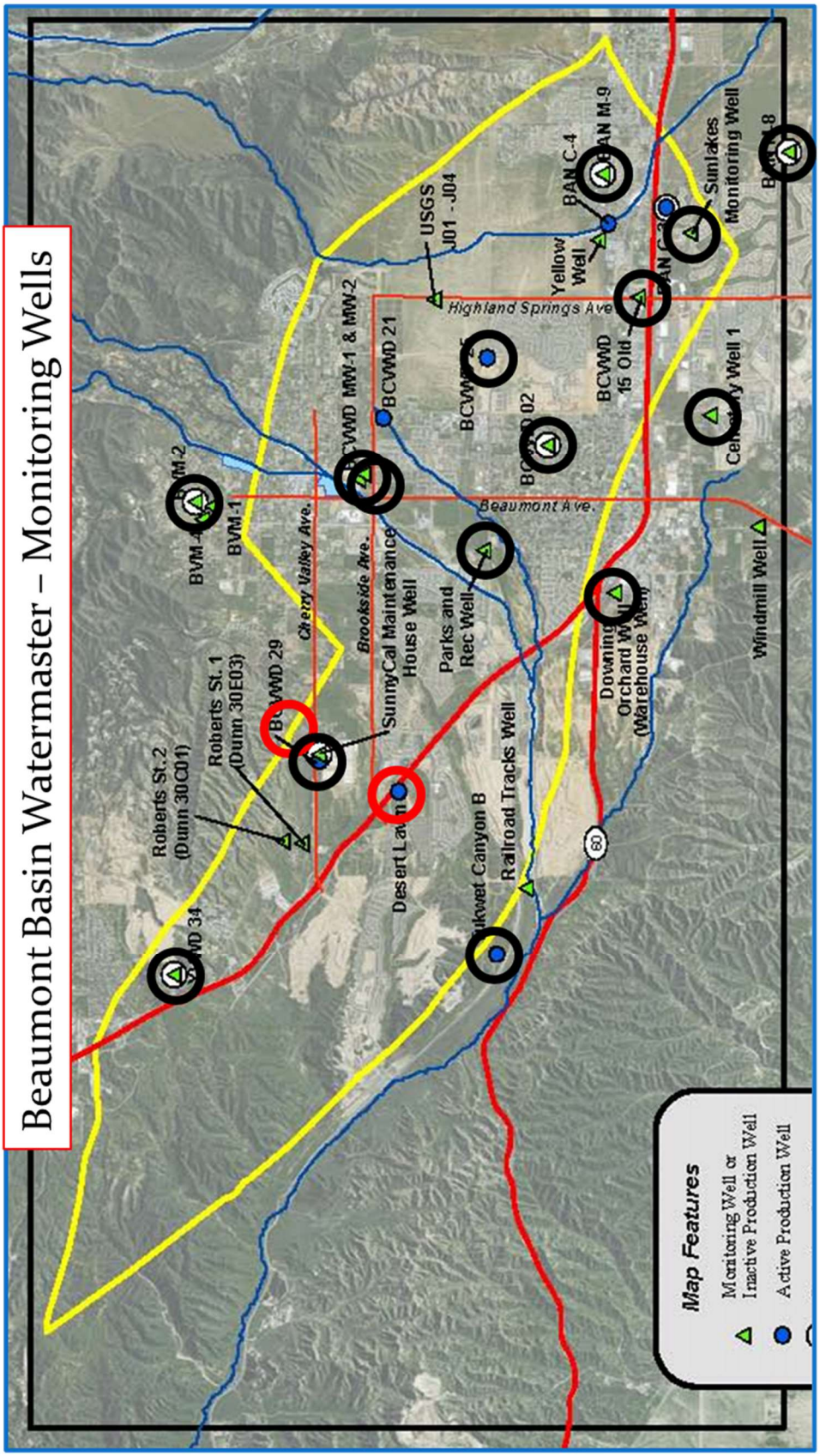
Two production wells have been identified as potential monitoring wells recently. The owners have been contacted and the sites visited. The first well is owned by the Beaumont-Cherry Valley Recreation and Park District. The well is located on the north side of Cherry Valley Blvd and is currently used to supply water during grading for construction of two warehouses. Upon construction of these facilities, this well will be available to irrigate nearby lands and a monitoring probe installed with minor modifications to the well head.

The second well is owned by Plantation on the Lake. The site has been visited and owner is considering drilling a hole on the well head to accommodate the monitoring probe.

Other potential well sites include:

- ✓ Catholic Dioceses of San Bernardino-Riverside counties, near Rancho Calimesa Mobile Home Park has three abandoned wells. Two of these wells cannot be used at this time because the probe could not be lowered; however, the third site has great potential. This well is approximately 400 ft deep and the water level is at approximately 160 feet below ground.

- ✓ Sharondale Well No. 1 – This well is operated by Clearwater Operations. We initiated contact with this company to install a water level probe at this well, but progress has not been made.



Wells with Working Monitoring Probes

Bonita Vista No. 2	BCVWD Old 15 (Banning)
Noble Creek Ponds 4 Deep	Summit Cemetery No. 1
Noble Creek Ponds 4 Shallow	Sun Lakes Golf Course
Noble Creek Park	Banning M-8
BCVWD No. 2	Banning M-9
BCVWD No. 25	YVWD No. 34
	ICON Warehouse

Potential Monitoring Wells

Beaumont Parks and Rec.
Plantation on the Lake

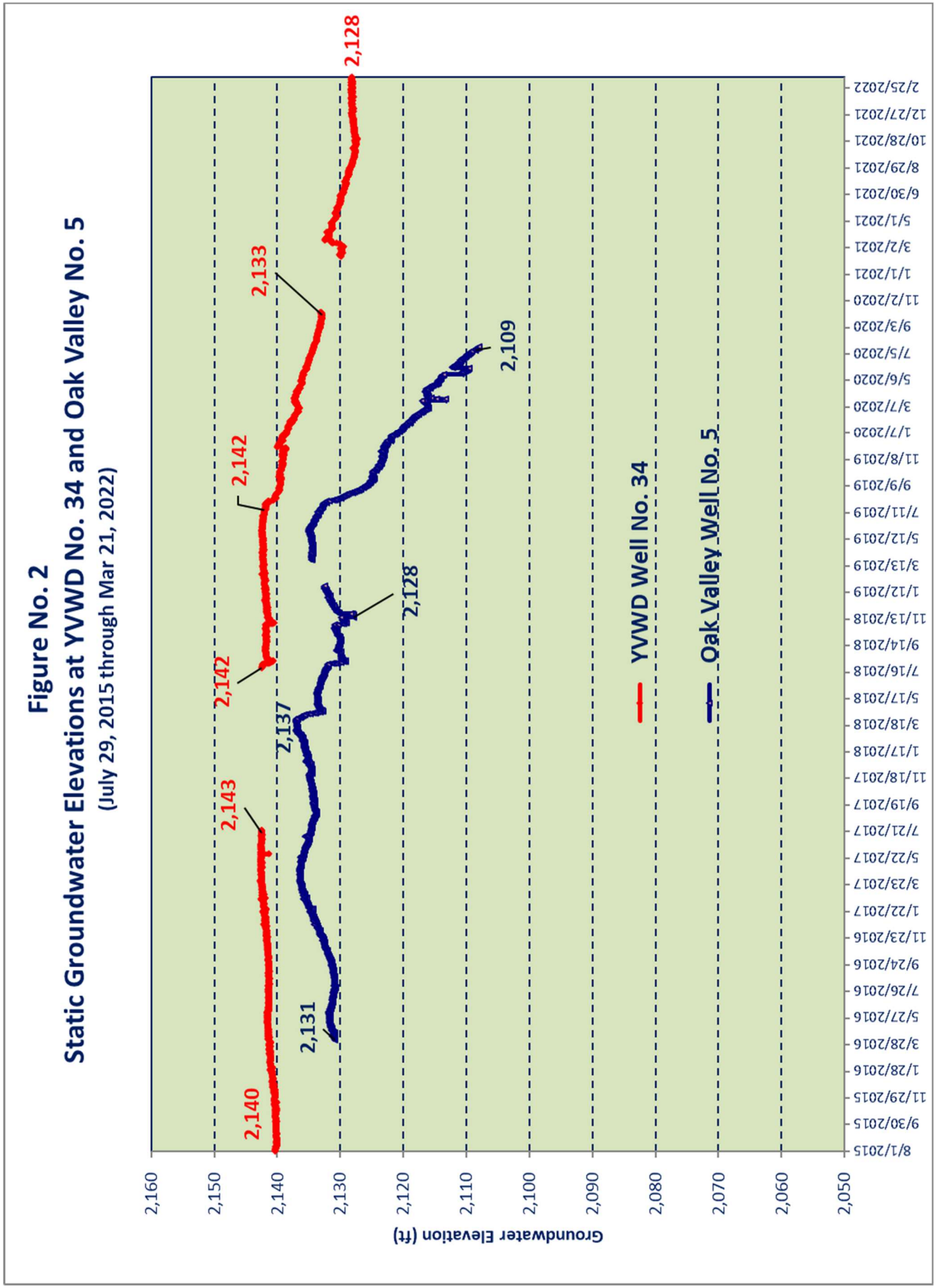


Figure No. 2
Static Groundwater Elevations at YVWD No. 34 and Oak Valley No. 5
(July 29, 2015 through Mar 21, 2022)
YVWD Well No. 34
Oak Valley Well No. 5
Groundwater Elevation (ft)
2,160
2,150
2,140
2,130
2,120
2,110
2,100
2,090
2,080
2,070
2,060
2,050
8/1/2015
9/30/2015
11/29/2015
1/28/2016
3/28/2016
5/27/2016
7/26/2016
9/24/2016
11/23/2016
1/22/2017
3/23/2017
5/22/2017
7/21/2017
9/19/2017
11/18/2017
1/17/2018
3/18/2018
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7/11/2019
9/9/2019
11/8/2019
1/7/2020
3/7/2020
5/6/2020
7/5/2020
9/3/2020
11/2/2020
1/1/2021
3/2/2021
5/1/2021
6/30/2021
8/29/2021
10/28/2021
12/27/2021
2/25/2022
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2,143
2,142
2,142
2,133
2,128
2,131
2,137
2,128
2,109

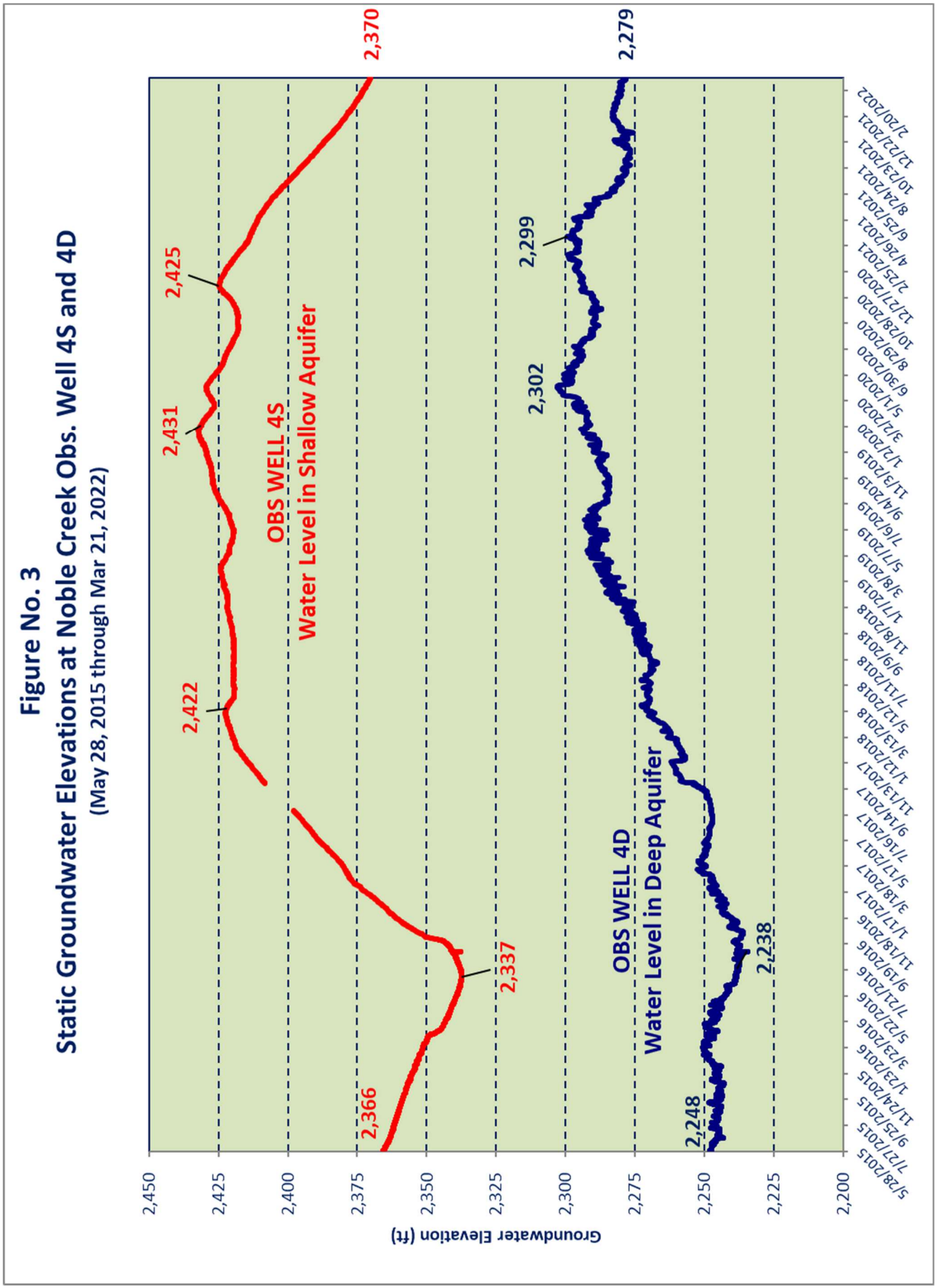
Figure No. 3
Static Groundwater Elevations at Noble Creek Obs. Well 4S and 4D
(May 28, 2015 through Mar 21, 2022)
OBS WELL 4S
Water Level in Shallow Aquifer
OBS WELL 4D
Water Level in Deep Aquifer
2,370
2,425
2,431
2,422
2,366
2,337
2,279
2,299
2,302
2,248
2,238
Groundwater Elevation (ft)
2,450
2,425
2,400
2,375
2,350
2,325
2,300
2,275
2,250
2,225
2,200
5/28/2015
7/27/2015
9/25/2015
11/24/2015
1/23/2016
3/23/2016
5/22/2016
7/21/2016
9/19/2016
11/18/2016
1/17/2017
3/18/2017
5/17/2017
7/16/2017
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12/22/2021
2/20/2022

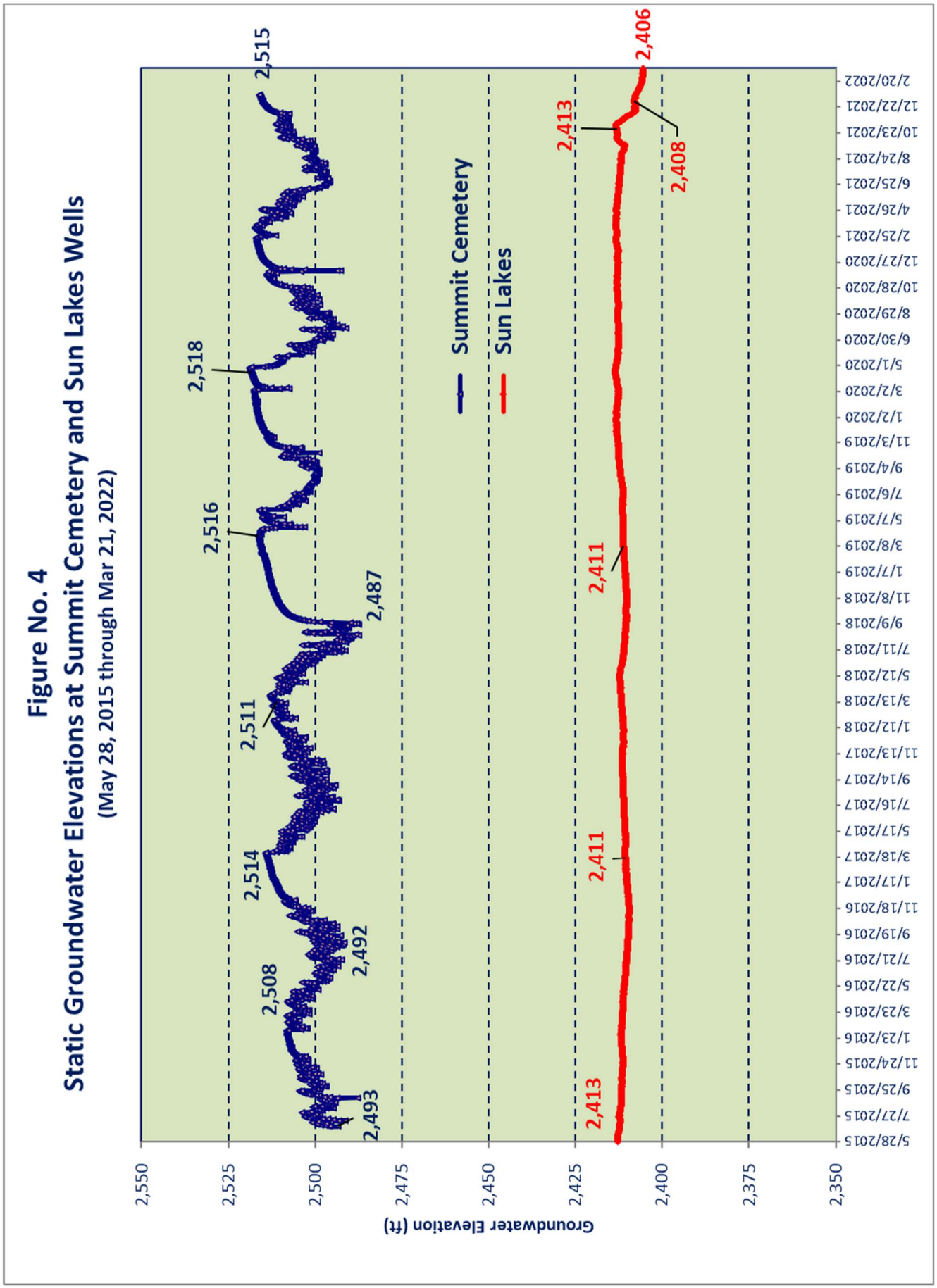
Figure No. 4
Static Groundwater Elevations at Summit Cemetery and Sun Lakes Wells
(May 28, 2015 through Mar 21, 2022)
Summit Cemetery
Sun Lakes
Groundwater Elevation (ft)
2,550
2,525
2,500
2,475
2,450
2,425
2,400
2,375
2,350
2,515
2,518
2,516
2,511
2,514
2,508
2,493
2,492
2,487
2,406
2,413
2,408
2,411
2,411
2,413
5/28/2015
7/27/2015
9/25/2015
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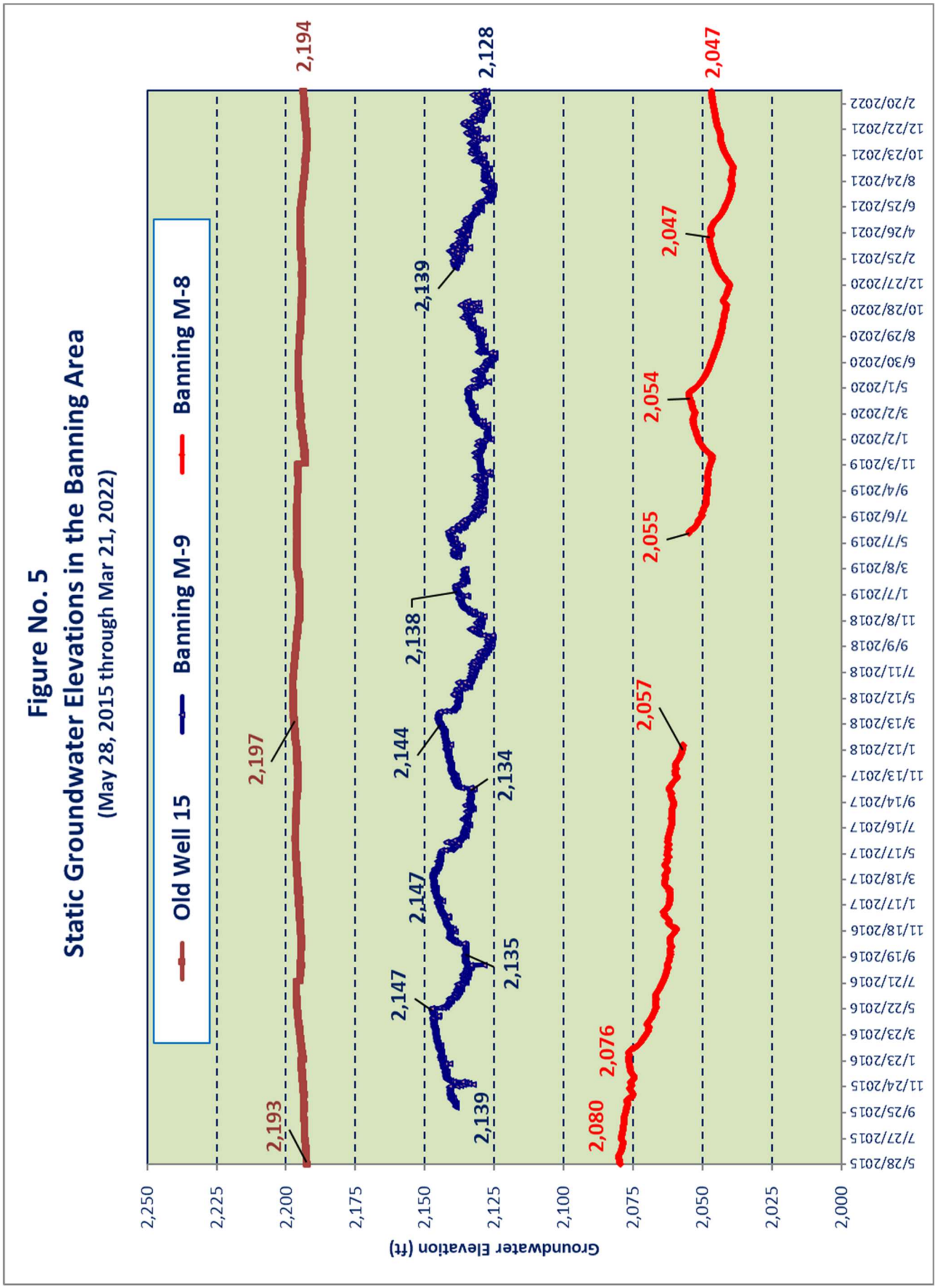
Figure No. 5
Static Groundwater Elevations in the Banning Area
(May 28, 2015 through Mar 21, 2022)
Old Well 15
Banning M-9
Banning M-8
Groundwater Elevation (ft)
2,250
2,225
2,200
2,175
2,150
2,125
2,100
2,075
2,050
2,025
2,000
5/28/2015
7/27/2015
9/25/2015
11/24/2015
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2,193
2,197
2,128
2,139
2,138
2,144
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2,047
2,054
2,055
2,057
2,080
2,076

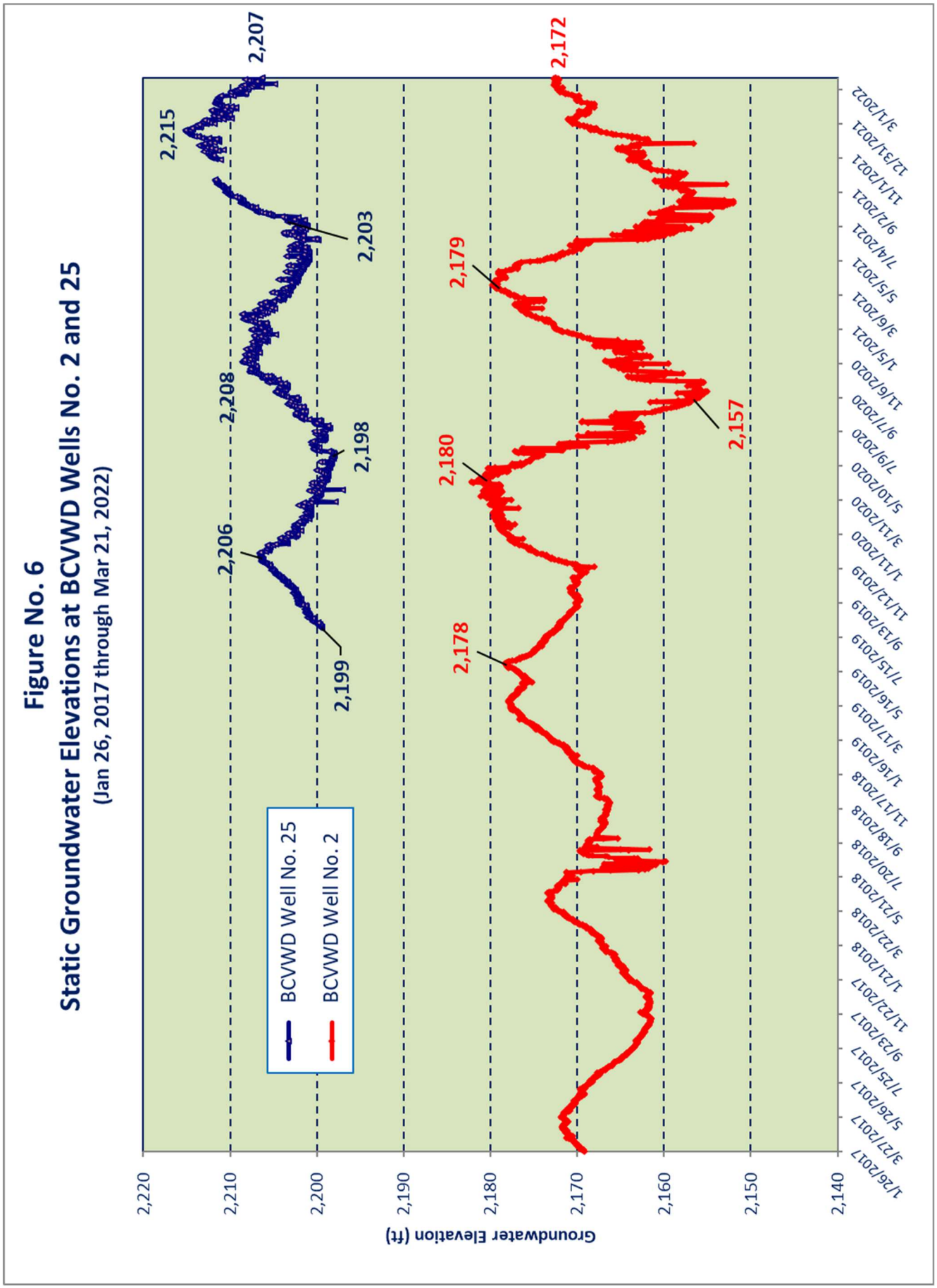
Figure No. 6
Static Groundwater Elevations at BCVWD Wells No. 2 and 25
(Jan 26, 2017 through Mar 21, 2022)
BCVWD Well No. 25
BCVWD Well No. 2
Groundwater Elevation (ft)
2,220
2,210
2,200
2,190
2,180
2,170
2,160
2,150
2,140
2,215
2,207
2,208
2,203
2,206
2,198
2,199
2,172
2,179
2,180
2,178
2,157
1/26/2017
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9/7/2020
11/6/2020
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12/31/2021
3/1/2022

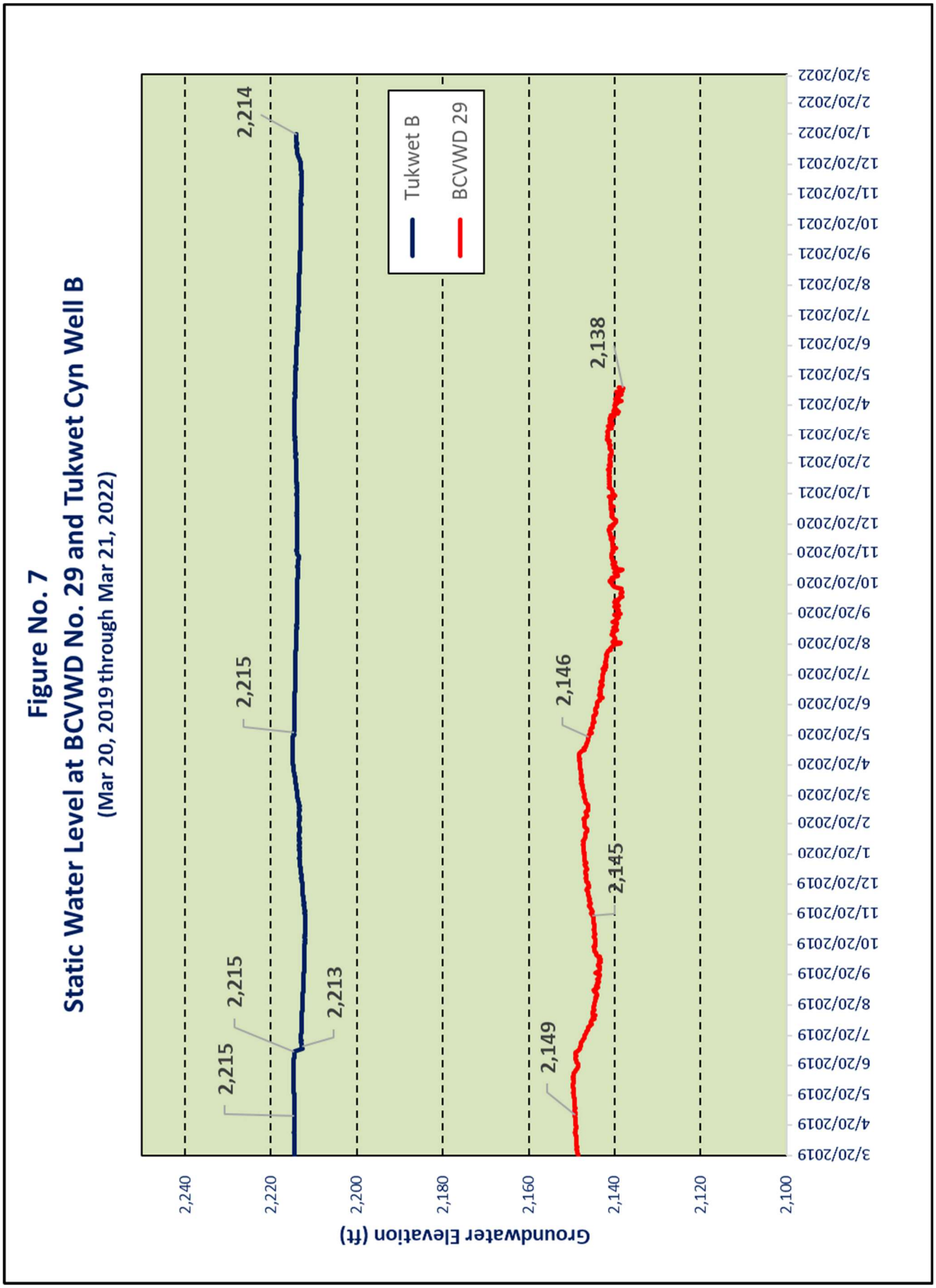
Figure No. 7
Static Water Level at BCVWD No. 29 and Tukwet Cyn Well B
(Mar 20, 2019 through Mar 21, 2022)
Tukwet B
BCVWD 29
2,214
2,215
2,215
2,215
2,213
2,138
2,146
2,145
2,149
Groundwater Elevation (ft)
2,240
2,220
2,200
2,180
2,160
2,140
2,120
2,100
3/20/2019
4/20/2019
5/20/2019
6/20/2019
7/20/2019
8/20/2019
9/20/2019
10/20/2019
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6/20/2020
7/20/2020
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3/20/2022

BEAUMONT BASIN WATERMASTER

Date: April 13th, 2022

From: Hannibal Blandon, ALDA Inc.

Subject: A Comparison of Production vs Extraction Credits through February 2022

Recommendation: No recommendation - For informational purposes only

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This Technical Memorandum presents a comparison of extraction credits from the Basin against actual production by Appropriators. At the beginning of each year, Appropriators have certain Extraction Credits resulting from: a) unused production by overlying users from 2017 and/or b) permanent transfers of overlying water rights. Extraction credits for individual Appropriators can be increased through the course of the year by spreading imported (supplemental) water.

Total production by Appropriators for the first two months of 2022 was 1,965 ac-ft while extraction credits for the same period were 4,478 ac-ft resulting in a positive credit balance of 2,513 ac-ft, as presented in the table below. At this point, all appropriators have a positive credit balance. Appropriators that produce less than their individual extraction credits can add the positive difference to their storage accounts at the end of the Calendar Year.

	City of Banning	Beaumont Cherry Valley W. D.	South Mesa Mutual W. C.	Yucaipa Valley W. D.	Total
Transfer of Overlying Rights from 2017	1,350	1,826	536	583	4,295
Transfer of Overlying Rights - OVP to YVWD	0	0	0	183	183
Imported Water	0	0	0	0	0
Total Extraction Credits	1,350	1,826	536	766	4,478
Production	335	1,556	71	3	1,965
Credits Balance	1,015	270	465	763	2,513
Water in Storage as of Dec 2021	48,718	31,633	10,263	15,957	106,571

Item V-E

MEMORANDUM

TO: Beaumont Basin Watermaster

FROM: Thierry R. Montoya

DATE: April 5, 2022

RE: Amendment to Services Agreement

Following up on our December, 2021 meeting, counsel has prepared the attached Amendment that extends ALDA's services as originally stated in its "2021-04-16 ALDA SERVICES AGREEMENT. The amendment extends these services for a one-year period based on billing rates as proposed in Memorandum No. 21-45.

AMENDMENT OF AGREEMENT FOR SERVICES BY INDEPENDENT CONSULTANT ("AGREEMENT")

This AMENDMENT is made effective as of the 1st day of December, 2021, by and between the Beaumont Basin Watermaster ("OWNER") whose address is 560 Magnolia Avenue, Beaumont, California 92223 and ALDA Inc. ("CONSULTANT") whose address is 5928 Vineyard Avenue, Alta Loma, California 91701; telephone: 909-587-9916

Recitals

This AMENDMENT is entered into on the basis of the following facts, understanding and intentions of the parties to this AMENDMENT:

A. At the December 1, 2021 public meeting, OWNER agreed to amend the existing "2012-04-16 ALDA SERVICES "AGREEMENT" [attached as Exhibit "1"] to extend the consulting services provided by CONSULTANT for a one-year period ending on December 31, 2022, with updated "BILLING RATES" as set forth in the attached Exhibit "2," that were introduced in MEMORANDUM No. 21-45, with such rates to be maintained for the duration of the AMENDMENT period.

B. CONSULTANT agreed to these changes on the meeting record.

AMENDMENT

Now, THEREFORE, in consideration of the foregoing Recitals and mutual covenants contained herein, OWNER and CONSULTANT agree as follows:

1. The "**Term of Agreement**" section is amended to extend the AGREEMENT through December 31, 2022.

2. CONSULTANT's services as set forth in the attached AGREEMENT are to be performed at the updated rates as set forth in the BILLING RATES and "Billing Rates for Thomas Harder and Company for Calendar Year 2022" [attached] such rates remaining fixed for the duration of the contract, *i.e.*, through December 31, 2022.

3. Unless as so specifically stated in this AMENDMENT, the AGREEMENT'S terms, conditions, and obligations remain as written.

IN WITNESS WHEREOF, the parties hereby have made and executed this AMENDMENT as of the day and year first above-written.

OWNER:	CONSULTANT:
BEAUMONT BASIN WATERMASTER	ALDA, INC.
By: _____-	By: _____
ARTURO VELA, Chairman	F. ANIBAL BLANDON, P.E., Principal

EXHIBIT 1

AGREEMENT FOR SERVICES BY INDEPENDENT CONSULTANT

THIS AGREEMENT is made and effective as of the 16th day of April, 2012, by and between the BEAUMONT BASIN WATERMASTER ("OWNER") whose address is 560 Magnolia Avenue, Beaumont, California 92223 and ALDA INC. ("CONSULTANT") whose address is 5928 Vineyard Avenue, Alta Loma, California 91701; telephone: (909-587-9916; fax: (909-498-0423 ; Federal Tax Identification. No. 45-4578114

RECITALS

This Agreement is entered into on the basis of the following facts, understandings and intentions of the parties to this Agreement:

A. OWNER desires to engage the services of CONSULTANT to perform such professional services, as may be assigned from time to time, by OWNER in writing for the purpose of monitoring, recording, and documenting compliance with the Judgment Pursuant to Stipulation Adjudicating Groundwater Rights in the Beaumont Basin, dated February 4, 2004.

B. The services to be performed by CONSULTANT shall be specifically described in one or more written Task Orders issued by OWNER to CONSULTANT pursuant to this Agreement.

C. CONSULTANT agrees to provide such services pursuant to, and in accordance with, the terms and conditions of this Agreement, and has represented and warrants to OWNER that CONSULTANT possesses the necessary skills, qualifications, personnel and equipment to provide such services.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing Recitals and mutual covenants contained herein, OWNER and CONSULTANT agree as follows:

1. Term of Agreement. This Agreement is effective as of the date first above written and shall continue until June 30, 2016, unless extended or sooner terminated as provided for herein.

2. Services to be Performed by CONSULTANT. CONSULTANT agrees to provide such services as may be assigned, from time to time, in writing by the Watermaster Committee. Each such assignment shall be made in the form of a written Task Order. Each such Task Order shall include, but shall not be limited to, a description of the nature and scope of the services to be performed by CONSULTANT, the amount of compensation to be paid, and the expected time of completion.

3. Subconsultants. CONSULTANT may, at CONSULTANT's sole cost and expense, employ such competent and qualified independent subconsultants as CONSULTANT deems necessary to perform each such assignment; provided, however, that CONSULTANT shall not subcontract any of the work to be performed without the prior written consent of OWNER. The cost of such independent subconsultants shall be included in the not-to-exceed

amount of the applicable Task Order, and shall not constitute an additional cost above and beyond the not-to-exceed amount. CONSULTANT shall not charge any mark-up for such costs.

4. Compensation.

4.01 In consideration for the services to be performed by CONSULTANT, OWNER agrees to pay CONSULTANT as provided for in each Task Order.

4.02 Each Task Order shall specify a total not-to-exceed amount and shall be based upon CONSULTANT's schedule of regular hourly rates customarily charged by CONSULTANT to its public agency clients.

4.03 OWNER will not reimburse CONSULTANT for any expenses incurred by CONSULTANT in the performance of services for OWNER.

4.04 CONSULTANT shall not be compensated for any services rendered in excess of those authorized in any Task Order unless approved in advance by the OWNER, in writing.

4.05 Unless otherwise provided for in any Task Order issued pursuant to this Agreement, CONSULTANT agrees that payment of compensation earned will be made in monthly installments within 30 business days after receipt of a written invoice describing in reasonable detail the services performed, the time spent performing such services, the hourly rate charged therefor, the identity of individuals performing such services for the benefit of OWNER, and materials consumed or used. CONSULTANT's invoice shall include all work performed and labor charges incurred as of the date(s) identified in the invoice. OWNER may withhold payment(s) associated with any Deliverables until such time as such Deliverables have been received by the OWNER. OWNER may also withhold payment for any invoice disputed by OWNER unless and until such dispute has been resolved, and OWNER will endeavor to notify CONSULTANT of any such dispute(s) within a reasonable time.

5. Obligations of CONSULTANT.

5.01 CONSULTANT agrees to perform all assigned services in accordance with the terms and conditions of this Agreement and those specified in each Task Order. CONSULTANT hereby specifically represents and warrants to OWNER that the services to be rendered pursuant to this Agreement shall be performed in accordance with the standards customarily applicable to an experienced and competent professional rendering the same or similar services.

5.02 Except as otherwise provided for in each Task Order, CONSULTANT will supply all personnel, materials and equipment required to perform the assigned services.

5.03 CONSULTANT shall keep OWNER informed as to the progress of the work assigned hereunder, by means of regular and frequent consultations. From time-to-time, when requested by the OWNER, CONSULTANT shall prepare written status reports.

5.04 CONSULTANT hereby agrees to be solely responsible for the health and safety of its employees, subconsultants and agents in performing the services assigned by OWNER. CONSULTANT also hereby covenants and agrees to:

a. Provide Comprehensive General Liability insurance policy on Insurance Service Office ISO-CG 2010 or equivalent in an amount of not less than $1,000,000 per occurrence. Such insurance may be provided by a combination of primary and excess liability insurance policies;

b. Provide Automobile Liability Insurance coverage for any automobile owned, rented, leased or borrowed. This insurance shall have a standard cross liability clause and endorsement in the amount of $1,000,000 combined single limit per accident for bodily injury and property damage naming OWNER as an additional insured. Such insurance may be provided by a combination of primary and excess liability insurance policies;

c. Provide Worker's Compensation Insurance for CONSULTANT's employees and agents as required by the Labor Code of the State of California and Employers Liability Insurance in the amount of, at least, $1,000,000 per accident, for bodily injury and disease;

d. Obtain a policy of errors and omissions insurance in a minimum amount of $1,000,000 per occurrence to cover any errors or omissions committed by CONSULTANT, its employees, subconsultants and agents in the performance of any services for OWNER. Such insurance may be provided by a combination of primary and excess policies;

e. Comply with all applicable local, state and federal laws, rules and regulations regarding, by way of example and not by limitation, nondiscrimination and payment of wages;

5.05 CONSULTANT waives all rights of subrogation against OWNER. Evidence of all insurance coverage shall be provided to OWNER prior to issuance of the first Task Order. Such policies shall be issued by a highly rated insurer (Best's Ins. rating of "A:VII" or better) licensed and admitted to do business in California, and shall provide that they shall not be cancelled or amended without 30 days' prior written notice to OWNER. Self-insurance does not comply with these insurance specifications. CONSULTANT acknowledges and agrees that all such insurance is in addition to CONSULTANT's obligation to fully indemnify and hold OWNER completely free and harmless from and against any and all claims arising out of any, loss, injury or damage to property or persons caused by the negligence, recklessness or willful misconduct of CONSULTANT in performing services under this Agreement.

5.06 CONSULTANT and OWNER agree that OWNER, its employees, agents and officials should, to the extent permitted by law, be fully protected from any loss, injury, damage, claim, lawsuit, cost, expense, attorneys' fees, litigation costs, defense costs, court costs or any other costs arising out of or in any way related to CONSULTANT's negligence, recklessness or willful misconduct in the performance of this Agreement. Accordingly, the provisions of this indemnity are intended by the parties to be interpreted and construed to provide the fullest protection possible under the law to OWNER. CONSULTANT acknowledges that OWNER would not enter into this

Agreement in the absence of the commitment of CONSULTANT to indemnify and protect OWNER as set forth here.

5.06.1 To the full extent permitted by law, CONSULTANT shall defend, indemnify and hold harmless OWNER, its employees, agents and officials, from any liability, claims, suits, actions, arbitration proceedings, administrative proceedings, regulatory proceedings, losses, expenses or costs of any kind, whether actual, alleged or threatened, including actual attorneys' fees incurred by owner, court costs, interest, defense costs, expert witness fees and any other costs or expenses of any kind whatsoever without restriction or limitation incurred in relation to, as a consequence of or arising out of or in any way attributable to the CONSULTANT's negligence, recklessness or willful misconduct in the performance of this Agreement. All obligations under this provision are to be paid by CONSULTANT as they are incurred by OWNER.

5.06.2 Without affecting the rights of OWNER under any provision of this Agreement or this Section, CONSULTANT shall not be required to indemnify and hold harmless OWNER as set forth above for liability attributable to the negligence of OWNER.

5.07 In the event that OWNER requests that specific employees or agents of CONSULTANT supervise or otherwise perform the services specified in each Task Order, CONSULTANT shall ensure that such individual (or individuals) shall be appointed and assigned the responsibility of performing the services.

5.08 The preparation of documents, tables, files, presentations, reports or any other work product ("Deliverables") shall be delivered to OWNER in complete, final and native form such that they can be used by OWNER without further preparation, modification, expansion or enhancement using commercially available software programs, and current release versions without third party proprietary alteration or CONSULTANT's modifications, acceptable to the OWNER. Acceptable programs include AutoCad, Excel, Word, PowerPoint and Access. CONSULTANT shall be responsible for any and all additional costs and expenses that the OWNER may incur in the event that such further preparation, modification, expansion or enhancement of such Deliverables is reasonably deemed necessary by the OWNER. Further, as provided in Section 4.05, OWNER may withhold payment(s) associated with any Deliverables until such time as such Deliverables have been received by the OWNER.

5.09 CONSULTANT shall be solely responsible for obtaining all permits, licenses and approvals necessary or applicable to the performance of services under this Agreement, unless otherwise expressly provided for in any Task Order issued pursuant to this Agreement. In the event OWNER is required to obtain an approval or permit from another governmental entity, CONSULTANT shall provide all necessary supporting documents to be filed with such entity.

6. Obligations of Owner.

6.01 OWNER shall do the following in a manner so as not to unreasonably hinder the performance of services by CONSULTANT:

a. Provide information, requirements and criteria regarding OWNER's project;

b. Furnish all existing studies, reports and other available data and items pertinent to each Task Order that are in OWNER's possession;

c. Designate a person to act as a liaison between CONSULTANT and the OWNER for each Task Order.

7. Additional Services, Changes and Deletions.

7.01 During the term of this Agreement, the OWNER may, from time to time, and without affecting the validity of this Agreement or any Task Order issued hereunder, order changes, deletions and additional services by the issuance of written change orders authorized and approved by the OWNER.

7.02 In the event CONSULTANT performs additional or different services than those described in any Task Order or authorized change order without the prior written approval of the OWNER, CONSULTANT shall not be compensated for such services.

7.03 CONSULTANT shall promptly advise OWNER as soon as reasonably practicable upon gaining knowledge of a condition, event or accumulation of events, which may affect the scope, and/or cost of services to be provided pursuant to this Agreement. All proposed changes, modifications, deletions and/or requests for additional services shall be reduced to writing for review and approval by the OWNER.

7.04 In the event that OWNER orders services deleted or reduced, compensation shall likewise be deleted or reduced by a fair and reasonable amount and CONSULTANT shall only be compensated for services actually performed.

8. Termination of Agreement.

8.01 In the event the time specified for completion of an assigned task in a Task Order exceeds the term of this Agreement, the term of this Agreement shall be automatically extended for such additional time as is necessary to complete such Task Order, and thereupon this Agreement shall automatically terminate without further notice.

8.02 Notwithstanding any other provision of this Agreement, OWNER, at its sole option, may terminate this Agreement at any time by giving 30 days' written notice to CONSULTANT, whether or not a Task Order has been issued to CONSULTANT.

8.03 In the event of termination, the payment of monies due CONSULTANT for work performed prior to the effective date of such termination will be paid within approximately 30 business days after receipt of an invoice as provided in this Agreement. Upon payment for such services, CONSULTANT agrees to promptly provide and deliver to OWNER all original documents, reports, studies, plans, specifications, including any Deliverables, which are in the possession or control of CONSULTANT and pertain to the services performed by CONSULTANT for OWNER.

9. Status of CONSULTANT. CONSULTANT shall perform the services assigned by OWNER in CONSULTANT's own way as an independent contractor, and in pursuit of CONSULTANT's independent calling, and not as an employee or agent of OWNER. CONSULTANT shall be under the control of OWNER only as to the result to be accomplished and the personnel assigned to perform services. However, CONSULTANT shall regularly confer with OWNER's General Manager and Board of Directors as provided for in this Agreement.

10. Audit; Ownership of Documents.

10.01 All draft and final reports, plans, drawings, studies, maps, photographs, specifications, data, notes, manuals, warranties, including electronic and computer data and disks in native format, and all other documents of any kind or nature prepared, developed or obtained by CONSULTANT in connection with the performance of services assigned to it by OWNER shall become the sole property of OWNER, and CONSULTANT shall promptly deliver all such materials to OWNER. At the OWNER's sole discretion, CONSULTANT may be permitted to retain original documents, and furnish reproductions.

10.02 CONSULTANT shall retain and maintain, for a period not less than five years following termination of this Agreement, all time records, accounting records and vouchers and all other records with respect to all matters concerning services performed, compensation paid and expenses reimbursed. At any time during normal business hours and as often as OWNER may deem necessary, CONSULTANT shall make available to OWNER's agents for examination all of such records and shall permit OWNER's agents to audit, examine and reproduce such records.

11. Miscellaneous Provisions.

11.01 This Agreement supersedes any and all previous agreements, either oral or written, between the parties hereto with respect to the rendering of services by CONSULTANT for OWNER and contains all of the covenants and agreements between the parties with respect to the rendering of such services in any manner whatsoever. Any modification of this Agreement will be effective only if it is in writing signed by both parties. CONSULTANT represents and warrants that the individual signing this Agreement on behalf of CONSULTANT has the full authority to bind CONSULTANT to this Agreement.

11.02 CONSULTANT shall not assign or otherwise transfer any rights or interest in this Agreement without the prior written consent of OWNER. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.

11.03 CONSULTANT shall comply with all applicable local, state and federal laws, rules, regulations, entitlements and/or permits applicable to, or governing the services authorized hereunder.

11.04 If required by law, CONSULTANT shall file Conflict of Interest Statements with OWNER.

11.05 Any dispute which may arise by and between the OWNER and the CONSULTANT, including the CONSULTANT's subconsultants, laborers, and suppliers, shall be submitted to binding arbitration. Arbitration shall be conducted by the Judicial Arbitration and Mediation Services, Inc., or such other arbitration service that the parties agree to in writing. The arbitrators must decide each and every dispute in accordance with the laws of the State of California, and all other applicable laws. Unless the parties stipulate to the contrary in writing, prior to the appointment of the arbitrator all disputes shall first be submitted to non-binding mediation, conducted by the Judicial Arbitration and Mediation Services, Inc., or such other mediation service that the parties agree to in writing.

11.06 In performance of the services under this Agreement, it is understood that CONSULTANT may be supplied with certain information and/or data by OWNER and/or others, and that CONSULTANT will rely on such information. It is agreed that the accuracy of such information is not within the CONSULTANT's control, but CONSULTANT shall use all reasonable efforts to verify the accuracy of such information, and shall notify OWNER of any concerns or discrepancies that CONSULTANT discovers immediately upon such discovery. Failure to notify OWNER immediately of any such concerns or discrepancies upon discovery of same shall be deemed an acknowledgment by the CONSULTANT that such information is accurate and reliable.

11.08 Each party to this Agreement warrants that the individuals who have signed this Agreement have the legal power, right and authority to execute this Agreement and bind each respective party, and that each party has obtained all appropriate approvals from their respective governing boards and/or officers.

IN WITNESS WHEREOF, the parties hereby have made and executed this Agreement as of the day and year first above-written.

OWNER:

BEAUMONT BASIN WATERMASTER

By_____
Duane Burk, Chairman

CONSULTANT:

ALDA, INC.

By_____
F. Anibal Blandon, P.E., Principal

EXHIBIT 2

ALDA Inc.
5928 Vineyard Avenue
Alta Loma, CA 91701
Tel: (909) 587-9916
Fax: (909) 498-0423

Beaumont Basin Watermaster

Billing Rates for Amendment No. 2

Billing Rates for ALDA Inc. for Calendar Year 2022

Position	Hourly Rate
Project Manager	$225.00
Project Engineer	$200.00
Staff Engineer	$175.00

Billing Rates for Thomas Harder and Company for Calendar Year 2022

Position	Hourly Rate
Principal Hydrogeologist	$210.00
Associate Hydrogeologist	$180.00
Senior Hydrogeologist	$150.00
Project Hydrogeologist	$120.00
Staff Hydrogeologist	$105.00
Field Technician	$ 85.00
Graphics	$ 95.00
Clerical	$ 75.00
Expert Witness	$420.00

Discussion Items

BEAUMONT BASIN WATERMASTER
MEMORANDUM NO. 22-12

Date:	April 13, 2022
From:	Art Vela, Chair
Subject:	Alvarado Smith Request for Rate Increase
Recommendation:	Discuss and consider approval of an increase in rates for General Counsel Services provided by Alvarado Smith

Alvarado Smith has provided general legal counsel services to Beaumont Basin Watermaster since May, 2012. The currently hourly rates paid to Alvarado Smith have remained unchanged since March, 2018. On March 9, 2022 the Watermaster received a letter from Alvarado Smith requesting a rate increase. The proposed increases reflect an approximate 5.5% increase for General Counsel activities and an approximate 5.1% increase for litigation activities. The proposed rates are shown in the letter attached to this report.

ALVARADOSMITH
A PROFESSIONAL CORPORATION
INCLUDING PROFESSIONAL CORPORATIONS

Thierry R. Montoya
(714) 852-6800
tmontoya@alvaradosmith.com

Orange County Office

Raymond G. Alvarado
1936-2014

VIA E-MAIL ONLY

Arturo Vela, P.E.
Director of Public Works/City Engineer
Public Works Department
City of Banning
President, Beaumont Basin Watermaster

Re: **Corrected,** AlvaradoSmith, APC, Beaumont Basin Watermaster General Counsel request for rate increase

Dear Art,

We have enjoyed our representation of Watermaster since our retention in May 2012. During this time, we have assisted Watermaster in redetermining safe yield of the Basin, assisted in updating and correcting Watermaster member and alternate designations with the court, assisted in developing a more consistent method of production monitoring, recently assisted in resolving a groundwater storage agreement with the San Gorgonio Pass Water Agency and previously with the Morongo Band of Mission Indians, and assisted with other projects.

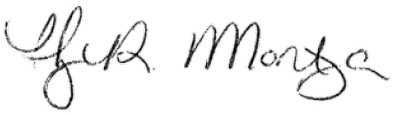
Since March 2018, we have maintained our hourly rates. We are requesting the modest increase, as denoted below, in our applicable hourly rates for Watermaster, which are deeply discounted from our standard hourly rates. The proposed rate structure follows:

	Current Discounted Rate	Proposed New Discounted Rate
General Counsel Activities:	$275/hour	$290/hour
Litigation Activities	$295/hour	$310/hour

We would appreciate the Watermaster Committee considering this rate increase proposal. Please do not hesitate to contact me if the Committee would like additional information.

Sincerely yours,

ALVARADOSMITH
A Professional Corporation



Thierry R. Montoya,
a Professional Corporation

TRM:dfh

Technical Memorandum

To: Mr. Hannibal Blandon
Alda, Inc.

From: Thomas Harder, P.G., CH.G.
Thomas Harder & Co.

Date: 6-Apr-22

Re: Updated Return Flow Accounting Methodology for the Beaumont Basin Adjudicated Area

1. Introduction

This Technical Memorandum (TM) describes a recommended return flow accounting methodology to develop annual estimates of return flow by Appropriator within the Beaumont Basin Adjudication area. The Appropriators within the Beaumont Basin Adjudicated area include Beaumont-Cherry Valley Water District (BCVWD), the City of Banning, and Yucaipa Valley Water District (YVWD). The return flow accounting methodology will enable Appropriators to account for the portion of annual return flow that occurs over their service areas. Return flow is herein referred to as the portion of water applied to landscaping or crops that is in excess of the plant's needs and percolates below the root zone to become groundwater recharge.

1.1 Background and Purpose

Estimates of return flow in the Beaumont Basin adjudicated area, by Appropriator, were published in the 2013 Reevaluation of the Beaumont Basin Safe Yield (TH&Co, 2015[1]). In general, the previous estimates were based on assumptions regarding indoor/outdoor water use and applied to general land use conditions. In 2018, the Beaumont Basin Watermaster Board (the Watermaster) directed the Alda/Thomas Harder & Co. team to develop a revised return flow methodology to consider parcel by parcel water delivery records, a more detailed accounting of indoor/outdoor water use, and account for differences in return flow lag time between the time of application and the arrival of the return flow at the groundwater.

[1] TH&Co, 2015. 2013 Reevaluation of the Beaumont Basin Safe Yield. Prepared for Beaumont Basin Watermaster. Dated April 3, 2015.

The new return flow accounting methodology takes into account the following: Accounting for water delivered to customers within Beaumont Basin adjudication boundary

1. Assumptions for water delivered to customers within Beaumont Basin adjudication boundary.
2. Assumptions as to how much water delivered to customers is applied for outdoor use.
3. Assumptions as to how much of the water applied to outdoor use becomes return flow.
4. Methodology for addressing parcels within Appropriator service areas that overlap and extend across the Beaumont Basin adjudication boundary.

The draft return flow methodology was submitted to the Watermaster in July 2019[2]. Based on input from the Watermaster, the return flow methodology from July 2019 has been modified, as presented in this revised draft TM, to address the following issues:

1. Modifications to indoor/outdoor water use for the City of Banning and YVWD.
2. Further evaluation of landscape irrigation efficiency.
3. Incorporation of commercial water deliveries as an additional water delivery account type.
4. Pipeline losses and infiltration and inflow.
5. Potential changes in total dissolved solids (TDS) concentration in groundwater associated with return flow.

The refined methodology was applied to the most recent complete set of available water delivery data (2019).

2. Return Flow Accounting Methodology

The proposed return flow accounting methodology follows seven steps:

1. Identify Beaumont Basin Watermaster Appropriator water delivery records by accounts that are within the Beaumont Basin adjudicated area based on parcel, address or other location information.
2. Track the volume of delivered water for accounts that are within the Beaumont Basin adjudicated area, by Appropriator. Water delivered to accounts that overlap the boundary is assumed to be proportional to the area of the parcel in the boundary.
3. Classify each water account as either sewered, unsewered, landscape, construction or commercial.
4. Estimate the indoor and outdoor water use by account, according to the account type classification.

[2] TH&Co, 2019. Draft Return Flow Accounting Methodology for the Beaumont Basin Adjudicated Area. Dated July 29, 2019.

5. For sewered, landscape and commercial/industrial classifications, apply the return flow factors to outdoor water use by account.
6. For the unsewered classification, apply the return flow factors to both indoor and outdoor water use, by account.
7. Return flow associated with the construction classification is assumed to be zero.
8. Sum the return flow within the Beaumont Basin adjudicated area by Appropriator.

2.1 Identification of Delivered Water by Location

The first step in the return flow accounting methodology was to determine a location of each delivery record with respect to the Beaumont Basin adjudicated area. Water delivery records from 2019 were obtained from each of the Appropriators in the basin (BCVWD, City of Banning, and YVWD). Each of the Appropriators keep records of the water account locations by address and/or location description. In some cases, the accounts could be correlated with an APN within the Beaumont Basin based on other identifying information. The spatial distribution of APNs was obtained from Riverside County[3] as a Geographic Information System (GIS) shapefile, which was overlaid on a base map in GIS along with the Beaumont Basin Adjudication area.

In some cases, when APNs were not provided, it was necessary to manually look up the address or location description of the account to determine its location with respect to the adjudication boundary, and then determine whether the account/meter was in the Beaumont Basin adjudicated area based on the address. For 2019, a total of approximately 16,000 active water delivery accounts were identified within the Beaumont Basin adjudicated area.

2.2 Accounting for Delivered Water to Accounts Overlapping the Adjudication Boundary

While most of the APNs or accounts were either classified as completely inside or outside of the adjudicated boundary, some parcels overlapped the boundary (see Figure 1). For parcels overlapping the boundary, TH&Co determined the percentage area of the parcel inside of the boundary compared to the entire parcel area using GIS. The percentage area of overlapping parcels that occurred within the Beaumont Basin adjudicated area was applied to the volume of water delivered to that parcel.

[3] https://gis.rivcoit.org/GIS-Data-2

2.3 Classification of Water Accounts by Type

TH&Co grouped water delivery accounts into five categories: sewered, unsewered, landscape, construction, and commercial/industrial. Sewered areas include high density residential land uses within the City of Banning's and YVWD's water service areas and the portion of the BCVWD within the City of Beaumont sewered area (see Figure 2).

The primary unsewered area within the adjudicated Beaumont Basin is the Cherry Valley community, a low-density residential area north of the City of Beaumont (see Figure 2). Residences in Cherry Valley discharge wastewater through individual household septic systems. Parcels in this area are generally larger and water deliveries to those parcels are generally higher, so it is assumed that their outdoor water use is greater. As shown on Figure 2, there are small areas of unsewered parcels in the Beaumont Basin that are outside of Cherry Valley.

Landscape includes accounts that were classified as irrigated agriculture as well as golf courses, parks and other urban landscape. However, this analysis does not include water production data from Overliers (private wells).

Some water delivery accounts were categorized as "floating meters" which indicates that the water was used for construction, fire suppression, or other uses, which were measured through portable meters. All of these uses were grouped under "construction" and were accounted for in the total water delivered in the basin.

Commercial/industrial water delivery accounts are labeled as such in Appropriator water delivery records. Water use at these accounts is expected to be predominantly indoors with very little landscape irrigation.

2.4 Estimation of Indoor and Outdoor Water Use for each Account based on Account Type

2.4.1 Water Use in Sewered Areas

For sewered areas, estimates of the portion of delivered water used indoors at each account were developed through an analysis of wastewater treatment plant inflows at the wastewater treatment plants for the City of Beaumont, City of Banning and YVWD (see Figure 3). It is assumed that the water delivered to the treatment plants is indicative of the indoor water use in the areas contributing water to the treatment plants, with the balance being used outdoors. The volumes of water delivered to the treatment plants was compared to the delivered water records for all accounts in the respective Appropriator areas (including outside the Beaumont Basin adjudicated area) to estimate indoor/outdoor water use ratios specific to each Appropriator.

Beaumont-Cherry Valley Water District

In 2019, the City of Beaumont reported 4,112 acre-ft of inflow to the treatment plant (see Table 1). During that same year (2019), the BCVWD delivered 8,026 acre-ft of water to non-landscape accounts within the sewered area. It is assumed for this analysis that the inflow to the treatment plant (4,112 acre-ft) represents the cumulative indoor water use for the BCVWD accounts within the sewered area of the district. Thus, the balance of delivered water (3,914 acre-ft) is assumed to be used outdoors. This results in 51 percent indoor use and 49 percent outdoor use (see Table 1). The average delivered water per account in 2019 for BCVWD was 0.49 acre/ft/account (see Table 2).

City of Banning

In 2019, the City of Banning reported 2,234 acre-ft of inflow to the treatment plant from all sewered accounts within the City (see Figure 3; Table 1). During that same year (2019), the City of Banning delivered 5,340 acre-ft of water to non-landscape accounts within the sewered area resulting in 42 percent indoor and 58 percent outdoor water use. The average delivered water per account in 2019 for the City of Banning was 0.47 acre-ft/account (see Table 2).

Yucaipa Valley Water District

In 2019, the YVWD reported 4,141 acre-ft of inflow to the treatment plant from all sewered accounts within the district (see Figure 3; Table 1). During that same year (2019), the YVWD delivered 7,947 acre-ft of water to non-landscape accounts within the sewered area resulting in 52 percent indoor and 48 percent outdoor water use. The average delivered water per account in 2019 for the YVWD was 0.47 acre-ft/account (see Table 2).

2.4.2 Water Use in Unsewered Areas

Based on 2019 water delivery records, the average delivered water per account per year in the unsewered area ranges from 0 acre-ft/account/yr in YVWD to 0.59 acre-ft/account/yr in BCVWD (see Table 2). In order to estimate the outdoor water use in the unsewered areas, it was assumed that indoor water use is the same for both sewered and unsewered areas (0.2 to 0.25 acre-ft/account/yr). The balance between the average delivered water per account (0 to 0.59 acre-ft/account/yr) and the indoor water use (0.2 to 0.25 acre-ft/account/yr) is assumed to be outdoor water use in the unsewered area (0 to 0.43 acre-ft/account/yr). When expressed as percentages, the estimated amount of indoor water use is 26 percent of delivered water and the estimated outdoor use is 74 percent of delivered water (see Table 2).

2.4.3 Landscape Water Use

All water delivered under this category is assumed to be used outdoors. The total volume of water used for landscape irrigation in the Beaumont Basin adjudicated area in 2019 was 1,790 acre-ft (see Tables 3a through 3c).

2.4.4 Construction Water Use

All water delivered under this category is assumed to be consumed with no return flow to the groundwater system. The total water delivered inside the adjudicated area for construction in 2019 was 11 acre-ft.

2.4.5 Commercial and Industrial Water Use

Each Appropriator has separate water delivery accounts for commercial and industrial water use. Water delivered to commercial and industrial accounts is assumed to be used primarily indoors as these properties typically have minimal landscaping. It is assumed for this methodology that indoor water use for these accounts is 95 percent of delivered water and outdoor water use is 5 percent of delivered water.

2.4.6 Uncertainty in Indoor/Outdoor Water Use Estimates

Inherent in the methodology presented herein is some uncertainty as it relates to the volume of water used indoors. The methodology assumes that indoor water use in the sewered areas is equal to the volume of water delivered to the wastewater treatment plants. Sewer pipeline leaks between the individual residences and the treatment plant will result in losses such that inflow to the treatment plant underestimates the indoor water use. Infiltration and inflow (I&I) into the sewer system from storm runoff and/or groundwater inflow where pipes are below the groundwater surface will add water to the treatment plant inflow not reflective of residential indoor water use, which overestimates indoor water use.

An evaluation of potential pipeline leakage rates indicates that it is not possible to estimate the leakage from sewer pipelines in the Beaumont Basin area with any degree of accuracy. Sewer lines located above the groundwater surface typically leak. A typical allowable leakage rate for new sewers is 200 gallons per day per inch mile (gpdim) of pipeline (ASTM, 2003)[4]. However, this rate is a guidance value and varies from construction to construction according to pipeline materials and construction methods. Literature review suggests pipeline leakage rates can vary

[4] ASTM, 2003. Standard Test Method for Hydrostatic Infiltration and Exfiltration of Vitrified Clay Pipelines. C1091-03.

from less than 100 gpdim[5] to over 10,000 gpdim[6]. Over time, the rate may increase with pipeline deterioration, root intrusions, or ground movement. Given the potential variability of this factor and the inability to measure the leakage, it is not recommended to account for sewer pipeline losses in the return flow methodology until a method to reliably quantify the losses can be identified and implemented.

Infiltration and inflow to the sewer system will also introduce uncertainty into the residential indoor/outdoor water use estimates for sewered areas. While groundwater infiltration is expected to be minimal in the Beaumont Basin area due to the significant depth of groundwater, storm runoff inflow will affect the volume of water entering the wastewater treatment plants. As this runoff varies from year to year according to precipitation amounts, the inflow to the sewer system varies accordingly. During years when precipitation and I&I are low, the indoor water use, using the methodology described herein, will be skewed low and the outdoor water use will be skewed high. During years when the I&I is high, the indoor water use will be skewed high and the outdoor water use will be skewed low. Over the long term, the impacts of I&I on return flow estimates will average out.

In summary, is not recommended to incorporate estimates of sewer pipeline losses and I&I into the indoor/outdoor water use estimates for the return flow methodology. The losses and additions cannot be measured accurately, vary from year to year, and may change over a long period of time.

2.4.7 Accounting for Water Use Efficiency Over Time

The proportion of indoor to outdoor water use in the Beaumont Basin is expected to change over time with water use efficiency. In the last 15 years, California has begun to implement various water use efficiency goals and ordinances, including the 20 x 2020 Water Conservation Plan[7] and the 2015 California Model Water Efficient Landscape Ordinance.[8] In accordance with these goals, new housing developments in the Beaumont Basin are being constructed with smaller lawn footprints than older homes. As less water is used outdoors, the indoor/outdoor water use ratio is expected to change over time.

Changes in the indoor/outdoor water use ratios resulting from increased water use efficiency will be reflected in the indoor/outdoor water use estimates obtained through comparison of delivered water records and wastewater treatment plant inflows, as described herein. As less water is used

[5] Gruenfeld, M. 2000. Exfiltration in Sewer Systems. Draft Report to the United States Environmental Protection Agency, National Risk Management Research Laboratory.
[6] Amick, R.S. and Burgess, E.H., 2000. Exfiltration in Sewer Systems. United States Environmental Protection Agency, National Risk Management Research Laboratory, Office of Research and Development, Report No. 600/R-01/034.
[7] California Department of Water Resources (CDWR), 2010. 20x2020 Water Conservation Plan. Dated February 2010.
[8] California Code of Regulations, Title 23, Division 2, Chapter 2.7, Sections 490 through 495.

indoors through efficiency, the volume of inflow to the treatment plants should reduce accordingly. Similarly, outdoor water use efficiency will be reflected in an increased ratio of treatment plant inflow to delivered water.

2.5 Applying the Return Flow Factor by Account Type

2.5.1 Assumption for Irrigation Efficiency (Return Flow Factor)

In any plant irrigation application, a portion of the water applied will infiltrate downward past the root zone of the plants and eventually percolate to the groundwater to become recharge. The volume of applied water that becomes deep infiltration (i.e. return flow) relative to the total applied water is the irrigation efficiency. The ratio of return flow to applied water is the return flow factor. Thus, if 75 percent of the applied water is used by the plants or evaporated and 25 percent becomes return flow, then the return flow factor is 25 percent or 0.25. The associated irrigation efficiency is 75 percent.

While there is no way to directly measure the volume of applied water that becomes return flow across any given area, there are studies that have published estimated irrigation efficiencies based on irrigation method. One of the more comprehensive accounting of irrigation efficiencies by irrigation method was published by the California Energy Commission (CEC) in 2006, as shown in the following table.[9]

Type of Irrigation System	Efficiency (%)
Surface Irrigation	
Basin	85
Border	77.5
Furrow	67.5
Wild Flooding	60
Gravity	75
Sprinkler	
Hand Move or Portable	70
Center Pivot and Linear Move	82.5
Solid Set or Permanent	75
Side Roll Sprinkler	70
Micro Sprinkler	87.5
Trickle Irrigation	
Surface Drip	87.5
Buried Drip	90
Subirrigation	90
LEPA (Low Energy Precision Application)	90
Unknown	75.5

[9] CEC, 2006. Estimating Irrigation Water Use for California Agriculture: 1950s – 2006.

While the efficiencies summarized in this table were originally applied to agricultural irrigation, the same efficiencies apply to landscape irrigation. As most residential lawns are irrigated with solid set or permanent sprinklers, an irrigation efficiency of 75 percent can be specified for lawn irrigation in accordance with the table. This efficiency rate, which results in 25 percent return flow, was also published in the 2015 California Model Water Efficient Landscape Ordinance[10]. The same document assumes an irrigation efficiency value of 81 percent for drip irrigated landscape. To be consistent with the recent State of California landscape ordinance, it is recommended to use a return flow factor of 25 percent (0.25) for lawns and 19 percent (0.19) for drip irrigated areas.

A review of recent aerial photographs of the Beaumont Basin area shows that, while newer residential developments generally have smaller landscape footprints, almost all include some lawn. There is no observable evidence of xeriscaping or other drought-tolerant landscaping that can be sustained from drip irrigation. As such, the only return flow factor used in this methodology is 0.25. If evidence of drip irrigated landscaping becomes apparent in future years, the methodology can be adjusted to account for the increased irrigation efficiency and reduced return flow.

2.5.2 Return Flow in Sewered Areas

For water deliveries that occur in the sewered portions of each Appropriator's service area overlying the adjudicated Beaumont Basin, between 48 and 58 percent of delivered water was assumed to be used outdoors as per Section 2.4.1 of this Technical Memorandum (see also Table 2). Of the water used outdoors, 25 percent is assumed to become groundwater return flow. This method was applied to each of the accounts classified as "sewered" (see Tables 3a through 3c).

It is noted that deep percolation of applied landscape irrigation in residential areas overlying surface outcrops of the San Timoteo Formation, as mapped by the United States Geological Survey, is assumed to be negligible and is not included in the return flow volumes summarized in Tables 3a through 3c. Applied irrigation in these areas that is not consumed by landscape is assumed to become runoff to storm drains, ultimately flowing out of the adjudicated area as surface flow.

2.5.3 Return Flow in Unsewered Areas

As the discharge of water through individual septic systems also contributes return flow to the groundwater, total return flow in the unsewered area is the sum of septic system infiltration and deep infiltration of applied irrigation water. All water discharged through individual septic systems is assumed to become groundwater recharge. Thus, return flow from unsewered areas is the sum of indoor water use and 25 percent of outdoor water use.

[10] California Code of Regulations, Title 23, Division 2, Chapter 2.7, Section 492.13.

2.5.4 Return Flow from Urban Landscape and Irrigated Agriculture

Return flow associated with urban landscape and irrigated agriculture is assumed to be 25 percent of delivered water. However, it is noted that return flow occurs in some portions of the Beaumont Basin adjudication area that are not within an Appropriator service area such as the Morongo Golf Course at Tukwet Canyon. This golf course uses private on-site wells for their own irrigation. This analysis does not include return flow from these or other Overlier private wells.

2.5.5 Return Flow from Construction

As mentioned in Section 2.4.4, water delivered under this category is assumed to be completely consumed with no return flow to the groundwater system. The total water delivered inside the adjudicated area for construction from all Appropriators in 2019 was 11 acre-ft and is negligible in the overall return flow estimate in the Beaumont Basin adjudicated area.

2.5.6 Return Flow from Commercial/Industrial Landscape

Of the water delivered to commercial and industrial accounts, only 5 percent is assumed to be used outdoors for landscape irrigation. Return flow associated with irrigation of landscape in commercial and industrial areas is assumed to be 25 percent of applied irrigation.

3. Estimates of Return Flow by Appropriator for 2019

Application of the return flow methodology outlined in this Technical Memorandum to the water delivery records of BCVWD, City of Banning, and YVWD for 2019 results in the return flow values shown in Table 4. The total return flow in 2019 for all accounts within the Appropriator service areas of the adjudicated Beaumont Basin is estimated to be 1,543 acre-ft. Of this, 1,215 acre-ft occurred in BCVWD, 308 acre-ft in the City of Banning, and 21 acre-ft in YVWD.

4. Applying the Return Flow Methodology for Future Years

The return flow accounting methodology reported herein can be implemented on an annual basis and reported in Beaumont Basin Watermaster annual reports. The data required to estimate return flow by Appropriator for annual reports will include:

- Water delivery records, by account, for each Appropriator, including any new accounts.
- City of Beaumont wastewater inflow volumes.
- Review of aerial photographs to confirm landscape irrigation methods.

It will be beneficial to conduct the analysis of indoor vs. outdoor water use on an annual basis in order to assess the effects of irrigation conservation efforts on return flow amounts.

5. Seepage Time Lag Analysis

Throughout most of the Beaumont Basin, groundwater is of sufficient depth below the land surface that there is a delay (or lag time) between the time the irrigation water is applied at the land surface and the time it reaches the groundwater table. TH&Co previously estimated the return flow lag time to be approximately 25 years in the vicinity of BCVWD Wells 1 and 2 (TH&Co, 2015).[11] This lag was estimated based on an analysis of hydrographs from BCVWD Wells 1 and 2. Specifically, stabilizing groundwater levels in the early 1960s, despite higher groundwater production and average precipitation conditions suggested that return flow from applied irrigation was reaching the groundwater table. As BCVWD began groundwater pumping in 1936, the return flow lag was estimated at this location to be approximately 25 years. Given that the depth to groundwater in 1961 was approximately 370 feet below ground surface (ft bgs) at BCVWD Well 1, the associated percolation rate is estimated to be approximately 15 feet per year (see Table 5).

As the depth to groundwater varies across the Beaumont Basin, the lag time will also vary accordingly. In the TH&Co (2015) report, the 25-yr lag time was applied equally across the basin. For this analysis, TH&Co varied the lag time across the Beaumont Basin adjudicated area by applying the return flow rate of 15 ft/yr to the depth to groundwater contour map shown on Figure 4. The depth to groundwater contour map was based on groundwater levels measured in December 2017. This percolation rate was applied to zones of similar groundwater level depth across the Beaumont Basin adjudicated area to determine return flow lag times. TH&Co assigned zones of equal lag time with each zone representing the area between each depth to groundwater contour, which are contoured at 100-ft intervals (see Figure 5). The return flow rate (15 ft per year) was multiplied by the average groundwater level depth in each zone to estimate the return flow lag time in years (see Table 5).

Applying the varying return flow lag times to the applied irrigation water overlying Appropriator service areas in the Beaumont Basin in 2019 results in the return flow recharge schedule shown in Table 6. It is noted that this recharge schedule assumes that the depth to groundwater conditions in 2017 are approximately the same as the depth to groundwater conditions will be in the future at the time of return flow arrival at the groundwater table. Assuming a constant average percolation rate, significant changes in groundwater level depth during return flow percolation (either up or down) could change the travel time from the land surface to the groundwater table. For example, in 1961, the depth to groundwater at BCVWD Well 1 was approximately 370 ft bgs. At that depth, the return flow lag time was 25 years (370 ft/15 ft/yr). In 2019, the return flow lag time has increased to 29 years (simplified to 30 years for this analysis based on Figure 5) because the depth

[11] TH&Co, 2015. 2013 Reevaluation of the Beaumont Basin Safe Yield. Prepared for Beaumont Basin Watermaster. Dated April 3, 2015.

to groundwater is now approximately 440 ft bgs (440 ft/15 ft/yr). Similar changes to the depth to groundwater in the future will impact the percolation lag time.

6. Analysis of Potential Total Dissolved Solids Concentrations Changes Associated with Return Flow

TH&Co conducted an analysis of potential future changes in groundwater total dissolved solids (TDS) concentrations in the Beaumont Basin adjudicated area associated with return flow (see Attachment A). The analysis was conducted using the Beaumont Basin groundwater flow model (MODFLOW) coupled with a solute transport model (MT3D-USGS). Through calibration of historical TDS concentration trends observed in basin wells, TH&Co estimated a TDS concentration flux rate (TDS mass loading) associated with return flow that was projected forward into the future. The mass loading rates for the various urban recharge zones in the model are shown in Table 3 of Attachment A.

Results of the model analysis of potential TDS changes in the Beaumont Basin show that, on a basin-wide average basis, the TDS concentration is not projected to rise above the Regional Water Quality Control Board Maximum Benefit Objective of 330 milligrams per liter (mg/L) (see Figure 7 of Attachment A). Model analysis suggests that there is potential for future exceedance of the TDS Maximum Benefit Objective at individual wells, including:

- South Mesa Water Company Well No. 1
- YVWD Well No. 34
- YVWD Well No. 35
- BCVWD Well No. 16
- BCVWD MW-1 (Well No. 23)

Recommendations for future refinements to the TDS water quality projections are provided in Attachment A.

7. Conclusions

Applying the return flow analysis methodology described herein to the 2019 water delivery records of each of the Appropriators within the Beaumont Basin adjudicated area results in the following estimated return flow volumes by Appropriator for 2019:

- BCVWD – 1,215 acre-ft
- Banning – 308 acre-ft
- YVWD – 21 acre-ft

The return flow methodology can be used to estimate, and report return flow within the Beaumont Basin adjudicated area on an annual basis.

The estimated delay (i.e. lag time) between the application of water at the land surface in 2017 and the arrival of the return flow at the groundwater table varies based on varying depth to groundwater conditions in the Beaumont Basin. The schedule of this delay for water applied in 2019 is shown in Table 6. A return flow lag time schedule would need to be applied to each annual estimate of Appropriator return flow.

Basin-wide TDS concentrations are forecast to increase through 2032 but remain below the Maximum Benefit Objective of 330 mg/L. The cause for localized projected increases in TDS concentrations at YVWD Wells 34 and 35 are not immediately apparent as there is little residential landscaping in this area, although there is a golf course located nearby. In the area of BCVWD Well No. 16, historically high and project increases in TDS concentrations may be associated with discharges from individual septic systems in the Cherry Valley community.

Tables

Basis for Estimates of Indoor and Outdoor Water Use

	A	B	C[3]	D[4]
	Inflow to Wastewater Treatment Plant[1] (2019) (acre-ft)	Water Delivered within Sewered Area[2] (2019) (acre-ft)	Percent of Water Used Indoors	Percent of Water Used Outdoors
Beaumont Cherry Valley Water District	4,112	8,026	51%	49%
City of Banning	2,234	5,340	42%	58%
Yucaipa Valley Water District	4,141	7,947	52%	48%

Notes:

[1] City of Beaumont Wastewater Treatment Plant No.1, City of Banning Wastewater Reclamation Plant, or City of Yucaipa Wastewater Reclamation Facility

[2] Includes commercial, residential, and sewered accounts.

[3] C = A / B

[4] D = 1 - (A / B)

Volume of Indoor and Outdoor Water Use per Account in the Beaumont Basin

	Sewered Area						
	Total Water Delivered (acre-ft)	Number of Accounts	Average Acre-ft/ Account	Percent of Indoor Use	Percent of Outdoor Use	Volume of Indoor Use (acre-ft/acct)*	Volume of Outdoor Use (acre-ft/acct)
Beaumont Cherry Valley Water District	6,231	12,634	0.49	51%	49%	0.25	0.24
City of Banning	1,467	3,119	0.47	42%	58%	0.20	0.27
Yucaipa Valley Water District	198	421	0.47	52%	48%	0.24	0.22

	Unsewered Area						
	Total Water Delivered (acre-ft)	Number of Accounts	Average Acre-ft/ Account	Percent of Indoor Use (acre-ft)	Percent of Outdoor Use	Volume of Indoor Use (acre-ft/acct)*	Volume of Outdoor Use (acre-ft/acct)
Beaumont Cherry Valley Water District	706	1,207	0.59	26%	74%	0.25	0.43
City of Banning	4	20	0.22	26%	74%	0.20	0.16
Yucaipa Valley Water District	0	2	0.00	26%	74%	0.24	0.00

Notes:

[1] Includes commercial, residential, and sewered accounts.

* The volume of indoor water use is assumed to be the same for both sewered and unsewered, but outdoor water use determined to be greater for larger homes in the unsewered area.

Beaumont Cherry Valley Water District Return Flow by Type Inside Beaumont Basin Adjudicated Area for 2019

Return Flow Methodology

Account Type	Total Water Delivered (ac-ft)	Indoor Use		Outdoor Use		Return Flow (ac-ft)
		Percent of Total Delivered	Infiltration Percent of Indoor Use	Total Delivered	Infiltration Percent of Outdoor Use	
Sewered	-	51%	0%	49%	25%	-
Unsewered	-	26%	100%	74%	25%	-
Landscape[1]	-	0%	N/A	100%	25%	-
Construction	-	0%	N/A	100%	0%	-
Commercial	-	95%	0%	5%	25%	-

Account Type	A	B	C	D	E[2]	F[3]
	Total Water Delivered (ac-ft)	Indoor Use		Outdoor Use		Return Flow (ac-ft)
		Total Delivered	Infiltration	Total Delivered	Infiltration	
Sewered	5,051	2,576	0	2,475	619	619
Unsewered	679	176	176	502	126	302
Landscape	1,136	0	N/A[4]	1,136	284	284
Construction	10	0	N/A	10	0	0
Commercial	781	742	0	39	10	10
Total	**7,657**	**3,495**	**176**	**4,162**	**1,038**	**1,215**

Notes:

[1] Landscape includes Irrigated Agriculture.

[2] E = D * 0.25

[3] F = C + E

[4] N/A = Not Applicable.

City of Banning Return Flow by Type Inside Beaumont Basin Adjudicated Area for 2019

Return Flow Methodology

Account Type	Total Water Delivered (ac-ft)	Indoor Use		Outdoor Use		Return Flow (ac-ft)
		Percent of Total Delivered	Infiltration Percent of Indoor Use	Total Delivered	Infiltration Percent of Outdoor Use	
Sewered	-	42%	0%	58%	25%	-
Unsewered	-	26%	100%	74%	25%	-
Landscape[1]	-	0%	N/A	100%	25%	-
Construction	-	0%	N/A	100%	0%	-
Commercial	-	95%	0%	5%	25%	-

Account Type	Total Water Delivered (ac-ft)	Indoor Use		Outdoor Use		Return Flow (ac-ft)
		Total Delivered	Infiltration	Total Delivered	Infiltration	
Sewered	935	393	0	542	136	136
Unsewered	4	1	1	3	1	2
Landscape	654	0	N/A	654	163	163
Construction	1	0	N/A	1	0	0
Commercial	528	502	0	26	7	7
Total	**2,122**	**896**	**1**	**1,227**	**306**	**308**

Notes:

[1] Landscape includes Irrigated Agriculture.

[2] E = D * 0.25

[3] F = C + E

[4] N/A = Not Applicable.

Yucaipa Valley Water District Return Flow by Type Inside Beaumont Basin Adjudicated Area for 2019

Return Flow Methodology

Account Type	Total Water Delivered (ac-ft)	Indoor Use		Outdoor Use		Return Flow (ac-ft)
		Percent of Total Delivered	Infiltration Percent of Indoor Use	Total Delivered	Infiltration Percent of Outdoor Use	
Sewered	-	52%	0%	48%	25%	-
Unsewered	-	26%	100%	74%	25%	-
Landscape[1]	-	0%	N/A	100%	25%	-
Construction	-	0%	N/A	100%	0%	-
Commercial	-	95%	0%	5%	25%	-

Account Type	Total Water Delivered (ac-ft)	Indoor Use		Outdoor Use		Return Flow (ac-ft)
		Total Delivered	Infiltration	Total Delivered	Infiltration	
Sewered	174	90	0	83	21	21
Unsewered	0	0	0	0	0	0
Landscape	0	0	N/A	0	0	0
Construction	0	0	N/A	0	0	0
Commercial	24	23	0	1	0.3	0.3
Total	**198**	**113**	**0**	**85**	**21**	**21**

Notes:

[1] Landscape includes Irrigated Agriculture.

[2] E = D * 0.25

[3] F = C + E

[4] N/A = Not Applicable.

2019 Water Delivery Summary Table

Appropriator	Total Water Delivered (Acre-ft)	Deliveries Inside the Beaumont Basin Adjudicated Area (Acre-ft)	Return Flow Inside the Beaumont Basin Adjudicated Area (Acre-ft)
BCVWD	11,247	7,657	1,215
Banning	6,295	2,122	308
YVWD	7,993	198	21
Total	**25,535**	**9,977**	**1,543**

Return Flow Lag Time Analysis in the Beaumont Basin

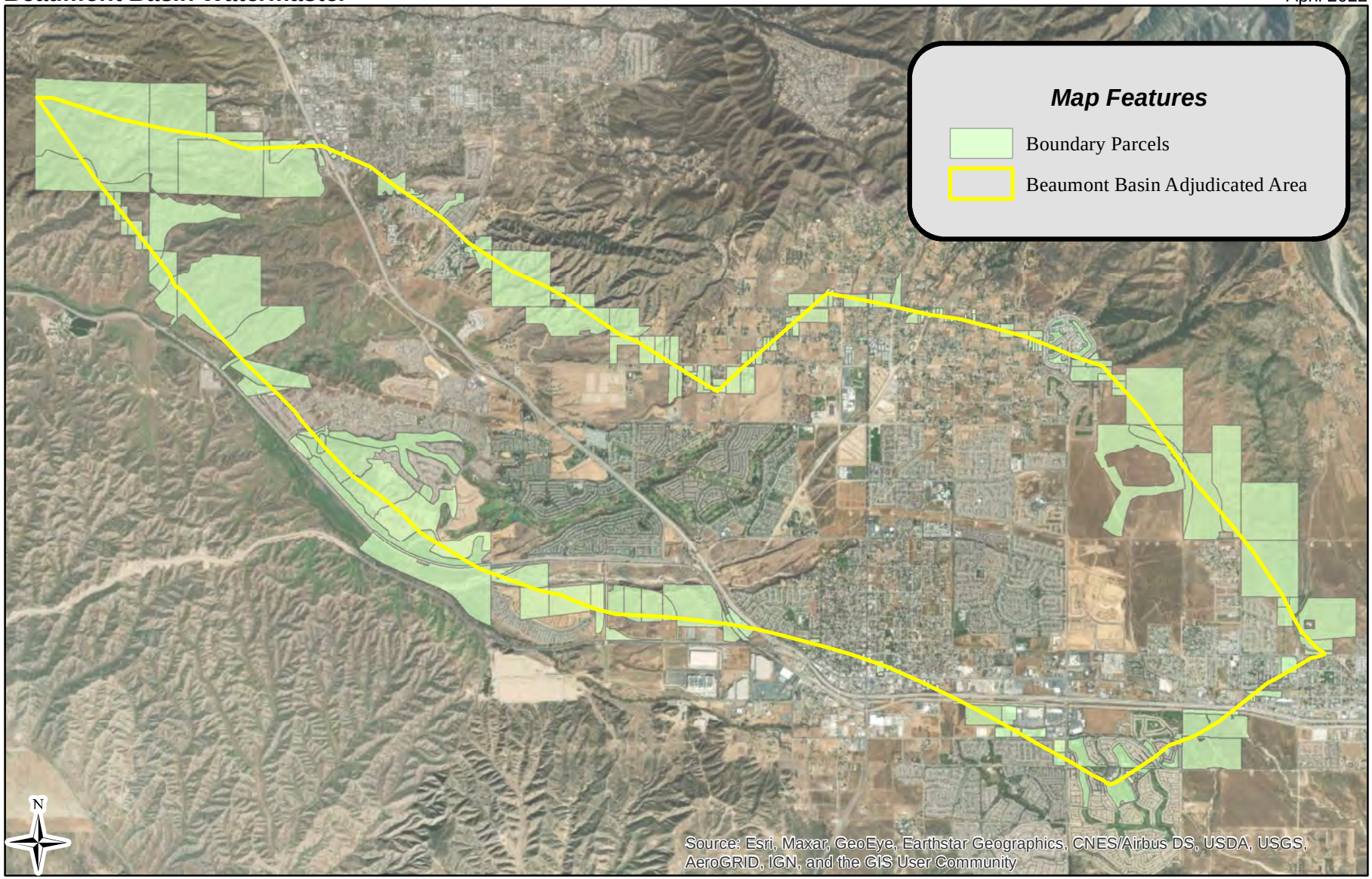
A	B	C	D[1]
Depth to Water Zone (ft)	Average Depth to Water (ft)	Feet per Year	Return Flow Lag Time (Years)
0 - 100	50	14.8	3
100 - 200	150	14.8	10
200 - 300	250	14.8	17
300 - 400	350	14.8	24
400 - 500	450	14.8	30
500 - 600	550	14.8	37
600 - 700	650	14.8	44

Notes:
[1] D = B / C

Return Flow Lag Time by Appropriator Inside Beaumont Basin Adjudicated Area for 2019

Return Flow Lag Time	Return Flow Inside the Beaumont Basin Adjudicated Area (ac-ft)		
	Beaumont Cherry Valley Water District	City of Banning	Yucaipa Valley Water District
3 Years	5	0	0
10 Years	39	0	8
17 Years	129	0	13
24 Years	225	207	0
30 Years	495	46	0
37 Years	182	55	0
44 Years	140	0	0
No Flow	0	0	0
Total	**1,215**	**308**	**21**
		Grand Total	**1,543**

Figures



Thomas Harder & Co.
Groundwater Consulting
in association with Alda, Inc.

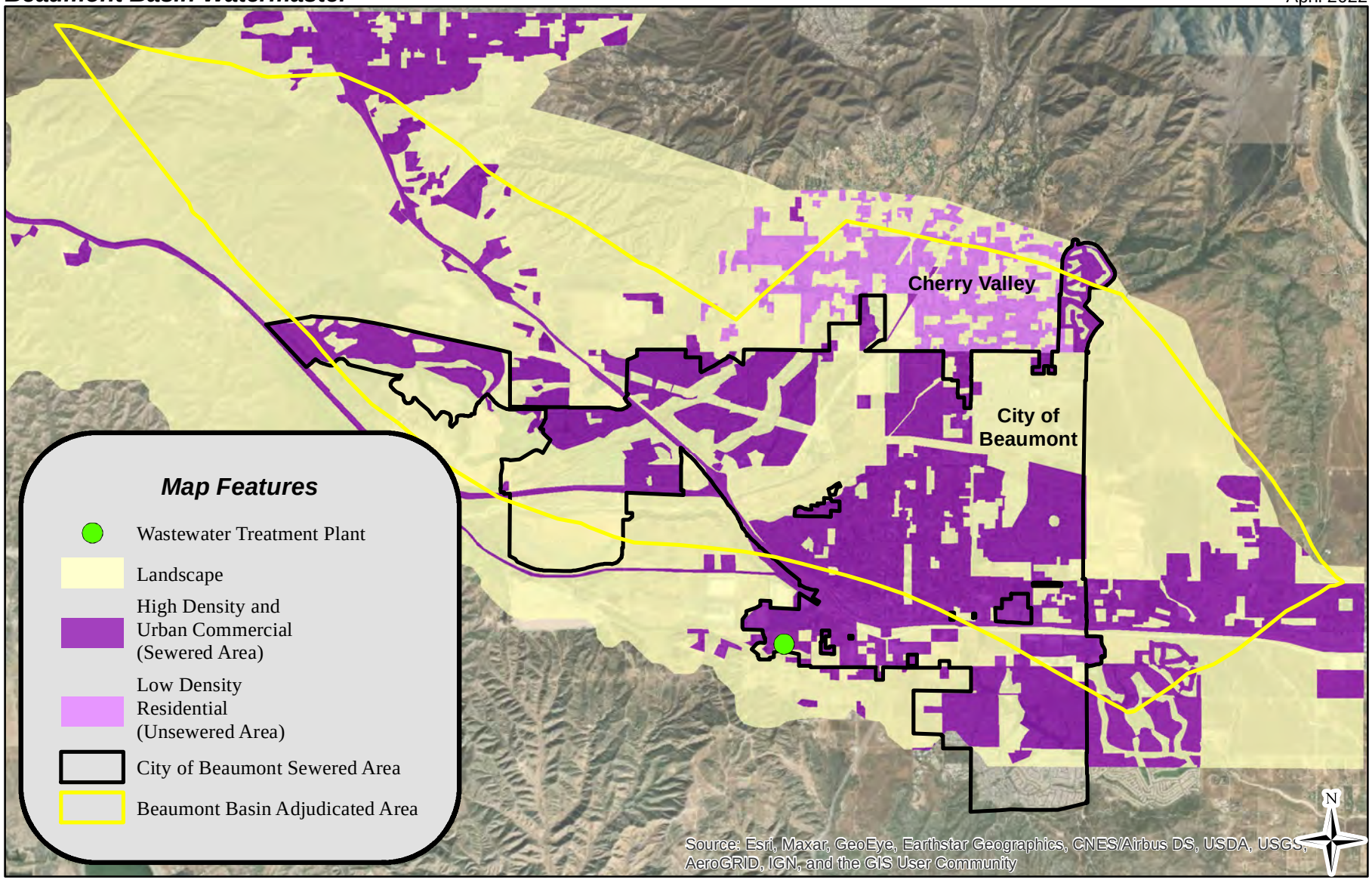
0 0.5 1 2
Miles

NAD 83 State Plane Zone 6

Note: Parcels from Riverside County Parcel Assessor 2015.

Parcels Overlapping the Adjudication Boundary

Figure 1



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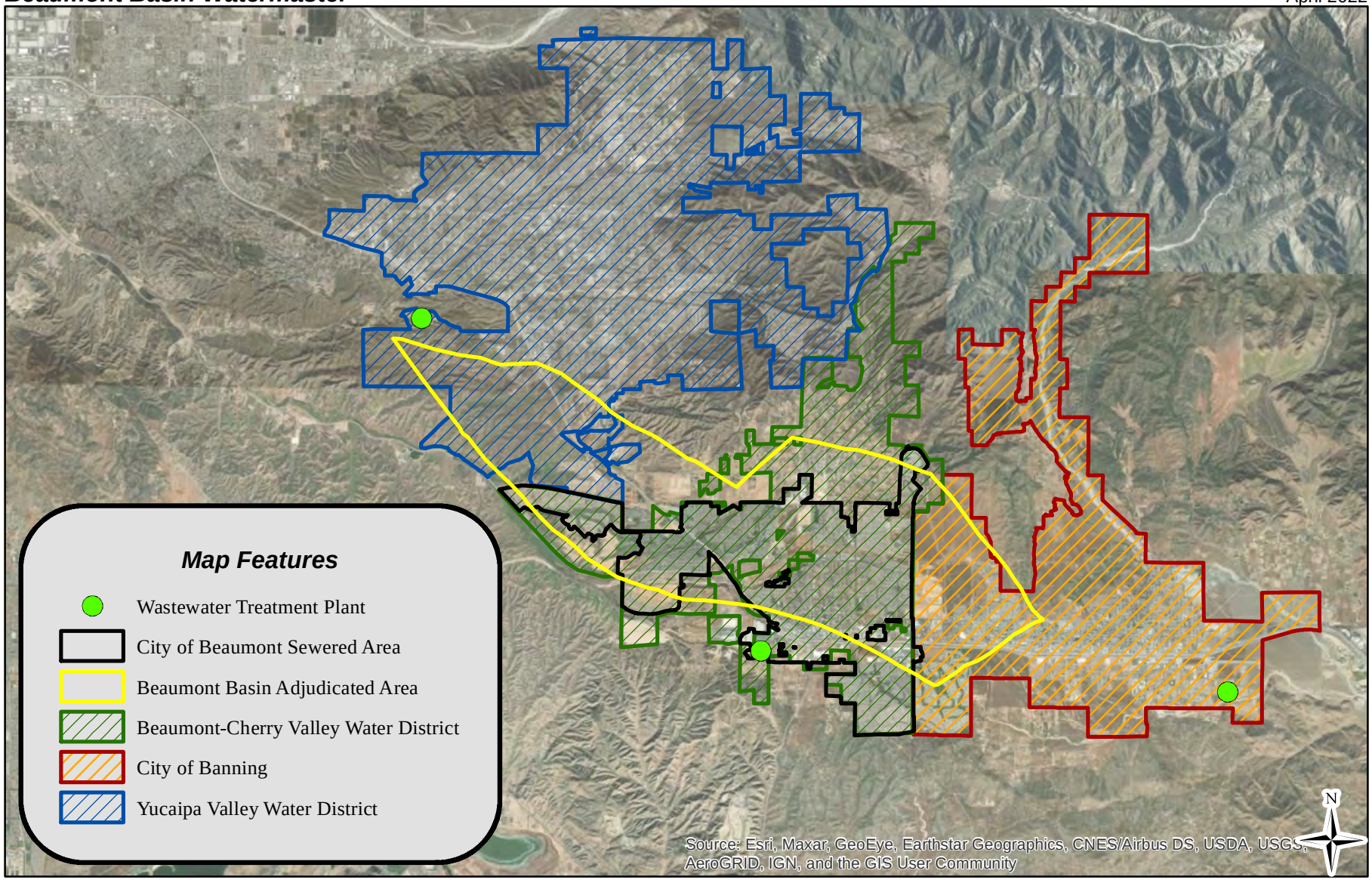
Notes: Sewer area is modified from UCR Nitrate Study, 2012 and Sewer manhole locations provided by the City of Beaumont. Land use is modified from 2010 Land Use Google Aerial Imagery.

2010 Land Use

Figure 2

Beaumont Basin Watermaster

April 2022



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0 1 2 4 Miles

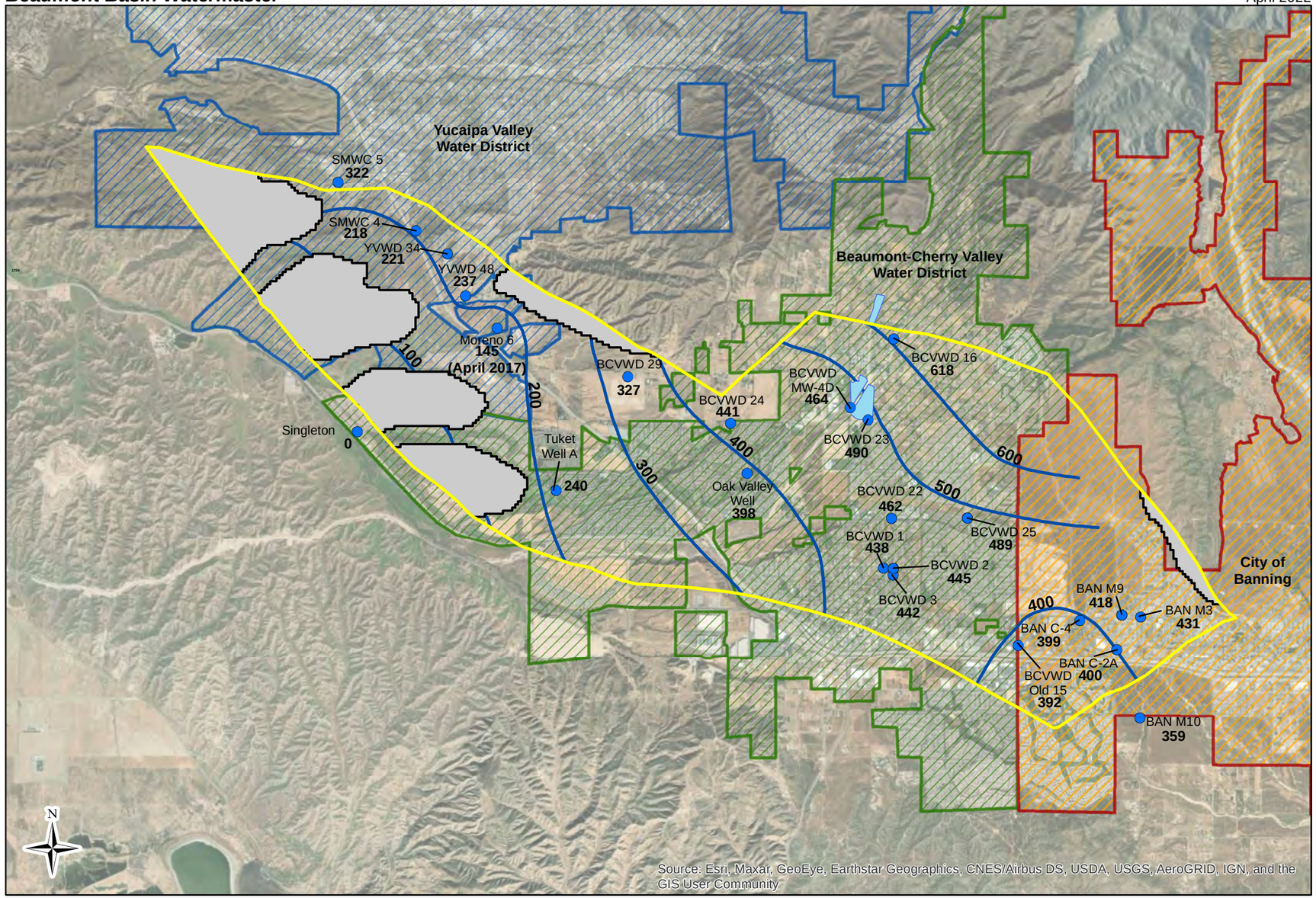
NAD 83 State Plane Zone 6

Note: Sewer area is modified from UCR Nitrate Study, 2012 and Sewer manhole locations provided by the City of Beaumont.

Appropriator Areas and City of Beaumont Sewered Area

Figure 3

Return Flow Accounting Methodology for the Beaumont Basin



Map Features

- Well with Depth to Water (ft bgs)
- 400 Depth to Groundwater Contour (ft bgs)
- No Flow
- Yucaipa Valley Water District
- Beaumont-Cherry Valley Water District
- City of Banning
- Artificial Recharge Facility
- Beaumont Basin Adjudicated Boundary

0 0.5 1 2 Miles

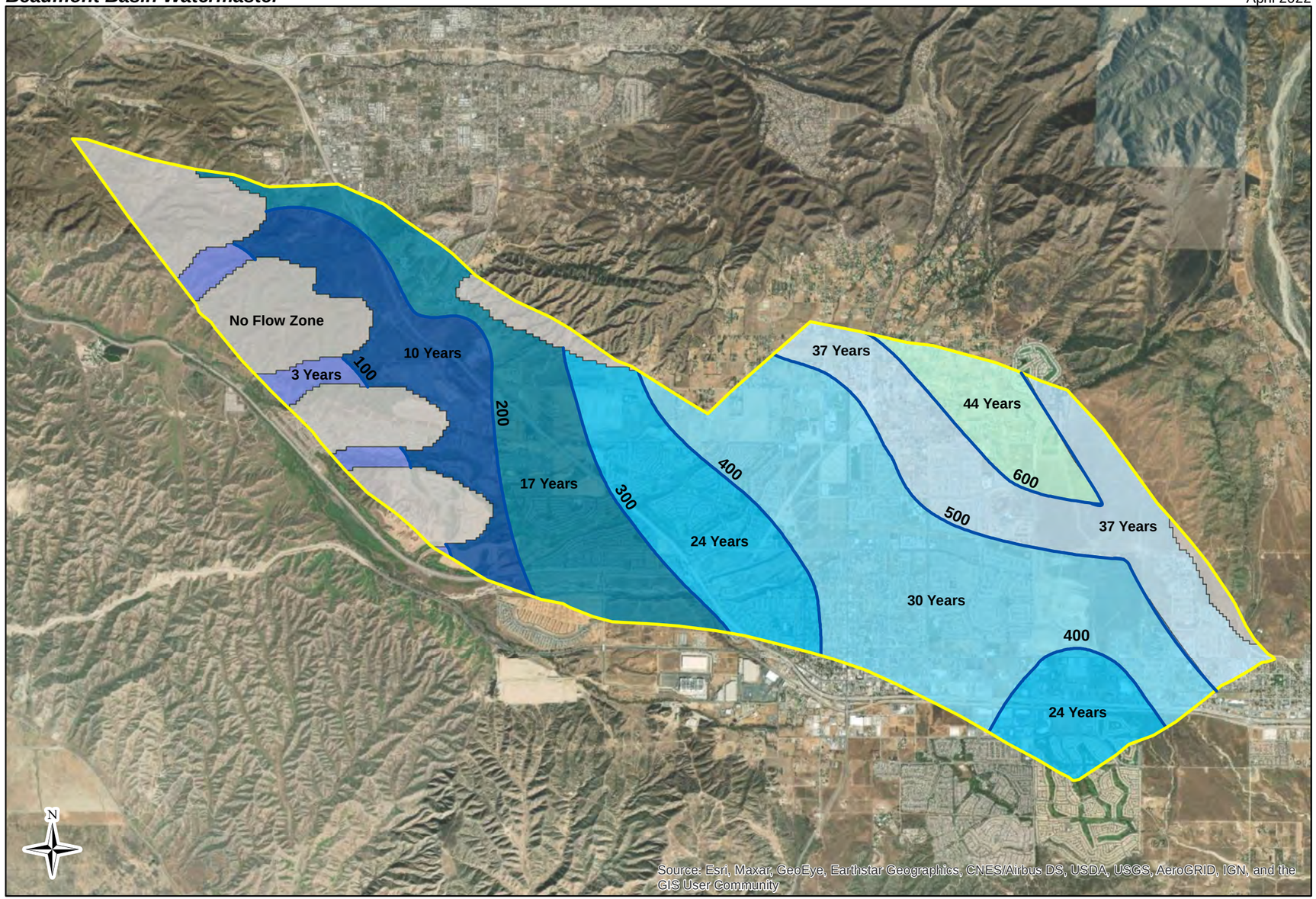
NAD 83 CA State Plane Zone 6

Thomas Harder & Co.
Groundwater Consulting
in association with Alda, Inc.

Depth to Groundwater Contours December 2017

Figure 4

Return Flow Accounting Methodology for the Beaumont Basin



Map Features

- 400 — Depth to Groundwater Contour (ft bgs)

Return Flow Lag Time to Groundwater Table

- 3 Years
- 10 Years
- 17 Years
- 24 Years
- 30 Years
- 37 Years
- 44 Years
- No Flow
- Beaumont Basin Adjudicated Boundary

0 0.5 1 2 Miles

NAD 83 CA State Plane Zone 6

Thomas Harder & Co.
Groundwater Consulting
in association with **Alda, Inc.**

Return Flow Lag Time Zones

Figure 5

Attachment A

Analysis of Return Flow Impacts on Groundwater Quality

Technical Memorandum

To:	Mr. Hannibal Blandon Alda, Inc.
From:	Jim Van de Water, P.G., CH.G. Thomas Harder & Co.
Date:	06-Apr-22
Re:	Analysis of Return Flow Impacts on Groundwater Quality in the Beaumont Basin

1.0 INTRODUCTION

Concentrations of total dissolved solids (TDS or "salt") have been increasing in some groundwater wells within the Beaumont Basin (Thomas Harder & Company [TH&Co], 2019[1], **Figure 1**). It has been postulated by some stakeholders that the increase of TDS in groundwater may be attributable to high TDS concentrations in "return flow" water[2]. If true, the concern has been raised that, left unchecked, TDS concentrations may increase in some areas to unacceptable levels from a consumer and/or regulatory standpoint – particularly within the Adjudication Area (the boundaries of which are also shown on **Figure 1**). This report presents an analysis to address this concern.

1.1 Purpose and Scope

The purpose of this analysis is to forecast TDS concentrations throughout the Beaumont Basin through 2032. Given the availability of data through 2019, the forecast is therefore a 13-year forecast (i.e., January 2020 through December 2032).

The scope of this analysis includes the use of the calibrated groundwater flow model (GFM), which TH&Co has maintained and updated annually since 2013, in association with a solute transport model (STM). The most recent version of the GFM extends through 2019. An earlier version of

[1] TH&Co, 2019. Draft Return Flow Accounting Methodology for the Beaumont Basin Adjudicated Area. Technical Memorandum submitted Alda, Inc. July 29th.

[2] Return flow water is that portion of water applied at the ground surface (e.g., rainfall, agricultural and/or landscape irrigation/watering, and recharge facilities) that makes its way downward through the vadose zone to the water table. That is, return flow is that portion of water applied at the surface that is: 1) not consumed by evaporation and/or transpiration and 2) not taken up into plant storage and/or vadose zone moisture storage.

the GFM, as documented in TH&Co (2015)[3], included a 20-year forecast based on measured data through 2012 and assumed future hydrologic conditions to obtain forecasted groundwater elevations from 2013 through 2032. Given the availability of actual (measured) data from 2013 to 2019 that has already been incorporated into the GFM via the annual updates, the input files for the GFM were modified to include the assumed future hydrologic conditions for the period spanning 2020 through 2032. This revised GFM was then used to generate an input file containing flow terms required by the STM. Input files in which TDS concentrations are specified were then developed for the STM based on statistical methods. The spatial configuration of the return flow areas in the GFM were then used without modification as TDS source terms in the STM. After conducting test simulations to ensure proper functionality of the STM, the TDS concentrations and timing of TDS impacts to groundwater for each return flow area were adjusted using a manual iterative approach ("trial-and-error" calibration) by varying parameters specific to the STM until a reasonable best-fit to historical TDS concentrations were achieved. Upon completion of the calibration, a forecast run was conducted to provide model-predicted TDS concentrations through 2032.

As such, the scope can be summarized as follows:

1. Modify the GFM to include the 2020 to 2032 forecast;
2. Using the modified GFM developed in the previous step, generate the flow term file required by the STM;
3. Develop input files for the STM;
4. Calibrate the STM;
5. Run the STM forecast simulation; and
6. Document the results of this analysis in this technical memorandum.

1.2 Types and Sources of Data

The GFM used in the analysis incorporates a comprehensive hydrogeological database of the Beaumont Basin. The types of data used to develop the model include geology, soils/lithology, groundwater levels, hydrogeology, surface water hydrology, and groundwater recharge and pumping, as summarized in TH&Co (2015) and annual update reports that have been submitted since 2014 and most recently, in 2020 (TH&Co, 2020[4]).

Groundwater quality data, on which the STM is based, were provided by the appropriators and overliers within the Beaumont Basin and the San Gorgonio Pass Water Agency (SGPWA).

[3] TH&Co, 2015. 2013 Reevaluation of the Beaumont Basin Safe Yield. Submitted to Alda, Inc. April 3rd.
[4] TH&Co, 2020. Evaluation of Groundwater Conditions and Operating Safe Yield for the Beaumont Basin – Calendar Year 2019. Technical Memorandum submitted to Alda, Inc. May 20th.

1.3 Methodology

The GFM described in TH&Co (2015 and 2020) used the United States Geological Survey (USGS) code MODFLOW-2005[5]. For this analysis, an updated version of MODFLOW-2005 known as MODFLOW-NWT[6] was used and employs a forecast period the spans 2020 through 2032 (i.e., a 13-year forecast period) based on the forecast period documented in TH&Co (2015) and described in the following subsection.

The resulting GFM was then coupled to the USGS solute transport code MT3D-USGS[7] using the USGS's "ModelMuse" graphical user interface (GUI)[8]. The MT3D-USGS transport code used output from the GFM, along with user-specified TDS concentrations and other transport parameters described below, to forecast future TDS concentrations at selected locations throughout the Beaumont Basin.

2.0 GROUNDWATER FLOW MODEL (GFM)

As the GFM is described extensively in TH&Co (2015) and the subsequent annual reports, discussion of the GFM in this technical memorandum is limited to the forecast period and its coupling to the STM through a flow term file.

2.1 GFM Forecast Period

The GFM documented in TH&Co (2015) used measured data through 2012 and assumed future hydrologic conditions to obtain a 20-year forecast of groundwater elevations from 2013 through 2032. Given the availability of actual (measured) data for the 7-year period spanning 2013 to 2019 already incorporated in the GFM, only the last 13 years of the forecast period (i.e., 2020 through 2032) was appended to the GFM to create the forecasting model used in this analysis. In addition to a time discretization file, future hydrologic conditions (and therefore the forecast itself) are specified by parameter values within head and flux boundary condition files in the GFM. These files are as follows:

1. general head file (head-dependent flux boundary conditions);
2. evapotranspiration file (head-dependent flux boundary conditions);
3. well file (flux boundary conditions);

[5] Harbaugh, A.W., 2005, MODFLOW-2005, The U.S. Geological Survey modular ground-water model—the Ground-Water Flow Process: U.S. Geological Survey Techniques and Methods 6-A16.
[6] Niswonger, R.G., Panday, Sorab, and Ibaraki, Motomu, 2011, MODFLOW-NWT, A Newton formulation for MODFLOW-2005: U.S. Geological Survey Techniques and Methods 6–A37, 44 p.
[7] Bedekar, Vivek, Morway, E.D., Langevin, C.D., and Tonkin, Matt, 2016, MT3D-USGS version 1: A U.S. Geological Survey release of MT3DMS updated with new and expanded transport capabilities for use with MODFLOW: U.S. Geological Survey Techniques and Methods 6-A53, 69 p., *http://dx.doi.org/10.3133/tm6A53*.
[8] Winston, R.B., 2009, ModelMuse—A graphical user interface for MODFLOW–2005 and PHAST: U.S. Geological Survey Techniques and Methods 6–A29, 52 p., available only online at http://pubs.usgs.gov/tm/tm6A29. Updated Version 4.3.0.14 (September 28, 2020; ModelMuse: A Graphical User Interface for Groundwater Models (usgs.gov)).

4. streamflow routing file (head-dependent flux boundary conditions);
5. recharge file (flux boundary conditions); and
6. constant head file (head boundary conditions).

The first four files (i.e., general head, evapotranspiration, well, and streamflow routing files) assume identical (repeating) annual conditions throughout the 13-year forecast period. The remaining two files (i.e., the recharge and constant head files) assume conditions that differ from year to year throughout the forecast period. Further details regarding the forecast assumptions are documented in TH&Co (2015).

2.2 GFM Flow Term File

The MT3D-USGS code itself does not contain a flow simulator. Instead, this code is a stand-alone transport simulator that can be used with most variants of MODFLOW, including MODFLOW-NWT as used in this analysis. The linkage between MODFLOW-NWT and MT3D-USGS is through an add-on package (the LMT package) that saves the flow solution required for the transport simulation (i.e., the 'FTL' file).[9] The FTL file contains flow terms associated with:

- flow into and out of constant head cells;
- flow into and out of general head cells;
- flow from wells;
- inflow of water due to recharge (downward flow across the ground surface);
- removal of water due to evapotranspiration (upward flow across the ground surface); and
- flow into and out of streams.

Because these terms are provided across the face of every model cell for every time step of the GFM, the FTL can be quite large. Fortunately, only one FTL file was needed for this analysis as only one set of hydrogeologic stresses was evaluated. That is, the GFM was only run a single time to produce a single FTL. If alternative pumping or recharge scenarios were evaluated, separate FTL files would be required for each alternative scenario.

3.0 SOLUTE TRANSPORT MODEL (STM)

As noted above, the STM is based on the MT3D-USGS code. The input files (a.k.a. "packages") for the STM, as required by MT3D-USGS, are as follows:

- BTN (basic transport package);
- SSM (source-sink mixing package);

[9] Zheng, C., Hill, M.C., and Hsieh, P.A., 2001, MODFLOW-2000, the U.S. Geological Survey Modular Ground-Water Model: User Guide to the LMT6 Package, the Linkage with MT3DMS for Multi-species Mass Transport Modeling: U.S. Geological Survey Open-File Report 01–82, 43 p.

- ADV (advection package);
- DSP (dispersion package); and
- GCG (generalized conjugate gradient solver package).

3.1 BTN Package

The BTN package handles basic tasks that are required by the STM. Among these tasks are definition of the simulation problem (i.e., layers, rows, and columns and identification of active and inactive cells), output times and locations, appropriate transport step size, and porosity. Porosity was a calibration parameter for this analysis and was initially assumed to be 0.25. Initial and boundary conditions with respect to TDS concentrations are also specified in this package and are described the subsections below.

3.1.1 Initial Concentration Conditions

Like the GFM, the starting time for the MT3D-USGS simulation is January 1, 1927. For this analysis, it was assumed that: 1) extensive residential, commercial, and agricultural development of the Beaumont Basin began in 1935 and 2) based on TH&Co (2015), return flow from this development did not reach the water table until 1960 (i.e., a 25-year "delay"). That is, ambient conditions with respect to TDS concentrations were assumed to have prevailed throughout the Beaumont Basin between 1927 until 1960. Put another way, starting in 1960, there existed the possibility that return flow could cause TDS concentrations to increase in the Beaumont Basin.

To specify initial conditions, TH&Co statistically evaluated historical TDS concentration data for 92 wells (**Appendix A**). The locations of wells for which TDS data were provided are shown on **Figure 1**. **Appendix B** contains figures that show the locations of wells for which TDS concentration data are available for each decade spanning 1960 to 2000. TDS concentration data were provided as far back as January 1, 1955 and as recently as November 30, 2011. **Table 1** provides the names of those wells that are within the Adjudication Area, whether there were sufficient TDS concentration data points to apply statistical methods (after removal of low and high outliers at a 5% significance level)[10], and whether the data exhibited a statistically significant trend (i.e., increasing or decreasing at a 5% significance level)[11]. As shown in the table, the datasets for 55 of the 92 wells were sufficiently large to assess trends. Of those 55 wells, 7 of them (Old Slack, YVWD 35, Fisherman's Retreat #1, BCVWD 02, BAN C-4, SMWC 05, and BCVWD 16) demonstrated an increasing trend in TDS concentrations. The substantive findings of the statistical analysis are displayed on **Figure 2**.

[10] Dixon's outlier test was used for wells having less than 25 records whereas Rosner's outlier test was used for wells having at least 25 records. The datasets were also qualitatively assessed using Q-Q plots and box-and-whisker plots.
[11] The Theil-Sen method was used to conduct the trend analysis.

The mean (arithmetic average) TDS concentrations of those wells with both sufficient data and which did not demonstrate a statistically significant trend were used to establish the initial (January 1, 1927) TDS concentration (ambient) conditions. Specifically, using each well as a control point, values were estimated between control points through interpolation (specifically, kriging) using ArcGIS (ESRI, 2009[12]). The resulting interpolated raster file was then used as the initial TDS concentration conditions (see **Figure 3**). These ambient values are shown in the last column of **Table 1**.

The approach described above for establishing initial TDS concentration conditions assumed sufficient time had passed for TDS concentrations to have demonstrated an increasing trend if one indeed exists. That is, if no trend was demonstrated, it is assumed return flow volumes and/or TDS concentrations were insufficient to have impacted groundwater (i.e., ambient, pre-development conditions prevail).

3.1.2 Concentration Boundary Conditions

All TDS concentration boundary conditions were specified in the SSM package described below in **Section 3.2**. TDS concentration boundary conditions were specified at:

- all perimeter specified head and flux boundaries prescribed in the GFM; these boundaries include constant and general head boundaries and mountain front/block recharge wells; and
- all areal (plan-view) recharge boundaries.

3.2 SSM Package

All perimeter specified head and flux boundaries were assigned a constant TDS concentration equal to the average (ambient) value established by the interpolation procedure described in **Section 3.1.1**. This constant TDS concentration was set to a single value (the ambient value) for the entire simulation (i.e., 1927 through 2032) and remained unchanged through the calibration process described below in **Section 4**.

The TDS concentrations at the areal recharge boundaries were specified using 30 'return flow zones' (RFZs) that cover the entire model domain (**Figure 4**) and are an integral part of the GFM. Details regarding the configuration of the RFZs is described in TH&Co (2015). TDS concentrations were temporally varied and with respect to magnitude in each individual RFZ as a 'specified mass-loading' boundary as part of the calibration process described below in **Section 4**. This approach was taken to simulate mixing of TDS in return flow waters with groundwater in a more representative way and in accordance with how MT3D-USGS simulates solute transport.

[12] ESRI, 2009. ArcGIS 10.6.1.

3.3 ADV Package

The ADV package directs the STM which advection solution to use and the Courant number. Additional items can also be specified in this package depending on the advection solution chosen.

For this analysis, the third-order total-variation-diminishing (TVD) scheme for solving the advection term was used based on experience and as noted by the original code developer[13]. TVD is mass conservative but does not introduce excessive numerical dispersion and artificial oscillation that can occur with other available solution schemes.

The Courant number is the number of cells (or fraction of a cell) advection is allowed in any direction in one transport step. There is no limit on its value, but for accuracy reasons, it is generally not set much greater than one. For this analysis, the Courant number was set to the default value of 1 based on performance and experience. For the TVD scheme used in this analysis, the Courant number is also a stability constraint which must not exceed one (and is automatically reset to one by the code if a value greater than one is specified).

3.4 DSP Package

Longitudinal, transverse, and vertical dispersivities (α_L, α_T, and α_Z; expressed in units of feet) and diffusion coefficients (which are expressed in units of feet^2/day) are specified in the DSP package. In planview or cross-sectional view, dispersivities control the degree to which a "plume" takes on an elliptical shape; the higher the dispersivity, the more elongated the plume. As such, dispersivity also controls the slope of the concentration versus time plot. The higher the dispersivity, the smaller the slope of the concentration versus time plot. Dispersivities are associated with advection (and therefore hydraulic gradients in part) and, as such, have a significantly larger influence on the model forecasts than diffusion coefficients, the latter of which are associated only with concentration gradients. Dispersivities are typically adjusted during calibration with the initial value of α_L set to one-tenth the cell dimension, α_T set to one-tenth α_L, and α_Z set to one-tenth α_T. Given the 164-foot by 164-foot (i.e., 50 meters by 50 meters) cells used in the GFM, α_L, α_T, and α_Z were initially set to 16, 1.6, and 0.16 feet in all model cells, respectively. Diffusion was ignored in this analysis (i.e., it was set to 0 feet^2/day in all model cells) given the expected dominance of advection.

[13] Zheng, Chunmiao, and Wang, P. Patrick. (1999). "MT3DMS: A modular three-dimensional multispecies transport model for simulation of advection, dispersion, and chemical reactions of contaminants in groundwater systems; documentation and user's guide," Contract Report SERDP-99-1, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

3.5 GCG Package

The GCG solver package must now be used in every simulation because the dispersion, sink/source and reaction terms are now always solved by the implicit finite-difference method, regardless of the method used to solve the advection term.

Settings in the GCG package were left at their default values as prescribed in the GUI for this analysis as experience has shown them to be generally reliable and result in reasonably low mass balance errors.

4.0 STM CALIBRATION AND FORECAST SIMULATION

Given the overall model setup and to ensure reasonable future forecasts and model stability, calibration of the STM and the STM forecast simulation were conducted concurrently.

4.1 STM Calibration

Calibration of the STM involved a manual iterative approach ("trial-and-error" calibration) in which parameters specific to the STM were varied until an acceptable best-fit to historical (January 1955 through July 2011) TDS concentrations were achieved in selected 'calibration target' wells. The locations of the target calibration wells are shown in **Figure 5**. No GFM parameters, including the geometry and recharge rates for each RFZ, were adjusted during calibration.

The STM parameters that were varied, and their impact on simulated TDS concentrations, are summarized below.

- Longitudinal dispersivity (α_L): This parameter was varied from its initial value of 16.4 feet. A value of 10 feet was found to provide a slightly better fit to the historical data and was therefore used for the forecast.
- Mass loading concentration: This was the primary calibration parameter. As described above, it is the TDS concentration and associated time schedule associated with the RFZs. The final RFZ-specific calibrated values for this parameter are summarized in **Table 2**. The mass loading concentrations input to the STM are listed relative to ambient (January 1927 through December 1959) TDS concentrations. As shown the table, mass loading concentrations throughout the model domain (i.e., all 30 RFZs) ranged from 0.8 to 1.5 times the ambient concentration. That is, if the average ambient concentration over all model cells comprising a given RFZ was 300 milligrams per liter (300 mg/L) and the value

listed in the table is "Ambient x 1.2", the average return flow zone TDS concentration used to calibrate the STM was 300 mg/L x 1.2 or 360 mg/L.[14]

Calibration hydrographs (model-predicted and measured TDS concentrations versus time) are provided in **Appendix C**. This appendix also includes model-predicted TDS concentrations versus time for several additional wells for which no TDS are available to provide more extensive areal coverage of the model domain. The fits were generally good, and particularly for the notable increase in BCVWD 16.

4.2 STM Forecast Simulation

The forecast simulation, which can be described as an extension of the calibration simulation, forecasts TDS concentrations through 2032. As such, the calibration hydrographs included as **Appendix C** show the forecasted TDS concentrations. The mass contributions of each RFZ to the Adjudication Area based on the model forecast are listed in **Table 3** and shown on **Figure 6**. The table lists, from left to right, the values associated with the calculation of the mass contributions: 1) area within the Adjudicated Area, 2) return flow (recharge) rate, and 3) the calibrated concentration in the return flow. The mass contribution is directly proportional to these values; that is, the larger these values, the large the mass contribution. The mass loading rates are then provided in the table for ambient conditions (January 1927 through December 1959) to provide the baseline needed to calculate the mass contributions, which are presented in the two righthand-most columns in the table. While the two largest mass contributors (the Noble Creek Recharge Basin and Little San Gorgonio Creek / Noble Creek) are comparatively small in area, they have higher return flow concentrations and significantly higher return flow rates in comparison to the other RFZs.

The average TDS concentration within the Adjudication Area versus time is shown as the blue line on **Figure 7**. The dashed line on the figure show the basin-wide water quality objective (330 mg/L) and basin-wide TDS concentrations based on 20-year averages as reported to, and published by, the California State Regional Water Quality Control Board (2014)[15]. The data used to arrive at these reported values are as follows:

- Water Quality Objective (330 mg/L): Data sampling period was 20 years (1954-1973);
- 1997 Ambient (290 mg/L): Data sampling period was 20 years (1978-1997);
- 2003 Ambient (260 mg/L): Data sampling period was 20 years (1984-2003);

[14] Given that return flow zone TDS concentrations vary from cell to cell due to the interpolation procedure described above in **Section 3.1.1**, the cell-specific return flow zone TDS concentrations comprising this particular RFZ were individually multiplied by 1.2 in this example.

[15] California State Regional Water Quality Control Board, 2014. Water Quality Objectives, Ambient Water Quality, and Assimilative Capacity for TDS table. Prepared by Wildermuth Environmental, Inc. Available online at: https://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/docs/SMP/2014-0005/A-C_Tables_with_2012_data.pdf

- 2006 Ambient (260 mg/L): Data sampling period was 20 years (1987-2006);
- 2009 Ambient (280 mg/L): Data sampling period was 20 years (1990-2009); and
- 2012 Ambient (290 mg/L): Data sampling period was 20 years (1993-2012).

Thus, the reported average TDS concentration ranges between 260 and 290 mg/L. The forecasted TDS concentration in 2032 within the Adjudication Area (approximately 280 mg/L) falls within this range and results in a forecasted 'assimilative capacity' of approximately 50 mg/L (i.e., 330 mg/L – 280 mg/L = 50 mg/L).

5.0 UNCERTAINTIES, FINDINGS, AND RECOMMENDATIONS

5.1 Uncertainties

All model forecasts are uncertain to some degree because of simplifying assumptions inherent in the governing equations on which the model codes are based, simplifying assumptions made during model development, and imperfections in the calibration. Because the forecasts are uncertain, any calculations that rely on them (e.g., mass contributions presented in **Table 3** and projected concentrations throughout the Adjudication Area presented on **Figure 7**) are also uncertain.

It is generally accepted that solute transport models harbor greater uncertainties than groundwater flow models. That said, those areas in which the GFM is not as well-calibrated will transmit more uncertainty to the STM.

Simplifying assumptions are required due to the complex nature of the subsurface. That is, subsurface model parameters (e.g., hydraulic conductivities and storage coefficients), which are heterogeneous (spatially variable) and anistropic (directionally variable) at every scale, are averaged over comparatively large distances (i.e., the length and width of each model cell) and are interpolated from field data over even larger distances (e.g., commonly miles). Measurement errors (e.g., errors in measured groundwater levels and reported TDS values due to sampling and/or analytical errors) also lead to uncertainty. By way of example, measurement and interpolation errors may explain why the reported basin-wide averages shown in **Figure 7** are reported to the nearest 10 mg/L.

The overall implication is that basin-scale models such as the GFM and STM cannot be perfectly calibrated - even if infinite time and resources were available. Therefore, there exist numerous sets of parameters that can similarly calibrate the models. Evaluation of multiple parameter sets is known as predictive uncertainty analysis and was beyond the scope of this effort.

Finally, the forecast presented here was based on assumed future hydrologic conditions (e.g., climate, land use, streamflows, and projected pumping) that are imperfectly known. That is,

the future is inherently uncertain. Along these same lines, it is noted that the most recent measured TDS data available for this analysis to establish the initial conditions, identify trends, and calibrate the STM were obtained a decade ago (i.e., in 2011) and commonly associated with wells within the Beaumont Cherry Valley Water District. TDS data in other areas of the Beaumont Basin were generally older. Regardless of location, the data used to calibrate the STM were dated.

5.2 Findings and Recommendations

The findings of this analysis are as follows:

1. Basin-wide TDS concentrations are forecast to increase through 2032 but remain below the Water Quality Objective of 330 mg/L;
2. The assimilative capacity forecasted for 2032 within the Adjudicated Area is estimated to be approximately 50 mg/L; and
3. The forecasted TDS concentrations are within the reported historical range based on 20-year averages and appear reasonable given the known increased development within the Beaumont Basin and measured TDS concentrations.

5.3 Recommendations

It is recommended that more frequent and widespread data collection efforts be undertaken on an ongoing basis. The overall goal of the recommendations listed below is to reduce the uncertainty associated with forecasting analyses of TDS concentrations that may be conducted at a future date. Specifically:

1. Obtain TDS concentrations at additional wells to give broader spatial coverage throughout the Beaumont Basin and on an ongoing basis;
2. Obtain TDS concentrations of water delivered to recharge facilities on an ongoing basis;
3. Obtain TDS concentrations in surface water bodies (e.g., creeks, streams, and recharge facilities – particularly in the vicinity of BCVWD 16) and irrigated areas (e.g., parks and golf courses) on an ongoing basis;
4. Obtain TDS concentrations at shallow wells adjacent to surface water bodies on an ongoing basis to establish any correlation between the two;
5. Revisit the GFM calibration using more recent data and, if sufficient additional TDS data can be obtained as recommended above, consider using TDS concentrations to inform GFM parameters to assist in any effort to recalibrate the GFM (and STM); and
6. Revisit the assumptions reported in TH&Co (2015) that were used to develop the future hydrologic conditions on which the forecast was based and modify as warranted based on more recent data.

Ambient TDS Values in Wells in the Beaumont Basin (mg/L)

Well	Number of Data Points	Outliers	Trend/No Trend	Ambient TDS (mg/L)
335651116590901	1	N/A	Insufficient Data	N/A
335838116582409	5	No Outliers	No Increasing Trend	244.4
335838116582501	10	No Outliers	No Increasing Trend	290.4
335838116582505	10	1 - Low	No Increasing Trend	240.3
335840116581702	2	N/A	Insufficient Data	N/A
335840116581706	1	N/A	Insufficient Data	N/A
335902116580901	1	N/A	Insufficient Data	N/A
335903116580902	1	N/A	Insufficient Data	N/A
335903116581001	1	N/A	Insufficient Data	N/A
335903116581004	1	N/A	Insufficient Data	N/A
335907116580801	2	N/A	Insufficient Data	N/A
Almo	5	No Outliers	No Increasing Trend	336.7
BAN C-2A	8	No Outliers	No Increasing Trend	227.7
BAN C-3	11	1 - Low	No Increasing Trend	190.7
BAN C-4	11	N/A	Increasing Trend	N/A
BAN M3	4	No Outliers	No Increasing Trend	263.3
BCVWD 01	35	1 - Low	No Increasing Trend	214.7
BCVWD 02	10	N/A	Increasing Trend	N/A
BCVWD 03	15	No Outliers	No Increasing Trend	202.8
BCVWD 04A	40	N/A	Increasing Trend	N/A
BCVWD 05	11	N/A	Increasing Trend	N/A
BCVWD 06	26	No Outliers	No Increasing Trend	265.8
BCVWD 07	3	N/A	Insufficient Data	N/A
BCVWD 09	5	N/A	Insufficient Data	N/A
BCVWD 10	16	No Outliers	No Increasing Trend	243.3
BCVWD 11	17	1 - High	No Increasing Trend	234.4
BCVWD 12	7	No Outliers	No Increasing Trend	248.9
BCVWD 14	10	No Outliers	No Increasing Trend	279.4
BCVWD 16	30	No Outliers	No Increasing Trend	320.0
BCVWD 18	7	No Outliers	No Increasing Trend	234.3
BCVWD 19	15	No Outliers	No Increasing Trend	251.6
BCVWD 20	9	No Outliers	No Increasing Trend	251.3
BCVWD 21	15	No Outliers	No Increasing Trend	280.0
BCVWD 22	19	1 - Low	No Increasing Trend	227.9
BCVWD 23	5	No Outliers	No Increasing Trend	266.9
BCVWD 24	4	No Outliers	No Increasing Trend	211.1

Ambient TDS Values in Wells in the Beaumont Basin (mg/L)

Well	Number of Data Points	Outliers	Trend/No Trend	Ambient TDS (mg/L)
BCVWD 25	2	N/A	Insufficient Data	N/A
BCVWD 26	3	N/A	Insufficient Data	N/A
BCVWD 29	2	N/A	Insufficient Data	N/A
Beaumont Cemetary Well 1	3	N/A	Insufficient Data	N/A
Beaumont Cemetary Well 2	3	N/A	Insufficient Data	N/A
Beaumont Irrigation District	5	N/A	Insufficient Data	N/A
Beaumont Unified School District	2	N/A	Insufficient Data	N/A
BH-19	6	No Outliers	No Increasing Trend	670.0
Bonita Vista Mutual Water Co. 1	3	N/A	Insufficient Data	N/A
Bonita Vista Mutual Water Co. 2	3	N/A	Insufficient Data	N/A
Bonita Vista Mutual Water Co. 4	4	N/A	Insufficient Data	N/A
Cherry Valley Mutual Water Co. 1	4	N/A	Insufficient Data	N/A
Cherry Valley Nursery	5	No Outliers	No Increasing Trend	263.3
Desert Lawn	4	No Outliers	No Increasing Trend	243.8
Dowling, Francis	2	N/A	Insufficient Data	N/A
Dowling Orchard Well	3	N/A	Insufficient Data	N/A
E236b	1	N/A	Insufficient Data	N/A
El Cas Lake	5	1 - Low	No Increasing Trend	667.5
Fisherman's Retreat 1	8	N/A	Increasing Trend	N/A
Fisherman's Retreat 2	8	No Outliers	No Increasing Trend	422.5
G. Witter	1	N/A	Insufficient Data	N/A
Heartland Well	9	No Outliers	No Increasing Trend	354.7
Illy, Stefan	5	No Outliers	No Increasing Trend	275.7
Joe Pistilli	5	No Outliers	No Increasing Trend	270.0
Larry Britton	5	No Outliers	No Increasing Trend	229.6
Oak Valley #1	7	No Outliers	No Increasing Trend	203.3
Oak Valley #2	3	N/A	Insufficient Data	N/A
Oak Valley Office	4	No Outliers	No Increasing Trend	246.5
Old Slack	5	N/A	Increasing Trend	N/A
Parks and Rec	1	N/A	Insufficient Data	N/A

Ambient TDS Values in Wells in the Beaumont Basin (mg/L)

Well	Number of Data Points	Outliers	Trend/No Trend	Ambient TDS (mg/L)
Ranch Well	5	1 - High	No Increasing Trend	625.0
Randy Downing	4	N/A	Increasing Trend	N/A
SanTim-1	5	No Outliers	No Increasing Trend	412.0
SanTim-2B/1	6	No Outliers	No Increasing Trend	247.7
SanTim-2B/2	6	No Outliers	No Increasing Trend	219.6
Schwenckert	7	1 - High	No Increasing Trend	855.0
Singleton Ranch 5	2	N/A	Insufficient Data	N/A
Singleton Ranch 7	5	No Outliers	No Increasing Trend	246.7
SMOA 1	2	N/A	Insufficient Data	N/A
SMOA 2	1	N/A	Insufficient Data	N/A
SMWC 2nd No. 4 Well	6	No Outliers	No Increasing Trend	191.5
SMWC 04	5	1 - High	No Increasing Trend	208.6
SMWC 05	37	N/A	Increasing Trend	N/A
SMWC 07	1	N/A	Insufficient Data	N/A
SMWC 09	1	N/A	Insufficient Data	N/A
SMWC 11	7	No Outliers	No Increasing Trend	345.9
SMWC 14	1	N/A	Insufficient Data	N/A
SMWC 16	1	N/A	Insufficient Data	N/A
Stearns, Leonard	3	N/A	Insufficient Data	N/A
Sunny Cal Ranch	3	N/A	Insufficient Data	N/A
Tukwet A	7	1 - High	No Increasing Trend	199.6
Tukwet D	6	No Outliers	No Increasing Trend	226.6
Wilkins, James	1	N/A	Insufficient Data	N/A
YVWD 34	5	No Outliers	No Increasing Trend	284.4
YVWD 35	27	N/A	Increasing Trend	N/A
YVWD 47	2	N/A	Insufficient Data	N/A
YVWD 48	13	No Outliers	No Increasing Trend	205.4

Mass Loading Calibration Summary

Return Flow Zone	Name of Facility or General Description	Mass Loading Concentration (relative to ambient concentration; see text)			Average Ambient Concentration (mg/L)[1]
		January 1927 through December 1959	January 1960 through May 2007	June 2007 through December 2032	
1	High-Density Residential	Ambient	Ambient x 1.2		241
2	High-Density Residential	Ambient			219
3	High-Density Residential	Ambient			236
4	High-Density Residential	Ambient			278
5	High-Density Residential	Ambient			254
6	Urban Landscape	Ambient			259
7	Urban Landscape	Ambient			224
8	High-Density Residential	Ambient			233
9	High-Density Residential	Ambient			292
10	Low-Density Residential	Ambient			275
11	High-Density Residential	Ambient	Ambient x 0.8		252
12	Urban Landscape	Ambient	Ambient x 1.2		299
13	Irrigated Grains	Ambient			354
14	Urban Commercial	Ambient			N/A[2]
15	Little San Gorgonio Pass Recharge Basin	Ambient		Ambient x 1.5	251

Mass Loading Calibration Summary

Return Flow Zone	Name of Facility or General Description	Mass Loading Concentration (relative to ambient concentration; see text)			Average Ambient Concentration (mg/L)[1]
		January 1927 through December 1959	January 1960 through May 2007	June 2007 through December 2032	
16	Noble Creek Recharge Basin	Ambient		Ambient x 1.5	267
17	High-Density Residential	Ambient			230
18	High-Density Residential	Ambient			230
19	High-Density Residential	Ambient			228
20	Cooper's Creek / San Timoteo Creek	Ambient	Ambient x 1.2		N/A
21	Little San Gorgonio Creek / Noble Creek	Ambient		Ambient x 1.4	285
22	Noble Creek	Ambient			269
23	Noble Creek	Ambient			228
24	Noble Creek	Ambient			241
25	Marshall Creek	Ambient			238
26	High-Density Residential	Ambient			231
27	Urban Commercial	Ambient	Ambient x 1.2		248
28	Native Vegetation	Ambient	Ambient x 1.2		244
29	Urban Landscape	Ambient			222
30	Native Vegetation	Ambient			253

Notes:

[1] Average concentrations shown are within the Beaumont Basin Adjudicated Area only.

[2] N/A = Not applicable; no part of the return flow zone is within the Adjudicated Area.

Mass Loading Contribution Summary

Return Flow Zone	Name of Facility or General Description	Area (acres; within the BBAA only)[1]	Time-Averaged Return Flow Rate (acre-ft/year)			Return Flow Concentration (mg/L)			Time-Averaged Mass Loading Rate (lbs/day)			Mass Loading Contribution Associated with Return Flow and Managed Recharge (lbs/day)	
			Jan. 1927 through Dec. 1959	Jan. 1960 through May 2007	June 2007 through Dec. 2032	Jan. 1927 through Dec. 1959	Jan. 1960 through May 2007	June 2007 through Dec. 2032	Jan. 1927 through Dec. 1959	Jan. 1960 through May 2007	June 2007 through Dec. 2032	Jan. 1960 through May 2007	June 2007 through Dec. 2032
1	High-Density Residential	135.6	27	27	30	241	289	289	49	59	64	10	14
2	High-Density Residential	241.2	21	22	124	219	219	219	34	35	202	0.9	168
3	High-Density Residential	579.6	19	20	30	236	236	236	34	35	52	0.7	18
4	High-Density Residential	197.0	2.5	34	81	278	278	278	5.2	69	168	64	163
5	High-Density Residential	356.3	7.3	26	66	254	254	254	14	49	126	35	112
6	Urban Landscape	72.0	24	24	27	259	259	259	47	47	51	0.3	4.7
7	Urban Landscape	1155.5	29	32	63	224	224	224	48	53	104	4.8	56
8	High-Density Residential	112.1	0.2	5.4	27	233	233	233	0.4	9.4	47	9.0	47
9	High-Density Residential	40.8	0.9	5.4	8.5	292	292	292	2.0	12	18	10	16

Mass Loading Contribution Summary

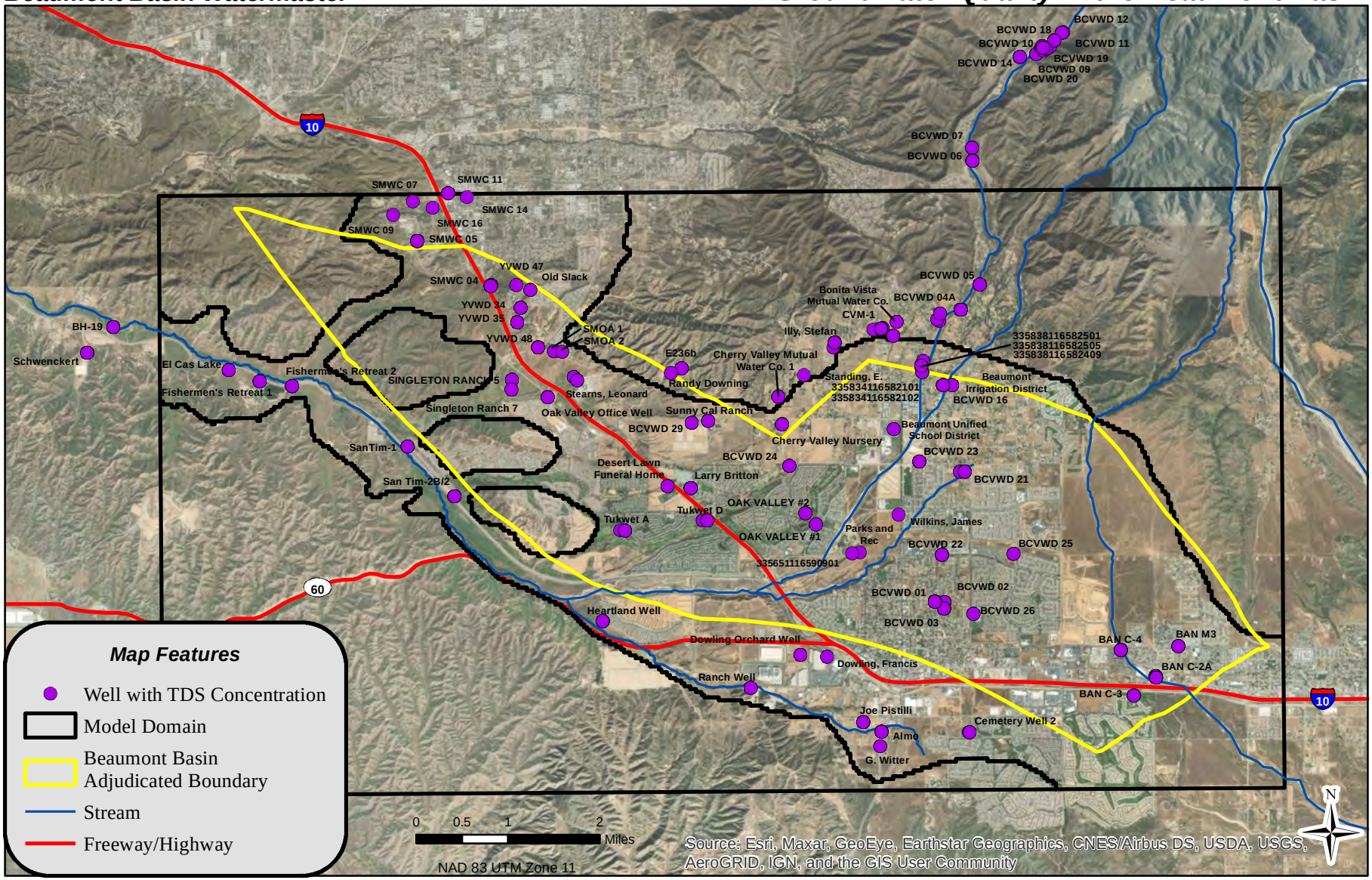
Return Flow Zone	Name of Facility or General Description	Area (acres; within the BBAA only)[1]	Time-Averaged Return Flow Rate (acre-ft/year)			Return Flow Concentration (mg/L)			Time-Averaged Mass Loading Rate (lbs/day)			Mass Loading Contribution Associated with Return Flow and Managed Recharge (lbs/day)	
			Jan. 1927 through Dec. 1959	Jan. 1960 through May 2007	June 2007 through Dec. 2032	Jan. 1927 through Dec. 1959	Jan. 1960 through May 2007	June 2007 through Dec. 2032	Jan. 1927 through Dec. 1959	Jan. 1960 through May 2007	June 2007 through Dec. 2032	Jan. 1960 through May 2007	June 2007 through Dec. 2032
10	Low-Density Residential	1238.1	116	290	488	275	275	275	238	594	999	356	761
11	High-Density Residential	637.4	15	35	116	202	202	202	28	53	174	25	146
12	Urban Landscape	47.1	0.6	18	35	299	359	359	1.2	49	94	48	93
13	Irrigated Grains	82.9	5.3	7.8	6.9	354	354	354	14	21	18	6.7	4.4
14	Urban Commercial	Not within the BBAA											
15	Little San Gorgonio Pass Recharge Basin	0.2	0.01	0.02	16	251	251	377	0.01	0.04	45	0.03	45
16	Noble Creek Recharge Basin	16.9	1.2	127	7835	267	267	401	2.4	253	23380	251	23377
17	High-Density Residential	470.7	0.6	23	21	230	230	230	1.0	40	37	39	36
18	High-Density Residential	28.4	0.3	0.3	0.4	230	230	230	0.5	0.5	0.6	0.004	0.1

Mass Loading Contribution Summary

Return Flow Zone	Name of Facility or General Description	Area (acres; within the BBAA only)[1]	Time-Averaged Return Flow Rate (acre-ft/year)			Return Flow Concentration (mg/L)			Time-Averaged Mass Loading Rate (lbs/day)			Mass Loading Contribution Associated with Return Flow and Managed Recharge (lbs/day)	
			Jan. 1927 through Dec. 1959	Jan. 1960 through May 2007	June 2007 through Dec. 2032	Jan. 1927 through Dec. 1959	Jan. 1960 through May 2007	June 2007 through Dec. 2032	Jan. 1927 through Dec. 1959	Jan. 1960 through May 2007	June 2007 through Dec. 2032	Jan. 1960 through May 2007	June 2007 through Dec. 2032
19	High-Density Residential	15.8	1.6	1.6	3.2	228	228	228	2.6	2.8	5.4	0.1	2.8
20	Cooper's Creek / San Timoteo Creek	Not within the BBAA											
21	Little San Gorgonio Creek / Noble Creek	33.9	25	116	4178	285	285	399	53	246	12403	193	12350
22	Noble Creek	No recharge assigned to this zone (Noble Creek is lined in this area)											
23	Noble Creek	55.6	16	47	51	228	228	228	27	80	87	53	59
24	Noble Creek	57.4	1.0	1.0	1.0	241	241	241	1.8	1.8	1.8	0.0004	0.0001
25	Marshall Creek	83.8	132	389	423	238	238	238	234	689	748	455	514
26	High-Density Residential	1130.1	7.3	163	307	231	231	231	13	281	528	268	516
27	Urban Commercial	510.0	73	92	136	248	297	297	135	204	300	69	165

Mass Loading Contribution Summary

Return Flow Zone	Name of Facility or General Description	Area (acres; within the BBAA only)[1]	Time-Averaged Return Flow Rate (acre-ft/year)			Return Flow Concentration (mg/L)			Time-Averaged Mass Loading Rate (lbs/day)			Mass Loading Contribution Associated with Return Flow and Managed Recharge (lbs/day)	
			Jan. 1927 through Dec. 1959	Jan. 1960 through May 2007	June 2007 through Dec. 2032	Jan. 1927 through Dec. 1959	Jan. 1960 through May 2007	June 2007 through Dec. 2032	Jan. 1927 through Dec. 1959	Jan. 1960 through May 2007	June 2007 through Dec. 2032	Jan. 1960 through May 2007	June 2007 through Dec. 2032
28	Native Vegetation	Native vegetation - not included in calculation											
29	Urban Landscape	489.0	45	45	226	222	222	222	74	75	374	1.0	300
30	Native Vegetation	Native vegetation - not included in calculation											



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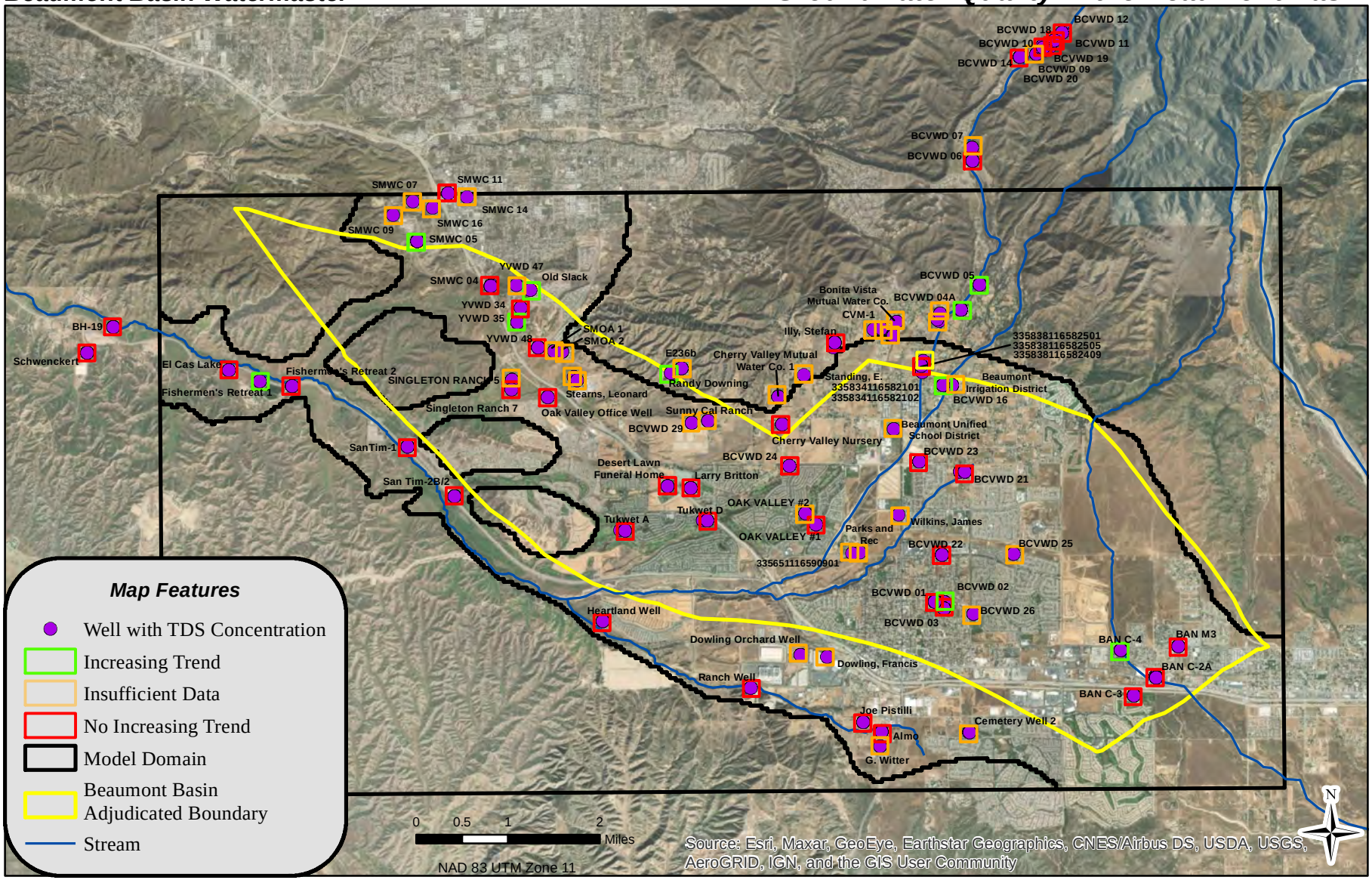
Site Location Map

Figure 1



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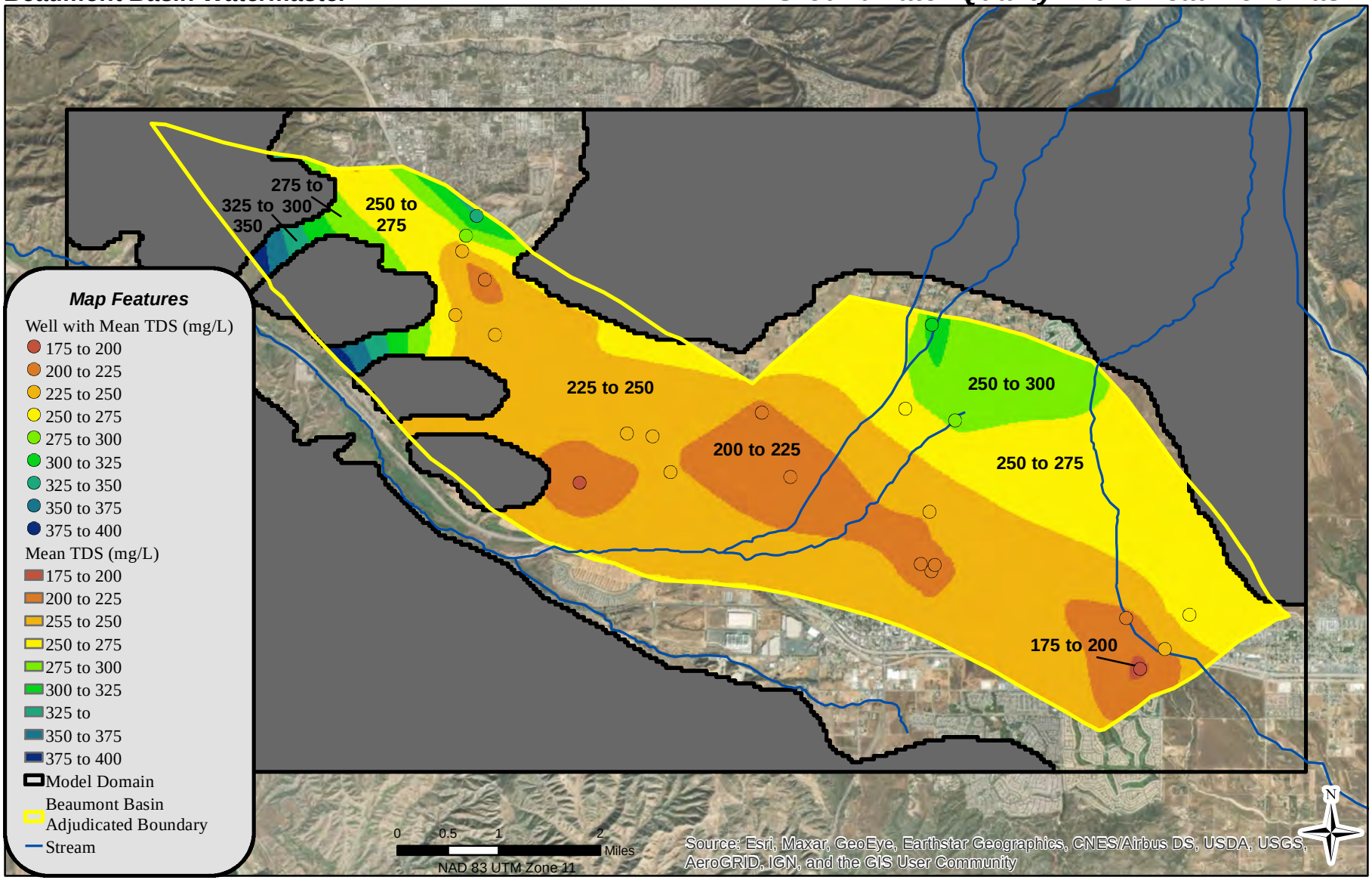
Results of Statistical Analysis

Figure 2



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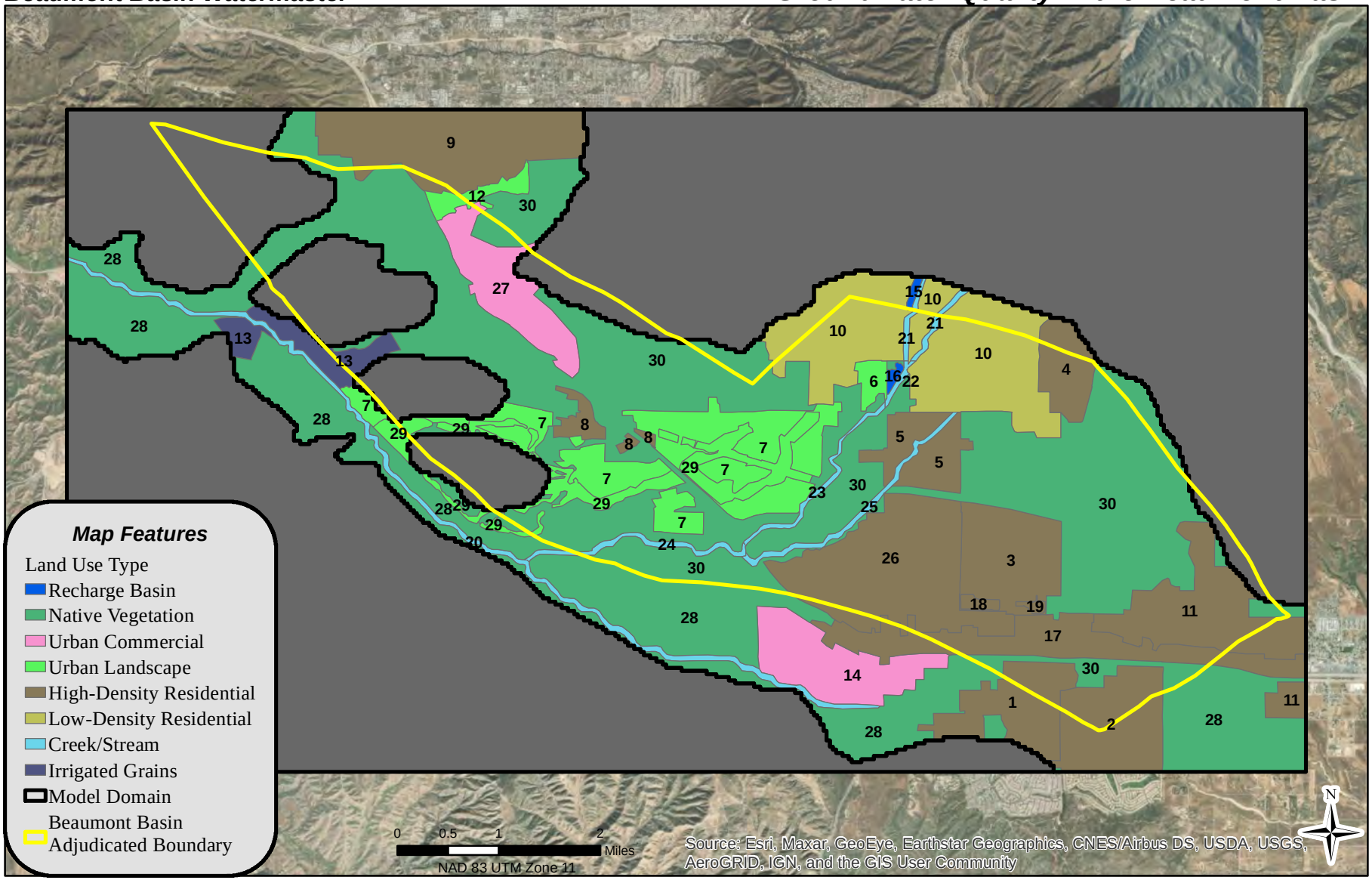
Ambient Concentrations (Initial TDS Concentration Conditions)

Figure 3



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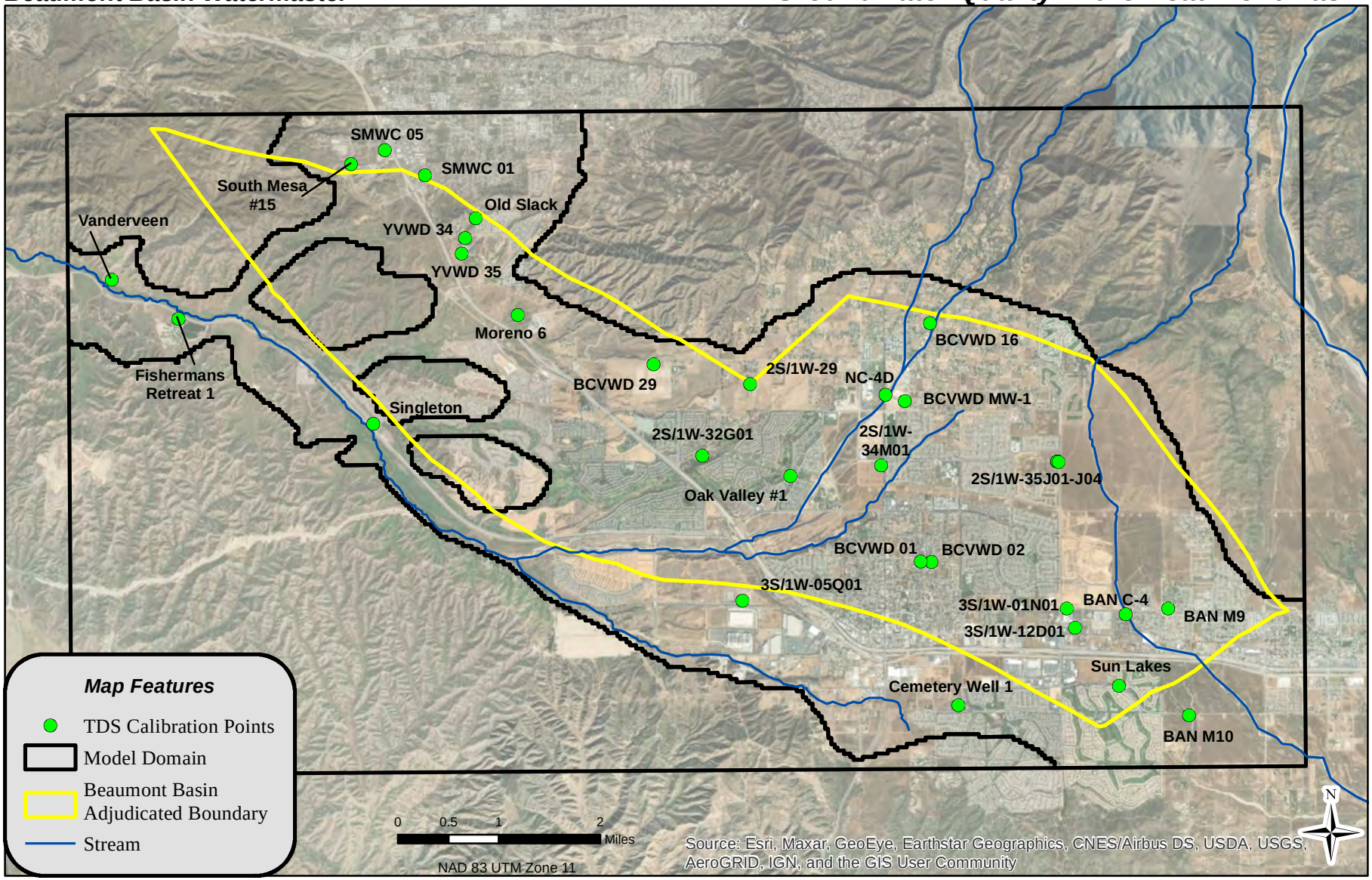
Configuration of Areal Recharge Concentration Boundary Condition Zones

Figure 4



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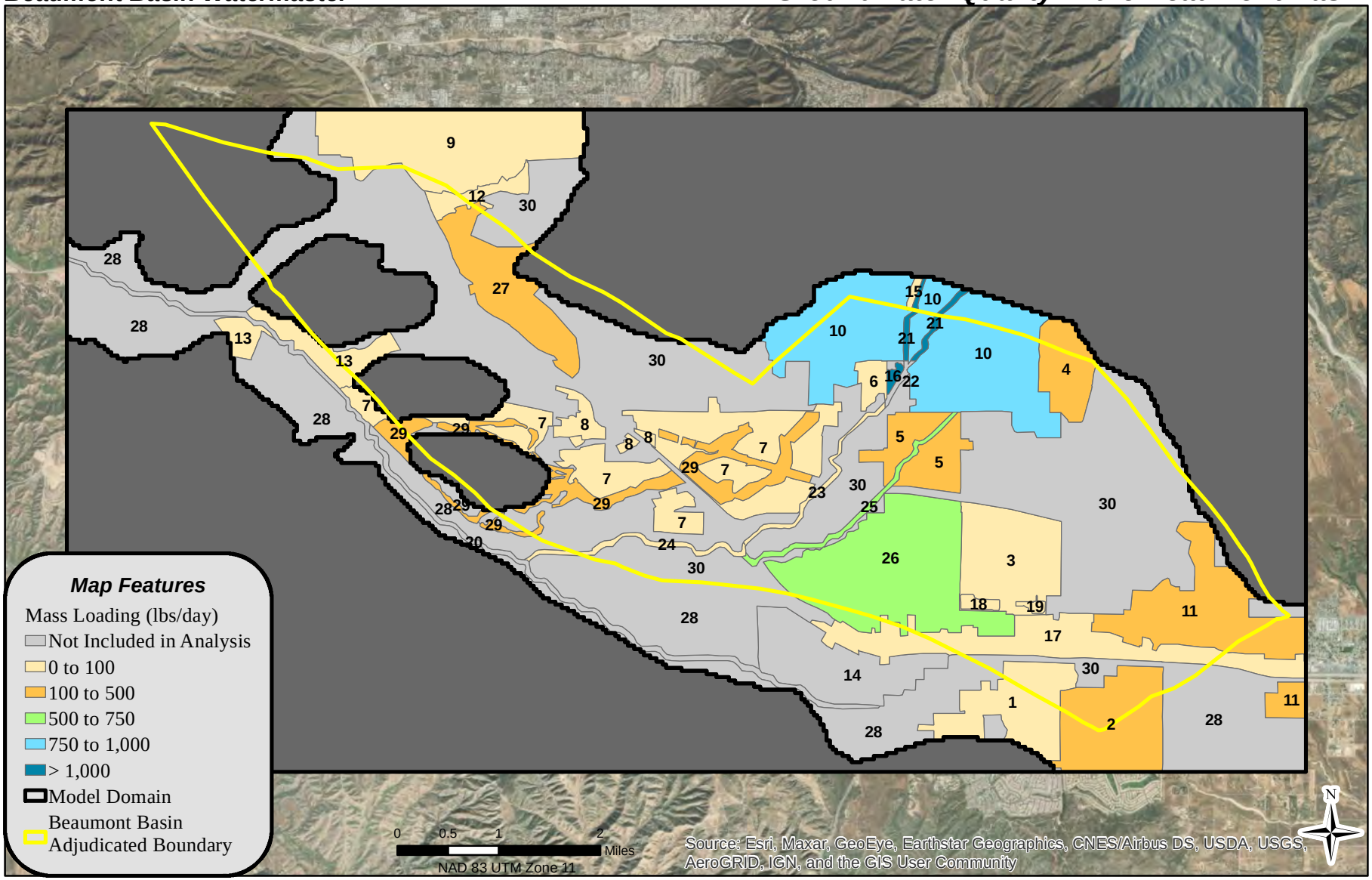
Calibration Well Locations

Figure 5



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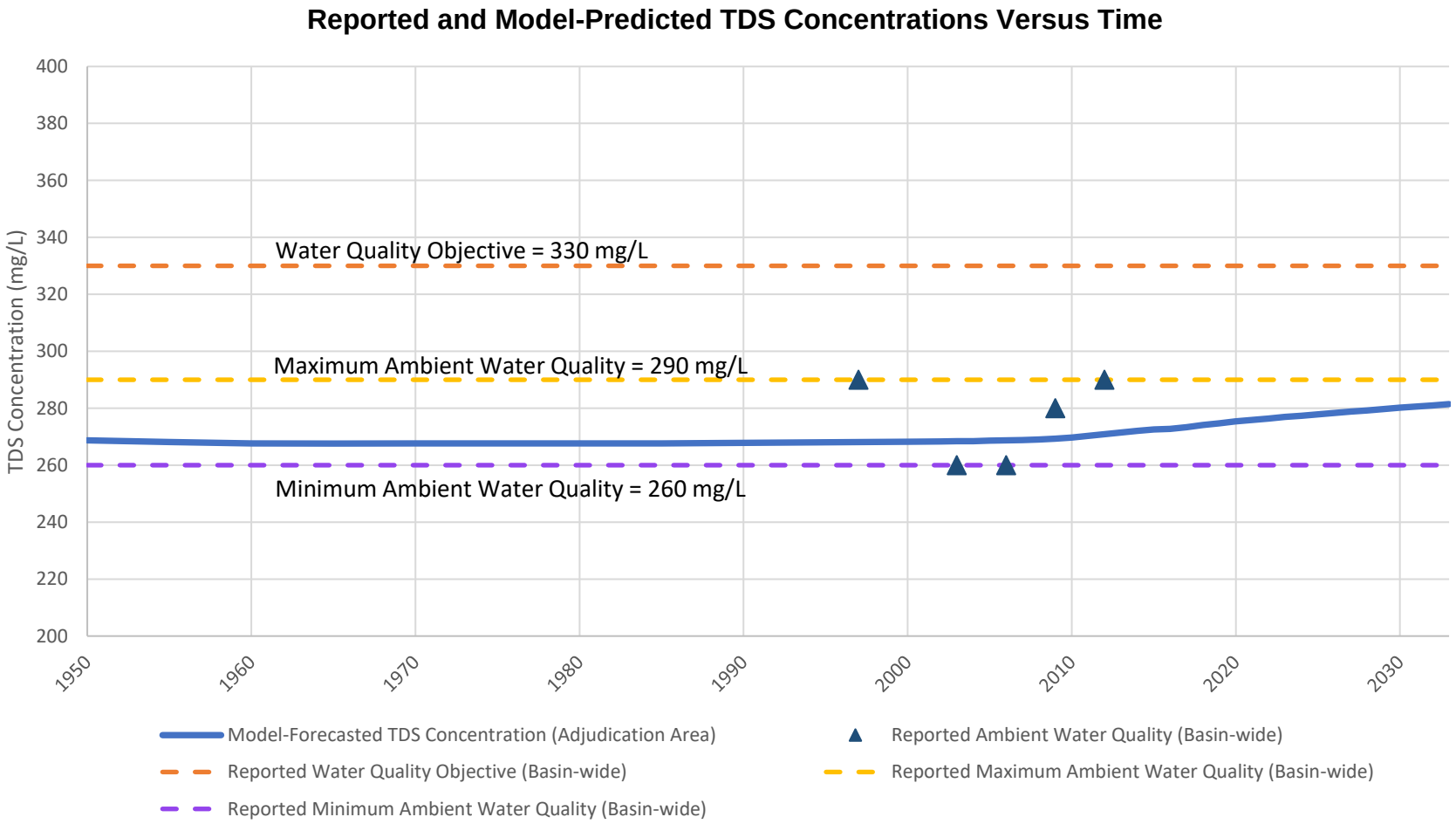
Mass Loading Contribution Associated with Return Flow and Managed Recharge (Jun 2007 through Dec 2032)

Figure 6

Figure 7



Note: Data from 'Water Quality Objectives, Ambient Water Quality, and Assimilative Capactiy for TDS' table from Wildermuth Environmental Inc, 2014. Prepared for the California State Water Resources Control Board.

Appendix A - Groundwater Quality Data

Well ID	Well Name	Owner	Sample Date	Analyte	Result	Source
1206844	1	SMOA 1	2/10/2005	TDS	240	Max Benefit
1206844	1	SMOA 1	2/8/2007	TDS	320	Max Benefit
1206854	1	Sunny Cal Ranch	9/22/2006	TDS	310	Max Benefit
1206854	1	Sunny Cal Ranch	11/13/2007	TDS	400	Max Benefit
1206854	1	Sunny Cal Ranch	11/11/2008	TDS	250	Max Benefit
1206845	2	SMOA 2	2/10/2005	TDS	300	Max Benefit
1201558	3	Stearns, Leonard	11/21/1996	TDS	260	SGPWA
1201558	3	Stearns, Leonard	7/14/2003	TDS	280	SGPWA
1003069	4	Stearns, Leonard	11/21/1996	TDS	280	SGPWA
1003069	4	Stearns, Leonard	1/15/2002	TDS	240	SGPWA
1003069	4	Stearns, Leonard	7/14/2003	TDS	260	SGPWA
1207760	335651116590901	USGS	8/28/1997	TDS	223	SGPWA
1207762	335704117014401	USGS	7/29/2005	TDS	203	SGPWA
1207766	335709117004701	USGS	4/4/2000	TDS	219	SGPWA
1207766	335709117004701	USGS	6/15/2000	TDS	221	SGPWA
1207766	335709117004701	USGS	6/24/2004	TDS	207	SGPWA
1207783	335740116575001	USGS	8/28/1997	TDS	281	SGPWA
1207783	335740116575001	USGS	8/10/1999	TDS	273	SGPWA
1207783	335740116575001	USGS	6/25/2001	TDS	267	SGPWA
1207783	335740116575001	USGS	6/10/2003	TDS	281	SGPWA
1207827	335834116582101	USGS	11/30/2007	TDS	300	Max Benefit
1207828	335834116582102	USGS	11/30/2007	TDS	390	Max Benefit
1007031	BAN C-2A	Banning	9/24/1996	TDS	230	Max Benefit
1007031	BAN C-2A	Banning	3/3/1999	TDS	230	Max Benefit
1007031	BAN C-2A	Banning	8/11/1999	TDS	228	Max Benefit
1007031	BAN C-2A	Banning	8/27/2002	TDS	189	Max Benefit
1007031	BAN C-2A	Banning	11/6/2002	TDS	260	Max Benefit
1007031	BAN C-2A	Banning	7/27/2005	TDS	228	Max Benefit
1007031	BAN C-2A	Banning	1/10/2006	TDS	210	Max Benefit
1007031	BAN C-2A	Banning	2/4/2009	TDS	240	Max Benefit
1004377	BAN C-3	Banning	3/2/1990	TDS	185	Max Benefit
1004377	BAN C-3	Banning	3/7/1994	TDS	200	Max Benefit
1004377	BAN C-3	Banning	9/5/1996	TDS	210	Max Benefit
1004377	BAN C-3	Banning	9/24/1996	TDS	106	Max Benefit
1004377	BAN C-3	Banning	3/2/1999	TDS	170	Max Benefit
1004377	BAN C-3	Banning	8/11/1999	TDS	192	Max Benefit
1004377	BAN C-3	Banning	6/14/2000	TDS	194	Max Benefit

Appendix A - Groundwater Quality Data

Well ID	Well Name	Owner	Sample Date	Analyte	Result	Source
1004377	BAN C-3	Banning	11/6/2002	TDS	220	Max Benefit
1004377	BAN C-3	Banning	6/23/2004	TDS	176	Max Benefit
1004377	BAN C-3	Banning	1/11/2006	TDS	180	Max Benefit
1004377	BAN C-3	Banning	2/4/2009	TDS	180	Max Benefit
1206706	BAN C-4	Banning	3/7/1994	TDS	225	Max Benefit
1206706	BAN C-4	Banning	8/28/1995	TDS	230	Max Benefit
1206706	BAN C-4	Banning	9/5/1996	TDS	220	Max Benefit
1206706	BAN C-4	Banning	9/24/1996	TDS	212	Max Benefit
1206706	BAN C-4	Banning	8/18/1998	TDS	212	Max Benefit
1206706	BAN C-4	Banning	3/2/1999	TDS	210	Max Benefit
1206706	BAN C-4	Banning	8/27/2002	TDS	190	Max Benefit
1206706	BAN C-4	Banning	11/6/2002	TDS	230	Max Benefit
1206706	BAN C-4	Banning	7/27/2005	TDS	220	Max Benefit
1206706	BAN C-4	Banning	1/11/2006	TDS	210	Max Benefit
1206706	BAN C-4	Banning	12/20/2011	TDS	240	DDW
1206706	BAN C-4	Banning	3/13/2014	TDS	180	DDW
1206706	BAN C-4	Banning	3/6/2017	TDS	190	DDW
1206706	BAN C-4	Banning	3/11/2020	TDS	200	DDW
1206706	BAN C-4	Banning	1/27/2009	TDS	200	Max Benefit
1206700	BAN M3	Banning	8/18/1998	TDS	243	Max Benefit
1206700	BAN M3	Banning	1/4/2003	TDS	280	Max Benefit
1206700	BAN M3	Banning	1/12/2006	TDS	280	Max Benefit
1206700	BAN M3	Banning	2/3/2009	TDS	250	Max Benefit
	Banning C-2	Banning	1/1/1955	TDS	325	SGPWA
	Banning C-2	Banning	1/1/1963	TDS	303	SGPWA
	Banning C-2	Banning	1/1/1964	TDS	286	SGPWA
	Banning C-2	Banning	1/1/1965	TDS	238	SGPWA
	Banning C-2	Banning	1/1/1966	TDS	229	SGPWA
	Banning C-2	Banning	1/1/1967	TDS	213	SGPWA
	Banning C-2	Banning	1/1/1968	TDS	180	SGPWA
	Banning C-2	Banning	1/1/1969	TDS	233	SGPWA
	Banning C-2	Banning	1/1/1970	TDS	230	SGPWA
	Banning C-2	Banning	1/1/1971	TDS	228	SGPWA
	Banning C-2	Banning	1/1/1972	TDS	220	SGPWA
	Banning C-2	Banning	1/1/1973	TDS	216	SGPWA
	Banning C-2	Banning	1/1/1974	TDS	241	SGPWA
	Banning C-2	Banning	1/1/1975	TDS	217	SGPWA

Appendix A - Groundwater Quality Data

Well ID	Well Name	Owner	Sample Date	Analyte	Result	Source
	Banning C-2	Banning	1/1/1976	TDS	231	SGPWA
	Banning C-2	Banning	1/1/1977	TDS	216	SGPWA
	Banning C-2	Banning	1/1/1978	TDS	217	SGPWA
	Banning C-2	Banning	1/1/1985	TDS	205	SGPWA
1004351	BCVWD 01	BCVWD	1/1/1955	TDS	295	SGPWA
1004351	BCVWD 01	BCVWD	1/1/1957	TDS	263	SGPWA
1004351	BCVWD 01	BCVWD	1/11/1961	TDS	235	Max Benefit
1004351	BCVWD 01	BCVWD	1/1/1963	TDS	285	SGPWA
1004351	BCVWD 01	BCVWD	4/6/1965	TDS	217	Max Benefit
1004351	BCVWD 01	BCVWD	9/23/1966	TDS	208	Max Benefit
1004351	BCVWD 01	BCVWD	4/14/1967	TDS	199	Max Benefit
1004351	BCVWD 01	BCVWD	10/10/1967	TDS	184	Max Benefit
1004351	BCVWD 01	BCVWD	4/23/1968	TDS	200	Max Benefit
1004351	BCVWD 01	BCVWD	10/23/1968	TDS	171	Max Benefit
1004351	BCVWD 01	BCVWD	5/11/1969	TDS	233	Max Benefit
1004351	BCVWD 01	BCVWD	10/26/1969	TDS	120	Max Benefit
1004351	BCVWD 01	BCVWD	4/24/1970	TDS	230	Max Benefit
1004351	BCVWD 01	BCVWD	11/23/1970	TDS	248	Max Benefit
1004351	BCVWD 01	BCVWD	5/4/1971	TDS	172	Max Benefit
1004351	BCVWD 01	BCVWD	11/12/1971	TDS	228	Max Benefit
1004351	BCVWD 01	BCVWD	5/19/1972	TDS	184	Max Benefit
1004351	BCVWD 01	BCVWD	5/18/1973	TDS	190	Max Benefit
1004351	BCVWD 01	BCVWD	9/16/1973	TDS	222	Max Benefit
1004351	BCVWD 01	BCVWD	5/19/1974	TDS	198	Max Benefit
1004351	BCVWD 01	BCVWD	9/30/1974	TDS	240	Max Benefit
1004351	BCVWD 01	BCVWD	2/12/1975	TDS	185	Max Benefit
1004351	BCVWD 01	BCVWD	5/11/1975	TDS	217	Max Benefit
1004351	BCVWD 01	BCVWD	11/2/1975	TDS	210	Max Benefit
1004351	BCVWD 01	BCVWD	5/23/1976	TDS	231	Max Benefit
1004351	BCVWD 01	BCVWD	10/3/1976	TDS	166	Max Benefit
1004351	BCVWD 01	BCVWD	1/26/1978	TDS	225	Max Benefit
1004351	BCVWD 01	BCVWD	11/4/1978	TDS	217	SGPWA
1004351	BCVWD 01	BCVWD	8/18/1982	TDS	230	Max Benefit
1004351	BCVWD 01	BCVWD	6/28/1991	TDS	215	Max Benefit
1004351	BCVWD 01	BCVWD	3/30/2004	TDS	230	Max Benefit
1004351	BCVWD 01	BCVWD	6/20/2007	TDS	260	Max Benefit
1004351	BCVWD 01	BCVWD	3/24/2010	TDS	220	Max Benefit

Appendix A - Groundwater Quality Data

Well ID	Well Name	Owner	Sample Date	Analyte	Result	Source
1004351	BCVWD 01	BCVWD	5/10/2011	TDS	257	Max Benefit
1004351	BCVWD 01	BCVWD	7/19/2011	TDS	236	Max Benefit
1004349	BCVWD 02	BCVWD	11/4/1978	TDS	216	SGPWA
1004349	BCVWD 02	BCVWD	8/18/1982	TDS	240	SGPWA
1004349	BCVWD 02	BCVWD	7/12/1991	TDS	285	SGPWA
1004349	BCVWD 02	BCVWD	9/7/1994	TDS	235	SGPWA
1004349	BCVWD 02	BCVWD	6/23/1997	TDS	250	SGPWA
1004349	BCVWD 02	BCVWD	8/17/1998	TDS	222	SGPWA
1004349	BCVWD 02	BCVWD	5/13/1999	TDS	220	SGPWA
1004349	BCVWD 02	BCVWD	1/8/2001	TDS	210	SGPWA
1004349	BCVWD 02	BCVWD	6/27/2001	TDS	220	SGPWA
1004349	BCVWD 02	BCVWD	10/24/2003	TDS	200	SGPWA
1004350	BCVWD 03	BCVWD	11/12/1971	TDS	234	Max Benefit
1004350	BCVWD 03	BCVWD	6/25/1975	TDS	190	Max Benefit
1004350	BCVWD 03	BCVWD	5/23/1976	TDS	249	Max Benefit
1004350	BCVWD 03	BCVWD	9/25/1985	TDS	200	SGPWA
1004350	BCVWD 03	BCVWD	7/25/1995	TDS	210	Max Benefit
1004350	BCVWD 03	BCVWD	8/28/1997	TDS	188	Max Benefit
1004350	BCVWD 03	BCVWD	8/28/1998	TDS	230	Max Benefit
1004350	BCVWD 03	BCVWD	8/10/1999	TDS	176	Max Benefit
1004350	BCVWD 03	BCVWD	6/14/2000	TDS	186	Max Benefit
1004350	BCVWD 03	BCVWD	7/6/2001	TDS	190	Max Benefit
1004350	BCVWD 03	BCVWD	6/23/2004	TDS	175	Max Benefit
1004350	BCVWD 03	BCVWD	7/5/2005	TDS	200	Max Benefit
1004350	BCVWD 03	BCVWD	6/20/2007	TDS	180	Max Benefit
1004350	BCVWD 03	BCVWD	3/24/2010	TDS	190	Max Benefit
1004350	BCVWD 03	BCVWD	5/10/2011	TDS	242	Max Benefit
1002938	BCVWD 16	BCVWD	8/14/1964	TDS	413	Max Benefit
1002938	BCVWD 16	BCVWD	4/6/1965	TDS	236	Max Benefit
1002938	BCVWD 16	BCVWD	10/8/1965	TDS	327	Max Benefit
1002938	BCVWD 16	BCVWD	9/23/1966	TDS	320	Max Benefit
1002938	BCVWD 16	BCVWD	10/10/1967	TDS	313	Max Benefit
1002938	BCVWD 16	BCVWD	4/23/1968	TDS	314	Max Benefit
1002938	BCVWD 16	BCVWD	4/24/1970	TDS	319	Max Benefit
1002938	BCVWD 16	BCVWD	5/19/1972	TDS	269	Max Benefit
1002938	BCVWD 16	BCVWD	11/7/1972	TDS	306	Max Benefit
1002938	BCVWD 16	BCVWD	9/16/1973	TDS	291	Max Benefit

Appendix A - Groundwater Quality Data

Well ID	Well Name	Owner	Sample Date	Analyte	Result	Source
1002938	BCVWD 16	BCVWD	2/12/1975	TDS	305	Max Benefit
1002938	BCVWD 16	BCVWD	3/6/1979	TDS	305	Max Benefit
1002938	BCVWD 16	BCVWD	9/25/1985	TDS	230	SGPWA
1002938	BCVWD 16	BCVWD	7/1/1991	TDS	230	Max Benefit
1002938	BCVWD 16	BCVWD	9/7/1994	TDS	320	Max Benefit
1002938	BCVWD 16	BCVWD	7/25/1995	TDS	330	Max Benefit
1002938	BCVWD 16	BCVWD	8/28/1997	TDS	334	Max Benefit
1002938	BCVWD 16	BCVWD	8/18/1998	TDS	325	Max Benefit
1002938	BCVWD 16	BCVWD	8/28/1998	TDS	340	Max Benefit
1002938	BCVWD 16	BCVWD	1/8/2001	TDS	310	Max Benefit
1002938	BCVWD 16	BCVWD	6/26/2001	TDS	328	Max Benefit
1002938	BCVWD 16	BCVWD	6/10/2003	TDS	320	Max Benefit
1002938	BCVWD 16	BCVWD	7/5/2005	TDS	330	Max Benefit
1002938	BCVWD 16	BCVWD	7/7/2005	TDS	360	Max Benefit
1002938	BCVWD 16	BCVWD	8/2/2005	TDS	319	Max Benefit
1002938	BCVWD 16	BCVWD	3/30/2007	TDS	324	Max Benefit
1002938	BCVWD 16	BCVWD	6/20/2007	TDS	340	Max Benefit
1002938	BCVWD 16	BCVWD	3/24/2010	TDS	380	Max Benefit
1002938	BCVWD 16	BCVWD	5/26/2011	TDS	415	Max Benefit
1002938	BCVWD 16	BCVWD	5/26/2011	TDS	410	Max Benefit
1201487	BCVWD 21	BCVWD	11/9/1988	TDS	290	Max Benefit
1201487	BCVWD 21	BCVWD	6/28/1991	TDS	275	Max Benefit
1201487	BCVWD 21	BCVWD	9/7/1994	TDS	265	Max Benefit
1201487	BCVWD 21	BCVWD	6/16/1997	TDS	270	Max Benefit
1201487	BCVWD 21	BCVWD	8/28/1997	TDS	281	Max Benefit
1201487	BCVWD 21	BCVWD	8/10/1999	TDS	273	Max Benefit
1201487	BCVWD 21	BCVWD	10/24/2000	TDS	290	Max Benefit
1201487	BCVWD 21	BCVWD	6/25/2001	TDS	267	Max Benefit
1201487	BCVWD 21	BCVWD	6/10/2003	TDS	281	Max Benefit
1201487	BCVWD 21	BCVWD	10/24/2003	TDS	250	Max Benefit
1201487	BCVWD 21	BCVWD	7/7/2005	TDS	300	Max Benefit
1201487	BCVWD 21	BCVWD	5/9/2006	TDS	270	Max Benefit
1201487	BCVWD 21	BCVWD	3/31/2009	TDS	290	Max Benefit
1201487	BCVWD 21	BCVWD	5/11/2011	TDS	318	Max Benefit
1201487	BCVWD 21	BCVWD	7/19/2011	TDS	322	Max Benefit
1002966	BCVWD 22	BCVWD	1/11/1961	TDS	243	Max Benefit
1002966	BCVWD 22	BCVWD	10/8/1965	TDS	225	Max Benefit

Appendix A - Groundwater Quality Data

Well ID	Well Name	Owner	Sample Date	Analyte	Result	Source
1002966	BCVWD 22	BCVWD	4/23/1968	TDS	222	Max Benefit
1002966	BCVWD 22	BCVWD	10/23/1968	TDS	206	Max Benefit
1002966	BCVWD 22	BCVWD	4/24/1970	TDS	253	Max Benefit
1002966	BCVWD 22	BCVWD	5/4/1971	TDS	224	Max Benefit
1002966	BCVWD 22	BCVWD	5/19/1972	TDS	205	Max Benefit
1002966	BCVWD 22	BCVWD	5/18/1973	TDS	221	Max Benefit
1002966	BCVWD 22	BCVWD	5/19/1974	TDS	213	Max Benefit
1002966	BCVWD 22	BCVWD	9/30/1974	TDS	228	Max Benefit
1002966	BCVWD 22	BCVWD	5/11/1975	TDS	242	Max Benefit
1002966	BCVWD 22	BCVWD	5/23/1976	TDS	248	Max Benefit
1002966	BCVWD 22	BCVWD	10/3/1976	TDS	108	Max Benefit
1002966	BCVWD 22	BCVWD	9/15/1998	TDS	239	Max Benefit
1002966	BCVWD 22	BCVWD	10/24/2003	TDS	210	Max Benefit
1002966	BCVWD 22	BCVWD	7/5/2005	TDS	230	Max Benefit
1002966	BCVWD 22	BCVWD	6/20/2007	TDS	220	Max Benefit
1002966	BCVWD 22	BCVWD	3/24/2010	TDS	200	Max Benefit
1002966	BCVWD 22	BCVWD	5/11/2011	TDS	273	Max Benefit
1207328	BCVWD 23	BCVWD	3/6/2006	TDS	240	Max Benefit
1207328	BCVWD 23	BCVWD	5/9/2006	TDS	260	Max Benefit
1207328	BCVWD 23	BCVWD	3/31/2009	TDS	240	Max Benefit
1207328	BCVWD 23	BCVWD	5/11/2011	TDS	307	Max Benefit
1207328	BCVWD 23	BCVWD	7/19/2011	TDS	287	Max Benefit
1208224	BCVWD 24	BCVWD	9/23/2005	TDS	220	Max Benefit
1208224	BCVWD 24	BCVWD	6/11/2008	TDS	200	Max Benefit
1208224	BCVWD 24	BCVWD	5/11/2011	TDS	245	Max Benefit
1208224	BCVWD 24	BCVWD	11/30/2011	TDS	180	Max Benefit
1220057	BCVWD 25	BCVWD	6/11/2009	TDS	220	Max Benefit
1220057	BCVWD 25	BCVWD	5/11/2011	TDS	269	Max Benefit
1220058	BCVWD 26	BCVWD	3/31/2009	TDS	200	Max Benefit
1220058	BCVWD 26	BCVWD	5/10/2011	TDS	233	Max Benefit
1220058	BCVWD 26	BCVWD	7/19/2011	TDS	232	Max Benefit
1201480	BCVWD 29	BCVWD	6/11/2009	TDS	220	Max Benefit
1201480	BCVWD 29	BCVWD	5/11/2011	TDS	265	Max Benefit
1206995	A	Tukwet Canyon Golf Club	1/16/2003	TDS	190	Max Benefit
1206995	A	Tukwet Canyon Golf Club	7/29/2005	TDS	203	Max Benefit

Appendix A - Groundwater Quality Data

Well ID	Well Name	Owner	Sample Date	Analyte	Result	Source
1206995	A	Tukwet Canyon Golf Club	1/5/2006	TDS	280	Max Benefit
1206995	A	Tukwet Canyon Golf Club	12/3/2007	TDS	210	Max Benefit
1206995	A	Tukwet Canyon Golf Club	11/19/2008	TDS	180	Max Benefit
1206995	A	Tukwet Canyon Golf Club	10/18/2010	TDS	190	Max Benefit
1206995	A	Tukwet Canyon Golf Club	3/31/2011	TDS	224	Max Benefit
1206996	D	Tukwet Canyon Golf Club	4/4/2000	TDS	219	Max Benefit
1206996	D	Tukwet Canyon Golf Club	6/15/2000	TDS	221	Max Benefit
1206996	D	Tukwet Canyon Golf Club	6/24/2004	TDS	207	Max Benefit
1206996	D	Tukwet Canyon Golf Club	11/19/2008	TDS	220	Max Benefit
1206996	D	Tukwet Canyon Golf Club	10/13/2009	TDS	250	Max Benefit
1206996	D	Tukwet Canyon Golf Club	3/31/2011	TDS	243	Max Benefit
1002958	N/A	Desert Lawn Funernal Home	9/21/2006	TDS	250	Max Benefit
1002958	N/A	Desert Lawn Funernal Home	11/7/2007	TDS	220	Max Benefit
1002958	N/A	Desert Lawn Funernal Home	11/11/2008	TDS	240	Max Benefit
1002958	N/A	Desert Lawn Funernal Home	3/2/2011	TDS	265	Max Benefit
1002965	N/A	Wilkins, James	6/13/2000	TDS	249	SGPWA
1007025	OAK VALLEY #1	Oak Valley Partners	11/20/1997	TDS	208	Max Benefit
1007025	OAK VALLEY #1	Oak Valley Partners	8/17/1998	TDS	211	Max Benefit
1007025	OAK VALLEY #1	Oak Valley Partners	8/12/1999	TDS	211	Max Benefit
1007025	OAK VALLEY #1	Oak Valley Partners	11/28/2006	TDS	160	Max Benefit
1007025	OAK VALLEY #1	Oak Valley Partners	11/27/2007	TDS	190	Max Benefit
1007025	OAK VALLEY #1	Oak Valley Partners	10/13/2009	TDS	210	Max Benefit

Appendix A - Groundwater Quality Data

Well ID	Well Name	Owner	Sample Date	Analyte	Result	Source
1007025	OAK VALLEY #1	Oak Valley Partners	3/2/2011	TDS	233	Max Benefit
1207769	OAK VALLEY #2	Oak Valley Partners	10/13/2009	TDS	200	Max Benefit
1207769	OAK VALLEY #2	Oak Valley Partners	10/18/2010	TDS	190	Max Benefit
1207769	OAK VALLEY #2	Oak Valley Partners	3/2/2011	TDS	223	Max Benefit
1201561	Oak Valley Office Well	Oak Valley Partners	9/21/2006	TDS	210	Max Benefit
1201561	Oak Valley Office Well	Oak Valley Partners	11/9/2007	TDS	240	Max Benefit
1201561	Oak Valley Office Well	Oak Valley Partners	11/11/2008	TDS	270	Max Benefit
1201561	Oak Valley Office Well	Oak Valley Partners	3/17/2011	TDS	266	Max Benefit
1003056	Old Slack	YVWD	6/22/1989	TDS	180	SGPWA
1003056	Old Slack	YVWD	7/6/1994	TDS	305	SGPWA
1003056	Old Slack	YVWD	2/13/1997	TDS	322	SGPWA
1003056	Old Slack	YVWD	2/2/2000	TDS	330	SGPWA
1003056	Old Slack	YVWD	3/31/2003	TDS	360	SGPWA
1207014	Parks and Rec	Beaumont-Cherry Valley Recreation And Parks District	6/27/2001	TDS	210	SGPWA
1003075	SINGLETON RANCH 5	Oak Valley Partners	9/21/2006	TDS	180	Max Benefit
1003075	SINGLETON RANCH 5	Oak Valley Partners	10/6/2009	TDS	100	Max Benefit
1003072	Singleton Ranch 7	Oak Valley Partners	9/21/2006	TDS	250	Max Benefit
1003072	Singleton Ranch 7	Oak Valley Partners	11/9/2007	TDS	190	Max Benefit
1003072	Singleton Ranch 7	Oak Valley Partners	11/11/2008	TDS	240	Max Benefit
1003072	Singleton Ranch 7	Oak Valley Partners	10/12/2010	TDS	250	Max Benefit
1003072	Singleton Ranch 7	Oak Valley Partners	3/1/2011	TDS	281	Max Benefit
1003035	SMWC 04	SMWC	7/17/1997	TDS	186	Max Benefit
1003035	SMWC 04	SMWC	9/10/2003	TDS	187	Max Benefit
1003035	SMWC 04	SMWC	3/31/2004	TDS	180	Max Benefit
1003035	SMWC 04	SMWC	3/6/2007	TDS	180	Max Benefit

Appendix A - Groundwater Quality Data

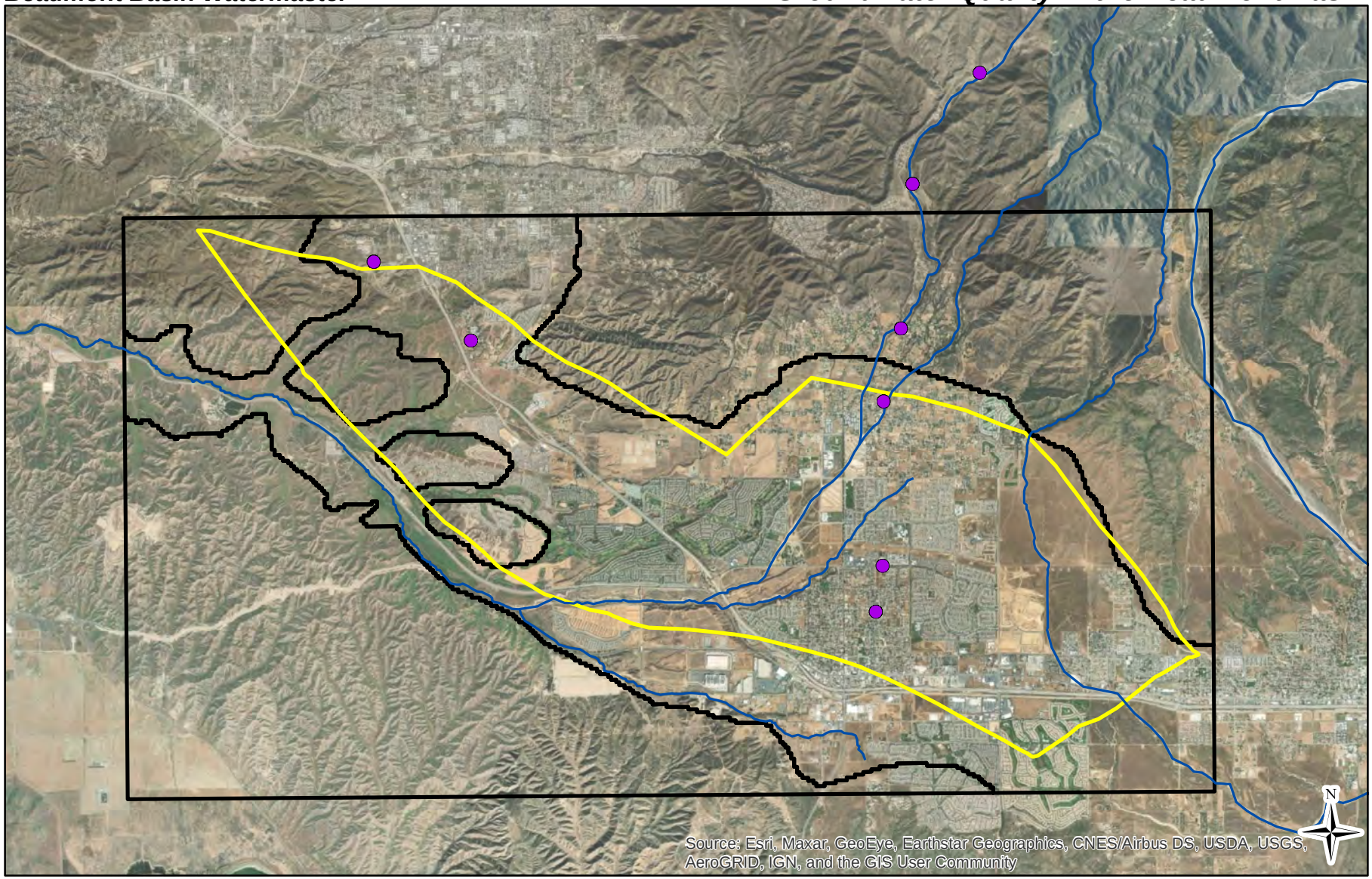
Well ID	Well Name	Owner	Sample Date	Analyte	Result	Source
1003035	SMWC 04	SMWC	3/22/2010	TDS	310	Max Benefit
1003034	SMWC 2ND NO. 4 WELL	SMWC	9/15/1987	TDS	247	SGPWA
1003034	SMWC 2ND NO. 4 WELL	SMWC	2/27/1990	TDS	156	SGPWA
1003034	SMWC 2ND NO. 4 WELL	SMWC	1/28/1993	TDS	240	SGPWA
1003034	SMWC 2ND NO. 4 WELL	SMWC	1/19/1996	TDS	162	SGPWA
1003034	SMWC 2ND NO. 4 WELL	SMWC	8/21/1998	TDS	184	SGPWA
1003034	SMWC 2ND NO. 4 WELL	SMWC	2/19/2001	TDS	160	SGPWA
1003059	YVWD 34	YVWD	5/16/1979	TDS	261	SGPWA
1003059	YVWD 34	YVWD	5/30/1980	TDS	145	SGPWA
1003059	YVWD 34	YVWD	7/6/1994	TDS	305	SGPWA
1003059	YVWD 34	YVWD	5/4/2000	TDS	355	SGPWA
1003059	YVWD 34	YVWD	6/25/2004	TDS	356	SGPWA
1003058	YVWD 35	YVWD	8/2/1961	TDS	252	SGPWA
1003058	YVWD 35	YVWD	10/19/1966	TDS	180	Max Benefit
1003058	YVWD 35	YVWD	5/8/1967	TDS	196	Max Benefit
1003058	YVWD 35	YVWD	10/9/1967	TDS	179	Max Benefit
1003058	YVWD 35	YVWD	4/30/1968	TDS	222	Max Benefit
1003058	YVWD 35	YVWD	10/18/1968	TDS	170	Max Benefit
1003058	YVWD 35	YVWD	5/1/1969	TDS	211	Max Benefit
1003058	YVWD 35	YVWD	10/28/1969	TDS	170	Max Benefit
1003058	YVWD 35	YVWD	4/17/1970	TDS	181	Max Benefit
1003058	YVWD 35	YVWD	11/24/1970	TDS	165	Max Benefit
1003058	YVWD 35	YVWD	11/1/1971	TDS	233	Max Benefit
1003058	YVWD 35	YVWD	5/19/1972	TDS	228	Max Benefit
1003058	YVWD 35	YVWD	5/3/1973	TDS	149	Max Benefit
1003058	YVWD 35	YVWD	10/21/1973	TDS	180	Max Benefit
1003058	YVWD 35	YVWD	5/9/1974	TDS	175	Max Benefit
1003058	YVWD 35	YVWD	4/28/1976	TDS	300	Max Benefit
1003058	YVWD 35	YVWD	5/20/1976	TDS	208	Max Benefit
1003058	YVWD 35	YVWD	9/24/1976	TDS	245	Max Benefit
1003058	YVWD 35	YVWD	5/16/1977	TDS	261	Max Benefit
1003058	YVWD 35	YVWD	5/16/1979	TDS	261	Max Benefit
1003058	YVWD 35	YVWD	5/27/1980	TDS	255	Max Benefit

Appendix A - Groundwater Quality Data

Well ID	Well Name	Owner	Sample Date	Analyte	Result	Source
1003058	YVWD 35	YVWD	1/24/1990	TDS	384	Max Benefit
1003058	YVWD 35	YVWD	1/5/1994	TDS	294	Max Benefit
1003058	YVWD 35	YVWD	2/13/1997	TDS	322	
1003058	YVWD 35	YVWD	2/2/2000	TDS	330	
1003058	YVWD 35	YVWD	3/31/2003	TDS	360	Max Benefit
1003058	YVWD 35	YVWD	1/30/2006	TDS	360	
1003058	YVWD 35	YVWD	11/21/2006	TDS	280	
1003058	YVWD 35	YVWD	8/23/2007	TDS	340	Max Benefit
1003058	YVWD 35	YVWD	8/20/2008	TDS	220	Max Benefit
1003058	YVWD 35	YVWD	8/20/2009	TDS	340	Max Benefit
1003020	YVWD 47	YVWD	2/15/1982	TDS	230	SGPWA
1003020	YVWD 47	YVWD	3/17/1988	TDS	218	SGPWA
1003063	YVWD 48	YVWD	4/26/1990	TDS	204	Max Benefit
1003063	YVWD 48	YVWD	7/16/1997	TDS	213	Max Benefit
1003063	YVWD 48	YVWD	9/18/1997	TDS	190	Max Benefit
1003063	YVWD 48	YVWD	6/15/2000	TDS	214	Max Benefit
1003063	YVWD 48	YVWD	7/26/2000	TDS	212	Max Benefit
1003063	YVWD 48	YVWD	6/12/2003	TDS	227	Max Benefit
1003063	YVWD 48	YVWD	8/14/2003	TDS	220	Max Benefit
1003063	YVWD 48	YVWD	8/17/2006	TDS	170	Max Benefit
1003063	YVWD 48	YVWD	8/16/2007	TDS	200	Max Benefit
1003063	YVWD 48	YVWD	8/21/2008	TDS	220	Max Benefit
1003063	YVWD 48	YVWD	8/6/2009	TDS	180	Max Benefit
1003063	YVWD 48	YVWD	4/27/2011	TDS	200	Max Benefit
1003063	YVWD 48	YVWD	8/9/2011	TDS	220	Max Benefit
1002939	NA	Beaumont Irrigation District	7/1/1991	TDS	230	SGPWA
1002939	NA	Beaumont Irrigation District	9/7/1994	TDS	320	SGPWA
1002939	NA	Beaumont Irrigation District	7/25/1995	TDS	330	SGPWA
1002939	NA	Beaumont Irrigation District	8/28/1998	TDS	340	SGPWA
1002939	NA	Beaumont Irrigation District	1/8/2001	TDS	310	SGPWA
1201486	NA	Larry Britton	9/21/2006	TDS	200	Max Benefit
1201486	NA	Larry Britton	11/7/2007	TDS	230	Max Benefit
1201486	NA	Larry Britton	11/18/2008	TDS	250	Max Benefit

Appendix A - Groundwater Quality Data

Well ID	Well Name	Owner	Sample Date	Analyte	Result	Source
1201486	NA	Larry Britton	10/12/2010	TDS	210	Max Benefit
1201486	NA	Larry Britton	3/2/2011	TDS	258	Max Benefit
1207797	NA	Beaumont Unified School District	8/28/2002	TDS	245	SGPWA
1207797	NA	Beaumont Unified School District	7/14/2003	TDS	260	SGPWA
	1	Plantation on the Lake Park	5/9/1997	TDS	220	DDW
	1	Plantation on the Lake Park	6/29/2000	TDS	220	DDW
	1	Plantation on the Lake Park	1/29/2004	TDS	260	DDW
	1	Plantation on the Lake Park	3/19/2008	TDS	260	DDW
	1	Plantation on the Lake Park	3/17/2011	TDS	240	DDW
	1	Plantation on the Lake Park	3/18/2014	TDS	250	DDW
	1	Plantation on the Lake Park	3/20/2017	TDS	270	DDW
	1	Plantation on the Lake Park	3/24/2020	TDS	260	DDW
	NA	Randy Downing	9/28/2006	TDS	240	DDW
	NA	Randy Downing	11/13/2007	TDS	240	DDW
	NA	Randy Downing	11/11/2008	TDS	260	DDW
	NA	Randy Downing	10/21/2010	TDS	290	DDW



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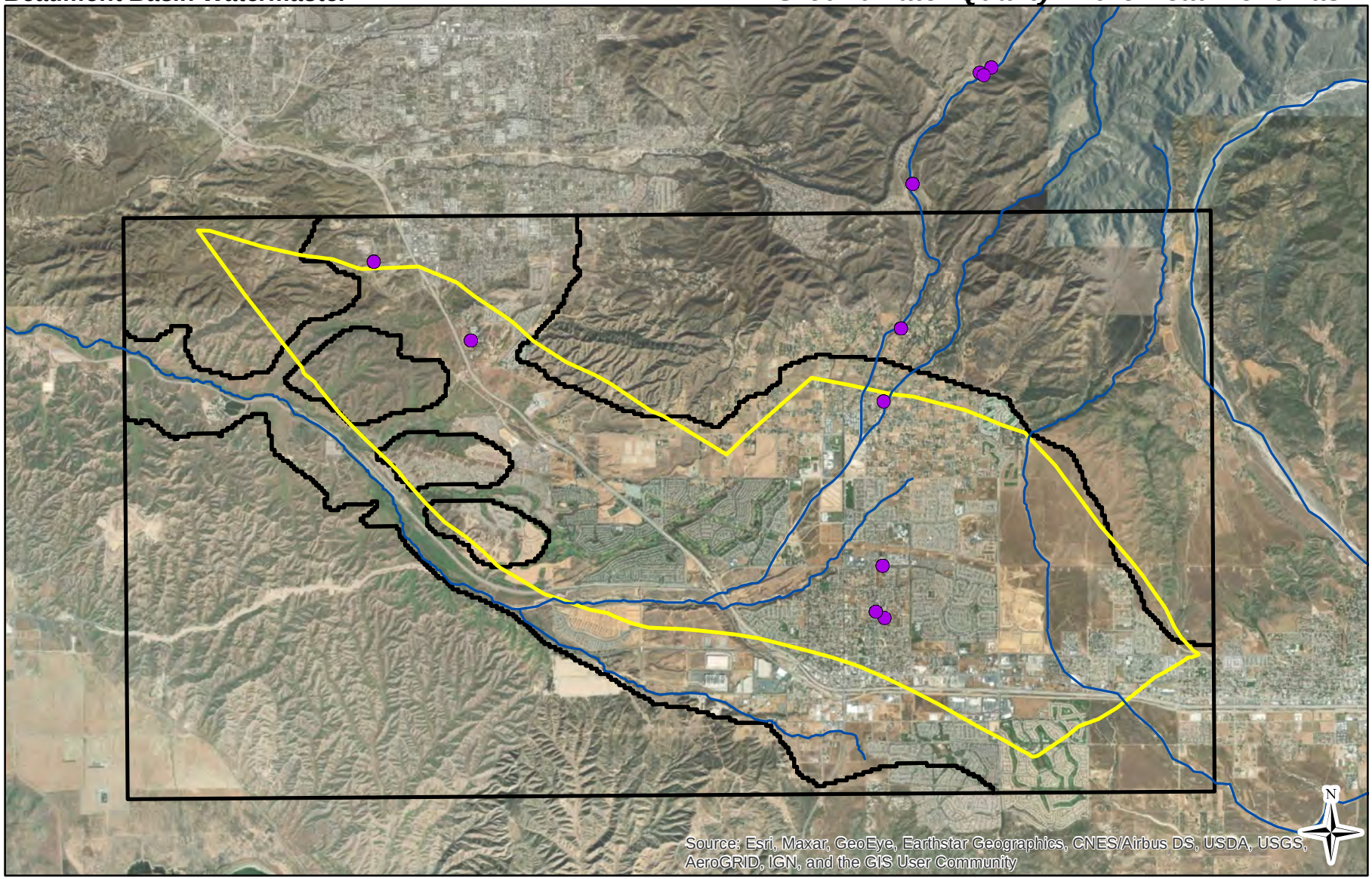
0 0.5 1 2
Miles

NAD 83 UTM Zone 11

April 2022

Wells with TDS Concentrations - 1960s

Appendix B-1



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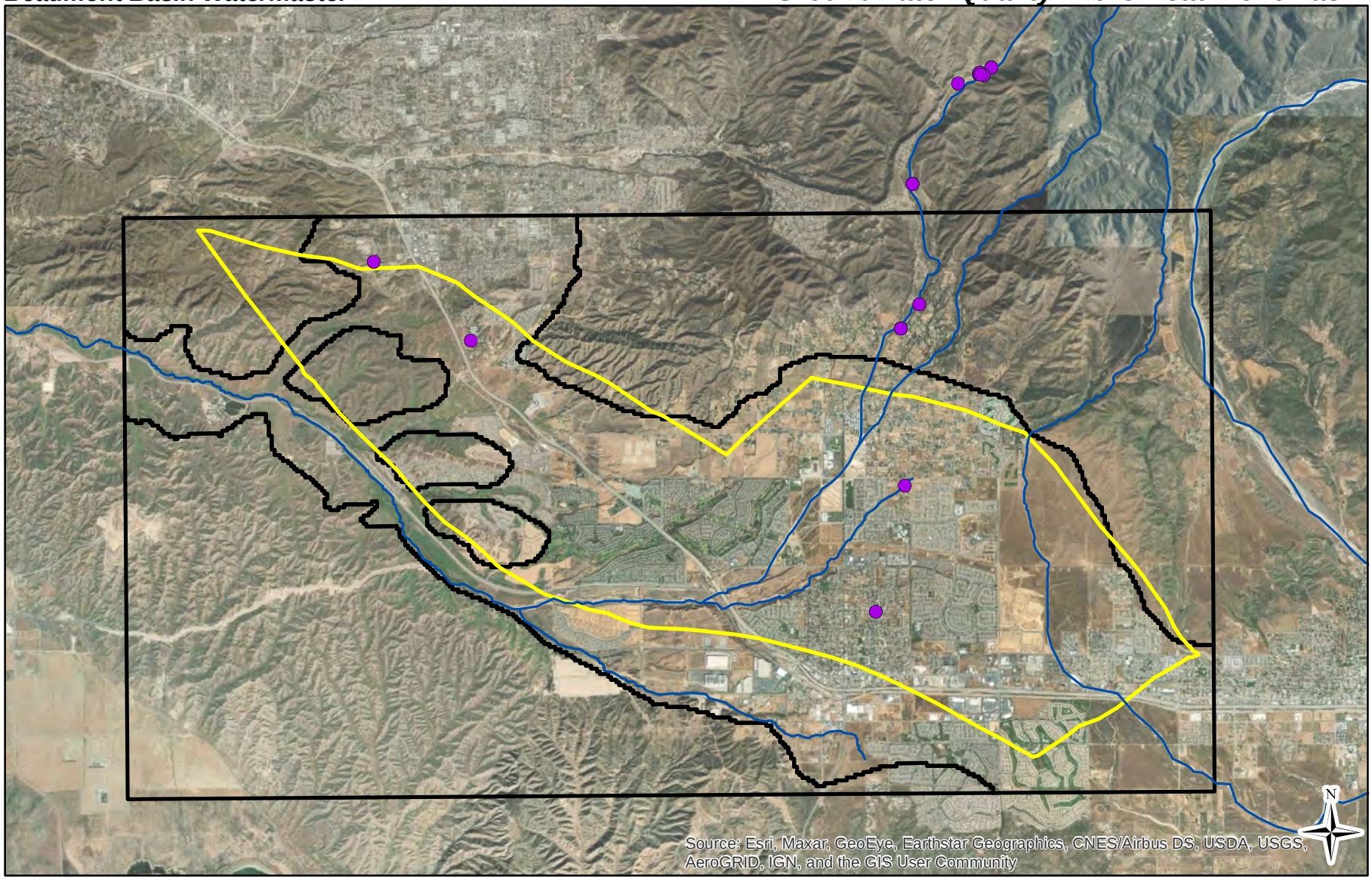
Wells with TDS Concentrations - 1970s

Appendix B-2



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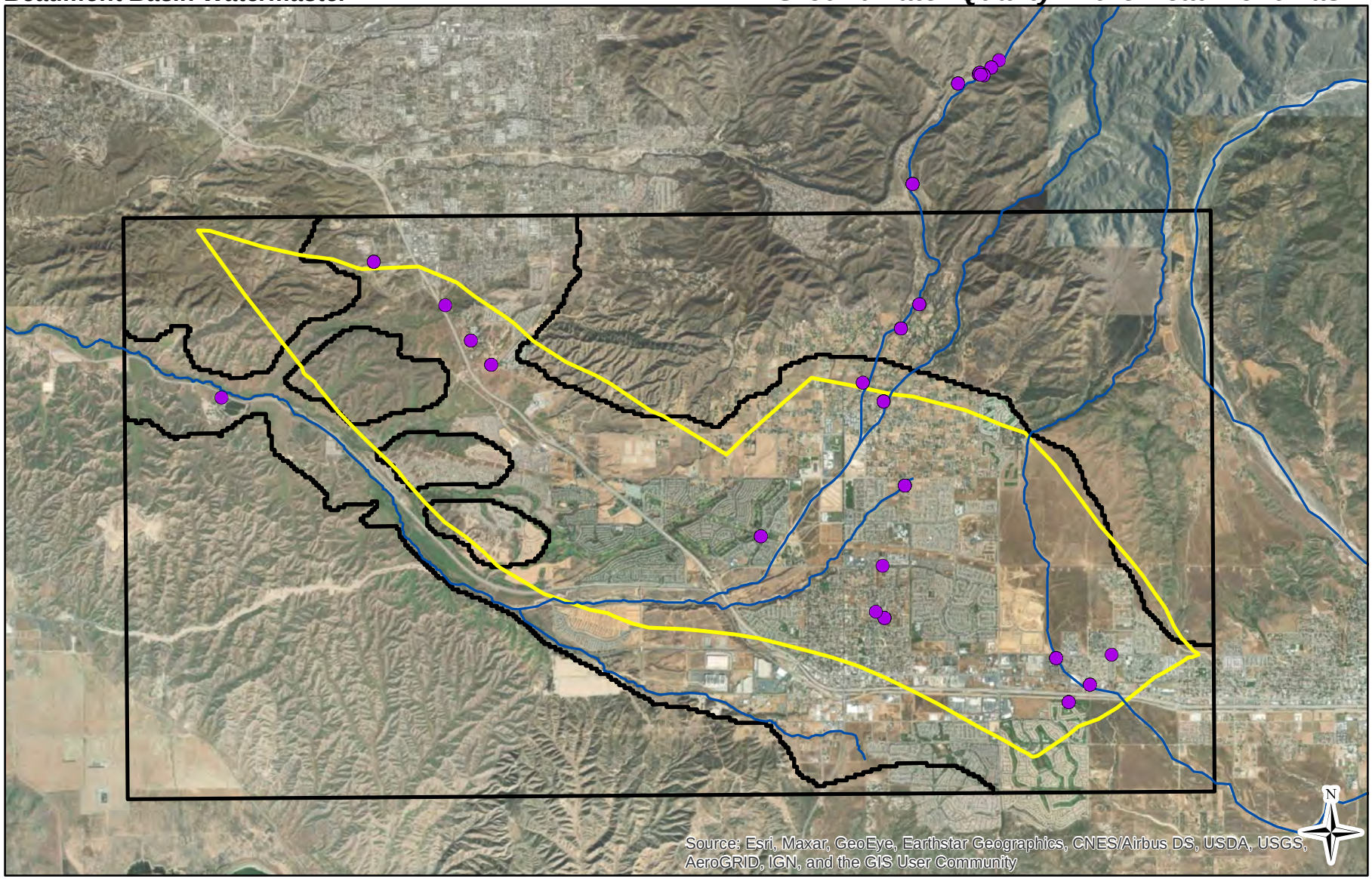
Wells with TDS Concentrations - 1980s

Appendix B-3



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Miles

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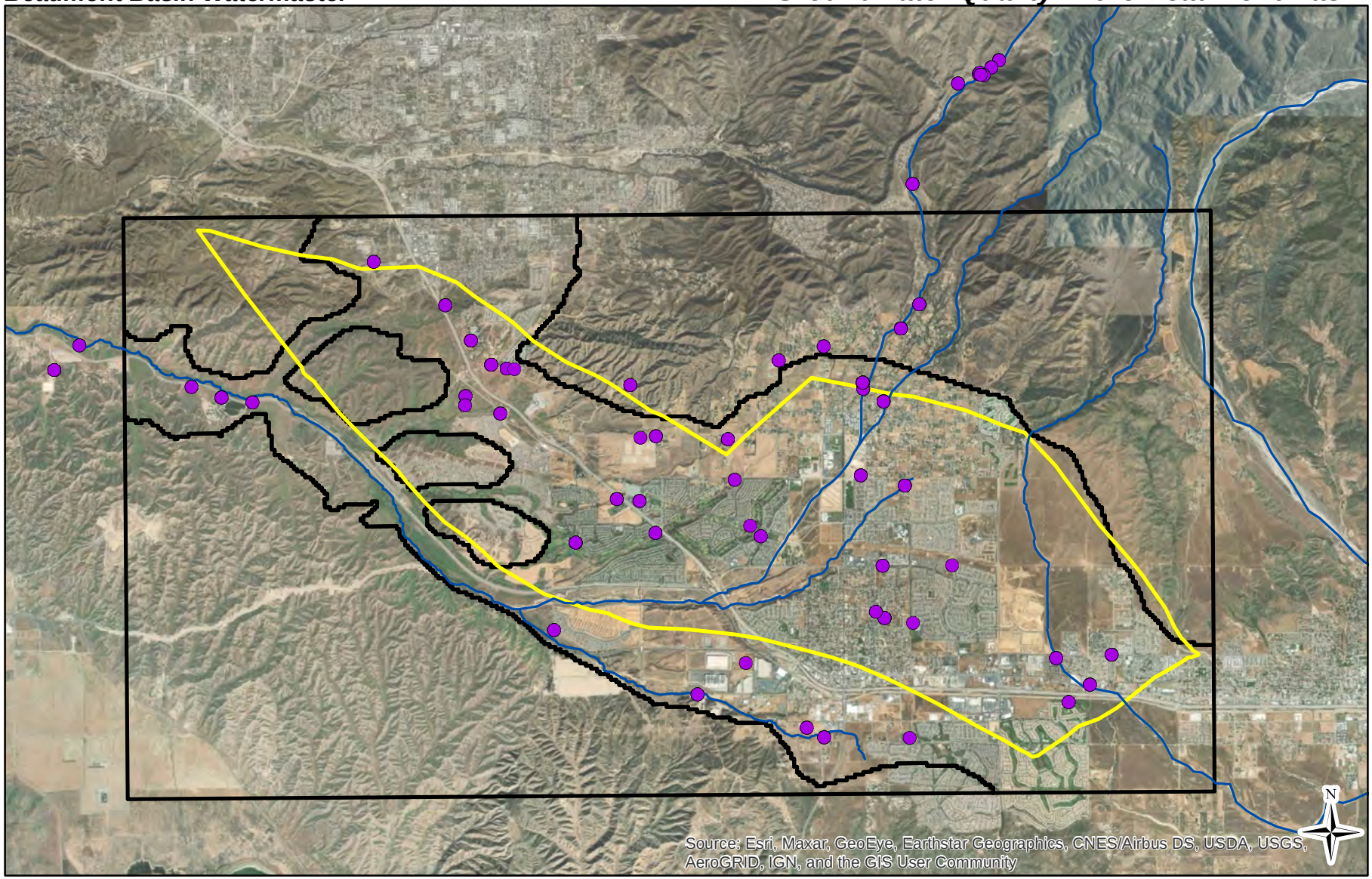
Wells with TDS Concentrations - 1990s

Appendix B-4



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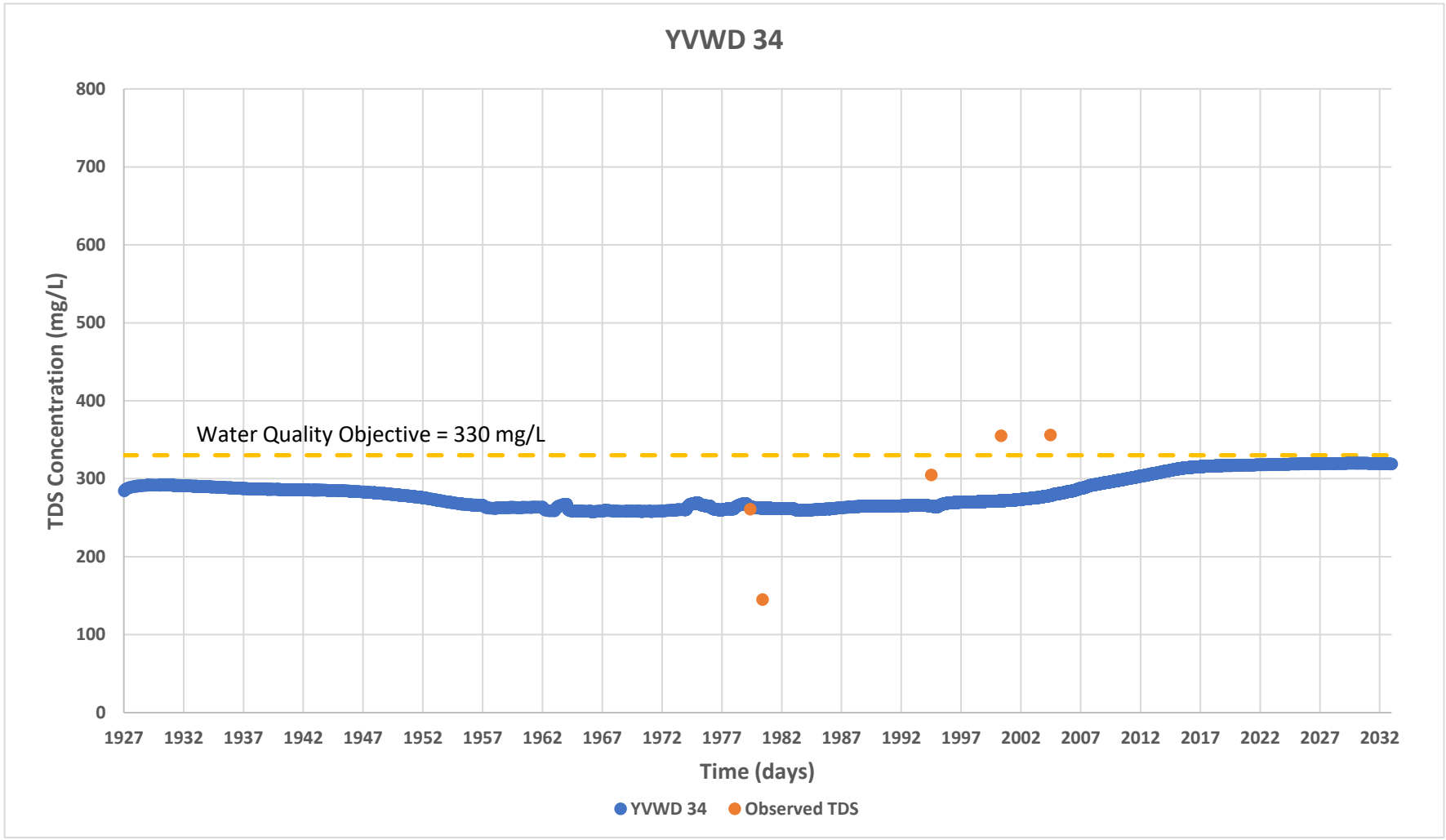
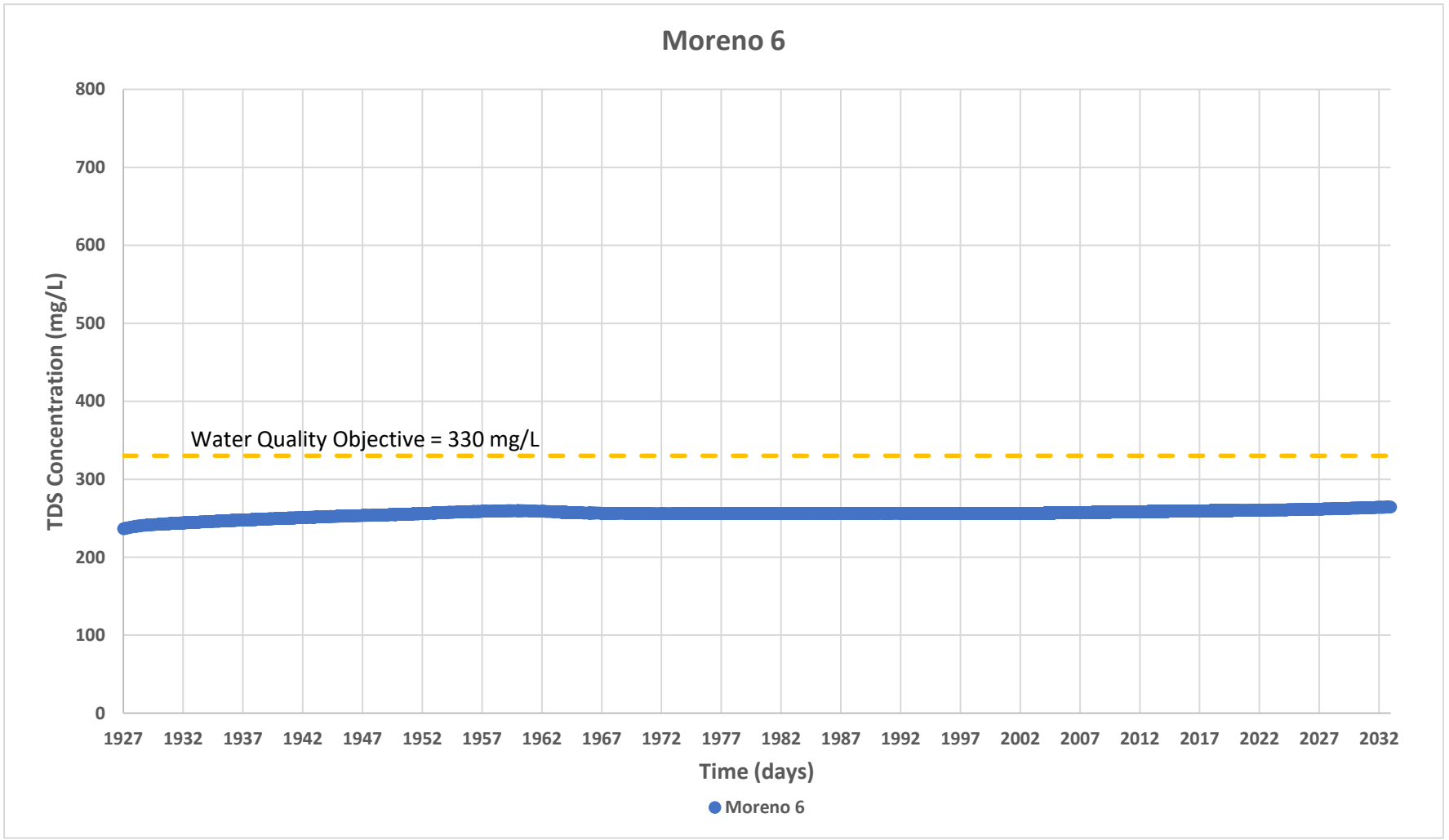
Wells with TDS Concentrations - 2000s

Appendix B-5

Model-Predicted TDS Concentrations vs. Time (mg/L)



Model-Predicted TDS Concentrations vs. Time (mg/L)



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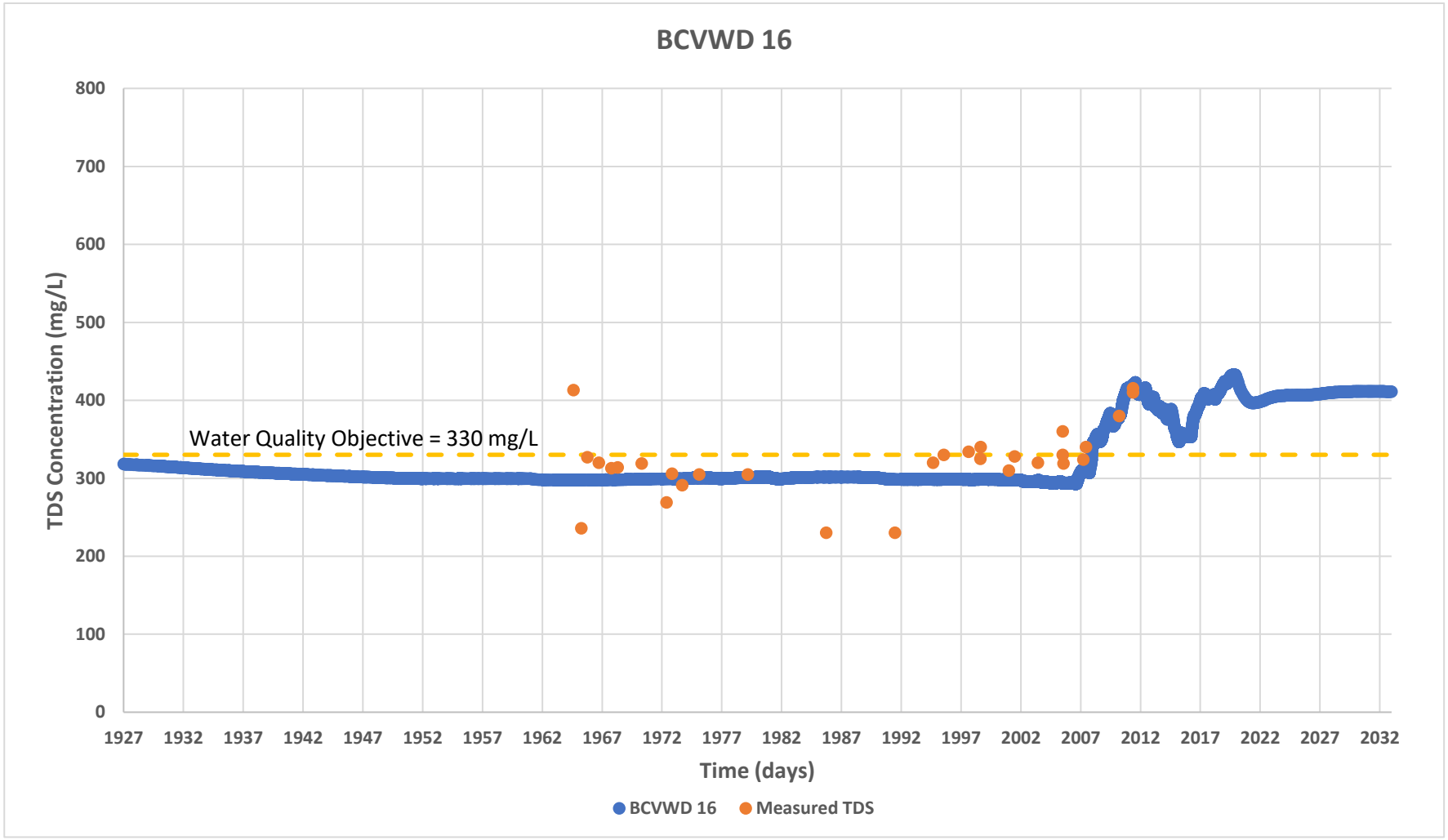

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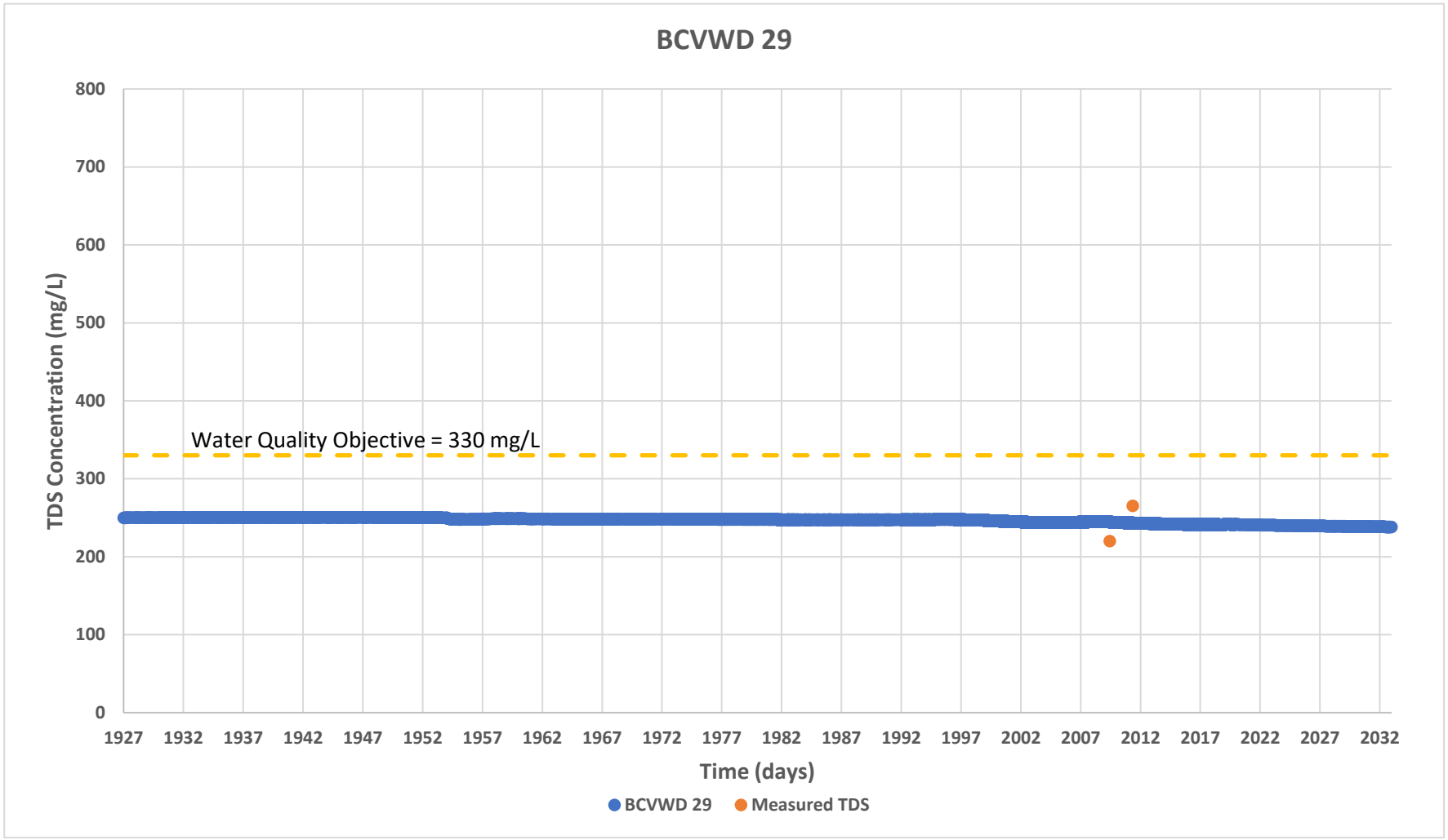

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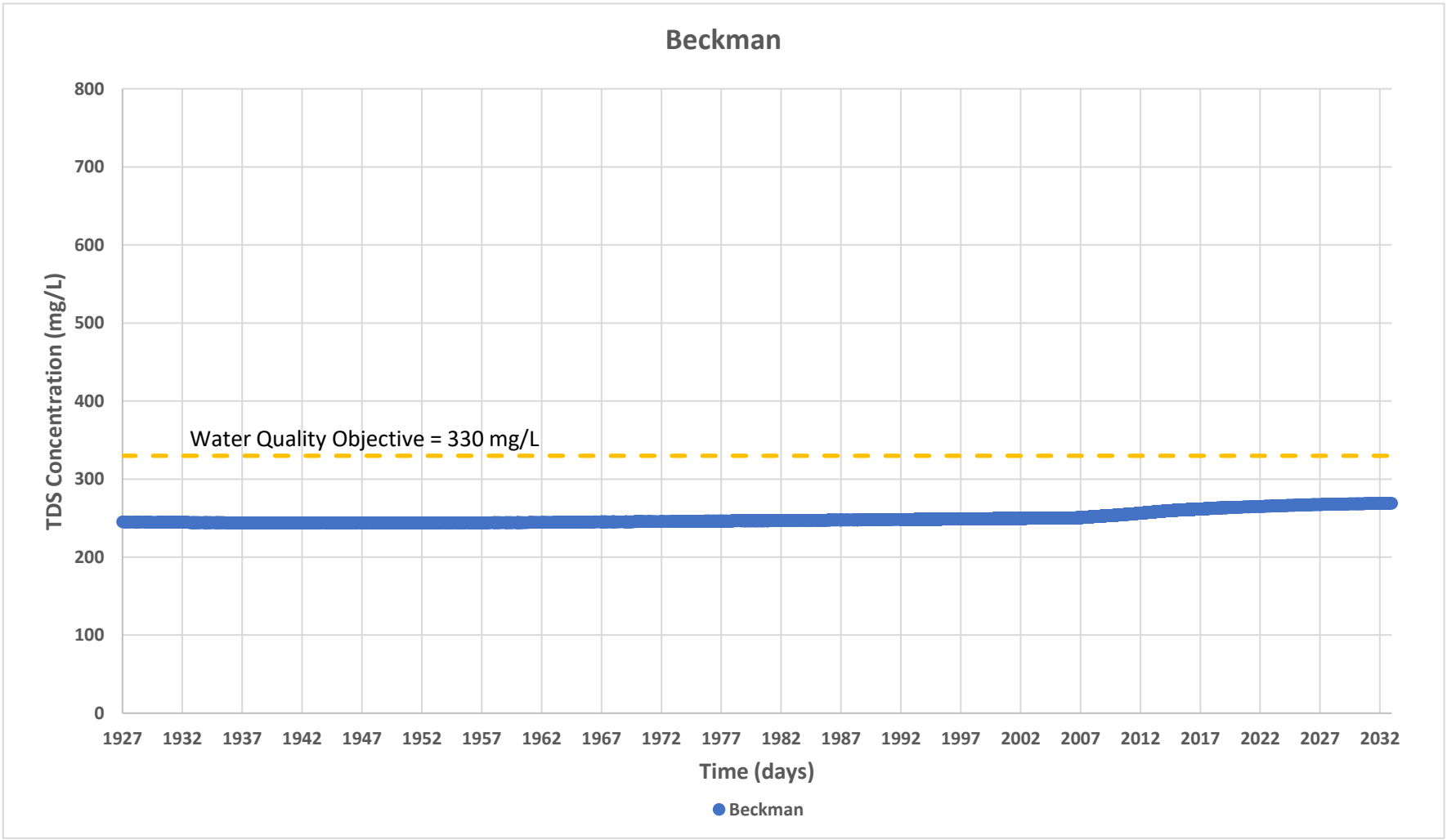

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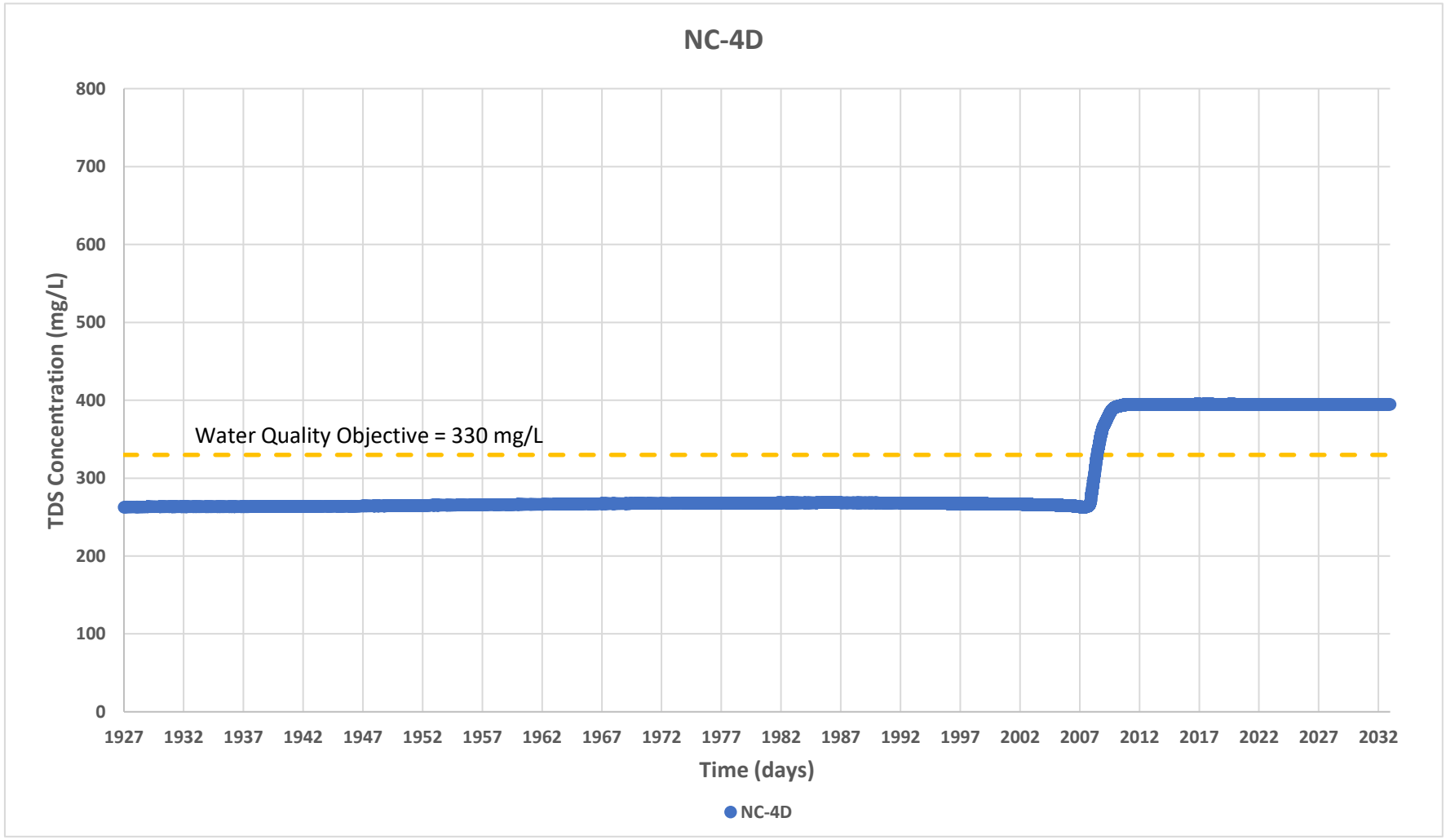

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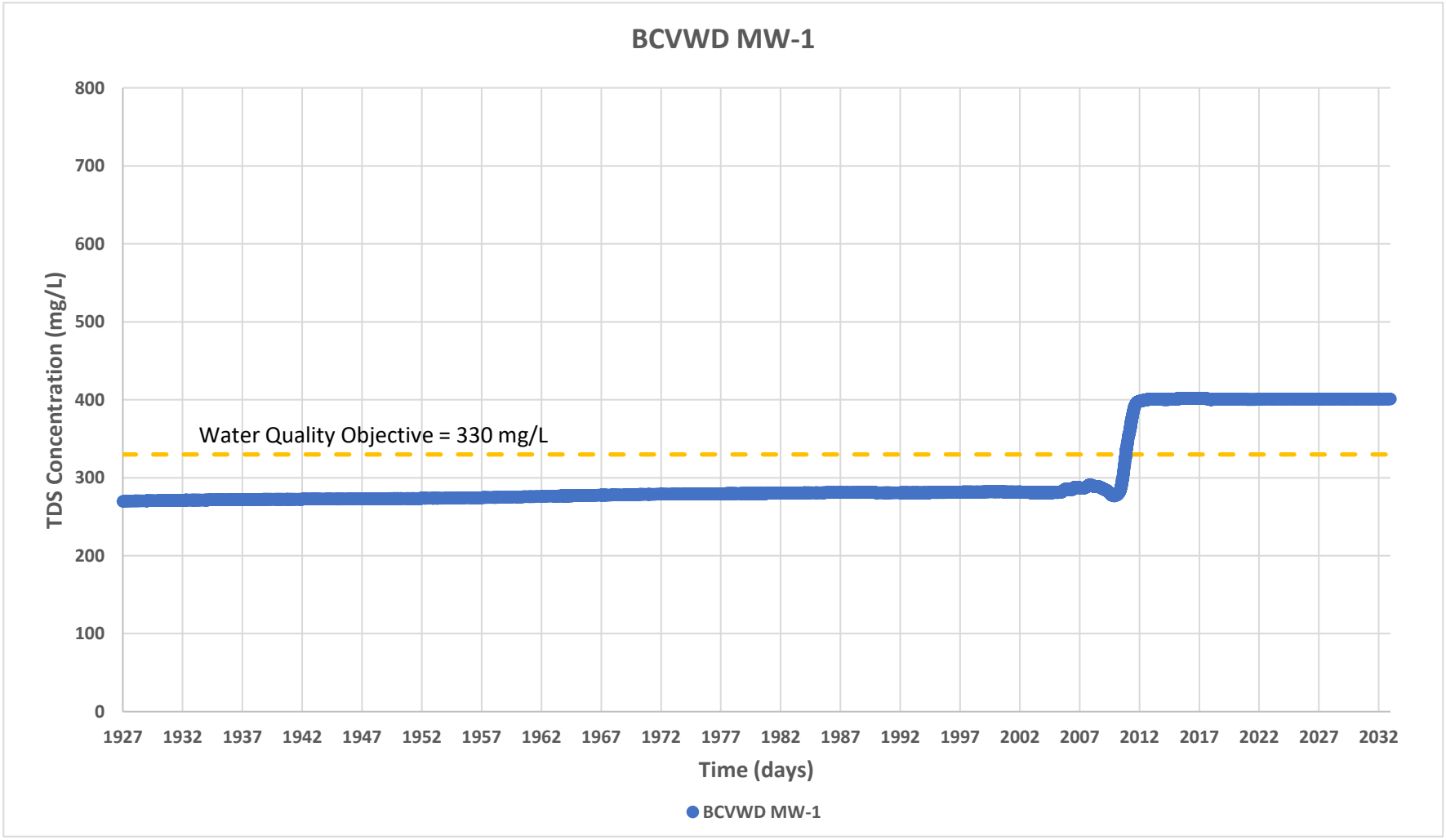

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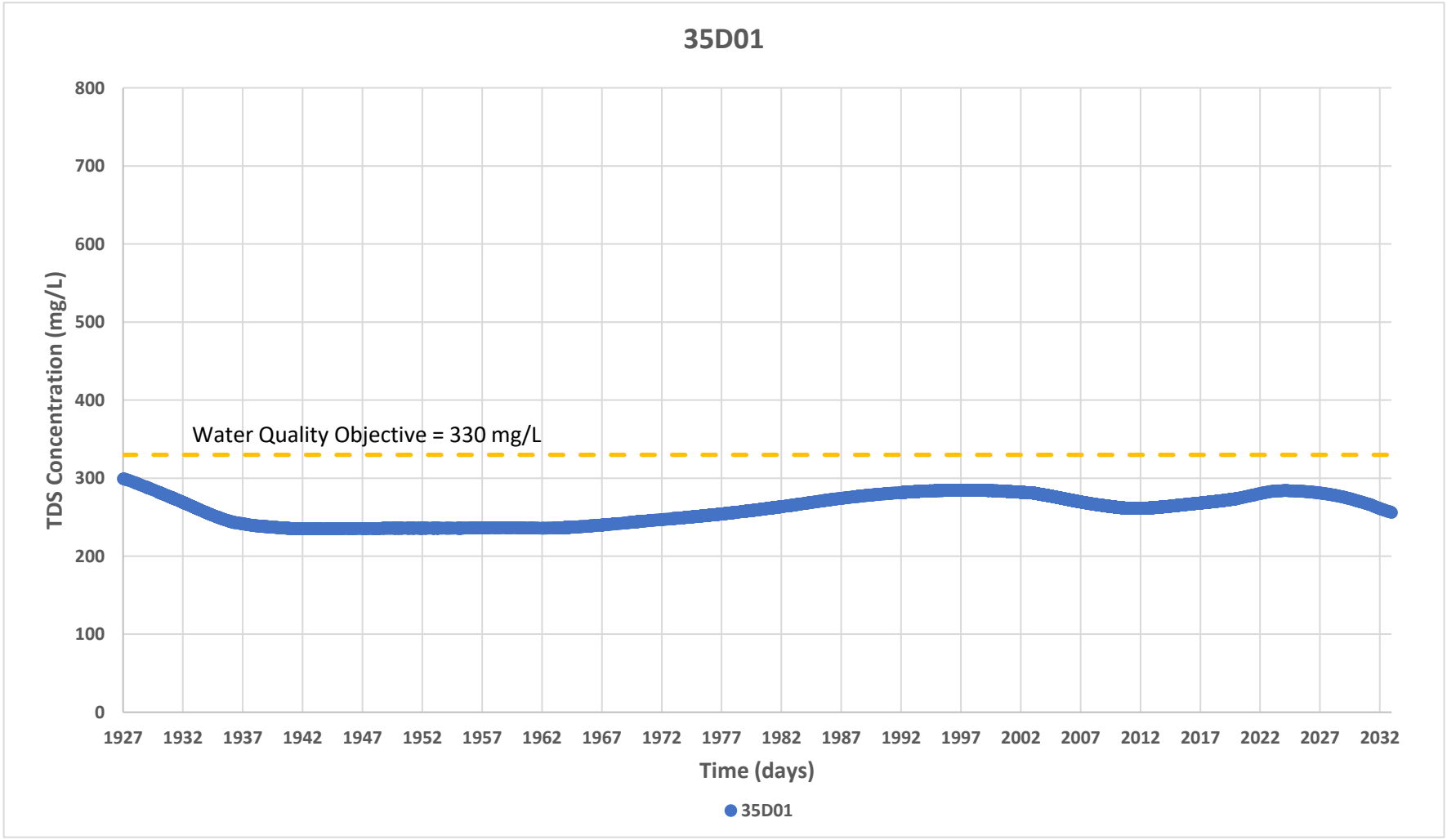

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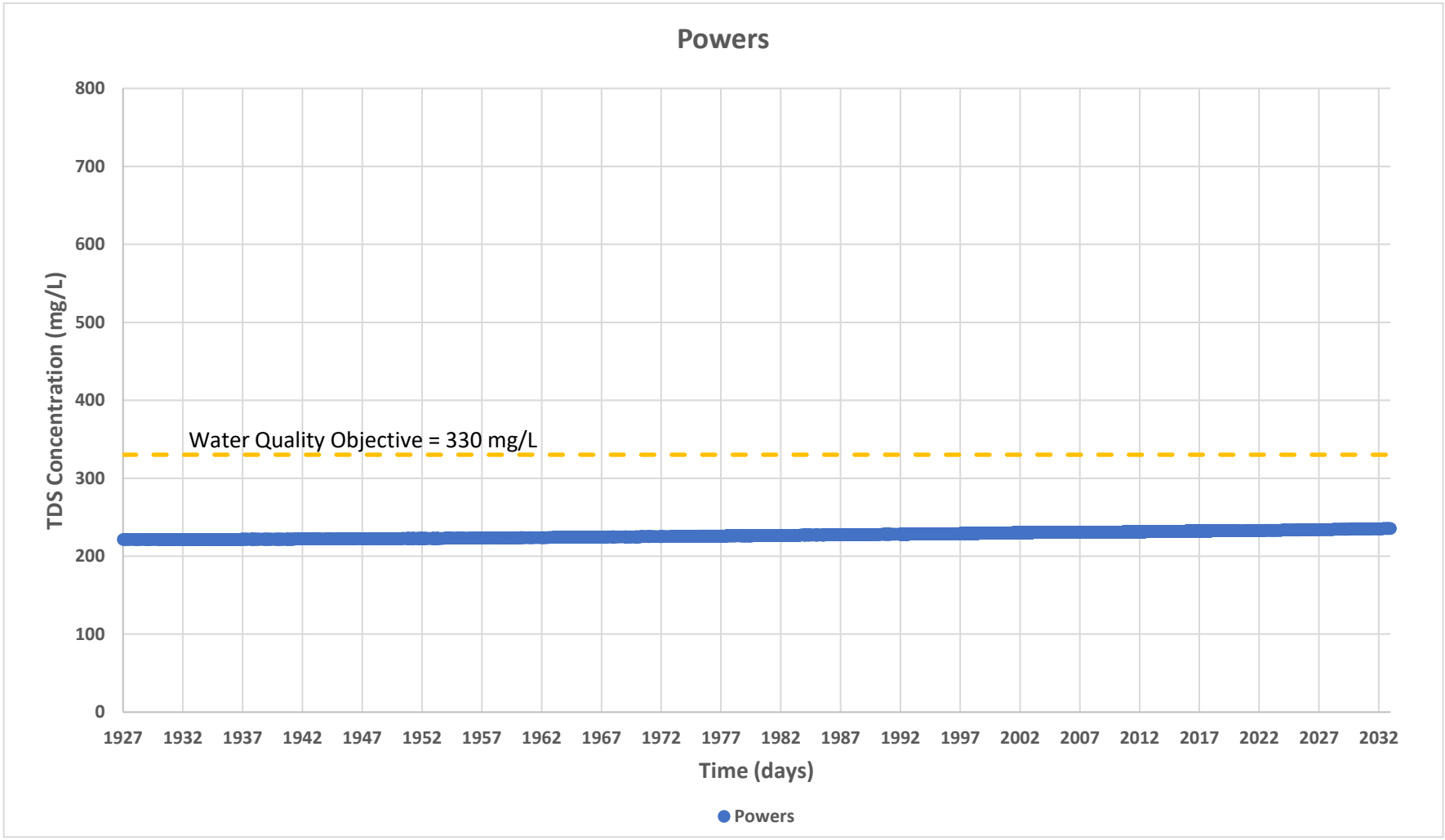

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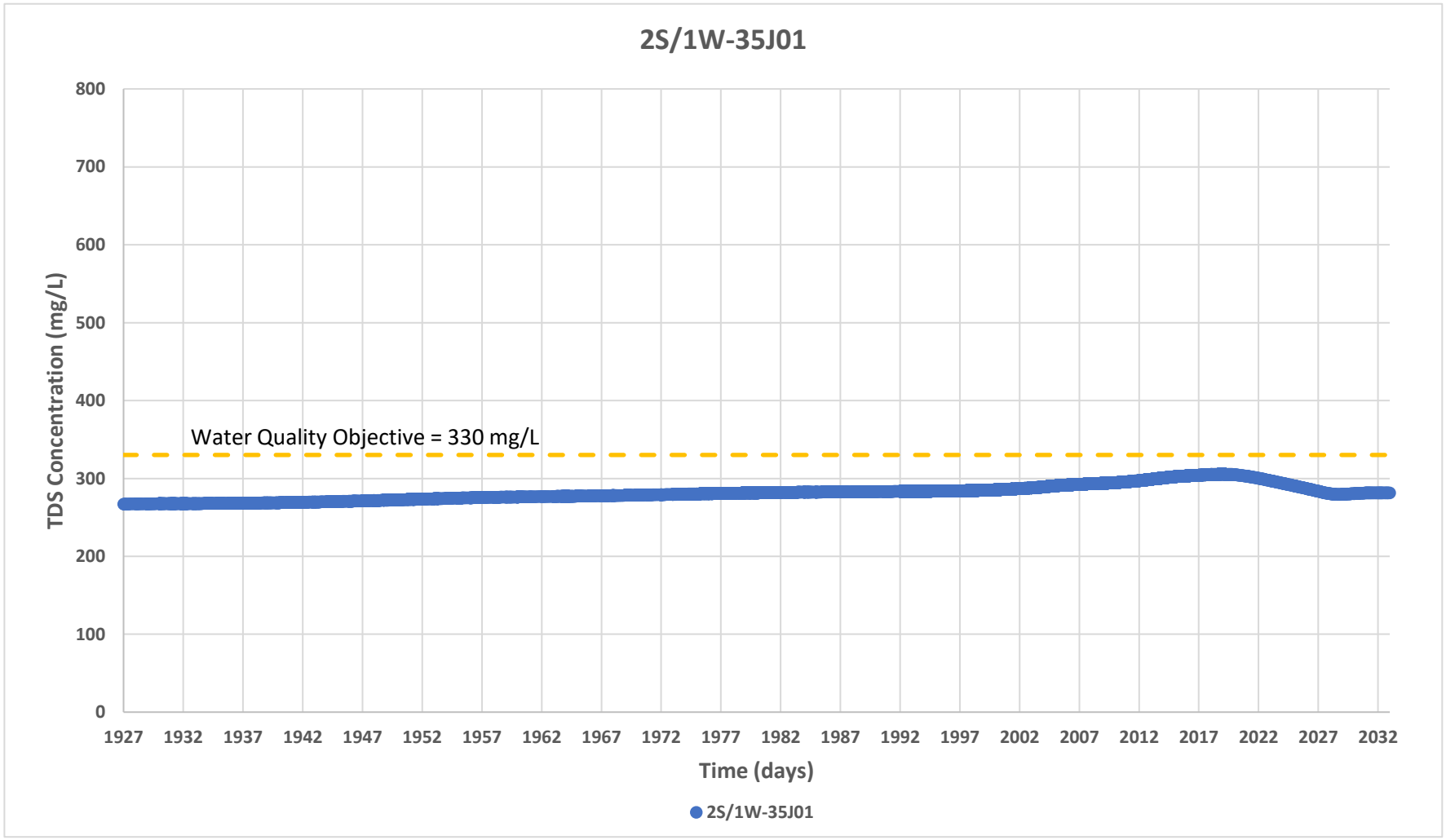

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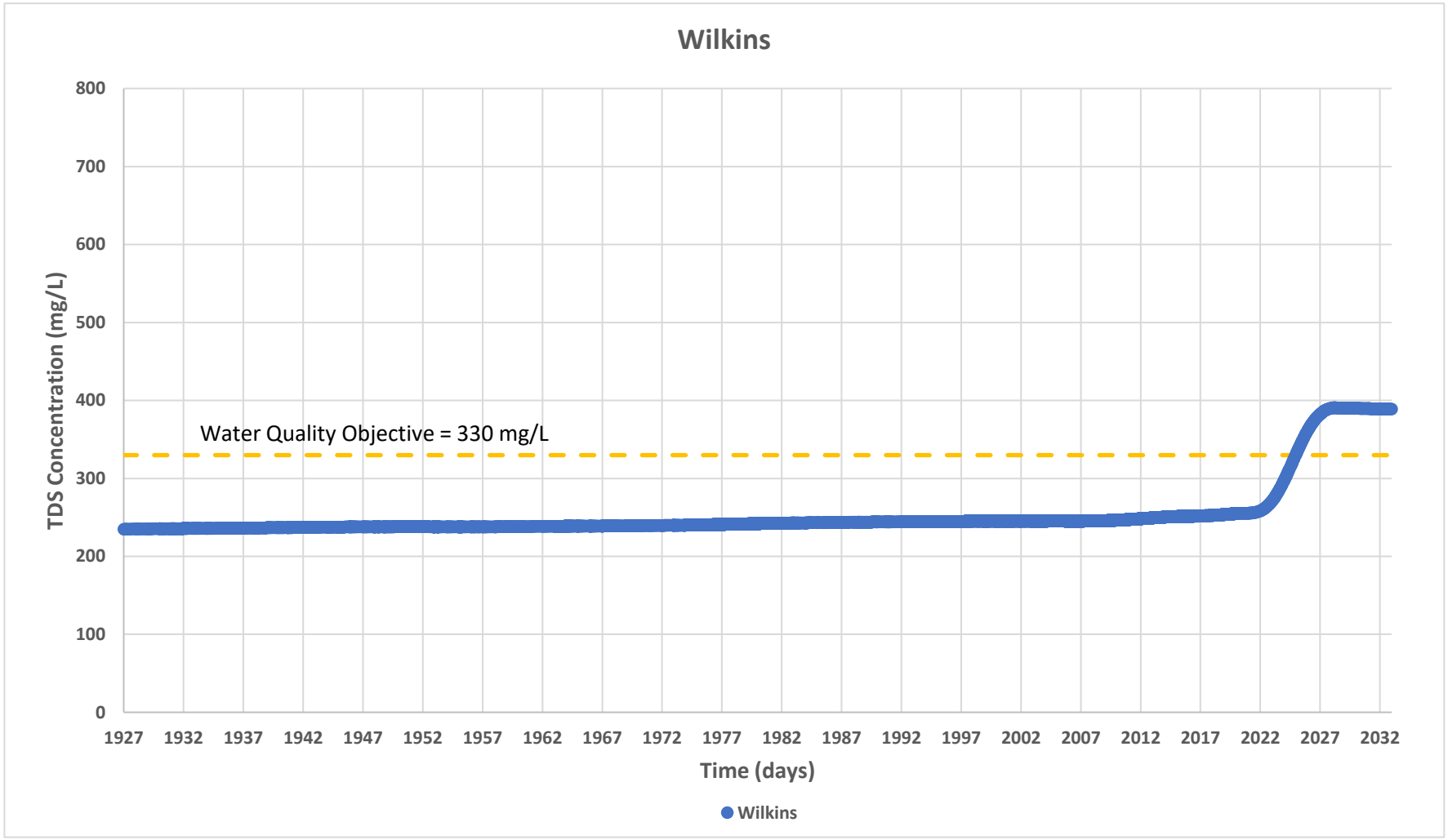

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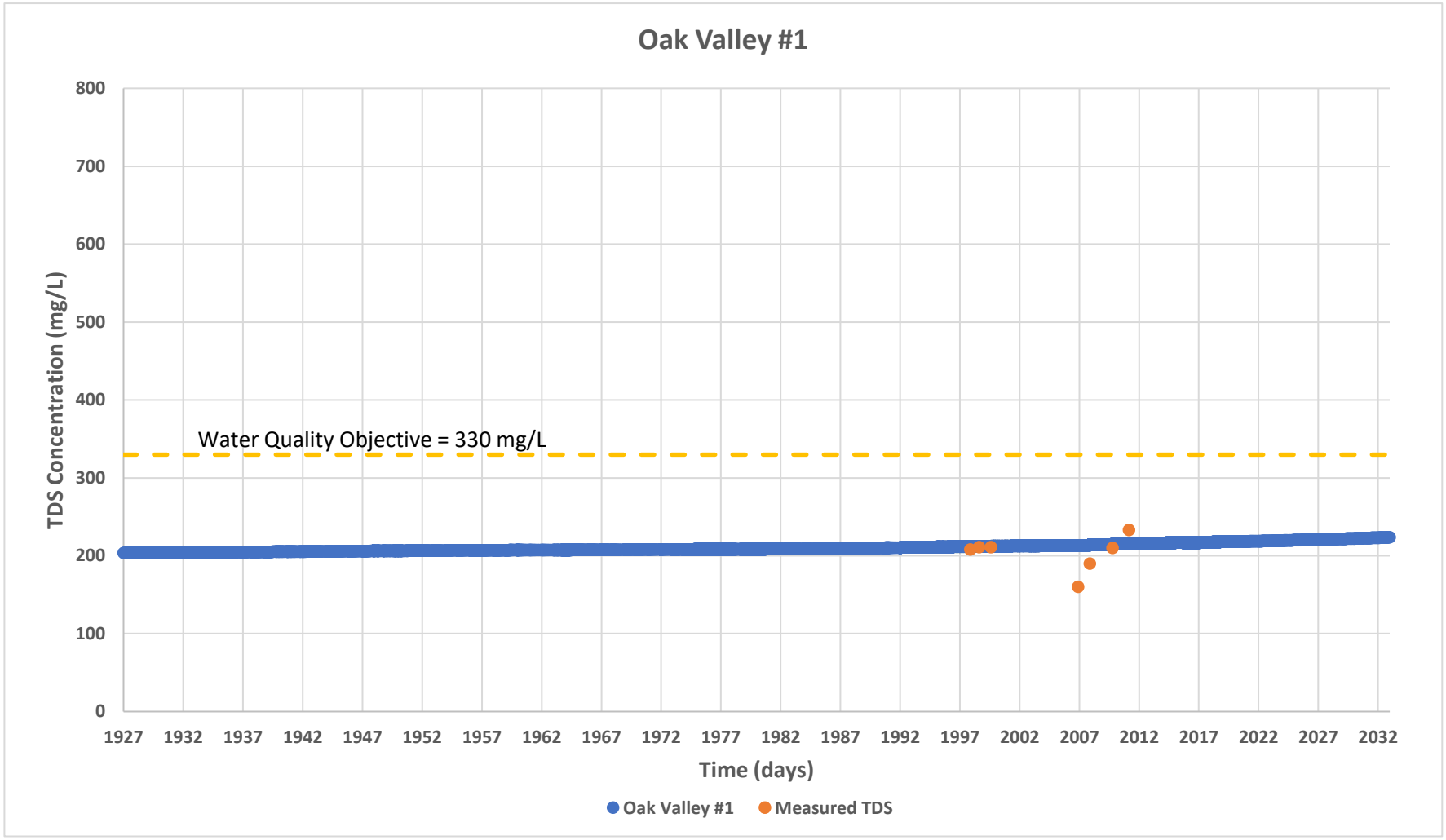

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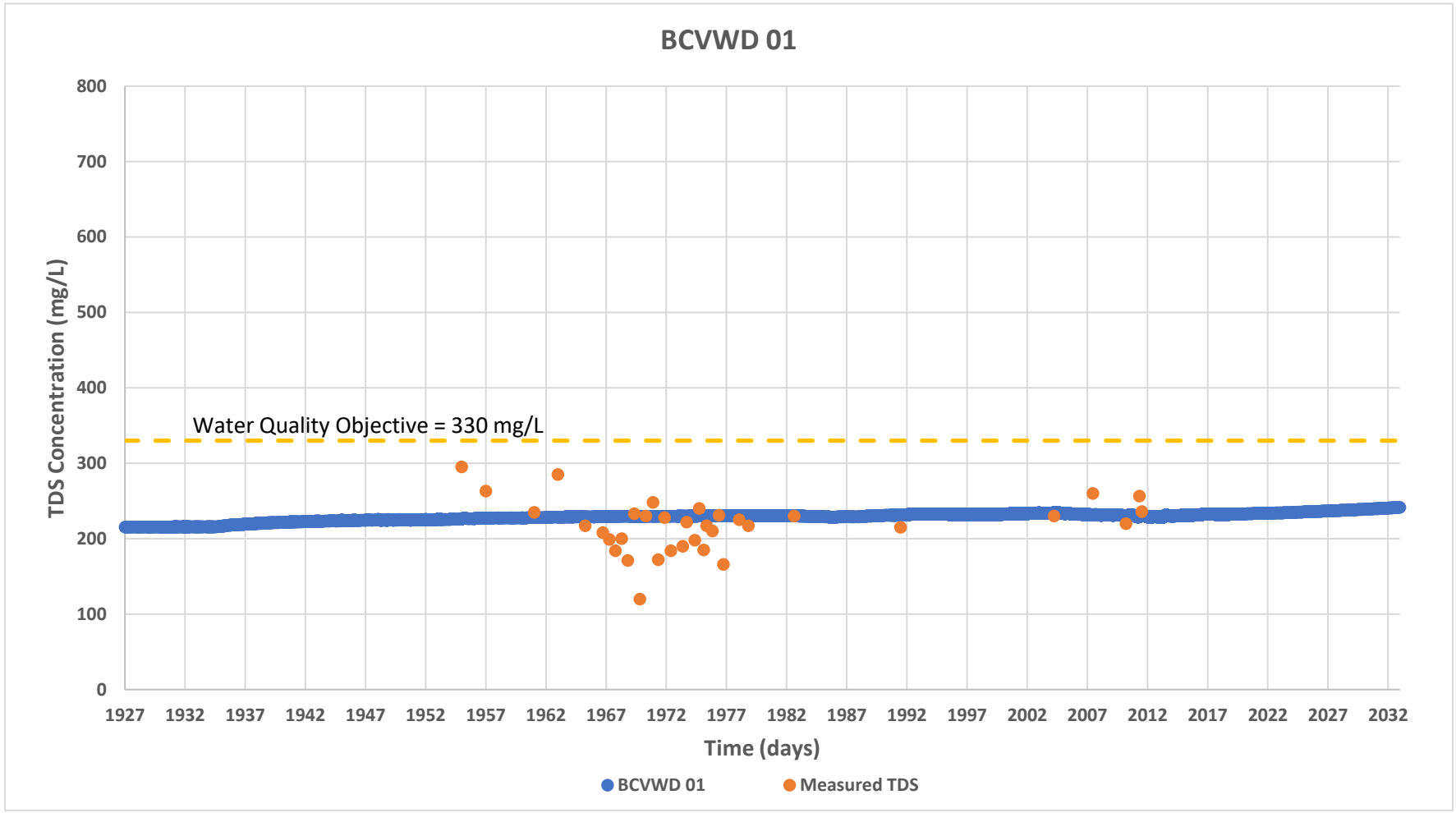

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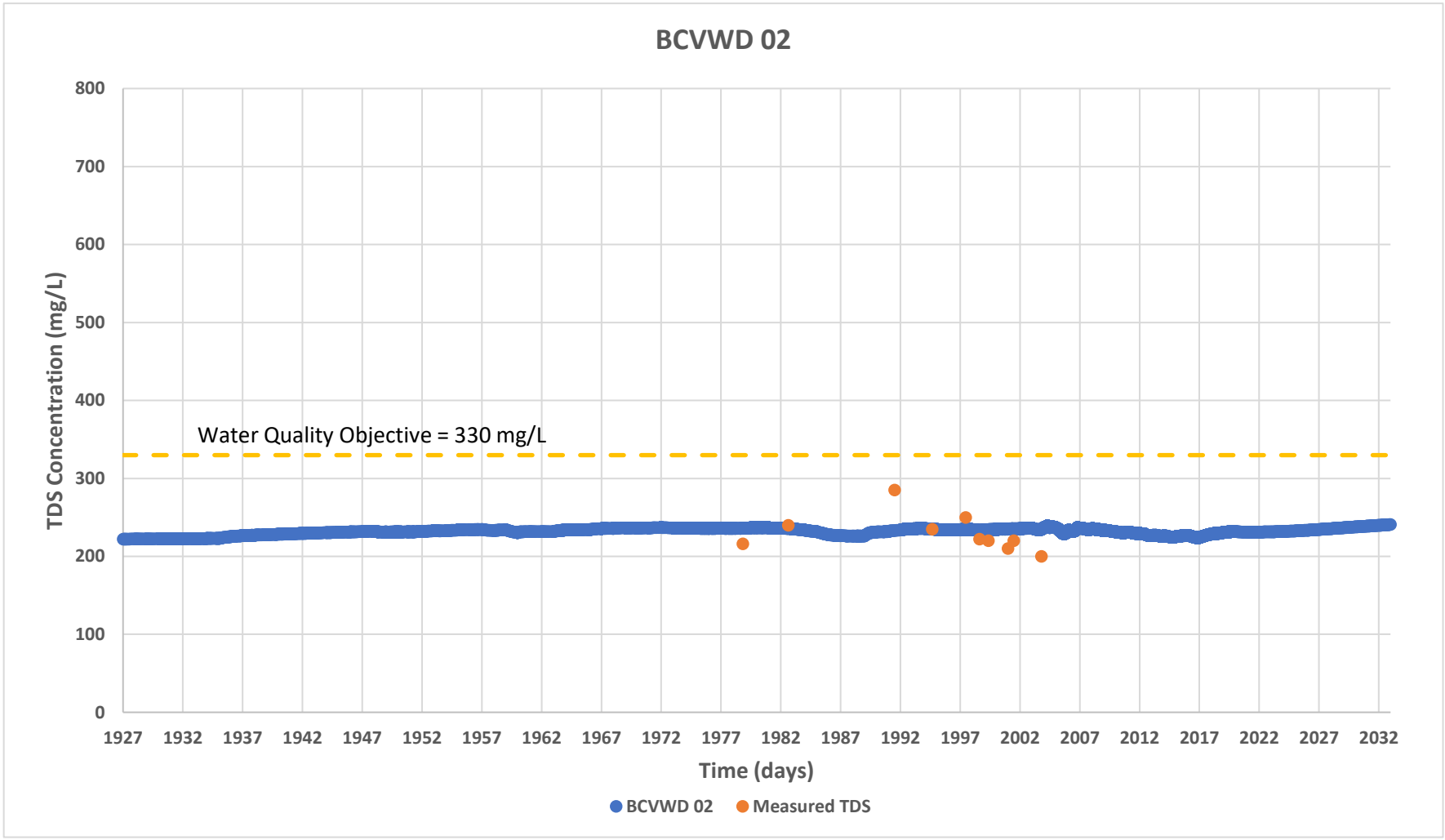

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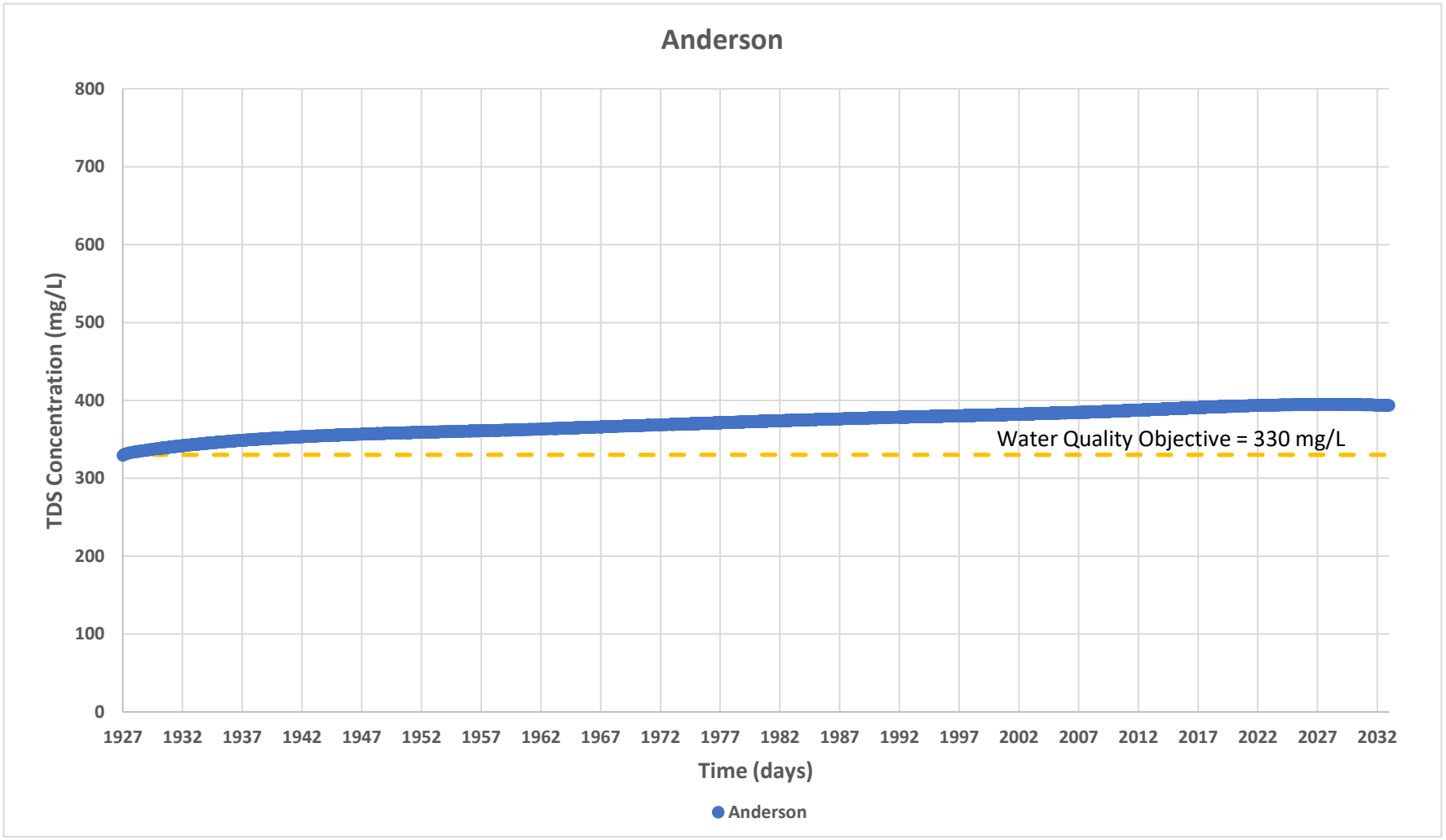

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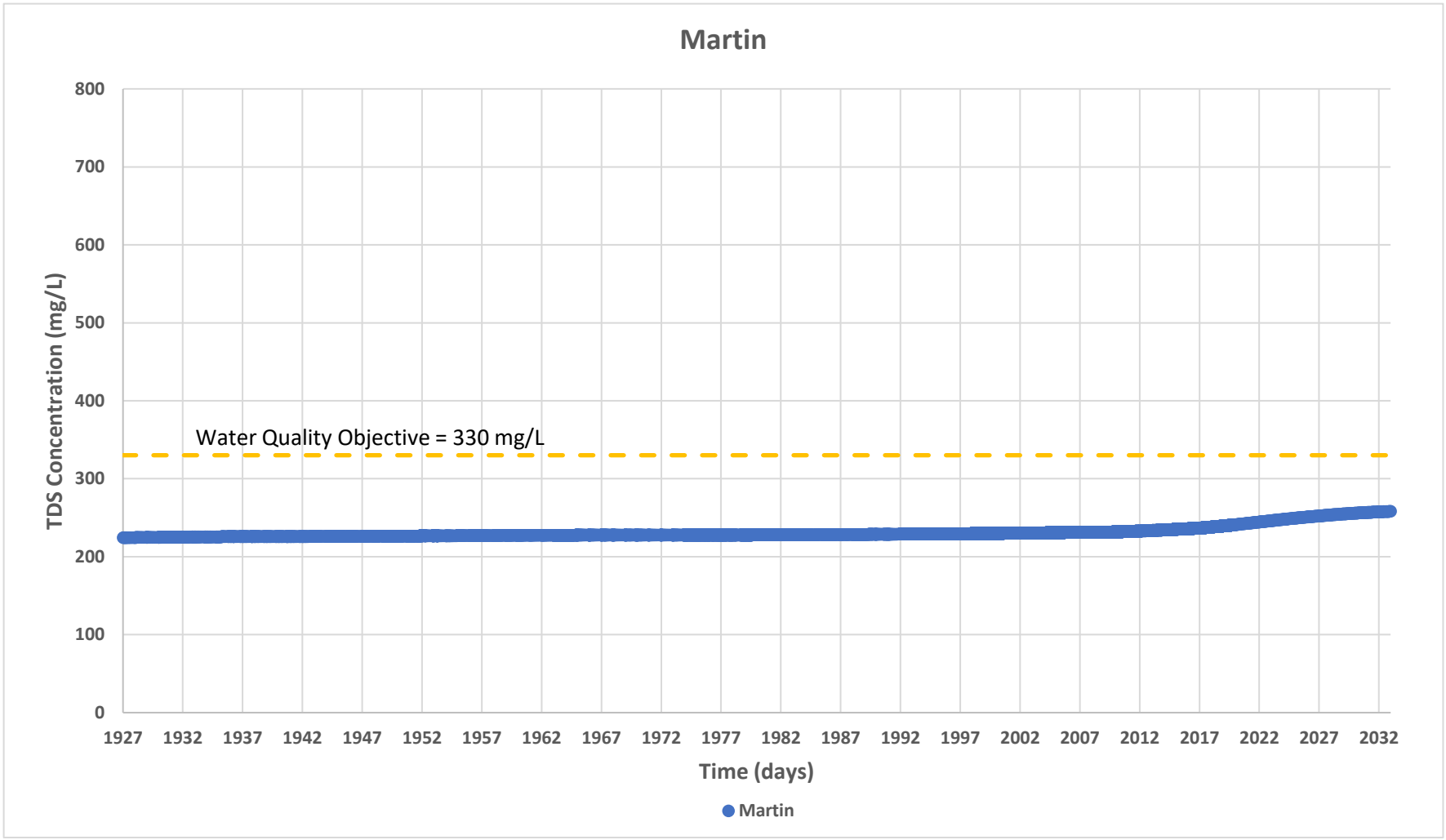

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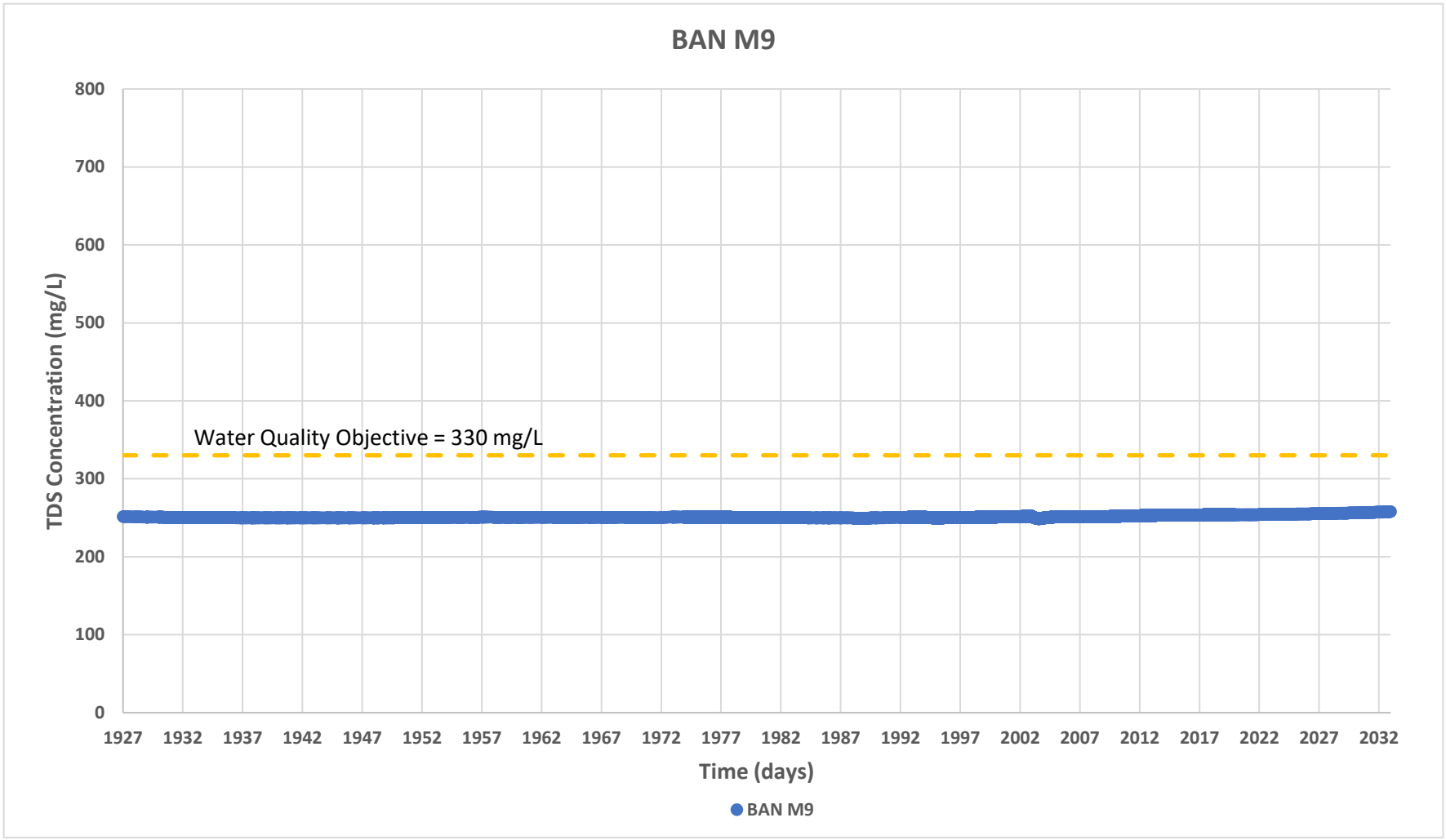

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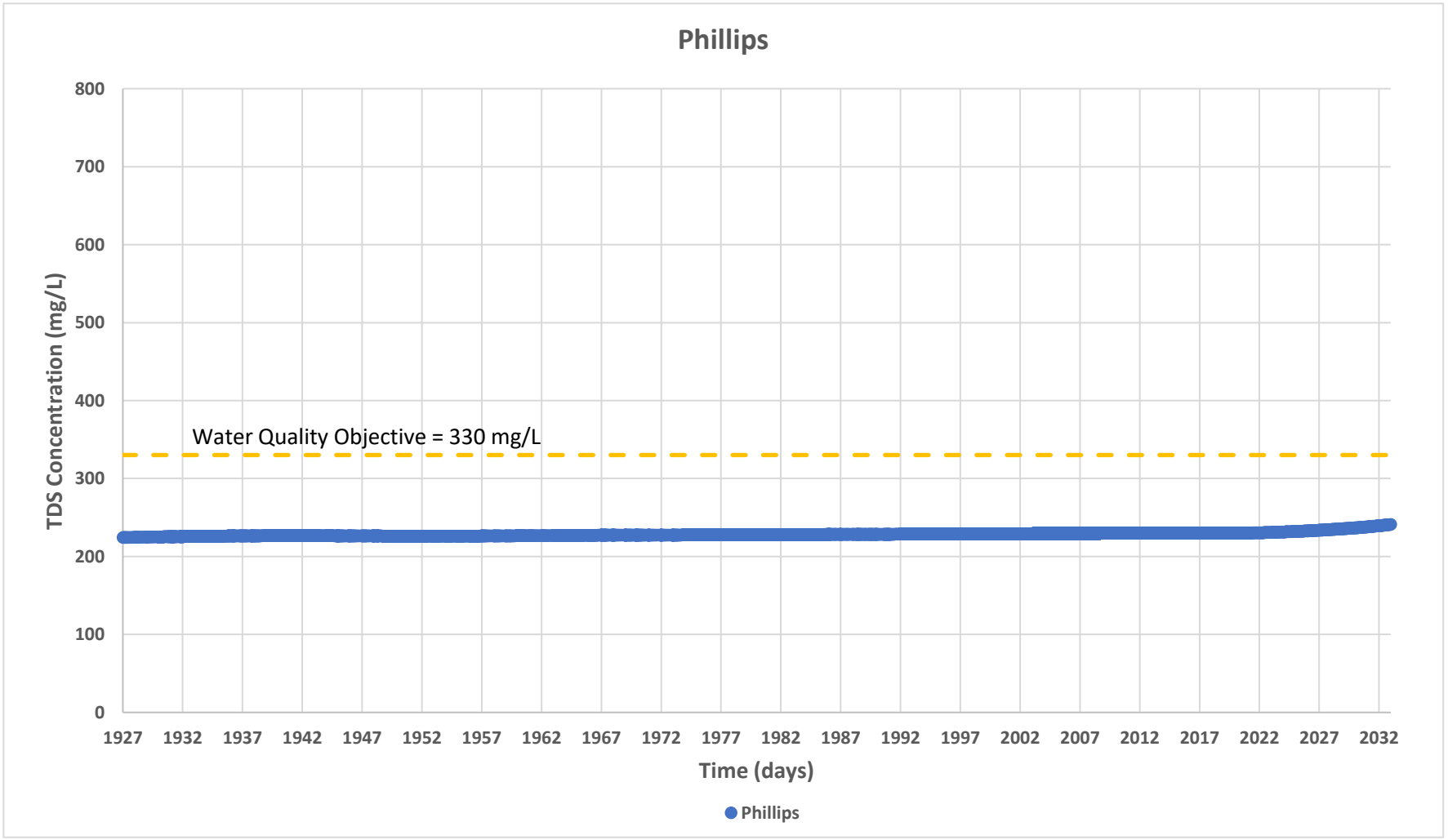

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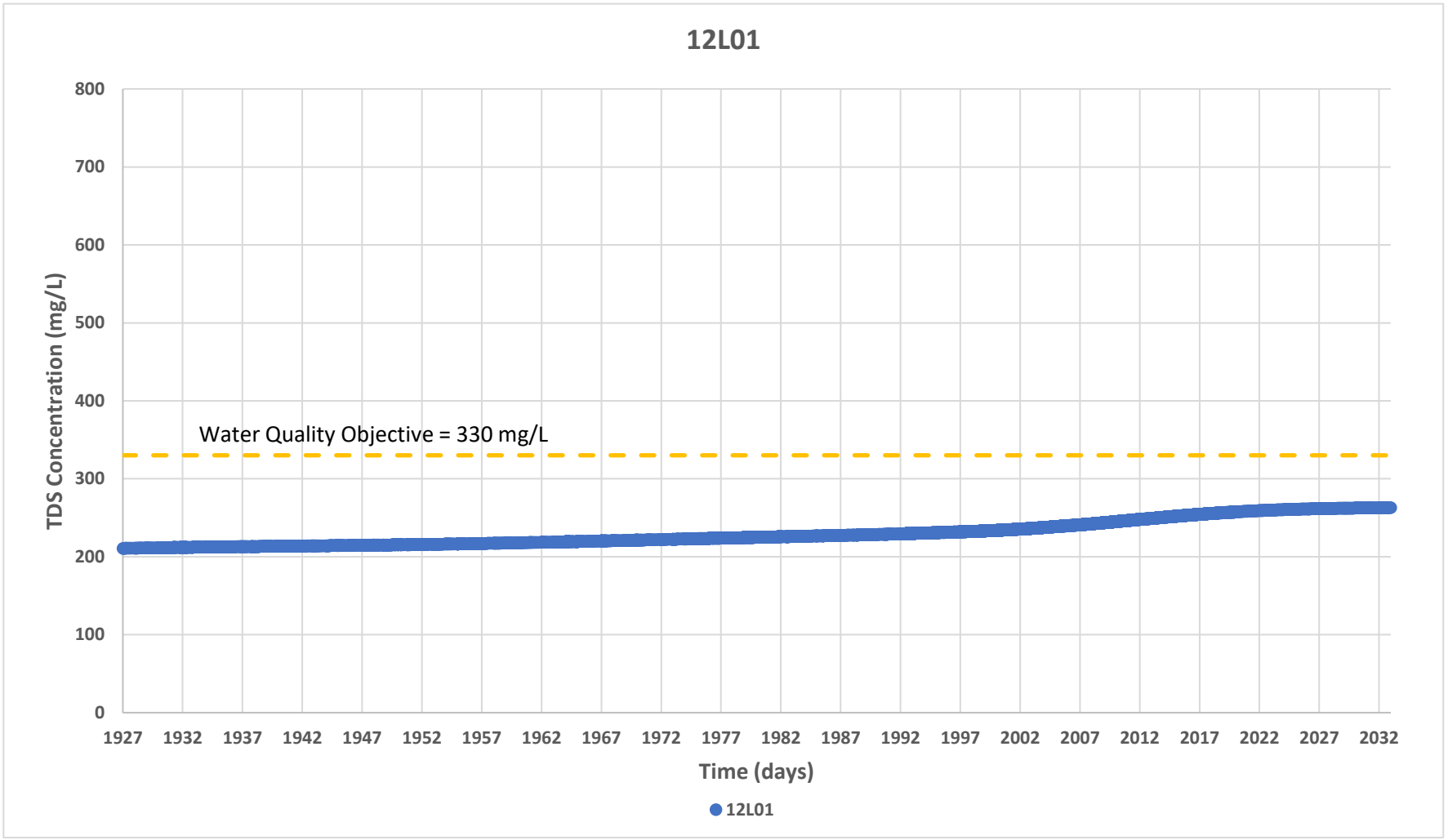

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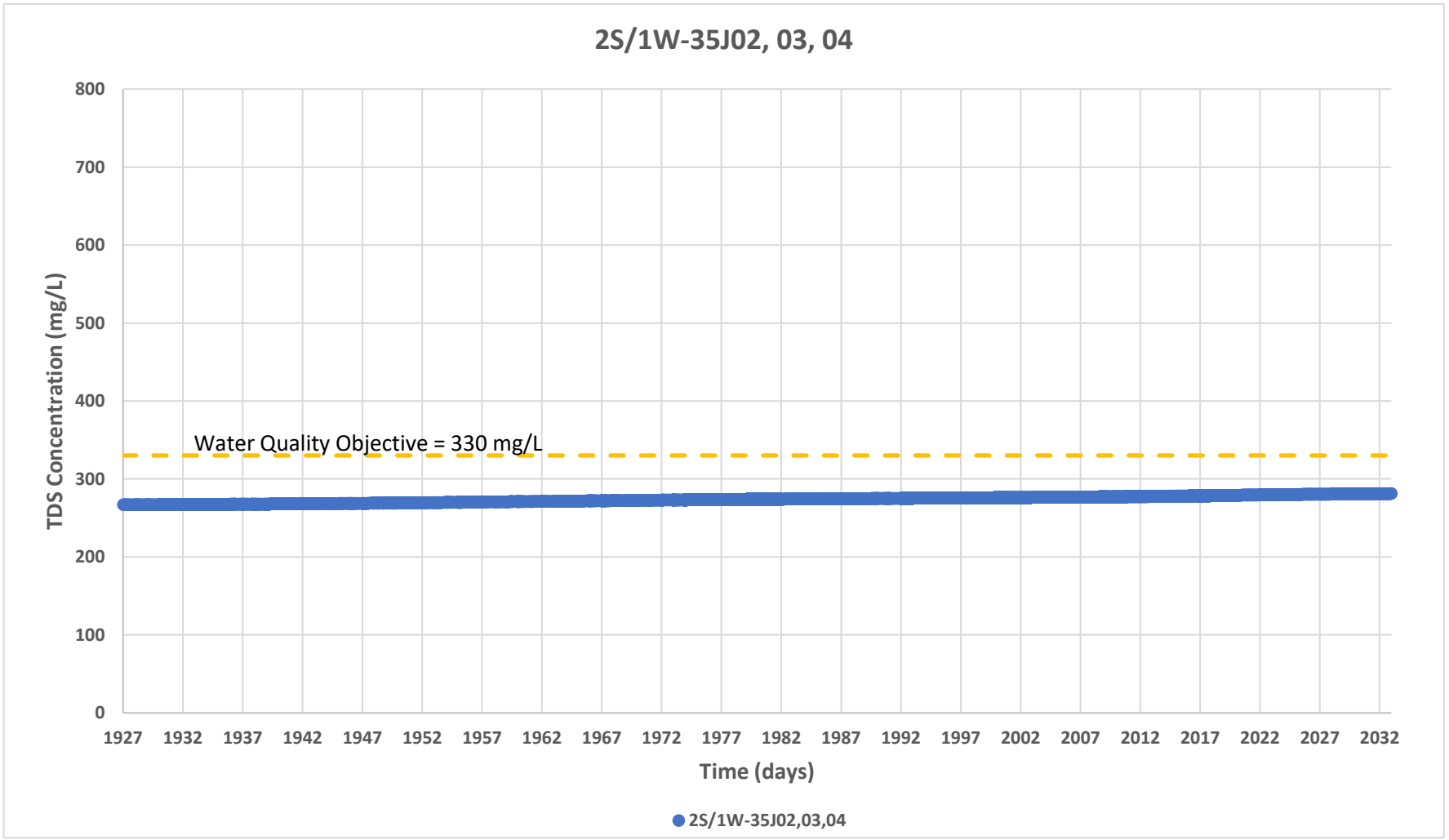

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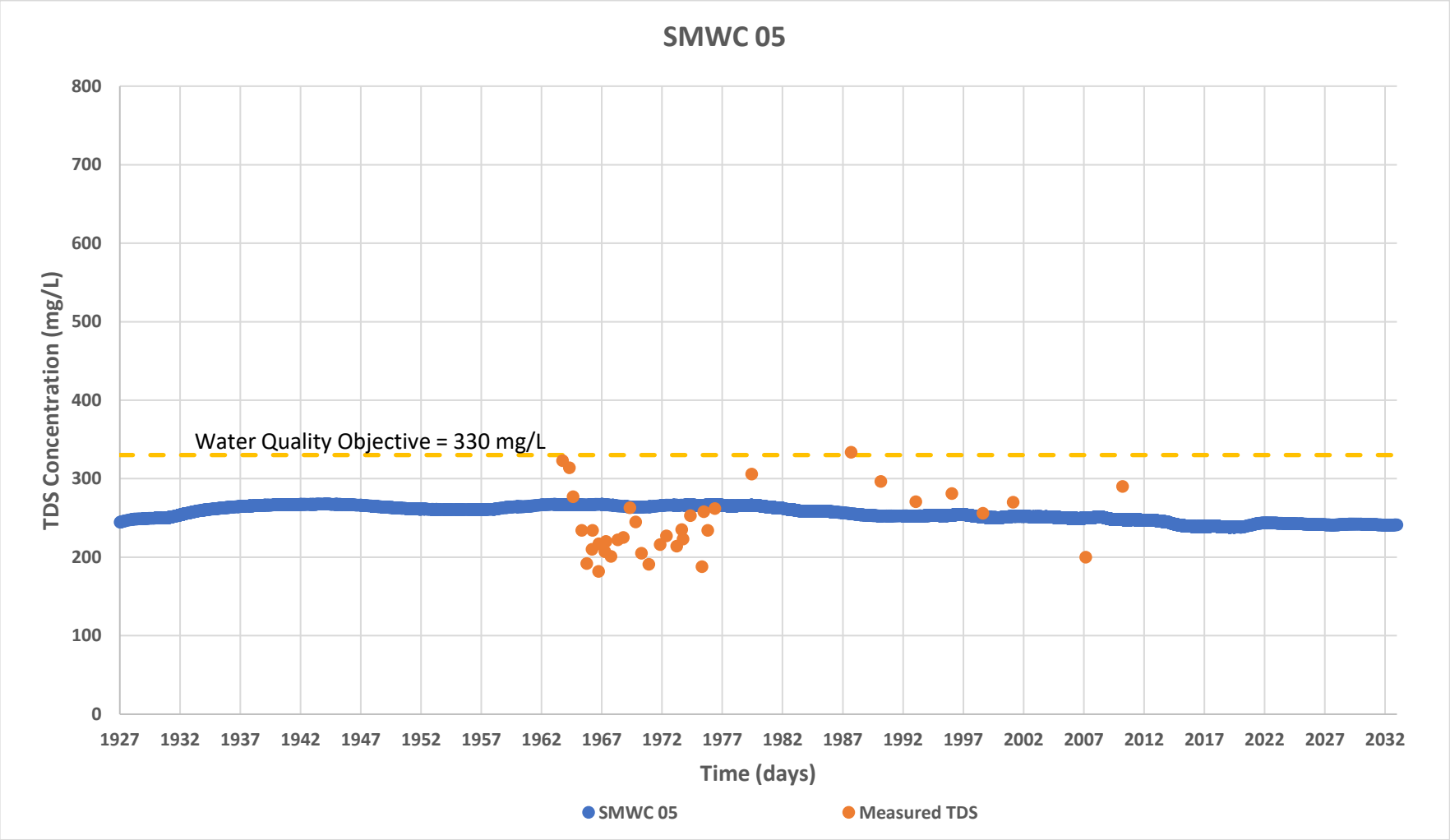

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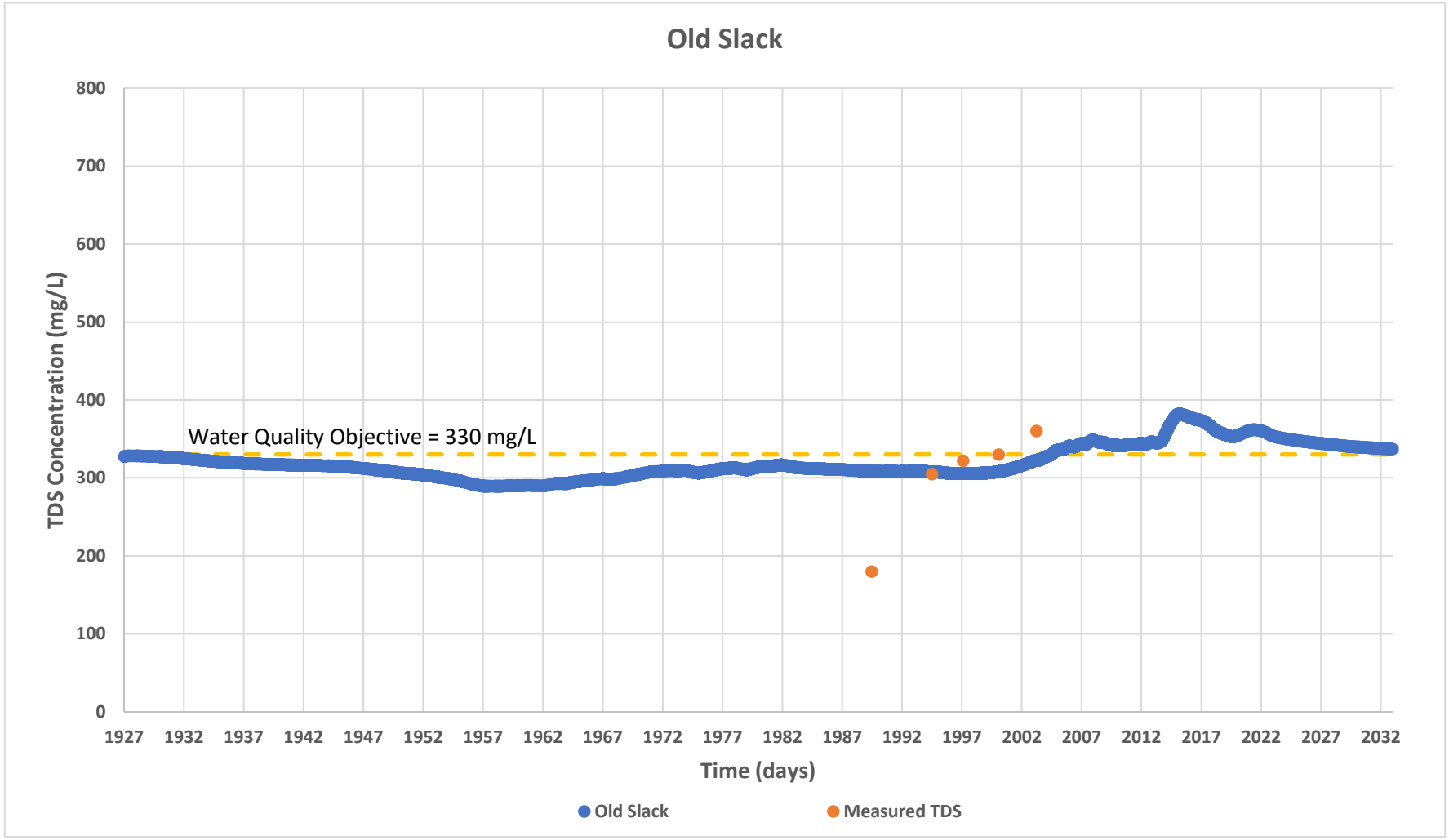

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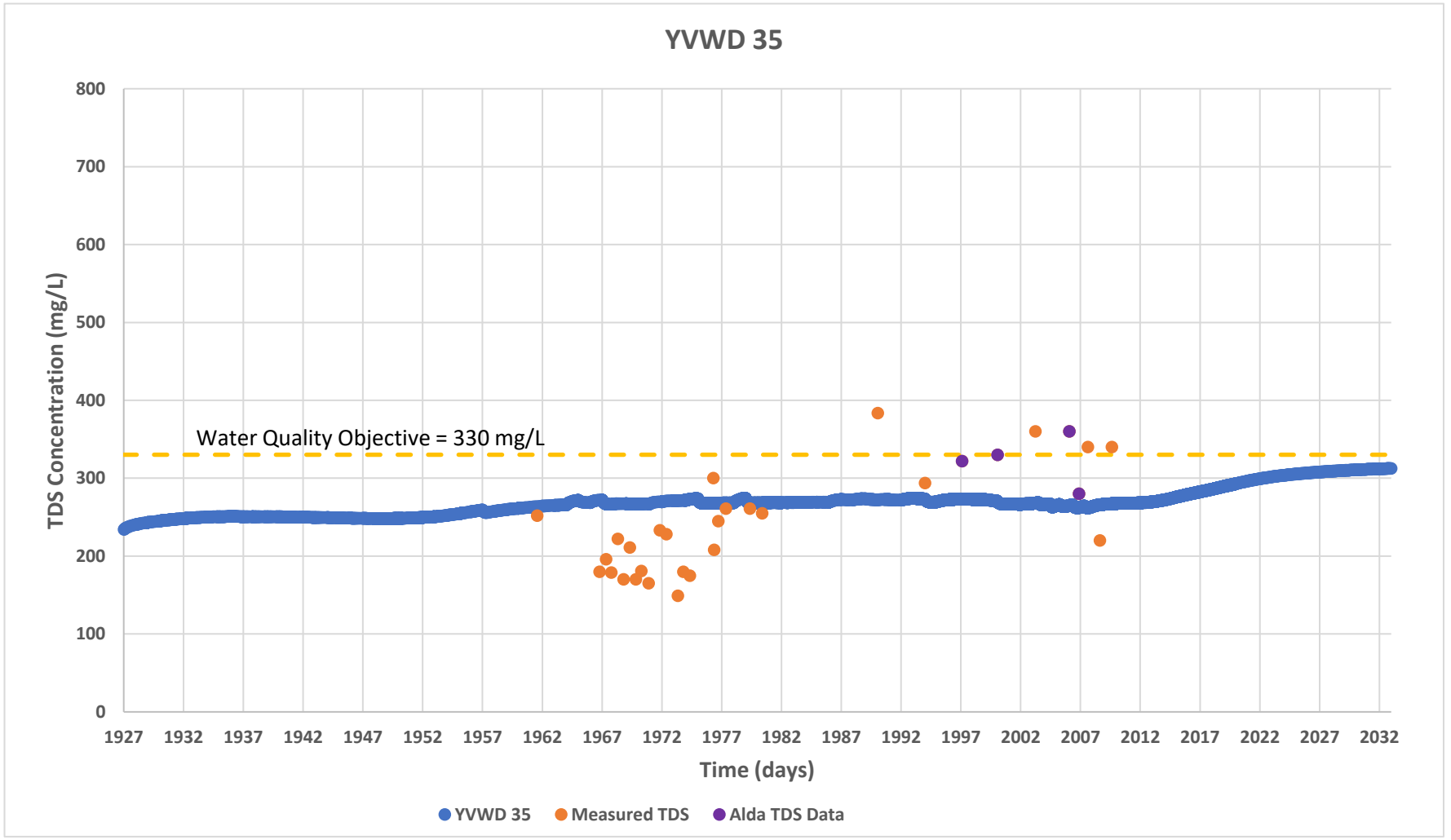

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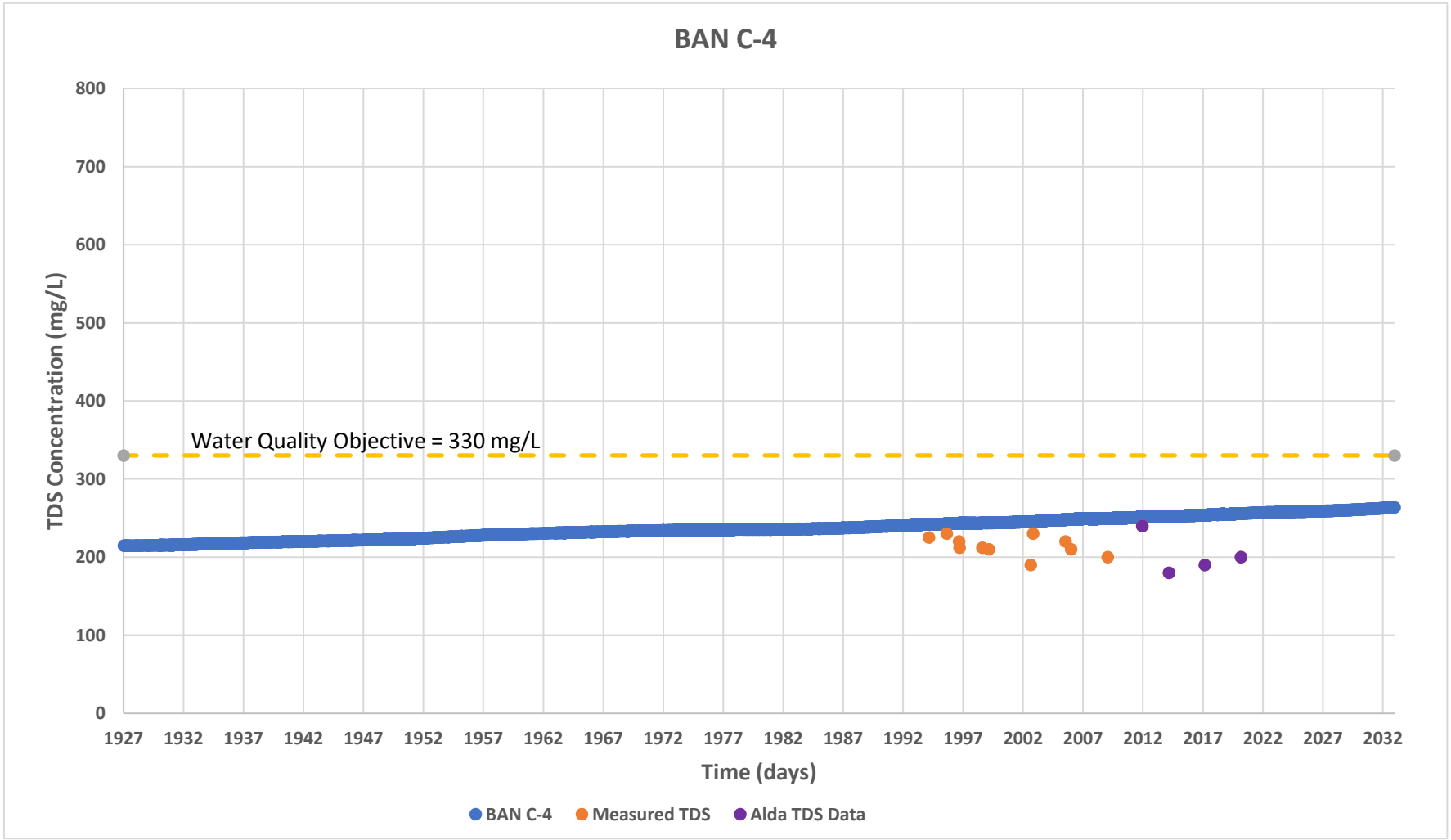

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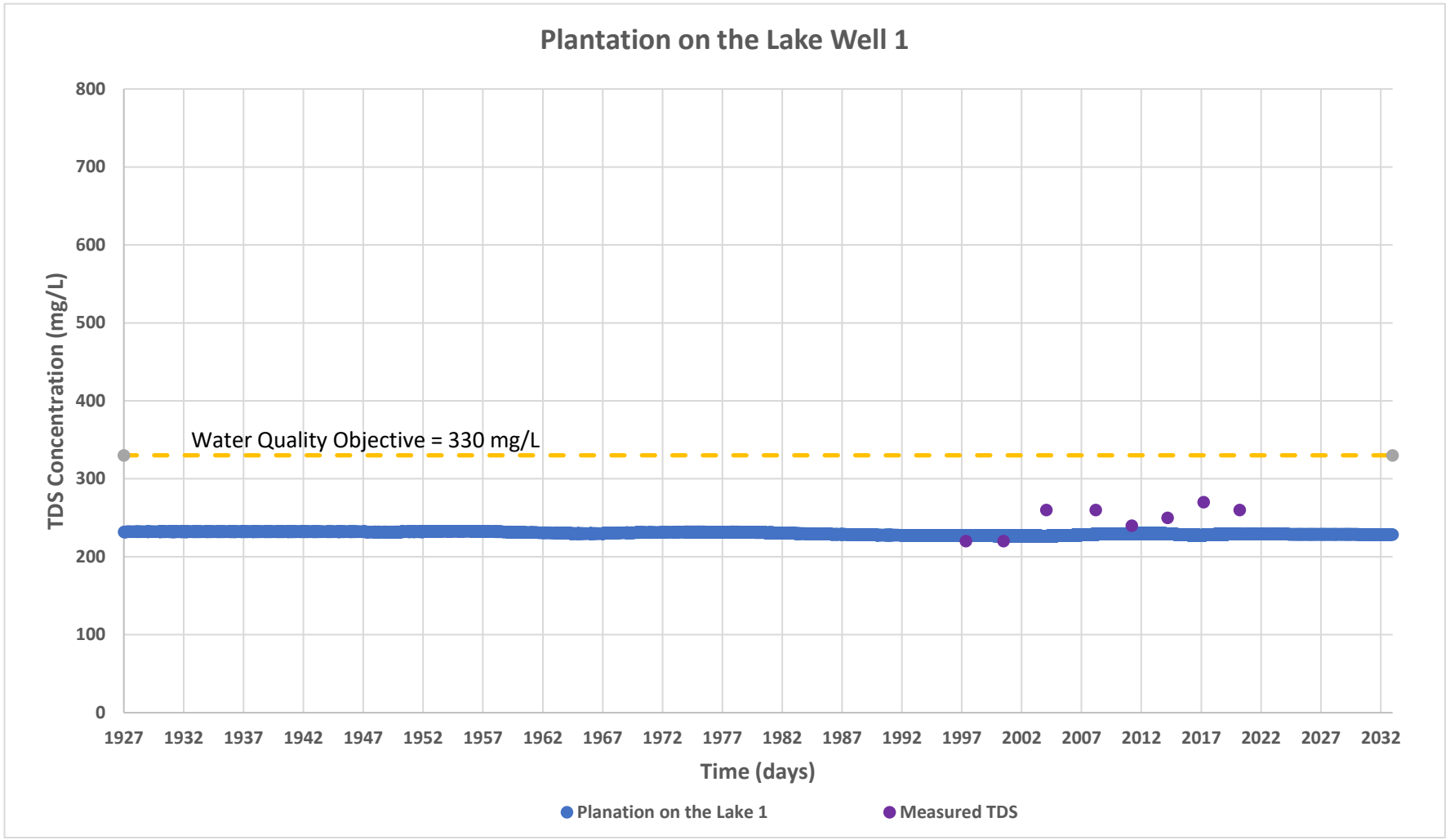

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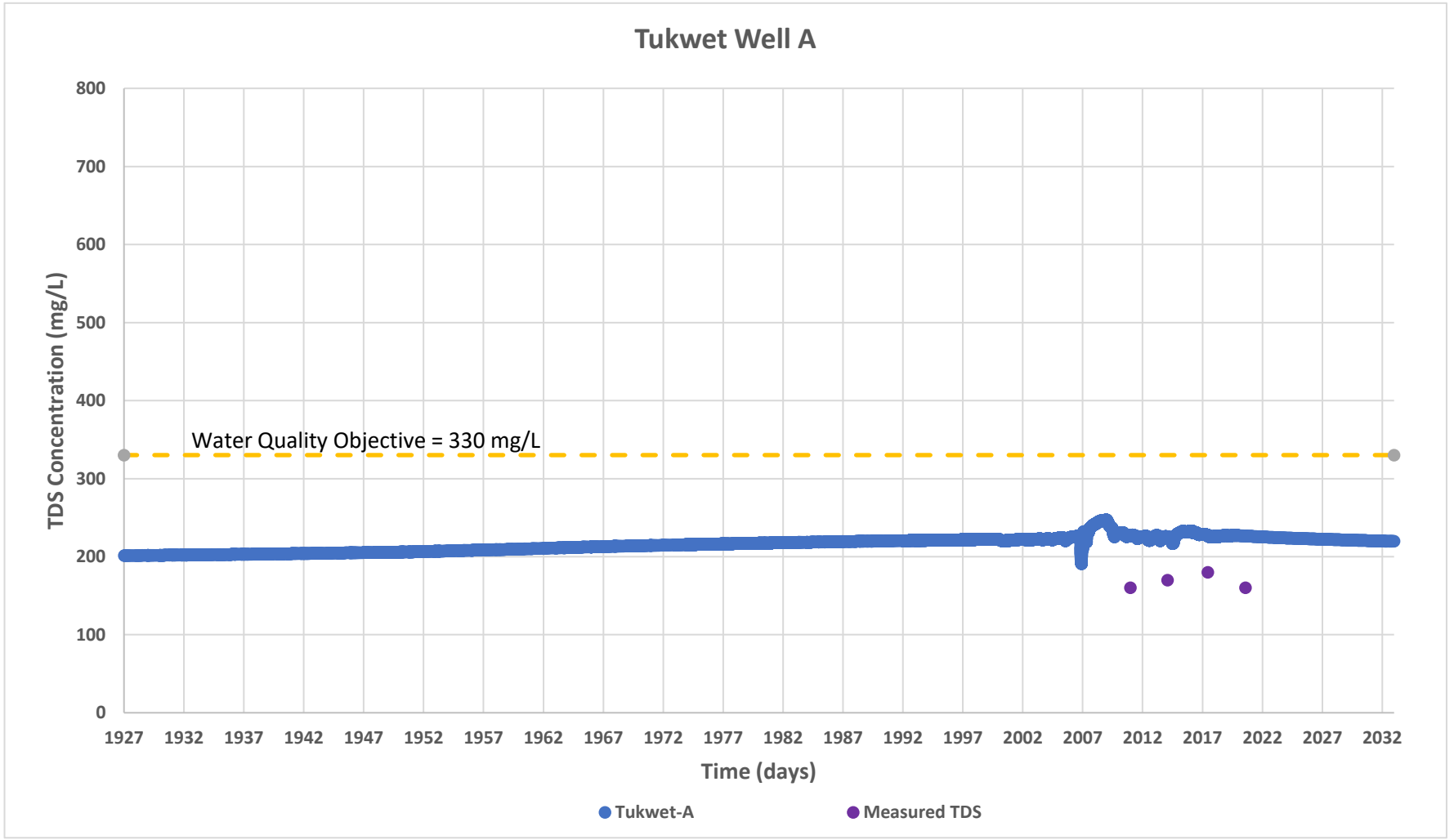

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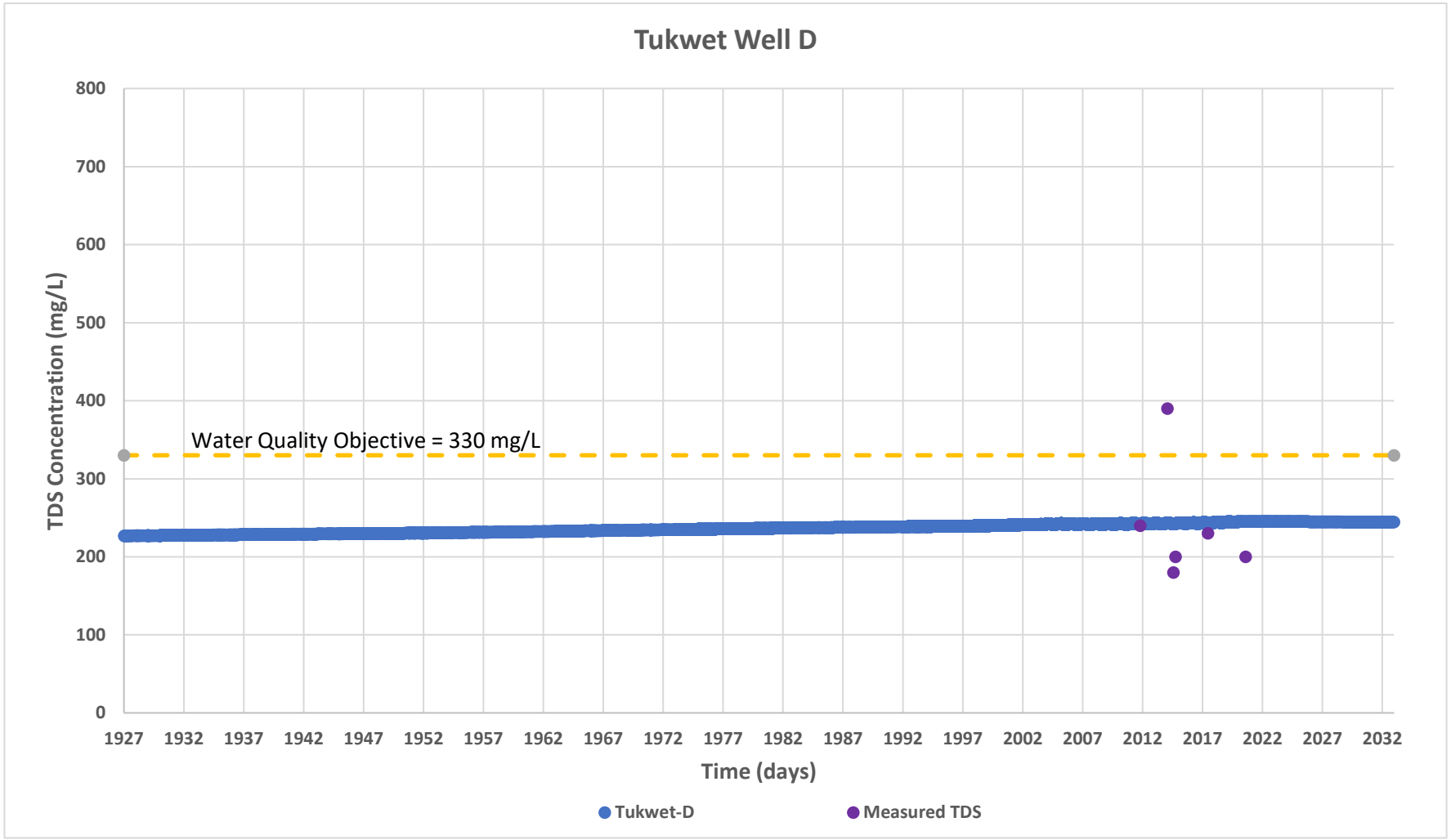

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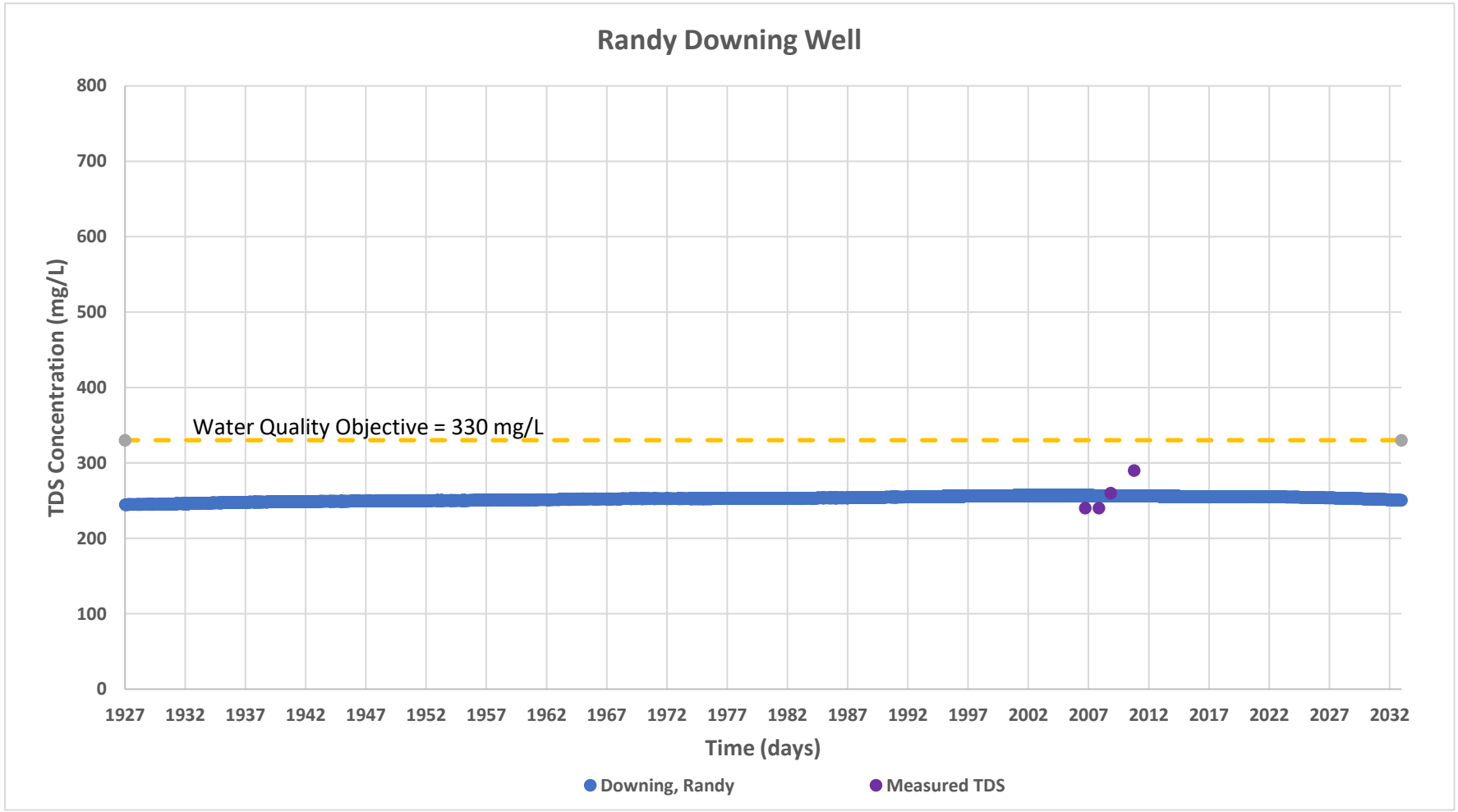


BEAUMONT BASIN WATERMASTER
MEMORANDUM NO. 22-14

Date: April 13th, 2022

From: Hannibal Blandon, ALDA Inc.

Subject: 2021 Consolidated Annual Report and Engineering Report - Presentation of Draft Report

Recommendation: For Information Purposes Only

ALDA Inc., in Association with Thomas Harder & Company, will make a formal online presentation of the draft of the 2021 Beaumont Basin Consolidated Annual Report and Engineering Report. The presentation will include conditions of the basin including groundwater production, water levels, spreading, water transfers, and water quality conditions that occurred during CY 2021. In addition, the Operating Safe Yield estimate for CY 2021 will be presented.

Committee members will have the opportunity to ask questions and comment on the various sections of the report and presentation. Additionally, members of the Committee will have the opportunity to review the draft report and submit comments.

Documented comments will be addressed at the June 2022 regular meeting.

The Draft 2021 Consolidated Annual Report is available online from the "Documents & Publications" section of the Beaumont Basin Watermaster website (www.beaumontbasinwatermaster.org)

The Draft Consolidated Annual Report can also be downloaded directly from the following link:

http://documents.yvwd.dst.ca.us/bbwm/documents/2021/2021annualreport-draft220405.pdf

Beaumont Basin Watermaster

2021 Consolidated Annual Report and Engineering Report

DRAFT

2021 Watermaster Board

Art Vela, City of Banning, **Chairman**
George Jorritsma, South Mesa Water Company, **Vice Chairman**
Daniel Jaggers, Beaumont Cherry Valley Water District, **Secretary**
Joseph Zoba, Yucaipa Valley Water District, **Treasurer**
Jeff Hart, City of Beaumont

Alvarado Smith, **Legal Counsel**
ALDA Inc. in Association with Thomas Harder & Company, **Engineering**
Rogers, Anderson, Malody, and Scott. LLP, **Financial Auditors**

April 2022

ALDA Inc.
5928 Vineyard Avenue
Alta Loma, CA 91701
Tel: (909) 587-9916
Fax: (909) 498-0423

April 6th, 2022

Art Vela, Chairman
Beaumont Basin Watermaster
560 Magnolia Avenue
Beaumont, CA 92223

Subject: **Beaumont Basin Watermaster**
Draft Annual Report for Calendar Year 2021

Dear Mr. Vela:

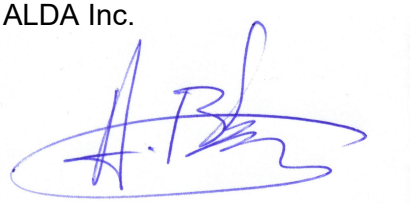
ALDA Inc., in association with Thomas Harder & Co. is pleased to submit to you, as Chairman of the Beaumont Basin Watermaster, a draft of the Beaumont Basin Watermaster Annual Report for Calendar Year 2021. This draft report summarizes all production, spreading, water rights issues, and storage activities that took place during calendar year 2021. Further, it documents changes in water levels and storage conditions, as well as an estimate of the Basin Operating Safe Yield for 2021. Finally, the report presents an evaluation of water quality conditions for all domestic wells during the 2017-2021 five-year period and for the Maximum Benefit Monitoring Program.

We will make a formal presentation to the Watermaster Committee during the upcoming Board meeting on April 6th, 2022. 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

List of Figures

List of Tables

Appendices

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
BMZ	Beaumont Management Zone
Beaumont	City of Beaumont
CDPH	California Department of Public Health
CVCOI	Cherry Valley Community of Interest
CY	calendar year
du	dwelling unit
FY	fiscal year
GAMA	Groundwater Ambient Monitoring and Assessment
IRWMP	Integrated Regional Water Management Program
MCL	Maximum Contaminant Level
NL	Notification Level
NTU	Nephelometric Turbidity Units
OSWDS	On-Site Waste Disposal Systems
Pass Agency	San Gorgonio Pass Water Agency
SGPWA	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
TDS	Total Dissolved Solids
UCR	University of California, Riverside
USEPA	United States Environmental Protection Agency
Watermaster	Beaumont Basin Watermaster Committee
YVWD	Yucaipa Valley Water District

Section 1
Background

The Sixteenth 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. This report documents activities in the Beaumont Basin for Calendar Year 2021. Section 3 of the original annual report has been expanded and retitled as "Status of the Basin and Administration of the Judgment"; it documents the Administration of the Judgment as well as provides a status of conditions in the basin addressing water production, water levels, recharge of supplemental water, water transfers, and storage activities. In addition, a Water Quality section, Section 4, has been added to document water quality of selected compounds at selected wells, as well as basin wide concentrations for the 2017-2021 period.

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: City of Banning, City of Beaumont, Beaumont Cherry Valley Water District (BCVWD), South Mesa Water Company (SMWC), and Yucaipa Valley Water District (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 was 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 was 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 percent 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 local and regional agencies 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 was 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 Recent Legal Opinions Related to the Judgment

On August 31, 2021, the Honorable Irma Poole Asberry ruled on two motions filed by YVWD regarding Case No. RIC389197. The first motion filed by YVWD was to rescind Watermaster Rule 7.3, formerly known as Rule 7.8. The second motion was to order the Watermaster to recognize Oak Valley Partners, LP's transfer of overlying water rights. The Court denied these motions without prejudice.

A copy of the Notice of Entry of Order Regarding Yucaipa Valley Water District's Motions, along with associated exhibits A and B is included under Appendix A of this report.

1.4 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 Rules and Regulations were most recently amended in 2019. 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 groundwater production, recharge activities, water transfers between appropriators, transfers of water rights from an overlying member to an appropriator 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 collected by local agencies as part of their Maximum Benefit and Monitoring Program for the Beaumont Management Zone.
- ✓ 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.

1.5 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

1.6 Watermaster Website

Watermaster website address is www.beaumontbasinwatermaster.org. This website is maintained by 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.

1.7 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 benefit to the people dependent on it."

Section 2
Watermaster Activities

2.1 Makeup of the Board

During the February 3, 2021 regular meeting of the Beaumont Basin Watermaster, the current Watermaster Committee Officers were re-affirmed to their respective positions for 2021 as follows:

- ✓ Mr. Art Vela – Chairman
- ✓ Mr. George Jorritsma – Vice Chairman
- ✓ Mr. Dan Jaggers – Secretary
- ✓ Mr. Joseph Zoba – Treasurer

The Watermaster Representatives serving each Appropriative Party at the end of CY 2021 were as follows:

Agency	Representative	Alternate
City of Banning	Art Vela	Luis Cardenas
City of Beaumont	Jeff Hart	Robert Vestal
Beaumont Cherry Valley Water District	Daniel Jaggers	Mark Swanson
South Mesa Water Company	George Jorritsma	Dave Armstrong
Yucaipa Valley Water District	Joseph Zoba	Jennifer Ares

Legal counsel during CY 2021 was provided by Alvarado Smith APC, represented by Keith McCullough and Thierry Montoya, while Engineering Services were provided by ALDA Inc., represented by Anibal Blandon, in association with Thomas Harder & Company, represented by Thomas Harder.

2.2 Watermaster Accomplishments and Activities During 2021

2.2.1 Watermaster Meetings

A total of seven regular meetings were held during CY 2021 on the following dates:

- ✓ February 2, 2021
- ✓ April 7, 2021
- ✓ June 2, 2021
- ✓ June 18, 2021
- ✓ August 4, 2021 (postponed to 8/17/21)
- ✓ August 17, 2021
- ✓ October 6, 2021
- ✓ December 1, 2021

The regular meeting scheduled for August 4, 2021 was postponed to August 17, 2021 due to technical difficulties prior to the meeting. In addition, there was one Special Meeting on February 18, 2021 and one Closed Session meeting on June 28, 2021.

Agendas for each of the above regular and special meetings can be viewed at and/or downloaded from Watermaster's website or by making a request to the Watermaster Secretary. Pursuant to Resolution 2009-01, 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 adopted during CY 2021.

2.2.3 Items Discussed in 2021

This section is a 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. Signed official copies of the minutes for all the regular and special meetings that took place in 2021 are included in Appendix B. Official meeting minutes may also be accessed at the Beaumont Basin Watermaster website: www.beaumontbasinwatermaster.org

The following items were discussed during the seven regular meetings and one special meeting held in CY 2021 along with their resulting outcome.

Items Discussed During the February 3, 2021 Regular Watermaster Committee Meeting

- ✓ *Reorganization of the Beaumont Basin Watermaster Committee – Chairman, Vice-Chairman, Secretary, and Treasurer [Memorandum 21-01].* The current Watermaster Committee Officers were re-affirmed to their respective positions for 2021.

- ✓ *Status Report on Water Level Monitoring throughout the Beaumont Basin through Jan 18, 2021 [Memorandum 21-02].* Engineer Blandon explained YVWD Well No. 34 and Banning M-9 experienced a sudden drop in level, likely due to equipment malfunctioning. He further indicated that the water level probe at YVWD No. 34 has been replaced. Member Zoba noted that some of the equipment may have dropped down into the well.

- ✓ *Monitoring Sites – Safety and Security [Memorandum 21-03].* Mr. Blandon provided a presentation of the well sites and reassured the Watermaster Committee that all the locations were secured. Member Ayres indicated that YVWD may be able to recover some of the items from the bottom of their well (YVWD No. 34).

- ✓ *A Comparison of Production and Allowable Extractions for Calendar Year 2020. [Memorandum 21-04].* Mr. Blandon pointed out the Transfer of Overlying Rights from 2015 of 4,614 ac-ft and the Transfer of Overlying Rights from Oak Valley Partners to YVWD of 183 ac-ft. He further indicated that the annual production of 16,725 ac-ft is the highest production in recent years. Member Zoba indicated that the table seem to imply that the transfer of Overlying Rights from 2015 are actually the water utilized in 2020, he

asked if it was a policy of the Committee that the right is being consumed straightaway in the year that is received. A discussion ensued on this issue by various members of the Committee, Member Zoba suggested a table or discussion that tabulates the accrual of overlying water rights and consumption versus other stored water in the agencies' storage accounts. He further suggested future discussion on how the water is used at the storage accounts.

- ✓ *Task Order No. 17 – Progress Report [Memorandum 21-05].* Mr. Harder provided brief background of the proposed amendment to Return Flow Methodology and addressed the comments received. He detailed the uncertainties in indoor/outdoor water use and recommended the continued use of the methodology presented in the draft Technical Memorandum. Chair Vela asked about fine tunning outdoor use estimates given ongoing work on Department of Water Resources residential landscape measurements; Mr. Harder cautioned that with too much detail, uncertainty could become too great and the numbers meaningless.

- ✓ *Task Order No. 22 – Preliminary Results Presentation [Memorandum 21-06].* Mr. Harder explained the analysis process of the potential impacts of return flow on groundwater quality (TDS). He explained that the water quality in the Basin was very good with all wells in the range of 250 to 300 mg/L which is low. He explained that the average TDS is not projected to reach the 330 mg/L maximum benefit objective. Member Zoba suggested that an agency credited with the return flow should absorb the liability of salt removal to maintain the TDS in the basin; he further noted that this would demonstrate to the Regional Water Quality Control Board that the Beaumont Basin is ahead of the curve in meeting the maximum benefit objectives.

- ✓ *2019 Revised Draft of the Beaumont Basin Watermaster Annual Report – Presentation of Comments [Memorandum 21-07].* Mr. Jaggers made a point of order indicating that a communication from YVWD related to this issue was made available to the Board members, but not to the public in potential violation of the Brown Act. Legal Counsel Montoya agreed and recommended the item be re-agendized. Chairman Vela tabled the item to a special meeting on February 18, 2021.

- ✓ *Discussion Regarding Task Order No. 23 with ALDA Inc. for the Preparation of 2020 Consolidated Annual Report, Estimate of the Basin Safe Yield, Update of the Groundwater Model, and Associated Consulting Services for 2021 [Memorandum 21-08].* Mr. Blandon reminded the Committee of the concerns raised about the cost at the December 2, 2020 meeting. He further indicated that actual expenditures for similar tasks averaged 90 percent of budget. Mr. Blandon recommended the Committee authorize up to 90 percent of the budget and use the remaining as a contingency. A motion was introduced by Member Jaggers along Mr. Blandon's recommendation. Motion was approved 5-0.

- ✓ *Consideration of Resolution No. 2021-01 Amending Section 7 of the Rules and Regulations of the Watermaster by Eliminating Rule 7.3 Availability of Unused Overlying Production and Allocation to the Appropriator Parties [Memorandum 21-09].* Member

Zoba expressed concern that there is a claim to groundwater supplies that is increasing; he pointed out that the Table in Rule 7.8 shows there is now close to 90,000 ac-ft of water in the Basin that has been claimed through the methodology described by this rule. After presenting four charts to illustrate his concerns, Member Zoba suggested that Rule 7.8 should be rescinded as it does not serve its purpose and it is not consistent with the Judgment; he further indicated that he is concerned with the overall operational health of the Basin. Counsel Montoya indicated that he is not concerned with the legality of Rule 7.8 or 7.3 as a matter of law. He advised that is legal and it is consistent with the purpose of the Judgment. After much discussion by the Watermaster Committee members, input from the public and opinions expressed by Mr. Harder and Mr. Blandon, the motion made by Member Zoba die for a lack of a second. An alternative motion was introduced by Member Jaggers to reject Resolution 2021-01; after additional discussion, the alternative motion was approved on a 4-1 vote.

Items Discussed During the February 18, 2021 Special Watermaster Committee Meeting

- ✓ *2019 Revised Draft of the Beaumont Basin Watermaster Annual Report – Presentation of Comments [Memorandum 21-12].* Before Mr. Blandon's presentation of comments, Member Jaggers expressed concern that some of the referenced attachments to Mr. Zoba's February 1, 2021 letter were not made available to the public on the website. After much discussion, Member Zoba indicated that he was confident that accurate draft minutes were included in the packets and provided to the public. Counsel Montoya stated that if the documents are publicly available, the Brown Act requirements have been met. Member Zoba suggested attaching all agencies comments to the annual report to build an administrative record. Member Jaggers indicated that he was satisfied that the Brown Act requirements have been met; Counsel Montoya concurred.

  Mr. Blandon noted that comments received were categorized as related or unrelated to Section 3.4.2. Unrelated comments addressed by Mr. Blandon included storage issues, the Basin southern boundary, and changes in production numbers for Banning C-4 and BCVWD deliveries allocated to Banning in 2018 and 2019.

  Mr. Blandon indicated that comments on Section 3.4.2 were received from the City of Beaumont, City of Banning, BCVWD, and YVWD and explained the edited report. He opined that consistent with the 2018 Annual Report, the Watermaster Committee should consider approval of the 2019 Annual Report based on the documentation of 183.05 ac-ft of overlying rights transferred from OVP to YVWD. He noted that the discussion of YVWD's submittal of Form 5 and the transfer of all OVP's rights to YVWD is yet to be resolved, and suggested upon resolution, adjustments may be made to the 2018 and 2019 annual reports, if needed.

  After much discussion on the issue, Member Jaggers opined that the 2019 Annual Report is consistent with the Rules and Regulations and with Resolution 2017-02, and the activities of 2019 are accurately represented other than minor production discrepancies. A motion to approve the 2019 Annual Report with de minimums changes was introduced by Member Jaggers; the motion was approved on a 4-1 vote.

Items Discussed During the April 7, 2021 Regular Watermaster Committee Meeting

- ✓ *Certification of Groundwater Production and Imported Water Use during Calendar Year 2020 [Memorandum 21-13].* Mr. Blandon reported that a letter has been written documenting the groundwater production and imported water deliveries and sent to the State before the April 1, 2021 deadline. Member Jaggers confirmed this. Mr. Blandon advised that a final letter must be submitted to the State later in the year.

- ✓ *Presentation of the 2020 Consolidated Annual Report and Engineering Report [Memorandum 21-14].* Mr. Blandon reviewed the report indicating that there were no resolutions adopted in 2020. He compared annual production in 2020 to the five-year average for each appropriator and noted that production was 17.2 percent higher than the average. He documented that a total of 11,469 ac-ft of imported water were delivered to the basin on behalf of BCVWD, the City of Banning and SGPWA. Discharges to Cooper Canyon from the City of Beaumont wastewater treatment plant were 4,305 ac-ft. Mr. Blandon documented that there were no transfers of groundwater between appropriators and that transfers from OVP to YVWD continue at 183.05 ac-ft. He noted that overall storage in the basin decreased slightly and currently represents 40.5 percent of total potential storage.

  Mr. Harder gave a presentation on the operating safe yield and estimated that overall the basin loss about 5,577 ac-ft of storage over the last year, which is the largest drop in storage on a year to year basis. He stated is by no means in overdraft and that 2020 estimated operating safe yield was 1,590 ac-ft, the lowest in the last 10 years.

  Mr. Blandon reviewed water quality evaluation noting that no primary standards were exceeded. He made various recommendations to the Committee including the development of a policy to account for groundwater storage losses, new yield, and recycled water recharge.

  Member Zoba noted that the customers within the adjudicated area of the overlying water rights of OVP have now exceeded the 183 ac-ft as referenced in the report and has climbed to 215 ac-ft. He asked Mr. Blandon how he expected to incorporate that information into the 2020 Annual Report; Mr. Blandon responded that based on Resolution 2017-02 the amount transferred continue to be 183.05 ac-ft and the issue of the Form 5 continues to be debated. Much discussion continued on this topic between various members of the Committee. Member Jaggers acknowledge the concerns of YVWD and suggested the approval of the 2020 Consolidated Annual Report and Engineering Report be continued; others agreed.

- ✓ *A Comparison of Production and Allowable Extractions through February 2021 [Memorandum 21-15].* Mr. Blandon documented the Overlying water rights transfers from 2016, the transfer of overlying rights of OVP to YVWD and imported water deliveries for the first two months of the year. Member Zoba pointed out that unused overlying water rights transfers remain a big issue and that this problem needs to be tended to

immediately. Member Jaggers presented his position and noted that he is interested in resolving the issue; he requested a future agenda item on this issue.

- ✓ *Status Report of Water Level Monitoring throughout the Beaumont Basin through March 21, 2021 [Memorandum 21-16].* Mr. Blandon indicated the presence of anomalies with water levels at YVWD well 34 probably resulting from earthquakes; he pointed out that he is also investigating fluctuating levels at Banning M-9. He concluded that there are no equipment needs at this time.

- ✓ *Financial Status Report [Memorandum 21-17].* Member Zoba detailed the process for invoicing and payments and noted that the bank account balance is slightly below $200,000. Per consensus, this report will be added to the consent calendar.

- ✓ *Independent Accountant's Financial Report and Agreed-Upon Procedures for the Beaumont Basin Watermaster [Memorandum 21-18].* Member Zoba presented the report showing long term trends and reminded the Committee that the public had originally asked for this tally of the operation's expenditures. He noted that everything appears to be in order and the auditors will be coming again this year. Member Jaggers motioned to receive and file the accountant's report for the period ending June 30, 2020. The motion was approved on a 5-0 vote.

- ✓ *Consideration of the Watermaster Budget for Fiscal Year 2021-2022 [Memorandum 21-19].* Member Zoba advised that invoices are sent out as each task order is approved and through each agency's financial departments Watermaster year-to-year spending trends can be followed. Mr. Zoba explained the proposed budget of $246,700.00. A motion to approve the budget was introduced by Chair Vela. The budget was approved on a 5-0 vote.

- ✓ *Discussion Regarding Proposed Revisions to Section 2.2 of the Rules and Regulations [Memorandum 21-20].* Member Jaggers advised that the proposal to bolster Section 2.2 was prompted by receipt of a request from an overlying party for a special Committee meeting over the Christmas holidays. The proposal is for a process of how to approach getting an item on the agenda while assuring there is enough time to prepare the agenda packet. Member Zoba noted that any of the managers should have the ability to add items to the agenda. There was a brief discussion to assure that the process is better defined in Section 2.2 with a final document for the Board to consider.

Items Discussed During the June 2, 2021 Regular Watermaster Committee Meeting

- ✓ *Financial Status Report [Memorandum 21-21].* Member Zoba provided an overview and indicated that after payment of invoices the bank balance was $97,000.00. He noted that at the next meeting the fiscal year will be closed and a year end report will be provided.

- ✓ *Status Report of Water Level Monitoring throughout the Beaumont Basin through May 13, 2021 [Memorandum 21-22].* Mr. Blandon reminded the Committee of the anomalies reported at the last meeting and indicated that jump in water level had been determined to be correct. He noted that Banning M-9 has declined over 30 feet over the last two

years. Mr. Blandon indicated that three wells were being considered for observation in the northern portion of the basin but decided against because they were located in an area where water levels have been flat.

- ✓ *Production and Allowable Extractions through April 2021 [Memorandum 21-23].* Mr. Blandon shared the table of Production vs. Allowable Extractions and noted that 6,617 ac-ft of imported water were spread in the first four months of the year. Production was documented at 4,126 ac-ft. Member Jaggers suggested adding the Morongo Band of Mission Indians and SGPWA to the report to memorialize the data; Mr. Blandon suggested a clarifying footnote to the table.

- ✓ *Discussion Regarding Task Order No. 25 with ALDA Inc. for On-Call Engineering Services [Memorandum 21-24].* Mr. Blandon reminded the Committee that six tasks have been completed under Task No. 8 and $18,062 of the $20,000 have been spent. The new Task Order No. 25 is requested for $25,000. Member Zoba noted that money left on Task 8 should be spent first and then Task Order No. 25 will take over. Chair Vela moved to approve the task order which was approved on a 5-0 vote.

- ✓ *Development of a Policy to Account for Storage Losses in the Beaumont Basin – Initial Approach [Memorandum 21-25].* Mr. Harder indicated that basin losses are sensitive to imported recharge and the location and pumping rate of wells. He noted that accounting for basin losses is necessary to maintain a representative water balance and behooves the Committee to evaluate those losses and develop a methodology and policy to account for them. Mr. Eckhart of SGPWA pointed out that this is a big deal for a managed basin and that this will be an ongoing effort as we move into basin optimization; he indicated that his agency will be happy to participate in this effort. Member Zoba motioned to create Task Order No. 26 for a sum not to exceed $10,000. Motion was approved on a 5-0 vote.

- ✓ *Update on Development of a Return Flow Accounting Methodology [Memorandum 21-26].* Mr. Harder reminded the Committee that a draft of the Return Flow Methodology was prepared in 2019, comments were received, and results were presented in February. Mr. Harder requested comments on the draft by July 21.

- ✓ *2020 Consolidated Annual Report and Engineering Report – Presentation of Comments Received on Draft Report [Memorandum 21-27].* Mr. Blandon highlighted comments that were received and changes made to the report in response. Member Jorritsma moved to approve the annual report. The motion passed on a 4-1 vote.

Items Discussed During the June 28, 2021 Regular Watermaster Committee Meeting

After requesting public comments, Chair Vela recessed the meeting to Closed Session.

Items Discussed During the August 4, 2021 Regular Watermaster Committee Meeting

This meeting was cancelled due to technical difficulties.

Items Discussed During the August 17, 2021 Regular Watermaster Committee Meeting

- ✓ *Status Report of Water Level Monitoring throughout the Beaumont Basin through Jul 26, 2021 [Memorandum No. 21-28].* Mr. Blandon reviewed the report and noted that water levels at certain wells continue to decline. He described seasonal fluctuations and year-to-year decline at BCVWD No. 25 and the impact of BCVWD No. 3 on levels at Well No. 2. He noted that BCVWD will be fully responsible for the replacement of the cable and probe at BCVWD No. 29.

- ✓ *Production and Allowable Extractions through June 2021 [Memorandum 21-29].* Mr. Blandon noted that 6,617 ac-ft of imported water have been spread over 7,600 ac-ft have been produced from the basin. Member Jaggers indicated that he understands that BCVWD is withdrawing from storage at this time.

- ✓ *Return Flow Accounting Methodology presentation of final Technical Memorandum and comments [Memorandum 21-30].* Mr. Harder reviewed the recommended return flow accounting methodology and comments received on the Technical Memo. He recommended reevaluating the methodology every five to 10 years to assure it is representative of what is happening. Mr. Harder discussed the projected impact of return flow on groundwater quality. Member Jaggers asked about detailed of the model regarding the spreading of recycled water and suggested some refinement to fully understand the application of recycled water. Much discussion ensued on the issue of spreading of recycled water and its impact on the Basin with multiple viewpoints. Counsel Montoya indicated the constituent elements should be determined before the policy and indicated that there is not enough information at this point to get to the policy development stage. Member Zoba suggested tabling this item as at this time may be incomplete. After ensuing discussion, Chair Vela requested legal counsel opinion and tabled the item for further discussion.

- ✓ *Task Order No. 27 to Provide Electronic Files of the Groundwater Model of the Beaumont Basin to the City of Beaumont [Memorandum 21-31].* Mr. Blandon requested a new Task Order at a cost not to exceed $15,000. Member Hart objected to the additional compensation and that the owner should be entitled to the information requested. Mr. Harder described the data requested and the work involved. Members Zoba and Jaggers concurred that the data would be helpful to have in a clear and consistent form. Member Zoba motioned to approve Task Order No. 27 to be split between the five members. Motion was approved on a 5-0 vote.

- ✓ *Electronic Delivery of Annual Report [Memorandum 21-32].* Mr. Blandon noted that reports have been delivered and comments provided electronically for the past year and longer due to COVID-19 and business is moving toward paperless. Member Hart motioned to approve the delivery of the annual report in electronic form. Motion was approved on a 5-0 vote.

- ✓ *Discussion Regarding the Date and Time of Regular Meetings of the Beaumont Basin Watermaster [Memorandum 21-33].* Member Zoba requested comments for scheduling

the next year's meetings. Discussion ensued. Member Zoba will prepare a resolution for adoption at the October meeting.

- ✓ *Financial Status Report [Memorandum 21-34].* Member Zoba presented the update and indicated the Task Orders will be updated to include the approved Task Order No. 27. He advised that he is engaging with the auditor to prepare the review of financial documents, which may be ready for the next meeting.

Items Discussed During the October 6, 2021 Regular Watermaster Committee Meeting

- ✓ *Discussion Regarding the Date and Time of Regular Meetings of the Beaumont Basin Watermaster [Memorandum 21-35].* Chair Vela motion to change the time of the Watermaster Committee meetings to 11:00 AM. Motion was approved on a 5-0 vote.

- ✓ *Discussion Regarding the Assignment of an Ad Hoc Committee for the Development of a Procurement Policy [Memorandum 21-36].* Member Hart reminded the Committee that there is procurement policy for the Committee and volunteered to serve on an ad hoc committee. Member Jaggers also volunteered. Member Zoba motioned to establish an Ad Hoc Committee on Procurement Policy. Motion was approved on a 5-0 vote.

- ✓ *Financial Status Report [Memorandum 21-37].* Member Zoba presented the update. There were no questions or comments.

- ✓ *Discussion Regarding the Development and Inclusion of Items on a Meeting Agenda [Memorandum 21-38].* Member Zoba explained the process that consultants used to include an item on the agenda packet. Member Jaggers noted that the issue was for others who may want to approach the Committee. Chair Vela suggested the Committee Secretary and Chair collaborate to determine if an item submitted by an outside entity is appropriate. Member Jaggers will draft a potential process for Committee evaluation.

- ✓ *Status Report of Water Level Monitoring throughout the Beaumont Basin through September 22, 2021 [Memorandum No. 21-39].* Mr. Blandon review the report and noted the potential for a monitoring well north of Cherry Valley Blvd.

- ✓ *A Comparison of Production vs Extraction Credits through August 2021 [Memorandum 21-40].* Mr. Blandon explained the new concept of Extraction Credits for Committee consideration. He reviewed the report and documented the amount of water imported and production; he noted that some agencies have exceeded their credits. Member Zoba asked about rollover of extraction credits. Member Jaggers suggested that given the recent Court ruling, this should be brought back as an agenda item.

- ✓ *Storage Accounting Issues – Preliminary Framework [Memorandum 21-41].* Mr. Blandon reviewed historical hydrological conditions as well as historical pumping and spreading and water rights issues in the Beaumont Basin. He noted the amount of water in storage and the allocation of storage in the Basin.

Mr. Harder reviewed change in groundwater levels over time and explained the hydrological conditions of the basin. He documented a negative change in storage in the basin between 2003 and 2020 of approximately 42,000 ac-ft, all of it occurring on the west side of the basin. He further noted that the change in storage could be as high as a negative 59,000 ac-ft basin wide and that total storage in the basin was approximately 1.4 million ac-ft. Mr. Harder noted that the west side is more sensitive to precipitation trends and anticipated a continue declined in water levels without recharge.

Member Zoba noted that to return to the zero point there is no enough water in the State Project Water. Mr. Harder agreed and indicated that the Committee must make the decision as to the significance of the overdraft; he discussed options from a physical operation and suggested there is more analysis to be done.

Mr. Harder suggested workshops to address the balance of recharge and discharge, look at the significance and what is to be done about it, and examine losses.

Mr. Blandon noted that to address the storage imbalance, recharge facilities need to be developed on the west side and proposed to conduct a series of workshops to begin discussion. He detailed two areas where additional recharge of imported water could take place. Members of the Committee contributed with a number of ideas as to how to address the storage imbalance. Discussion ensued regarding prioritizing topics for the workshop.

- ✓ *Consideration of Change Order No. 1 for Task Order No. 26 for the Development of a Framework to Address Storage Accounting Issues [Memorandum 21-42].* Mr. Blandon reviewed the request for change order. The Committee discussed needs and the potential for a workshop facilitator. Mr. Eckhart offered to participate financially in the workshops. Member Jaggers moved to approve amendment of the budget for Task Order No. 26 to add $6,700.00. Motion passed on a 5-0 vote.

Items Discussed During the December 1, 2021 Regular Watermaster Committee Meeting

- ✓ *Storage Accounting Issues – Additional Thoughts [Memorandum 21-43].* Mr. Blandon reviewed issues raised and information discussed in October. He noted that the August 2021 ruling settled the water rights and storage issues in the basin for supplemental water as well as unused surplus water. He explained that all the water in the storage accounts is valid and available for use and the basin must be managed accordingly.

  To be determined over the next few meetings, Blandon stated, will be how to manage the basin in a way that does not negatively affect some producers, consideration of the issues of spreading imported water on the west side of the basin, and ascertain that appropriators can safely store and extract their production rights.

  Chair Vela noted that it will get to a point where agencies will have to rely on the surplus water, and basin management practices and implementation to ensure the basin is in good condition should be discussed, along with a policy on storage losses.

- ✓ *Use of On-Call Task Order No. 8 and 25 to Provide Engineering Services related to evaluation of Storage Issues in the Beaumont Groundwater Basin [Memorandum 21-44].* Mr. Blandon explained that additional work needs to be done but there is no budget approved for additional activities. After much discussion, Chair Vela tabled the item.

- ✓ *Discussion Regarding Amendment of Engineering Services Contract with ALDA Inc. for Calendar Year 2022 [Memorandum 21-45].* Mr. Blandon provided history of the Agreement for Engineering Services and shared the proposed billing rates. Following discussion of upcoming work and the RFP process, the majority of the Committee concurred on extension of the contract. Member Ares moved to approve the contract extension through December 31, 2022. Motion was approved on a 4-1 vote.

- ✓ *Discussion Regarding Task Order No. 28 with ALDA Inc. for the Preparation of the 2021 Consolidated Annual Report, Estimate of the Basin Safe Yield, Update of the Groundwater Model, and Associated Consulting Services for 2022 [Memorandum 21-46].* Mr. Blandon explained that this is the basic task order as provided each year to prepare the annual report, estimate the operating safe yield, and provide general engineering services. After much discussion Chair Vela motioned to approve Task Order No. 28 for a sum not to exceed $103,600.00. Motion was approved on a 4-1 vote.

- ✓ *Discussion Regarding Task Order No. 29 with ALDA Inc. for the Installation, Maintenance, and Data Collection of Water Level Monitoring Equipment in 2022 [Memorandum 21-47].* Mr. Blandon reviewed the work to be conducted under this task. After some discussion, Member Jorritsma motion to approve Task Order No. 29 for a sum not to exceed $24,975.00. Motion was approved on a 5-0 vote.

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 Beaumont Basin shall be redetermined at least every 10 years beginning 10 years after the date of entry of the Judgment (February 4, 2004).

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. At the February 2015 Watermaster Committee meeting a formal presentation of the final-draft document was made to provide members of the Committee with an opportunity to ask questions and addressed any unresolved issues. The final document was presented for approval and adoption at the April 2015 Watermaster Committee meeting.

Resolution No. 2015-01 was adopted at the April 1st, 2015 Regular Watermaster Committee meeting. Through this resolution, the Final 2013 Reevaluation of the Beaumont Basin Safe Yield Report and Redetermination of the Safe Yield of the Beaumont Basin were adopted.

The Beaumont Basin Watermaster Committee re-determined the Safe Yield of the Beaumont Basin to be 6,700 ac-ft per year.

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 the City of 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 the City of Banning, BCVWD, the City of 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 initial 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. The Watermaster Committee deemed the application incomplete and requested further information from the applicant to address questions posed by members of the Committee. This application was subsequently approved at the June 5, 2013 meeting allowing the Morongo Band of Mission Indians to store up to 20,000 ac-ft of imported water in the basin.

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 in August 2013 and will be used for future applicants.

After development of new forms and procedures, a new application by SGPWA was received in early 2016 to develop a Groundwater Storage Agreement. This application was discussed over several Watermaster Committee meetings and was finally approved at the June 7, 2017 regular meeting under Resolution 17-01. The approval of this application allows SGPWA to store up to 10,000 ac-ft of imported water in the Beaumont Groundwater Basin.

As of December 31, 2021, the total storage allowed stands at 290,000 ac-ft; storage limits by participant are presented below. Amounts of water in storage by participant are discussed under Section 3.

- ✓ 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 20,000 ac-ft
- ✓ San Gorgonio Pass Water Agency 10,000 ac-ft

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. On September 9, 2008, the Watermaster adopted Rule and Regulation 7.8, entitled "Availability of Unused Overlying Production and Allocation to the Appropriator Parties". The objective of this rule is to define the process through which unused production by Overlying Parties is allocated to the Appropriator Parties. The unused water will be allocated based on each Appropriator's percent share of the operating Safe Yield, as described in Exhibit C of the Judgment. This allocation will have no impact on the legal water rights owned by the Overlying Parties in subsequent years. The initial allocation to take place on or after February 4, 2009.

The latest change to the Rules and Regulations came under Resolution 2019-02, adopted on June 25, 2019, by which the Beaumont Basin Watermaster rescinded Section 7 of the Beaumont Basin Watermaster Rules and Regulations in its entirety and replaced it as provided in Attachment A of the resolution. Under this resolution, the Beaumont Basin Watermaster also updated Form 5 entitled, "Notice to Adjust Rights of an Overlying Party due to Proposed Provision of Water Service by an Appropriator" and Form 7 entitled, "Notice to Transfers of Appropriator Production Right of Operating Yield Between Appropriators" as provided in Attachment "A" to the Resolution.

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 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 C.

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 Fiscal Year 2021 operations.

2.6.1 Budget

The budget for Fiscal Year 2019-20 and 2020-21 were initially approved at the Feb 5, 2020 Watermaster Committee meeting under Memorandum 20-02. The FY 2020-21 was for the amount of $246,600.00. The budget for Fiscal Year 2021-22 was approved at the April 6, 2021 Watermaster Committee meeting under Memorandum 21-19. The approved budget provided funding for administrative expenses in the amount of $246,700.00, an increase of

$100.00 over the FY 2020-21 budget. The approved FY 2021-22 budget did not include any funds for Special Projects.

The following table presents a comparison between the final budgets for FY 2019-20, approved budget for FY 2020-21, and approved budget for FY 2021-22. Typically the final budget for FY 2020-21 is listed, but it was not available at the time of this report preparation.

Operating Expense	*FY 2019-20 Final Budget*	*FY 2020-21 Approved Budget*	*FY 2021-22 Approved Budget*
Administrative Expenses			
Bank Fees and Interest	$ 14.00	$ 50.00	$ 50.00
Miscellaneous and Meetings	$ 0.00	$ 250.00	$ 250.00
Acquisition/computation & Annual Report	$ 0.00	$ 100,000.00	$ 100,000.00
Annual Audit	$ 1,300.00	$ 1,300.00	$ 1,400.00
Engineering Services	$ 24,527.00	$ 50,000.00	$ 50,000.00
Monitoring and Data Acquisition	$ 96,644.00	$ 50,000.00	$ 50,000.00
Meter Installation and Repair	$ 0.00	$ 10,000.00	$ 0.00
Legal Expenses	$ 10,032.00	$ 25,000.00	$ 35,000.00
Reserve Funding	$ 0.00	$ 10,000.00	$ 10,000.00
	$ 131,217.00	**$ 246,600.00**	**$ 246,700.00**
Special Project Expenses			
Engineering	$ 0.00	$ 0.00	$ 0.00
Litigation	$ 0.00	$ 0.00	$ 0.00
	$ 0.00	**$ 0.00**	**$ 0.00**
Total Operating Expense	**$ 131,217.00**	**$ 246,600.00**	**$ 246,700.00**

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 2021, dated June 30, 2021, prepared by Rogers, Anderson, Malody, and Scott, LLP, is included under Appendix D.

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 in the Beaumont Basin. 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 adopted by the Board in early 2013. The annual report for CY 2021 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 16.84 inches over the 100-year period between 1922 and 2021. On the average during this 100-year period, 11.76 inches of precipitation, or 69.8 percent of total, fell during the winter between December and March. Over the last 25 years (1997-2021), precipitation has averaged 13.70 inches of rain which is approximately 81 percent of the 100-year average precipitation. Precipitation during CY 2021 at Station 13 was 11.05 inches, approximately 66 percent of the 100-year average or 81 percent of the 25-year average.

Figure 3-1 illustrates annual precipitation at this station for the 25-year reporting period between 1997 and 2021 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 2003-05 period; average precipitation during this period was 19.94 inches or close to 18 percent above the long-term average. Conversely, down trending periods indicate periods of below average precipitation as in the 2011-18 period when average precipitation was only 11.23 inches or approximately 67 percent of the 100-year average.

Notwithstanding the significantly above average precipitation recorded in 2019 (23.34 inches), the Basin has been in a dry period that began in 2011. During the last 13 years (2009-21), two of the five years with the lowest precipitation ever recorded at Station 13 have occurred; 7.4 inches (lowest ever) in 2013 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, sightly over 20 percent below the 100-year long-term average for the Basin and approximately two percent below the 25-year precipitation average.

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 semi consolidated Quaternary alluvium. Surrounding the alluvial sediments are semi consolidated rocks of the San Timoteo Formation and igneous and metamorphic rocks that make up the San Jacinto and San Bernardino Mountains (see Figure 3-2). 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 3-2). 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. The southern boundary of the basin was postulated by Bloyd (1971) based on groundwater level differences in the area. No fault has ever formally been mapped at this southern boundary. The San Timoteo Fault was identified by USGS (2006) but does not correlate to the adjudicated 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 3-2). 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, City of Banning, City of Beaumont, BCVWD, SMWC, and YVWD. The City of Beaumont, while identified as an Appropriator in Exhibit C of the Judgment, it has never produced from the basin and it has a zero allocation as a percent share of Safe Yield allocated to Appropriators. 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; applicable only between Fiscal Years 2004 and 2013

- ✓ Transfers from other Appropriators,
- ✓ Transfers of unused production from Overlying Producers,
- ✓ Conversion of Overlying rights to Appropriative rights
- ✓ Water withdrawn from their storage account, and
- ✓ New yield created by the Appropriator.

Monthly production for the last five years of operation (CY 2017-21) are presented in a series of tables starting with Table 3-1A for CY 2017 and continuing on an annual basis through Table 3-1E for CY 2021. It should be noted that all production by Appropriators is currently being metered; however, no information is available as to the accuracy of existing meters.

During CY 2021, Appropriators pumped a combined amount of 17,904.20 ac-ft of groundwater from the Beaumont Basin (See Table 3-1E). Production for CY 2021 was the highest production ever recorded from the Basin by Appropriators and represents an increase of approximately 1,180 ac-ft over CY 2020. CY 2021 production was 15.9 percent higher than the 2017-21 five-year average of 15,448 ac-ft per year.

With the exception of YVWD, in CY 2021 all agencies increased their groundwater production over CY 2020. The City of Banning production increased by over 43 percent while SMWC more than doubled the amount pumped. BCVWD's production was slightly higher by approximately 70 ac-ft. Production by YVWD decreased by approximately 250 ac-ft compared to the previous year.

In mid-2021, YVWD notified Watermaster that they will be using an old irrigation well, known as the Calimesa Irrigation Well, to provide construction water to an industrial development north of Cherry Valley Blvd. Upon finalization of this short-term project, the operations of this well will be reverted back to its owner, Cherry Valley Recreation and Park District, for their use.

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 21 groundwater wells. All active wells operated by the larger producers are metered. Meters were installed by individual owners or as part of an effort initiated by Watermaster in 2013 to obtain a closer production accounting from Overlying Parties. Production from metered wells represented over 99 percent of the total production by Overlying Parties in CY 2021.

The remaining wells, operated by smaller producers, did not have meters for some or most of 2021 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 2021 Annual Report uses the updated method as detailed in Appendix E.

Similar to the production reported for the Appropriators, a series of tables were developed to report monthly and annual production from the Overlying Parties on a calendar year basis. Starting with Table 3-2A, monthly production by well is documented for CY 2017. In a similar manner, Tables 3-2B through 3-2E summarize monthly overlying production for CY 2018 through CY 2021, respectively. In addition, these tables show their share of the Safe Yield and the amount of unused water for each Overlying Party.

During CY 2021, Overlying Producers produced an estimated 2,034.10 ac-ft; this level of production is approximately six percent higher than in CY 2020 and 15 percent higher than in CY 2019, a record low year. Production in CY 2021 was however nine percent lower than in CY 2018. Compared to the 2017-21 five-year average of 2,069.0 ac-ft/yr, Overlying Producers pumped two percent less water.

3.2.3 2003-2021 Annual Production Summary

Annual production for all appropriators and overlying parties since 2003 is summarized in Table 3-3A on a calendar year basis for the 2003 to 2011 calendar years and Table 3-3B for CY 2012 through CY 2021. It should be noted that production from 2003 only includes production for the second half of the year. Since July 2003, a total of 300,731 ac-ft has been pumped from the Beaumont Basin; an estimated 84.4 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 74.3 percent registered in CY 2003 to a temporary high of 87.2 percent recorded in CY 2014. Production by appropriators reached an all-time high of 89.8 percent in CY 2021. Over the last five years, production by appropriators has averaged 88.1 percent of total extractions.

Groundwater production peaked in CY 2007 when 19,811 ac-ft were pumped from the basin; since, it declined steadily through CY 2010 to approximately 13,600 ac-ft. Production during the CY 2011-14 period increased by 26.2 percent to 17,281 ac-ft.; however, it declined to less than 14,000 ac-ft in the ensuing two years. Total production from the basin has increased significantly in the last five years to an all time high of 19,938 ac-ft in CY 2021. Figure 3-4 depicts annual total production by appropriators and overlying parties on a calendar year basis. Also, depicted on this figure is the amount of annual overlying underproduction to be allocated to appropriators.

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, estimated in the recently completed

(Sep 2018) Beaumont Basin Storage Analysis, have not been incorporated into the accounting of storage in the basin. The Watermaster may adopt a policy to address storage losses in the future. Table 3-4 presents a summary of the annual groundwater recharge in the Beaumont Basin since 2004 on a calendar year basis. There was no imported water recharge in 2003.

3.3.1 State Water Project Water Recharge

Deliveries of imported water are conducted through the San Gorgonio Pass Water Agency, the State Water Contractor for this area. BCVWD's Noble Creek spreading facility, located in the vicinity of Beaumont Avenue and Cherry Valley Blvd., has been until now the primary facility in the Beaumont Basin where imported water can be delivered for groundwater recharge. The location of this recharge facility is depicted in Figure 3-3. In 2019, SGPWA completed the construction of a new spreading facility southwest of the intersection of Beaumont Avenue and Brookside Avenue; spreading of imported water at this location took place for the first time in December of the year when 257.80 ac-ft were spread.

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 peaking in CY 2011 at 7,979 ac-ft and declining through 2015 to low of 2,773 ac-ft. From CY 2017 through CY 2020, BCVWD spread over 10,000 ac-ft per year; however, spreading in CY 2021 decreased to a low of 2,468 ac-ft. In total, a total of 111,360 ac-ft of imported water have been spread on behalf of BCVWD since CY 2006 (See Table 3-4).

The City of Banning began purchasing imported water for recharge at BCVWD's Noble Creek facility in July 2008 and has since recharged 13,942 ac-ft. in accordance with their storage agreement on file with Watermaster. During CY 2012 and 2013, Banning spread an average of 100 ac-ft per month; spreading in CY 2014 and 2015 was reduced to approximately half of that amount. However, spreading in CY 2016 and 2017 increased significantly to 1,477 ac-ft and 1,350 ac-ft, respectively. In CY 2019 and again in CY 2020, the City of Banning spread only 250 ac-ft of imported water per year. No spreading took place by the City of Banning during CY 2021.

In addition to imported water deliveries to BCVWD and the City of Banning at 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 is likely to be a source of subsurface recharge to the Beaumont Basin; however, Watermaster has not adopted this finding. Subsurface recharge across the Banning Fault was investigated as part of the Safe Yield of the Basin determination study, completed in early 2015.

Deliveries of imported water by SGPWA to the Little San Gorgonio Creek Spreading Ponds began in August 2003. Between 2004 and 2013, SGPWA recharged a total of 10,464 ac-ft or an average of 1,046.4 ac-ft/yr. Deliveries in CY 2014 through CY 2018 were practically non-existent as less than 44 ac-ft were spread in those five years combined.

Under Resolution 17-01, adopted on June 7, 2017, SGPWA entered into a storage agreement with the Beaumont Basin Watermaster to spread up to 10,000 ac-ft of imported water in the Beaumont Basin subject to certain conditions. Starting in CY 2019, SGPWA began spreading imported water at their new facilities on Brookside Avenue and has spread a total of 507.8 ac-ft at this new location including 36 ac-ft spread in CY 2021. No spreading by SGPWA has taken place at the Little San Gorgonio Creek Spreading Ponds since CY 2016.

3.3.2 Treated Wastewater Recharge

The City of Beaumont owns and operates the Beaumont Wastewater Treatment Plant. The plant was originally designed and permitted to discharge up to 4.0 mgd of tertiary treated wastewater; current capacity is 6.0 mgd. Discharges from this plant are not permitted for recycled water use at this time. Wastewater discharges from this facility are currently regulated under Order No. R8- 2015-0026, NPDES Number CA105376.

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 Canyon where it infiltrates into the San Timoteo Management Zone and outside the Beaumont Basin. Starting in March 2010, Beaumont began deliveries of treated wastewater 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 treated wastewater discharged at this location reaches and recharges the Beaumont Basin. In the Fall of 2015, the City of Beaumont ceased deliveries to DP-007 in Marshall Creek.

In CY 2021, the City of Beaumont discharged an estimated 4,148 ac-ft of treated wastewater at DP-001 in Cooper's Canyon. Discharges at this location were approximately four percent lower than in CY 2020 when 4,305 ac-ft of treated wastewater were discharged. Monthly discharges at DP-001 varied slightly in CY 2021 from a low 3.44 mgd in February to a high of 4.55 mgd in June; the average for the year was 3.70 mgd. Monthly treated wastewater 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 the City of Beaumont has been recharging local waters at various locations in the Basin and would like to receive credit for the New Yield developed. For the City of Beaumont to receive credit however, Watermaster will need to develop the methodology to compute and credit the New Yield.

3.4 Water Transfers and Adjustments of Rights

Section 7 of the Watermaster Rules and Regulations, as replaced by Resolution 2019-2 in June 2019, 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:

- ✓ Transfer of water rights and/or water in storage between Appropriators
- ✓ Transfer of water rights from Overlying producers to an Appropriator in exchange for water service, and
- ✓ Allocation of unused Overlying Water to the Appropriator Parties based on their share of the Operating Safe Yield.

According to Part VI, Administration, Paragraph 5Y of the Judgment, the Safe Yield of the Beaumont Basin shall be re-determined at least every 10 years after the date of entry of the Judgment, February 4, 2004. In 2015 the Safe Yield of the Beaumont Basin was re-determined and estimated at 6,700 ac-ft/yr. This amount represents a 22.54 percent reduction from the previous estimate of 8,650 ac-ft/yr. Table 3-6 presents the initial and revised production rights from individual Overlying producers and compares them against actual groundwater production during the 2017-21 five-year period for each user. Annual average groundwater production during this period for all Overlying producers combined was estimated at 2,069.0 ac-ft/yr; representing approximately 30.9 percent of the revised Safe Yield. Individually, none of the Overlying producers produced more than their allowable production rights during this five-year period; California Oak Valley Golf and Resort LLC averaged the highest percentage of their respective allocation at 81.6 percent followed by Sharondale Mesa Owner Association at 75.3 percent and Plantation on the Lake at 66.9 percent. Tukwet Canyon Golf Club followed at an average of 59.0 percent of their Overlying right.

3.4.1 Transfers between Appropriators

According to Section 7.2 of the Rules and Regulations, as replaced under Resolution 2019-02, 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, SMWC and BCVWD entered into a transfer agreement that allowed 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 SMWC estimates the amount of water available for transfer and offers it to 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 alone. SMWC also transferred 1,500 ac-ft of water to Banning in CY 2007. The purchase agreements and transfers between these agencies are on file with Watermaster. CY 2011 was the last year that SMWC transferred water to other appropriators.

No water transfers between Appropriators were reported during CY 2021.

3.4.2 Transfers of Overlying Rights for Service by an Appropriator

The Stipulated Judgment, under Part III, Declaration of Adjustment of Rights, Section 3(B), provides that to the extent any Overlying Party requests, and uses its Exhibit "B", Column 4 water to obtain water service from an Appropriative Party, an equivalent volume of potable groundwater shall be earmarked by the Appropriative Party which will serve the Overlying Party, up to the volume of the Overlying Water Rights as reflected in Column 4 of Exhibit "B" for the purpose of serving the Overlying Party.

The Stipulated Judgment, under Part III, Section 3(C), states that in the event that an Overlying Party receives water service from an Appropriative Party, the Overlying Party shall forebear the use of that volume of the Overlying Water Right earmarked by the Appropriative Party. The Appropriator Party providing such service shall have the right to produce the volume of water foregone by the Overlying Party, in addition to other rights otherwise allocated to the Appropriator Party.

Under Resolution 17-02, adopted on August 30, 2017, Oak Valley Partners L.P. ("OVP") agreed to transfer its Overlying water rights to particular development parcels, intending to secure commitments from YVWD to provide water services to development phases of OVP's Summerwind Ranch Specific Plan (Project), located in the Beaumont Basin. The Stipulated Judgment allocated OVP an Overlying production right of 1,806 ac-ft based on the initial Safe Yield of 8,650 ac-ft/yr. OVPs rights have been adjusted to 1,398.86 ac-ft based on the recalculated Safe Yield of 6,700 ac-ft/yr as approved by the Watermaster on April 1, 2015. Overlying rights and Overlying-Appropriative rights will be adjusted every 10 years based on the recalculation of the Safe Yield of the Beaumont Basin.

In CY 2018, Oak Valley Partners transferred a combined total of 180.4 ac-ft in Overlying rights to YVWD upon YVWD's water service commitments to serve certain Project parcels in the Beaumont Basin. In a similar manner, an additional 2.65 ac-ft of former OVP's Overlying rights were transferred to YVWD in early 2019 for a combined total of 183.05 ac-ft. There were no transfers of Overlying rights from OVP to YVWD in CY 2020 and CY 2021.

The transfer of the above amount reduced OVP's Overlying rights to 1,215.81 ac-ft/yr for 2021. In the future OVP's rights will remain at this level or adjusted down as additional rights are transferred to YVWD. Starting in 2018, YVWD is free to use its Appropriative rights, as denoted above, by either pumping from the basin, transferring to other Appropriators, or adding to its storage account.

Under Resolution 2019-02, adopted on June 25, 2019, the Beaumont Basin Watermaster rescinded Section 7 of the Beaumont Basin Watermaster Rules and Regulations in its entirety and replaced it as provided in Attachment A of the resolution. Under this resolution, the Beaumont Basin Watermaster also updated Form 5 entitled, "Notice to Adjust Rights of an Overlying Party due to Proposed Provision of Water Service by an Appropriator" and Form 7 entitled, "Notice to Transfers of Appropriator Production Right of Operating Yield Between Appropriators".

At the Dec 4, 2019 Watermaster Meeting, YVWD submitted a Form 5, signed Nov 19, 2019, documenting the transfer of OVP's all original 1,806 / revised 1,398.90 ac-ft ("Earmarked Water") of Overlying Water Rights to YVWD effective on October 9, 2018 (A copy of Form 5 submitted by YVWD to the Watermaster was included under Appendix E of the 2020 Annual Report). This issue was extensively discussed at that meeting and throughout the various meetings in 2020 between legal counsel and members of the Watermaster Committee without reaching an agreement. In mid-2021, YVWD filed with the Court two related motions. The first motion was to rescind Watermaster Rule 7.3 (formerly Rule 7.8); the second motion was to order the Watermaster to recognize Oak Valley Partners, LP's transfer of overlying water rights. On August 31, 2021, the Court denied these motions without prejudice. A copy of the Notice of Entry of Order Regarding Yucaipa Valley Water District's Motions, along with associated exhibits A and B is included under Appendix A of this report.

3.4.3 Allocation of Unused Overlying Water

Section 7.3 of the Rules and Regulations, as replaced under Resolution 2019-02, 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 have been made on a fiscal year basis coinciding with the preparation of the annual report. Preparing the annual report on a calendar year basis required 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 2021 were based on unused production from Overlying Users in CY 2016. 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 allocated to Appropriators for CY 2008. Table 3-7 summarizes the volume of unused Overlying water for CY 2003 through CY 2021. While groundwater production by Overlying Users has decreased by over 45 percent since 2004, the volume of unused overlying water has correspondingly increased from 5,053 ac-ft/yr in CY 2006 to a maximum of 6,679 ac-ft during CY 2011. The amount of unused production decreased starting in CY 2014 as a result of reduced Overlying allocations resulting from the new basin Safe Yield of 6,700 ac-ft/yr.

Table 3-7 presents the allocation of unused Overlying water to each Appropriator based on their share of the Safe Yield and the schedule set forth under Section 7.3 of the Rules and Regulations, as replaced under Resolution 2019-02. It should be noted that this schedule has been modified to reflect a calendar year basis for allocation. Under the modified schedule, unused Overlying production in CY 2016, estimated at 4,763 ac-ft, is allocated to Appropriators during CY 2021. Unused Overlying production during CY 2021, adjusted by reductions on OVP's rights, is estimated at 4,483 ac-ft. This amount would be allocated to Appropriators during CY 2026.

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. The completion of the "Beaumont Basin Storage Loss Analysis" in September 2018 estimates storage losses under various spreading scenarios; however, Watermaster has not develop a methodology to adjust storage accounts and their corresponding losses.

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 2021. This table includes annual production by Appropriator, their share of Temporary Surplus, Appropriative rights, 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 2020, an overall total of 117,532.80 ac-ft of water were stored in the Basin for future use; this total decreased in CY 2021 by 10,453.80 ac-ft to a cumulative total of 107,078.90 ac-ft. Despite of the expiration of the Temporary Surplus allocation at the end of CY 2013, the amount of water in storage at the end of CY 2021 was 6,266.20 ac-ft higher. The amount of water in storage by party at the beginning and end of CY 2021 is presented below. Figure 3-5 compares the amount of water in storage to the storage limit for each party with storage accounts. Figure 3-6 presents storage totals by agency for the most recent 10-year period.

Agency / Party to the Judgment	Calendar Year 2021 (ac-ft)		
	Beginning	Ending	Change
City of Banning	50,889.2	48,718.1	-2,171.1
BCVWD	39,749.8	31,633.2	-8,116.6
City of Beaumont	0.0	0.0	0.0
South Mesa Water Company	10,134.2	10,262.7	128.4
Yucaipa Valley Water District	16,287.7	15,957.1	-330.6
Morongo Band of Mission Indians	0.0	0.0	0.0
San Gorgonio Pass Water Agency	471.8	507.8	36.0
TOTAL in Storage	**117,532.8**	**107,078.9**	**-10,453.8**

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 2020 and 2021 were evaluated based on measured data in monitoring wells located throughout the Beaumont Basin. Separate groundwater level contour maps were created for December 2020 and December 2021 to evaluate changes in groundwater flow patterns and basin-wide changes in groundwater levels over the time period. The manual generated groundwater contour maps for 2019 and 2020 are shown on Figures 3-7 and 3-8, respectively.

Groundwater flow direction and gradient within the Beaumont Basin varies depending on location. In the west central portion of the basin (immediately west of the Beaumont Plains Fault Zone), groundwater generally flows to the north from the lowest reach of Noble Creek. Further to the west near Calimesa, the groundwater low direction becomes westerly and then southwesterly toward San Timoteo Wash. In the eastern part of the basin, groundwater flows to the southeast towards the City of Banning. The groundwater flow directions did not change significantly between 2020 and 2021 although a previous pumping depression near BCVWD Well 29 was abated somewhat resulting from reduced production from this well.

Basin-wide groundwater level trends in the Beaumont Basin were evaluated based on hydrographs from eight key wells and the groundwater level change map developed by subtracting the 2020 groundwater surface from the 2021 groundwater surface (see Figures 3-9 and 3-10). In the northwest portion of the basin (YVWD 34 and Singleton Ranch 7), groundwater levels have shown a downward trend since approximately 2020. At Tukwet Canyon Golf Club C, although groundwater levels had been steadily declining between 2003 and 2019, they were relatively stable between December 2020 and December 2021.

Groundwater levels in the north central portion of the basin showed general declines in the range of -4 to -18 feet with the largest declines (as much as -44 feet) in the vicinity of the Noble Creek Artificial Recharge Facility (see Figure 3-9).

In the south-central portion of the basin, groundwater levels at Oak Valley No. 1 were relatively stable between 2020 and 2021. At Beaumont-Cherry Valley Water District (BCVWD) Well No. 2, groundwater levels showed a decrease of approximately 21 feet between December 2020 and December 2021. At Banning Well C-4 (southeast Beaumont Basin), groundwater levels are highly variable and likely influenced by groundwater pumping. As judged by the highest peaks in the hydrograph, the overall groundwater level trend at this well has been downward from 2020 to 2021.

Groundwater levels in the northeast portion of the basin (USGS Highland Springs Monitoring Well) were relatively stable between 2020 and 2021

3.6.2 Analysis of Change in Groundwater Storage

Basin-wide change in groundwater storage between December 2020 and December 2021 was analyzed as a function of the difference in groundwater levels across the basin and the specific yield of the aquifer sediments. Specific yield values were obtained from the calibrated groundwater flow model of the Beaumont Basin (TH&Co, 2015). Groundwater level change across the basin was analyzed using the following procedure:

- ✓ The December 2020 and 2021 hand-generated groundwater contour maps were each converted into three-dimensional raster surfaces.
- ✓ The basin was discretized into 100-ft by 100-ft grid cells.
- ✓ Attributes were assigned to each saturated grid cell including groundwater level change and specific yield.
- ✓ The resulting attribute table was processed in a Geographic Information System (GIS) for calculating the change in storage.

Results of the analysis show an overall decrease in groundwater storage within the adjudicated basin of approximately 9,522 ac-ft during this one-year period.

3.7 Operating Safe Yield

For purposes of this annual report, 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 overlier 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 2021 was 19,938 ac-ft (see Table 3-3B). Total artificial recharge in calendar year 2021 was 2,504 ac-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, if any, 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 earlier. The period of time over which the OSY is evaluated is one year. The resulting OSY is estimated as:

$$OSY = \frac{19{,}938 + (-9{,}522) - 2{,}504}{1} = 7{,}912 \text{ ac-ft}$$

It is emphasized that the OSY, as presented herein, is based on one year of groundwater production and recharge 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. The Safe Yield will be reevaluated again in 2023.

It is noted that the change in groundwater storage used to estimate the annualized Safe Yield is based on the most representative data available to date. Further, after review of the annualized safe yield from previous years, it is likely that the localized positive storage change resulting from artificial recharge at the Noble Creek Recharge Facility was underestimated, resulting in underestimated OSY for years 2016 through 2020. The storage estimate issues associated with these annualized OSYs will be addressed in the reevaluation of the long-term Safe Yield in 2023.

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 revisions changing the reporting of Watermaster activities from a fiscal year basis to a calendar year basis and more recently replacing Section 7 in its entirety under Resolution 19-02.

In September 2018, a study to estimate groundwater losses from the basin was completed for Watermaster. In this study groundwater losses from the basin resulting from spreading of imported or outside water at selected locations in the basin was estimated. The study has been accepted by the Watermaster Committee; however, a methodology to address this issue is yet to be developed.

Watermaster may conduct additional studies in the future in support of:

- ✓ Developing a methodology to account for new yield from capturing local stormwater in the basin, and
- ✓ Developing a methodology to account for recycled water recharge in the basin.

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:

- ✓ 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.

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. Individual parties may or may not maintain and calibrate their production meters at acceptable intervals.

- ✓ 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. This provision should be revised as it was written for fiscal year accounting. Overlying Parties producing less than 10 ac-ft/yr should report by the 15th of January now that calendar year accounting is used. Proper supporting information should be provided.

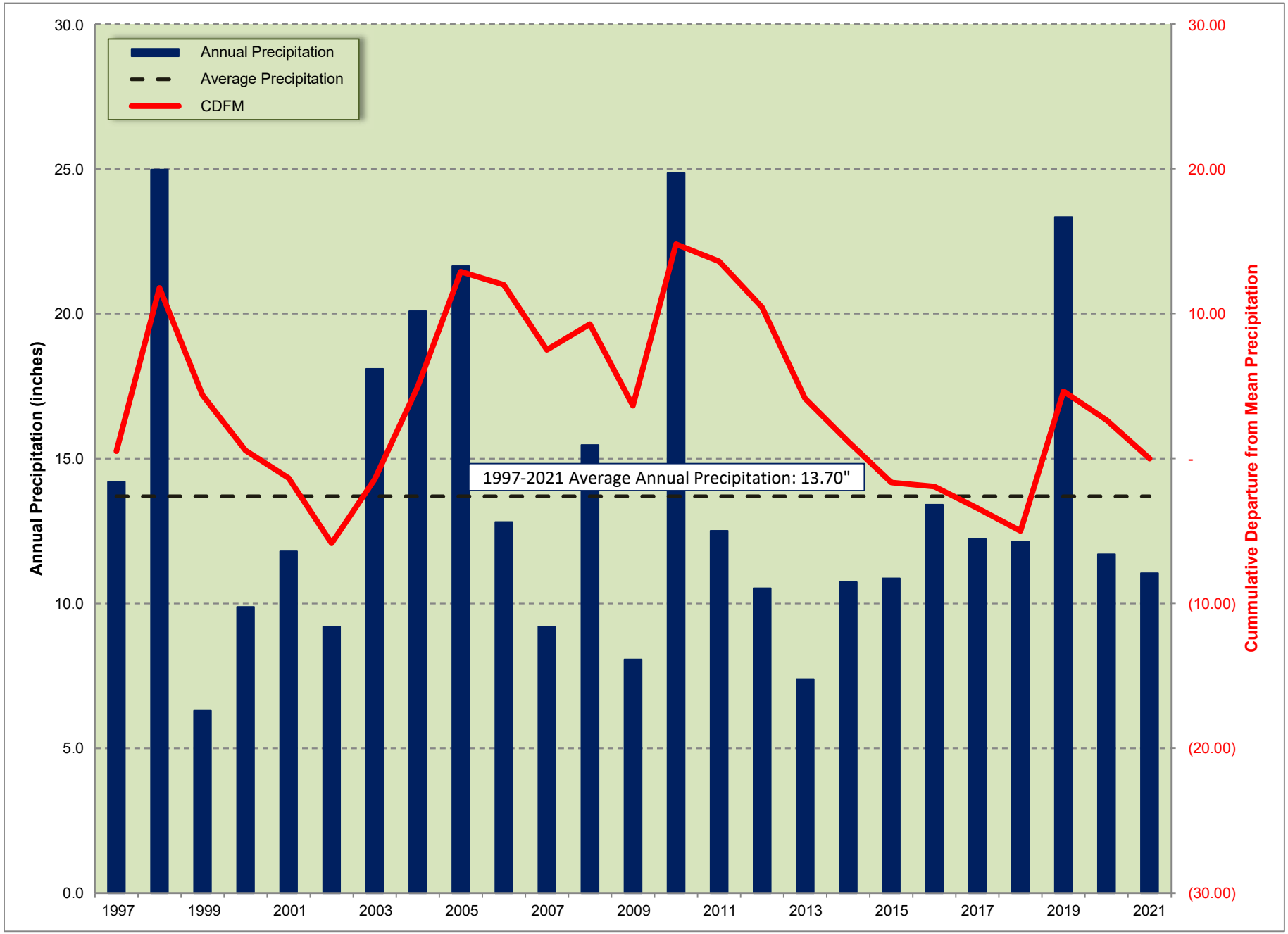
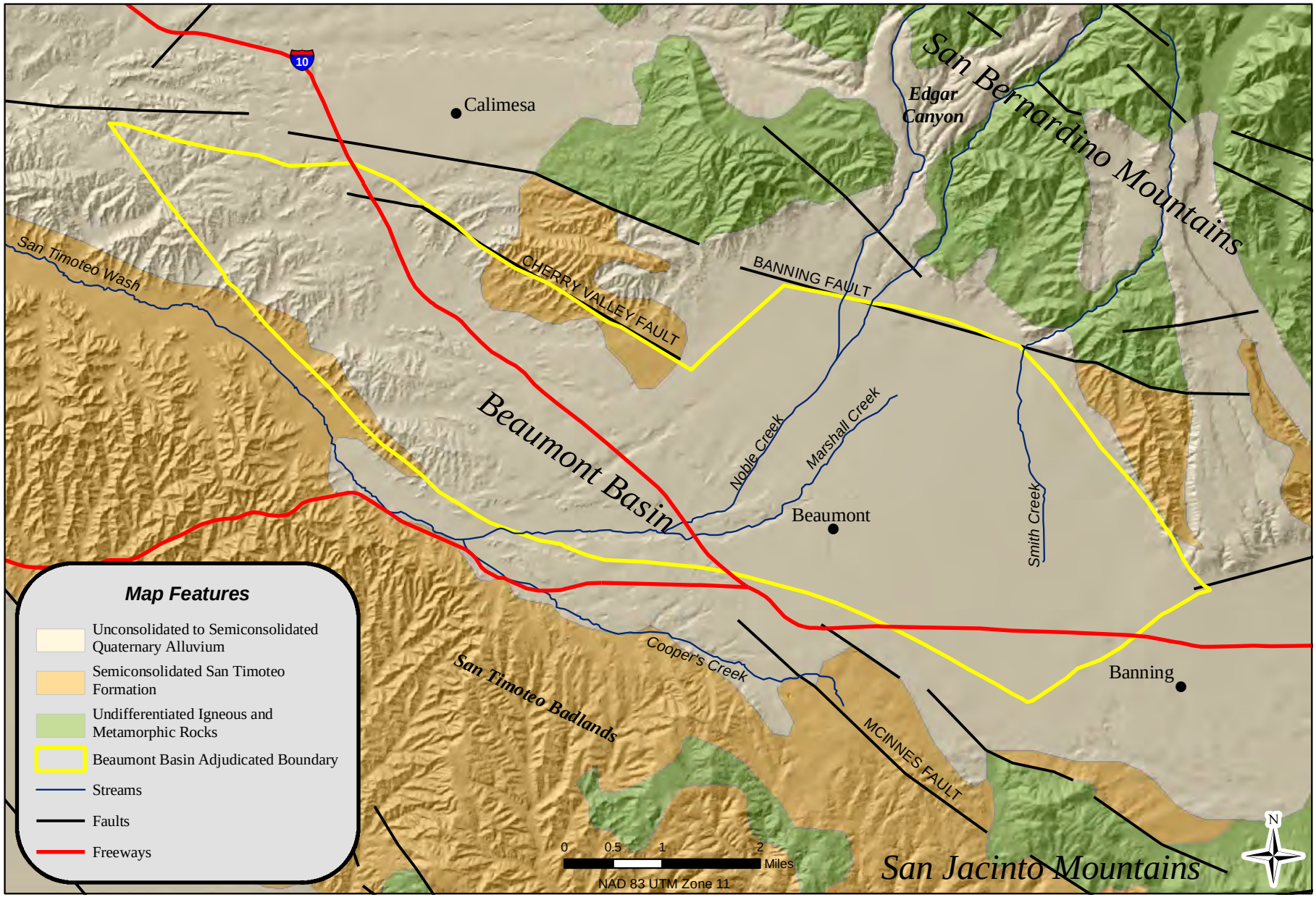
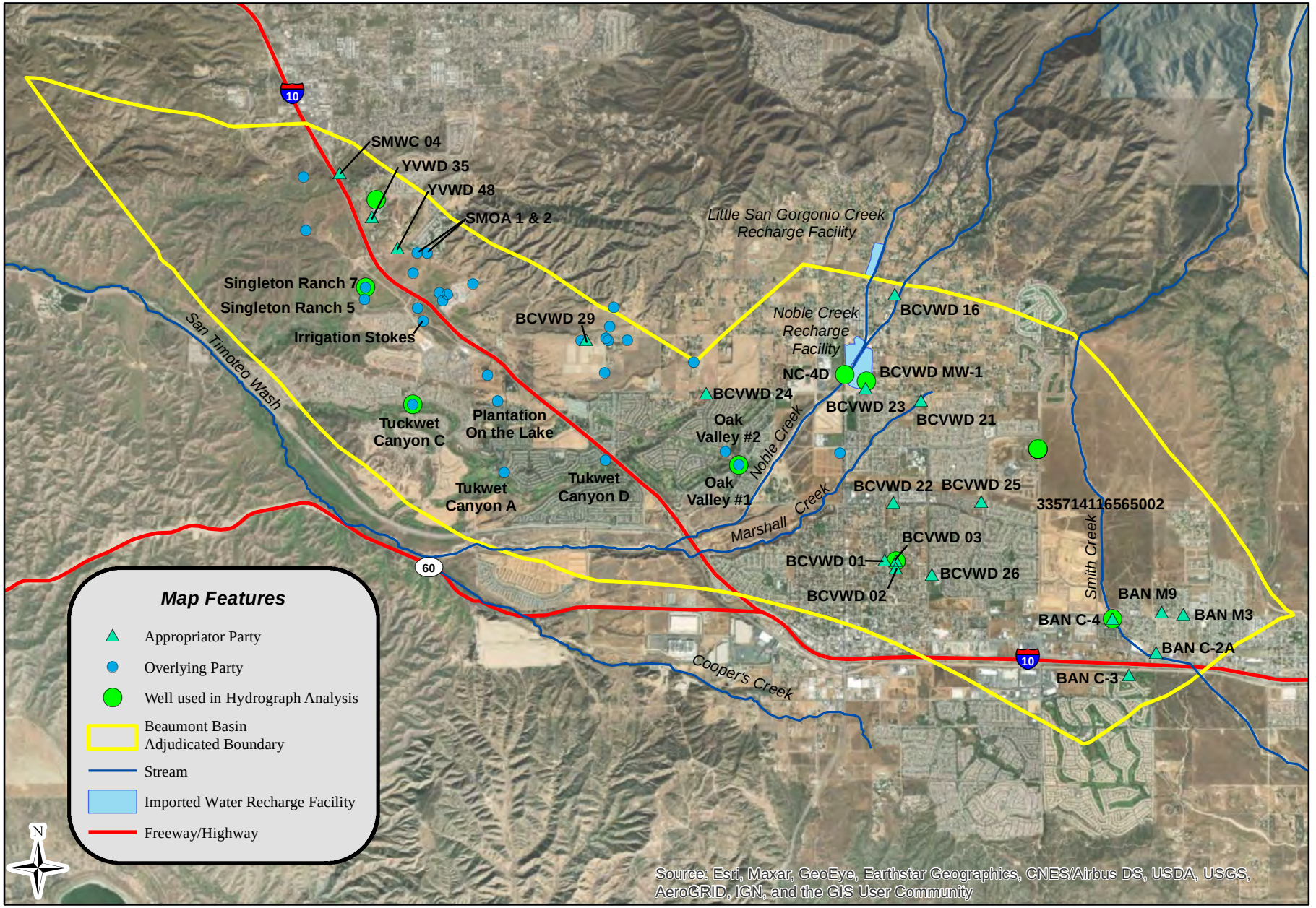


Figure 3-1
Annual Precipitation with Cummulative Departure from the Mean (1997-2021)



Alda, Inc. *in association with*
Thomas Harder & Co.
Groundwater Consulting

Geology of the Beaumont Basin
Figure 3-2



Alda, Inc. *in association with*
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0 0.5 1 2 Miles

NAD 83 UTM Zone 11

Well Locations in the Beaumont Basin

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Figure 3-3

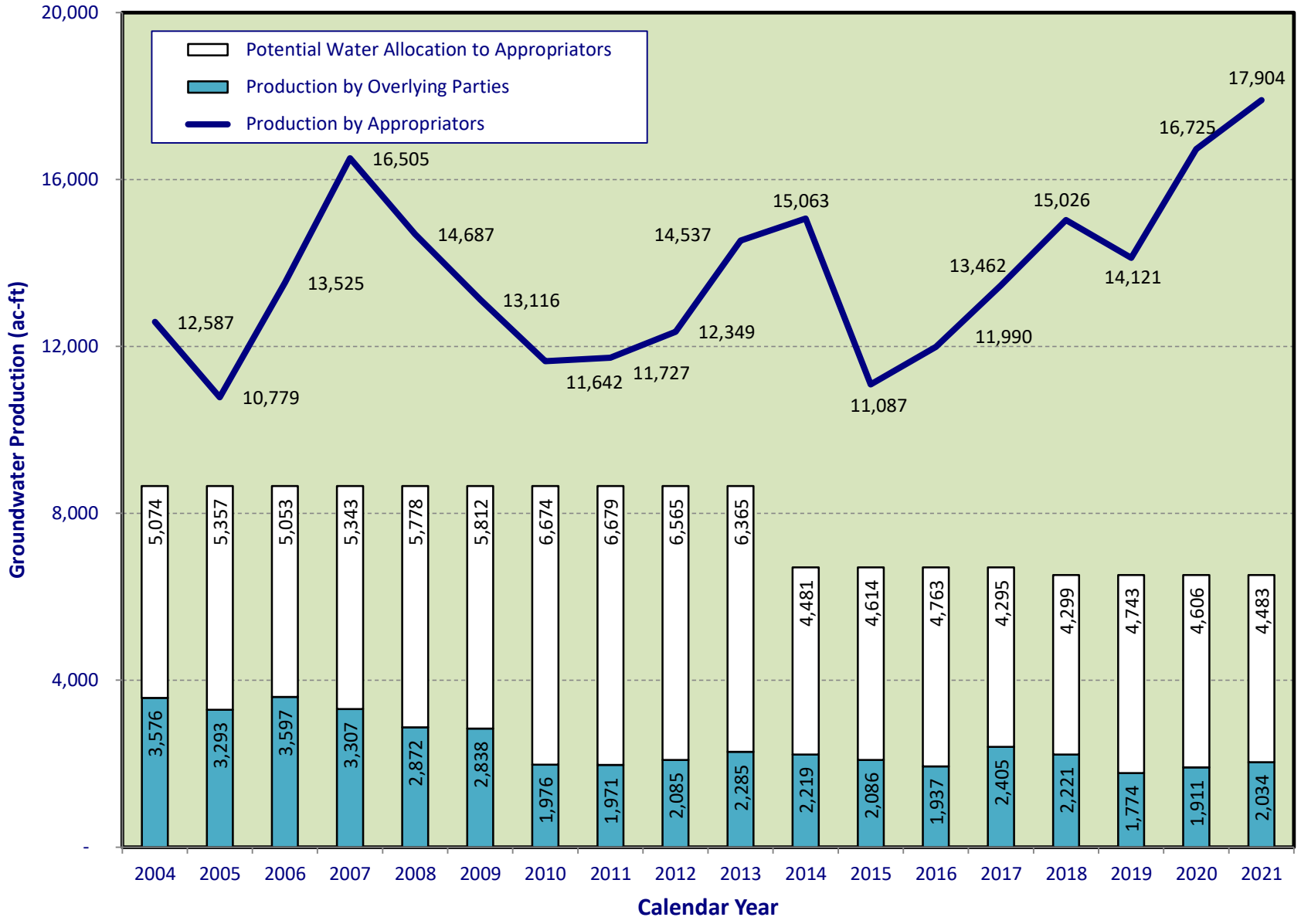


Figure 3-4
Annual Production by Appropriators and Overlying Users (2004-21)

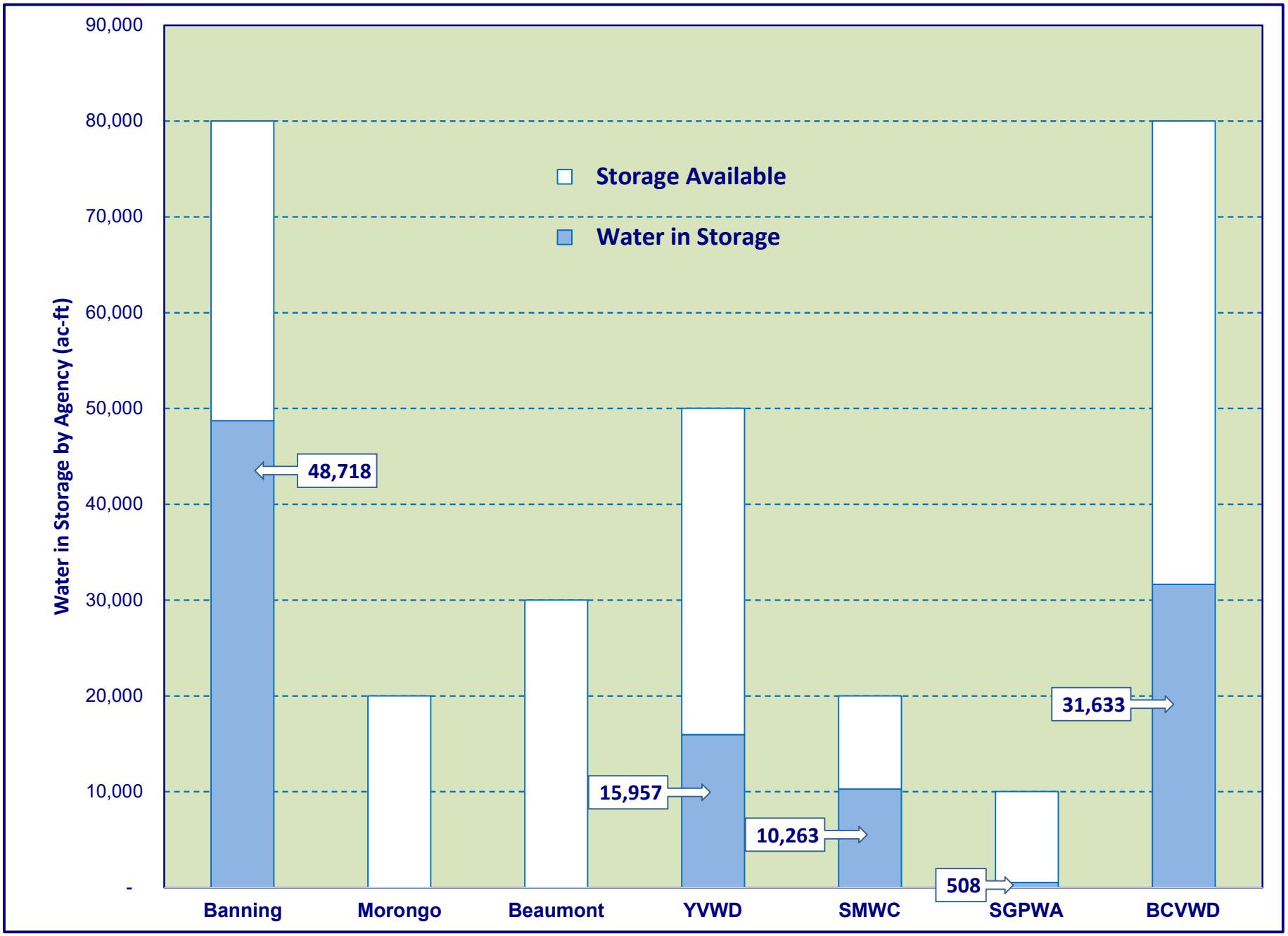


Figure 3-5
Groundwater Storage by Agency/User as of 2021

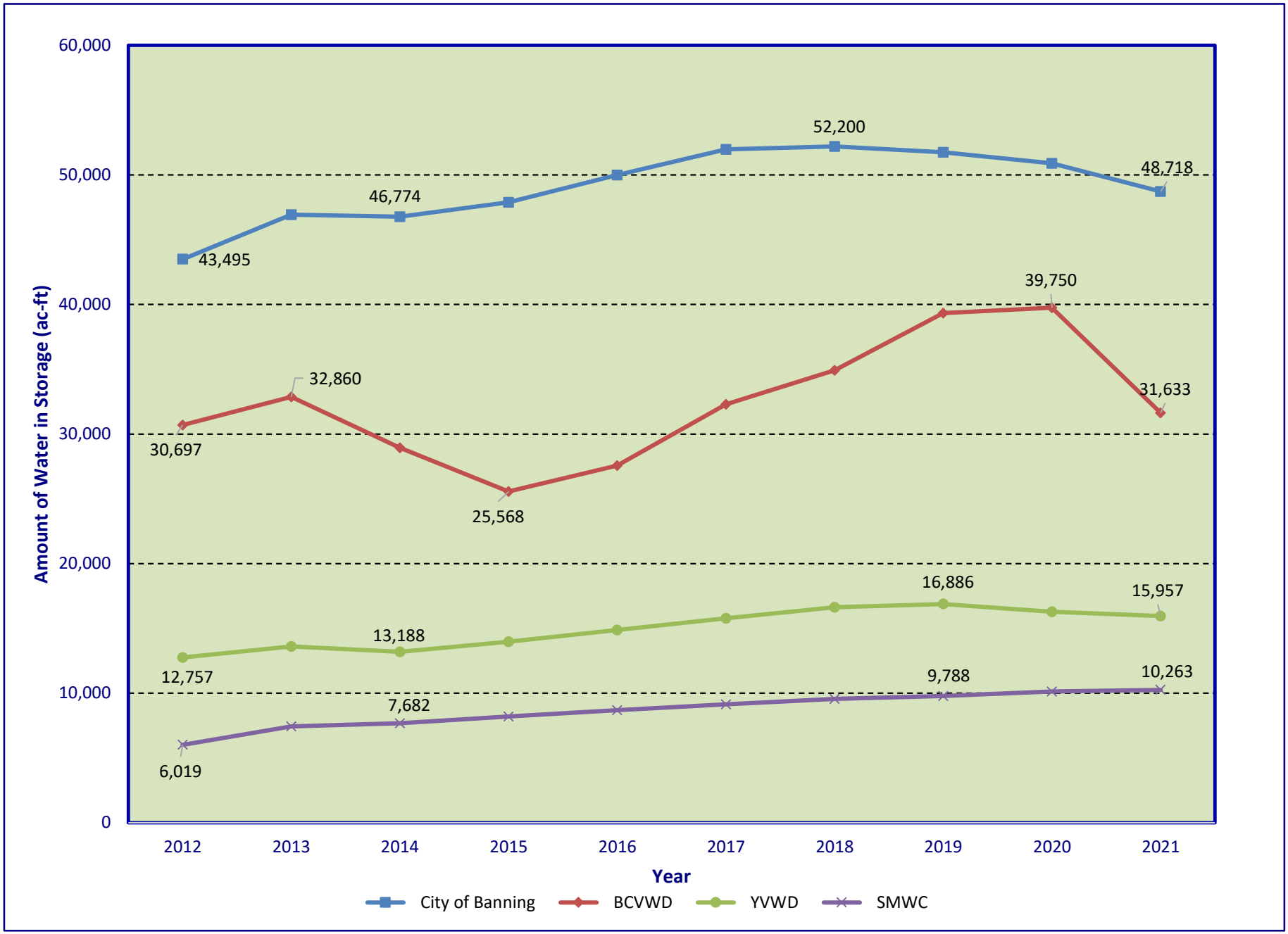
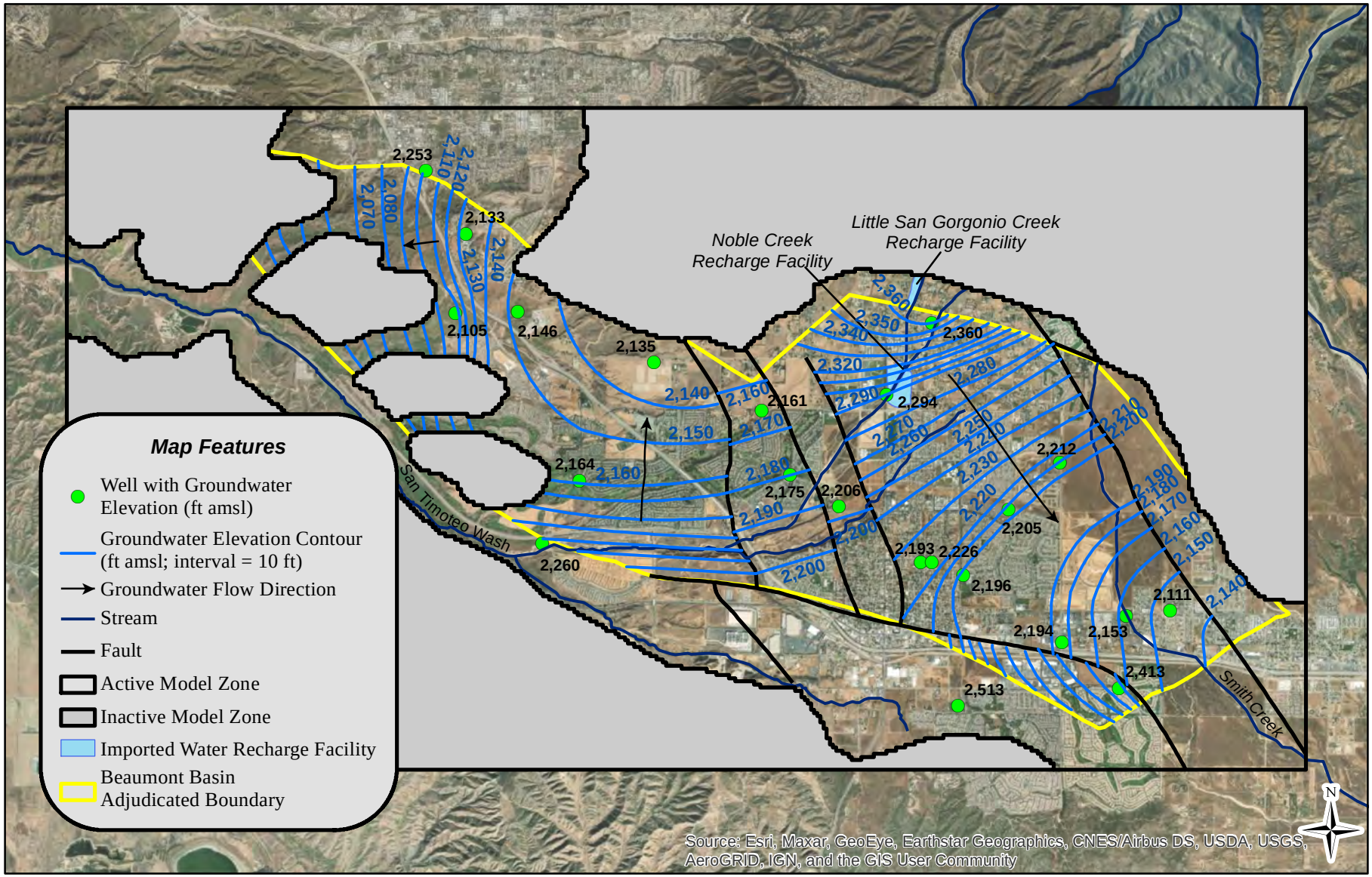


Figure 3-6
Accumulation of Storage by Agency for the Last Ten Years (2012-21)



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Thomas Harder & Co. Groundwater Consulting

0 0.5 1 2 Miles
NAD 83 UTM Zone 11

Groundwater Elevation Contours in the Beaumont Basin - December 2020

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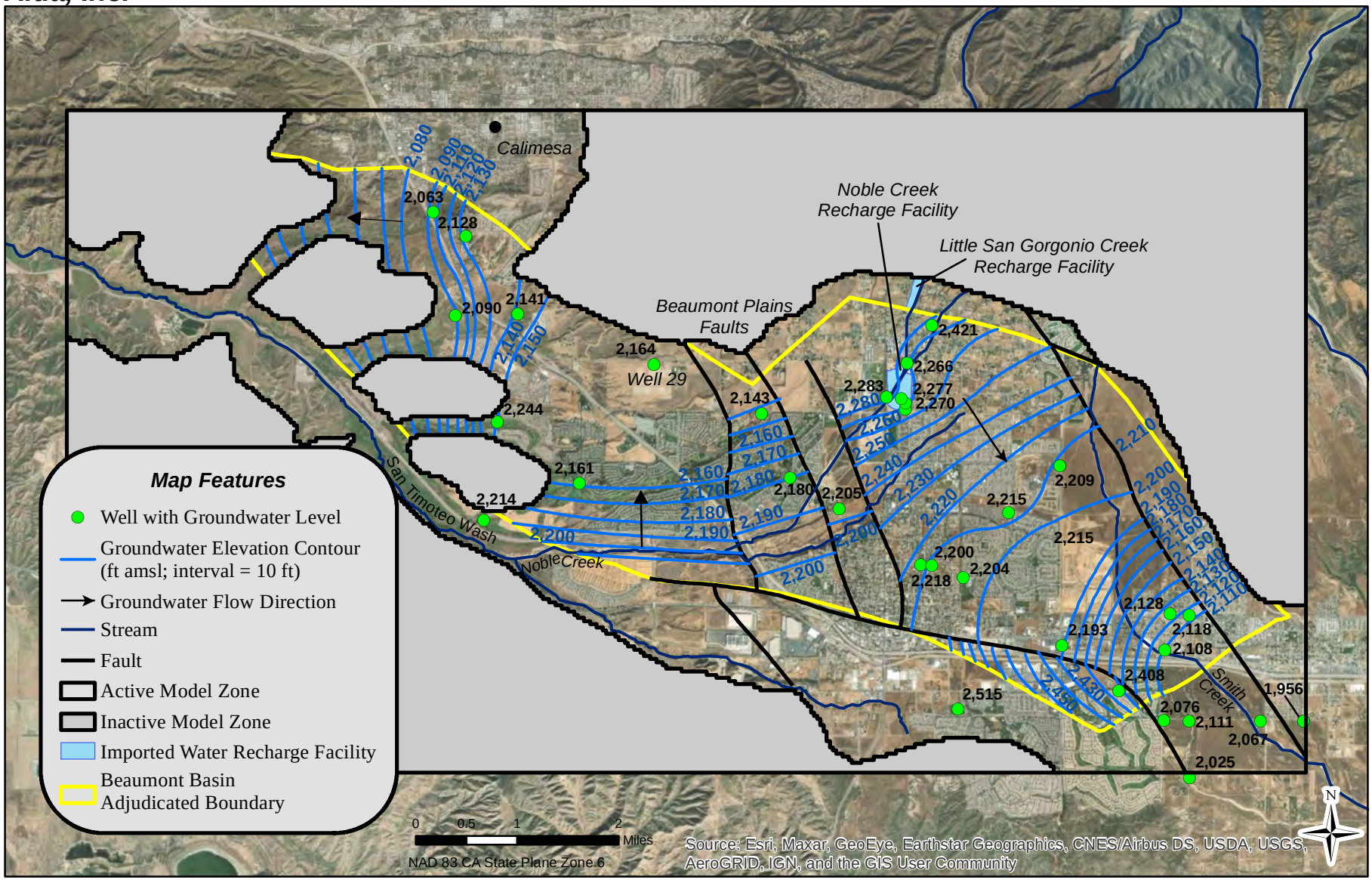
Figure 3-7



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March 2022

Groundwater Contours in the Beaumont Basin - Winter 2021

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Figure 3-8

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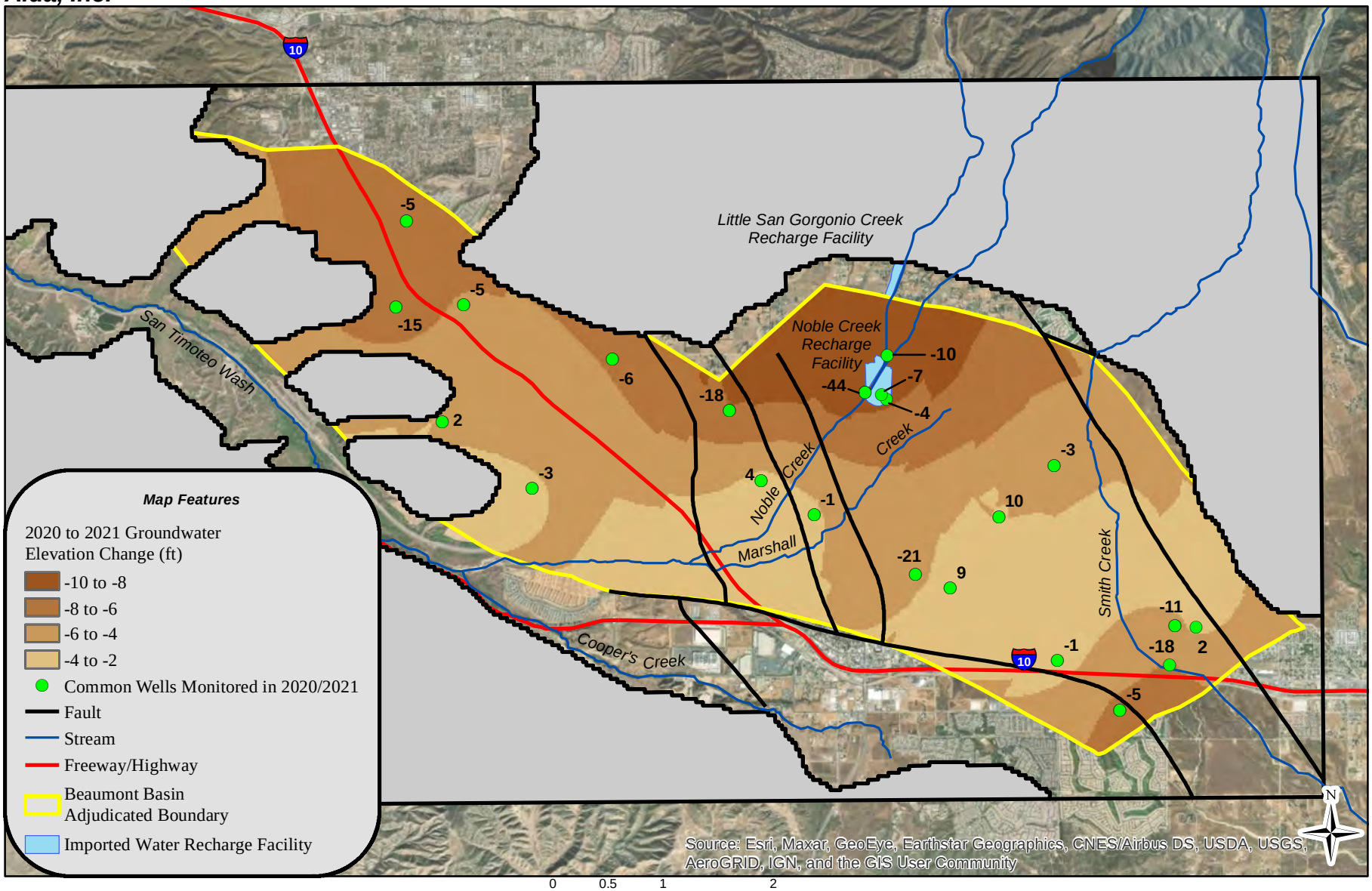

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Change in Groundwater Elevation 2020 - 2021

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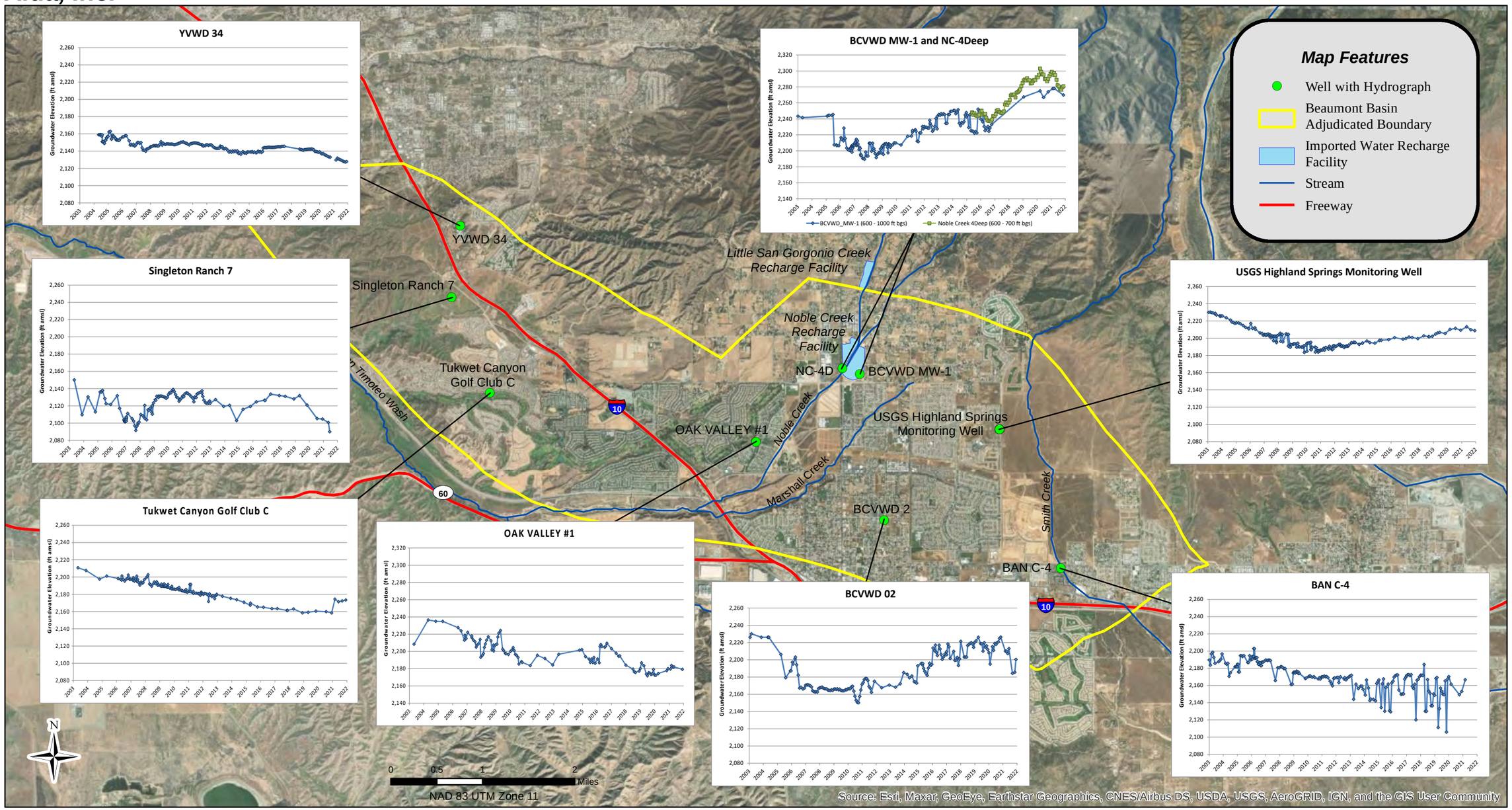
Figure 3-9



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March 2022

Groundwater Level Trends at Key Wells

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Figure 3-10

Table 3-1A

Appropriator Producer - Summary of Production for Calendar Year 2017 (ac-ft)

Owner & Well Name	Water Production by Appropriator (ac-ft) [1]												Total Production
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Banning, City of													
Well C2-A	0.8	0.3	0.8	0.3	0.0	4.6	3.8	2.0	0.7	3.7	1.4	0.2	18.6
Well C3	0.9	0.3	1.5	69.3	113.5	87.0	92.5	76.4	49.9	4.6	16.0	0.1	512.1
Well C4	1.2	0.5	48.5	20.8	7.6	73.5	91.4	76.8	73.3	64.2	26.6	14.2	498.4
Well M3	0.0	0.3	0.4	1.5	14.3	76.4	94.3	92.1	87.5	47.2	0.2	0.2	414.4
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal	**3.0**	**1.4**	**51.2**	**91.9**	**135.4**	**241.5**	**282.0**	**247.2**	**211.4**	**119.7**	**44.1**	**14.7**	**1,443.5**
Beaumont Cherry Valley Water District													
Well 1	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 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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Well 16	9.0	10.3	3.6	2.3	50.3	89.4	112.4	113.8	84.6	68.2	78.8	58.0	680.6
Well 21	141.5	87.6	144.2	196.3	39.5	394.9	290.1	294.4	240.9	210.7	196.2	169.5	2,405.7
Well 22	0.0	0.0	2.1	1.6	37.3	111.1	172.9	167.2	140.1	102.8	1.0	2.6	738.6
Well 23	147.7	169.0	113.3	209.2	264.7	265.3	268.8	263.6	178.5	0.0	107.1	256.8	2,244.0
Well 24	0.0	6.9	152.6	227.0	194.4	171.2	129.7	121.1	187.7	212.5	149.0	159.0	1,711.1
Well 25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	232.4	120.2	0.0	352.6
Well 26	9.0	10.4	57.8	133.6	154.5	163.9	174.9	170.0	152.5	161.1	127.4	130.1	1,445.1
Well 29	54.7	54.3	95.7	161.8	174.9	221.8	324.2	255.6	231.5	189.2	144.2	142.7	2,050.5
Egg Ranch Well	0.0	1.9	11.6	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.4
To Banning [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
Subtotal	**361.8**	**340.4**	**580.9**	**940.7**	**915.5**	**1,417.6**	**1,472.8**	**1,385.7**	**1,215.8**	**1,176.9**	**923.8**	**918.7**	**11,650.7**
South Mesa Water Company													
Well 4	15.7	12.9	17.7	25.0	36.7	41.9	45.6	51.0	37.1	34.7	27.6	22.2	368.1
Subtotal	**15.7**	**12.9**	**17.7**	**25.0**	**36.7**	**41.9**	**45.6**	**51.0**	**37.1**	**34.7**	**27.6**	**22.2**	**368.1**
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
Subtotal	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.1**
Total	**380.5**	**354.8**	**649.8**	**1,057.6**	**1,087.7**	**1,700.9**	**1,800.4**	**1,684.0**	**1,464.2**	**1,331.4**	**995.5**	**955.6**	**13,462.4**

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

(2) - Pursuant to Part I, Paragraph 3B of the Judgment, and a separate Agreement (a copy of which is on file with the Watermaster). A portion of the production from certain wells, operated by BCVWD and co-owned by the City of Banning and BCVWD, is delivered to the City of Banning at two connections, Sun Lakes and Highland Springs where flow meters are read.

Table 3-1B

Appropriator Producer - Summary of Production for Calendar Year 2018 (ac-ft)

Owner & Well Name	Water Production by Appropriator (ac-ft) [1]												Total Production
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Banning, City of													
Well C2-A	3.2	1.1	0.5	0.5	0.4	22.8	24.8	37.9	69.0	11.0	4.0	0.1	175.5
Well C3	0.0	0.9	0.2	0.2	0.7	68.6	67.8	79.1	79.8	103.7	107.2	13.4	521.7
Well C4	0.6	4.3	3.2	30.6	66.6	58.2	87.2	100.5	118.3	135.0	139.7	109.2	853.4
Well M3	0.2	0.2	0.1	56.6	86.7	81.5	89.4	86.6	86.0	56.6	46.6	0.1	590.5
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.6	52.6	28.6	119.7
Subtotal	**4.1**	**6.5**	**4.0**	**87.9**	**154.4**	**231.2**	**269.2**	**304.1**	**353.0**	**344.9**	**350.1**	**151.5**	**2,260.8**
Beaumont Cherry Valley Water District													
Well 1	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 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	7.8	99.0	19.0	0.0	0.0	0.0	0.0	0.0	125.9
Well 16	20.6	6.3	15.6	12.7	12.7	54.5	22.5	21.2	2.8	5.5	0.8	0.6	176.0
Well 21	193.0	163.9	179.2	215.1	258.0	284.3	294.3	294.0	284.3	196.7	242.6	186.1	2,791.4
Well 22	0.7	18.6	16.8	80.4	155.1	53.2	0.0	0.0	0.0	0.0	0.0	0.0	324.9
Well 23	247.9	177.8	125.8	189.6	201.8	214.9	268.5	248.1	237.7	208.8	157.3	81.0	2,359.3
Well 24	72.9	147.1	110.0	201.9	166.2	237.9	261.0	237.9	217.0	206.1	222.4	142.0	2,222.5
Well 25	0.0	0.0	2.5	108.9	227.8	261.2	272.7	251.9	273.4	224.5	247.7	190.3	2,060.8
Well 26	94.1	75.3	6.1	0.0	0.0	0.0	88.1	183.6	159.8	120.7	111.6	50.0	889.4
Well 29	112.3	119.8	89.5	111.2	0.0	94.5	233.3	238.8	185.5	150.2	29.8	13.9	1,378.7
Egg Ranch Well	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
To Banning [2]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-38.6	-52.6	-28.6	-119.7
Subtotal	**741.6**	**708.9**	**545.4**	**919.9**	**1,029.6**	**1,299.5**	**1,459.3**	**1,475.6**	**1,360.7**	**1,074.0**	**959.5**	**635.3**	**12,209.2**
South Mesa Water Company													
Well 4	20.1	14.5	14.4	26.9	30.0	42.7	51.4	46.5	44.0	31.4	26.9	16.1	364.9
Subtotal	**20.1**	**14.5**	**14.4**	**26.9**	**30.0**	**42.7**	**51.4**	**46.5**	**44.0**	**31.4**	**26.9**	**16.1**	**364.9**
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	0.0	0.0	0.0	92.1	0.0	0.0	0.1	60.8	0.2	7.7	30.3	0.0	191.2
Subtotal	**0.0**	**0.0**	**0.0**	**92.1**	**0.0**	**0.0**	**0.1**	**60.8**	**0.2**	**7.7**	**30.3**	**0.0**	**191.2**
Total	**765.7**	**729.9**	**563.9**	**1,126.8**	**1,214.0**	**1,573.3**	**1,779.9**	**1,886.9**	**1,757.9**	**1,458.0**	**1,366.8**	**802.9**	**15,026.1**

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

(2) - Pursuant to Part I, Paragraph 3B of the Judgment, and a separate Agreement (a copy of which is on file with the Watermaster). A portion of the production from certain wells, operated by BCVWD and co-owned by the City of Banning and BCVWD, is delivered to the City of Banning at two connections, Sun Lakes and Highland Springs where flow meters are read.

Table 3-1C

Appropriator Producer - Summary of Production for Calendar Year 2019 (ac-ft)

Owner & Well Name	Water Production by Appropriator (ac-ft) [1]												Total Production
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Banning, City of													
Well C2-A	6.0	25.4	17.5	0.6	3.7	11.2	25.7	39.0	44.8	26.3	0.9	1.4	202.4
Well C3	0.8	0.4	0.2	1.3	0.0	38.3	78.8	53.2	0.0	0.0	0.0	0.0	172.8
Well C4	105.4	7.4	15.8	146.7	144.5	110.0	100.0	109.9	118.0	61.6	80.7	6.4	1,006.4
Well M3	4.9	50.2	51.1	32.0	4.4	56.2	84.0	82.8	79.7	81.8	77.0	74.8	679.0
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]	16.9	1.0	4.8	10.0	5.4	6.5	6.0	3.6	0.5	3.6	0.7	1.6	60.7
Subtotal	**133.9**	**84.3**	**89.3**	**190.6**	**157.9**	**222.2**	**294.5**	**288.5**	**243.0**	**173.3**	**159.3**	**84.2**	**2,121.3**
Beaumont Cherry Valley Water District													
Well 1	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 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	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Well 16	0.1	0.0	0.4	1.2	0.0	3.1	0.0	8.3	9.2	20.8	6.2	1.9	51.1
Well 21	186.1	168.1	71.1	240.8	206.3	237.4	256.9	242.5	227.1	256.6	237.3	158.7	2,488.8
Well 22	0.0	0.0	0.0	7.5	6.1	123.1	116.2	106.4	91.5	90.7	65.1	5.0	611.7
Well 23	82.1	106.1	42.6	85.9	27.3	113.3	240.6	280.6	229.9	189.5	176.2	172.3	1,746.4
Well 24	89.9	21.6	133.9	211.0	108.1	179.7	201.9	249.7	206.6	195.4	186.7	86.6	1,871.1
Well 25	196.2	95.2	201.4	216.7	249.4	244.6	307.7	298.4	280.5	277.1	171.9	59.1	2,598.4
Well 26	15.7	0.0	26.2	130.2	57.6	130.1	125.9	155.4	151.2	139.3	113.9	17.3	1,062.7
Well 29	6.3	5.4	1.6	0.0	4.4	49.7	194.9	224.4	167.0	76.5	30.1	10.4	770.8
Egg Ranch Well	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
To Banning [2]	-16.9	-1.0	-4.8	-10.0	-5.4	-6.5	-6.0	-3.6	-0.5	-3.6	-0.7	-1.6	-60.7
Subtotal	**560.2**	**395.5**	**472.5**	**883.2**	**653.9**	**1,074.5**	**1,438.0**	**1,562.1**	**1,362.5**	**1,242.4**	**986.5**	**509.7**	**11,140.9**
South Mesa Water Company													
Well 4	12.8	11.8	14.2	25.5	22.5	38.9	53.6	54.4	39.8	22.9	20.7	13.5	330.7
Subtotal	**12.8**	**11.8**	**14.2**	**25.5**	**22.5**	**38.9**	**53.6**	**54.4**	**39.8**	**22.9**	**20.7**	**13.5**	**330.7**
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	148.0	110.4	83.6	76.7	110.0	528.6
Subtotal	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**148.0**	**110.4**	**83.6**	**76.7**	**110.0**	**528.6**
Total	**706.9**	**491.6**	**576.1**	**1,099.3**	**834.3**	**1,335.5**	**1,786.1**	**2,053.0**	**1,755.8**	**1,522.2**	**1,243.2**	**717.4**	**14,121.5**

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

(2) - Pursuant to Part I, Paragraph 3B of the Judgment, and a separate Agreement (a copy of which is on file with the Watermaster). A portion of the production from certain wells, operated by BCVWD and co-owned by the City of Banning and BCVWD, is delivered to the City of Banning at two connections, Sun Lakes and Highland Springs where flow meters are read.

Table 3-1D

Appropriator Producer - Summary of Production for Calendar Year 2020 (ac-ft)

Owner & Well Name	Water Production by Appropriator (ac-ft) [1]												Total Production
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Banning, City of													
Well C2-A	4.0	20.3	2.7	0.5	7.8	16.8	27.6	23.5	17.8	13.4	19.5	4.8	158.8
Well C3	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 C4	25.1	90.6	101.3	106.1	115.8	133.3	146.6	149.0	142.6	135.1	125.6	137.4	1,408.7
Well M3	80.9	0.1	0.3	0.3	72.1	77.9	85.1	82.8	82.8	52.1	40.2	42.3	616.8
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]	1.9	6.4	2.5	0.6	0.0	0.0	0.0	84.5	98.3	110.8	43.2	16.1	364.4
Subtotal	**111.9**	**117.5**	**106.9**	**107.6**	**195.7**	**228.0**	**259.4**	**339.7**	**341.5**	**311.4**	**228.5**	**200.6**	**2,548.6**
Beaumont Cherry Valley Water District													
Well 1	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 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	3.0	26.3	47.7	50.7	113.0	126.8	165.9	163.7	61.1	59.8	34.7	852.6
Well 16	0.0	9.1	19.0	4.0	18.2	52.6	21.2	56.4	8.9	9.3	0.5	2.0	201.1
Well 21	157.8	129.3	19.4	0.0	0.0	0.0	69.9	221.0	199.9	218.0	125.2	113.2	1,253.7
Well 22	0.5	5.6	17.0	35.6	134.4	160.7	106.7	71.2	172.7	149.7	86.7	75.8	1,016.5
Well 23	256.7	145.4	64.9	163.0	209.7	271.2	273.1	276.1	269.4	236.8	178.5	159.2	2,504.0
Well 24	164.9	144.1	120.2	155.8	186.9	153.0	225.1	130.2	1.9	57.1	0.0	2.1	1,341.3
Well 25	55.9	74.2	33.5	29.8	144.8	151.6	182.1	151.6	145.7	160.0	122.5	125.0	1,376.7
Well 26	0.0	139.6	191.8	123.7	251.1	178.6	280.3	300.0	307.6	297.6	226.1	210.7	2,507.1
Well 29	5.9	59.6	44.4	0.0	185.2	209.0	224.8	286.9	291.9	212.7	166.9	163.4	1,850.7
Egg Ranch Well	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
To Banning [2]	-1.9	-6.4	-2.5	-0.6	0.0	0.0	0.0	-84.5	-98.3	-110.8	-43.2	-16.1	-364.4
Subtotal	**639.8**	**703.4**	**533.9**	**558.9**	**1,181.0**	**1,289.7**	**1,509.9**	**1,574.8**	**1,463.4**	**1,291.5**	**923.0**	**870.0**	**12,539.2**
South Mesa Water Company													
Well 4	17.1	14.9	13.0	16.9	26.2	24.7	36.6	44.8	26.7	0.0	0.0	8.3	229.2
Subtotal	**17.1**	**14.9**	**13.0**	**16.9**	**26.2**	**24.7**	**36.6**	**44.8**	**26.7**	**0.0**	**0.0**	**8.3**	**229.2**
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	152.2	142.1	83.4	122.9	133.1	158.5	167.4	148.1	127.2	119.7	53.3	0.0	1,407.7
Subtotal	**152.2**	**142.1**	**83.4**	**122.9**	**133.1**	**158.5**	**167.4**	**148.1**	**127.2**	**119.7**	**53.3**	**0.0**	**1,407.7**
Total	**920.9**	**977.9**	**737.1**	**806.2**	**1,536.0**	**1,700.8**	**1,973.2**	**2,107.5**	**1,958.8**	**1,722.6**	**1,204.9**	**1,078.9**	**16,724.7**

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

(2) - Pursuant to Part I, Paragraph 3B of the Judgment, and a separate Agreement (a copy of which is on file with the Watermaster). A portion of the production from certain wells, operated by BCVWD and co-owned by the City of Banning and BCVWD, is delivered to the City of Banning at two connections, Sun Lakes and Highland Springs where flow meters are read.

Table 3-1E

Appropriator Producer - Summary of Production for Calendar Year 2021 (ac-ft)

Owner & Well Name	Water Production by Appropriator (ac-ft) [1]												Total Production
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Banning, City of													
Well C2-A	18.6	14.4	14.5	3.3	1.2	44.0	93.3	82.1	88.5	62.8	36.9	48.0	507.7
Well C3	0.0	10.5	37.7	109.9	111.3	110.9	107.9	95.4	103.9	61.9	76.4	13.1	838.9
Well C4	110.9	123.0	95.0	138.3	141.5	138.7	133.2	133.5	135.6	136.7	129.7	49.4	1,465.4
Well M3	25.3	18.8	41.3	48.0	65.8	57.2	58.4	59.5	9.2	4.3	8.3	10.9	407.0
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]	4.2	0.0	0.0	0.3	0.0	1.8	73.5	71.4	71.7	76.1	73.4	76.6	449.0
Subtotal	**159.1**	**166.7**	**188.5**	**299.9**	**319.8**	**352.6**	**466.3**	**441.9**	**408.9**	**341.8**	**324.7**	**198.1**	**3,668.1**
Beaumont Cherry Valley Water District													
Well 1	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 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	0.8	15.5	4.0	38.4	154.2	162.0	156.6	167.1	100.6	60.3	91.3	39.9	990.7
Well 16	4.5	5.6	1.0	7.6	59.4	70.2	86.4	100.5	83.4	73.7	58.4	21.9	572.5
Well 21	126.6	98.2	99.4	147.1	175.4	200.4	209.1	193.0	169.1	137.6	177.4	151.9	1,885.2
Well 22	26.1	5.7	2.7	23.9	92.0	153.6	146.7	170.8	135.6	88.9	145.1	110.7	1,101.8
Well 23	108.4	121.0	117.9	139.8	222.4	284.0	347.8	360.2	290.7	201.9	106.9	3.1	2,304.1
Well 24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	106.9	119.7	213.1	215.5	655.2
Well 25	77.7	64.8	69.4	124.4	155.7	111.7	165.9	154.4	149.1	132.0	113.0	39.0	1,357.3
Well 26	220.4	173.0	216.3	186.4	48.0	294.2	370.8	321.0	257.7	242.5	51.8	141.6	2,523.7
Well 29	152.4	148.5	154.6	235.5	265.6	78.8	143.7	160.1	148.5	74.7	79.6	26.2	1,668.0
Egg Ranch Well	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
To Banning [2]	-4.2	0.0	0.0	-0.3	0.0	-1.8	-73.5	-71.4	-71.7	-76.1	-73.4	-76.6	-449.0
Subtotal	**712.7**	**632.4**	**665.3**	**902.9**	**1,172.7**	**1,353.1**	**1,553.4**	**1,555.7**	**1,369.9**	**1,055.1**	**963.2**	**673.3**	**12,609.5**
South Mesa Water Company													
Well 4	24.6	20.7	23.3	26.6	37.6	36.3	46.7	56.6	54.3	52.9	49.8	36.8	466.0
Subtotal	**24.6**	**20.7**	**23.3**	**26.6**	**37.6**	**36.3**	**46.7**	**56.6**	**54.3**	**52.9**	**49.8**	**36.8**	**466.0**
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	54.5	81.7	59.6	109.1	142.3	135.2	137.7	145.5	138.9	92.0	1.5	0.0	1,097.9
Calimesa Irrigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.8	21.7	8.7	3.0	1.4	62.6
Subtotal	**54.5**	**81.7**	**59.6**	**109.1**	**142.3**	**135.2**	**137.7**	**173.2**	**160.6**	**100.7**	**4.5**	**1.4**	**1,160.5**
Total	**950.8**	**901.4**	**936.7**	**1,338.3**	**1,672.4**	**1,877.2**	**2,204.1**	**2,227.4**	**1,993.6**	**1,550.5**	**1,342.1**	**909.6**	**17,904.2**

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

(2) - Pursuant to Part I, Paragraph 3B of the Judgment, and a separate Agreement (a copy of which is on file with the Watermaster). A portion of the production from certain wells, operated by BCVWD and co-owned by the City of Banning and BCVWD, is delivered to the City of Banning at two connections, Sun Lakes and Highland Springs where flow meters are read.

Table 3-2A
Overlying Producer - Summary of Production for Calendar Year 2017 (ac-ft)

Owner and Well Name	Metered	Monthly Water Production by Overlying Producer[1]												Total[2] Production	Overlying Water Right	Unused Overlying Allocation
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Beckman, Walter M. [3]	Yes	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.9**	**58.1**	**57.2**
California Oak Valley Golf and Resort LLC [4]																
Oak Valley #1	Yes	0.0	0.0	0.0	0.0	0.0	0.0	38.9	88.3	40.8	0.0	0.0	0.0	168.1		
Oak Valley #2	Yes	6.3	6.5	125.4	54.7	61.6	75.0	129.4	0.0	52.7	10.1	80.1	60.1	661.9		
Subtotal		**6.3**	**6.5**	**125.4**	**54.7**	**61.6**	**75.0**	**168.3**	**88.3**	**93.5**	**10.1**	**80.1**	**60.1**	**830.0**	**735.8**	**0.0**
Merlin Properties	No	Water Duty Method Used to Estimate Annual Production												**1.6**	**426.0**	**424.4**
Oak Valley Partners, LP [5]														**2.5**	**1,398.87**	**1,396.4**
Plantation on the Lake LLC	Yes	11.7	9.0	9.6	20.2	26.9	28.9	35.8	38.6	73.5	55.6	61.1	47.1	**417.8**	**450.0**	**32.2**
Rancho Calimesa Mobile Home Park [6]																
Well No.1	Yes	1.0	1.0	0.6	1.7	2.5	3.3	3.0	3.4	3.7	2.8	2.7	1.1	26.9		
Well No.2	No	0.7	0.6	0.4	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.9	4.2		
Subtotal		**1.7**	**1.6**	**1.1**	**2.9**	**2.5**	**3.3**	**3.0**	**3.4**	**3.7**	**2.8**	**3.1**	**2.0**	**31.2**	**116.2**	**85.0**
Roman Catholic Bishop of San Bernardino		Water Duty Method Used to Estimate Annual Production												**0.0**	**119.3**	**119.3**
Sharondale Mesa Owners Association [6]																
Well No.1	Yes	1.4	1.3	4.2	5.4	5.2	8.4	10.5	9.2	9.1	8.7	6.0	5.4	74.7		
Well No.2	Yes	1.4	1.2	3.3	4.0	3.8	4.1	4.0	3.7	3.9	4.3	5.1	4.4	43.2		
Subtotal		**2.7**	**2.5**	**7.4**	**9.3**	**9.0**	**12.5**	**14.5**	**13.0**	**13.0**	**13.0**	**11.2**	**9.8**	**117.9**	**154.9**	**37.0**
Tukwet Canyon Golf Club [7]																
Well A	Yes	0.4	0.8	0.6	7.9	6.2	15.4	12.3	6.1	2.9	12.4	0.7	0.5	66.3		
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	0.0	4.7	48.3	94.9	111.7	130.5	58.2	137.6	112.1	101.8	58.4	67.1	925.1		
Subtotal		**0.4**	**5.5**	**48.8**	**102.8**	**117.9**	**145.9**	**70.5**	**143.7**	**115.0**	**114.1**	**59.1**	**67.6**	**991.4**	**1,704.0**	**712.7**
Stearns, Leonard M. and Dorothy D.	No	Water Duty Method Used to Estimate Annual Production												**0.7**	**154.9**	**154.2**
Sunny-Cal Egg and Poultry Company	No	Water Duty Method Used to Estimate Annual Production												**4.3**	**1,115.0**	**1,110.6**
Albor Properties III, LP	No	Water Duty Method Used to Estimate Annual Production												**2.4**	**232.4**	**229.9**
Nikodinov, Nick	No	Water Duty Method Used to Estimate Annual Production												**0.8**	**15.5**	**14.7**
McAmis, Ronald L.	No	Water Duty Method Used to Estimate Annual Production												**0.6**	**3.9**	**3.3**
Aldama, Nicolas and Amalia	No	Water Duty Method Used to Estimate Annual Production												**0.9**	**5.4**	**4.6**
Gutierrez, Hector, et al.	No	Water Duty Method Used to Estimate Annual Production												**1.4**	**7.7**	**6.3**
Darmont, Boris and Miriam	No	Water Duty Method Used to Estimate Annual Production												**0.4**	**1.9**	**1.6**
TOTAL														**2,404.7**	**6,700.0**	**4,389.4**

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

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

3.- Mr. Beckman has not provided production information since 2014.

4.- Monthly production provided by BCVWD.

5.- Starting in 2008, the parcels owned by Oak Valley Partners (OVP) were no longer used for agricultural purposes. An annual production of 2.5 ac-ft has been estimated since.

6.- Monthly production since 2011 provided by Clearwater Solutions, a company in charge of operating the water system.

7.- Monthly production provided by the Morongo Band of Mission Indians.

Table 3-2B
Overlying Producer - Summary of Production for Calendar Year 2018 (ac-ft)

Owner and Well Name	Metered	Monthly Water Production by Overlying Producer[1]												Total[2] Production	Overlying Water Right	Unused Overlying Allocation
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Beckman, Walter M. [3]	Yes	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.9**	**58.1**	**57.2**
California Oak Valley Golf and Resort LLC [4]																
Oak Valley #1	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		
Oak Valley #2	Yes	34.8	8.7	23.1	16.3	39.5	72.5	76.2	91.6	68.0	75.2	53.8	13.4	573.0		
Subtotal		**34.8**	**8.7**	**23.1**	**16.3**	**39.5**	**72.5**	**76.2**	**91.6**	**68.0**	**75.2**	**53.8**	**13.4**	**573.1**	**735.8**	**162.8**
Merlin Properties	No	Water Duty Method Used to Estimate Annual Production												**1.6**	**426.0**	**424.4**
Oak Valley Partners, LP [5]														**2.5**	**1,218.47**	**1,216.0**
Plantation on the Lake LLC	Yes	42.0	44.5	27.6	23.0	30.6	33.1	40.8	44.1	83.9	63.6	33.7	4.2	**471.2**	**450.0**	**-21.2**
Rancho Calimesa Mobile Home Park [6]																
Well No.1	Yes	2.3	2.0	2.1	2.7	2.4	2.9	3.9	3.7	2.9	3.3	2.3	2.2	32.7		
Well No.2	No	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		
Subtotal		**2.3**	**2.0**	**2.1**	**2.7**	**2.4**	**2.9**	**3.9**	**3.7**	**2.9**	**3.3**	**2.3**	**2.2**	**32.7**	**116.2**	**83.4**
Roman Catholic Bishop of San Bernardino		Water Duty Method Used to Estimate Annual Production												**0.0**	**119.3**	**119.3**
Sharondale Mesa Owners Association [6]																
Well No.1	Yes	3.2	4.4	2.4	5.4	8.0	8.5	8.0	10.4	12.8	10.9	7.6	3.8	85.4		
Well No.2	Yes	2.7	3.2	2.1	3.9	2.4	2.9	5.1	3.1	1.3	0.0	1.4	2.8	31.0		
Subtotal		**5.9**	**7.7**	**4.4**	**9.3**	**10.4**	**11.4**	**13.1**	**13.5**	**14.2**	**10.9**	**9.0**	**6.6**	**116.4**	**154.9**	**38.5**
Tukwet Canyon Golf Club [7]																
Well A	Yes	0.9	0.5	0.7	1.4	0.9	4.1	13.6	13.5	7.5	2.9	0.7	0.8	47.5		
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	37.3	40.8	18.3	88.3	78.9	124.6	149.1	133.8	120.0	81.4	67.6	23.4	963.5		
Subtotal		**38.2**	**41.2**	**19.0**	**89.8**	**79.8**	**128.7**	**162.7**	**147.3**	**127.5**	**84.2**	**68.3**	**24.2**	**1,010.9**	**1,704.0**	**693.1**
Stearns, Leonard M. and Dorothy D.	No	Water Duty Method Used to Estimate Annual Production												**0.7**	**154.9**	**154.2**
Sunny-Cal Egg and Poultry Company	No	Water Duty Method Used to Estimate Annual Production												**4.3**	**1,115.0**	**1,110.6**
Albor Properties III, LP	No	Water Duty Method Used to Estimate Annual Production												**2.4**	**232.4**	**229.9**
Nikodinov, Nick	No	Water Duty Method Used to Estimate Annual Production												**0.8**	**15.5**	**14.7**
McAmis, Ronald L.	No	Water Duty Method Used to Estimate Annual Production												**0.6**	**3.9**	**3.3**
Aldama, Nicolas and Amalia	No	Water Duty Method Used to Estimate Annual Production												**0.9**	**5.4**	**4.6**
Gutierrez, Hector, et al.	No	Water Duty Method Used to Estimate Annual Production												**1.4**	**7.7**	**6.3**
Darmont, Boris and Miriam	No	Water Duty Method Used to Estimate Annual Production												**0.4**	**1.9**	**1.6**
TOTAL														**2,220.7**	**6,519.6**	**4,298.9**

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

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

3.- Mr. Beckman has not provided production information since 2014.

4.- Monthly production provided by BCVWD.

5.- Starting in 2008, the parcels owned by Oak Valley Partners (OVP) were no longer used for agricultural purposes. An annual production of 2.5 ac-ft has been estimated since. As part of Resolution 2017-02, OVP transfered 180.40 ac-ft of its Overlying rights to YVWD in 2018; OVP's rights were reduced to 1,218.47 ac-ft.

6.- Monthly production since 2011 provided by Clearwater Solutions, a company in charge of operating the water system.

7.- Monthly production provided by the Morongo Band of Mission Indians.

Table 3-2C
Overlying Producer - Summary of Production for Calendar Year 2019 (ac-ft)

Owner and Well Name	Metered	Monthly Water Production by Overlying Producer[1]												Total[2] Production	Overlying Water Right	Unused Overlying Allocation
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Beckman, Walter M. [3]	Yes	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.9**	**58.1**	**57.2**
California Oak Valley Golf and Resort LLC [4]																
Oak Valley #1	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		
Oak Valley #2	Yes	8.9	3.6	8.1	24.1	36.7	58.9	69.3	102.7	63.1	59.0	55.2	0.0	489.6		
Subtotal		**8.9**	**3.6**	**8.1**	**24.1**	**36.7**	**58.9**	**69.3**	**102.7**	**63.1**	**59.0**	**55.2**	**0.0**	**489.6**	**735.8**	**246.3**
Merlin Properties	No	Water Duty Method Used to Estimate Annual Production												**1.6**	**426.0**	**424.4**
Oak Valley Partners, LP [5]														**2.5**	**1,215.82**	**1,213.3**
Plantation on the Lake LLC	Yes	12.4	7.8	18.1	25.3	21.3	32.1	34.4	39.0	34.4	8.7	10.1	14.9	**258.7**	**450.0**	**191.3**
Rancho Calimesa Mobile Home Park [6]																
Well No.1	Yes	1.5	1.6	1.2	1.4	1.6	1.9	2.8	3.2	3.3	3.1	2.6	2.4	26.7		
Well No.2	No	0.5	0.5	0.8	0.8	0.7	1.5	0.0	0.0	0.0	0.0	0.0	0.6	5.4		
Subtotal		**2.0**	**2.1**	**2.0**	**2.2**	**2.3**	**3.4**	**2.8**	**3.2**	**3.3**	**3.1**	**2.6**	**3.0**	**32.1**	**116.2**	**84.1**
Roman Catholic Bishop of San Bernardino		Water Duty Method Used to Estimate Annual Production												**0.0**	**119.3**	**119.3**
Sharondale Mesa Owners Association [6]																
Well No.1	Yes	2.8	2.5	1.5	7.1	3.3	6.2	7.8	7.4	6.9	10.1	8.2	4.0	67.8		
Well No.2	Yes	2.2	1.7	1.8	1.0	2.6	3.9	4.5	3.7	5.2	1.8	0.0	2.0	30.4		
Subtotal		**5.0**	**4.2**	**3.4**	**8.1**	**5.9**	**10.1**	**12.3**	**11.1**	**12.1**	**12.0**	**8.2**	**6.0**	**98.3**	**154.9**	**56.6**
Tukwet Canyon Golf Club [7]																
Well A	Yes	0.4	0.7	0.9	1.6	0.9	8.2	6.8	0.0	1.4	0.9	0.8	0.9	23.4		
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	9.8	0.1	1.7	85.7	29.4	103.2	169.2	155.5	128.1	104.1	64.5	4.2	855.5		
Subtotal		**10.2**	**0.8**	**2.5**	**87.3**	**30.3**	**111.4**	**176.0**	**155.5**	**129.5**	**105.0**	**65.3**	**5.0**	**878.8**	**1,704.0**	**825.2**
Stearns, Leonard M. and Dorothy D.	No	Water Duty Method Used to Estimate Annual Production												**0.7**	**154.9**	**154.2**
Sunny-Cal Egg and Poultry Company	No	Water Duty Method Used to Estimate Annual Production												**4.3**	**1,115.0**	**1,110.6**
Albor Properties III, LP	No	Water Duty Method Used to Estimate Annual Production												**2.4**	**232.4**	**229.9**
Nikodinov, Nick	No	Water Duty Method Used to Estimate Annual Production												**0.8**	**15.5**	**14.7**
McAmis, Ronald L.	No	Water Duty Method Used to Estimate Annual Production												**0.6**	**3.9**	**3.3**
Aldama, Nicolas and Amalia	No	Water Duty Method Used to Estimate Annual Production												**0.9**	**5.4**	**4.6**
Gutierrez, Hector, et al.	No	Water Duty Method Used to Estimate Annual Production												**1.4**	**7.7**	**6.3**
Darmont, Boris and Miriam	No	Water Duty Method Used to Estimate Annual Production												**0.4**	**1.9**	**1.6**
TOTAL														**1,773.9**	**6,517.0**	**4,743.0**

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

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

3.- Mr. Beckman has not provided production information since 2014.

4.- Monthly production provided by BCVWD.

5.- Starting in 2008, the parcels owned by Oak Valley Partners (OVP) were no longer used for agricultural purposes. An annual production of 2.5 ac-ft has been estimated since. As part of Resolution 2017-02, OVP transfered 180.40 ac-ft of its Overlying rights to YVWD in 2018, an additional 2.65 ac-ft were transfered in 2019. These transfers have reduced OVP's Overlying rights to 1,215.82 ac-ft.

6.- Monthly production since 2011 provided by Clearwater Solutions, a company in charge of operating the water system.

7.- Monthly production provided by the Morongo Band of Mission Indians.

Table 3-2D
Overlying Producer - Summary of Production for Calendar Year 2020 (ac-ft)

Owner and Well Name	Metered	Monthly Water Production by Overlying Producer[1]												Total[2] Production	Overlying Water Right	Unused Overlying Allocation
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Beckman, Walter M. [3]	Yes	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.9**	**58.1**	**57.2**
California Oak Valley Golf and Resort LLC [4]																
Oak Valley #1	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		
Oak Valley #2	Yes	17.3	18.6	8.6	13.0	54.5	70.0	132.0	49.5	83.6	57.8	39.8	32.6	577.3		
Subtotal		**17.3**	**18.6**	**8.6**	**13.0**	**54.5**	**70.0**	**132.0**	**49.5**	**83.6**	**57.8**	**39.8**	**32.6**	**577.3**	**735.8**	**158.6**
Merlin Properties	No	Water Duty Method Used to Estimate Annual Production												**1.6**	**426.0**	**424.4**
Oak Valley Partners, LP [5]		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**	**1,215.82**	**1,215.8**
Plantation on the Lake LLC	Yes	21.3	20.2	7.6	21.1	33.2	38.3	38.9	14.7	0.0	0.0	0.0	0.0	**195.2**	**450.0**	**254.8**
Rancho Calimesa Mobile Home Park [6]																
Well No.1	Yes	1.1	0.0	0.0	0.0	0.0	2.0	2.6	3.2	2.6	2.0	2.1	2.1	17.7		
Well No.2	No	0.7	1.8	1.8	2.8	1.3	0.6	0.9	0.4	0.5	1.2	0.0	0.4	12.4		
Subtotal		**1.9**	**1.8**	**1.8**	**2.8**	**1.3**	**2.5**	**3.4**	**3.5**	**3.2**	**3.2**	**2.2**	**2.6**	**30.1**	**116.2**	**86.1**
Roman Catholic Bishop of San Bernardino		Water Duty Method Used to Estimate Annual Production												**0.0**	**119.3**	**119.3**
Sharondale Mesa Owners Association [6]																
Well No.1	Yes	3.5	6.4	3.6	2.5	6.6	8.2	5.8	11.3	11.9	13.1	7.3	7.4	87.6		
Well No.2	Yes	3.5	1.9	1.7	2.3	4.5	4.4	4.3	5.3	0.7	0.0	5.3	4.5	38.3		
Subtotal		**6.9**	**8.2**	**5.3**	**4.8**	**11.1**	**12.6**	**10.1**	**16.6**	**12.6**	**13.2**	**12.6**	**11.9**	**125.8**	**154.9**	**29.1**
Tukwet Canyon Golf Club [7]																
Well A	Yes	1.1	0.8	0.7	0.9	0.7	0.8	1.1	1.6	1.5	1.5	1.9	3.0	15.5		
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	18.1	35.9	27.9	35.6	14.0	120.7	173.2	162.5	153.0	88.1	67.8	57.0	953.7		
Subtotal		**19.1**	**36.6**	**28.6**	**36.4**	**14.7**	**121.5**	**174.3**	**164.2**	**154.5**	**89.6**	**69.7**	**60.0**	**969.3**	**1,704.0**	**734.8**
Stearns, Leonard M. and Dorothy D.	No	Water Duty Method Used to Estimate Annual Production												**0.7**	**154.9**	**154.2**
Sunny-Cal Egg and Poultry Company	No	Water Duty Method Used to Estimate Annual Production												**4.2**	**1,115.0**	**1,110.8**
Albor Properties III, LP	No	Water Duty Method Used to Estimate Annual Production												**2.4**	**232.4**	**230.0**
Nikodinov, Nick	No	Water Duty Method Used to Estimate Annual Production												**0.8**	**15.5**	**14.7**
McAmis, Ronald L.	No	Water Duty Method Used to Estimate Annual Production												**0.6**	**3.9**	**3.3**
Aldama, Nicolas and Amalia	No	Water Duty Method Used to Estimate Annual Production												**0.9**	**5.4**	**4.6**
Gutierrez, Hector, et al.	No	Water Duty Method Used to Estimate Annual Production												**1.4**	**7.7**	**6.3**
Darmont, Boris and Miriam	No	Water Duty Method Used to Estimate Annual Production												**0.4**	**1.9**	**1.6**
TOTAL														**1,911.4**	**6,517.0**	**4,605.6**

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

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

3.- Mr. Beckman has not provided production information since 2014.

4.- Monthly production provided by BCVWD.

5.- Starting in 2008, the parcels owned by Oak Valley Partners (OVP) were no longer used for agricultural purposes. An annual production of 2.5 ac-ft was estimated through 2019; there was no groundwater production in 2020. As part of Resolution 2017-02, OVP transfered 180.40 ac-ft of its Overlying rights to YVWD in 2018, an additional 2.65 ac-ft were transfered in 2019. These transfers reduced OVP's Overlying rights to 1,215.82 ac-ft. No additional transfers took place in 2020.

6.- Monthly production since 2011 provided by Clearwater Solutions, a company in charge of operating the water system.

7.- Monthly production provided by the Morongo Band of Mission Indians.

Table 3-2E
Overlying Producer - Summary of Production for Calendar Year 2021 (ac-ft)

Owner and Well Name	Metered	Monthly Water Production by Overlying Producer[1]												Total[2] Production	Overlying Water Right	Unused Overlying Allocation
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Beckman, Walter M. [3]	Yes	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.9**	**58.1**	**57.2**
California Oak Valley Golf and Resort LLC [4]																
Oak Valley #1	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		
Oak Valley #2	Yes	20.7	18.7	16.0	37.4	7.0	49.6	98.0	98.0	69.1	47.8	47.8	21.3	531.3		
Subtotal		**20.7**	**18.7**	**16.0**	**37.4**	**7.0**	**49.6**	**98.0**	**98.0**	**69.1**	**47.8**	**47.8**	**21.3**	**531.3**	**735.8**	**204.5**
Merlin Properties	No	Water Duty Method Used to Estimate Annual Production												**1.6**	**426.0**	**424.4**
Oak Valley Partners, LP [5]		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**	**1,215.82**	**1,215.8**
Plantation on the Lake LLC	Yes	0.0	0.0	0.0	0.0	0.0	0.0	18.5	41.3	34.0	28.7	27.9	11.0	**161.5**	**450.0**	**288.5**
Rancho Calimesa Mobile Home Park [6]																
Well No.1	Yes	1.3	1.8	1.6	2.5	2.2	2.3	0.0	0.0	1.1	1.4	2.0	1.8	18.1		
Well No.2	No	0.7	1.0	0.0	0.4	0.3	0.5	0.2	0.8	0.8	1.1	0.5	0.5	6.9		
Subtotal		**2.0**	**2.7**	**1.6**	**2.9**	**2.6**	**2.9**	**0.2**	**0.8**	**1.9**	**2.5**	**2.5**	**2.3**	**25.0**	**116.2**	**91.2**
Roman Catholic Bishop of San Bernardino		Water Duty Method Used to Estimate Annual Production												**0.0**	**119.3**	**119.3**
Sharondale Mesa Owners Association [6]																
Well No.1	Yes	4.0	4.8	4.7	7.2	5.8	7.3	7.9	8.4	7.8	6.0	5.7	3.3	72.9		
Well No.2	Yes	3.3	3.7	4.0	5.0	4.2	5.3	5.1	5.1	5.0	4.4	4.2	2.6	51.8		
Subtotal		**7.3**	**8.5**	**8.7**	**12.2**	**9.9**	**12.6**	**13.0**	**13.5**	**12.8**	**10.4**	**9.9**	**5.9**	**124.7**	**154.9**	**30.2**
Tukwet Canyon Golf Club [7]																
Well A	Yes	2.3	1.3	1.8	2.2	2.2	1.4	1.6	5.2	2.3	1.7	1.9	1.7	25.7		
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	27.3	26.7	39.2	98.8	130.9	158.7	151.7	153.6	122.7	71.2	86.1	85.3	1,152.2		
Subtotal		**29.5**	**28.1**	**41.1**	**101.0**	**133.1**	**160.2**	**153.3**	**158.7**	**125.1**	**72.8**	**88.0**	**87.0**	**1,177.9**	**1,704.0**	**526.1**
Stearns, Leonard M. and Dorothy D.	No	Water Duty Method Used to Estimate Annual Production												**0.7**	**154.9**	**154.2**
Sunny-Cal Egg and Poultry Company	No	Water Duty Method Used to Estimate Annual Production												**4.3**	**1,115.0**	**1,110.7**
Albor Properties III, LP	No	Water Duty Method Used to Estimate Annual Production												**2.4**	**232.4**	**230.0**
Nikodinov, Nick	No	Water Duty Method Used to Estimate Annual Production												**0.8**	**15.5**	**14.7**
McAmis, Ronald L.	No	Water Duty Method Used to Estimate Annual Production												**0.6**	**3.9**	**3.3**
Aldama, Nicolas and Amalia	No	Water Duty Method Used to Estimate Annual Production												**0.9**	**5.4**	**4.6**
Gutierrez, Hector, et al.	No	Water Duty Method Used to Estimate Annual Production												**1.4**	**7.7**	**6.3**
Darmont, Boris and Miriam	No	Water Duty Method Used to Estimate Annual Production												**0.4**	**1.9**	**1.6**
TOTAL														**2,034.1**	**6,517.0**	**4,482.9**

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

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

3.- Mr. Beckman has not provided production information since 2014.

4.- California Oak Valley Golf and Resort meter has been inconsistent and may be faulty. Monthly production provided by BCVWD thorugh August 2021. Production for Sept to Dec was not available and was estimated based on 2017-20 records.

5.- Starting in 2008, the parcels owned by Oak Valley Partners (OVP) were no longer used for agricultural purposes. An annual production of 2.5 ac-ft was estimated through 2019; there was no groundwater production in 2020 and 2021. As part of Resolution 2017-02, OVP transfered 180.40 ac-ft of its Overlying rights to YVWD in 2018, an additional 2.65 ac-ft were transfered in 2019. These transfers reduced OVP's Overlying rights to 1,215.82 ac-ft. No additional transfers took place in 2021.

6.- Monthly production since 2011 provided by Clearwater Solutions, a company in charge of operating the water system.

7.- Monthly production provided by the Morongo Band of Mission Indians.

Table 3-3A

Production Summary for Appropriator and Overlying Producers in the Beaumont Basin

2003 through 2011 - Calendar Year Accounting (ac-ft)

	Annual Production (ac-ft)								
	2003[1]	2004	2005	2006	2007	2008	2009	2010	2011
Appropriator Parties									
Banning, City of	2,174	3,397	1,809	1,828	2,773	2,934	2,095	1,144	1,342
Beaumont-Cherry Valley Water District	3,512	6,874	7,026	9,054	11,383	10,710	10,134	9,421	9,431
South Mesa Water Company	223	483	663	616	666	471	382	405	420
Yucaipa Valley Water District	1,162	1,834	1,281	2,027	1,683	572	504	672	534
Subtotal	**7,072**	**12,587**	**10,779**	**13,525**	**16,505**	**14,687**	**13,116**	**11,642**	**11,727**
Overlying Parties									
Beckman, Walter M	16.2	27.0	22.4	11.5	8.3	12.7	12.9	6.4	9.0
California Oak Valley Golf and Resort LLC	736.2	728.6	703.9	831.5	779.0	780.4	766.7	565.1	517.3
Merlin Properties	3.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.6
Oak Valley Partners, LP	301.2	440.7	350.2	312.1	312.1	310.5	310.5	2.5	2.5
Plantation on the Lake LLC	178.6	340.9	310.2	350.1	344.2	354.0	352.3	337.2	344.7
Rancho Calimesa Mobile Home Park	35.4	68.3	68.3	68.3	69.3	69.3	69.3	69.3	69.3
Roman Catholic Bishop of San Bernardino	46.8	59.1	55.6	59.0	0.7	0.7	0.7	0.0	-
Sharondale Mesa Owners Association	104.3	158.0	181.0	188.6	182.3	193.3	154.3	132.3	133.0
Tukwet Canyon Golf Club[2]	791.4	1,346.7	1,213.1	1,753.4	1,599.1	1,137.6	1,158.6	851.8	882.9
Stearns, Leonard M. and Dorothy D.	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.7	0.7
Sunny-Cal Egg and Poultry Company	226.0	404.4	385.4	2.6	2.7	4.2	4.2	3.8	4.2
Albor Properties III, LP[3]				13.2	2.3	2.3	2.3	2.1	2.3
Nikodinov, Nick				0.7	0.8	0.8	0.7	0.7	0.8
McAmis, Ronald L.				0.5	0.6	0.6	0.5	0.5	0.6
Aldama, Nicolas and Amalia				0.8	0.8	0.9	0.8	0.8	0.9
Gutierrez, Hector, et. al.				1.4	1.4	1.4	1.4	1.3	1.4
Darmont, Boris and Miriam				0.4	0.4	0.4	0.4	0.4	0.4
Subtotal	**2,440.8**	**3,576.3**	**3,292.6**	**3,596.7**	**3,306.5**	**2,871.6**	**2,838.2**	**1,976.5**	**1,971.4**
Total	**9,512.5**	**16,163.6**	**14,071.3**	**17,121.6**	**19,811.1**	**17,558.6**	**15,953.7**	**13,618.8**	**13,698.4**

1.- 2003 groundwater production only includes Jul-Dec time period.

2.- Formerly known as the East Valley Golf Course and the Southern California Section of the PGA of America.

3.- Formerly Known as Sunny Cal North - Manheim, Manheim & Berman.

Table 3-3B

Production Summary for Appropriator and Overlying Producers in the Beaumont Basin

2012 through 2021 - Calendar Year Accounting (ac-ft)

	Annual Production (ac-ft)									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Appropriator Parties										
Banning, City of	1,038	2,101	2,585	1,678	1,473	1,443	2,261	2,121	2,549	3,668
Beaumont-Cherry Valley Water District	10,162	11,097	10,806	8,973	10,160	11,651	12,209	11,141	12,539	12,610
South Mesa Water Company	449	308	474	317	353	368	365	331	229	466
Yucaipa Valley Water District	700	1,031	1,198	119	5	0	191	529	1,408	1,161
Subtotal	**12,349**	**14,537**	**15,063**	**11,087**	**11,990**	**13,462**	**15,026**	**14,121**	**16,725**	**17,904**
Overlying Parties										
Beckman, Walter M	9.0	2.1	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
California Oak Valley Golf and Resort LLC	517.3	625.8	417.0	751.1	552.3	830.0	573.1	489.6	577.3	531.3
Merlin Properties	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Oak Valley Partners, LP	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0	0.0
Plantation on the Lake LLC	344.7	326.7	403.8	302.1	293.4	417.8	471.2	258.7	195.2	161.5
Rancho Calimesa Mobile Home Park	69.3	69.3	16.2	23.4	31.2	31.2	32.7	32.1	30.1	25.0
Roman Catholic Bishop of San Bernardino	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sharondale Mesa Owners Association	145.3	147.0	137.3	94.1	84.8	117.9	116.4	98.3	125.8	124.7
Tukwet Canyon Golf Club[1]	984.3	1,098.4	1,227.9	898.6	958.6	991.4	1,010.9	878.8	969.3	1,177.9
Stearns, Leonard M. and Dorothy D.	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Sunny-Cal Egg and Poultry Company	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.2	4.3
Albor Properties III, LP[2]	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Nikodinov, Nick	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
McAmis, Ronald L.	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Aldama, Nicolas and Amalia	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Gutierrez, Hector, et. al.	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Darmont, Boris and Miriam	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Subtotal	**2,085.4**	**2,284.8**	**2,218.7**	**2,085.7**	**1,936.7**	**2,404.7**	**2,220.7**	**1,773.9**	**1,911.4**	**2,034.1**
Total	**14,434.3**	**16,821.9**	**17,281.5**	**13,173.1**	**13,926.4**	**15,867.1**	**17,246.8**	**15,895.4**	**18,636.1**	**19,938.3**

1.- Formerly known as the East Valley Golf Course and the Southern California Section of the PGA of America.

2.- Formerly Known as Sunny Cal North - Manheim, Manheim & Berman.

Table 3-4

Annual Supplemental Recharge to the Beaumont Basin -- Calendar Year Accounting

Year	Supplemental Recharge (ac-ft)				
	Banning[1]	Beaumont	BCVWD[1]	SGPWA[2]	Total
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
2014	608.0	-	4,405.0	16.5	5,029.5
2015	694.0	-	2,773.0	9.2	3,476.2
2016	1,477.0	-	9,319.0	17.8	10,813.8
2017	1,350.0	-	13,590.0	-	14,940.0
2018	500.0	-	12,121.0	-	12,621.0
2019	250.0	-	13,645.0	257.8	14,152.8
2020	250.0	-	11,005.0	214.0	11,469.0
2021	-		2,468.0	36.0	2,504.0
Totals	**13,942.2**	**-**	**111,360.2**	**11,015.6**	**136,318.0**

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

2.- Through 2018, the SGPWA recharged imported water at the Little San Gorgonio Creek Spreading Ponds, located just to the north of the basin boundary. Starting in 2019, the SGPWA has the ability to recharge at their new spreading basins located at the southwest corner of Beaumont Blvd. and Brookside Ave. Imported water recharged at this location will be credited to the agency in their storage account.

Table 3-5

City of Beaumont Wastewater Treatment Plant - Monthly Discharges Since 2007

Treatead Wastewater Daily Average Discharges (mgd) 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	2,789
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	2,896
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	2,901
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	2.22	2,492
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	2,620
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
2014	2.62	2.22	2.45	2.48	2.61	2.62	2.61	2.74	2.87	2.74	2.99	3.12	2.67	2,995
2015	2.87	2.94	2.97	2.90	2.92	2.98	2.99	3.10	3.08	3.08	3.06	3.11	3.00	3,361
2016	3.15	3.06	3.01	3.07	3.11	3.15	3.15	3.26	3.22	3.18	3.19	3.30	3.15	3,543
2017	3.36	3.26	3.17	3.35	3.22	3.18	3.21	3.31	3.32	3.26	3.29	3.31	3.27	3,663
2018	3.37	3.28	3.33	3.32	3.30	3.31	3.41	3.51	3.47	3.42	3.51	3.47	3.39	3,800
2019	3.61	3.61	3.64	3.66	3.69	3.61	3.59	3.72	3.80	3.64	3.77	3.72	3.67	4,112
2020	3.73	3.75	3.92	4.02	3.82	3.81	3.81	4.09	4.05	3.88	3.66	3.46	3.83	4,305
2021	3.51	3.44	3.70	3.60	3.97	4.55	3.50	3.65	3.61	3.60	3.57	3.72	3.70	4,148

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

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average (mgd)	Annual (ac-ft)
2010	0.00	0.00	0.82	0.67	0.57	0.62	0.70	0.69	0.69	0.70	0.67	0.65	0.57	530
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	546
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
2014	0.21	0.65	0.61	0.66	0.61	0.42	0.49	0.35	0.21	0.24	0.02	0.02	0.37	416
2015	0.24	0.20	0.31	0.31	0.22	0.38	0.37	0.23	0.00	0.00	0.00	0.00	0.19	212

Effluent discharges at DDP7 ceased at the end of 2015

Table 3-6
Overlying Parties Production Rights Allocation Based on Revised Safe Yield

Overlying Party to the 2003 Judgment	Initial Overlying Water Right through 2013	New Overlying Water Right Starting in 2014	5-Year (2017-21) Average Production (ac-ft)	5-Year (2017-21) Running Avg % of Water Right
California Oak Valley Golf and Resort LLC (1)	950.0	735.84	600.2	81.6%
Sharondale Mesa Owners Association	200.0	154.91	116.6	75.3%
Plantation on the Lake LLC	581.0	450.02	300.9	66.9%
Tukwet Canyon Golf Club	2,200.0	1,704.05	1,005.7	59.0%
Rancho Calimesa Mobile Home Park	150.0	116.18	30.2	26.0%
Gutierrez, Hector, et al.	10.0	7.75	1.4	18.4%
Darmont, Boris and Miriam	2.5	1.94	0.4	18.1%
Aldama, Nicolas and Amalia	7.0	5.42	0.9	15.9%
McAmis, Ronald L.	5.0	3.87	0.6	14.4%
Nikodinov, Nick	20.0	15.49	0.8	4.9%
Beckman, Walter M.	75.0	58.09	0.9	1.5%
Albor Properties III, LP	300.0	232.37	2.4	1.0%
Stearns, Leonard M. and Dorothy D.	200.0	154.91	0.7	0.5%
Sunny-Cal Egg and Poultry Company	1,439.5	1,114.99	4.3	0.4%
Merlin Properties	550.0	426.01	1.6	0.4%
Oak Valley Partners, LP (2)	1,806.0	1,398.87	1.5	0.1%
Roman Catholic Bishop of San Bernardino	154.0	119.28	0.0	0.0%
	8,650.0	**6,700.0**	**2,069.0**	**30.9%**

(1) - California Oak Valley Golf and Resort LLC exceeded its annual production right in 2017; however, their average five-year production over any five-year period has been below their overlying water right.

(2) - Under Resolution 17-02, adopted August 30, 2017, Oak Valley Partners LP (OVP) agreed to transfer its Overlying water rights to particular development parcels, intending to secure commitment from YVWD to provide water service to development phases of OVP's Summerwind Ranch Specific Plan (Project) located in the Beaumont Basin. In 2018 OVP transfered a combined total of 180.40 ac-ft in overlying rights to YVWD. In a similar manner, an additional 2.65 ac-ft of former OVP's Overlying water rights were transfered to YVWD in early 2019. No additional transfers have been recoreded since. These transfers have reduced OVP's Overlying water rights to 1,215.82 ac-ft from its adjusted 1,398.87 ac-ft.

Table 3-7

Summary of Unused Overlying Water and Allocation to Appropriators (ac-ft)

Accounting Year	Overlying Water Right	Overlying Production	Unused Overlying Water Right
2003	4,325	2,441	1,884
2004	8,650	3,576	5,074
2005	8,650	3,293	5,357
2006	8,650	3,597	5,053
2007	8,650	3,307	5,343
2008	8,650	2,872	5,778
2009	8,650	2,838	5,812
2010	8,650	1,976	6,674
2011	8,650	1,971	6,679
2012	8,650	2,085	6,565
2013	8,650	2,285	6,365
2014	6,700	2,219	4,481
2015	6,700	2,086	4,614
2016	6,700	1,937	4,763
2017	6,700	2,405	4,295
2018 [1]	6,520	2,221	4,299
2019 [2]	6,517	1,774	4,743
2020	6,517	1,911	4,606
2021	6,517	2,034	4,483

Allocation Year	City of Banning	City of Beaumont	Beaumont Cherry Valley WD	South Mesa Water Co.	Yucaipa Valley Water District	Total
2008	592	0	801	235	256	1,884
2009	1,595	0	2,157	633	689	5,074
2010	1,684	0	2,277	669	728	5,357
2011	1,588	0	2,148	631	686	5,053
2012	1,679	0	2,272	667	726	5,343
2013	1,816	0	2,456	721	785	5,778
2014	1,827	0	2,471	725	789	5,812
2015	2,097	0	2,837	833	906	6,674
2016	2,099	0	2,839	833	907	6,679
2017	2,063	0	2,791	819	891	6,565
2018	2,001	0	2,706	794	864	6,365
2019	1,408	0	1,905	559	609	4,481
2020	1,450	0	1,962	576	627	4,614
2021	1,497	0	2,025	594	647	4,763
2022	1,350	0	1,826	536	583	4,295
2023	1,351	0	1,827	536	584	4,299
2024	1,491	0	2,016	592	644	4,743
2025	1,448	0	1,958	575	625	4,606
2026	1,409	0	1,906	559	609	4,483

1.- In 2018, Oak Valley Partners, through three assignments, transferred a combined total of 180.40 ac-ft of Overlying Rights to the YVWD to serve certain parcels in the Beaumont Basin.

2.- In 2019, Oak Valley Partners, through a single assignment, transferred an additional 2.65 ac-ft of Overlying Rights to the YVWD to serve certain parcels in the Beaumont Basin.

Table 3-8
Consolidation of Appropriator Production and Storage Accounts
Calendar Year Accounting (ac-ft) 2003 through 2021

Calendar Year	Storage Account Balance at Beginning of CY	Share of Surplus Water	Appropriative Rights	Production	Additions to Storage Account							Ending Account Balance
					Under / Over Production [1]	Overlying Users Parcel Conversion	Unused Overlying Production Allocation	Transfers Among Appropriators/ SGPWA	SWP Water Recharge	Local Recharge	Total Additions to Storage Account	
City of Banning - Authorized Storage Account: 80,000 ac-ft												
2003	0.0	2,514.5	0.0	2,174.2	340.3	0.0	0.0	0.0	0.0	0.0	340.3	340.3
2004	340.3	5,029.0	0.0	3,397.3	1,631.7	0.0	0.0	0.0	0.0	0.0	1,631.7	1,972.0
2005	1,972.0	5,029.0	0.0	1,808.6	3,220.4	0.0	0.0	0.0	0.0	0.0	3,220.4	5,192.5
2006	5,192.5	5,029.0	0.0	1,827.5	3,201.5	0.0	0.0	0.0	0.0	0.0	3,201.5	8,393.9
2007	8,393.9	5,029.0	0.0	2,772.6	2,256.4	0.0	0.0	1,500.0	0.0	0.0	3,756.4	12,150.3
2008	12,150.3	5,029.0	0.0	2,933.6	2,095.4	0.0	592.2	0.0	1,534.0	0.0	4,221.6	16,371.9
2009	16,371.9	5,029.0	0.0	2,095.0	2,934.0	0.0	1,594.7	0.0	2,741.2	0.0	7,269.8	23,641.8
2010	23,641.8	5,029.0	0.0	1,143.6	3,885.4	0.0	1,683.8	0.0	1,338.0	0.0	6,907.2	30,549.0
2011	30,549.0	5,029.0	0.0	1,341.7	3,687.3	0.0	1,588.2	0.0	800.0	0.0	6,075.5	36,624.5
2012	36,624.5	5,029.0	0.0	1,038.3	3,990.7	0.0	1,679.5	0.0	1,200.0	0.0	6,870.2	43,494.7
2013	43,494.7	2,514.5	0.0	2,100.7	413.8	0.0	1,816.1	0.0	1,200.0	0.0	3,430.0	46,924.7
2014	46,924.7	0.0	0.0	2,585.1	-2,585.1	0.0	1,826.7	0.0	608.0	0.0	-150.4	46,774.2
2015	46,774.2	0.0	0.0	1,678.3	-1,678.3	0.0	2,097.5	0.0	694.0	0.0	1,113.2	47,887.5
2016	47,887.5	0.0	0.0	1,472.7	-1,472.7	0.0	2,099.1	0.0	1,477.0	0.0	2,103.4	49,990.8
2017	49,990.8	0.0	0.0	1,443.5	-1,443.5	0.0	2,063.2	0.0	1,350.0	0.0	1,969.8	51,960.6
2018	51,960.6	0.0	0.0	2,260.8	-2,260.8	0.0	2,000.6	0.0	500.0	0.0	239.8	52,200.4
2019	52,200.4	0.0	0.0	2,121.3	-2,121.3	0.0	1,408.5	0.0	250.0	0.0	-462.8	51,737.5
2020	51,737.5	0.0	0.0	2,548.6	-2,548.6	0.0	1,450.3	0.0	250.0	0.0	-848.4	50,889.2
2021	50,889.2	0.0	0.0	3,668.1	-3,668.1	0.0	1,497.1	0.0	0.0	0.0	-2,171.0	48,718.1

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

Table 3-8
Consolidation of Appropriator Production and Storage Accounts
Calendar Year Accounting (ac-ft) 2003 through 2021

Calendar Year	Storage Account Balance at Beginning of CY	Share of Surplus Water	Appropriative Rights	Production	Additions to Storage Account							Ending Account Balance
					Under / Over Production [1]	Overlying Users Parcel Conversion	Unused Overlying Production Allocation	Transfers Among Appropriators/ SGPWA	SWP Water Recharge	Local Recharge	Total Additions to Storage Account	
Beaumont Cherry Valley Water District - Authorized Storage Account: 80,000 ac-ft												
2003	0.0	3,401.0	0.0	3,511.9	-110.9	0.0	0.0	0.0	0.0	0.0	-110.9	-110.9
2004	-110.9	6,802.0	0.0	6,873.9	-71.9	0.0	0.0	0.0	0.0	0.0	-71.9	-182.8
2005	-182.8	6,802.0	0.0	7,025.6	-223.6	0.0	0.0	0.0	0.0	0.0	-223.6	-406.4
2006	-406.4	6,802.0	0.0	9,054.1	-2,252.1	0.0	0.0	0.0	3,501.0	0.0	1,248.9	842.5
2007	842.5	6,802.0	0.0	11,383.3	-4,581.3	0.0	0.0	1,500.0	4,501.0	0.0	1,419.7	2,262.2
2008	2,262.2	6,802.0	0.0	10,710.5	-3,908.5	0.0	801.0	2,500.0	2,399.0	0.0	1,791.5	4,053.7
2009	4,053.7	6,802.0	0.0	10,133.9	-3,331.9	0.0	2,156.8	2,000.0	2,741.2	0.0	3,566.1	7,619.8
2010	7,619.8	6,802.0	0.0	9,421.3	-2,619.3	0.0	2,277.4	0.0	5,727.0	0.0	5,385.1	13,004.9
2011	13,004.9	6,802.0	0.0	9,431.3	-2,629.3	0.0	2,148.1	3,500.0	7,979.0	0.0	10,997.8	24,002.8
2012	24,002.8	6,802.0	0.0	10,162.0	-3,360.0	0.0	2,271.5	0.0	7,783.0	0.0	6,694.5	30,697.3
2013	30,697.3	3,401.0	0.0	11,097.4	-7,696.4	0.0	2,456.4	0.0	7,403.0	0.0	2,163.0	32,860.3
2014	32,860.3	0.0	0.0	10,805.5	-10,805.5	0.0	2,470.6	0.0	4,405.0	0.0	-3,929.9	28,930.4
2015	28,930.4	0.0	0.0	8,972.8	-8,972.8	0.0	2,836.9	0.0	2,773.0	0.0	-3,362.8	25,567.6
2016	25,567.6	0.0	0.0	10,159.8	-10,159.8	0.0	2,839.1	0.0	9,319.0	0.0	1,998.3	27,565.9
2017	27,565.9	0.0	0.0	11,650.7	-11,650.7	0.0	2,790.6	0.0	13,590.0	0.0	4,729.9	32,295.8
2018	32,295.8	0.0	0.0	12,209.2	-12,209.2	0.0	2,705.9	0.0	12,121.0	0.0	2,617.7	34,913.4
2019	34,913.4	0.0	0.0	11,140.9	-11,140.9	0.0	1,905.0	0.0	13,645.0	0.0	4,409.1	39,322.5
2020	39,322.5	0.0	0.0	12,539.2	-12,539.2	0.0	1,961.5	0.0	11,005.0	0.0	427.3	39,749.8
2021	39,749.8	0.0	0.0	12,609.5	-12,609.5	0.0	2,024.9	0.0	2,468.0	0.0	-8,116.6	31,633.2

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

Table 3-8
Consolidation of Appropriator Production and Storage Accounts
Calendar Year Accounting (ac-ft) 2003 through 2021

Calendar Year	Storage Account Balance at Beginning of CY	Share of Surplus Water	Appropriative Rights	Production	Additions to Storage Account							Ending Account Balance
					Under / Over Production [1]	Overlying Users Parcel Conversion	Unused Overlying Production Allocation	Transfers Among Appropriators/ SGPWA	SWP Water Recharge	Local Recharge	Total Additions to Storage Account	
City of Beaumont - Authorized Storage Account: 30,000 ac-ft												
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2006	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2007	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2008	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2009	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2012	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2013	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2014	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2015	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2016	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2017	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2018	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2020	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2021	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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

Table 3-8
Consolidation of Appropriator Production and Storage Accounts
Calendar Year Accounting (ac-ft) 2003 through 2021

Calendar Year	Storage Account Balance at Beginning of CY	Share of Surplus Water	Appropriative Rights	Production	Additions to Storage Account							Ending Account Balance
					Under / Over Production [1]	Overlying Users Parcel Conversion	Unused Overlying Production Allocation	Transfers Among Appropriators/ SGPWA	SWP Water Recharge	Local Recharge	Total Additions to Storage Account	
South Mesa Water Company - Authorized Storage Account: 20,000 ac-ft												
2003	0.0	998.0	0.0	223.2	774.8	0.0	0.0	0.0	0.0	0.0	774.8	774.8
2004	774.8	1,996.0	0.0	482.5	1,513.5	0.0	0.0	0.0	0.0	0.0	1,513.5	2,288.3
2005	2,288.3	1,996.0	0.0	663.2	1,332.8	0.0	0.0	0.0	0.0	0.0	1,332.8	3,621.1
2006	3,621.1	1,996.0	0.0	616.0	1,380.0	0.0	0.0	0.0	0.0	0.0	1,380.0	5,001.1
2007	5,001.1	1,996.0	0.0	665.8	1,330.2	0.0	0.0	-3,000.0	0.0	0.0	-1,669.8	3,331.3
2008	3,331.3	1,996.0	0.0	470.9	1,525.2	0.0	235.2	-2,500.0	0.0	0.0	-739.7	2,591.6
2009	2,591.6	1,996.0	0.0	382.2	1,613.8	0.0	633.2	-2,000.0	0.0	0.0	247.0	2,838.6
2010	2,838.6	1,996.0	0.0	405.0	1,591.0	0.0	668.6	0.0	0.0	0.0	2,259.6	5,098.2
2011	5,098.2	1,996.0	0.0	419.9	1,576.1	0.0	630.6	-3,500.0	0.0	0.0	-1,293.3	3,805.0
2012	3,805.0	1,996.0	0.0	448.5	1,547.5	0.0	666.9	0.0	0.0	0.0	2,214.4	6,019.4
2013	6,019.4	998.0	0.0	308.4	689.7	0.0	721.1	0.0	0.0	0.0	1,410.8	7,430.2
2014	7,430.2	0.0	0.0	473.7	-473.7	0.0	725.3	0.0	0.0	0.0	251.6	7,681.7
2015	7,681.7	0.0	0.0	317.2	-317.2	0.0	832.9	0.0	0.0	0.0	515.7	8,197.5
2016	8,197.5	0.0	0.0	352.6	-352.6	0.0	833.5	0.0	0.0	0.0	480.9	8,678.3
2017	8,678.3	0.0	0.0	368.1	-368.1	0.0	819.3	0.0	0.0	0.0	451.2	9,129.5
2018	9,129.5	0.0	0.0	364.9	-364.9	0.0	794.4	0.0	0.0	0.0	429.5	9,559.0
2019	9,559.0	0.0	0.0	330.7	-330.7	0.0	559.3	0.0	0.0	0.0	228.6	9,787.5
2020	9,787.5	0.0	0.0	229.2	-229.2	0.0	575.9	0.0	0.0	0.0	346.7	10,134.2
2021	10,134.2	0.0	0.0	466.0	-466.0	0.0	594.5	0.0	0.0	0.0	128.4	10,262.7

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

Table 3-8
Consolidation of Appropriator Production and Storage Accounts
Calendar Year Accounting (ac-ft) 2003 through 2021

Calendar Year	Storage Account Balance at Beginning of CY	Share of Surplus Water	Appropriative Rights	Production	Additions to Storage Account							Ending Account Balance
					Under / Over Production [1]	Overlying Users Parcel Conversion	Unused Overlying Production Allocation	Transfers Among Appropriators/ SGPWA	SWP Water Recharge	Local Recharge	Total Additions to Storage Account	
Morongo Band of Mission Indians - Authorized Storage Account: 20,000 ac-ft												
2013	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2014	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2015	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2016	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2017	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2018	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2020	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2021	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
San Gorgonio Pass Water Agency - Authorized Storage Account: 10,000 ac-ft												
2018	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	257.8	0.0	257.8	257.8
2020	257.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	214.0	0.0	214.0	471.8
2021	471.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.0	0.0	36.0	507.8

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

Table 3-8
Consolidation of Appropriator Production and Storage Accounts
Calendar Year Accounting (ac-ft) 2003 through 2021

Calendar Year	Storage Account Balance at Beginning of CY	Share of Surplus Water	Appropriative Rights	Production	Additions to Storage Account							Ending Account Balance
					Under / Over Production [1]	Overlying Users Parcel Conversion	Unused Overlying Production Allocation	Transfers Among Appropriators/ SGPWA	SWP Water Recharge	Local Recharge	Total Additions to Storage Account	
Yucaipa Valley Water District - Authorized Storage Account: 50,000 ac-ft												
2003	0.0	1,086.5	0.0	1,162.4	-75.9	0.0	0.0	0.0	0.0	0.0	-75.9	-75.9
2004	-75.9	2,173.0	0.0	1,833.7	339.3	0.0	0.0	0.0	0.0	0.0	339.3	263.4
2005	263.4	2,173.0	0.0	1,281.3	891.7	0.0	0.0	0.0	0.0	0.0	891.7	1,155.1
2006	1,155.1	2,173.0	0.0	2,027.3	145.7	0.0	0.0	0.0	0.0	0.0	145.7	1,300.8
2007	1,300.8	2,173.0	0.0	1,682.9	490.1	0.0	0.0	0.0	0.0	0.0	490.1	1,790.9
2008	1,790.9	2,173.0	0.0	572.0	1,601.0	0.0	255.9	0.0	0.0	0.0	1,856.8	3,647.8
2009	3,647.8	2,173.0	0.0	504.4	1,668.6	0.0	689.0	0.0	0.0	0.0	2,357.6	6,005.4
2010	6,005.4	2,173.0	0.0	672.4	1,500.6	0.0	727.5	0.0	0.0	0.0	2,228.1	8,233.5
2011	8,233.5	2,173.0	0.0	534.1	1,638.9	0.0	686.2	0.0	0.0	0.0	2,325.1	10,558.6
2012	10,558.6	2,173.0	0.0	700.1	1,472.9	0.0	725.6	0.0	0.0	0.0	2,198.5	12,757.2
2013	12,757.2	1,086.5	0.0	1,030.8	55.7	0.0	784.7	0.0	0.0	0.0	840.4	13,597.6
2014	13,597.6	0.0	0.0	1,198.5	-1,198.5	0.0	789.2	0.0	0.0	0.0	-409.2	13,188.4
2015	13,188.4	0.0	0.0	119.2	-119.2	0.0	906.3	0.0	0.0	0.0	787.1	13,975.5
2016	13,975.5	0.0	0.0	4.6	-4.6	0.0	907.0	0.0	0.0	0.0	902.4	14,877.9
2017	14,877.9	0.0	0.0	0.1	-0.1	0.0	891.5	0.0	0.0	0.0	891.3	15,769.2
2018	15,769.2	0.0	0.0	191.2	-191.2	180.4	864.4	0.0	0.0	0.0	853.6	16,622.8
2019	16,622.8	0.0	0.0	528.6	-528.6	183.1	608.6	0.0	0.0	0.0	263.0	16,885.8
2020	16,885.8	0.0	0.0	1,407.7	-1,407.7	183.1	626.6	0.0	0.0	0.0	-598.1	16,287.7
2021	16,287.7	0.0	0.0	1,160.5	-1,160.5	183.1	646.9	0.0	0.0	0.0	-330.6	15,957.1

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

Table 3-8
Consolidation of Appropriator Production and Storage Accounts
Calendar Year Accounting (ac-ft) 2003 through 2021

Calendar Year	Storage Account Balance at Beginning of CY	Share of Surplus Water	Appropriative Rights	Production	Additions to Storage Account							Ending Account Balance
					Under / Over Production [1]	Overlying Users Parcel Conversion	Unused Overlying Production Allocation	Transfers Among Appropriators/ SGPWA	SWP Water Recharge	Local Recharge	Total Additions to Storage Account	
Totals - All Agencies with Storage Accounts												
2003	0.0	8,000.0	0.0	7,071.7	928.3	0.0	0.0	0.0	0.0	0.0	928.3	928.3
2004	928.3	16,000.0	0.0	12,587.4	3,412.6	0.0	0.0	0.0	0.0	0.0	3,412.6	4,340.9
2005	4,340.9	16,000.0	0.0	10,778.6	5,221.4	0.0	0.0	0.0	0.0	0.0	5,221.4	9,562.3
2006	9,562.3	16,000.0	0.0	13,524.9	2,475.1	0.0	0.0	0.0	3,501.0	0.0	5,976.1	15,538.3
2007	15,538.3	16,000.0	0.0	16,504.6	-504.6	0.0	0.0	0.0	4,501.0	0.0	3,996.4	19,534.8
2008	19,534.8	16,000.0	0.0	14,687.0	1,313.0	0.0	1,884.2	0.0	3,933.0	0.0	7,130.2	26,665.0
2009	26,665.0	16,000.0	0.0	13,115.6	2,884.4	0.0	5,073.7	0.0	5,482.4	0.0	13,440.6	40,105.6
2010	40,105.6	16,000.0	0.0	11,642.3	4,357.7	0.0	5,357.4	0.0	7,065.0	0.0	16,780.0	56,885.6
2011	56,885.6	16,000.0	0.0	11,727.0	4,273.0	0.0	5,053.3	0.0	8,779.0	0.0	18,105.3	74,990.9
2012	74,990.9	16,000.0	0.0	12,348.9	3,651.1	0.0	5,343.5	0.0	8,983.0	0.0	17,977.6	92,968.6
2013	92,968.6	8,000.0	0.0	14,537.2	-6,537.2	0.0	5,778.4	0.0	8,603.0	0.0	7,844.2	100,812.7
2014	100,812.7	0.0	0.0	15,062.8	-15,062.8	0.0	5,811.8	0.0	5,013.0	0.0	-4,237.9	96,574.8
2015	96,574.8	0.0	0.0	11,087.4	-11,087.4	0.0	6,673.5	0.0	3,467.0	0.0	-946.9	95,628.0
2016	95,628.0	0.0	0.0	11,989.7	-11,989.7	0.0	6,678.6	0.0	10,796.0	0.0	5,484.9	101,112.9
2017	101,112.9	0.0	0.0	13,462.4	-13,462.4	0.0	6,564.6	0.0	14,940.0	0.0	8,042.2	109,155.0
2018	109,155.0	0.0	0.0	15,026.1	-15,026.1	180.4	6,365.2	0.0	12,621.0	0.0	4,140.5	113,295.6
2019	113,295.6	0.0	0.0	14,121.5	-14,121.5	183.1	4,481.3	0.0	14,152.8	0.0	4,695.6	117,991.2
2020	117,991.2	0.0	0.0	16,724.7	-16,724.7	183.1	4,614.3	0.0	11,469.0	0.0	-458.4	117,532.8
2021	117,532.8	0.0	0.0	17,904.2	-17,904.2	183.1	4,763.3	0.0	2,504.0	0.0	-10,453.8	107,078.9

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 2017-2021 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 (as N) 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.

Sources and Availability of Water Quality Information

There are two main sources of data used in the assessment of water quality conditions in the Beaumont Basin and near surroundings: namely, the California Department of Public Health database, as part of the Groundwater Ambient Monitoring and Assessment (GAMA) program, and the Beaumont Management Zone Maximum Benefit Monitoring Program. The GAMA database obtained from the State Water Resources Control Board focuses on drinking water sources; it contains 2,760 water quality results for the 2017-2021 reporting period. Water quality from the BMZ Maximum Benefit Monitoring Program was also available for the same period.

4.1 Comparison with Management Zone Objectives

Groundwater quality objectives for anti-degradation and maximum benefit have been established by the Regional Board for TDS and Nitrate (as N) 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 anti-degradation objectives are based on the historic ambient TDS and Nitrate as N concentration of 230 mg/L and 1.5 mg/L respectively.

Maximum benefit objectives were adopted by the Regional Board in 2004 at the request of STWMA and the City of 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 (as N), 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 (as N) concentration exceeds the BMZ maximum benefit objectives.

4.1.1 Total Dissolved Solids

Figure 4-2 shows the maximum TDS concentrations for 59 wells measured within and in the vicinity of the Beaumont Basin wells during the 2017-2021 reporting period. A total of 31 wells are located inside the Beaumont Basin, 17 in the Singleton Basin / Edgar Canyon and the remaining 11 in the South Beaumont Basin.

The maximum TDS concentrations for wells owned by appropriators within the basin ranged from 170 to 350 mg/L and averaged 225 mg/L; this average of maximum values at each well is 30 mg/L lower than the average maximum TDS concentration reported in the 2008-11 Engineering Report of 255 mg/L. Of the 13 overlying wells, maximum TDS concentrations ranged from 100 to 320 mg/L and average 245 mg/L, 20 mg/L higher than the average for appropriator's wells.

In the Singleton Basin / Edgar Canyon area, the maximum TDS concentration ranged from 210 to 400 mg/L and averaged 277 mg/L. The average TDS concentration for all samples in this area was 266 mg/L.

In the South Beaumont Basin, the maximum TDS concentration ranged from 270 to 870 mg/L and averaged 491 mg/L. The average TDS concentration for all samples in this basin was 428 mg/L.

Average and maximum TDS concentrations for all sampled wells within the basin and surroundings are as follows:

Well Classification	Count	Samples	Average Concentration	Avg Max Concentration
Beaumont Groundwater Basin				
Appropriators	15	25	219	225
Overliers	12	50	231	245
Others	4	22	262	278
Total	31	97	229	239
Singleton Basin / Edgar Canyon Area				
All Wells	17	40	266	277
South Beaumont Basin				
All Wells	11	78	428	491

Of the 27 wells owned by appropriators and overliers, 14 wells had a maximum concentration equal to or below the anti-degradation objective of 230 mg/L, 12 wells were between the anti-degradation and maximum benefit objective of 330 mg/L, and one (BCVWD No. 16) exceeded the maximum benefit objective for the BMZ at 350 mg/L. None of the production wells samples exceeded the secondary federal or state drinking water standard for TDS (500 mg/L). BCVWD wells along Edgar Canyon were not included in the analysis of domestic wells.

In the Singleton Basin / Edgar Canyon area, only one well had a maximum concentration below the anti-degradation objective, 15 wells were between the anti-degradation and maximum benefit objective of 330 mg/L, and the remaining well exceeded the maximum objective, no wells exceeded the secondary drinking standard.

In the South Beaumont Basin, none of the wells had a maximum TDS concentration below the anti-degradation objective, three wells were between this and the maximum objective, and the remaining eight wells exceeded the maximum objective. Most of the wells with the highest TDS concentrations are located in the South Beaumont Basin.

4.1.2 Nitrate as N

Figure 4-3 shows the maximum Nitrate concentrations for 59 wells measured within and in the vicinity of the Beaumont Basin wells during the 2017-2021 reporting period. A total of 31 wells are located inside the basin, 17 wells in the Singleton Basin / Edgar Canyon and the remaining 11 in the South Beaumont Basin.

Maximum Nitrate concentrations for domestic wells owned by Appropriators ranged from 0.89 to 7.00 mg/L (BCVWD No. 16) and averaged 2.51 mg/L. Maximum concentrations for overlying wells were slightly higher as they ranged from 0.25 to 6.50 mg/L and averaged 3.51 mg/L. The average concentration for all potable wells was 2.62 mg/L.

In the Singleton Basin / Edgar Canyon area, the maximum Nitrate concentration ranged from 0.61 to 14.0 mg/L and averaged 3.29 mg/L. The average concentration for all samples in this area was 2.78 mg/L.

In the South Beaumont Basin, the maximum Nitrate concentration ranged from 3.10 to 22.0 mg/L and averaged 11.06 mg/L. The average concentration for all samples in this area was 9.97 mg/L.

Average and maximum Nitrate concentrations for all sampled wells within the basin are as follows:

Well Classification	No. of Wells	Samples	Average Concentration	Avg Max Concentration
Beaumont Groundwater Basin				
Appropriators	15	108	2.11	2.51
Overliers	12	109	2.92	3.51
Other	4	22	1.07	1.20
Total	31	239	2.29	2.73
Singleton Basin / Edgar Canyon Area				
All Wells	17	64	2.78	3.29
South Beaumont Basin				
All Wells	11	79	9.97	11.06

Of the 27 wells owned by appropriators and overliers, six wells had a maximum concentration below the anti-degradation objective of 1.5 mg/L, 15 wells were between this objective and maximum benefit objective of 5.0 mg/L; six wells exceeded the maximum benefit objective for the BMZ. None of the production wells samples exceeded the primary federal or state drinking water standard for Nitrate of 10 mg/L.

In the Singleton Basin / Edgar Canyon area, four wells had a maximum concentration below the anti-degradation objective, another ten wells had concentrations between the anti-degradation and maximum objective while three wells exceeded the maximum benefit objective of 5.0 mg/L.

In the South Beaumont Basin, only two wells had a maximum concentration below the maximum objective while the remaining nine exceed it with seven of these wells also exceeding drinking water standards. There were no wells with nitrate concentrations below the anti-degradation limit.

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 are 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 sewering 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 Gorgonio 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-N, 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 suggests 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 was recently incorporated into the Groundwater Ambient Monitoring and Assessment (GAMA) program. The GAMA program is California's comprehensive groundwater quality monitoring program that was created by the State Water Resources Control Board in 2000. The program was later expanded by Assembly Bill 559, also known as the Groundwater Quality Monitoring Act of 2001.

Chemical information for drinking water sources is grouped in the GAMA program in various databases depending on the year(s) of information desired. This annual report documents water quality conditions for the 2017-21 period. To gather pertinent information, the 2015-19 and 2020-Present databases in the State of California Water Resources Control Board website were accessed. Accessing the water quality information in the GAMA program has been significantly enhanced compared to previous databases run through the CDPH website; it is better organized and easier to access and compile. The 2020 and earlier annual reports documented water quality information using databases from the CDPH website.

The objective of this water quality analysis was to determine whether any of the potable wells in the Beaumont Basin exceeded the Primary or Secondary Federal and State standards or the Notification Levels (NL) set by the state. Federal standards are set by the United States Environmental Protection Agency (USEPA). These standards determine the maximum concentration allowable for a specific contaminant in drinking water. States have the option to

adopt more stringent standards, or develop standards regulations for contaminants that the federal government has not acted on. In California the State Water Resources Control Board's Division of Drinking Water is responsible for regulated public water systems that provide drinking water across the State and for establishing drinking water standards for contaminants that threaten our water supply.

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 others. Contaminants with a secondary MCL are not considered to present a risk to human health at the established maximum level. Notification levels are not enforceable standards; however, they require that municipal water suppliers notify the public if the NL for a specific chemical has been exceeded.

A total of 2,760 water quality results were extracted from the GAMA database for all domestic production wells in the Beaumont Basin. Results were obtained for 31 minerals and inorganic chemicals and over 108 organic compounds sampled between 2017 and 2021. The results of the analysis indicate that not a single well exceeded the primary Federal or State MCL for any of the analytes tested. However, the California Notification Limit for Vanadium (100 ug/day) was exceeded by SMWC's 4 and by YVWD's 48 during the reporting period.

Appendix F contains summary statistics of the analytical results for the 2017-2021 period for selected chemicals that have a federal or state drinking water standard as reported in the GAMA database.

4.2.1 Nitrate (as NO_3) and Total Dissolved Solids (TDS)

A total of 176 samples were collected and analyzed for Nitrate; 28 of these samples were also analyzed for TDS. The current primary MCL for Nitrate (as NO_3) is 45 ppm (mg/L); the secondary MCL for TDS is 500 mg/L. Table 4-1 presents a summary of Nitrate and TDS concentration, including the number of samples taken, average and maximum concentrations recorded, for all 22 domestic wells in the Beaumont Basin. This table indicates that none of the domestic wells in the Beaumont Basin are near the MCL or the notification level of 80 percent MCL, 36 mg/L for Nitrate and 400 mg/L for TDS. Highest concentrations during the reporting period were recorded at BCVWD Well No. 16 with 31.5 mg/L of Nitrates and 350 mg/L of dissolved solids.

4.2.2 Trace Metals

As indicated earlier, not a single domestic well exceeded the primary 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 as in the 2004-2008 initial reporting five-year period. Trace metals are briefly discussed here and compared to previous reporting periods.

Table 4-1
Nitrate (NO_3) and TDS Summary for Domestic Wells (2017-21)

Agency/ Well No.	Nitrate as NO_3			Total Dissolved Solids (TDS)		
	Count	Avg	Max	Count	Ave	Max
City of Banning						
Well C-2A	5	8.2	9.0	1	220	220
Well C-3	4	7.9	8.1	1	170	170
Well C-4	6	4.2	5.0	2	195	200
Well M-3	6	9.7	10.4	2	270	280
Beaumont Cherry Valley Water District						
Well 03	2	2.9	3.8	1	190	190
Well 16	20	27.5	31.5	1	350	350
Well 21	19	14.4	16.2	1	270	270
Well 22	3	4.1	4.2	1	220	220
Well 23	12	10.7	13.1	1	260	260
Well 24	4	7.0	8.1	1	200	200
Well 25	5	5.1	7.2	1	230	230
Well 26	3	3.4	4.0	1	180	180
Well 29	4	9.3	10.8	1	210	210
South Mesa Water Company						
Well 4	8	17.2	22.1	1	180	180
Yucaipa Valley Water District						
Well 48	5	9.9	14.0	2	165	200
Overlying Users						
Sharondale 1	18	21.6	29.3	1	320	320
Sharondale 2	16	23.2	26.6	1	320	320
Plantation 1	4	9.0	9.9	2	265	270
RCMHP 1	8	21.7	24.8	1	260	260
RCMHP 2	15	24.7	29.7	1	270	270
Tukwet A	4	6.2	6.8	2	170	180
Tukwet D	5	9.5	10.4	2	215	230

Aluminum. There were 28 water samples taken during the reporting period and tested for aluminum. Aluminum concentration at all wells, except the city of Banning M-3 Well, was below 50 ug/L, significantly below the secondary MCL of 200 ug/L. Banning M-3 had a maximum concentration of 57 ug/L. Aluminum above the MCL can add color to water. One well exceeded the MCL during the FY 2004-08 reporting period.

Arsenic. The current MCL for Arsenic has been set to 10 ug/L. There were 30 water samples collected and tested for arsenic during the reporting period with most wells reporting under 2.0 ug/L. The highest arsenic concentration was observed at Tukwet Well A at 6.5 ug/L and SMWC's Well No. 4 at 3.8 ug/L. The rise in arsenic concentration at Tukwet's A from 3.7 ug/L in June 2017 to 6.5 ug/L in August 2020 is relatively a new event. Arsenic at SMWC's 4 has increased from 4.2 ug/L in 2009, to 4.6 ug/L in 2012, to the highest value of 5.2 ug/L in April 2013. Latest value, recorded in April 2019, arsenic concentration was down to 3.8 ug/L. YVWD reported a concentration of 2.5 ug/L in July 2017 at Well No. 48; however, the latest analysis (Jul 2020) did not show the presence of Arsenic. Based on the latest values reported, arsenic continues to be a non-issue in the Beaumont basin.

Iron. A total of 28 water samples were taken during the reporting period and tested for iron. In most cases iron concentration was below 100 ug/L., which is significantly below the current secondary MCL of 300 ug/L. However, in August 2016, BCVWD Well No. 3 showed a concentration of 450 ug/L, exceeding the secondary MCL. Iron concentration at this well was below 100 ug/L in the latest sample taken (Dec 2020). City of Banning Well M3 had the highest concentration of iron during the reporting period at 120 ug/L. Iron at a concentration above the MCL can impact color, odor, and taste in water. Five wells exceeded the secondary MCL during the FY 2004-08 reporting period.

Lead. There were 28 water samples collected and tested for lead during the reporting period. Lead concentrations were all below 0.005 mg/L (5 ppb), which is well below the current primary MCL of 0.015 mg/L (15 ppb). Slightly higher concentrations were reported before 2014 at BCVWD Well No. 25 (0.0065 mg/L) and at Rancho Calimesa Mobile Home Park Well No. 1 (0.0058 mg/L). Lead concentration at these two wells were below 0.005 mg/L from the latest sample available. One well exceeded the MCL during the FY 2004-08 reporting period.

Manganese. There were 26 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. A concentration of 20ug/L (Dec 2019) was mistakenly reported in previous annual reports at BCVWD Well No. 16; actual concentration was below 20ug/L. Manganese can significantly impact color and taste in water at concentrations above the MCL. One monitoring well exceeded the secondary MCL during the FY 2004-08 reporting period.

Total Chromium. A total of 28 water samples were taken during the reporting period and tested for total chromium. The highest reported concentrations of total chromium were observed in December 2018 at BCVWD Well 26 at 16 ug/L and in March 2020 at Banning C-2A and Banning C-04 also at 16 ug/L. These values are significantly below the current state primary MCL of 50 ug/L. One well exceeded the state primary MCL during the FY 2004-08 reporting period.

Vanadium. Three water samples were tested for vanadium during the reporting period from SMWC's Well 4 and YVWD No. 48. Vanadium at SMWC Well 4 has been consistently above the state Notification Level of 50 ug/L; latest test indicates a concentration of 72 ug/L. Vanadium concentration at YVWD No. 48 was 25 ug/L in 2014, increasing to 90 ug/L in the summer of 2017. Latest concentration was down to 22 ug/L (Jul 2020).

Copper. There were 28 water samples collected and tested for copper during the reporting period. None of the wells tested during the reporting period exceeded the detection limit of 50 ug/L. This concentration is significantly below the state secondary MCL of 1,000 ug/L. This is consistent with previous reporting periods.

Zinc. There were 35 water samples collected and tested for zinc during the reporting period. Zinc concentration in all wells was below 50 ug/L (ppb), which is significantly lower than the current secondary MCL of 5.0 mg/l (ppm).

4.2.3 Organic Compounds

There were over 1,500 lab results for 93 organic compounds during the reporting period. Concentrations of these compounds in most cases were below the detection limit for purpose of reporting or just above it. Organics of special concern include the following:

- ✓ TCE – Trichloroethylene (TCE) – 23 samples collected all reported below detection limit of 0.5 ug/L. Current MCL is 5 ug/L.
- ✓ Tetrachloroethylene (PCE) - 23 samples collected all reported below detection limit of 0.5 ug/L. Current MCL is 5 ug/L.
- ✓ Dibromo-chloropropane (DBCP) - 17 samples collected with most below the detection limit of 0.01 ug/L; just two samples above this limit at BCVWD Well No. 23 at 0.048 ug/L (Jun 2019) and 0.044 ug/L (Dec 2018). These concentrations are significantly below the current MCL of 0.2 ug/L.

4.2.4 pH

There are two secondary standards for pH, a lower limit of 6.5 and an upper limit of 8.5. There were three wells exceeding the upper MCL for pH during the reporting period, SMWC' 4 at 9.0 (April 2019), Tukwet's A at 8.8 (Aug 2020) and YVWD's 48 at 8.7 (Jul 2017). In addition, there are a number of wells with pH in the 8.0 to 8.4 range including SMHOA Well No. 1 at 8.4, BCVWD's No. 23, 25, and 26 and Sharondale MHOA's 2 at 8.3; BCVWD Wells No. 16, 21, 24 and 29, Banning Well C-2A, C04, and M-3, Tukwet's D and SMHOA's 1 at 8.2. The lowest pH was reported from Plantation No. 1 at 7.5. Four wells in the basin exceeded the upper limit for pH during the FY 2004-08 reporting period.

4.2.5 Turbidity

Turbidity is a measure of the cloudiness of water and is used to indicate water quality and filtration effectiveness. Previous annual reports reported that all production wells in the Basin

tested for turbidity none exceeded the primary federal and state MCL of 5 NTU. However, the new GAMA database does not contain information on turbidity.

4.3 Historical Nitrate (as N) Concentrations for Selected Wells in the Beaumont, Singleton, and South Beaumont Basins

Historical water quality records since 1974 from The California Department of Health Services GAMA database and water quality collected as part of the Beaumont Management Zone Maximum Benefit Monitoring Program were combined to develop historical nitrate concentrations. The following figures illustrate historical water quality for selected wells around the basin.

- ✓ Figure 4-4 – Noble Creek Area
- ✓ Figure 4-5 – East of Marshall Creek
- ✓ Figure 4-6 – Banning Area
- ✓ Figure 4-7 – West of Noble Creek
- ✓ Figure 4-8 – Northwest Area
- ✓ Figure 4-9 – Singleton Basin
- ✓ Figure 4-10 – South Beaumont Basin

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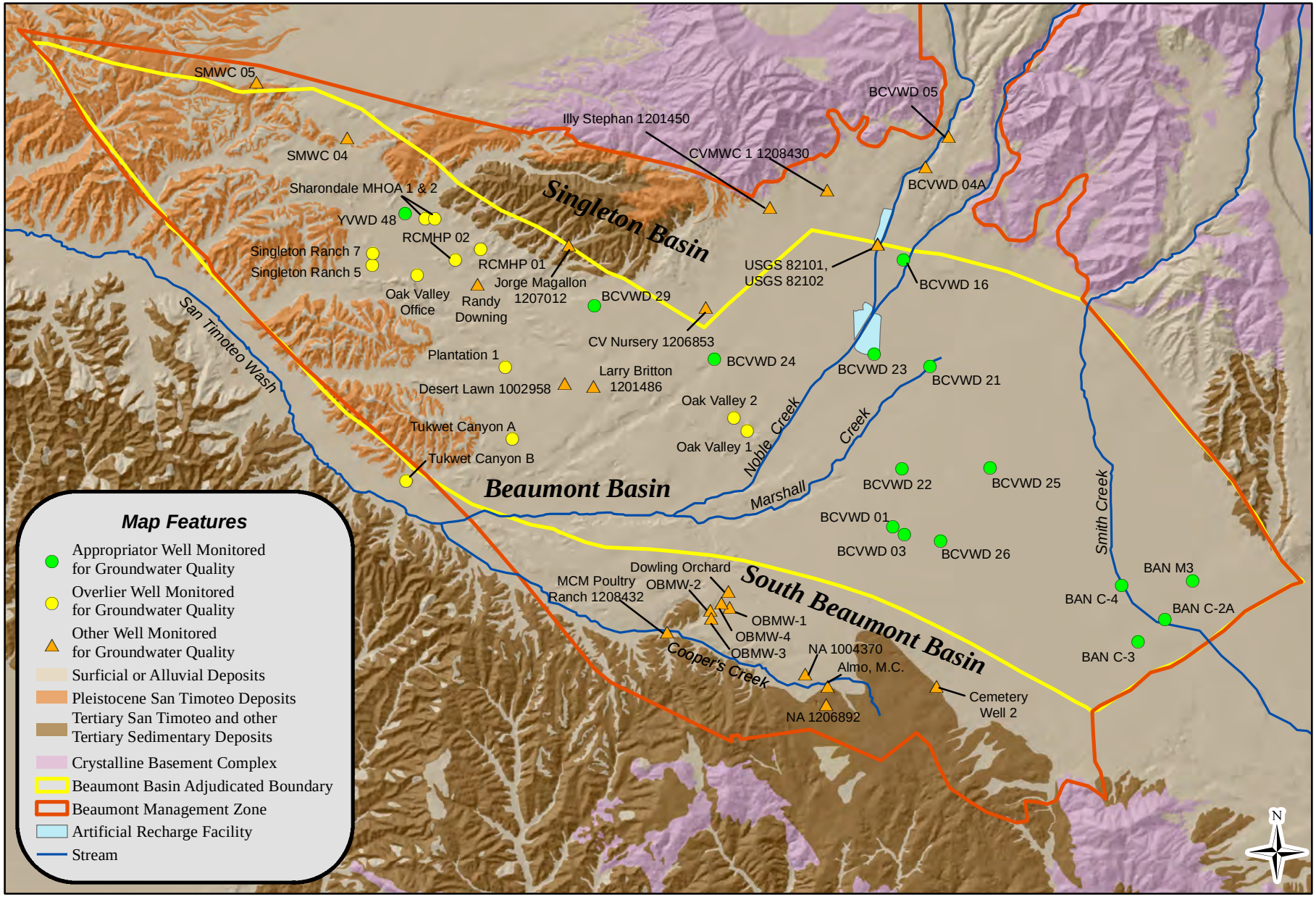

Alda, Inc. *in association with*
Thomas Harder & Co. Groundwater Consulting

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NAD 83 UTM Zone 11

Wells with Groundwater Quality Data in the Beaumont Basin

Figure 4-1

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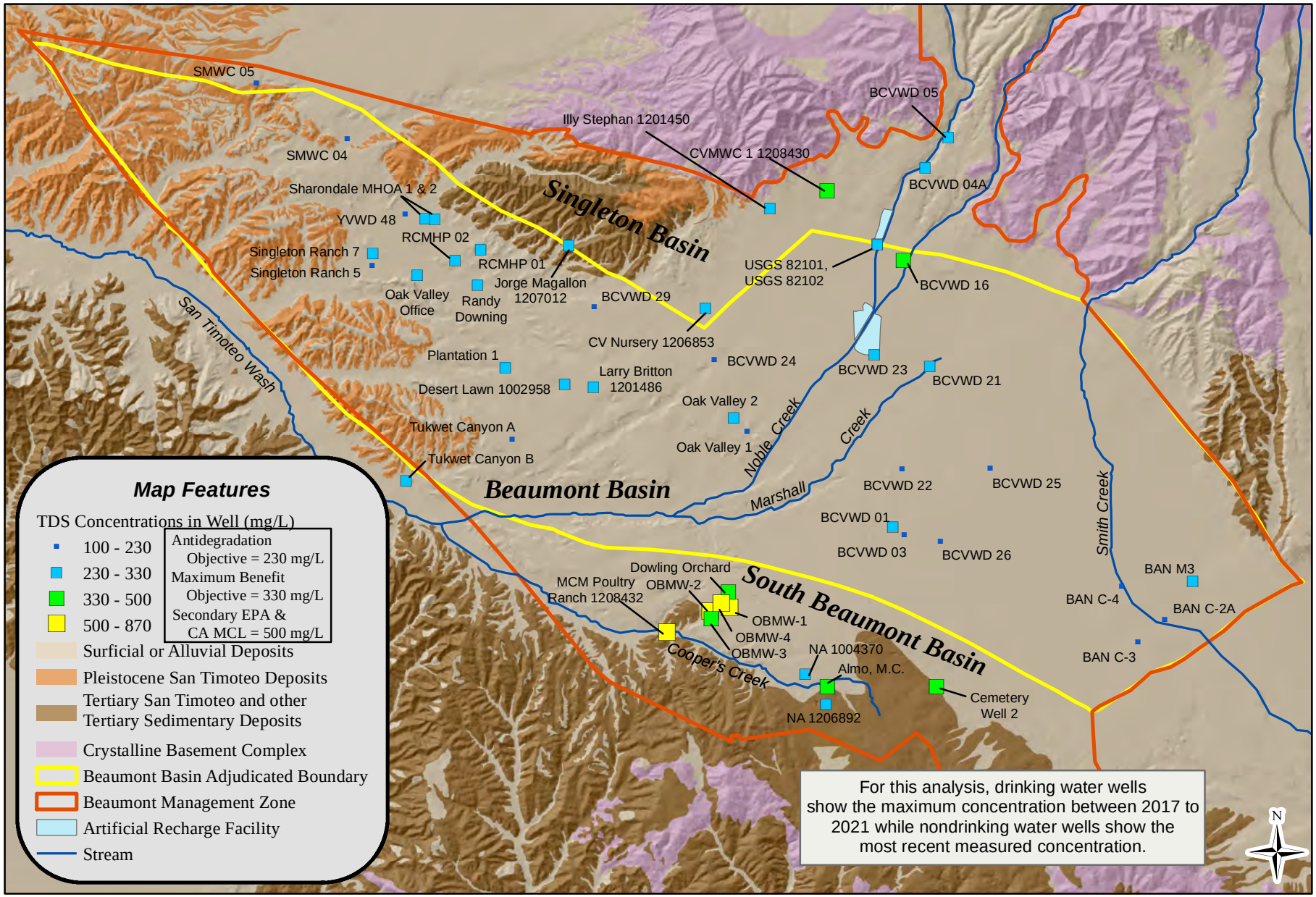

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Total Dissolved Solids in Groundwater (Maximum Concentrations 2017 to 2021)

Figure 4-2

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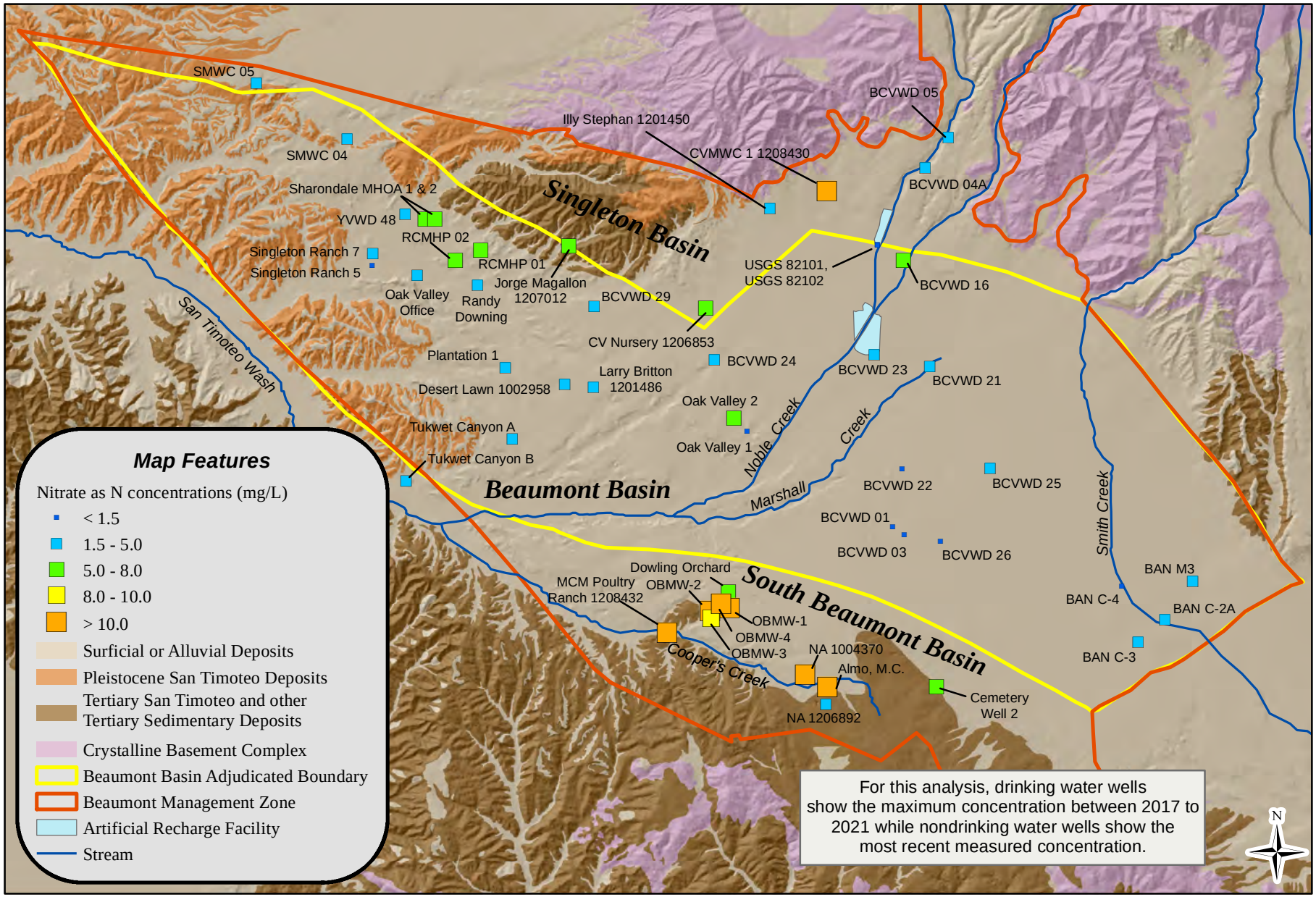

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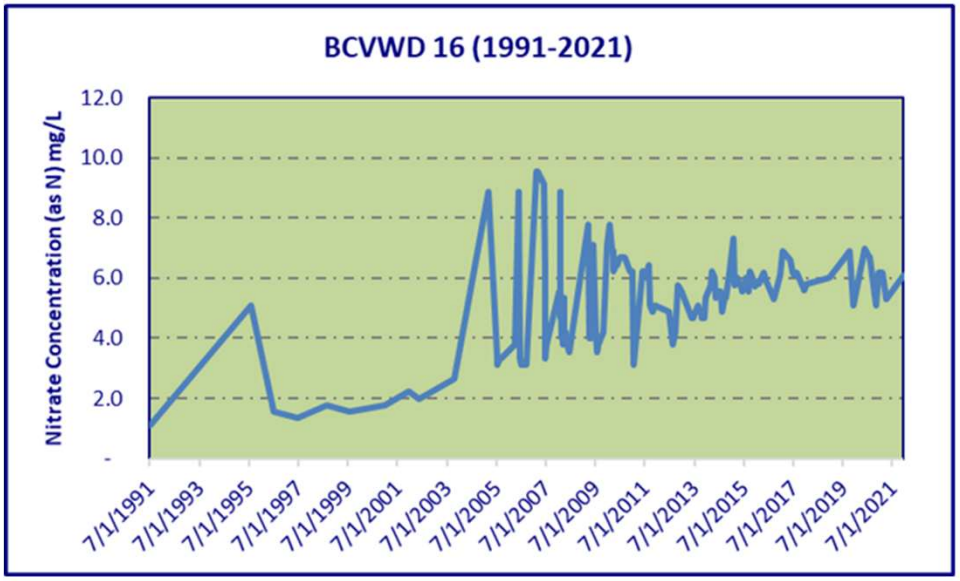
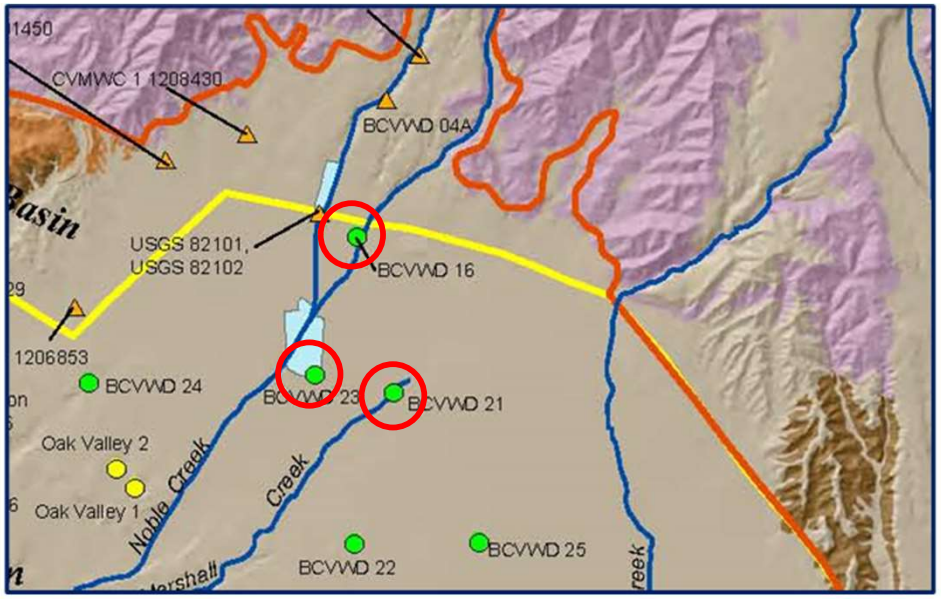
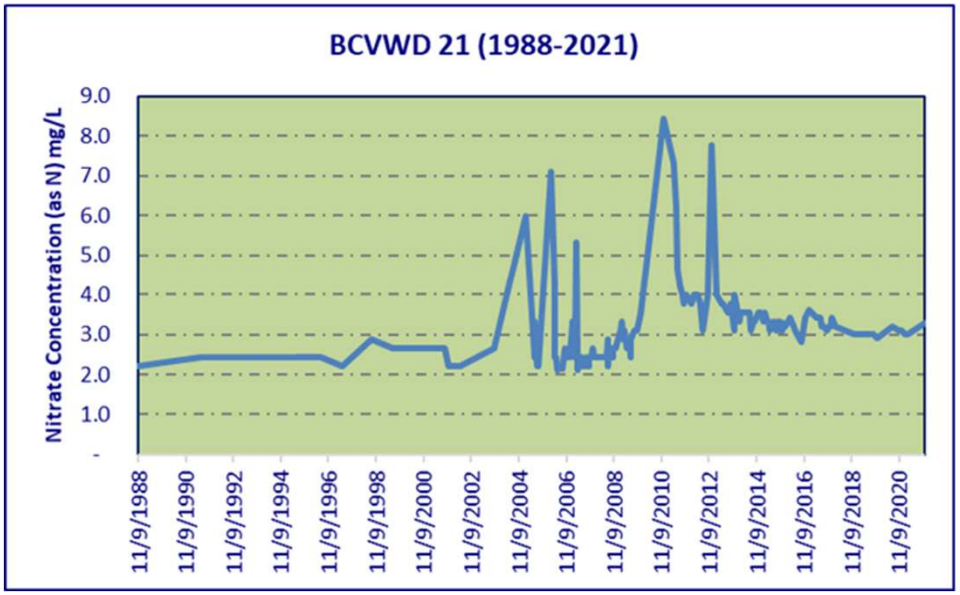
0 0.5 1 2 Miles
NAD 83 UTM Zone 11

Nitrate in Groundwater (Maximum Concentrations 2017 to 2021)

Figure 4-3







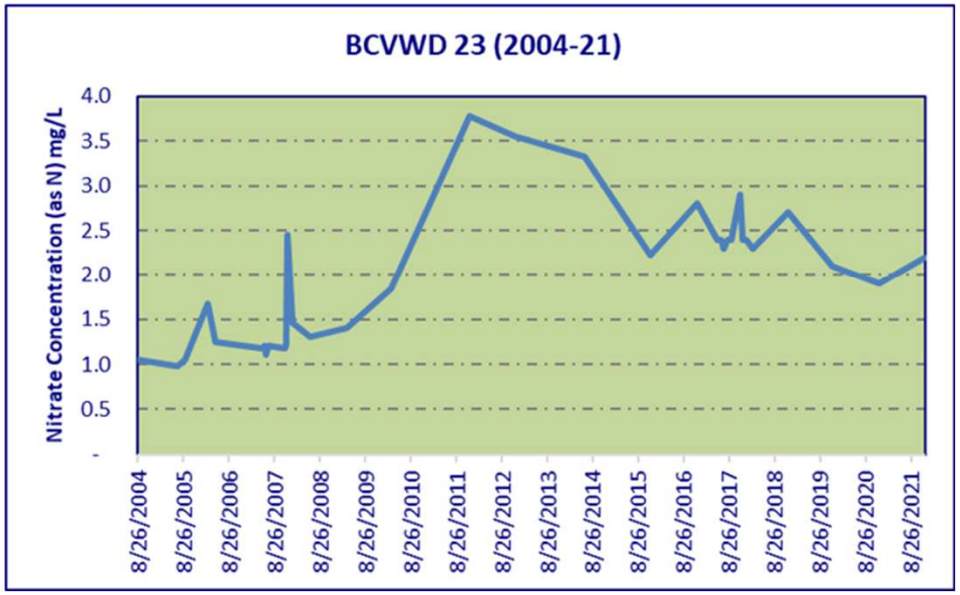
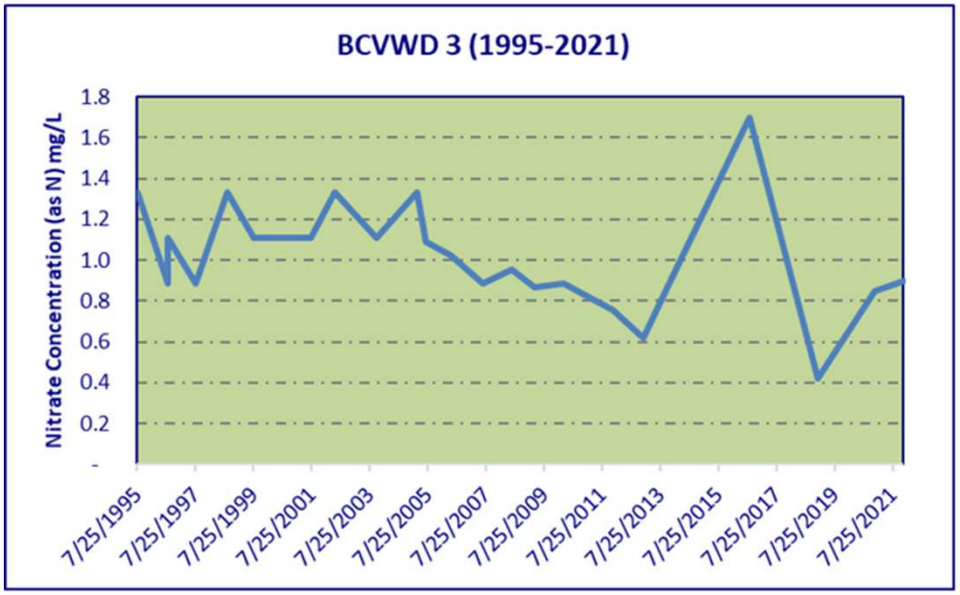
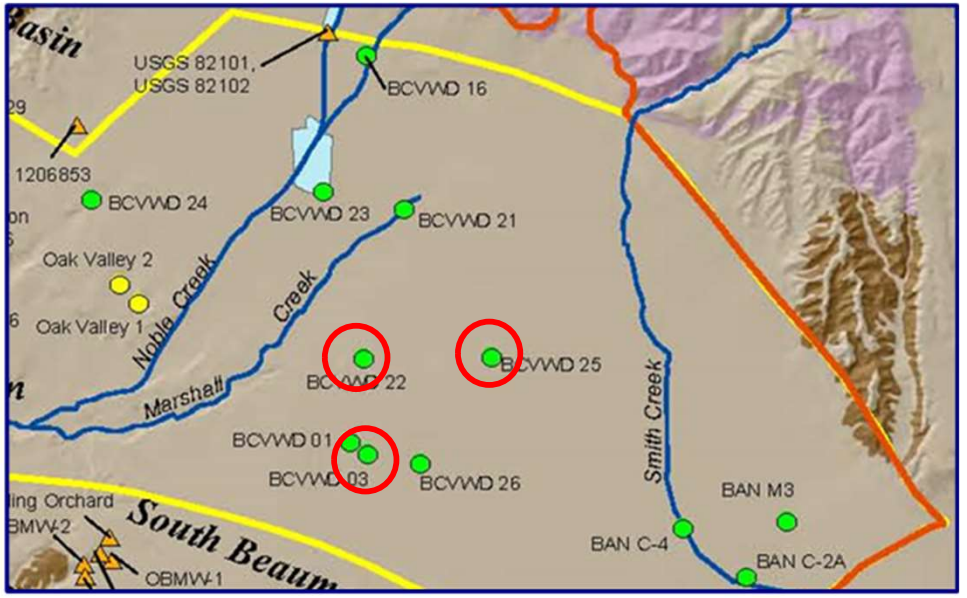
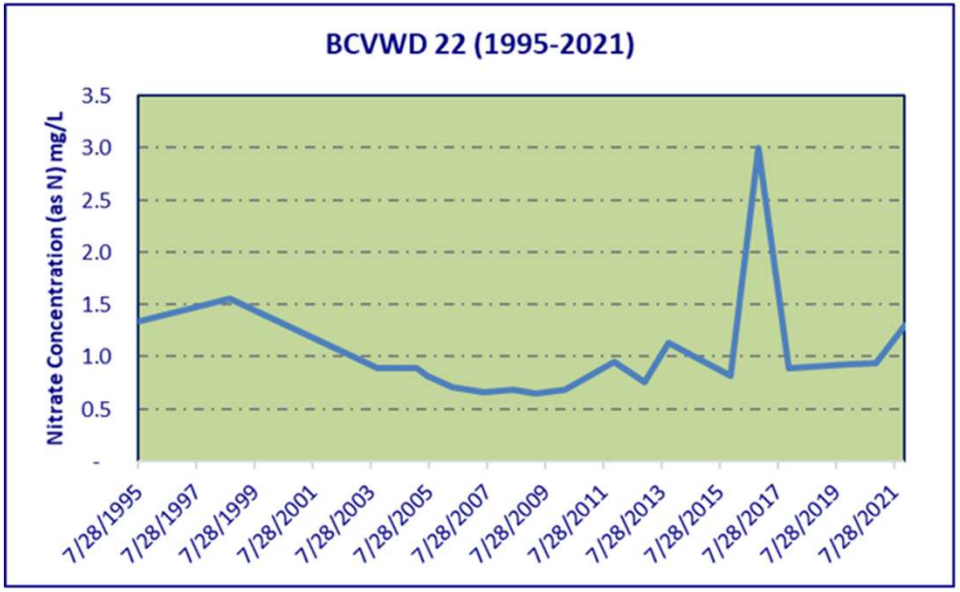


Figure 4-4
Noble Creek Area – Historical Nitrate Concentration







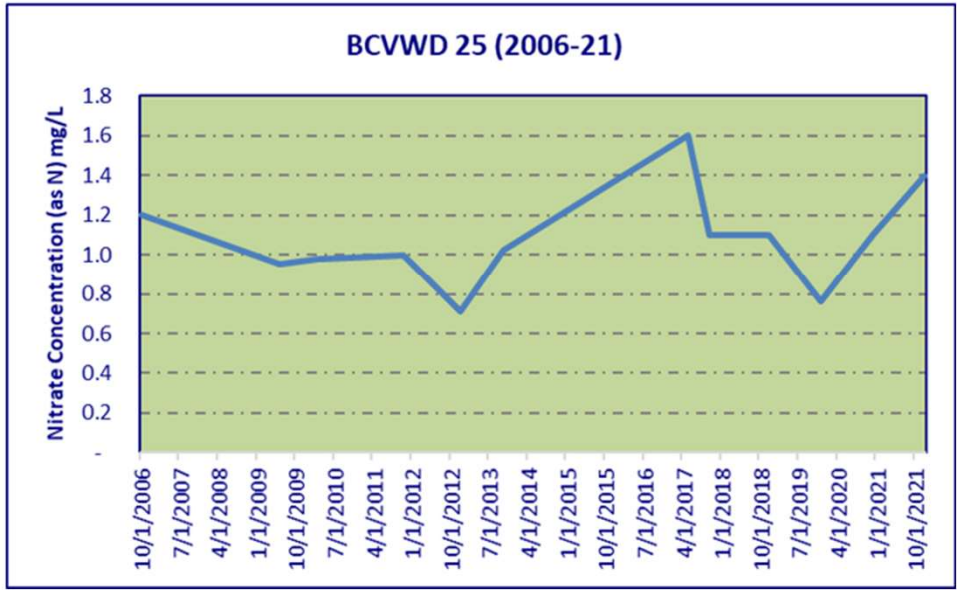
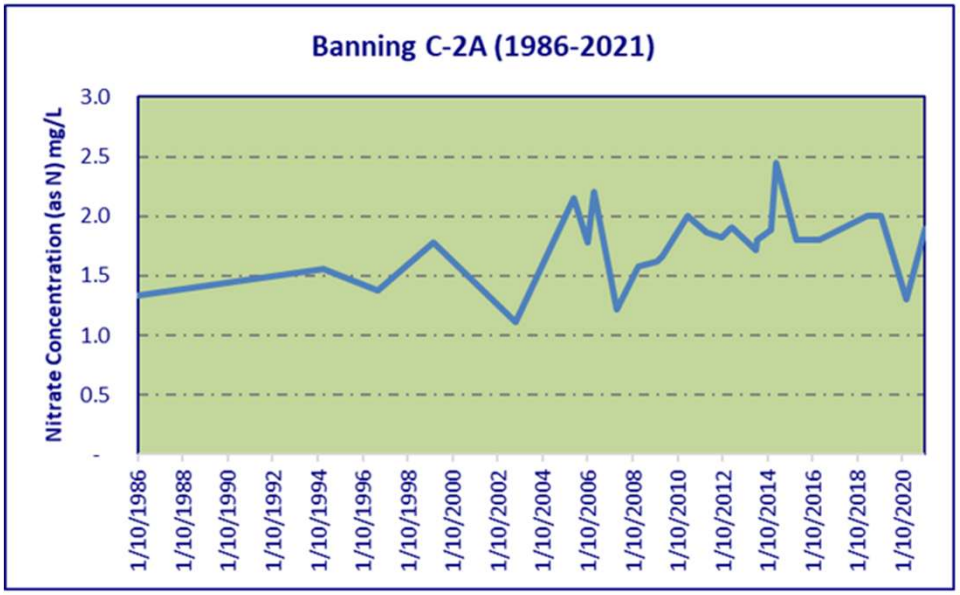
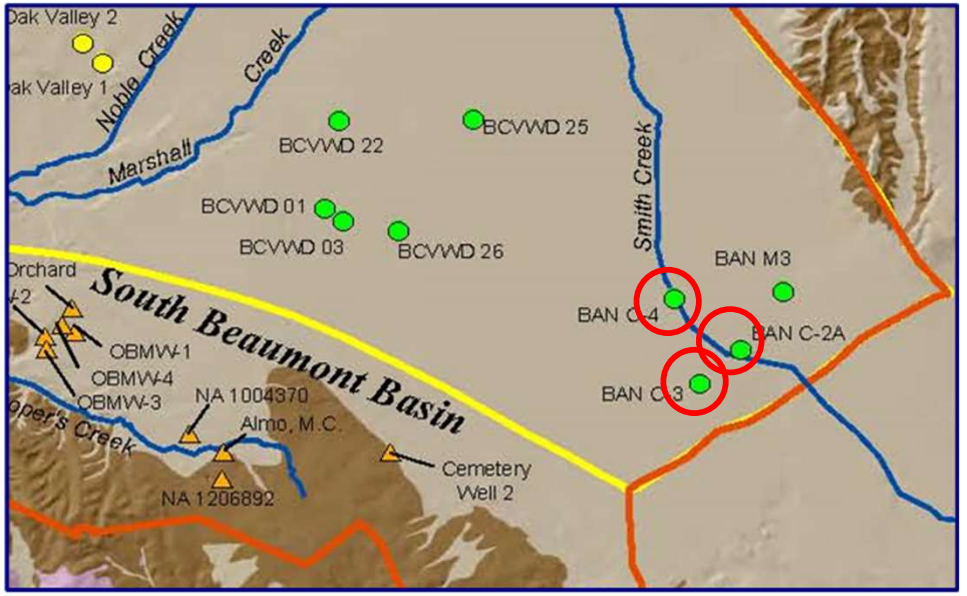


Figure 4-5
East of Marshall Creek – Historical Nitrate Concentration





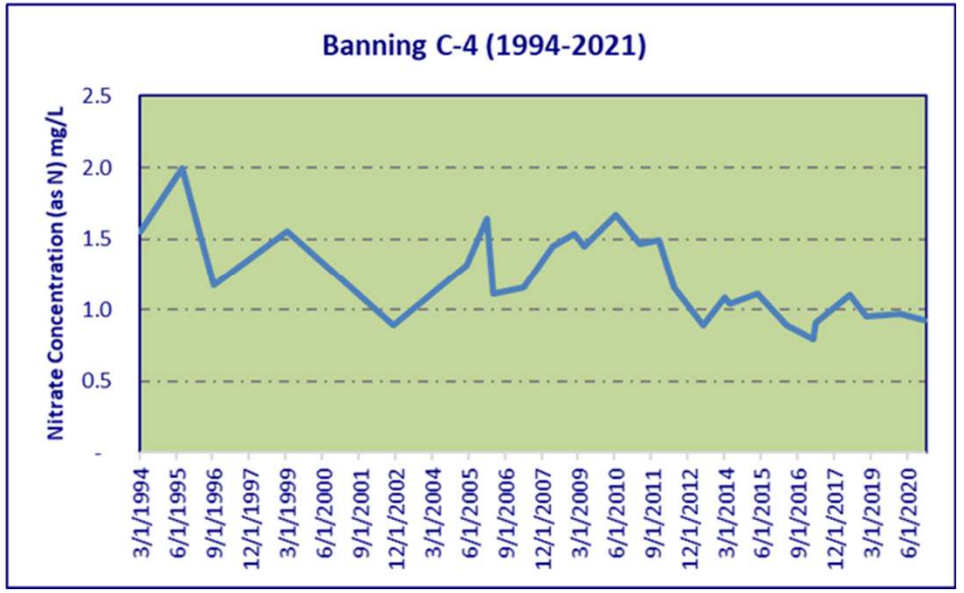
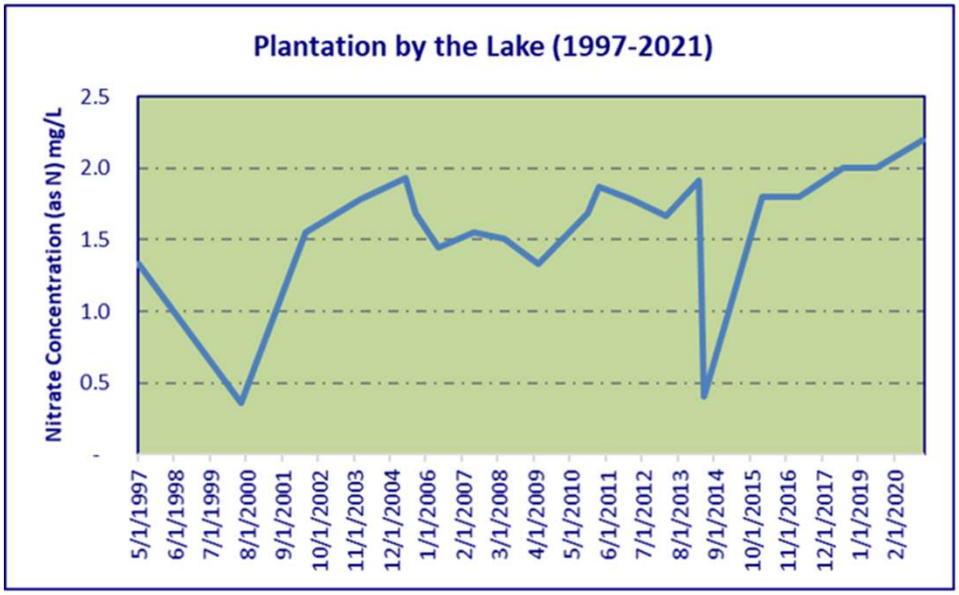
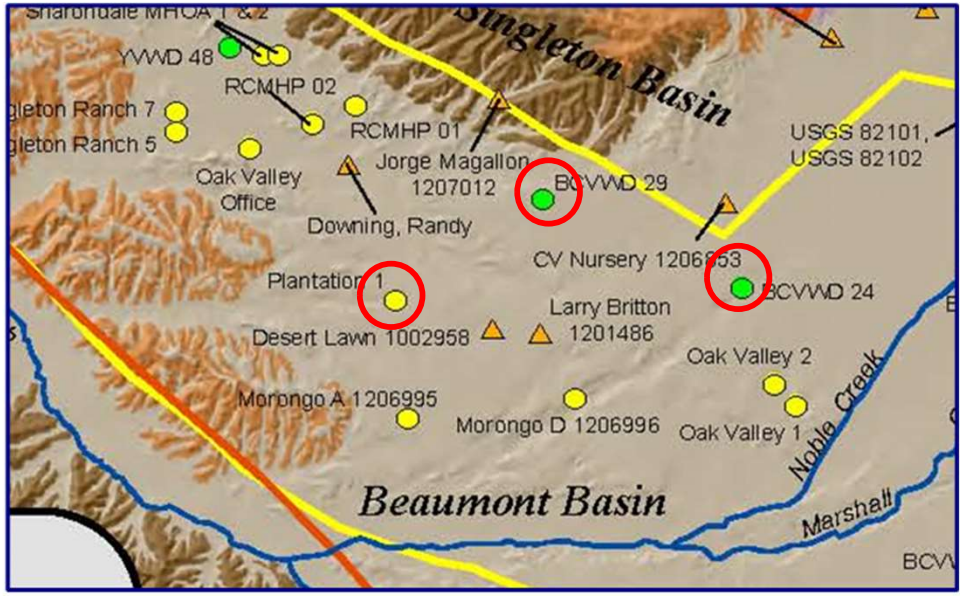
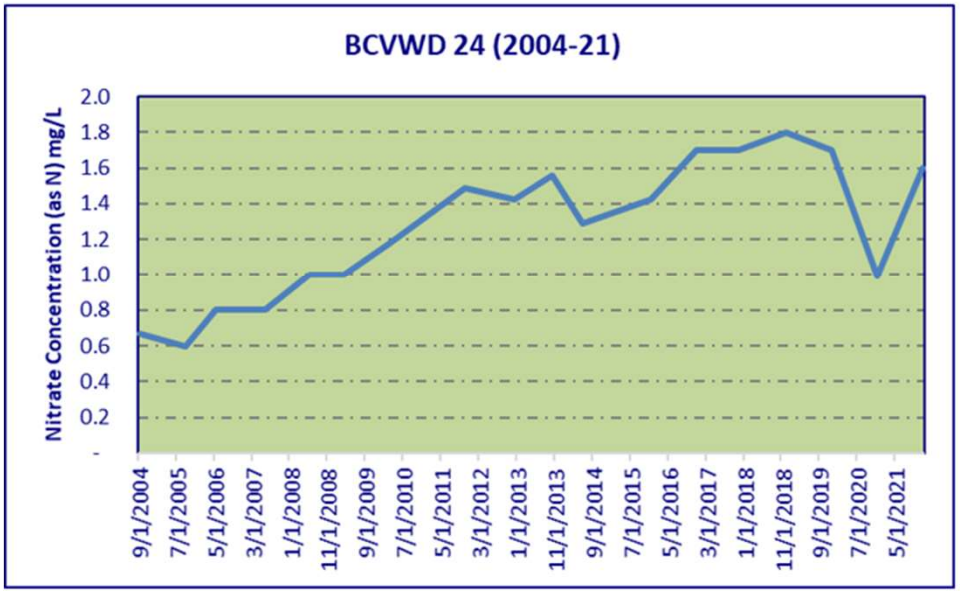


Figure 4-6
Banning Area – Historical Nitrate Concentration







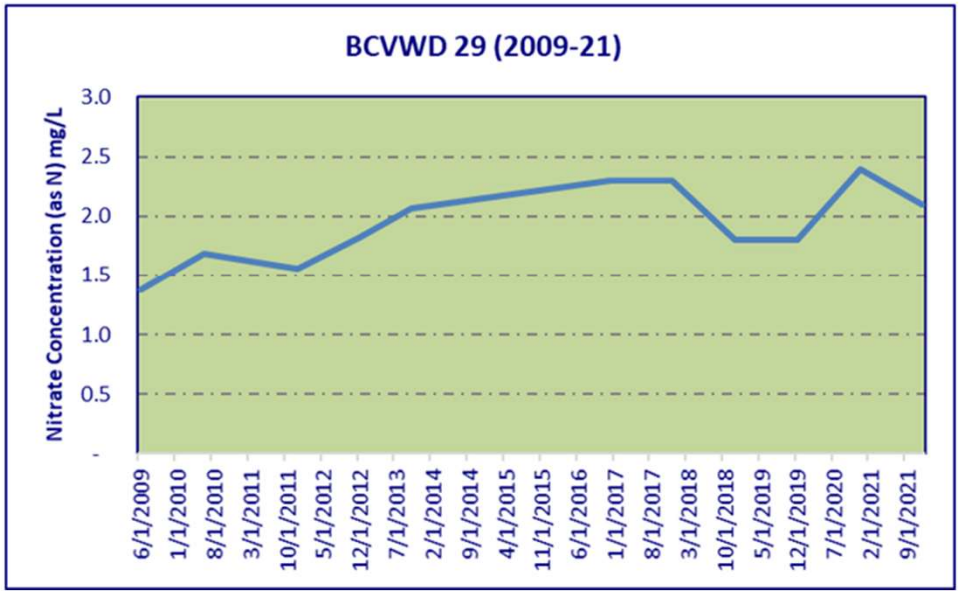
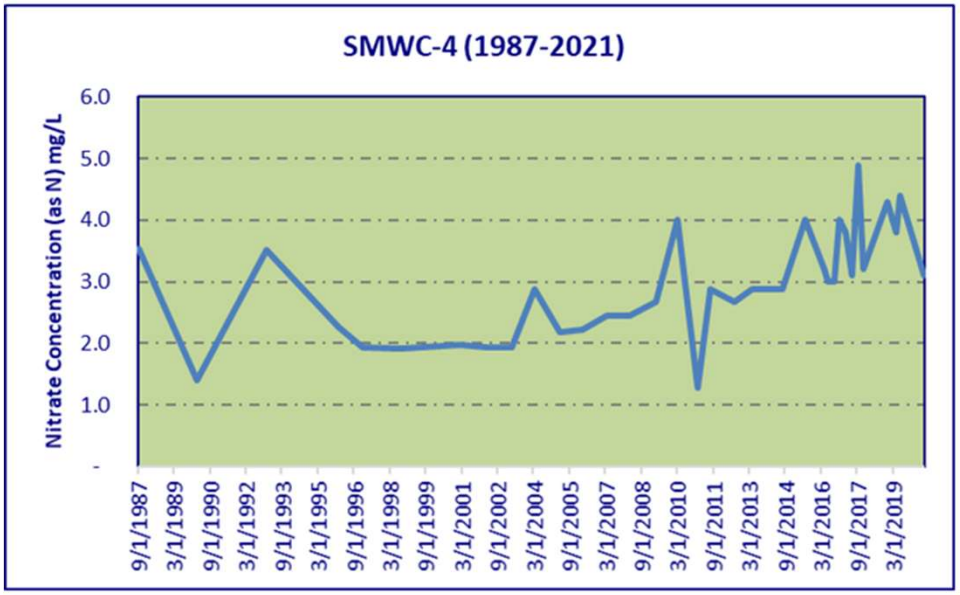
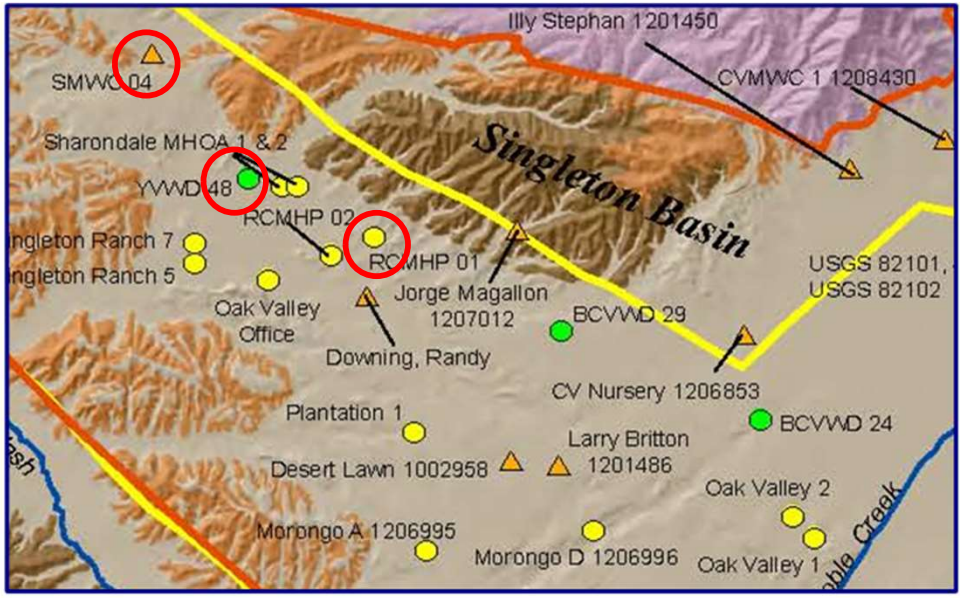
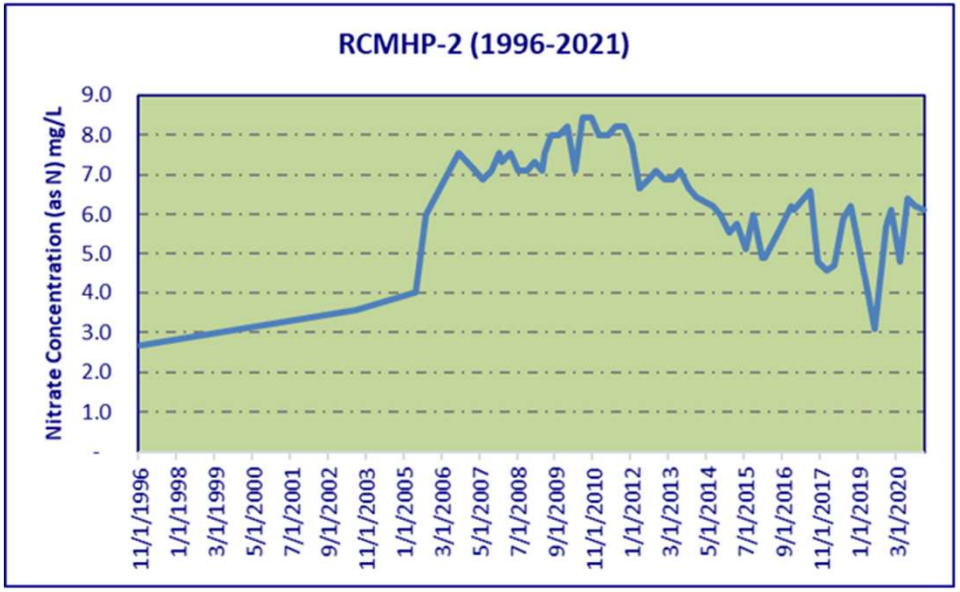


Figure 4-7
West of Noble Creek – Historical Nitrate Concentration







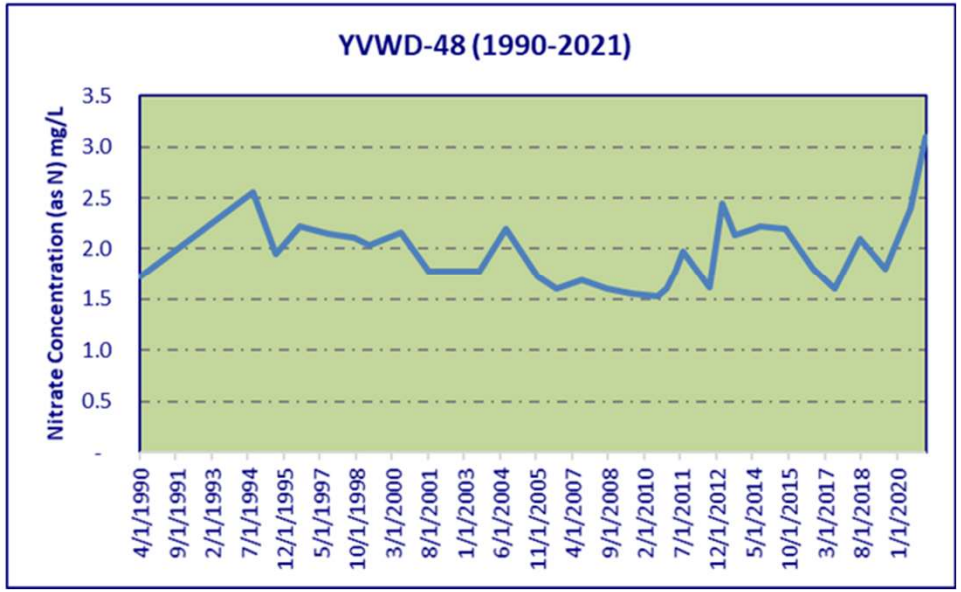
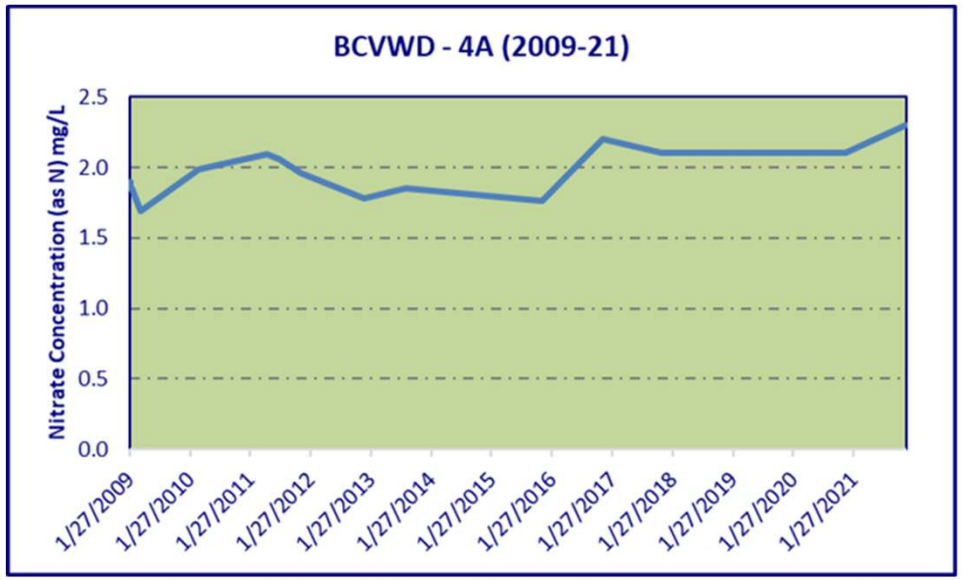
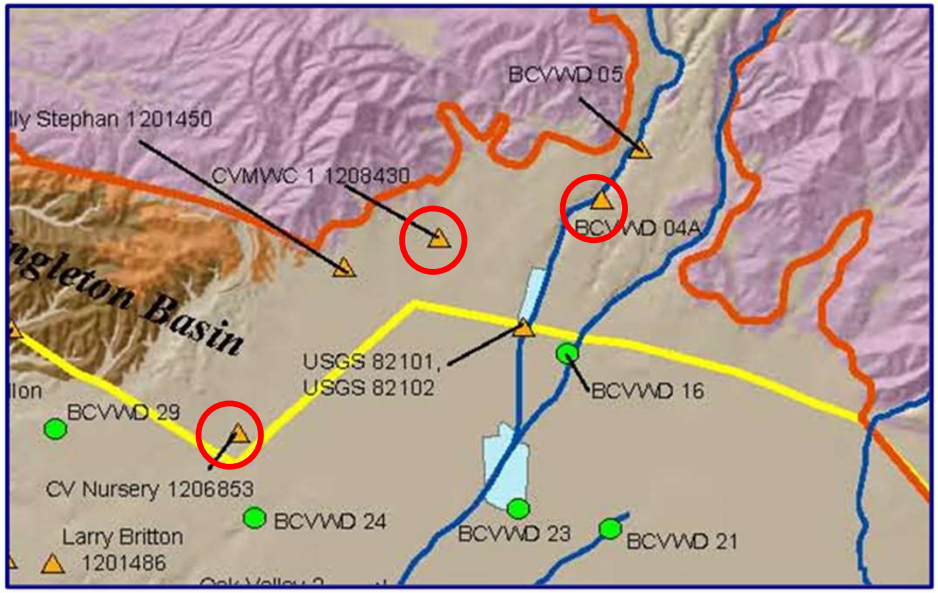
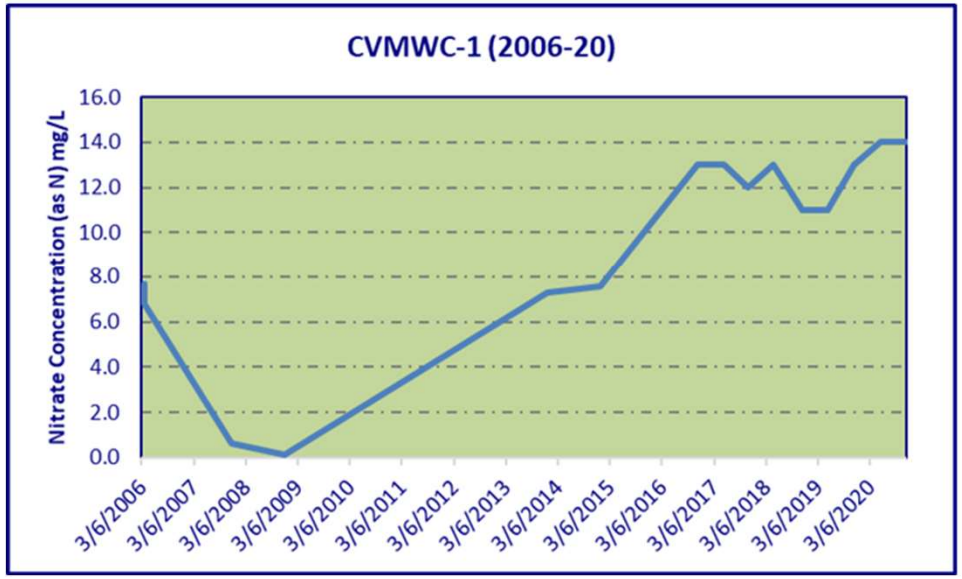


Figure 4-8
Northwest Area – Historical Nitrate Concentration







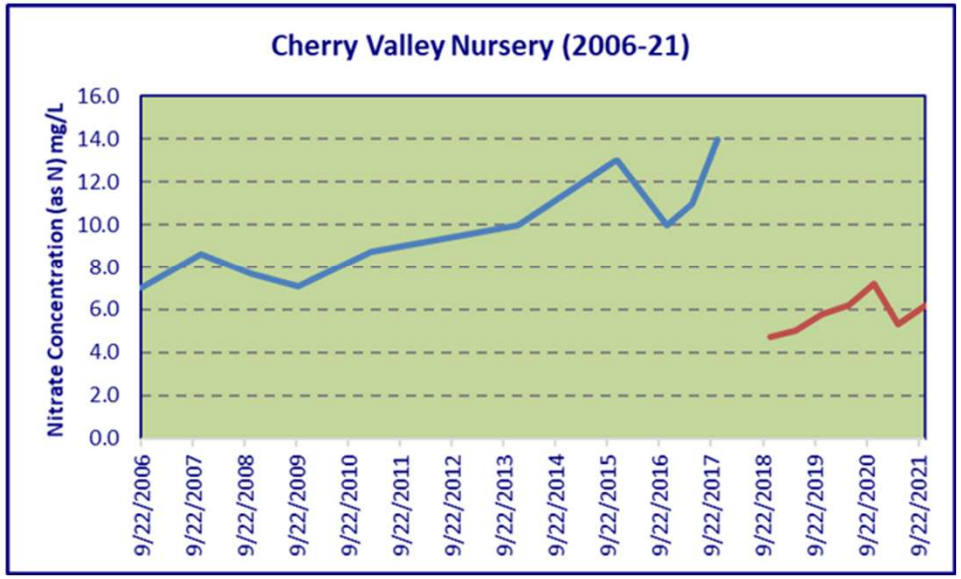
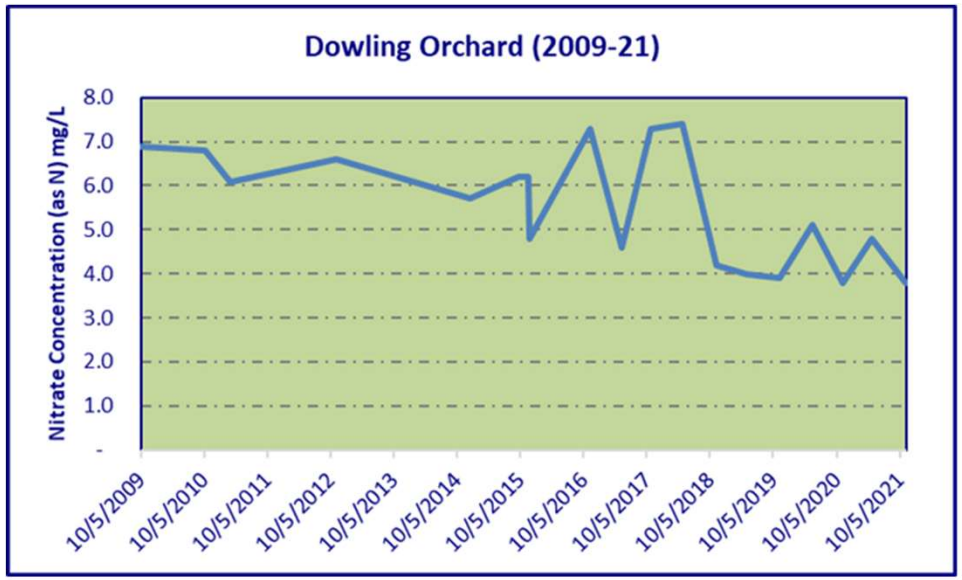
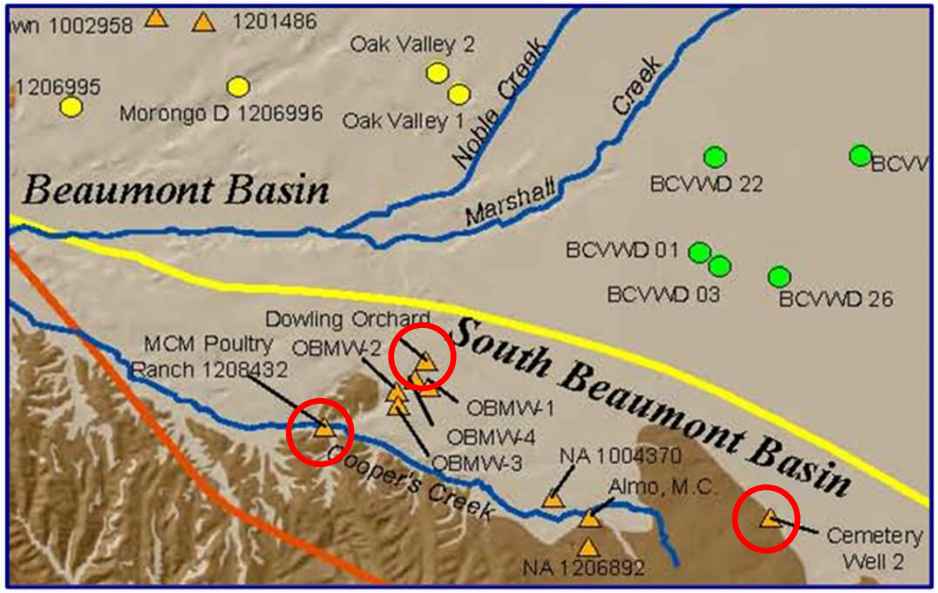
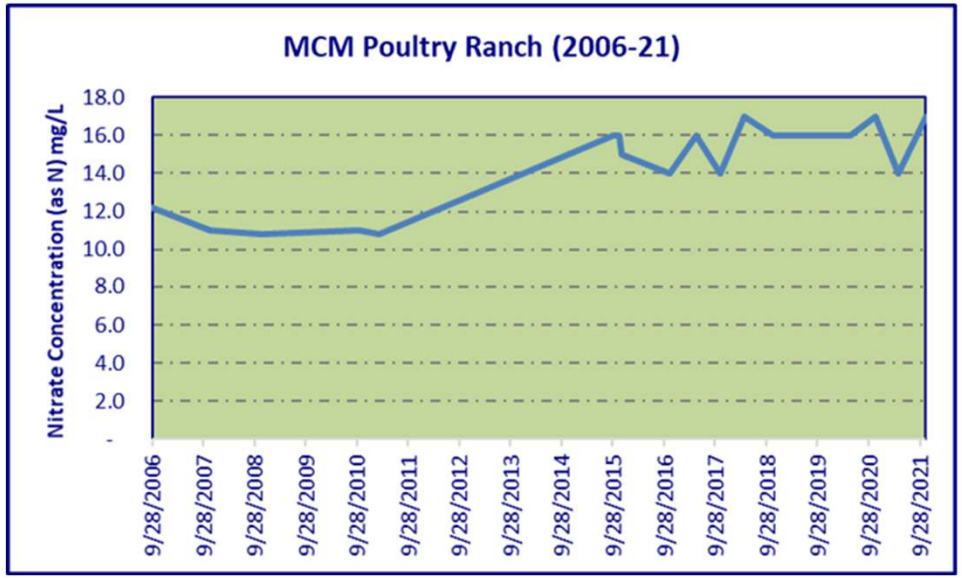


Figure 4-9
Singleton Basin – Historical Nitrate Concentration







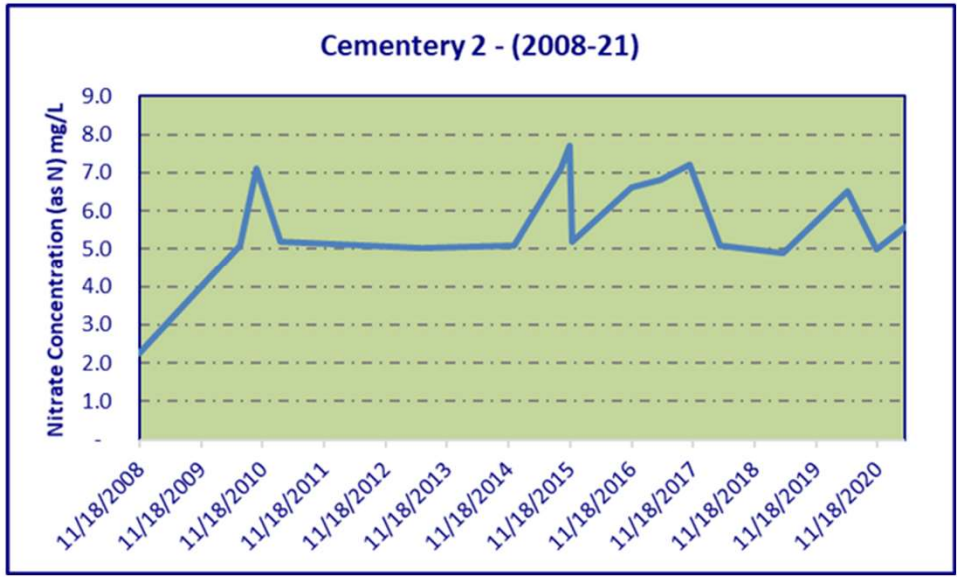


Figure 4-10
South Beaumont Basin – Historical Nitrate Concentration

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 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

Notice of Entry of Order Regarding Yucaipa Valley Water District's Motions

KEITH E. MCCULLOUGH (CA Bar No. 142519)
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Attorneys for Defendant
BEAUMONT BASIN WATERMASTER

EXEMPT FROM FILING FEES
GOV'T CODE § 6103

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF RIVERSIDE HALL OF JUSTICE

SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY, a public agency,

Plaintiff,

v.

CITY OF BANNING, a municipal corporation; BEAUMONT-CHERRY VALLEY WATER DISTRICT, an irrigation district; YUCAIPA VALLEY WATER DISTRICT, a county water District; PLANTATION ON THE LAKE LLC, a California limited liability Company; SHARONDALE MESA OWNERS ASSOCIATION; an unincorporated association; SOUTH MESA MUTUAL WATER COMPANY, a mutual water company, CALIFORNIA OAK VALLEY GOLF AND RESORT LLC, a California limited liability company; OAK VALLEY PARTNERS LP, a Texas limited Partnership; SOUTHERN CALIFORNIA SECTION OF THE PROFESSIONAL GOLFERS ASSOCIATION OF AMERICA, a California Corporation; SUNNY-CAL EGG AND POULTRY COMPANY, a California corporation; MANHEIM, MANHEIM &

CASE NO.: RIC389197

NOTICE OF ENTRY OF ORDER RE YUCAIPA VALLEY WATER DISTRICT'S MOTIONS SEEKING: I) AN ORDER DIRECTING THE BEAUMONT BASIN WATERMASTER TO AMEND THE 2019 ANNUAL REPORT TO ADJUST OAK VALLEY PARTNER LP'S OVERLYING WATER RIGHTS AND YVWD APPROPRIATIVE WATER RIGHTS, AND II) AN ORDER RESCINDING BEAUMONT BASIN WATERMASTER RULE 7.3

Assigned for All Purposes to:
Hon. Judge Irma Poole Asberry, Dept. 05

Date: August 31, 2021
Time: 8:30 a.m.
Dept.: Dept. 5

Action Filed: February 20, 2003
Trial Date: N/A

BERMAN, a California General Partnership; WALTER M. BECKMAN, individually and as Trustee of the BECKMAN FAMILY TRUST dated December 11, 1990; THE ROMAN CATHOLIC BISHOP OF SAN BERNARDINO, a California Corporation; MERLIN PROPERTIES, LLC; LEONARD M. STEARNS AND DOROTHY D. STEARNS, individually and as Trustees of the LEONARD M. STEARNS FAMILY TRUST OF 1991; and DOES 1 through 500, inclusive

Defendants.

TO ALL PARTIES AND THEIR ATTORNEYS OF RECORD:

PLEASE TAKE NOTICE that the Court has entered the Order Re Yucaipa Valley Water District's Motions Seeking: I) An Order Directing The Beaumont Basin Watermaster To Amend The 2019 Annual Report To Adjust Oak Valley Partner LP's Overlying Water Rights And YVWD Appropriative Water Rights, And II) An Order Rescinding Beaumont Basin Watermaster Rule 7.3. A copy of said Orders are attached hereto as Exhibit "A." The Tentative Ruling is attached hereto as Exhibit "B."

Dated: September 13, 2021

ALVARADOSMITH APC

By: _____

KEITH E. MCCULLOUGH
THIERRY R. MONTOYA
Attorneys for Defendant
BEAUMONT BASIN
WATERMASTER

ALVARADOSMITH
A PROFESSIONAL CORPORATION
SANTA ANA

EXHIBIT A

SUPERIOR COURT OF CALIFORNIA, COUNTY OF RIVERSIDE

Historic Court House

Hearing re: Motion for an Order Directing the Beaumont Basin Watermaster to Amend the Beaumont Basin Watermaster 2019 Annual Report to Adjust Oak Valley Partners LP's Overlying Water Rights and Yucaipa Valley Water District's Appropriative Water Rights

08/31/2021
8:30 AM
Department 5

RIC389197
SAN TIMOTEO WATERHSED MANAGEMENT AUTHORITY vs CITY OF BANNING

Honorable Irma Asberry, Judge
M. Vargas, Courtroom Assistant
Court Reporter: None

APPEARANCES:

CITY OF BANNING [DEF] represented by Barbara Brenner .
BEAUMONT-CHERRY VALLEY WATER DISTRICT [DEF] represented by James Lee Markman.
BEAUMONT BASIN WATERMASTER [TP] represented by Thierry Montoya .
SOUTH MESA MUTUAL WATER COMPANY [DEF] represented by Derek Hoffman and Paige Gosney.
YUCAIPA VALLEY WATER DISTRICT [DEF] represented by Gregory Newmark and Bryan Brown.
Wes Miliband, representing Morongo Band is telephonically present present.
John Covington is telephonically present.
Joseph Zoba is telephonically present.
Court Reporter George Dominguez is telephonically present.

The court has published instructions for public access (including Livestream) to this hearing on the court website which can be found under the banner COVID-19 information and court operations. If it is your responsibility to provide notice, the notice is to include the Web-Ex information for Department 5.
This matter is being live streamed for public access
At 10:06 AM, the following proceedings were held:
Motion by Yucaipa Valley Water District regarding Motion for an Order Directing the Beaumont Basin Watermaster to Amend the Beaumont Basin Watermaster 2019 Annual Report to Adjust Oak Valley Partners LP's Overlying Water Rights and Yucaipa Valley Water District's Appropriative Water Rights is called for hearing.
After issuance of tentative ruling oral argument(s) was requested
Counsel presents argument.
Court makes the following order(s):

SUPERIOR COURT OF CALIFORNIA, COUNTY OF RIVERSIDE

Historic Court House

Hearing re: Motion for an Order Directing the Beaumont Basin Watermaster to Amend the Beaumont Basin Watermaster 2019 Annual Report to Adjust Oak Valley Partners LP's Overlying Water Rights and Yucaipa Valley Water District's Appropriative Water Rights

08/31/2021
8:30 AM
Department 5

RIC389197
SAN TIMOTEO WATERHSED MANAGEMENT AUTHORITY vs CITY OF BANNING

Honorable Irma Asberry, Judge
M. Vargas, Courtroom Assistant
Court Reporter: None

Tentative ruling shall become the ruling of the court.
Motion for an Order Directing the Beaumont Basin Watermaster to Amend the Beaumont Basin Watermaster 2019 Annual Report to Adjust Oak Valley Partners LP's Overlying Water Rights and Yucaipa Valley Water District's Appropriative Water Rights is denied without prejudice
Request for Judicial Notice: BCVWD and SMMWC request judicial notice of the Chino Basin Judgment, which YVWD objects to. The court declines to take judicial notice of the judgment as it is not relevant. That judgment is not binding in this court and has no persuasive value. The requests are granted as to SMMWC's remaining request for judicial notice, pursuant to Evidence Code § 452(b).

Factual and procedural background: On 2/20/03, Plaintiff San Timoteo Watershed Management Authority filed this action for an adjudication of groundwater rights in the Beaumont Basin. On 11/25/03, Plaintiff filed the First Amended Complaint. Plaintiff is a joint powers public agency, with Defendants City of Beaumont, Beaumont-Cherry Valley Water District, Yucaipa Valley Water District and South Mesa Mutual Water Company. The remaining Defendants claim a right to the groundwater, but there was an overdraft of the water. On 2/4/04, the parties entered into a stipulated judgment which would limit the amount of water drawn (i.e. safe yield) and the creation of a Watermaster to develop and implement a groundwater management plan. An amended judgment was filed nunc pro tunc to 2/4/04. Since entry of judgment, the court has been involved in enforcing various portions of the judgment, and appoint members.

Yucaipa Valley Water District (YVWD) has filed two related motions. The first is to rescind Watermaster Rule 7.3 (formerly Rule 7.8) and the second is to order the Watermaster to recognize Oak Valley Partners, LP's transfer of overlying water rights. YVWD argues that under the Judgment, Section III.3, overlying partners have the right to transfer their adjudicated water rights to an Appropriator. But the Watermaster issued Rule 7.3 which permanently reallocates unused overlying water to Appropriator Storage Accounts after five years without compensation or commitment to provide water. Accordingly, the Watermaster has refused to recognize YVWD's interests in Oak Valley's water rights. YVWD complains that the Watermaster has been making these allocations without determining the regional water conditions in the basin because the Watermaster does not track use of stored water by Appropriators or losses of water from the basin. As such, on 2/3/21,

SUPERIOR COURT OF CALIFORNIA, COUNTY OF RIVERSIDE

Historic Court House

Hearing re: Motion for an Order Directing the Beaumont Basin Watermaster to Amend the Beaumont Basin Watermaster 2019 Annual Report to Adjust Oak Valley Partners LP's Overlying Water Rights and Yucaipa Valley Water District's Appropriative Water Rights

08/31/2021
8:30 AM
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RIC389197
SAN TIMOTEO WATERHSED MANAGEMENT AUTHORITY vs CITY OF BANNING

Honorable Irma Asberry, Judge
M. Vargas, Courtroom Assistant
Court Reporter: None

YVWD proposed Watermaster Resolution 21-01 to rescind Rule 7.3 and to update the annual report. In the second motion, it contends that the Watermaster refuses to acknowledge the earmark for agreeing to provide water service to Oak Valley under the Judgment, contending that it does not apply until the water is delivered—which is not in the judgment. As such, this results in a hoarding by the other Appropriators in the storage accounts. It asserts that limiting in this will permanently transfer rights to the other Appropriators while restricting their water rights, and causing major financial losses for it.

The Watermaster has filed an opposition, contending that YVWD's motion is untimely as it is filed beyond the 90 days for challenging any decisions. It contends that the rule is consistent with the Watermaster's powers under the Judgment to account for water rights transfers and storage, which includes the ability to reclassify overlying water rights based on non-use. It argues that previously, YVWD complied with Rule 7 to obtain water transfer credits when it provided water service to Oak Valley, but now seeks credit to the water storage account in the full amount of Oak Valley's former overlying water rights. It argues that YVWD speculates about any harm. For both motions, it argues that if YVWD complies with Resolution 2017-02, i.e. providing water service, it will obtain the credit. It asserts that YVWD's contract with Oak Valley is a lease and not a water transfer.

Beaumont-Cherry Valley Water District (BCVWD) submits an omnibus opposition and contends to allow YVWD's transfer would violate the Judgment of allowing appropriators on an equitable basis. It argues that the Judgment does not allow for transferability of rights between overlying owners and appropriators. It contends that YVWD improperly seeks to reallocate unpumped overlying rights, which would allow it to profit by leasing the overlying water rights. It points to a comparable scenario under the Chino Judgment, which specifically allows transfers, but no such provision is allowed here.

South Mesa Water Company (SMWC) also contends that the motion is untimely. It contends that it was YVWD who developed and recommended the rules it now wants to invalidate. It asserts Rule 7.3 is consistent with common law regarding reclassification of overlying water rights. At the time of the adoption of the Rule, then Watermaster Engineer (Wildermuth Engineering) analyzed the purpose of the rule and noted that for appropriators to obtain access to the safe yield, it would have to be based

on overlying parties to under produce. It argues that the Rule is consistent with the Physical Solution and the California Constitutional requirement to prevent waste. It asserts that there is no evidence that the Rule harms the Basin, as YVWD has an interest in trying to obtain more water from the Basin since it is relying more and more on outside water sources. If YVWD is successful, that it would have to replace the water source it needs. For the second motion, it argues that YVWD is improperly trying to effectuate a backdated transfer without actually providing water services to Oak Valley. On the second motion, it argues that water service is actually required. It repeats that YVWD approved Resolution 2019-02, but it was YVWD who backdated the form of an effective date of 10/9/18 in order to receive Oak Valley's entire water allotment.

The City of Banning filed a joinder to the oppositions filed by the other parties.

YVWD filed separate replies to address each of the oppositions, but they provide primarily similar arguments. It argues that when Resolution 2017-02 that water service would be provided, it did not understand that this would support only rights transferred on a parcel by parcel basis, rather than the entire development. It points out that Form 5 changed by removing references to specific parcels, and that transfers were made to the overlying owner rather than parcel. It contends that under Rule 7.1, the Watermaster's actions are merely ministerial, which was to comport with the Judgment. It contends that the Judgment acknowledges that the Oak Valley development would apply to the property as a whole. For Rule 7.3, it argues that the Watermaster created new rights not contemplated by the Judgment. It contends that there can be no storage of water other than supplemental water. It asserts that current droughts are not sufficient to depart from the Judgment. It contends that it creates a windfall for the other appropriators.

The Morongo Band of Mission Indians filed a positional statement on 8/12/21. It wants to preserve its overlying rights (via the Tukwet Canyon Golf Course). It contends that transfers do not occur until water service is actually provided, and supports the Rule in that respect. It argues that the requirement of beneficial use should allow it to transfer rights to unused water to other parties inexchange for compensation. The Watermaster's response to the Morongo Band, contends that the Morongo Band has not identified an actual harm from Rule 7.3 to require adjudication by the court

and there is no indication that the Morongo Band's right to pump has been affected. To the extent it challenges Rule 7.3, the Watermaster contends that it is time barred nor can the court take any action that intrudes on the Watermaster's rule making authority.

As to timeliness of the motions and procedural issues:

Under the judgment:
Any action, decision, rule or procedure of the Watermaster pursuant to this Judgment shall be subject to review by the court on its own motion or on timely motion by any Party, as follows:
...
C. Time for Motion: A motion to review any Watermaster action or decision shall be filed within 90 days after such Watermaster action or decision, except that motions to review Watermaster assessments, hereunder shall be filed within 30 days of mailing of notice of the assessment.

(Judgment, ¶VII.6.) YVWD does not dispute that the Watermaster passed Rule 7.3 in 2008 and did not bring a motion with the court to challenge the rule—despite the fact that Joseph Zoba on behalf of YVWD dissented to the rule. (Zoba Decl. ¶26.) Under the Judgment, the Watermaster consists of a committee of persons nominated by the City of Banning, City of Beaumont, BCVWD, SMMWC, and YVWD. (Judgment ¶VI.4.) Under YVWD's interpretation, any time the Watermaster adopts a rule, it can be challenged by a subsequent challenge trying to rescind the rule—which is exactly what YVWD did. This attempt would render the time limitations meaningless since YVWD has the ability via its nominee on the Watermaster to introduce resolutions to challenge rules and restart the clock on challenging years-old decisions. This appears an attempt to get around the time limitations. However, YVWD is correct that the court apparently has jurisdiction on its own motion to consider these issues.

As to the Morongo Band's "statement," to the extent that Morongo seeks affirmative relief, it should file its own motion. Based on the information provided, Morongo has no current controversy to adjudicate. To the extent that Morongo seeks to sell its surplus water, that issue is not currently before the court.
Tentative Ruling to be filed.

SUPERIOR COURT OF CALIFORNIA, COUNTY OF RIVERSIDE

Historic Court House

Hearing re: Motion for an Order Directing the Beaumont Basin Watermaster to Amend the Beaumont Basin Watermaster 2019 Annual Report to Adjust Oak Valley Partners LP's Overlying Water Rights and Yucaipa Valley Water District's Appropriative Water Rights

08/31/2021
8:30 AM
Department 5

RIC389197
SAN TIMOTEO WATERHSED MANAGEMENT AUTHORITY vs CITY OF BANNING

Honorable Irma Asberry, Judge
M. Vargas, Courtroom Assistant
Court Reporter: None

EXHIBIT B

questions are referring to. The original motion does include, though, a copy of the interrogatories sent to Defendant which includes interrogatory number 34. This is a minor issue and does not warrant denying the entire motion or continuing this hearing.

Interrogatory No. 2 asks Securitas to confirm it made a complete search of all records and a diligent inquiry in attempting to discover all available information relating to this action. In response, Defendant objected to the relevance of this interrogatory arguing that it is not directed at discovering information permitted under CCP §2030.010(b).

CCP §2030.010(b) provides that "[a]n interrogatory may relate to whether another party is making a certain contention, or to the facts, witnesses, and writings on which a contention is based. An interrogatory is not objectionable because an answer to it involves an opinion or contention that relates to fact or the application of law to fact, or would be based on information obtained or legal theories developed in anticipation of litigation or in preparation for trial." Whether or not Defendant has conducted a diligent search and thorough inquiry in searching for documents to provide in discovery relates to the facts, witnesses, and writings on which Defendant's contentions are based. Whether Defendant has performed a diligent search is relevant. If they haven't, more discovery would certainly be required. Further response is required.

Interrogatories 34 – 41 and 43 as for all information related to claims made within the last ten years by persons alleging injury due to improper conduct by a guard employed by Securitas. The requests are relevant to the causes of action. However they are overboard in scope. Evidence from other similar cases may help the parties and/or the court in determining whether or not this particular security guard was acting within the course and scope of his duties and shed light on other information relevant to prove or disprove the claims and defenses. Securitas' has stated objections and argues that these interrogatories are burdensome and oppressive as they do not maintain an informational database regarding claims of improper conduct by its security guards. This is a fair objection. As illustrated in Securitas' Opposition, the sheer number of security guards employed by Securitas (potentially up to 100,000 nationwide) makes answering this interrogatory as worded burdensome. The court therefore limits the scope as described above.

Securitas also argues the term "improper conduct" is vague. This is well taken, as improper conduct could range from verbal assault to theft to sexual misconduct. A claim for theft is not analogous to the instant claim for physical assault and would force Securitas to unnecessarily review and provide irrelevant documents. Thus, the scope is limited as described above.

Securitas also asserts a privacy rights argument as to the privacy of third parties who are not part of this lawsuit. Thus, the parties are ordered to meet and confer regarding a protective order.

6.

RIC389197	SAN TIMOTEO WATERHSED MANAGEMENT AUTHORITY vs CITY OF BANNING	Joinder to Motion for Order Directing the Beaumont Basin Watermaster to Rescind Beaumont Basin Watermaster Rule 7.3

Tentative Ruling: See Tentative Ruling No. 9 below.

7.

RIC389197	SAN TIMOTEO WATERHSED MANAGEMENT AUTHORITY vs CITY OF BANNING	Joinder to Motion for Order Directing the Beaumont Basin Watermaster to Amend the Beaumont Basin Watermaster's 2019 Annual Report

Tentative Ruling: See Tentative Ruling No. 9 below.

8.

RIC389197	SAN TIMOTEO WATERHSED MANAGEMENT AUTHORITY vs CITY OF BANNING	Corrected Motion for an Order Directing the Beaumont Basin Watermaster to Rescind Beaumont Basin Watermaster Rule 7.3

Tentative Ruling: See Tentative Ruling No. 9 below.

9.

RIC389197	SAN TIMOTEO WATERHSED MANAGEMENT AUTHORITY vs CITY OF BANNING	Motion for an Order Directing the Beaumont Basin Watermaster to Amend the Beaumont Basin Watermaster 2019 Annual Report to Adjust Oak Valley Partners LP's Overlying Water Rights and Yucaipa Valley Water District's Appropriative Water Rights

Tentative Ruling: Denied without prejudice. The discussion of matters in this Ruling also apply to Nos. 6 – 8 above.

Request for Judicial Notice: BCVWD and SMMWC request judicial notice of the Chino Basin Judgment, which YVWD objects to. The court declines to take judicial notice of the judgment as it is not relevant. That judgment is not binding in this court and has no persuasive value. The requests are granted as to SMMWC's remaining request for judicial notice, pursuant to Evidence Code § 452(b).

Factual and procedural background: On 2/20/03, Plaintiff San Timoteo Watershed Management Authority filed this action for an adjudication of groundwater rights in the Beaumont Basin. On 11/25/03, Plaintiff filed the First Amended Complaint. Plaintiff is a joint powers public agency, with Defendants City of Beaumont, Beaumont-Cherry Valley Water District, Yucaipa Valley Water District and South Mesa Mutual Water Company. The remaining Defendants claim a right to the groundwater, but there was an overdraft of the water. On 2/4/04, the parties entered into a stipulated judgment which would limit the amount of water drawn (i.e. safe yield) and the creation of a Watermaster to develop and implement a groundwater management plan. An amended judgment was filed nunc pro tunc to 2/4/04. Since entry of judgment, the court has been involved in enforcing various portions of the judgment, and appoint members.

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The Watermaster has filed an opposition, contending that YVWD's motion is untimely as it is filed beyond the 90 days for challenging any decisions. It contends that the rule is consistent with the Watermaster's powers under the Judgment to account for water rights transfers and storage, which includes the ability to reclassify overlying water rights based on non-use. It argues that previously, YVWD complied with Rule 7 to obtain water transfer credits when it provided water service to Oak Valley, but now seeks credit to the water storage account in the full amount of Oak Valley's former overlying water rights. It argues that YVWD speculates about any harm. For both motions, it argues that if YVWD complies with Resolution 2017-02, i.e. providing water service, it will obtain the credit. It asserts that YVWD's contract with Oak Valley is a lease and not a water transfer.

Beaumont-Cherry Valley Water District (BCVWD) submits an omnibus opposition and contends to allow YVWD's transfer would violate the Judgment of allowing appropriators on an equitable basis. It argues that the Judgment does not allow for transferability of rights between overlying owners and appropriators. It contends that YVWD improperly seeks to reallocate unpumped overlying rights, which would allow it to profit by leasing the overlying water rights. It points to a comparable scenario under the Chino Judgment, which specifically allows transfers, but no such provision is allowed here.

South Mesa Water Company (SMWC) also contends that the motion is untimely. It contends that it was YVWD who developed and recommended the rules it now wants to invalidate. It asserts Rule 7.3 is consistent with common law regarding reclassification of overlying water rights. At the time of the adoption of the Rule, then Watermaster Engineer (Wildermuth Engineering) analyzed the purpose of the rule and noted that for appropriators to obtain access to the safe yield, it would have to be based on overlying parties to under produce. It argues that the Rule is consistent with the Physical Solution and the California Constitutional requirement to prevent waste. It asserts that there is no evidence that the Rule harms the Basin, as YVWD has an interest in trying to obtain more water from the Basin since it is relying more and more on outside water sources. If YVWD is successful, that it would have to replace the water source it needs. For the second motion, it argues that YVWD is improperly trying to effectuate a backdated transfer without actually providing water services to Oak Valley. On the second motion, it argues that water service is actually required. It repeats that YVWD approved Resolution 2019-02, but it was YVWD who backdated the form of an effective date of 10/9/18 in order to receive Oak Valley's entire water allotment.

The City of Banning filed a joinder to the oppositions filed by the other parties.

YVWD filed separate replies to address each of the oppositions, but they provide primarily similar arguments. It argues that when Resolution 2017-02 that water service would be provided, it did not understand that this would support only rights transferred on a parcel by parcel basis, rather than the entire development. It points out that Form 5 changed by removing references to specific parcels, and that transfers were made to the overlying owner rather than parcel. It contends that under Rule 7.1, the Watermaster's actions are merely ministerial, which was to comport with the Judgment. It contends that the Judgment acknowledges that the Oak Valley development would apply to the property as a whole. For Rule 7.3, it argues that the Watermaster created new rights not contemplated by the Judgment. It contends that there can be no storage of water other than supplemental water. It asserts that current droughts are not sufficient to depart from the Judgment. It contends that it creates a windfall for the other appropriators.

The Morongo Band of Mission Indians filed a positional statement on 8/12/21. It wants to preserve its overlying rights (via the Tukwet Canyon Golf Course). It contends that transfers do not occur until water service is actually provided, and supports the Rule in that respect. It argues that the requirement of beneficial use should allow it to transfer rights to unused water to other parties in

exchange for compensation. The Watermaster's response to the Morongo Band, contends that the Morongo Band has not identified an actual harm from Rule 7.3 to require adjudication by the court and there is no indication that the Morongo Band's right to pump has been affected. To the extent it challenges Rule 7.3, the Watermaster contends that it is time barred nor can the court take any action that intrudes on the Watermaster's rule making authority.

As to timeliness of the motions and procedural issues:

Under the judgment:

> Any action, decision, rule or procedure of the Watermaster pursuant to this Judgment shall be subject to review by the court on its own motion or on timely motion by any Party, as follows:
>
> ...
>
> C. Time for Motion: A motion to review any Watermaster action or decision shall be filed within 90 days after such Watermaster action or decision, except that motions to review Watermaster assessments, hereunder shall be filed within 30 days of mailing of notice of the assessment.

(Judgment, ¶VII.6.) YVWD does not dispute that the Watermaster passed Rule 7.3 in 2008 and did not bring a motion with the court to challenge the rule—despite the fact that Joseph Zoba on behalf of YVWD dissented to the rule. (Zoba Decl. ¶26.) Under the Judgment, the Watermaster consists of a committee of persons nominated by the City of Banning, City of Beaumont, BCVWD, SMMWC, and YVWD. (Judgment ¶VI.4.) Under YVWD's interpretation, any time the Watermaster adopts a rule, it can be challenged by a subsequent challenge trying to rescind the rule—which is exactly what YVWD did. This attempt would render the time limitations meaningless since YVWD has the ability via its nominee on the Watermaster to introduce resolutions to challenge rules and restart the clock on challenging years-old decisions. This appears an attempt to get around the time limitations. However, YVWD is correct that the court apparently has jurisdiction on its own motion to consider these issues.

As to the Morongo Band's "statement," to the extent that Morongo seeks affirmative relief, it should file its own motion. Based on the information provided, Morongo has no current controversy to adjudicate. To the extent that Morongo seeks to sell its surplus water, that issue is not currently before the court.

Legal authorities and analysis: The California Constitution, Article X, §2, limits water rights to reasonable and beneficial uses. (City of Santa Maria v. Adam (2012) 211 Cal.App.4th 266, 277-278.) The state owns the groundwater in that it has the right to supervise and regulate water use, while water rights holders do not own the water, but rather, have the right to use the water as long as they do not waste it. (Ibid. at 278.) The reasonable and beneficial use "consideration applies to all water users, regardless of the source from which their rights are grounded [citation], because no party has a protectable interest in the unreasonable use of water." (Antelope Valley Groundwater Cases (2021) 62 Cal.App.5th 992, 1024–1025, review denied (July 21, 2021).)

Water rights in an underground basin are classified as overlying, appropriative or prescriptive. (City of Barstow v. Mojave Water Agency (2000) 23 Cal.4th 1224, 1240.) An overlying right is based on land ownership and provides the right to take underground water for use on his land, similar to a riparian owner. (Ibid.) An overlying rights holder has superior and priority rights over those who do not have priority but are limited "to a reasonable beneficial use." (Ibid.) An appropriator right is the actual taking of surplus water, but yield to the overlying right holder when there is a shortage. (Id. at 1241.) A prescriptive right is the taking of water (that is not surplus) that is "actual, open and notorious, hostile and adverse to the original owner, continuous and uninterrupted for the statutory period of five years, and under claim of right." (Id.)

As to Rule 7.3, under the Judgment, the court's review is de novo, and the decision is final and binding on the Watermaster and parties. (Amended Judgment, ¶VII.6.D.)

The Judgment creates the "Physical Solution," in which the purpose "is to establish a legal and practical means for making the maximum reasonable beneficial use of the waters of Beaumont Basin, to facilitate conjunctive utilization of surface, ground and Supplemental Waters, and to satisfy the requirements of water users having rights in, or who are dependent upon, the Beaumont Basin. Such Physical Solution requires the definition of the individual rights of all Parties within the Beaumont Basin in a manner which will fairly allocate the native water supplies and which will provide for equitable sharing of costs of Supplemental water." (Amended Judgment, ¶V.1.) It requires flexibility. (Amended Judgment, ¶V.2.) It is to address all production and storage within the Basin. (Amended Judgment, ¶V.3.) "Because the Beaumont Basin is at or near a condition of Overdraft, any Production outside the framework of this Judgment and Physical Solution will potentially damage the Beaumont Basin, injure the rights of all Parties, result in the waste of water and interfere with the Physical Solution." (Ibid.) The Judgment created the Watermaster, who has "discretionary powers to develop and implement a groundwater management plan and program." (Amended Judgment, ¶VI.2.) Except for the overlying parties exercising their rights, "groundwater extractions and the replenishment thereof, and the storage of Supplemental Water, shall be subject to procedures established and administered by the Watermaster." (Ibid.) This includes "[t]he monitoring of groundwater levels, ground levels, storage, and water quality." (Amended Judgment, ¶VI.5.G.) While YVWD asserts that the Judgment did not allow for the creation of Rule 7.3, the Judgment gave the Watermaster broad discretion to implement a groundwater management plan. Rule 7.3 is merely the process. The issue is whether in implementing Rule 7.3 does it currently violate the goals of the physical solution.

"A physical solution is an equitable remedy designed to alleviate overdrafts and the consequential depletion of water resources in a particular area, consistent with the constitutional mandate to prevent waste and unreasonable water use and to maximize the beneficial use of this state's limited resource. (Cal. Const., art. X, § 2.) Courts are vested with not only the power but also the affirmative duty to suggest a physical solution where necessary, and it has 'the power to enforce such solution regardless of whether the parties agree.' " (California American Water v. City of Seaside (2010) 183 Cal.App.4th 471, 480.)

Rule 7.3 provides:

> Except as provided for in Section 7.0 herein, to the extent that groundwater pumping by an overlying party to the Judgment does not exceed five times the share of safe yield assigned to the overlying party during any five- year period (see column 4 of Exhibit B to the Judgment), the amount of groundwater not produced by such overlying party pursuant to its rights under the Judgment shall be available for allocation to the appropriator parties in accordance with their respective percentage shares of unused safe yield (see column 3 of Exhibit C to the Judgment). The availability and allocation of any such groundwater not produced by the overlying parties in accordance with their rights under the Judgment shall be first determined in fiscal year 2008/09 and every year thereafter.
>
> ...
>
> Groundwater not produced by the overlying parties in accordance with their rights under the Judgment and determined to be available for allocation to the appropriator parties pursuant hereto may be utilized by the appropriator parties in accordance with the terms of the Judgment and these Rules and Regulations. Neither this rule nor its operation shall be deemed or construed in any way to change, limit, or otherwise affect any rights awarded to and held by the overlying parties pursuant to the Judgment. Nor shall this rule or its operation result in any liability to the overlying parties or be deemed or construed as a

transfer, assignment, forfeiture, or abandonment of any overlying rights under the Judgment.

(Zoba Decl., Ex. J.)

Under the Amended Judgment, overlying parties have the right to exercise their overlying rights. (Amended Judgment, ¶III.1 and ¶III.3.A.) The only limitation is if an overlying party seeks water service from an appropriator party (i.e. the four public entities—City of Banning, BCVWD, SMWC and YVWD), "an equivalent volume of potable groundwater shall be earmarked by the Appropriator Party which will serve the Overlying Party, up to the volume of the Overlying Water Right...for the purpose of serving the Overlying Party. The intent of this provision is to ensure that the Overlying Party is given credit towards satisfying the water availability assessment provisions of Government Code, Section 66473.7 et seq. and Water Code, Section 10910 et seq. or other similar provisions of law, equal to the amount of groundwater earmarked hereunder." (Amended Judgment, ¶III.3.B.) Both Government Code §66473.7 and Water Code §10910 et seq. require specific water supplies to be identified during specific phases of development. (Preserve Wild Santee v. City of Santee (2012) 210 Cal.App.4th 260, 283.) The Amended Judgment further provides that once the water is earmarked for the appropriator, the overlying party forbears the use of that water, and the appropriator has the right to produce that foregone water of the overlying party. (Amended Judgment, ¶III.3.C.)

The Amended Judgment specifically also addresses Oak Valley, which was developing the property. (Amended Judgment, ¶III.3.G.) It acknowledged that the future water supply needs will exceed their production. As a result, YVWD asserts that this violates the storage limitations because storage within the Beaumont Basin is limited to supplemental water. (Rule 7.3 Motion, opening memo., p. 11.) Supplemental water is imported water. (Amended Judgment, ¶I.3.Z.) The parties are enjoined from storing supplemental water in the Basin for withdrawal, or causing withdrawal of water stored by that party except pursuant to a written groundwater storage agreement with the Watermaster (i.e. "stored water" which is defined as supplemental water stored in the basin pursuant to a groundwater storage agreement with the Watermaster) and in accordance with the Watermaster Rules and Regulations. (Amended Judgment, ¶I.3.Y, ¶II.2.) Supplemental water not stored pursuant to a Groundwater Storage Agreement is deemed abandoned and not stored water. (Amended Judgment, ¶II.2.)

Thus, while the Amended Judgment specifically contemplates storage of supplemental water pursuant to a written agreement and abandoned water, it does not preclude the storage of unused surplus water—it is merely silent. However, as discussed above, the Watermaster has broad discretion to implement a groundwater management plan. The Amended Judgment permits the court "to make such further or supplemental order or directions as may be necessary or appropriate...for interpretation, or enforcement or carrying out of this Judgment, and to modify, amend or amplify any of the provisions of this Judgment or to add to the provisions hereof consistent with the rights herein decreed...." (Amended Judgment, ¶IV.) The only limitation to the court's jurisdiction is a redetermination of the safe yield during the first ten years and the fractional shares of each appropriator. (Ibid.)

YVWD also argues that because the Appropriators are not required to use the reallocated water, it accumulates in their storage accounts and has not been put to benefit use, i.e. an improper stockpile. There is nothing per se improper about carry over surplus water. For example, in Antelope Valley Groundwater Cases (2021) 62 Cal.App.5th 992, 1039-1040 (review denied 7/21/21), the judgment imposed a limitation on transfers of waters, which the appellant contended violated the reasonable and beneficial use requirements because the water was being stored rather than provided to appellant. The court rejected that argument contending that there was evidence that the transfer and storage maximized available water as it was essential in the management of the basin and restore groundwater levels. (Id.) Here, YVWD provides no

evidence that the long-term management of the Beaumont Basin is mismanaging the replenishment of the water. Furthermore, as it is clear from the request for judicial notice, California is currently in a historic drought. While YVWD asserts that this is a red herring, it provides no evidence that in light of the current drought, replenishment and maintaining supplies of water is not reasonable and beneficial to the long term health of the basin.

What YVWD appears to have an issue is that with the accumulation of storage "credits" without a reflection of the actual amount of water stored in the basin since water losses were not accounted. First, YVWD's position is still speculative. While it is no doubt concerning that the Watermaster has not yet determined the rules for what would happen if this occurred, it has yet to occur. Second, it is not clear how storage credits is a terrible solution, when compared to YVWD's solution. YVWD's intent, based on its concurrent motion, is to obtain all of Oak Village's overlay water rights as of now because the development's water usage will increase and cause a financial burden to it. (Zoba Decl. ¶20-22, 25.) Either YVWD intends to use all of Oak Village's allotment of 1,398.90 AF now, or seek credit for the unused allotment. Under the latter, it is the same scenario currently in place—with the only distinction is that the credit goes solely to YVWD and not the other appropriators. Under the former, it is not clear to me how this is a reasonable and beneficial use (as will be discussed in regards to the next motion).

There is currently no evidence presented that the other appropriators are using the credits. There is no evidence that the use of storage credits rather than allowing immediate withdrawal of the water is reasonable and beneficial use. As such, YVWD's motion to rescind Rule 7.3 is denied.

As to amending the 2019 Annual Report to Adjust Water Rights

The main issue presented by this motion is whether YVWD is entitled to Oak Valley's full amount of overlying water rights allocation. The parties dispute whether the Amended Judgment provides limitations. While the various opposing appropriator parties contend that there are limitations, quoting various provisions, including: "To the extent any Overlying Party requests, and uses its Exhibit "B", Column 4 water to obtain water service from an Appropriator Party...." (Amended Judgment, ¶III.3.B.) Such limitations do not appear in the Amended Judgment. The Amended Judgment was written broadly to provide flexibility.

The dispute is on the impact of Resolutions 2017-02 and 2019-02. Resolution 2017-02 acknowledged Oak Valley's intent to have its overlying rights listed in parcels to YVWP when water service is provided to those parcels. (Zoba Decl., Ex. E.) The Watermaster approved the transfer of the overlying water rights to the parcels. There is no dispute that YVWP supported this resolution. Zoba, in reply, asserts he interpreted this as overlying rights to be transferred as a group and not specific parcels. (Reply Zoba Decl. ¶7.) However, that does not appear to be a reasonable interpretation because the resolution specifically states, "OVP's property consists of numerous assessor parcels....Section III, 3(G) of the Adjudication [i.e. Judgment] outlines OVP's intended development of its property and specifies the process that OVP may utilize to arrange the transfer of its Overlying Water Rights to particular development parcels eventually to be serviced by one or more retail water service providers upon annexation..." Throughout the resolution, the specific parcels are mentioned by APN numbers. It also provides "Once OVP...secures commitments from the Yucaipa Valley Water District to provide water service to the development phases of the Project, and when water service is provided to the designated Project parcels, then the overlying water rights for those Project parcels shall be transferred to YVWD. YVWD shall report to Watermaster when it has provided retail water service to various properties making up portions of the Project...." Thereafter, YVWD sent letters confirming transfer of the overlying rights based on specific tracts. (Zoba Decl., Ex. G-H.)

In 2019, the Watermaster adopted Resolution 2019-02 which replaced Section 7 of the Watermaster Rules and Regulations, and adopted Form 5. (Zoba Decl., Ex. J.) Rule 7.0 merely reiterates the Judgment, ¶III.3.) When there is an adjustment of rights, Rule 7.1 requires overlying parties and appropriators to file Form 5 with the Watermaster, who then maintains an accounting.

Form 5 merely identifies the overlying party and appropriator, and how much earmarked water is transferred to the appropriator when the overlying party receives service. YVWD asserts that this demonstrates that it is development specific rather than parcel specific, and that there is no discretion on the Watermaster. The Watermaster has broad discretion under the Amended Judgment, and Resolution 2017-2 was never rescinded or modified. The only issue is the discrepancy between Resolution 2017-2 and Form 5, as the latter does not identify parcel numbers and merely indicates service. The lack of clarity in Form 5 does not suggest that the requirements of Resolution 2017-2 were not sufficient. By YVWD's admission, it complied with Resolution 2017-2 up until Form 5 was adopted.

The Amended Judgment provides discretion in the implementation and management of the Physical Solution. Under YVWD's proposed interpretation, as long as it began service anywhere in the development, it is entitled to the entire allotment of Oak Valley's overlying rights even if only a small portion of the land was actually being developed. Water rights, even overlying rights holders, are subject to reasonable and beneficial use. By linking it to the specific parcels, it ensures that the water will be used in a reasonable and beneficial manner.

The Amended Judgment provides that the overlying party's "groundwater shall be earmarked to the Appropriator Party...for the purpose of serving the Overlying Party." (Amended Judgment, ¶III.3.B (emphasis added).) "When an overlying Party receives water service...the Overlying Party shall forebear the use of that volume of the Overlying Water Right earmarked by the Appropriator Party." (Amended Judgment, ¶III.3.C.) Here, YVWD asserts it entered into an agreement with Oak Valley to provide service. (Zoba Decl. ¶7-17, Ex. J.) Based on the first sentence, the water earmarked is for the purpose of serving the overlying party, i.e. Oak Valley. YVWD asserts it is entitled to the entire allocation of Oak Valley's water since 10/9/18, i.e. the date it commenced service to Oak Valley. (Zoba Decl. ¶14.) Assuming arguendo that the earmarks are triggered merely by service to the development rather than individual parcels, YVWD fails to demonstrate that the entire 1,398.90 AF could even be used for the Oak Valley development. In 2018 and 2019, only .11 AF and 63.92 AF were used respectively. Even in 2020, only 215.49 AF was used. (Zoba Decl. ¶20.) It is not clear why YVWD would be entitled to use the excess water. The only reasonable explanation is that YVWD intends to use Oak Valley's overlying rights to support the entire district—not just Oak Valley which is a limitation based on the Amended Judgment. YVWD fails to explain how using the entire 1,398.90 AF is reasonable and beneficial when the Oak Valley development does not need the entire amount based on YVWD's own estimate. YVWD's estimates indicate that at most, 2022 may use almost nearly the entire overlying rights water demand, but it is reduced by 2023. (Zoba Decl. ¶20.) While actual use and overlying rights are not the same concept and do not need to be identical, here there are too many concerns to provide the full allotment of Oak Valley's overlying rights to YVWD.

The proposed draft of 2019 Annual Report indicates that the allocations for the four assignments between 2018-2019 total 183.05 AF, which is what YVWD seeks to amend. There does not appear to be reason to amend the report in light of these issues.

PROOF OF SERVICE

STATE OF CALIFORNIA, COUNTY OF ORANGE

San Timoteo Watershed Management Authority v. City of Banning, et al.

Case No. RIC389197

I am employed in the County of Orange, State of California. I am over the age of 18 years and not a party to the within action. My business address is **AlvaradoSmith, 1 MacArthur Place, Santa Ana, CA 92707**.

On September 13, 2021, I served the foregoing document described as **NOTICE OF ENTRY OF ORDER RE YUCAIPA VALLEY WATER DISTRICT'S MOTIONS SEEKING: I) AN ORDER DIRECTING THE BEAUMONT BASIN WATERMASTER TO AMEND THE 2019 ANNUAL REPORT TO ADJUST OAK VALLEY PARTNER LP'S OVERLYING WATER RIGHTS AND YVWD APPROPRIATIVE WATER RIGHTS, AND II) AN ORDER RESCINDING BEAUMONT BASIN WATERMASTER RULE 7.3** on the interested parties in this action.

☒ by placing the original and/or a true copy thereof enclosed in (a) sealed envelope(s), addressed as follows:

SEE ATTACHED SERVICE LIST

☒ **BY REGULAR MAIL:** I deposited such envelope in the mail at 1 MacArthur Place, Santa Ana, California. The envelope was mailed with postage thereon fully prepaid.

I am "readily familiar" with the firm's practice of collection and processing correspondence for mailing. It is deposited with the U.S. Postal Service on that same day in the ordinary course of business. I am aware that on motion of the party served, service is presumed invalid if postal cancellation date or postage meter date is more than one (1) day after date of deposit for mailing in affidavit.

BY THE ACT OF FILING OR SERVICE, THAT THE DOCUMENT WAS PRODUCED ON PAPER PURCHASED AS RECYCLED.

☒ **BY ELECTRONIC SERVICE:** Based on a court order or an agreement of the parties to accept service by electronic transmission, I caused the documents to be sent to the persons at the electronic notification address listed in the Service List.

☐ **BY FACSIMILE MACHINE:** I Tele-Faxed a copy of the original document to the above facsimile numbers.

☐ **BY OVERNIGHT MAIL:** I deposited such documents at the GLS Overnight or Federal Express Drop Box located at 1 MacArthur Place, Santa Ana, California 92707. The envelope was deposited with delivery fees thereon fully prepaid.

☐ **BY PERSONAL SERVICE:** I caused such envelope(s) to be delivered by hand to the above addressee(s).

☒ (State) I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

☐ (Federal) I declare that I am employed in the office of a member of the Bar of this Court, at whose direction the service was made.

Executed on September 13, 2021, at Santa Ana, California.

DONNA F. HEFLIN

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SANTA ANA

SERVICE LIST

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California Oak Valley Golf and Resort, LLC Huey-Min Yu 16124 Glencove Drive Hacienda Heights, CA 91745 (Agent for Service of Process)	*Via U.S. Mail*

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Shopoff Realty Investments 2 Park Plaza, #700 Irvine, CA 92614	*Via U.S. Mail*
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Appendix B

Beaumont Basin Watermaster Minutes for the Regular and Special Committee Meetings held in 2021

Record of the Minutes of the
Beaumont Basin Committee Meeting of the
Beaumont Basin Watermaster
Regular Meeting
Wednesday, February 3, 2021

Meeting Location:

There was no public physical meeting location due to the coronavirus pandemic.
Meeting held via video teleconference pursuant to:
California Government Code Section 54950 et. seq. and
California Governor's Executive Orders N-29-20 and N-33-20

I. Call to Order

Chairman Arturo Vela called the meeting to order at 10:01 a.m.

II. Roll Call

City of Banning	*Arturo Vela*	*Present*
City of Beaumont	*Jeff Hart*	*Present*
Beaumont-Cherry Valley Water District	*Daniel Jaggers*	*Present*
South Mesa Water Company	*George Jorritsma*	*Present*
Yucaipa Valley Water District	*Joseph Zoba*	*Present*

Thierry Montoya was present representing legal counsel for the Beaumont Basin Watermaster (BBWM). Hannibal Blandon and Thomas Harder were present as engineers for the BBWM.

Members of the public who registered and / or attended:
Lance Eckhart, San Gorgonio Pass Water Agency
Mark Swanson, Beaumont-Cherry Valley Water District
Erica Gonzales, Beaumont-Cherry Valley Water District
Allison Edmisten, Yucaipa Valley Water District
Luis Cardenas, City of Banning
Michele Staples
Steve Anderson
Jennifer Ayres, Yucaipa Valley Water District
Steven Lehtonen, San Gorgonio Pass Water Agency
Brian Rupp
Todd Parton, City of Beaumont
David Fenn, Councilmember, City of Beaumont
John Ohanian, Oak Valley Partners
Greg Newmark
Lloyd White, City of Beaumont
Loni Granlund, Yucaipa Valley Water District
John Bakker
Brandy Llanes, Beaumont-Cherry Valley Water District

Kristine Day, City of Beaumont
Ashley Gibson
Larry Smith, San Gorgonio Pass Water Agency

III. Pledge of Allegiance

Chair Vela led the pledge.

IV. Public Comments:

None.

V. Consent Calendar

1. Meeting Minutes for December 2, 2020

It was moved by Member Jaggers and seconded by Chair Vela to approve the Meeting Minutes of December 2, 2020:

AYES:	Hart, Jaggers, Jorritsma, Vela, Zoba
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

VI. Reports

A. Report from Engineering Consultant – Hannibal Blandon, ALDA Engineering

Mr. Blandon recommended including in the annual report a section to document and track the changes that have occurred in previous years.

B. Report from Hydrogeological Consultant – Thomas Harder, Thomas Harder & Co.

Mr. Harder noted he would be reporting later in the meeting.

C. Report from Legal Counsel – Thierry Montoya, Alvarado Smith

Mr. Montoya said that since the last meeting, he had conversations with Michele Staples regarding the water transfer request of Brian Rupp and the I-10 entities, which has now been taken off calendar.

VII. Discussion Items

A. Reorganization of the Beaumont Basin Watermaster Committee – Chairman, Vice Chairman, Secretary and Treasurer

Recommendation: That the members of the Watermaster either reaffirm the existing officers or conduct nominations for the appointment of new officers of the Beaumont Basin Watermaster.

It was moved by Member Jaggers and seconded by Member Zoba to continue with the current officers:

- *Chair Arturo Vela*
- *Vice Chair George Jorritsma*
- *Secretary Dan Jaggers*
- *Treasurer Joe Zoba*

and approved by the following vote:

AYES:	Hart, Jaggers, Jorritsma, Vela, Zoba
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

B. Status Report on Water Level Monitoring throughout the Beaumont Basin through January 18, 2021

Recommendation: Presentation - No recommendation

Mr. Blandon reviewed the report and advised the Committee that Yucaipa Well No. 34 experienced a sudden drop in water level likely due to a probe malfunction. A similar drop was recorded at Banning Well M-9, likely due to a communications cable issue, he said. Mr. Jaggers asked Mr. Blandon to document the data discrepancies and to report on the follow up to the repairs.

Mr. Blandon advised the Committee that the level logger at Yucaipa Well No. 34 which had disappeared has now been replaced. There are no equipment needs at this time, he said.

Mr. Zoba indicated that at Well 34, some of the equipment may have dropped down into the well.

C. Monitoring Sites – Safety and Security

Recommendation: No recommendation; informational only

Mr. Blandon explained the parts and workings of the monitoring mechanisms. He provided the Committee with a PowerPoint tour of well locations and reassured that all the locations are very secure.

Ms. Jennifer Ayres of YVWD acknowledged the extra security measure at Well 34 to prevent the equipment from falling into the well. She indicated that YVWD may be able to retrieve the other items from the bottom of the well. Mr. Jaggers made recommendations.

D. A Comparison of Production and Allowable Extractions for Calendar Year 2020

Recommendation: No recommendation; informational only

Mr. Blandon shared the table of Production vs. Allowable Extractions and pointed out the Transfer of Overlying Rights from 2015 of 4,614 acre-feet (AF) and the Transfer of Overlying Rights from Oak Valley Partners to YVWD of 183 AF.

Blandon noted due to overproduction of the allowable extractions, 672 AF will have to come from the storage account. Chair Vela explained that historically, the City of Banning had not overproduced its allotment, but this storage impact may be the new norm for the City of Banning as there has been more housing production in the last two months that was seen in the last decade.

Production of 16,725 AF by appropriators in 2020 is the highest production in the Basin in recent years, Blandon stated. Mr. Jaggers reminded that BCVWD has validated numbers for production from wells co-owned with the City of Banning and those numbers will be forthcoming. Mr. Blandon confirmed that the adjustments will be reflected in this table, but the overall production will be the same.

Member Zoba pointed out that the table reflects a new concept. He said he had always seen the Watermaster as the accounting entity for reporting water in and water out at the end of the year. He said the table seems to imply that the transfer of overlying water rights from 2015 are actually the water utilized in 2020. He said he did not recall the Committee setting that forth as a policy and noted that it impacts the storage account.

Mr. Blandon pointed to the last item on the agenda (proposed Resolution 2021-01) and said this has been a carry-on since the beginning; in which underproduction by overliers is distributed among the various agencies. The annual report documents it back to 2004, with implementation for 2009 continuing to this day, Blandon explained.

Member Zoba asked if it was a policy of the Committee indicating it had agreed that the right is being consumed straightaway in the year that it is received – five years after the overliers do not use it. Mr. Blandon reiterated it has been like this since the beginning. Member Zoba responded that this table is only a couple of years old.

Chair Vela indicated that Member Zoba had made a good point that the 183 acre-feet inclusion in the table reflects the transfer but does not necessarily reflect the extraction of that water. Mr. Blandon explained he had developed the table about two and a half years ago to give appropriators an idea of where they are throughout the year. Mr. Blandon said the initial table did not include the lines related to the 183 acre-feet, or the storage impact line in the initial table as those items were not previously at issue.

Mr. Zoba suggested a table or discussion that tabulates the accrual of overlying water rights and consumption versus other stored water in the agencies' storage accounts. He noted that consumption is not broken out from storage, which implies that water is being utilized in the year it is received by the appropriator. Mr. Blandon explained the inclusion of the transferred overlying rights and storage impact lines and disagreed that the Table implied the water was actually consumed, which would be impossible to determine. The Table indicates how the storage accounts are closed at the end of the year, he said.

The table included in the Annual Report is different and summarizes this on a year-by-year basis, and calculates what the ending storage should be, Blandon continued. Member Zoba suggested future discussion on how the water is used at the storage accounts. He suggested that with overlying rights and unused overlying water rights transferred in, and the addition of supplemental water, that this is not put into a general fund and consumed in whatever proportions, but instead showing where the water is coming in and creating a table that shows from where the appropriators are pulling that water to better track what is happening in the basin and what supplies exist, where they exist from, and how that fits into the judgment.

Chair Vela pointed to the Facts About the Beaumont Basin Watermaster that had been included in previous agendas and Member Zoba said he would include it in the next packet.

Mr. Blandon said he was surprised by the higher production and shared a comparison of prior years. The 2020 production of 16,725 was the highest on record, he noted, and acknowledged Member Jaggers' point that it was probably significantly related to the fact that people are at home as the result of COVID-19. Mr. Jaggers added that there was a significant amount of grading going on for home sites, which is a one-time use of water and is not a long-term projection.

E. Task Order No. 17 – Progress Report

Recommendation: Presentation - No recommendation

Mr. Tom Harder provided brief background on the proposed amendment to Return Flow Methodology and addressed the comments received. He detailed the uncertainty in indoor/outdoor water use and recommended the continued use of the methodology described in the draft Technical Memorandum. He noted that the impacts will average over time and said he did not recommend accounting for sewer pipeline losses as the estimates vary widely and there is not a method available to quantify those losses.

Mr. Harder also posited that water use efficiency will be reflected in the ratio of delivered water to the wastewater treatment plant inflows. If there is less irrigation, then indoor water use will more closely match what is delivered to the treatment plant.

Harder described additional studies of the City of Banning and YVWD and explained the re-evaluation of landscape irrigation efficiency, recommending use of the single 75 percent efficiency value.

Member Zoba requested the opinion of engineers and legal counsel on the relationship to the judgment regarding which agency receives the return flow credit and why in order to produce policy.

Chair Vela asked about opportunity to fine-tune outdoor use estimates given the current ongoing work on Department of Water Resources residential landscape area measurement. Mr. Harder cautioned that with too much detail, uncertainty could become too great and the numbers meaningless, and said he would have to see what was proposed. Member Jaggers pointed to Beaumont's landscape ordinances and noted that there will be change over time. He said he would share data sets with this information.

F. 2019 Task Order No. 22

Recommendation: No recommendation; informational only

Mr. Harder reminded the Committee that the Board authorized ALDA to conduct an analysis of the potential impacts of return flow on groundwater quality in the Beaumont Basin, focused on total dissolved solids (TDS) or salts. He explained the analysis process and noted that the water quality in the Basin is very good with all wells in the range of 250 to 330 milligrams per liter (mg/L) which is low, and historically has changed very little.

Considered in the analysis was the exception of BCVWD Well No. 16 at the north part of the Basin in an area of active individual sewer systems, known to have impacted the groundwater quality, Harder stated.

Harder presented the preliminary water quality results and explained the projections. Basin-wide, he advised, the average is not projected to reach the 330 mg/L maximum benefit objective. Member Jaggers clarified that the septic system contribution to the groundwater basin around well No. 16 is what is exceeding the maximum objective. BCVWD is still extracting water and it is still within the drinking water standards, he stated. Harder agreed.

Member Zoba suggested that an agency credited with the return flow should absorb the liability of salt removal and make a contribution to maintain the TDS of the Basin to achieve the Basin Plan Objective. He suggested this would demonstrate to the Regional Water Quality Control Board that the Beaumont Basin is ahead of the curve in attaining the Maximum Benefit Objectives. He recommended keeping this concept together with the return flow analysis rather than just looking at the volume of wet water.

Member Jaggers agreed with Member Zoba and suggested attuned treatment to blend to a point of non-negative balance. He noted that each district recharges in the area differently and BCVWD is bringing in a salt-balancing component via imported water from a Basin-blended perspective.

Chair Vela acknowledged the relationship of the two task orders and asked about time frame for completion. Mr. Harder estimated that the Technical Memorandum would be finalized, or at least another draft ready, by the end of February to inform any potential policy concerns.

G. 2019 Revised Draft of the Beaumont Basin Watermaster Annual Report

Recommendation: No recommendation.

Mr. Jaggers made a point of order indicating that a communication from YVWD related to the 2019 Revised Draft was made available to the Board members but not made available to the public in potential violation of the Brown Act. Legal Counsel Montoya agreed and recommended it be re-agendized.

Chair Vela tabled the 2019 Revised Draft of the Beaumont Basin Watermaster Annual Report to a special meeting on February 18, 2021 at 10 a.m.

H. Discussion Regarding Task Order No. 23 with ALDA Inc. for the Preparation of the 2020 Consolidated Annual Report, Estimate of the Basin Safe Yield, Update of the Groundwater Model, and Associated Consulting Services for 2021

Recommendation: That the Watermaster authorizes up to 90 percent of the initial budget of $95,970 and uses the remaining 10 percent as a contingency.

Engineer Blandon reminded the Committee of discussion at the December 2, 2020 meeting and concerns raised about the cost. He explained the activities included at the same fee since 2017.

In the last few years, actual expenditures for similar tasks averaged 90 percent of the budget, Blandon explained. He recommended the Committee authorize up to 90 percent of the budget and use the remaining amount as contingency. Chair Vela indicated support.

It was moved by Member Jaggers and seconded by Member Jorritsma authorizing up to 90 percent of the initial budget of $95,970 and use of the remaining 10 percent as a contingency as outlined in Memorandum 21-08. The motion was approved by the following vote:

AYES:	Hart, Jaggers, Jorritsma, Vela, Zoba
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

I. Consideration of Resolution 2021-01 Amending Section 7 of the Rules and Regulations of the Watermaster by eliminating Rule 7.3[1] Availability of Unused Overlying Production and Allocation to the Appropriator Parties

Recommendation: That the Watermaster Committee adopts Resolution No. 2021-01.

The Resolution was NOT adopted.

Member Joe Zoba advised that the retailers in the San Gorgonio Pass Water Agency are beginning to develop the Regional Urban Water Management Plan that is due later this year and have been asked to look at ways to reduce reliance on the Delta.

In 2008, the Watermaster Committee approved Rule 7.8 to lay claim to unproduced groundwater from the overlying parties and allocating that water supply to the appropriators, Zoba explained. Water not used by an overlier, five years later gets distributed per the allocation table.

Zoba expressed concern that there is claim to groundwater supplies that is increasing. He reminded the Watermaster Committee that that there has been previous discussion about transfer and acquisition of overlying water rights. He read from Rule 7.8:

> *Neither this rule nor its operation shall be deemed or constructed in any way to change, limit or otherwise affect any rights awarded to and held by the overlying parties pursuant to the Judgment. Nor shall this rule or its operation result in any liability to the overlying parties or be deemed or construed as a transfer, assignment, forfeiture, or abandonment of any overlying rights under the Judgment.*

Mr. Zoba opined that the Committee has seen some of that in past discussions and said the application of the rule concerns him from an application and use perspective. He pointed to the staff report of September 9, 2008 and pointed out there were last minute changes as recommended by Best Best & Krieger (BB&K), counsel for the overlying parties, regarding the change of the word "transfer" to "allocate" throughout.

He pointed out that via allocation using the table in Rule 7.8, there is now close to 90,000 AF of water in the Basin that has been claimed through this methodology, waiting to be extracted by the appropriators,

[1] Resolution 2019-02 modified the Rules and Regulations of the Beaumont Basin Watermaster resulting in a numbering change of former Rule 7.8 to current Rule 7.3.

but the water levels are not going up. He questioned whether there would be adverse impacts as each one of the appropriators tries to extract the water to meet future demands.

Zoba presented four charts of unused overlying water and indicated concern that if no additional water were added, by 2022 the full storage account could theoretically be made up of the unused overlying water right. He suggested that Rule 7.8 as now stated should be rescinded as it does not serve its purpose and is not consistent with the Judgment, and said he is concerned with the overall operational health of the Basin.

Mr. Zoba made the motion to adopt Resolution 2021-01. Member Hart requested legal counsel input.

Counsel Thierry Montoya indicated he had no concern with the legality of Rule 7.8 or 7.3: an appropriative right, as a matter of law, is limited to what is surplus in the Basin, he explained. An overlying party does not necessarily lose its overlying right but can lose amounts of water not pumped, which then go to the appropriators based on their allocation. That is legal, he advised, and is consistent with the purpose and intent of the Judgment. The purpose of the Judgment is to have a legal and practical means for making maximum, reasonable beneficial use of the Beaumont Basin for the benefit of all of those who have rights, he stated. Rule 7.8 was vetted by the public as noted and commented on by Pater Garcia of BB&K, and there has been no overlying party objection, Montoya continued.

Mr. Montoya reminded the Committee about an ad hoc group meeting two years ago to go over the rules and regulations, and modifications were presented to the Watermaster noting that all were of the opinion that it was consistent with the Judgment. Mr. Montoya added that he is still of the opinion that Rule 7 is consistent with the Judgment and explained it is consistent with water rights law. He said he sees no harm to the Basin and said he did not concur with the recommendation. Montoya further stated that he did not think that anything improper had happened, and the appropriator should continue to have the right to pick up surplus to the extent that it exists and to put it to use.

Member Jorritsma asked how the original 160,000 AF of temporary surplus under the Judgment relates to the current question and reflects on the charts provided by Member Zoba. Member Zoba referred to the table 3-8 tracking the additions to the storage accounts and noted that it was mentioned earlier that extractions (i.e., the water being consumed) are not tracked. Overliers will lose their water and it is claimed by the appropriators after five years, but there is no tracking or demonstration that shows it is being put to beneficial use, Zoba noted. He asked why the overliers lose this after five years but there is no similar rule for the appropriators who are not putting the water to

beneficial use? The temporary surplus was a separate item, Zoba said, but similarly was not tracked for beneficial use or if it is still in storage accounts at all.

Chair Vela suggested that the table accounting for each agency's production is tracking beneficial use. Zoba responded that the increase in the storage accounts is largely associated with the unused overlying water rights so that if the water was being used, there would not be 90,000 AF in storage. A positive number remaining over the years means it is not being put to use, he opined. Member Zoba added that he believes the water is not being tracked appropriately to be able to make statements about putting water to beneficial use and about some people losing water and others not losing water.

Chair Vela posited that the amount of unused overlying water right moving into the future is going to be less than today as transfers move forward due to overlying water right transfers. Mr. Zoba said he agreed in theory . He said he believes that the filing of the Form 5 by Oak Valley Partners is consistent with the Judgment and should be removed from the table but is instead allocated to the other appropriators. Member Jaggers pointed out the analysis is over simplistic and pointed to the Urban Water Management Plan. He said this table allows for the Basin to be understood moving though time to assure there is not more extraction. Jaggers indicated that his thoughts parallel those of Mr. Montoya.

Member Jaggers made an alternative motion to reject Resolution 2021-01 based on legal counsel's recommendation.

Chair Vela pointed out there are many unknowns not reflected in the graphs such as development trends.

Chair Vela invited public comment.

City of Beaumont Councilmember David Fenn said he believes that unused water from the Basin should continue to be allocated back to the other overliers within the Basin with the purpose that Basin water should be used within Basin boundaries only. As a Beaumont resident, he continued, he is concerned that any water from the Basin could ultimately end up being used outside of the boundaries and that could cause problems with sustainability. He said he agreed with counsel and suggested that if it were to move forward, there should be additional information and research done, and perhaps discussion with water rights owners to assure parallel with the adjudication and if changes made may open up that adjudication for other changes. He recommended following the advice of counsel and not delete Rule 7.3.

Mr. Harder said that as a hydrogeologist and from a water balance perspective, Mr. Zoba has brought up some good points, one thathas been on his mind for quite a while. The annual reports look at physical storage in the Basin and indicated concern with comparing what is physically changing in the Basin with what is actually going on paper in terms of storage accounts. Additionally, water losses are not accounted for, he pointed out. He said he pictures this as a "run on the bank" where all the water was removed. He wondered what would happen physically in the basin if everybody drew their storage accounts to zero and if there would be undesirable results. He explained that potential adverse circumstances should be thought about so as to be avoided. Mr. Harder also noted that while current groundwater levels in the Basin are stable and going up, they are not going up commensurately with artificial recharge and accounting for storage accounts.

Mr. Blandon said his thoughts are aligned with Mr. Harder's and acknowledged Mr. Zoba's point in terms of whether the storage accounts are real water. He said that he and Mr. Harder had discussed this issue in terms of storage losses. He pointed out that the issue of accounting for water storage losses as a result of imported water spreading has been a "future agenda item" for two years but hasn not been addressed. It is a delicate issue because it implies loss of water which was paid for, he noted, but the issue of overlying transfers combined with the issue of storage losses is an issue that must be addressed sooner or later and must be faced by the Basin managers because the water may not physically be there. He wondered if the basin would be impacted negatively.

Mr. Montoya referred to comments by Councilmember Fenn and said he did not think the Judgment would accommodate a use outside of the Basin boundaries. Pursuant to the Judgment, if there was an attempt to do that, it could be enjoined, he opined.

Chair Vela acknowledged Member Zoba's point and indicated this is something at which the Committee should continue to look, but at this point it is not appropriate to jump to approval of the resolution relating to elimination of the Rule as a whole,.

It was moved by Member Zoba to adopt Resolution 2021-01 Amending Section 7 of the Rules and Regulations of the Watermaster by eliminating Rule 7.3 Availability of Unused Overlying Production and Allocation to the Appropriator Parties. The motion died for lack of a second.

Alternative Motion

It was moved by Member Jaggers and seconded by Member Hart to reject Resolution 2021-01 Amending Section 7 of the Rules and

Regulations of the Watermaster by eliminating Rule 7.3 Availability of Unused Overlying Production and Allocation to the Appropriator Parties. The motion was approved 4-1 by the following vote:

AYES:	Hart, Jaggers, Jorritsma, Vela
NOES:	Zoba
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

Resolution 2021-01 was NOT adopted.

VIII. Topics for Future Meetings

a. Development of a methodology and policy to account for groundwater storage losses in the basin resulting from the artificial recharge of water resources.

b. Development of a methodology and policy to account for recycled water recharge.

c. Develop policies and procedures to formalize the process for agenda preparation.

d. 2020 initial draft Annual Report (April 7, 2021)

IX. Comments from the Watermaster Committee Members

None.

X. Announcements

a. The next regular meeting of the Beaumont Basin Watermaster is scheduled for Thursday, February 18, 2021 at 10:00 a.m.

b. Future Meeting Dates:

i. Wednesday, April 7, 2021 at 10:00 a.m.

ii. Wednesday, June 2, 2021 at 10:00 a.m.

iii. Wednesday, August 4, 2021 at 10:00 a.m.

iv. Wednesday, October 6, 2021 at 10:00 a.m.

v. Wednesday, December 1, 2021 at 10:00 a.m.

XI. Adjournment

Chairman Vela adjourned the meeting at 12:15 p.m.

Attest:

Daniel Jaggers, Secretary
Beaumont Basin Watermaster

Record of the Minutes of the
Beaumont Basin Committee Meeting of the
Beaumont Basin Watermaster
Special Meeting
Thursday, February 18, 2021

Meeting Location:

There was no public physical meeting location due to the coronavirus pandemic. Meeting held via video teleconference pursuant to: California Government Code Section 54950 et. seq. and California Governor's Executive Orders N-29-20 and N-33-20

I. Call to Order

Chairman Arturo Vela called the meeting to order at 10:00 a.m.

II. Roll Call

City of Banning	*Arturo Vela*	*Present*
City of Beaumont	*Jeff Hart*	*Present*
Beaumont-Cherry Valley Water District	*Daniel Jaggers*	*Present*
South Mesa Water Company	*Dave Armstrong*	*Present*
Yucaipa Valley Water District	*Joseph Zoba*	*Present*

Thierry Montoya was present representing legal counsel for the Beaumont Basin Watermaster (BBWM). Hannibal Blandon was present as engineer for the BBWM.

Members of the public who registered and / or attended:
Lance Eckhart, San Gorgonio Pass Water Agency
Mark Swanson, Beaumont-Cherry Valley Water District
Erica Gonzales, Beaumont-Cherry Valley Water District
Jennifer Ares, Yucaipa Valley Water District
Robert Vestal, City of Beaumont
Bryan Brown
Greg Newmark
Logan Largent
Madeline Blua
Mike Kastelecky
Thaxton Van Belle, City of Beaumont

III. Pledge of Allegiance

Chair Vela led the pledge.

IV. Public Comments: *None.*

V. Consent Calendar

1. Meeting Minutes for February 3, 2021

BBWM Secretary Dan Jaggers reported that comments on the minutes were received and recommended continuance of this item to the next meeting. The item was continued to the next meeting.

VI. Reports

A. Report from Engineering Consultant – Hannibal Blandon, ALDA Engineering

Mr. Blandon reported that the water level probes at YVWD No. 34 and Banning M9 were replaced as discussed at the last meeting and are now working fine.

B. Report from Hydrogeological Consultant – Thomas Harder, Thomas Harder & Co.

No report.

C. Report from Legal Counsel – Thierry Montoya / Keith McCollough - Alvarado Smith

Mr. Montoya reported that he provided an opinion to Mr. Jaggers to ensure that requirements of the Brown Act are being met regarding documents available to the public.

VII. Discussion Items

A. 2019 Revised Draft of the Beaumont Basin Watermaster Annual Report – Presentation of Comments

Recommendation: That the Watermaster Committee approve the Revised Draft of the 2019 Annual Report

Member Jaggers pointed to the report section on Comments by the YVWD*, and expressed concern that some of the referenced attachments to Mr. Zoba's February 1, 2021 letter were not available to the public on the website. Member Zoba indicated the draft minutes are available in the meeting packets and are posted to the website once approved. He noted that in addition to YVWD, other agencies provided comments which were summarized by Mr. Blandon in Memorandum 21-12.*

Mr. Blandon clarified that the attachments represented 168 pages and made the file too large to email, hence the reference to the BBWM website. Member Jaggers stated for the record that the August 27, 2020 draft special meeting minutes and the October 7, 2020 draft meeting

minutes are attached to the December 2, 2020 agenda packet; and the December 2, 2020 draft meeting minutes are attached to the February 3, 2021 packet.

In response to Mr. Jaggers, Member Zoba indicated that he was confident that accurate draft minutes were included in the packets and were provided to the public. Mr. Montoya stated that if the documents are publicly available, the Brown Act requirements have been met. He advised that the YVWD comments and letter in entirety is part of the record. He suggested using a BBWM DropBox account and providing a link and recommended full and complete attachments as part of the meeting materials. Mr. Zoba suggested attaching all agencies' comments to the annual report to build an administrative record. Mr. Jaggers indicated he was satisfied that the Brown Act requirements have been met and Counsel Montoya concurred. Engineer Blandon advised that he will now include relevant pages related to comments received.

Mr. Blandon provided an overview of documentation and concerns about the transfer of the Oak Valley Partners, L.P. (OVP) 183.5 acre-feet of overlying water rights to YVWD in 2018 and 2019 as addressed in the Revised Draft Report dated December 12, 2020. He noted that the OVP transfer to YVWD available for 2019 remained as initially documented in the initial draft.

Comments were received on the Revised Draft, Blandon noted, and were categorized as related or unrelated to Annual Report Section 3.4.2. He highlighted the comments unrelated which were storage issues, the Basin southern boundary, and changes in production numbers for Banning C4 and BCVWD deliveries allocated to Banning in 2018 and 2019.

Blandon reviewed Production Tables and pointed out a discrepancy of less than 1 acre-foot between the numbers submitted by BCVWD and Banning, which will be addressed in the next few days. The changes affect storage balances, he explained, and reviewed the Storage Summary for 2019.

Mr. Blandon detailed comments related to Section 3.4.2 provided by the City of Beaumont, City of Banning, BCVWD and YVWD and explained the edited Report. Transfers of overlying rights from OVP to YVWD available for 2019 remained as initially documented in the initial draft at a combined total of 183.05 acre-feet, he stated. All meeting minutes for 2019 plus a copy of the Form 5 will be included in the Report, Blandon noted.

Mr. Blandon summarized comments submitted by Member Zoba (YVWD) and detailed ALDA's responses. He opined that consistent with the approval of the 2018 Annual Report, the Watermaster Committee should

consider approving the 2019 Annual Report based on the documentation of 183.05 acre-feet of overlying rights transferred from OVP to YVWD during 2018 and early 2019. He noted that the discussion of YVWD's submittal of the Form 5 and the transfer of all OVP's rights to YVWD is yet to be resolved, and suggested that upon resolution, adjustments may be made to the 2018 and 2019 annual reports if needed.

Blandon explained there are two competing and mutually exclusive positions and requested guidance from the Committee to complete the report.

Member Zoba pointed to Rule 7.1, the submission of Form 5, and the documentation from OVP indicating forbearance of the production of the water and suggested the Annual Report allocates the overlying water that was acquired by YVWD to a category of unused overlying water rights that is not in the judgment. He suggested ALDA take a fresh look despite ongoing discussion, and indicated concern that documentation is not being followed and action is inconsistent with the Rules and Regulations. Zoba advised that he believes it is wrong that the Watermaster would consider a report that does not adequately transfer the water rights from OVP to YVWD when YVWD has followed all rules but is held up by ongoing discussion of the Watermaster Committee.

Mr. Blandon reminded the Committee of discussion related to the approval of the 2018 Annual Report. He noted that there is disagreement between the parties and that guidance, and the approval of the Report must be provided by the Committee.

Member Jaggers opined that the 2019 Annual Report is consistent with the Rules and Regulations of the Beaumont groundwater basin and with Resolution 2017-02, and the activities of 2019 are fairly and accurately represented other than the minor discrepancy between the production reporting between BCVWD and the City of Banning.

Chair Vela acknowledged that Engineer Blandon is caught in the middle and that he has done a good job of revising the Annual Report per direction received from the Committee. There has been extensive discussion and it will continue until the issue is worked out, he said, and concurred that the 2019 Annual Report is accurate.

Member Armstrong indicated that Counsel Montoya's advice has been followed and agreed with moving forward.

It was moved by Member Jaggers and seconded by Member Armstrong to approve the 2019 Revised Draft of the Beaumont Basin Watermaster Annual Report with de minimus changes related to the storage accounts of the Beaumont-Cherry Valley Water District and the City of Banning. The motion was approved by the following roll-call vote:

AYES:	Hart, Jaggers, Armstrong, Vela
NOES:	Zoba
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved 4-1

VIII. Topics for Future Meetings

a. Development of a methodology and policy to account for groundwater storage losses in the basin resulting from the artificial recharge of water resources.

b. Development of a methodology and policy to account for recycled water recharge.

c. Amendment to the Rules and Regulations for addition of a policy and procedure for adding agenda items

d. Addition of one monitoring well south of the Basin, and one north of the Basin as part of water loss monitoring

IX. Comments from the Watermaster Committee Members

Member Hart requested a list of open contracts and a project accounting.

Member Hart asked about filing of the Annual Report. Mr. Blandon explained that the report had been significantly delayed due to COVID-19 issues. Copies are submitted to all members and to legal counsel, and it is filed with the Riverside County Court. A report consisting of total Basin production, total amount of imported water, and change in storage is filed with the Department of Water Resources.

In response to Member Hart, Member Zoba explained that financial records are maintained by YVWD and BCVWD has copies of the contracts. He said he would provide a report at the next meeting.

X. Announcements

a. The next regular meeting of the Beaumont Basin Watermaster is scheduled for Wednesday, April 7, 2021 at 10:00 a.m.

b. Future Meeting Dates:

i. Wednesday, June 2, 2021 at 10:00 a.m.
ii. Wednesday, August 4, 2021 at 10:00 a.m.
iii. Wednesday, October 6, 2021 at 10:00 a.m.
iv. Wednesday, December 1, 2021 at 10:00 a.m.

XI. Adjournment

Chairman Vela adjourned the meeting at 11:06 a.m.

Attest:

Daniel Jaggers, Secretary
Beaumont Basin Watermaster

Record of the Minutes of the
Beaumont Basin Committee Meeting of the
Beaumont Basin Watermaster
Regular Meeting
Wednesday, April 7, 2021

Meeting Location:

There was no public physical meeting location due to the coronavirus pandemic.
Meeting held via video teleconference pursuant to:
California Government Code Section 54950 et. seq. and
California Governor's Executive Orders N-29-20 and N-33-20

I. Call to Order

Chairman Arturo Vela called the meeting to order at 10:00 a.m.

II. Roll Call

City of Banning	*Arturo Vela*	*Present*
City of Beaumont	*Jeff Hart*	*Present*
Beaumont-Cherry Valley Water District	*Daniel Jaggers*	*Present*
South Mesa Water Company	*George Jorritsma*	*Present*
Yucaipa Valley Water District	*Joseph Zoba*	*Present*

Thierry Montoya was present representing legal counsel for the Beaumont Basin Watermaster (BBWM). Hannibal Blandon and Thomas Harder were present as engineers for the BBWM.

Members of the public who registered and / or attended:
Lance Eckhart, San Gorgonio Pass Water Agency
Mark Swanson, Beaumont-Cherry Valley Water District
Erica Gonzales, Beaumont-Cherry Valley Water District
Jennifer Ares, Yucaipa Valley Water District
Dave Armstrong, South Mesa Water Company
Lonni Granlund, Yucaipa Valley Water District
Logan Largent
Joyce McIntire
Allison Edmisten, Yucaipa Valley Water District
John Covington, Beaumont-Cherry Valley Water District / Morongo Band of Mission Indians
Kyle Warsinski, City of Beaumont
James Bean, Beaumont-Cherry Valley Water District
Michele Staples

III. Pledge of Allegiance

Chair Vela led the pledge.

IV. Public Comments:

None.

V. Consent Calendar

1. Meeting Minutes for October 7, 2020
2. Meeting Minutes for February 3, 2021
3. Meeting Minutes for February 18, 2021

It was moved by Member Zoba and seconded by Member Hart to approve the Meeting Minutes.

AYES:	Hart, Jaggers, Jorritsma, Vela, Zoba
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

VI. Reports

A. Report from Engineering Consultant – Hannibal Blandon, ALDA Engineering

Mr. Blandon reported that the 2019 Annual Report was approved at the last meeting, and differences between the water transfer from BCVWD to the City of Banning has been addressed and the final report will be submitted to Mr. Zoba for uploading to the BBWM website by this Friday.

B. Report from Hydrogeological Consultant – Thomas Harder, Thomas Harder & Co.

Mr. Harder said he will be providing an update later in the meeting.

C. Report from Legal Counsel – Thierry Montoya, Alvarado Smith

Mr. Montoya advised of a conversation with Michele Staples related to the parcel gifted to the Beaumont-Cherry Valley Recreation and Parks District, and whether its well could be used to provide water for grading on the adjacent parcel. Generally speaking, entities can lease their water rights to another party, he said, and noted that he asked Ms. Staples to put the request in writing.

In response to Chair Vela, Mr. Montoya indicated this may not be something in which the Watermaster would need to be involved since it is not a water transfer. Mr. Jaggers pointed out that an overlier leasing rights to a non-overlier / non-appropriator parcel may have ramifications.

VII. Discussion Items

A. Certification of Groundwater Production and Imported Water Use during Calendar Year 2020

Recommendation: That the Watermaster Committee certify groundwater production, imported water spreading, and change in storage in the Beaumont Groundwater Basin during Calendar Year 2021.

Engineer Hannibal Blandon reminded the Committee that the Final Groundwater Production and Imported Water and Water Use for 2020 is required to be filed with the State by April 1. Because that is not possible, a letter has been written documenting the groundwater production of 18,600, 14 acre-feet of which is unmetered, and a total of 11,469 acre-feet (af) imported in 2020. Total water use in the Basin was 18,636 af and a negative change in storage of 5,577 af, he noted.

Member Jaggers confirmed that the report was uploaded to the State on April 1. A copy of the final annual report must be certified and submitted later in the year, Blandon advised.

It was moved by Member Jaggers and seconded by Member Jorritsma to certify groundwater production, imported water spreading, and change in storage in the Beaumont Groundwater Basin during Calendar Year 2021 and approved by the following vote:

AYES:	Hart, Jaggers, Jorritsma, Vela, Zoba
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

B. Presentation of the 2020 Consolidated Annual Report and Engineering Report

Recommendation: That the Watermaster Committee consider approving the Draft Report depending on the nature of the comments.

Mr. Blandon reviewed the report. No resolutions were adopted in 2020, he noted. He described historical precipitation in the Basin with an average of 13.97 inches per year between 1996 and 2020, compared to the hundred-year average of 17.04. Blandon compared annual production in 2020 to the 2016-2020 average for each appropriator,

noting total production was 17.2 percent higher than the five-year average and was the highest on record.

Blandon noted that overliers produced 138 af less than the average between 2016-2020 and there is a continued downward trend. The overliers have been producing on average 30.6 percent of the overlying right. None of the overliers are close to producing 100 percent of their right, and their 2020 production was the lowest on record, he said.

The City of Banning, BCVWD and SGPWA imported 11,469 af in 2020, for an overall running total in excess of 126,000 af since 2003, Blandon reported.

Recycled water recharge from the City of Beaumont Wastewater Treatment Plant shows a continued increase to an annual total of 4,305 af, Blandon explained. All discharge has been to Coopers Canyon.

In 2020, Blandon continued, there were no transfers of water between appropriators. Allocated conversion of underproduction to 2020 from 2015 was 4,614 af, he noted. Under Resolution 17-02, the conversion of Oak Valley Partners LP (OVP) overlying right to YVWD started in 2018, continued in 2019, but there are no conversions for 2020 at this point, Blandon said.

A total of 183.05 af have been transferred from OVP to YVWD, Blandon stated, and cited Section 3.4.2, the stipulated judgment, Resolution 17-02, CY 2020 meeting minutes and the Form 5 submitted on Nov. 19, 2019 by YVWD.

Blandon reviewed the 2020 production vs allowable extractions and noted that total production exceeded the amount of storage by 673 af. Member Zoba clarified that on a calendar year basis YVWD had not produced more than allowed. He suggested adding a row to the table to indicate storage account balances.

Blandon presented the 2020 storage balance and noted that overall, the storage decreased by 458 af. Chair Vela pointed out differing numbers for the City of Banning; Mr. Blandon indicated it is a rounding issue – probably about 1/10th acre-foot. Overall, water in storage accounts equals 40.5 percent of total potential storage, he said. In 2020, 4,606 af of unused overlying water rights were distributed among the agencies from 2015 according to the percentages provided in the judgment, Blandon reported.

Engineer Thomas Harder gave a presentation on the operating safe yield including flow patterns and changes in groundwater levels. He estimated that overall, the basin lost about 5,577 af of storage from 2019-2020, which is the largest drop in storage on a year over year basis. The effects

of the dry period are being felt in the basin, he added. Member Jaggers pointed out that BCVWD pumping affects the groundwater levels.

Mr. Harder stated that this basin is by no means in overdraft. These are temporary changes in groundwater levels; the long-term trend is still relatively stable, he said, but the effects of drought are being seen. He explained the calculation of the 2020 estimated operating safe yield of 1,590 af which is the lowest seen in the last 10 years, primarily due to the relatively large negative change in storage.

Mr. Blandon reviewed the water quality evaluation, noting that no primary standards were exceeded. He recommended the Committee develop a policy to account for groundwater storage losses, new yield, and recycled water recharge, develop a protocol to increase accuracy and consistency of data reporting, and file the annual reports with the Court.

Member Zoba noted that the customers within the adjudicated area of the overlying water rights of OVP have now exceeded the 183 af as referenced in the report and has climbed to 215. He said he anticipates this will continue to climb, and asked how Blandon anticipates incorporating that data from 2020 into the report. Blandon noted he had not before heard this information, and said that based on Resolution 17-02, OVP has transferred 183.05 and that the issue of the Form 5 continues to be debated, he would have to say that it is 183.05. Zoba said he would provide written documentation for consideration.

Chair Vela asked that if the transfer had been exceeded, would the overage not come from another source of supply. Zoba said it is an issue of OVP not producing any water but is now being made up by appropriate use over those same parcels.

Jaggers said there have been submittals in the past from new tracts developing and transfer of those overlying rights, and suggested clarification of the actual production in the previously transferred areas more than was transferred, or whether there are new areas that are also in the overall consumption area. Zoba said the consumption is all within the parcels of the consolidated overlying water rights and consistent with Form 5.

In response to a question from Jaggers, Zoba assured the Committee that the Form 5 has been filed to document all of the overlying water rights, so it includes the area consistent with the Watermaster regulation for the transfer and use of overlying water rights. Chair Vela reminded that the Watermaster received a couple of letters specifically that identified certain tract numbers and a certain amount of water that was going to be transferred (the 183.05). He noted the question of whether there are now additional tracts and asked if the consumption in

excess of the 183.05 also includes recycled water. Zoba said it is both potable and recycled water. It is in addition to the original tracts received by the Watermaster, he noted, but superseded with the filing of the Form 5.

Mr. Jaggers acknowledged and referenced the Form 5 transfer, stating he continues to reference Resolution 17-02 as the format. He recommended documentation to be provided to Mr. Blandon and said that if the water is being used, he is supportive of that as it converts over. Zoba said he would send his notes to Blandon, and Blandon advised he would coordinate with legal counsel as to how the data is to be presented in the report.

Mr. Jaggers acknowledged the concerns of YVWD and suggested the approval of the 2020 Consolidated Annual Report and Engineering Report be continued. He pointed out some potential terminology clarification. Chair Vela agreed and indicated need for fine-tuning the 2020 numbers. Jaggers proposed that the Committee show transfers with a bi-monthly report.

Mr. Blandon indicated he would delay submitting the final 2019 report until numbers had been finalized between BCVWD and the City of Banning. Chair Vela indicated he would respond.

Chair Vela continued the 2020 Consolidated Annual Report and Engineering Report to the meeting on June 2, 2021 at 10 a.m.

C. A Comparison of Production and Allowable Extractions through February 2021

Recommendation: No recommendation; informational only

Mr. Blandon shared the table of Production vs. Allowable Extractions through February 2021 and pointed out a total of 4,763 af of overlying rights transferred from 2016, the transfer of overlying rights of OVP to YVWD of 183 and imported 479 af totaling 5,425. Production was 46.2 percent of the 5,425 resulting in a positive storage impact, he said.

Blandon presented alternate ways to look at storage as an informational item, resulting in water in storage at 117,533 af. Production is not even touching the unused overlying production, he noted. Overall, extractions from the Beaumont Basin could continue for another seven years before the water in storage was exhausted, he noted.

Member Zoba pointed out that unused overlying water right transfers remain a big issue. It is not supplemental water as identified in the judgment; it was a creation of this group, he said, and that is

problematic. Representing that there is a lot of water, inconsistent with the judgment, Zoba said, indicates a problem that needs to be tended to immediately. Member Jaggers pointed out that the judgment identifies that once the overlier rights are satisfied in a particular year, the remainder gets redistributed or is available to the appropriators as outlined. BCVWD's takeaway is that each year, the first water pumped is allocated back to the District, and everything else is a balance of storage vs. usage. During any particular year, if the overliers' needs are met, the rest of the water becomes available to the appropriators at the percentage outlined in Table C of the judgement, Jaggers stated, and said he is interested in resolving the issue. Blandon pointed out that there is no distinction as to which water is to be used first.

Jaggers requested a future agenda item on the issue.

D. Status Report on Water Level Monitoring throughout the Beaumont Basin through March 21, 2021

Recommendation: Presentation - No recommendation

Mr. Blandon presented a report and noted anomalies with the level monitoring at YVWD Well 34. He reported a jump of 0.7 feet in water level seven hours prior to a March 12 earthquake, and a jump of 0.8 feet seven hours after a March 18 earthquake. Member Zoba indicated that all equipment has been restored to the Well.

In response to Member Jaggers, Mr. Harder assured that data is examined and outliers are weeded out to make sense of the information in a larger context. Mr. Blandon indicated he would continue to dig into the data.

Mr. Blandon explained he is investigating fluctuating levels at Banning Well M9 and said there are no equipment needs at this time.

E. Financial Status Report

Recommendation: Presentation Only - No recommendation

Member Zoba reminded the Committee that this overview was requested at the last meeting. He detailed the process for invoicing and payments and noted that the bank account balance is slightly below $200,000. He noted that information on operating expenses is included in the agenda packet. Administrative expenses such as legal are not billed out but there are enough funds to cover those expenses for the time being and for next year, Zoba reported.

Per consensus, this report will be added to the consent calendar monthly.

F. Independent Accountant's Financial Report of Agreed-Upon Procedures for the Beaumont Basin Watermaster

Recommendation: That the Watermaster Committee receive and file the Independent Accountant's Financial Report for the period ending June 30, 2020.

Member Zoba presented the report showing long term trends and reminded the Committee that the public had originally asked for this tally of the operation's expenditures. He noted that everything appears to be in order and said that auditor Rogers, Anderson, Malody and Scott will be coming in again this year.

It was moved by Member Jaggers and seconded by Member Jorritsma to receive and file the Independent Accountant's Financial Report for the period ending June 30, 2020. The motion was approved by the following vote:

AYES:	Hart, Jaggers, Jorritsma, Vela, Zoba
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

G. Consideration of the Watermaster Budget for Fiscal Year 2021-2022

Recommendation: That the Watermaster approve the budget for Fiscal Year 2021-2022.

Member Zoba advised that invoices are sent out as each task order is approved and through each agency's financial departments Watermaster year-to-year spending trends can be followed. Administration is working to ensure that expenses do not cross over the fiscal year, he explained.

Zoba explained the proposed budget of $246,700.

It was moved by Chair Vela and seconded by Member Hart to approve the budget for Fiscal Year 2021-2022. The motion was approved by the following vote:

AYES:	Hart, Jaggers, Jorritsma, Vela, Zoba
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

H. Discussion Regarding Proposed Revisions to Section 2.2 of the Rules and Regulations

Member Jaggers advised that the proposal to bolster Section 2.2 was prompted by receipt of a request from an overlying party for a special Committee meeting over the Christmas holidays. In trying to resolve the request, Jaggers determined that the process was not clearly defined.

The proposal is for a process on how to approach getting an item on the agenda while assuring there is enough time for preparation of the agenda packet without burden of a last-minute request, Jaggers explained.

Member Zoba indicated concern related to the Brown Act and suggested a companion document that would allow addition of agenda items freely based on the needs of the particular agency. Any one of the managers should have the ability to add items to the agenda, he noted.

Member Jaggers assured that the proposal is merely to clarify a process. Legal Counsel Montoya acknowledged the potential Brown Act issue and said he favors Member Zoba's approach.

Chair Vela said it would be helpful to have the process defined a little more in Section 2.2. Zoba suggested working together to define one document for the Board to consider. Member Hart advocated for inclusion of timing for submittals to be agendized.

VIII. Topics for Future Meetings

a. Development of a methodology and policy to account for groundwater storage losses in the basin resulting from the artificial recharge of water resources.

b. Development of a methodology and policy to account for recycled water recharge.

c. Discussion of changes in storage accounts vs. production.

IX. Comments from the Watermaster Committee Members

None.

X. Announcements

a. The next regular meeting of the Beaumont Basin Watermaster is scheduled for Wednesday, June 2, 2021 at 10:00 a.m.

b. Future Meeting Dates:

i. Wednesday, August 4, 2021 at 10:00 a.m.

ii. Wednesday, October 6, 2021 at 10:00 a.m.

iii. Wednesday, December 1, 2021 at 10:00 a.m.

XI. Adjournment

Chairman Vela adjourned the meeting at 11:54 p.m.

Attest:

Daniel Jaggers, Secretary
Beaumont Basin Watermaster

Record of the Minutes of the
Beaumont Basin Committee Meeting of the
Beaumont Basin Watermaster
Regular Meeting
Wednesday, June 2, 2021

Meeting Location:

There was no public physical meeting location due to the coronavirus pandemic. Meeting held via video teleconference pursuant to:
California Government Code Section 54950 et. seq. and
California Governor's Executive Orders N-29-20 and N-33-20

I. Call to Order

Chairman Arturo Vela called the meeting to order at 10:00 a.m.

II. Roll Call

City of Banning	*Arturo Vela*	*Present*
City of Beaumont	*Jeff Hart*	*Present*
Beaumont-Cherry Valley Water District	*Daniel Jaggers*	*Present*
South Mesa Water Company	*George Jorritsma*	*Present*
Yucaipa Valley Water District	*Joseph Zoba*	*Present*

Hannibal Blandon and Thomas Harder were present as engineers for the BBWM.

Members of the public who registered and / or attended:
Lance Eckhart, San Gorgonio Pass Water Agency
Mark Swanson, Beaumont-Cherry Valley Water District
Erica Gonzales, Beaumont-Cherry Valley Water District
John Covington, Beaumont-Cherry Valley Water District / Morongo Band of Mission Indians

III. Pledge of Allegiance

Chair Vela led the pledge.

IV. Public Comments:

None.

V. Consent Calendar

1. Meeting Minutes for April 7, 2021

It was moved by Member Jaggers and seconded by Member Hart to approve the Meeting Minutes.

AYES:	Hart, Jaggers, Jorritsma, Vela, Zoba
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

VI. Reports

A. Report from Engineering Consultant – Hannibal Blandon, ALDA Engineering

Mr. Blandon reported that the 2019 Consolidated Annual Report and Engineering Report was submitted on April 21, 2021 but has not been posted.

Blandon advised that Member Hart had requested copies of all annual reports and all files related to the groundwater model of the Beaumont Basin. Due to the expense of compiling the files, the item would have been agendized for approval by the Committee. After discussion, consensus was to provide the requested information as the time should be minimal. Mr. Blandon will complete the work under the open Task Order for On Call Engineering Services.

B. Report from Hydrogeological Consultant – Thomas Harder, Thomas Harder & Co.

No report.

C. Report from Legal Counsel – Thierry Montoya, Alvarado Smith

No report.

VII. Discussion Items

A. Financial Status Report

Recommendation: No recommendation. Presentation only

Member Zoba provided an overview. After payment of invoices, the bank balance is $93,000, he noted, and pointed to the Operating expenses. At the next meeting, the fiscal year will be closed out and a year end report will be provided.

B. Status Report on Water Level Monitoring throughout the Beaumont Basin through May 13, 2021

Recommendation: No recommendation.

Mr. Blandon reviewed the report. He reminded the Committee of anomalies reported at the last meeting and said that the jump in level had been determined to be correct.

He noted that Banning Well M-9 has declined by more than 30 feet over the last two years, and BCVWD Wells No. 2 and 25 show significant fluctuations.

New monitoring wells were being considered in the northern portion of the Basin, and three wells were evaluated, Blandon explained. Since levels measured were flat it was decided there is no need to have observation wells monitored on an hourly basis, he said.

C. A Comparison of Production and Allowable Extractions through April 2021

Recommendation: No recommendation; informational only

Mr. Blandon shared the table of Production vs. Allowable Extractions through April 2021. He noted that 6,617 acre-feet of imported water has been spread in the Basin. Production through April has been 4,126 af and the total allowable production considering the transfers of overlying rights since 2016 is 6,171, he stated. The numbers change daily as the agencies continue to pump, he added.

Member Jaggers suggested adding the Morongo Band of Mission Indians and the San Gorgonio Pass Water Agency to the report to memorialize the data. Mr. Blandon suggested a footnote indicating that they, along with the City of Beaumont, have water storage accounts but no water in storage.

D. Discussion Regarding Task Order No. 25 with ALDA Inc. for On-Call Engineering Services

Recommendation: That the Watermaster Committee approve Task Order No. 25 for a sum not to exceed $25,000

Mr. Blandon reminded the Committee about Task Order No. 8 approved in October 2015 for $20,000. Six tasks have been completed and $18,062 spent, with a remainder of about $1,900. A portion of that will be used to pull the data requested by Member Hart, he noted.

New Task Order No. 25 is requesting an additional $25,000, Blandon explained. In response to Chair Vela, Blandon indicated that Task Order 8 would be exhausted or closed. Member Zoba recommended adding Task 25 which would take over once the amount in Task 8 is expended.

It was moved by Member Vela and seconded by Member Jaggers to approve Task Order No. 25 for a sum not to exceed $25,000 and to send out invoices to the Watermaster Committee members and was approved by the following vote:

AYES:	Hart, Jaggers, Jorritsma, Vela, Zoba
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

E. Development of a Policy to Account for Storage Losses in the Beaumont Basin – Initial Approach

Recommendation: That the Watermaster Committee authorize the expenditure of $10,000 under Task 25 On-Call Services, to cover the expense associated with this task

Tom Harder of Thomas Harder and Associates reminded the Committee of the discussion regarding comparison of the storage accounts and the written accounts which appears to show the groundwater level response is not commensurate with the storage accounts that are accruing. It is a complicated matter and is worthwhile to evaluate to assure the physical water budget in the Basin is commensurate with what is on paper, he noted.

Harder said analyses show that groundwater flows to the southeast, and most of the losses are occurring in that area. Some limited losses are occurring at the western part of the Basin, he added. Issues are outlined in the Technical Memo along with a summary of what other basins are doing to address storage losses.

Basin losses are sensitive to imported recharge, and the location and pumping rate of pumping wells, Harder advised. The conclusion was that loss can be limited on the east side of the Basin via strategic pumping. Pumping outside the Basin is also influencing the loss, he noted.

Harder said that accounting for Basin losses is necessary to maintain a representative water balance, and it behooves the Committee to

evaluate those losses and develop a methodology and policy to account for them, otherwise, safe yield assessments may have a discrepancy.

Harder recommended development of a framework to account for storage losses based on the hydrogeology of the Basin via an initial budget of $10,000 Under Task Order 25.

Member Jaggers clarified that in addition to potential losses there are potential gains due to operational activity. BCVWD has increased pumping on the east side to capture those losses and has shut down Well 29 in the winter to stimulate in-lieu recharge on the western side of the Basin, he explained. The framework would want to make an understanding of those operations, he noted. He pointed out that Tukwet Canyon pumps (mostly irrigation water) in the area, also.

Member Zoba suggested the work be rolled into the redetermination of safe yield. Harder agreed and said it would be helpful to have the Committee's input ahead of the process to vet the ideas and issues.

Mr. Lance Eckhart of the San Gorgonio Pass Water Agency (SGPWA) pointed out this is a big deal for a managed basin, and $10,000 might get it started, but moving into basin optimization and how to minimize losses will be an ongoing effort. He also pointed out the current drought conditions and noted that the Committee will want to aggressively store more water and do more active conjunctive use moving forward. He stated there should not be a disincentive to bring imported water into the Basin and touted a thoughtful, collaborative process. This is core to the mission of the SGPWA, and the Agency would be happy to participate in answering these important questions.

In response to Mr. John Covington of the Morongo Band of Mission Indians, Member Jaggers explained the location of Well 29 near the old Sunny Cal Egg Ranch.

Committee members concurred regarding communication with SGPWA regarding participation.

It was moved by Member Zoba and seconded by Member Jaggers to create Task Order No. 26 for a sum not to exceed $10,000 and to send out invoices to the Watermaster Committee members and was approved by the following vote:

AYES:	Hart, Jaggers, Jorritsma, Vela, Zoba
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

F. Update on Development of a Return Flow Accounting Methodology

Recommendation: That the Watermaster Committee receive the Draft Report and provide comments that will be addresses at the August 2021 regular meeting

Mr. Harder reminded the Committee that a draft of the Return Flow Methodology was prepared in 2019, comments were received, and results were presented in February. A draft Technical Memo is included in the Board packet along with a water quality analysis on TDS concentrations in the Basin into the future, he added. He requested Committee member comments by July 21.

G. 2020 Consolidated Annual Report and Engineering Report – Presentation of Comments Received on Draft Report

Recommendation: That the Watermaster Committee consider Approving the 2020 Annual Report after comments received on the Draft Report are Presented and Discussed.

Mr. Blandon highlighted comments that were received and changes made to the Report in response.

It was moved by Member Jorritsma and seconded by Member Jaggers to approve the 2020 Consolidated Annual Report and Engineering Report. The motion was approved 4-1 by the following vote:

AYES:	Hart, Jaggers, Jorritsma, Vela
NOES:	Zoba
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

VIII. Topics for Future Meetings

a. Development of a methodology and policy to account for groundwater storage losses in the basin resulting from the artificial recharge of water resources.

b. Development of a methodology and policy to account for recycled water recharge.

c. Discussion regarding the addition of various topics to future meetings.

IX. Comments from the Watermaster Committee Members

Member Zoba commented on recycled water recharge, which is not an indirect discharge of treated wastewater, and said he agreed with Member Jaggers regarding re-titling of the Annual Report sections, but recommended keeping the agenda related to recycled water recharge.

Member Jaggers added that the City of Beaumont is approaching recycled water and noted two components: treated tertiary wastewater and recycled water.

Zoba indicated that the judgment discusses recharge of recycled water and appears to require the filing of an application through the Watermaster. Jaggers concurred and added there are minimum standards outlined in the judgment.

X. Announcements

a. The next regular meeting of the Beaumont Basin Watermaster is scheduled for Wednesday, August 4, 2021 at 10:00 a.m.

b. Future Meeting Dates:

i. Wednesday, October 6, 2021 at 10:00 a.m.

ii. Wednesday, December 1, 2021 at 10:00 a.m.

XI. Adjournment

Chairman Vela adjourned the meeting at 10:48 a.m.

Attest:

Daniel Jaggers, Secretary
Beaumont Basin Watermaster

Record of the Minutes of the
Beaumont Basin Committee Special Meeting of the
Beaumont Basin Watermaster
Regular Meeting
Monday, June 28, 2021

Meeting Location:

There was no public physical meeting location due to the coronavirus pandemic.
Meeting held via video teleconference pursuant to:
California Government Code Section 54950 et. seq. and
California Governor's Executive Orders N-29-20, N-33-20, and N-08-21

I. Call to Order

Chairman Arturo Vela called the meeting to order at 10:02 a.m.

II. Roll Call

City of Banning	*Arturo Vela*	*Present*
City of Beaumont	*Jeff Hart*	*Present*
Beaumont-Cherry Valley Water District	*Daniel Jaggers*	*Present*
South Mesa Water Company	*George Jorritsma*	*Present*
Yucaipa Valley Water District	*Joseph Zoba*	*Present*

Hannibal Blandon was present as engineer for the BBWM. Thierry Montoya was present as legal counsel for the BBWM.

Members of the public who registered and / or attended:
Mark Swanson and Erica Gonzales, Beaumont-Cherry Valley Water District

III. Public Comments:

None.

IV. Closed Session

Chair Vela recessed the meeting to Closed Session at 10:07 a.m.

CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION
Pursuant to *Government Code* section 54956.9(a)
Yucaipa Valley Water District

i) Motion for an Order Directing the Beaumont Basin Watermaster to Amend the Beaumont Basin Watermaster 2019 Annual Report to Adjust Oak Valley Partners LP's Overlying Water Rights and Yucaipa Valley Water District's Appropriative Water Rights;

ii) Motion for an Order Directing the Beaumont Basin Watermaster to Rescind Beaumont Basin Watermaster Rule 7.3

both currently pending before the Hon. Judge Irma Poole Asberry, Riverside Superior Court, Department 05.

Reconvene in Open Session: 10:48 a.m.

Report on Action Taken During Closed Session:

Counsel Thierry Montoya reported that there is ongoing litigation in the form of the two motions. Discussed were:
The briefing schedule
The new Court hearing date is August 19, 2021
The substance of the BBWM responses in the form of oppositions to the two motions.

V. Comments from the Watermaster Committee Members

The Committee chose to resume hybrid in-person/ videoconference meetings in August.

VI. Announcements

a. The next regular meeting of the Beaumont Basin Watermaster is scheduled for Wednesday, August 4, 2021 at 10:00 a.m.

b. Future Meeting Dates:

i. Wednesday, October 6, 2021 at 10:00 a.m.

ii. Wednesday, December 1, 2021 at 10:00 a.m.

XI. Adjournment

Chairman Vela adjourned the meeting at 10:51 a.m.

Attest:

Daniel Jaggers, Secretary
Beaumont Basin Watermaster

Record of the Minutes of the
Beaumont Basin Committee Meeting of the
Beaumont Basin Watermaster
Regular Meeting
Wednesday, August 4, 2021

Meeting Location:

There was no public physical meeting location due to the coronavirus pandemic.
Meeting held via video teleconference pursuant to:
California Government Code Section 54950 et. seq. and
California Governor's Executive Orders N-29-20, N-33-20, and N-08-21

I. Call to Order

Chairman Arturo Vela called the meeting to order at 10:00 a.m.

II. Roll Call

City of Banning	*Arturo Vela*	*Present*
City of Beaumont	*Jeff Hart*	*Present*
Beaumont-Cherry Valley Water District	*Daniel Jaggers*	*Present*
South Mesa Water Company	*George Jorritsma*	*Present*
Yucaipa Valley Water District	*Joseph Zoba*	*Present*

Hannibal Blandon and Thomas Harder were present as engineers for the BBWM.

Members of the public who registered and / or attended:
Mark Swanson, Beaumont-Cherry Valley Water District
Erica Gonzales, Beaumont-Cherry Valley Water District
Daniel Baguyo, Beaumont-Cherry Valley Water District
Evan Ward, Beaumont-Cherry Valley Water District
John Covington, BCVWD / Morongo Band of Mission Indians
Dave Armstrong, South Mesa Water Company
Jennifer Ares, Yucaipa Valley Water District
John Ohanian, Oak Valley Partners

Due to technical difficulties, the meeting was immediately adjourned and canceled, to be rescheduled.

Attest:

Daniel Jaggers, Secretary
Beaumont Basin Watermaster

Record of the Minutes of the
Beaumont Basin Committee Meeting of the
Beaumont Basin Watermaster
Regular Meeting
Tuesday, August 17, 2021

Meeting Location:

There was no public physical meeting location due to the coronavirus pandemic.
Meeting held via video teleconference pursuant to:
California Government Code Section 54950 et. seq. and
California Governor's Executive Orders N-29-20, N-33-20, and N-08-21

This meeting was rescheduled from August 4, 2021.

I. Call to Order

Chairman Arturo Vela called the meeting to order at 1:40 p.m.

II. Roll Call

City of Banning	*Arturo Vela*	*Present*
City of Beaumont	*Jeff Hart*	*Present*
Beaumont-Cherry Valley Water District	*Daniel Jaggers*	*Present*
South Mesa Water Company	*George Jorritsma*	*Present*
Yucaipa Valley Water District	*Joseph Zoba*	*Present*

Hannibal Blandon and Thomas Harder were present as engineers for the BBWM.
Thierry Montoya was present as BBWM legal counsel.

Members of the public who registered and / or attended:
Thaxton Van Belle, Chief Plant Operator, City of Beaumont
Julio Martinez, City Councilmember, City of Beaumont
Madeline Blua, Yucaipa Valley Water District
Allison Edmisten, Yucaipa Valley Water District
Jennifer Ares, Yucaipa Valley Water District
David Armstrong, South Mesa Water Company
Lance Eckhart, San Gorgonio Pass Water Agency
Daniel Baguyo, Beaumont-Cherry Valley Water District
Mark Swanson, Beaumont-Cherry Valley Water District
Erica Gonzales, Beaumont-Cherry Valley Water District
Evan Ward, Beaumont-Cherry Valley Water District
Madeline Chen
Steve Anderson
Steve Stuart
Ty Muli

III. Pledge of Allegiance

Chair Vela led the pledge.

IV. Public Comments:

None.

V. Consent Calendar

1. Meeting Minutes for June 2, 2021
2. Meeting Minutes for June 28, 2021

It was moved by Member Zoba and seconded by Member Jaggers to approve the Meeting Minutes.

AYES:	Hart, Jaggers, Jorritsma, Vela, Zoba
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

VI. Reports

A. Report from Engineering Consultant – Hannibal Blandon, ALDA Engineering

Mr. Blandon reported two issues on Task Order No. 26 regarding a framework to address storage losses from the basin. A presentation will be made at the October 21 meeting.

Development of a new production well at YVWD is a candidate as a new monitoring site, he said. Mr. Blandon identified an issue with the transfer of water rights. Mr. Zoba clarified this is an existing well and does not result in a transfer of water rights; the rights belong to Beaumont-Chery Valley Recreation and Park District.

B. Report from Hydrogeological Consultant – Thomas Harder, Thomas Harder & Co.

No report.

C. Report from Legal Counsel – Thierry Montoya, Alvarado Smith

Mr. Montoya noted that the hearing on YVWD's motions has been continued to August 31, 2021 at 830 a.m. He advised that he had received a memo from John Pinkney on behalf of the City of Beaumont requesting an update on when Beaumont will receive all the technical reports and public records requested. He advised it is in the works.

In response to a request from Mr. Zoba, Mr. Montoya will send a copy of the request made by the City of Beaumont to all Committee members.

VII. Discussion Items

A. Status Report on Water Level Monitoring throughout the Beaumont Basin through July 26, 2021

Recommendation: No recommendation.

Mr. Blandon reviewed the report. Water levels at several observation wells continue to decline he noted. He advised the Committee of a cable under warranty replaced at no charge.

Blandon described seasonal fluctuations and year-to-year decline at BCVWD Well 25, and the impact of pumping at BCVWD Well 3 on levels at Well 2.

Equipment issues at BCVWD Well 29 will be investigated in the fall, Blandon noted, and said BCVWD has indicated they will be fully responsible for the replacement of the cable and the probe.

B. Production and Allowable Extractions through June 2021

Recommendation: No recommendation; informational only

Mr. Blandon shared the table of Production vs. Allowable Extractions through June 2021. He noted that 6,617 acre-feet of imported water has been spread in the Basin.

Production through the end of June has been 7,600 af which exceeds the total allowable production by 16 percent. As of December, 2020 over 117,000 af was in storage in the Basin, Blandon noted.

Member Jaggers said BCVWD understands it is withdrawing from storage and proposed that the table be revised.

C. Return Flow Accounting Methodology presentation of final Technical Memorandum and comments

Recommendation: That the Watermaster Committee accept the final Technical Memorandum, findings, and recommendations

Mr. Thomas Harder reviewed the recommended return flow accounting methodology and comments received on the Technical Memo. Data records from each appropriator would be obtained via a spreadsheet document. Information from the entire service area would be gathered and compared to wastewater treatment plant inflows, he explained. Those ratios can be applied to those parcels within the adjudication area.

Implementing the plan, estimated return flow for each appropriator on an annual basis, reporting previous year and applying the return flow to each appropriator per the lag time schedule, he explained. It takes the water in some areas 50 to 50 years to get down to the water table.

Harder recommended reevaluating the methodology every five to 10 years to assure it is representative of what is happening.

Mr. Harder responded to comments and questions submitted by the City of Banning.

Member Jaggers pointed to water activities moving forward such as the grading along Cherry Valley Boulevard and questioned the evaporation factor. Mr. Harder advised that the State does not publish a return flow factor for applied water for construction use. Short of anything else, the 25 percent factor will be applied. These are not significant, as historically there has not been much construction water delivered, Harder noted, and suggested reevaluating in five years.

Member Hart added that production numbers for wells belonging to the Parks District for the grading would be interesting to analyze. Ten acre-feet seems low, he opined, considering the growth being seen. Mr. Vela agreed that construction is very active.

Mr. Harder discussed the projected impact of return flow on groundwater quality in the Beaumont Basin.

Member Jaggers advised that BCVWD intends to contribute recycled water and asked about detail of the model. Mr. Harder responded that there is no history of recycled water recharge in the adjudicated area, so the model includes only return flow of implied irrigation water is included in the model. The imported water was included as an average of historic delivered concentrations, he stated. Jaggers suggested there is some refinement to move toward to fully understand the application of recycled water.

Member Zoba pointed out that the Basin Plan Objective is required to be met. Chair Vela pointed out that the intent was to better understand and model the return flow and implement from a policy perspective. He

inquired about formal steps for implementation and requested member input.

Mr. Jaggers said it is important to project the health of the basin overall and have an opportunity to improve the model as cause and effect is seen. He pointed to future solutions based on data collected.

Member Jorritsma indicated neutrality on moving forward, as South Mesa has no return flow.

Member Hart concurred with the methodology and suggested s deeper dive into analysis of rate of return on construction water.

Chair Vela touched on water quality saying that the City of Beaumont is planning to discharge recycled water over the basin and is looking at different technologies. The intent is to meet the requirements of the Beaumont Management Zone, he said. The review of this analysis will help understand impacts to the Basin from recycled water, he noted, and supported.

Member Zoba asked how the issue with overliers will be addressed, as they may also want to receive return flow credit. Mr. Montoya noted there are multiple parties and multiple viewpoints, and suggested an ad hoc committee to examine the various standpoints. Member Vela pointed to the Morongo golf course and their storage account. Mr. Harder said golf courses will be watering and have more regular return flow. It would be relatively easy to quantify and there is information on return flow factors for golf courses that can be incorporated into the accounting; the methodology would be the same.

Mr. Montoya indicated the constituent elements should be determined before the policy. Following comments from Mr. Jaggers and Mr. Zoba, he indicated there is not enough information at this point to get to the policy development stage. Roles of overliers and issues must be developed further, he said.

In response to Chair Vela, Mr. Zoba suggested tabling the item as at this time it may be incomplete. Mr. Harder said it is easy to add a single golf course, but to extend to other overlying uses may be more involved. Counsel Montoya advised that the development of policy needs further consideration. He suggested consideration of the impact of a single golf course.

Mr. Harder indicated he could report back on addition of a single golf course. Mr. Jaggers pointed out that most production for the Tukwet Golf Course is from the Beaumont Basin, however a number of the greens lie outside the Basin and therefore part of the water leaves the Basin and does not return. In response to Member Zoba, Mr. Harder

advised that the methodology is geared toward appropriators, and it has not been considered how it might be applied to overliers. Mr. Jaggers requested legal counsel's opinion and discussion on related overlier rights. Mr. Zoba agreed, pointed to upcoming uses such as a park, and suggested a table of multipliers to provide for the accounting.

Mr. Blandon pointed out there are other types of overliers without storage accounts which are contributing return flows to the Basin. Mr. Jaggers pointed back to the Basin safe yield.

Chair Vela requested legal counsel opinion and tabled the item for further discussion.

D. Task Order No. 27 to Provide Electronic Files of the Groundwater Model of the Beaumont Basin to the City of Beaumont

Recommendation: That the Watermaster Committee considers the approval of this task order at a cost not to exceed $15,000

Mr. Hannibal Blandon requested a new Task Order be opened and reminded the Committee about the request from the City of Beaumont, which was completed at a cost of $2,765. The new information requested by the City includes electronic files that will take an estimated 84 hours of mostly Mr. Harder's time for a cost of $10,790. Blandon requested $15,000 in case the City may have other miscellaneous requests.

Member Hart advised that he did not request this Task Order. He said his interpretation of the contact with ALDA indicates this is information to which the owner is entitled and has paid, and he objected to the additional compensation required to fulfill the task. Mr. Blandon reiterated this requires significant effort of the part of the consultant.

Mr. Hart pointed out the requesting agency is an owner and is party to the contract, and said he was having a hard time seeing the significant time and effort for delivering data that has already been created and compiled. Mr. Harder offered detail.

In response to Member Hart, Mr. Blandon noted the ALDA contract is on a time and materials basis. Mr. Hart indicated this seems excessive. Mr. Zoba and Mr. Jaggers concurred that the data would be helpful to have in a clear and consistent form.

In response to Chair Vela, Mr. Harder described the data and work involved. Mr. Jaggers noted that with all agencies participating, the cost

is $3,000 apiece. He pointed out that nothing happens in a public records request without effort, and supported the Task Order.

The cost is to prepare the data requested, and does not include updating the data, Harder stated.

It was moved by Member Zoba and seconded by Member Jaggers to approve Task Order No. 27 to be split between the five members and to send out invoices to the Watermaster Committee members. The motion was approved by the following vote:

AYES:	Hart, Jaggers, Jorritsma, Vela, Zoba
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

E. Electronic Delivery of Annual Report

Recommendation: That the Watermaster Committee considers the delivery of annual reports, both draft and final, in electronic format unless an individual member or agency would prefer hard copies of individual reports

Mr. Blandon noted that reports have been delivered and comments provided electronically for the past year and longer due to COVID-19 and business is moving toward paperless. The cost of annual reports is approximately $2,000 for 12 copies of the draft and 12 copies of the final report, he advised.

It was moved by Member Hart and seconded by Member Jaggers to deliver the annual reports in electronic format. The motion was approved 5-0 by the following vote:

AYES:	Hart, Jaggers, Jorritsma, Vela, Zoba
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

F. Discussion Regarding the Date and Time of Regular Meetings of the Beaumont Basin Watermaster

Member Zoba requested comment for scheduling the next year's meetings. Discussion ensued. Member Zoba will prepare a resolution for adoption at the next meeting on October 6, 2021 at 11 a.m.

G. Financial Status Report

Member Zoba presented the update and indicated the Task Orders will be updated to include the approved Task Order 27. He advised that he is engaging with the auditor to prepare the review of financial documents, which may be ready for the next meeting.

VIII. Topics for Future Meetings

a. Development of a methodology and policy to account for groundwater storage losses in the basin resulting from the artificial recharge of water resources.

b. Development of a methodology and policy to account for recycled water recharge.

c. Discussion regarding the addition of various topics to future meetings.

d. Process to place an item on the Watermaster Committee agenda.

e. Establishment of an ad hoc committee to produce a procurement policy.

IX. Comments from the Watermaster Committee Members

Member Hart inquired about interest in creating a procurement policy. Member Jaggers suggested creation of an ad hoc committee. Member Zoba pointed out that most activities are consultant based and have been via Requests for Proposal. Member Hart clarified the policy would include other procurement types.

Member Hart requested that presentations be provided on Mondays prior to the meetings. Mr. Jaggers suggested 72 hours or 24 hours in advance in accordance with the Brown Act.

X. Announcements

a. The next regular meeting of the Beaumont Basin Watermaster is scheduled for Wednesday, October 6, 2021 at 11:00 a.m.

b. Future Meeting Dates:

i. Wednesday, December 1, 2021 at 11:00 a.m.

XI. Adjournment

Chairman Vela adjourned the meeting at 3:31 p.m.

Attest:

Daniel Jaggers, Secretary
Beaumont Basin Watermaster

Record of the Minutes of the
Beaumont Basin Committee Meeting of the
Beaumont Basin Watermaster
Regular Meeting
Tuesday, October 6, 2021

Meeting Location:

Beaumont-Cherry Valley Water District
560 Magnolia Avenue
Beaumont, CA 92223

I. Call to Order

Chairman Arturo Vela called the meeting to order at 11:02 a.m.

II. Roll Call

City of Banning	*Arturo Vela*	*Present*
City of Beaumont	*Jeff Hart*	*Present*
Beaumont-Cherry Valley Water District	*Daniel Jaggers*	*Present*
South Mesa Water Company	*George Jorritsma*	*Present*
Yucaipa Valley Water District	*Joseph Zoba*	*Present*

Hannibal Blandon and Thomas Harder were present as engineers for the BBWM.
Thierry Montoya was present as BBWM legal counsel.

Members of the public who registered and / or attended:
Joyce McIntire, Yucaipa Valley Water District
Matt Porras, Yucaipa Valley Water District
Jennifer Ares, Yucaipa Valley Water District
Logan Largent, California Association of Mutual Water Companies
Mark Swanson, Beaumont-Cherry Valley Water District
Erica Gonzales, Beaumont-Cherry Valley Water District
Lynda Kerney, Beaumont-Cherry Valley Water District
Robert Rasha, Beaumont-Cherry Valley Water District
Allison Edmisten, Yucaipa Valley Water District
Larry Smith, San Gorgonio Pass Water Agency
Lance Eckhart, San Gorgonio Pass Water Agency
Todd Parton, City of Beaumont
Bryan Brown
Greg Newmark, Meyers Nave
John Covington, Morongo Band of Mission Indians
David Armstrong, South Mesa Water Company

III. Pledge of Allegiance

Chair Vela led the pledge.

IV. Public Comments:

Mr. Lance Eckhart, general manager of the San Gorgonio Pass Water Agency offered the partnership of the Agency.

V. Consent Calendar

1. Meeting Minutes for August 4, 2021
2. Meeting Minutes for August 17, 2021

It was moved by Member Zoba and seconded by Member Jaggers to approve the Meeting Minutes.

AYES:	Hart, Jaggers, Jorritsma, Vela, Zoba
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

VI. Reports

A. Report from Engineering Consultant – Hannibal Blandon, ALDA Engineering

Mr. Blandon reported that the groundwater modeling files were delivered as requested.

B. Report from Hydrogeological Consultant – Thomas Harder, Thomas Harder & Co.

Mr. Harder reported on the Committee's request for the return flow from overliers. Golf courses: Total production of 1,370 acre-feet (af) of which 25 percent is assumed to be return flow (342 af annually). Others total 50 af (production assuming 50 percent of outdoor use and 25 percent indoor).

C. Report from Legal Counsel – Thierry Montoya, Alvarado Smith

Mr. Montoya reported that on August 31, 2021, Riverside Superior Court heard arguments on the Yucaipa Valley Water District motion for an order to amend the Watermaster's 2019 annual report and adjust water rights, and companion motion to rescind Watermaster Rule 7.3. The Court denied both motions without prejudice.

VII. Discussion Items

A. Discussion Regarding the Date and Time of Regular Meetings of the Beaumont Basin Watermaster

It was moved by Member Vela and seconded by Member Hart to change the time of the Watermaster Committee meetings to 11 a.m. and add the text of Resolution 2012-01 to the Watermaster Rules and Regulations. The motion was approved by the following vote:

AYES:	Hart, Jaggers, Jorritsma, Vela, Zoba
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

B. Discussion Regarding the Assignment of an Ad Hoc Committee for the Development of a Procurement Policy

Recommendation: That the Watermaster Committee appoint an Ad Hoc Committee

Mr. Hart reminded the Committee that there is no procurement policy for the Committee and volunteered to serve on an ad hoc committee. Mr. Jaggers also volunteered.

It was moved by Member Zoba and seconded by Chair Vela to establish the Ad Hoc Committee on Procurement Policy. The motion was approved by the following vote:

AYES:	Hart, Jaggers, Jorritsma, Vela, Zoba
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

C. Financial Status Report

Recommendation: Presentation only

Member Zoba presented the update. There were no questions or comments.

D. Discussion Regarding the Development and Inclusion of Items on a Meeting Agenda

Recommendation: Pending

Member Zoba explained that consultants submit their memorandums approximately one week in advance of the meeting, and the agenda packet is compiled from there. He suggested making available the template for the memorandum for any member who wants to sponsor and present an item.

This allows all members to put proposals before the Committee, Zoba noted. Member Jaggers indicated that the concern was for others who may want to approach the Committee. He noted that as the Secretary for the Watermaster, the Beaumont-Cherry Valley Water District was approached during a holiday period about calling a special meeting and was unable to find an outline of a process for overliers or other agencies to place an item on the Watermaster agenda.

Mr. Zoba indicated willingness to follow the regular process of submission for any group. Chair Vela indicated preference for a process to assure the Committee agreed on agendizing of an item.

Chair Vela suggested the Committee Secretary and Chair collaborate to determine whether an agenda item submitted by an outside entity is appropriate. Chair Vela advocated for agility in being able to address issues, but Member Hart indicated preference for a process.

Member Jaggers will draft a potential process for Committee evaluation.

E. Status Report on Water Level Monitoring throughout the Beaumont Basin through September 22, 2021

Recommendation: No recommendation.

Mr. Blandon reviewed the report. He noted the potential for a monitoring well at the development above Cherry Valley Boulevard.

F. A Comparison of Production vs Extraction Credits through August 2021

Recommendation: No recommendation. Informational only.

Mr. Blandon explained that previous reports used the term, "allowable extractions" which was confusing. The new concept of "extraction credits" is reported for Committee consideration, he stated.

At the beginning of the year, each agency has certain credit which comes from the transfer of unused production by the overliers in the previous 5th year, i.e., credits for 2021 are from 2016, and are spread among the various appropriators based on the certain percentages in

the judgment, Blandon explained. The other initial credit comes from permanent transfer of overlying water rights. Appropriators can increase their extraction credits by spreading imported water, he added.

If production exceeds credits, the excess must be drawn from storage, and if production is less than credits, water remains in storage at the end of the year, Blandon explained.

Blandon reviewed the report and noted that imported water has been delivered only to the Beaumont-Cherry Valley Water District. Production has totaled 12,079 af and noted some agencies have exceeded their credits.

Member Zoba asked about rollover of extraction credits. Mr. Blandon assured that those overlying rights and extraction credits are accounted for and roll over at the end of the year. Mr. Zoba pointed out that the water must be used on the property. Mr. Blandon suggested an annual accounting for parcels, and Zoba requested a separate chart to clarify.

Being that the Court ruling is new, Member Jaggers suggested bringing this back as an agenda item.

G. Storage Accounting Issues – Preliminary Framework

Recommendation: No recommendation. Informational only.

Mr. Blandon advised that it has been brought to attention that the historic amount of water may not be commensurate with the amount of water that is in the Basin. He presented historic hydrological conditions of the Beaumont Basin.

The 2003 basin adjudication assigned production to the overliers based on the 1997 to 2001 period, he explained. There is no documentation regarding the determination of the initial safe yield of 8,650 af and water rights assigned to overliers, he said.

Overliers have been producing one-third to one-half of the amount they are allowed to produce, Blandon said. This has been documented on a monthly basis, and is the reason there is a significant amount of water being transferred to the appropriators on a five-year lag, he noted.

In response to a question from Chair Vela, Mr. Blandon explained that the concept of managed overdraft was introduced to allow the extraction of 16,000 af per year over a 10-year period. All appropriators and overliers had the right to extract a certain amount of water.

Mr. Harder pointed out that there is no operating safe yield defined in the judgment. The term is used to present the annualized safe yield.

The safe yield was recalculated in 2013 as 6,700 af, Blandon noted. The ten-year control of overdraft terminated in 2013 and is no longer available to appropriators. He pointed to significant production above the safe yield, and stated that figures show the western and central portions of the basin in decline, while the eastern portion is trending up.

Additions to the storage accounts in the Basin are the unused overlying production with a five-year lag, a temporary surplus of 16,000 af per year, contribution of imported water, and determining transfers to appropriators. On the subtraction side, there is groundwater production by appropriators. Overlying underproduction transfer by appropriators is equivalent to 5,000 to 6,000 af per year, resulting in underproduction by 69,680 af by overliers that has been transferred.

The concept of temporary surplus is defined in the judgment as the amount of groundwater that can be pumped annually in excess of the safe yield from the groundwater basin necessary to create enough additional storage capacity to prevent the waste of water, Blandon continued. In 2003, the idea was that the appropriators would be able to pump a certain amount of water and begin a controlled overdraft of the basin to minimize basin losses. These 16,000 af were split between the various appropriators, with Beaumont Cherry Valley Water District allocated the largest percentage at 42.15 percent. ~~One of the objectives~~ The intent was to create a depression into which water from the San Timoteo wash would move into the Basin (controlled overdraft).

There is no documentation regarding how the 16,000 af was determined at the time, Blandon stated.

In response to a question from Chair Vela, Mr. Blandon explained that the amount of water moved into the depression from the San Timoteo wash has never been quantified, but through groundwater modeling, there are estimates.

The annual imported water deliveries began in 2006 when 3,500 af were spread, and have continued over the years. The maximum was in 2017 when close to 15,000 af were spread, and cumulative, the contribution is 123,000 af with Beaumont Cherry Valley Water District having acquired and used 91 percent.

Water in storage consists of unused overlying production, surplus allocation, imported water, permanent transfers, and groundwater production, all of which have been documented, Blandon continued.

There was a significant rise in storage prior to 2013, then slowing. This is due to the controlled overdraft: whatever was not produced was stored. Although it was given to appropriators, this does not mean that water was created physically in the basin, but it gave the appropriators

the right to produce and overdraft up to that amount, Blandon explained.

The City of Banning has the largest amount in its storage account with close to 51,000 af, followed by Beaumont Cherry Valley Water District with 40,000 af, South Mesa Water Company with 10,000, and Yucaipa Valley Water District with 16,000, San Gorgonio Pass Water Agency with 500 af. The Morongo Band and the City of Beaumont also have accounts but neither have water in storage. A total of 290,000 af of storage has been allocated to the storage accounts since the inception of the judgment.

Mr. Thomas Harder continued the presentation. He reviewed change in groundwater levels over time and explained the hydrological conditions on the basin map.

In the fall of 2013, 10 years into the judgment, the northeast part of the Basin including the Noble Creek spreading basins show the recharge beginning in 2006. In 2003, water from the San Timoteo wash was already flowing into the west end basin, he said. The idea was to capture more of that water, Harder surmised.

The contrasted changes shown on the 2020 contour map include areas of mounding and pumping depressions, and trends of groundwater levels. Much of the decline is on the west and northwest sides, and on the east side, levels are rising while the south side is staying the same or having some drop.

The change in storage from 2003 to 2013 basin-wide was approximately negative 64,000 af. Between 2013 and 2020, it was 22,000 af to the positive, Harder noted, mainly due to managed recharge in the east part of the basin. Of the negative 42,000 af change in the basin from 2003 to 2020, all of it is occurring in the west side of the basin, Harder stated. Due to overdraft, storage space has been created on the west side, and it is time to put some water in the ground there, Harder recommended.

The overall change in storage from 2003 to 2020 was between negative 42,000 af and negative 59,000 af basin-wide, Harder continued. For comparison, he said, the total groundwater (usable amount of water) in storage in the basin is approximately 1.4 million af, which is a little higher than the previous estimate by Wildermuth.

Member Jaggers pointed to return flow and suggested that 2,500 af may be in transit to the basin. He also noted use for grading water and new development. Chair Vela noted these figures are through 2020.

Member Zoba indicated that the production of Yucaipa Valley Water District and South Mesa Water Company have not changed much over

the period. He pointed to the water levels in the Well 29 area and asked if recharge was working. Mr. Harder noted that the west side is much more sensitive to precipitation trends and since 2011, may have been influenced by drought. Based on this trend, and pumping in Calimesa, the water level will decrease on the west side, Zoba posited; Mr. Harder confirmed that would be the case without recharge.

Member Zoba asked about the amount of water accessible by wells today. Mr. Harder said that based on current well settings, the 1.4 million af is not entirely accessible, and noted that pumping past the usable water at the San Timoteo formation (model layer 1) would likely create some major negative effects. Zoba requested determination of the accessible water level above the bowls; Harder said it would be possible to determine using data from the appropriators' pump settings.

Jaggers pointed out some active management activity but posited that the drought has had some significant effects. The 10-year safe yield update will inform that, Harder noted.

Harder continued detailing the physical change in storage. Supplemental recharge has been a major benefit to the basin to stabilize the storage change, he stated, but there is a balance of recharge issue. Pumping in the basin has not changed very much, still approximately 15,000 af per year. Zoba acknowledged the consistency of pumping and noted that the change in storage plummeted. Harder said that was because there was no recharge occurring between 2003 and 2006, then took a while to ramp up, and it takes a while for that water to manifest in groundwater levels.

In terms of management of the basin, and the negative change in storage at 60,000 af, Zoba noted that to return to the zero point would cost around $20 million and there is probably not enough State Project Water. Harder agreed and indicated that the Committee must make the decision as to significance in the overdraft, i.e., are there undesirable results due to the overdraft, should the overage be partially filled, or other option. He noted that there may be legal obligations to fill the hole. He discussed options from a physical operational standpoint, and suggested there is more analysis to be done.

Jaggers pointed to a more sophisticated model to examine data such as return flows and precipitation. He discussed the basin imbalance and needs to be determined. Harder noted the language in the judgment regarding waste of water is subjective. Chair Vela added that it appears there needs to be some true up of the storage accounts related to the basin losses and previous analysis.

Harder showed a graph depicting increases in storge accounts, with physical groundwater storage decreasing. In 2013, there was

approximately 130,000 af (close to the 160,000), but by 2020 it was 180,000 af. There are additional things not being accounted for, Harder explained, such as precipitation and drought. He noted that unpumped overlier water is being added to accounts although the safe yield is lower than that would indicate, and there are losses occurring in the basin, which increase with additional recharge. Those components can be identified, then the Committee can decide what to do, he stated.

In response to Chair Vela, Mr. Harder indicated that, ideally, the storage accounts would be tied to physical water, but that is not the case. The 160,000 was more of a controlled overdraft deficit. He pointed to the comparison of the storage accounts with the physical storage, and indicated that something needs to be done about it. Jaggers described a component in the judgment that may have led to the 160,000 number.

Member Zoba pointed to the original concept of marketing the basin for water storage, a scheme that has since fallen apart. He suggested some change in the chart of Comparison of Appropriator Storage Accounts and Storage Change Estimates and said the issue pertains to management of the basin and action to maintain the status quo.

The seriousness of the issue is a judgment call, Harder noted. Impact would be felt after pumping for three or four years, he said. Zoba added that logistically, there would be no way to refill the basin.

Harder suggested workshops to a) address the balance of recharge and discharge issue, b) look at the significance and what is to be done about it, c) examine losses. Some discussion ensued and support for the workshops was expressed.

Vela pointed to geology and suggested that impacts will not be the same across the basin. Harder emphasized support of each other's projects to bring in new water and noted that water in addition to return flow will be needed to turn around the decline.

Mr. Blandon returned to the graph. He explained that legally the Beaumont Basin is one basin, but hydrologically, the basin behaves as two separate basins. The west side has no recharge, and the east side has benefitted from all the recharge over the years, he explained. The engineers were tasked with creating a framework and identified preliminary issues: the clearly demonstrated recharge imbalance between the eastern and western portions of the basin; the storage account balances appear in conflict with evidence of the physical storage in the basin; and the current storage accounting does not account for storage losses. These need to be addressed sooner rather than later, Blandon advised.

As of now, storage accounts continue to accumulate without consideration of losses – nothing is subtracted from the account, but potentially there could be significant losses of 15 to 20 percent, Blandon stated, and pointed out that the cost of imported water is hundreds of dollars per acre-foot. There is an imbalance, and potential for additional losses which are not being accounted for at this time, he warned.

To address the imbalance, recharge facilities need to be developed on the western portion of the basin, Blandon stated. The storage account balances are paper, rather than actuals, he said. He proposed as Task No. 2 of this Task Order, to conduct a series of workshops to begin discussion regarding what can or cannot be done, and to develop a policy to account for the storage losses.

To arrest the recharge imbalance and bring water to the western side of the basin, there is some potential for enhanced stormwater capture, spreading of imported water in existing and in new basins, and use of recycled water, Blandon offered. He detailed two areas for capture that have been identified, extension of the San Gorgonio pipeline to the State Water Project, and the location of the City of Beaumont wastewater treatment plant with the potential for recycled water. Groundwater modeling will need to be done, he advised.

Blandon suggested that workshop agenda items may include further articulation of the issues, preliminary identification and discussion of potential projects and management actions to arrest the issues including needs for individual appropriators, discussion of next steps to arrest the issues which may include further concepts, and outline of an implementation plan.

Blandon advised that the initial budget of $10,000 for this task was underestimated and current expenditures are $16,700, with the goal to provide a complete picture to the Committee.

In response to Member Zoba and Chair Vela, Mr. Harder further discussed safe yield. Zoba posited that a potential solution in order to keep the basin in balance, is to retain storage accounts, but limit the maximum production to the operating safe yield, to not damage anyone else. He pointed out that extraction of unused water rights results in depletion of the basin.

Jaggers suggested adding wells to the east side and moving water to the western portion of the basin, turning off the wells on the west. Long term goals would be to balance and manage the basin, and determine what water is in the return flow zone, he added.

Jaggers advocated for workshops and identified that the San Gorgonio Pass Water Agency has a hydrogeologist who may be helpful. He pointed

to the cumulative storage credit of 117,553 af which is the volumetric availability across the basin, but Zoba noted that if all of that were extracted, it must be subtracted from the already negative basin storage. There is no time to fill up the basin, Zoba posited. The basin will always be depleted, it needs to be determined who will be the most impacted by the dropped water levels, he noted.

The intent is to manage to keep the basin in balance to the best of the ability of the Watermaster and there will be give and take over time, Jaggers said. Who pays the price to establish the balance, Zoba continued. The transition has been made from depletion to filling to depletion, and this is a big deal, Zoba said. He reminded the Committee that this group was established as a result of lawsuits regarding getting a fair share. The intent in 2004 was not to go negative, it was to check each other to assure all have a share of the basin and keep operating.

Jaggers pointed to the Urban Water Management Plan and indicated the goal is not to deplete the basin. Zoba suggested establishing a management objective in terms of change in storage and advocated scheduling the workshops quickly. Mr. Blandon proposed the first to be held in November.

Member Hart requested further definition of the workshops to make them fruitful and to assure that allocating additional budget is necessary. Mr. Blandon provided detail on the process and emphasized that much more work is needed. Discussion ensued regarding prioritizing topics for the workshops.

Mr. Zoba suggested a water sustainability consultant and will provide a sample RFP at the next meeting. Mr. Blandon suggested quantification of losses and impacts to storage accounts.

H. Consideration of Change Order No. 1 for Task Order No. 26 for the Development of a Framework to Address Storage Accounting Issues

Recommendation: That the Watermaster Committee consider approving Change Order No. 1 to Task Order No. 26 for the sum not to exceed $20,000 and to direct the Treasurer to invoice specific Appropriators based on anticipated benefits.

Mr. Blandon reviewed the request for change order but noted that the workshops will delay the need for this work. The initial task was to develop a framework, which is what was presented in the last agenda item. This is to facilitate further analysis and work on the issue.

The Committee discussed needs and the potential for a workshop facilitator. Mr. Eckhart requested the ability for the San Gorgonio Pass

Water Agency to participate and offered to participate financially in the workshops. Member Jorritsma welcomed the request.

It was moved by Member Jaggers and seconded by Chair Vela to approve amendment of the budget for Task 1 of Task Order No. 26 to add $6,700. The motion was approved by the following vote:

AYES:	Hart, Jaggers, Jorritsma, Vela, Zoba
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

VIII. Topics for Future Meetings

a. Development of a methodology and policy to account for groundwater storage losses in the basin / Groundwater management

b. Scope of work and Request for Proposal for a workshop facilitator / consultant

c. Incidental discharge

d. Effect of Court ruling on Production vs Extraction Credits

e. Development of a recycled water policy

IX. Comments from the Watermaster Committee Members

Chair Vela recommended establishment of a Consent Calendar on the agenda.

X. Announcements

a. The next regular meeting of the Beaumont Basin Watermaster is scheduled for Wednesday, December 1, 2021 at 11:00 a.m.

b. Future Meeting Dates:

i. February 2, 2022 at 11:00 a.m.

ii. April 6, 2022 at 11:00 a.m.

iii. June 1, 2022 at 11:00 a.m.

XI. Adjournment

Chairman Vela adjourned the meeting at 2:46 p.m.

Attest:

Daniel Jaggers, Secretary
Beaumont Basin Watermaster

Record of the Minutes of the
Beaumont Basin Committee Meeting of the
Beaumont Basin Watermaster
Regular Meeting
Wednesday, December 1, 2021

Meeting Location:

Beaumont-Cherry Valley Water District
560 Magnolia Avenue
Beaumont, CA 92223

I. Call to Order

Chairman Arturo Vela called the meeting to order at 11:02 a.m.

II. Roll Call

City of Banning	*Arturo Vela*	*Present*
City of Beaumont	*Jeff Hart*	*Present*
Beaumont-Cherry Valley Water District	*Daniel Jaggers*	*Present*
South Mesa Water Company	*George Jorritsma*	*Present*
Yucaipa Valley Water District	*Jennifer Ares*	*Present*

Hannibal Blandon and Thomas Harder were present as engineers for the BBWM.
Thierry Montoya was present as BBWM legal counsel.

Members of the public who registered and / or attended:
Ron Duncan, San Gorgonio Pass Water Agency
Cenica Smith, Beaumont-Cherry Valley Water District
Mark Swanson, Beaumont-Cherry Valley Water District
Robert Rasha, Beaumont-Cherry Valley Water District
Joyce McIntire, Yucaipa Valley Water District
Steve Anderson
John Covington, Morongo Band of Mission Indians
Thaxton Van Belle, City of Beaumont
Steve Stewart
Logan Largent, California Association of Mutual Water Companies

III. Pledge of Allegiance

Chair Vela led the pledge.

IV. Public Comments:

None.

V. Consent Calendar

B. Status Report on Water Level Monitoring throughout the Beaumont Basin through November 17, 2021

C. A Comparison of Production versus Extraction Credits through October 2021

It was moved by Member Jaggers and seconded by Member Jorritsma to approve items B and C.

AYES:	Hart, Jaggers, Jorritsma, Vela, Ares
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.
STATUS:	Motion Approved

A. Meeting Minutes for October 6, 2021

Member Jaggers suggested some corrections to the October 6, 2021 minutes as noted by ALDA Consultants, to be verified via the meeting recording. Ms. Ares requested that in the future, such items be checked ahead of time to avoid delay in approval of the minutes. Mr. Jaggers indicated that would be possible if comments were received in time prior to publication. The October 6, 2021 minutes were tabled to the next meeting.

VI. Reports

A. Report from Engineering Consultant – Hannibal Blandon, ALDA Engineering
Mr. Blandon requested early review of the meeting minutes.

B. Report from Hydrogeological Consultant – Thomas Harder, Thomas Harder & Co.
No report.

C. Report from Legal Counsel – Thierry Montoya, Alvarado Smith
Nothing to report.

VII. Discussion Items

A. Storage Accounting Issues

Recommendation: Information only. No recommendation.

Mr. Blandon reviewed issues raised and information discussed in October and reminded the Committee that storage accounts collectively contain approximately 117,000 acre-feet (af). However, Blandon continued, the changing groundwater storage that Mr. Harder investigated indicates that the change between 2003 and 2020 could be anywhere between 42,000 af and 59,000 af depending on the way that the water levels are interpreted by hand or through the flow model. Mr. Harder also concluded that there is approximately 1.4 million af of water in the basin, and noted that most of the depletion (40,000 af) was on the west side of the basin, Blandon said.

Preliminary issues include the recharge imbalance between the eastern and western portions of the basin, the storage account balances appear to be in conflict with evidence of the physical storage of the basin, and current storage accounting does not account for losses, Blandon reminded. He said he reviewed the documentation at the time of the judgment and advised there was no documentation as to how the determination of the safe yield was made, but newly available court documents related to the August 2021 ruling provide clarification.

The tentative ruling settles the water rights and storage issues in the basin for supplemental water as well as unused surplus water; the judgment does not preclude the storage of unused surplus water; and there is nothing improper about carryover surplus water, Blandon explained. All water in the storage accounts is valid and available for use, he said, and the basin must be managed accordingly.

Temporary Surplus is defined in the judgment as, "the amount of groundwater that can be pumped annually in excess of the Safe Yield from a Groundwater Basin necessary to create enough additional storage capacity to prevent the waste of water," Blandon read. He advised that the intent was to pump up to 160,000 af from the basin to create space to bring more imported water or to produce additional water from the basin, and the judgment defines 16,000 af per year as percentages and amounts distributed to the four water agencies. Blandon pointed to the storage account amounts as of the end of 2020, totaling 117,533 af.

Blandon reviewed tables comparing the agencies' temporary surplus allocations and all extraction rights to actual 2003-2020 production. The appropriators have the right to produce another 117,533 af up to the 160,000 af initially anticipated, he stated. To be determined over the next few meetings will be how to manage the basin in a way that does not negatively affect some producers, consideration of the issues of spreading imported water on the west side of the basin, and

ascertaining that appropriators can safely store and extract their production rights, he stated.

To address the recharge imbalance, Blandon recommended capture of additional stormwater, spreading of additional imported water in existing and new basins, and use of recycled water. He pointed to potential project areas and offered suggestions.

Member Jaggers noted that the results noticed are reasonable with what is set forth in the judgment for extraction. He recalled discussion at the prior meeting about precipitation and the reduced average over the last 10 years, and pointed to impact on the basin. He indicated that BCVWD could assist with basin management from an operational perspective. He said he calculated that basin losses could be in the range of 10,000 to 20,000 af, and pointed to continued drought.

Chair Vela noted that it will get to a point where agencies will have to rely on the surplus water, and basin management practices and implementation to ensure the basin is in good condition should be discussed, along with a policy on storage losses.

Member Hart suggested a workshop to identify mission, vision, and goals and how to proceed as to the best interests of the sustainability of the basin.

Chair Vela invited public comment. There was none.

B. Use of On-Call Task Order No. 8 and 25 to Provide Engineering Services related to evaluation of Storage Issues in the Beaumont Groundwater Basin

Recommendation: That the Beaumont Basin Watermaster Committee approves ALDA Inc. / TH&Co. to use available funds in On-Call Task Order No. 8 and Task Order No. 25 to continue providing technical support to Watermaster on issues related to the storage evaluation and management of the groundwater basin

Mr. Blandon explained that additional work was discussed at the October meeting but there is currently no budget approved for continuing activities. He shared the current budget remaining on Task Orders 8 and 25. After Committee discussion of upcoming work, continuing task orders, and the Request for Proposal process, Legal counsel Thierry Montoya suggested bringing back a request for services and a specific contract. A special meeting and a workshop will be scheduled in January.

Chair Vela tabled the item.

C. Discussion Regarding Amendment of Engineering Services Contract with ALDA Inc. for Calendar Year 2022

Recommendation: That the Watermaster Committee approves the contract extension with ALDA Inc. through December 31, 2022

Mr. Blandon provided history of the Agreement for Engineering Services, originally signed on May 10, 2012, and extended through December 31, 2021. He shared the proposed billing rates for ALDA Inc. and Thomas Harder & Company and reminded the Committee that the rates had not changed over the last five-year period.

Mr. Blandon advised that most of the work for the task orders takes place in the first three months of the year as the annual report and engineering analysis of the basin is prepared. He recommended extension of the contract through December 31, 2022, at the listed 2022 rates, or a five-year extension with rates updated annually.

Member Hart pointed to the active task order and recommended extension of the existing contract until a procurement policy is established. In response to a question from Chair Vela, Mr. Montoya recommended determining what specific services are sought as opposed to extension of contracts and task orders remaining open.

Mr. Jaggers pointed to production of the annual report, ongoing tasks, and need to create a vehicle to move forward and complete the 2021 work. Mr. Blandon detailed the annual report process and Mr. Jaggers added the required report submission dates.

Following discussion of upcoming work and the RFP process, the majority of the Committee concurred on extension of the contract. Mr. Jaggers pointed out that an amendment will be required for signature, but the document is not yet herewith. Mr. Montoya indicated that he would produce an amendment to come back for Committee approval.

It was moved by Member Ares and seconded by Chair Vela to approve the contract extension with ALDA Inc. through December 31, 2022. The motion was approved by the following vote:

AYES:	Jaggers, Jorritsma, Vela, Ares
NOES:	Hart
ABSTAIN:	None
ABSENT:	None
STATUS:	Motion Approved

D. Discussion Regarding Task Order No. 28 with ALDA Inc. for the Preparation of the 2021 Consolidated Annual Report, Estimate of the Basin Safe Yield, Update of the Groundwater Model, and Associated Consulting Services for 2022

Recommendation: That the Watermaster Committee approves Task Order No. 28 for a sum not to exceed $103,600.00 and considers the approval of a 10 percent contingency

Mr. Blandon explained that this is the basic task order as provided each year to prepare the consolidated annual report for 2021, estimate the operating safe yield, and to provide general consulting services during 2022. He reviewed the costs and prior year expenditures, averaging 90 percent of the budget on this task.

The economic impact is $20,7020 for each Watermaster Committee member, Blandon noted, and addition of the recommended 10 percent contingency would result in a proportionate increase.

Member Hart recommended this item be tabled to the workshop in January; Member Jaggers concurred, but acknowledged the challenge of submitting the report by the April 1 deadline. Chair Vela pointed out the need for continuing the work.

Member Jorritsma acknowledged the work of ALDA and recommended not delaying the approval for the annual report work. It was moved by Member Hart to approve Task 2 of Task 28 and bring back the remaining items. The motion died for lack of second.

It was moved by Chair Vela and seconded by Member Jorritsma to approve Task Order No. 28 for a sum not to exceed $103,600.00 and considers the approval of a 10 percent contingency. The motion was approved by the following vote:

AYES:	Jaggers, Jorritsma, Vela, Ares
NOES:	Hart
ABSTAIN:	None
ABSENT:	None
STATUS:	Motion Approved

E. Discussion Regarding Task Order No. 29 with ALDA Inc, for the Installation, Maintenance, and Data Collection of Water Level Monitoring Equipment in 2022

Recommendation: That the Watermaster Committee approves Task Order No. 29 for a sum not to exceed $24,975.

Mr. Blandon reviewed the work and announced the availability of two additional wells. The cost represents approximately $4,995 for each Committee member.

In response to Member Hart, Mr. Blandon explained that data is collected approximately two weeks before each Committee meeting to prepare the report. Other issues are addressed between readings such as equipment needs, he added.

It was moved by Member Jorritsma and seconded by Chair Vela to approve Task Order No. 29 for a sum not to exceed $24,975. The motion was approved by the following vote:

AYES:	Hart, Jaggers, Jorritsma, Vela, Zoba
NOES:	None
ABSTAIN:	None
ABSENT:	None
STATUS:	Motion Approved

VIII. Topics for Future Meetings

a. Development of a methodology and policy to account for groundwater storage losses in the basin / Groundwater management

b. Scope of work and Request for Proposal for a workshop facilitator / consultant

c. Incidental discharge

d. Effect of Court ruling on Production vs Extraction Credits

e. Development of a recycled water policy

IX. Comments from the Watermaster Committee Members

None.

X. Announcements

a. Tentative special meeting January 5, 2022 at 11 a.m. to address the contract amendment and topics for the workshop

b. The next regular meeting of the Beaumont Basin Watermaster is scheduled for Wednesday, February 2, 2022 at 11:00 a.m.

c. Future Meeting Dates:

i. April 6, 2022 at 11:00 a.m.
ii. June 1, 2022 at 11:00 a.m.
iii. August 3, 2022 at 11:00 a.m.
iv. October 5, 2022 at 11:00 a.m.

XI. Adjournment

Chairman Vela adjourned the meeting at 12:45 p.m.

Attest:

Daniel Jaggers, Secretary
Beaumont Basin Watermaster

Appendix C

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Appendix D

Fiscal Year 2020-21 Audit Letter

BEAUMONT BASIN WATERMASTER

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

JUNE 30, 2021

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MEMBERS
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Independent Accountant's Report

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

We have performed the procedures enumerated below on the Watermaster Schedules (Schedules), attached as Exhibit A and Exhibit B, on the full accrual basis of accounting as of June 30, 2021, and for the year then ended. Yucaipa Valley Water District (District) management, as treasurer of the Beaumont Basin Watermaster (Watermaster), is responsible for the Schedules.

The District has agreed to and acknowledged that the procedures performed are appropriate to meet the intended purpose of evaluating certain amounts reported in the Schedules, attached as Exhibit A and Exhibit B, on the full accrual basis of accounting as of June 30, 2021, and for the year then ended and its compliance with the Rules and Regulations regarding assessments and expenses. Additionally, the Watermaster has agreed to and acknowledged that the procedures performed are appropriate to meet their purposes. This report may not be suitable for any other purpose. The procedures performed may not address all the items of interest to a user of this report and may not meet the needs of all users of this report and, as such, users are responsible for determining whether the procedures performed are appropriate for their purposes.

The procedures and the associated findings are as follows:

1. Procedure

Agree the unrestricted net position, beginning of year amount on the Schedule of Revenues and Expenses (Exhibit B) to the unrestricted net position, end of year amount noted on the trial balance for the fiscal year ended June 30, 2020.

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.

3. **Procedure**

Trace all member agency assessments recorded in the Schedule of Revenues and Expenses (Exhibit B) to the 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, 2020 to the beginning check number for the period beginning on July 1, 2020. Note any breaks in check sequence for the period of July 1, 2020 through June 30, 2021.

Finding

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

5. **Procedure**

Based on the population of checks issued during July 1, 2020 through June 30, 2021, 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, 2020 to June 30, 2021. 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 engaged by the District to perform this agreed-upon procedures engagement and conducted our engagement in accordance with attestation standards established by the AICPA. We were not engaged to and did not conduct an examination or review, the objective of which would be the expression of an opinion or conclusion, respectively, on the schedules of assets, liabilities and net position (Exhibit A) and revenues and expenses (Exhibit B). Accordingly, we do not express such an opinion or conclusion. Had we performed additional procedures, other matters might have come to our attention that would have been reported to you.

We are required to be independent of the District and Watermaster and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements related to our agreed-upon procedures engagement.

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

Rogers, Anderson, Malody & Scott, LLP.

September 1, 2021
San Bernardino, California

Beaumont Basin Watermaster
Schedule of Assets, Liabilities and Net Position
(Unaudited)
June 30, 2021

Assets	
Cash and cash equivalents	$ 114,371
Accounts receivable	14,000
Total assets	128,371
Liabilities	
Accounts payable	35,113
Net position	
Unrestricted	$ 93,258

Beaumont Basin Watermaster
Schedule of Revenues and Expenses
(Unaudited)
For the Year Ended June 30, 2021

Revenues	
Assessments	$ 209,813
Interest	43
Total revenues	209,856
Expenses	
Special projects	
Acquisition/computation and annual report	62,497
Engineering	58,015
Monitoring and data acquisition	63,660
Administrative	
Legal and professional	68,434
Bank charges	13
Total expenses	252,619
Change in net position	(42,763)
Unrestricted net position, beginning of year	136,021
Unrestricted net position, end of year	$ 93,258

Appendix E

Production Estimation Methods for Unmetered Overlying Producers

University of California Riverside - CIMIS Station 44

Monthly Evapotranspiration Values - 2003 through 2021

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
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	7.84	6.44	4.38	2.72	1.70	62.42
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
2014	3.27	3.03	4.95	6.52	7.65	7.61	7.77	7.29	6.19	4.52	3.21	2.01	64.02
2015	2.84	3.32	5.85	6.28	5.37	7.46	6.75	7.66	5.81	4.22	2.77	2.35	60.68
2016	2.09	4.29	4.92	6.04	6.21	7.21	7.74	6.88	5.30	3.87	3.18	1.99	59.72
2017	1.81	2.08	5.01	6.13	5.95	6.98	7.11	6.40	4.92	4.54	2.35	3.09	56.37
2018	2.41	3.17	3.81	5.69	5.57	7.61	8.04	7.35	5.86	4.30	3.13	2.24	59.18
2019	2.29	2.37	4.36	5.90	4.95	6.49	8.03	7.68	5.76	5.11	3.05	1.81	57.80
2020	2.65	3.71	3.66	4.83	7.25	6.42	8.17	7.74	6.33	4.81	3.22	2.70	61.49
2021	2.98	3.51	4.66	5.87	6.45	7.41	8.10	7.14	5.86	4.03	3.31	1.52	60.84

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

Indoor Water Use: 0.35 ac-ft/yr/du

Irrigation Efficienty: 70%

Estimated Pumping - All Unmetered Accounts

Year	Total Use
2004	466.11
2005	443.64
2006	81.28
2007	12.23
2008	13.78
2009	13.47
2010	11.85
2011	12.67
2012	13.07

Year	Total Use
2013	12.91
2014	13.28
2015	12.84
2016	12.71
2017	12.28
2018	12.64
2019	12.46
2020	12.91
2021	12.83

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	5.49	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
2014	2.29	2.12	3.47	4.56	5.36	5.33	5.44	5.10	4.33	3.16	2.25	1.41	44.81
2015	1.99	2.32	4.10	4.40	3.76	5.22	4.73	5.36	4.07	2.95	1.94	1.65	42.48
2016	1.46	3.00	3.44	4.23	4.35	5.05	5.42	4.82	3.71	2.71	2.23	1.39	41.80
2017	1.27	1.46	3.51	4.29	4.17	4.89	4.98	4.48	3.44	3.18	1.65	2.16	39.46
2018	1.69	2.22	2.67	3.98	3.90	5.33	5.63	5.15	4.10	3.01	2.19	1.57	41.43
2019	1.60	1.66	3.05	4.13	3.47	4.54	5.62	5.38	4.03	3.58	2.14	1.27	40.46
2020	1.86	2.60	2.56	3.38	5.08	4.49	5.72	5.42	4.43	3.37	2.25	1.89	43.04
2021	2.09	2.46	3.26	4.11	4.52	5.19	5.67	5.00	4.10	2.82	2.32	1.06	42.59

Estimated Pumping by Merlin Properties

Year	Parcel Size (acres)	D.U.	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
2014	48	3	1.05	0.11	0.41	0.59	1.64
2015	48	3	1.05	0.11	0.39	0.56	1.61
2016	48	3	1.05	0.11	0.38	0.55	1.60
2017	48	3	1.05	0.11	0.36	0.52	1.57
2018	48	3	1.05	0.11	0.38	0.54	1.59
2019	48	3	1.05	0.11	0.37	0.53	1.58
2020	48	3	1.05	0.11	0.37	0.53	1.58
2021	48	3	1.05	0.11	0.37	0.53	1.58

Estimated Pumping by Roman Catholic Bishop of San Bernardino

Year	Parcel Size (acres)	D.U.	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
2014	34	0	0.00	0.00	0.00	0.00	0.00
2015	34	0	0.00	0.00	0.00	0.00	0.00
2016	34	0	0.00	0.00	0.00	0.00	0.00
2017	34	0	0.00	0.00	0.00	0.00	0.00
2018	34	0	0.00	0.00	0.00	0.00	0.00
2019	34	0	0.00	0.00	0.00	0.00	0.00
2020	34	0	0.00	0.00	0.00	0.00	0.00
2021	34	0	0.00	0.00	0.00	0.00	0.00

Estimated Pumping by Leonard Stearns

Year	Parcel Size (acres)	D.U.	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

2014	91	2	0.70	0.00	0.00	0.00	0.70
2015	91	2	0.70	0.00	0.00	0.00	0.70
2016	91	2	0.70	0.00	0.00	0.00	0.70
2017	91	2	0.70	0.00	0.00	0.00	0.70
2018	91	2	0.70	0.00	0.00	0.00	0.70
2019	91	2	0.70	0.00	0.00	0.00	0.70
2020	91	2	0.70	0.00	0.00	0.00	0.70
2021	91	2	0.70	0.00	0.00	0.00	0.70

Estimated Pumping by Sunny Cal

Year	Parcel Size (acres)	D.U.	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	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	2.50	3.57	4.27
2014	185	2	0.70	0.00	0.00	0.70	2.61	3.73	4.43
2015	185	2	0.70	0.00	0.00	0.70	2.48	3.54	4.24
2016	185	2	0.70	0.00	0.00	0.70	2.44	3.48	4.18
2017	185	2	0.70	0.00	0.00	0.70	2.30	3.29	3.99
2018	185	2	0.70	0.00	0.00	0.70	2.42	3.45	4.15
2019	185	2	0.70	0.00	0.00	0.70	2.36	3.37	4.07
2020	185	2	0.70	0.00	0.00	0.70	2.51	3.59	4.29
2021	185	2	0.70	0.00	0.00	0.70	2.48	3.55	4.25

Water consumption per chicken estimated at 6.0 gal/100 chickens

Estimated Pumping by Albor Properties

Year	Parcel Size (acres)	D.U.	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
2014	122	1	0.35	0.40	1.49	2.13	2.48
2015	122	1	0.35	0.40	1.42	2.02	2.37
2016	122	1	0.35	0.40	1.39	1.99	2.34
2017	122	1	0.35	0.40	1.32	1.88	2.23
2018	122	1	0.35	0.40	1.38	1.97	2.32
2019	122	1	0.35	0.40	1.35	1.93	2.28
2020	122	1	0.35	0.40	1.43	2.05	2.40
2021	122	1	0.35	0.40	1.42	2.03	2.38

Estimated Pumping by Nikodinov

Year	Parcel Size (acres)	D.U.	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
2014	10	1	0.35	0.08	0.30	0.43	0.78
2015	10	1	0.35	0.08	0.28	0.40	0.75
2016	10	1	0.35	0.08	0.28	0.40	0.75
2017	10	1	0.35	0.08	0.26	0.38	0.73
2018	10	1	0.35	0.08	0.28	0.39	0.74
2019	10	1	0.35	0.08	0.27	0.39	0.74
2020	10	1	0.35	0.08	0.29	0.41	0.76
2021	10	1	0.35	0.08	0.28	0.41	0.76

Estimated Pumping by McAmis

Year	Parcel Size (acres)	D.U.	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
2014	0.9	1	0.35	0.04	0.15	0.21	0.56
2015	0.9	1	0.35	0.04	0.14	0.20	0.55
2016	0.9	1	0.35	0.04	0.14	0.20	0.55
2017	0.9	1	0.35	0.04	0.13	0.19	0.54
2018	0.9	1	0.35	0.04	0.14	0.20	0.55
2019	0.9	1	0.35	0.04	0.13	0.19	0.54
2020	0.9	1	0.35	0.04	0.14	0.20	0.55
2021	0.9	1	0.35	0.04	0.14	0.20	0.55

Estimated Pumping by Aldama

Year	Parcel Size (acres)	D.U.	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
2014	1.4	1	0.35	0.10	0.37	0.53	0.88
2015	1.4	1	0.35	0.10	0.35	0.51	0.86
2016	1.4	1	0.35	0.10	0.35	0.50	0.85
2017	1.4	1	0.35	0.10	0.33	0.47	0.82
2018	1.4	1	0.35	0.10	0.35	0.49	0.84
2019	1.4	1	0.35	0.10	0.34	0.48	0.83
2020	1.4	1	0.35	0.10	0.36	0.51	0.86
2021	1.4	1	0.35	0.10	0.35	0.51	0.86

Estimated Pumping by Gutierrez

Year	Parcel Size (acres)	D.U.	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
2014	2	2	0.70	0.14	0.52	0.75	1.45
2015	2	2	0.70	0.14	0.50	0.71	1.41
2016	2	2	0.70	0.14	0.49	0.70	1.40
2017	2	2	0.70	0.14	0.46	0.66	1.36
2018	2	2	0.70	0.14	0.48	0.69	1.39
2019	2	2	0.70	0.14	0.47	0.67	1.37
2020	2	2	0.70	0.14	0.50	0.72	1.42
2021	2	2	0.70	0.14	0.50	0.71	1.41

Estimated Pumping by Damont

Year	Parcel Size (acres)	D.U.	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
2014	0.5	1	0.35	0.00	0.00	0.00	0.35
2015	0.5	1	0.35	0.00	0.00	0.00	0.35
2016	0.5	1	0.35	0.00	0.00	0.00	0.35
2017	0.5	1	0.35	0.00	0.00	0.00	0.35
2018	0.5	1	0.35	0.00	0.00	0.00	0.35
2019	0.5	1	0.35	0.00	0.00	0.00	0.35
2020	0.5	1	0.35	0.00	0.00	0.00	0.35
2021	0.5	1	0.35	0.00	0.00	0.00	0.35

Appendix F

GAMA Water Quality Analysis Summary (2017-2021) for Drinking Water Wells

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
RCMHP-01	4/29/2019	Alkalinity, total	190	MG/L
RCMHP-01	4/29/2019	Aluminum	50	UG/L
RCMHP-01	4/29/2019	Antimony	< 6	UG/L
RCMHP-01	4/29/2019	Arsenic	< 2	UG/L
RCMHP-01	4/29/2019	Bicarbonate Alkalinity	190	MG/L
RCMHP-01	4/29/2019	Calcium	42	MG/L
RCMHP-01	4/29/2019	Chloride	23	MG/L
RCMHP-01	4/29/2019	Chromium	10	UG/L
RCMHP-01	4/29/2019	Copper	< 0.05	MG/L
RCMHP-01	4/29/2019	Fluoride	0.55	MG/L
RCMHP-01	4/29/2019	Hardness	170	MG/L
RCMHP-01	4/29/2019	Iron	100	UG/L
RCMHP-01	4/29/2019	Lead	< 5	UG/L
RCMHP-01	4/29/2019	Magnesium	15	MG/L
RCMHP-01	4/29/2019	Manganese	< 20	UG/L
RCMHP-01	4/29/2019	Mercury	< 1	UG/L
RCMHP-01	1/16/2017	Nitrate as N	4.6	MG/L
RCMHP-01	1/22/2018	Nitrate as N	2.9	MG/L
RCMHP-01	1/3/2019	Nitrate as N	5.5	MG/L
RCMHP-01	10/7/2019	Nitrate as N	5.3	MG/L
RCMHP-01	1/13/2020	Nitrate as N	5.2	MG/L
RCMHP-01	7/6/2020	Nitrate as N	4.7	MG/L
RCMHP-01	10/5/2020	Nitrate as N	5.2	MG/L
RCMHP-01	1/18/2021	Nitrate as N	5.2	MG/L
RCMHP-01	4/29/2019	Nitrite as N	0.4	MG/L
RCMHP-01	4/29/2019	pH	8.2	PH UNITS
RCMHP-01	4/29/2019	Sodium	27	MG/L
RCMHP-01	4/29/2019	Specific Conductivity	460	UMHOS/CM
RCMHP-01	4/29/2019	Sulfate	12	MG/L
RCMHP-01	4/29/2019	Total Dissolved Solids	260	MG/L
RCMHP-01	4/29/2019	Zinc	< 0.05	MG/L
RCMHP-02	4/29/2019	Alkalinity, total	190	MG/L
RCMHP-02	4/29/2019	Aluminum	50	UG/L
RCMHP-02	4/29/2019	Antimony	< 6	UG/L
RCMHP-02	4/29/2019	Arsenic	< 2	UG/L
RCMHP-02	4/29/2019	Bicarbonate Alkalinity	190	MG/L
RCMHP-02	4/29/2019	Calcium	43	MG/L
RCMHP-02	4/29/2019	Chloride	25	MG/L
RCMHP-02	4/29/2019	Chromium	10	UG/L
RCMHP-02	1/16/2017	Chromium, Hexavalent (Cr6	10	UG/L

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
RCMHP-02	7/10/2017	Chromium, Hexavalent (Cr6	11	UG/L
RCMHP-02	10/16/2017	Chromium, Hexavalent (Cr6	11	UG/L
RCMHP-02	1/22/2018	Chromium, Hexavalent (Cr6	9.1	UG/L
RCMHP-02	4/18/2018	Chromium, Hexavalent (Cr6	9.5	UG/L
RCMHP-02	7/5/2018	Chromium, Hexavalent (Cr6	10	UG/L
RCMHP-02	10/1/2018	Chromium, Hexavalent (Cr6	8.7	UG/L
RCMHP-02	1/4/2019	Chromium, Hexavalent (Cr6	12	UG/L
RCMHP-02	4/29/2019	Copper	< 0.05	MG/L
RCMHP-02	4/29/2019	Fluoride	0.63	MG/L
RCMHP-02	4/29/2019	Hardness	170	MG/L
RCMHP-02	4/29/2019	Iron	100	UG/L
RCMHP-02	4/29/2019	Lead	< 5	UG/L
RCMHP-02	4/29/2019	Magnesium	15	MG/L
RCMHP-02	4/29/2019	Manganese	< 20	UG/L
RCMHP-02	4/29/2019	Mercury	< 1	UG/L
RCMHP-02	1/16/2017	Nitrate as N	6.1	MG/L
RCMHP-02	7/10/2017	Nitrate as N	6.6	MG/L
RCMHP-02	10/16/2017	Nitrate as N	4.8	MG/L
RCMHP-02	1/22/2018	Nitrate as N	4.6	MG/L
RCMHP-02	4/18/2018	Nitrate as N	4.7	MG/L
RCMHP-02	7/5/2018	Nitrate as N	5.9	MG/L
RCMHP-02	10/1/2018	Nitrate as N	6.2	MG/L
RCMHP-02	1/4/2019	Nitrate as N	5.1	MG/L
RCMHP-02	7/1/2019	Nitrate as N	3.1	MG/L
RCMHP-02	11/25/2019	Nitrate as N	5.7	MG/L
RCMHP-02	1/13/2020	Nitrate as N	6.1	MG/L
RCMHP-02	4/20/2020	Nitrate as N	4.8	MG/L
RCMHP-02	7/7/2020	Nitrate as N	6.4	MG/L
RCMHP-02	10/5/2020	Nitrate as N	6.2	MG/L
RCMHP-02	1/18/2021	Nitrate as N	6.1	MG/L
RCMHP-02	4/29/2019	Nitrite as N	0.4	MG/L
RCMHP-02	4/29/2019	pH	8.1	PH UNITS
RCMHP-02	4/29/2019	Sodium	31	MG/L
RCMHP-02	4/29/2019	Specific Conductivity	460	UMHOS/CM
RCMHP-02	4/29/2019	Sulfate	12	MG/L
RCMHP-02	4/29/2019	Total Dissolved Solids	270	MG/L
RCMHP-02	4/29/2019	Zinc	< 0.05	MG/L
SMHOA-01	8/10/2018	Alkalinity, total	230	MG/L
SMHOA-01	8/10/2018	Aluminum	50	UG/L
SMHOA-01	8/10/2018	Antimony	< 6	UG/L

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
SMHOA-01	8/10/2018	Arsenic	< 2	UG/L
SMHOA-01	8/10/2018	Bicarbonate Alkalinity	230	MG/L
SMHOA-01	8/10/2018	Calcium	48	MG/L
SMHOA-01	8/10/2018	Chloride	27	MG/L
SMHOA-01	8/10/2018	Chromium	6.3	UG/L
SMHOA-01	8/10/2018	Copper	< 0.05	MG/L
SMHOA-01	8/10/2018	Fluoride	0.5	MG/L
SMHOA-01	8/10/2018	Hardness	190	MG/L
SMHOA-01	8/10/2018	Iron	100	UG/L
SMHOA-01	8/10/2018	Lead	< 5	UG/L
SMHOA-01	8/10/2018	Magnesium	17	MG/L
SMHOA-01	8/10/2018	Manganese	< 20	UG/L
SMHOA-01	8/10/2018	Mercury	< 1	UG/L
SMHOA-01	1/7/2017	Nitrate as N	5.2	MG/L
SMHOA-01	4/7/2017	Nitrate as N	2.5	MG/L
SMHOA-01	7/10/2017	Nitrate as N	4.6	MG/L
SMHOA-01	9/13/2017	Nitrate as N	4.8	MG/L
SMHOA-01	10/16/2017	Nitrate as N	4.4	MG/L
SMHOA-01	1/22/2018	Nitrate as N	5.6	MG/L
SMHOA-01	4/18/2018	Nitrate as N	5	MG/L
SMHOA-01	7/5/2018	Nitrate as N	4.2	MG/L
SMHOA-01	8/10/2018	Nitrate as N	4.8	MG/L
SMHOA-01	10/1/2018	Nitrate as N	4.3	MG/L
SMHOA-01	1/2/2019	Nitrate as N	5	MG/L
SMHOA-01	4/29/2019	Nitrate as N	5.1	MG/L
SMHOA-01	10/7/2019	Nitrate as N	4.6	MG/L
SMHOA-01	1/13/2020	Nitrate as N	4.7	MG/L
SMHOA-01	4/20/2020	Nitrate as N	5.1	MG/L
SMHOA-01	7/6/2020	Nitrate as N	5.2	MG/L
SMHOA-01	10/5/2020	Nitrate as N	4.9	MG/L
SMHOA-01	1/12/2021	Nitrate as N	6.5	MG/L
SMHOA-01	4/18/2018	Nitrite as N	0.1	MG/L
SMHOA-01	8/10/2018	Nitrite as N	0.1	MG/L
SMHOA-01	4/29/2019	Nitrite as N	0.4	MG/L
SMHOA-01	8/10/2018	pH	8.4	PH UNITS
SMHOA-01	8/10/2018	Sodium	44	MG/L
SMHOA-01	8/10/2018	Specific Conductivity	550	UMHOS/CM
SMHOA-01	8/10/2018	Sulfate	20	MG/L
SMHOA-01	4/29/2019	Tetrachloroethene (PCE)	< 0.5	UG/L
SMHOA-01	8/10/2018	Total Dissolved Solids	320	MG/L

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
SMHOA-01	4/29/2019	Trichloroethene (TCE)	< 0.5	UG/L
SMHOA-01	8/10/2018	Zinc	< 0.05	MG/L
SMHOA-02	8/10/2018	Alkalinity, total	220	MG/L
SMHOA-02	8/10/2018	Aluminum	50	UG/L
SMHOA-02	8/10/2018	Antimony	< 6	UG/L
SMHOA-02	8/10/2018	Arsenic	< 2	UG/L
SMHOA-02	8/10/2018	Bicarbonate Alkalinity	220	MG/L
SMHOA-02	8/10/2018	Calcium	52	MG/L
SMHOA-02	8/10/2018	Chloride	32	MG/L
SMHOA-02	8/10/2018	Chromium	8.9	UG/L
SMHOA-02	8/10/2018	Copper	< 0.05	MG/L
SMHOA-02	8/10/2018	Fluoride	0.59	MG/L
SMHOA-02	8/10/2018	Hardness	200	MG/L
SMHOA-02	8/10/2018	Iron	100	UG/L
SMHOA-02	8/10/2018	Lead	< 5	UG/L
SMHOA-02	8/10/2018	Magnesium	18	MG/L
SMHOA-02	8/10/2018	Manganese	< 20	UG/L
SMHOA-02	8/10/2018	Mercury	< 1	UG/L
SMHOA-02	1/7/2017	Nitrate as N	5.1	MG/L
SMHOA-02	9/13/2017	Nitrate as N	4.9	MG/L
SMHOA-02	10/16/2017	Nitrate as N	4.7	MG/L
SMHOA-02	1/22/2018	Nitrate as N	4.6	MG/L
SMHOA-02	4/18/2018	Nitrate as N	5.2	MG/L
SMHOA-02	7/5/2018	Nitrate as N	5.4	MG/L
SMHOA-02	8/10/2018	Nitrate as N	4.6	MG/L
SMHOA-02	10/1/2018	Nitrate as N	5	MG/L
SMHOA-02	1/2/2019	Nitrate as N	4.6	MG/L
SMHOA-02	4/29/2019	Nitrate as N	5.9	MG/L
SMHOA-02	10/7/2019	Nitrate as N	5.1	MG/L
SMHOA-02	1/13/2020	Nitrate as N	5.5	MG/L
SMHOA-02	4/20/2020	Nitrate as N	5.5	MG/L
SMHOA-02	7/6/2020	Nitrate as N	5.3	MG/L
SMHOA-02	10/5/2020	Nitrate as N	5.6	MG/L
SMHOA-02	1/12/2021	Nitrate as N	5.4	MG/L
SMHOA-02	4/18/2018	Nitrite as N	0.1	MG/L
SMHOA-02	8/10/2018	Nitrite as N	0.1	MG/L
SMHOA-02	4/29/2019	Nitrite as N	0.4	MG/L
SMHOA-02	8/10/2018	pH	8.3	PH UNITS
SMHOA-02	8/10/2018	Sodium	45	MG/L
SMHOA-02	8/10/2018	Specific Conductivity	530	UMHOS/CM

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
SMHOA-02	8/10/2018	Sulfate	16	MG/L
SMHOA-02	4/29/2019	Tetrachloroethene (PCE)	< 0.5	UG/L
SMHOA-02	8/10/2018	Total Dissolved Solids	320	MG/L
SMHOA-02	4/29/2019	Trichloroethene (TCE)	< 0.5	UG/L
SMHOA-02	8/10/2018	Zinc	< 0.05	MG/L
Plantation-01	3/20/2017	Alkalinity, total	200	MG/L
Plantation-01	3/24/2020	Alkalinity, total	190	MG/L
Plantation-01	3/20/2017	Aluminum	50	UG/L
Plantation-01	3/24/2020	Aluminum	0	UG/L
Plantation-01	3/20/2017	Antimony	< 6	UG/L
Plantation-01	3/24/2020	Antimony	< 6	UG/L
Plantation-01	3/20/2017	Arsenic	< 2	UG/L
Plantation-01	3/24/2020	Arsenic	< 2	UG/L
Plantation-01	3/20/2017	Bicarbonate Alkalinity	240	MG/L
Plantation-01	3/24/2020	Bicarbonate Alkalinity	240	MG/L
Plantation-01	3/20/2017	Calcium	50	MG/L
Plantation-01	3/24/2020	Calcium	52	MG/L
Plantation-01	3/20/2017	Chloride	14	MG/L
Plantation-01	3/24/2020	Chloride	17	MG/L
Plantation-01	3/20/2017	Chromium	5.4	UG/L
Plantation-01	3/24/2020	Chromium	0	UG/L
Plantation-01	3/20/2017	Copper	< 0.05	MG/L
Plantation-01	3/24/2020	Copper	< 0.05	MG/L
Plantation-01	3/20/2017	Fluoride	0.5	MG/L
Plantation-01	3/24/2020	Fluoride	0.41	MG/L
Plantation-01	3/20/2017	Hardness	200	MG/L
Plantation-01	3/24/2020	Hardness	210	MG/L
Plantation-01	3/20/2017	Iron	100	UG/L
Plantation-01	3/24/2020	Iron	0	UG/L
Plantation-01	3/20/2017	Lead	< 5	UG/L
Plantation-01	3/24/2020	Lead	< 5	UG/L
Plantation-01	3/20/2017	Magnesium	17	MG/L
Plantation-01	3/24/2020	Magnesium	18	MG/L
Plantation-01	3/20/2017	Manganese	< 20	UG/L
Plantation-01	3/20/2017	Mercury	< 1	UG/L
Plantation-01	3/24/2020	Mercury	< 1	UG/L
Plantation-01	3/20/2017	Nitrate as N	1.8	MG/L
Plantation-01	7/23/2018	Nitrate as N	2	MG/L
Plantation-01	7/22/2019	Nitrate as N	2	MG/L
Plantation-01	12/16/2020	Nitrate as N	2.2	MG/L

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
Plantation-01	3/20/2017	Nitrite as N	0.1	MG/L
Plantation-01	3/24/2020	Nitrite as N	0	MG/L
Plantation-01	3/20/2017	pH	7.8	PH UNITS
Plantation-01	3/24/2020	pH	7.5	PH UNITS
Plantation-01	3/20/2017	Sodium	20	MG/L
Plantation-01	3/24/2020	Sodium	19	MG/L
Plantation-01	3/20/2017	Specific Conductivity	450	UMHOS/CM
Plantation-01	3/24/2020	Specific Conductivity	450	UMHOS/CM
Plantation-01	3/20/2017	Sulfate	10	MG/L
Plantation-01	3/24/2020	Sulfate	12	MG/L
Plantation-01	3/20/2017	Total Dissolved Solids	270	MG/L
Plantation-01	3/24/2020	Total Dissolved Solids	260	MG/L
Plantation-01	3/20/2017	Zinc	< 0.05	MG/L
Plantation-01	3/24/2020	Zinc	0	MG/L
Tukwet-A	6/20/2017	Alkalinity, total	130	MG/L
Tukwet-A	8/6/2020	Alkalinity, total	120	MG/L
Tukwet-A	6/20/2017	Aluminum	50	UG/L
Tukwet-A	8/6/2020	Aluminum	50	UG/L
Tukwet-A	6/20/2017	Antimony	< 6	UG/L
Tukwet-A	8/6/2020	Antimony	< 6	UG/L
Tukwet-A	6/20/2017	Arsenic	3.7	UG/L
Tukwet-A	8/6/2020	Arsenic	6.5	UG/L
Tukwet-A	6/20/2017	Bicarbonate Alkalinity	120	MG/L
Tukwet-A	8/6/2020	Bicarbonate Alkalinity	110	MG/L
Tukwet-A	6/20/2017	Calcium	17	MG/L
Tukwet-A	8/6/2020	Calcium	7.8	MG/L
Tukwet-A	6/20/2017	Chloride	14	MG/L
Tukwet-A	8/6/2020	Chloride	17	MG/L
Tukwet-A	6/20/2017	Chromium	9.3	UG/L
Tukwet-A	8/6/2020	Chromium	10	UG/L
Tukwet-A	6/20/2017	Copper	< 0.05	MG/L
Tukwet-A	8/6/2020	Copper	< 0.05	MG/L
Tukwet-A	6/20/2017	Fluoride	0.7	MG/L
Tukwet-A	8/6/2020	Fluoride	0.65	MG/L
Tukwet-A	6/20/2017	Hardness	68	MG/L
Tukwet-A	8/6/2020	Hardness	29	MG/L
Tukwet-A	6/20/2017	Iron	100	UG/L
Tukwet-A	8/6/2020	Iron	100	UG/L
Tukwet-A	6/20/2017	Lead	< 5	UG/L
Tukwet-A	8/6/2020	Lead	< 5	UG/L

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
Tukwet-A	6/20/2017	Magnesium	5.8	MG/L
Tukwet-A	8/6/2020	Magnesium	2.2	MG/L
Tukwet-A	6/20/2017	Manganese	< 20	UG/L
Tukwet-A	8/6/2020	Manganese	< 20	UG/L
Tukwet-A	6/20/2017	Mercury	< 1	UG/L
Tukwet-A	8/6/2020	Mercury	< 1	UG/L
Tukwet-A	6/20/2017	Nitrate as N	1.5	MG/L
Tukwet-A	8/10/2018	Nitrate as N	1.2	MG/L
Tukwet-A	9/26/2019	Nitrate as N	1.4	MG/L
Tukwet-A	8/6/2020	Nitrate as N	1.4	MG/L
Tukwet-A	6/20/2017	Nitrite as N	0.1	MG/L
Tukwet-A	8/6/2020	Nitrite as N	0.4	MG/L
Tukwet-A	6/20/2017	pH	8.4	PH UNITS
Tukwet-A	8/6/2020	pH	8.8	PH UNITS
Tukwet-A	6/20/2017	Potassium	1.3	MG/L
Tukwet-A	8/6/2020	Potassium	1	MG/L
Tukwet-A	6/20/2017	Sodium	47	MG/L
Tukwet-A	8/6/2020	Sodium	56	MG/L
Tukwet-A	6/20/2017	Specific Conductivity	330	UMHOS/CM
Tukwet-A	8/6/2020	Specific Conductivity	280	UMHOS/CM
Tukwet-A	6/20/2017	Sulfate	6.4	MG/L
Tukwet-A	8/6/2020	Sulfate	5.1	MG/L
Tukwet-A	6/20/2017	Tetrachloroethene (PCE)	< 0.5	UG/L
Tukwet-A	8/6/2020	Tetrachloroethene (PCE)	< 0.5	UG/L
Tukwet-A	6/20/2017	Total Dissolved Solids	180	MG/L
Tukwet-A	8/6/2020	Total Dissolved Solids	160	MG/L
Tukwet-A	6/20/2017	Trichloroethene (TCE)	< 0.5	UG/L
Tukwet-A	8/6/2020	Trichloroethene (TCE)	< 0.5	UG/L
Tukwet-A	6/20/2017	Zinc	< 0.05	MG/L
Tukwet-A	8/6/2020	Zinc	< 0.05	MG/L
Tukwet-D	6/20/2017	Alkalinity, total	150	MG/L
Tukwet-D	8/11/2020	Alkalinity, total	150	MG/L
Tukwet-D	6/20/2017	Aluminum	50	UG/L
Tukwet-D	8/11/2020	Aluminum	50	UG/L
Tukwet-D	6/20/2017	Antimony	< 6	UG/L
Tukwet-D	8/11/2020	Antimony	< 6	UG/L
Tukwet-D	6/20/2017	Arsenic	< 2	UG/L
Tukwet-D	8/11/2020	Arsenic	< 2	UG/L
Tukwet-D	6/20/2017	Bicarbonate Alkalinity	150	MG/L
Tukwet-D	8/11/2020	Bicarbonate Alkalinity	150	MG/L

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
Tukwet-D	6/20/2017	Calcium	30	MG/L
Tukwet-D	8/11/2020	Calcium	30	MG/L
Tukwet-D	6/20/2017	Chloride	9.2	MG/L
Tukwet-D	8/11/2020	Chloride	11	MG/L
Tukwet-D	6/20/2017	Chromium	6.3	UG/L
Tukwet-D	8/11/2020	Chromium	10	UG/L
Tukwet-D	6/20/2017	Copper	< 0.05	MG/L
Tukwet-D	8/11/2020	Copper	< 0.05	MG/L
Tukwet-D	6/20/2017	Fluoride	0.6	MG/L
Tukwet-D	8/11/2020	Fluoride	0.52	MG/L
Tukwet-D	6/20/2017	Hardness	130	MG/L
Tukwet-D	8/11/2020	Hardness	130	MG/L
Tukwet-D	6/20/2017	Iron	100	UG/L
Tukwet-D	8/11/2020	Iron	100	UG/L
Tukwet-D	6/20/2017	Lead	< 5	UG/L
Tukwet-D	8/11/2020	Lead	< 5	UG/L
Tukwet-D	6/20/2017	Magnesium	14	MG/L
Tukwet-D	8/11/2020	Magnesium	13	MG/L
Tukwet-D	6/20/2017	Manganese	< 20	UG/L
Tukwet-D	8/11/2020	Manganese	< 20	UG/L
Tukwet-D	6/20/2017	Mercury	< 1	UG/L
Tukwet-D	8/11/2020	Mercury	< 1	UG/L
Tukwet-D	6/20/2017	Nitrate as N	2.1	MG/L
Tukwet-D	8/10/2018	Nitrate as N	1.9	MG/L
Tukwet-D	8/13/2019	Nitrate as N	2.2	MG/L
Tukwet-D	9/26/2019	Nitrate as N	2	MG/L
Tukwet-D	8/11/2020	Nitrate as N	2.3	MG/L
Tukwet-D	6/20/2017	Nitrite as N	0.1	MG/L
Tukwet-D	8/11/2020	Nitrite as N	0.4	MG/L
Tukwet-D	6/20/2017	pH	8.2	PH UNITS
Tukwet-D	8/13/2019	pH	8.2	PH UNITS
Tukwet-D	8/11/2020	pH	8.1	PH UNITS
Tukwet-D	6/20/2017	Potassium	1.3	MG/L
Tukwet-D	8/11/2020	Potassium	1.4	MG/L
Tukwet-D	6/20/2017	Sodium	24	MG/L
Tukwet-D	8/11/2020	Sodium	23	MG/L
Tukwet-D	6/20/2017	Specific Conductivity	350	UMHOS/CM
Tukwet-D	8/11/2020	Specific Conductivity	350	UMHOS/CM
Tukwet-D	6/20/2017	Sulfate	8.9	MG/L
Tukwet-D	8/11/2020	Sulfate	9.3	MG/L

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
Tukwet-D	6/20/2017	Tetrachloroethene (PCE)	< 0.5	UG/L
Tukwet-D	8/11/2020	Tetrachloroethene (PCE)	< 0.5	UG/L
Tukwet-D	6/20/2017	Total Dissolved Solids	230	MG/L
Tukwet-D	8/11/2020	Total Dissolved Solids	200	MG/L
Tukwet-D	6/20/2017	Trichloroethene (TCE)	< 0.5	UG/L
Tukwet-D	8/11/2020	Trichloroethene (TCE)	< 0.5	UG/L
Tukwet-D	6/20/2017	Zinc	< 0.05	MG/L
Tukwet-D	8/11/2020	Zinc	< 0.05	MG/L
BCVWD-03	12/16/2020	1,2-Dibromo-3-chloropropa	< 0.01	UG/L
BCVWD-03	12/16/2020	Alkalinity, total	160	MG/L
BCVWD-03	12/16/2020	Aluminum	50	UG/L
BCVWD-03	12/16/2020	Antimony	< 6	UG/L
BCVWD-03	12/16/2020	Arsenic	< 2	UG/L
BCVWD-03	12/16/2020	Bicarbonate Alkalinity	160	MG/L
BCVWD-03	12/16/2020	Calcium	35	MG/L
BCVWD-03	12/16/2020	Chloride	8	MG/L
BCVWD-03	12/16/2020	Chromium	11	UG/L
BCVWD-03	12/16/2020	Copper	< 0.05	MG/L
BCVWD-03	12/16/2020	Fluoride	0.32	MG/L
BCVWD-03	12/16/2020	Hardness	120	MG/L
BCVWD-03	12/16/2020	Iron	100	UG/L
BCVWD-03	12/16/2020	Lead	< 5	UG/L
BCVWD-03	12/16/2020	Magnesium	8.5	MG/L
BCVWD-03	12/16/2020	Manganese	< 20	UG/L
BCVWD-03	12/16/2020	Mercury	< 1	UG/L
BCVWD-03	12/20/2018	Nitrate as N	0.42	MG/L
BCVWD-03	12/16/2020	Nitrate as N	0.85	MG/L
BCVWD-03	12/16/2020	Nitrite as N	0.4	MG/L
BCVWD-03	12/16/2020	pH	8.1	PH UNITS
BCVWD-03	12/16/2020	Potassium	1.5	MG/L
BCVWD-03	12/16/2020	Sodium	23	MG/L
BCVWD-03	12/16/2020	Specific Conductivity	350	UMHOS/CM
BCVWD-03	12/16/2020	Sulfate	11	MG/L
BCVWD-03	12/16/2020	Tetrachloroethene (PCE)	< 0.5	UG/L
BCVWD-03	12/16/2020	Total Dissolved Solids	190	MG/L
BCVWD-03	12/16/2020	Trichloroethene (TCE)	< 0.5	UG/L
BCVWD-03	12/16/2020	Zinc	< 0.05	MG/L
BCVWD-16	12/4/2019	1,2-Dibromo-3-chloropropa	< 0.01	UG/L
BCVWD-16	12/4/2019	Alkalinity, total	180	MG/L
BCVWD-16	12/4/2019	Aluminum	50	UG/L

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
BCVWD-16	12/4/2019	Antimony	< 6	UG/L
BCVWD-16	12/18/2018	Arsenic	< 2	UG/L
BCVWD-16	12/4/2019	Arsenic	< 2	UG/L
BCVWD-16	12/4/2019	Bicarbonate Alkalinity	180	MG/L
BCVWD-16	12/4/2019	Calcium	54	MG/L
BCVWD-16	12/4/2019	Chloride	46	MG/L
BCVWD-16	12/4/2019	Chromium	10	UG/L
BCVWD-16	12/4/2019	Copper	< 0.05	MG/L
BCVWD-16	12/4/2019	Fluoride	0.64	MG/L
BCVWD-16	12/4/2019	Hardness	220	MG/L
BCVWD-16	12/4/2019	Iron	100	UG/L
BCVWD-16	12/4/2019	Lead	< 5	UG/L
BCVWD-16	12/4/2019	Magnesium	20	MG/L
BCVWD-16	12/4/2019	Manganese	< 20	UG/L
BCVWD-16	12/4/2019	Mercury	< 1	UG/L
BCVWD-16	1/31/2017	Nitrate as N	6.9	MG/L
BCVWD-16	5/23/2017	Nitrate as N	6.6	MG/L
BCVWD-16	6/19/2017	Nitrate as N	6.2	MG/L
BCVWD-16	7/18/2017	Nitrate as N	6.1	MG/L
BCVWD-16	8/14/2017	Nitrate as N	6.2	MG/L
BCVWD-16	9/11/2017	Nitrate as N	6.1	MG/L
BCVWD-16	10/23/2017	Nitrate as N	5.8	MG/L
BCVWD-16	11/22/2017	Nitrate as N	5.7	MG/L
BCVWD-16	12/11/2017	Nitrate as N	5.6	MG/L
BCVWD-16	1/8/2018	Nitrate as N	5.8	MG/L
BCVWD-16	12/18/2018	Nitrate as N	6	MG/L
BCVWD-16	10/1/2019	Nitrate as N	6.9	MG/L
BCVWD-16	12/4/2019	Nitrate as N	5.1	MG/L
BCVWD-16	5/26/2020	Nitrate as N	7	MG/L
BCVWD-16	6/16/2020	Nitrate as N	6.8	MG/L
BCVWD-16	7/27/2020	Nitrate as N	6.7	MG/L
BCVWD-16	10/27/2020	Nitrate as N	5.1	MG/L
BCVWD-16	12/10/2020	Nitrate as N	6.2	MG/L
BCVWD-16	2/9/2021	Nitrate as N	6.2	MG/L
BCVWD-16	3/23/2021	Nitrate as N	5.3	MG/L
BCVWD-16	12/4/2019	Nitrite as N	0.4	MG/L
BCVWD-16	11/22/2017	pH	8.1	PH UNITS
BCVWD-16	12/4/2019	pH	8.2	PH UNITS
BCVWD-16	12/4/2019	Potassium	1.3	MG/L
BCVWD-16	12/4/2019	Sodium	35	MG/L

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
BCVWD-16	11/22/2017	Specific Conductivity	550	UMHOS/CM
BCVWD-16	12/4/2019	Specific Conductivity	590	UMHOS/CM
BCVWD-16	12/4/2019	Sulfate	45	MG/L
BCVWD-16	12/4/2019	Tetrachloroethene (PCE)	< 0.5	UG/L
BCVWD-16	12/4/2019	Total Dissolved Solids	350	MG/L
BCVWD-16	12/4/2019	Trichloroethene (TCE)	< 0.5	UG/L
BCVWD-16	12/4/2019	Zinc	< 0.05	MG/L
BCVWD-21	12/4/2019	1,2-Dibromo-3-chloropropa	< 0.01	UG/L
BCVWD-21	12/18/2018	Alkalinity, total	180	MG/L
BCVWD-21	12/18/2018	Aluminum	50	UG/L
BCVWD-21	12/18/2018	Antimony	< 6	UG/L
BCVWD-21	12/18/2018	Arsenic	< 2	UG/L
BCVWD-21	12/18/2018	Bicarbonate Alkalinity	180	MG/L
BCVWD-21	12/18/2018	Calcium	48	MG/L
BCVWD-21	12/18/2018	Chloride	24	MG/L
BCVWD-21	12/18/2018	Chromium	10	UG/L
BCVWD-21	12/18/2018	Copper	< 0.05	MG/L
BCVWD-21	12/18/2018	Fluoride	0.45	MG/L
BCVWD-21	12/18/2018	Hardness	190	MG/L
BCVWD-21	12/18/2018	Iron	100	UG/L
BCVWD-21	12/18/2018	Lead	< 5	UG/L
BCVWD-21	12/18/2018	Magnesium	17	MG/L
BCVWD-21	12/18/2018	Manganese	< 20	UG/L
BCVWD-21	12/18/2018	Mercury	< 1	UG/L
BCVWD-21	1/31/2017	Nitrate as N	3.6	MG/L
BCVWD-21	5/23/2017	Nitrate as N	3.4	MG/L
BCVWD-21	6/19/2017	Nitrate as N	3.4	MG/L
BCVWD-21	7/18/2017	Nitrate as N	3.4	MG/L
BCVWD-21	8/14/2017	Nitrate as N	3.2	MG/L
BCVWD-21	9/11/2017	Nitrate as N	3.2	MG/L
BCVWD-21	10/23/2017	Nitrate as N	3.1	MG/L
BCVWD-21	11/22/2017	Nitrate as N	3.2	MG/L
BCVWD-21	12/11/2017	Nitrate as N	3.2	MG/L
BCVWD-21	1/8/2018	Nitrate as N	3.4	MG/L
BCVWD-21	2/27/2018	Nitrate as N	3.2	MG/L
BCVWD-21	12/18/2018	Nitrate as N	3	MG/L
BCVWD-21	10/1/2019	Nitrate as N	3	MG/L
BCVWD-21	12/4/2019	Nitrate as N	2.9	MG/L
BCVWD-21	7/27/2020	Nitrate as N	3.2	MG/L
BCVWD-21	10/27/2020	Nitrate as N	3.1	MG/L

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
BCVWD-21	12/10/2020	Nitrate as N	3.1	MG/L
BCVWD-21	2/9/2021	Nitrate as N	3	MG/L
BCVWD-21	3/23/2021	Nitrate as N	3	MG/L
BCVWD-21	12/18/2018	Nitrite as N	0.4	MG/L
BCVWD-21	12/18/2018	pH	8.2	PH UNITS
BCVWD-21	12/18/2018	Potassium	1.6	MG/L
BCVWD-21	12/18/2018	Sodium	24	MG/L
BCVWD-21	12/18/2018	Specific Conductivity	480	UMHOS/CM
BCVWD-21	12/18/2018	Sulfate	28	MG/L
BCVWD-21	12/4/2019	Tetrachloroethene (PCE)	< 0.5	UG/L
BCVWD-21	12/18/2018	Total Dissolved Solids	270	MG/L
BCVWD-21	12/4/2019	Trichloroethene (TCE)	< 0.5	UG/L
BCVWD-21	12/18/2018	Zinc	< 0.05	MG/L
BCVWD-22	12/4/2019	1,2-Dibromo-3-chloropropa	< 0.01	UG/L
BCVWD-22	12/4/2019	Alkalinity, total	180	MG/L
BCVWD-22	12/4/2019	Aluminum	50	UG/L
BCVWD-22	12/4/2019	Antimony	< 6	UG/L
BCVWD-22	12/4/2019	Arsenic	< 2	UG/L
BCVWD-22	12/4/2019	Bicarbonate Alkalinity	180	MG/L
BCVWD-22	12/4/2019	Calcium	38	MG/L
BCVWD-22	12/4/2019	Chloride	8	MG/L
BCVWD-22	12/4/2019	Chromium	10	UG/L
BCVWD-22	12/4/2019	Copper	< 0.05	MG/L
BCVWD-22	12/4/2019	Fluoride	0.31	MG/L
BCVWD-22	12/4/2019	Hardness	160	MG/L
BCVWD-22	12/4/2019	Iron	100	UG/L
BCVWD-22	12/4/2019	Lead	< 5	UG/L
BCVWD-22	12/4/2019	Magnesium	16	MG/L
BCVWD-22	12/4/2019	Manganese	< 20	UG/L
BCVWD-22	12/4/2019	Mercury	< 1	UG/L
BCVWD-22	12/14/2017	Nitrate as N	0.89	MG/L
BCVWD-22	12/4/2019	Nitrate as N	0.93	MG/L
BCVWD-22	12/10/2020	Nitrate as N	0.94	MG/L
BCVWD-22	12/4/2019	Nitrite as N	0.4	MG/L
BCVWD-22	12/4/2019	pH	8.1	PH UNITS
BCVWD-22	12/4/2019	Potassium	1.3	MG/L
BCVWD-22	12/4/2019	Sodium	18	MG/L
BCVWD-22	12/4/2019	Specific Conductivity	380	UMHOS/CM
BCVWD-22	12/4/2019	Sulfate	10	MG/L
BCVWD-22	12/4/2019	Tetrachloroethene (PCE)	< 0.5	UG/L

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
BCVWD-22	12/4/2019	Total Dissolved Solids	220	MG/L
BCVWD-22	12/4/2019	Trichloroethene (TCE)	< 0.5	UG/L
BCVWD-22	12/4/2019	Zinc	< 0.05	MG/L
BCVWD-23	12/18/2018	1,2-Dibromo-3-chloropropa	0.044	UG/L
BCVWD-23	6/27/2019	1,2-Dibromo-3-chloropropa	0.048	UG/L
BCVWD-23	12/18/2018	Alkalinity, total	170	MG/L
BCVWD-23	12/18/2018	Aluminum	50	UG/L
BCVWD-23	12/18/2018	Antimony	< 6	UG/L
BCVWD-23	12/18/2018	Arsenic	< 2	UG/L
BCVWD-23	12/18/2018	Bicarbonate Alkalinity	170	MG/L
BCVWD-23	12/18/2018	Calcium	47	MG/L
BCVWD-23	12/18/2018	Chloride	21	MG/L
BCVWD-23	12/18/2018	Chromium	10	UG/L
BCVWD-23	12/18/2018	Copper	< 0.05	MG/L
BCVWD-23	12/18/2018	Fluoride	0.37	MG/L
BCVWD-23	12/18/2018	Hardness	180	MG/L
BCVWD-23	12/18/2018	Iron	100	UG/L
BCVWD-23	12/18/2018	Lead	< 5	UG/L
BCVWD-23	12/18/2018	Magnesium	15	MG/L
BCVWD-23	12/18/2018	Manganese	< 20	UG/L
BCVWD-23	12/18/2018	Mercury	< 1	UG/L
BCVWD-23	5/23/2017	Nitrate as N	2.4	MG/L
BCVWD-23	6/19/2017	Nitrate as N	2.4	MG/L
BCVWD-23	7/18/2017	Nitrate as N	2.3	MG/L
BCVWD-23	8/14/2017	Nitrate as N	2.4	MG/L
BCVWD-23	9/11/2017	Nitrate as N	2.4	MG/L
BCVWD-23	11/22/2017	Nitrate as N	2.9	MG/L
BCVWD-23	12/11/2017	Nitrate as N	2.4	MG/L
BCVWD-23	1/8/2018	Nitrate as N	2.4	MG/L
BCVWD-23	2/27/2018	Nitrate as N	2.3	MG/L
BCVWD-23	12/18/2018	Nitrate as N	2.7	MG/L
BCVWD-23	12/4/2019	Nitrate as N	2.1	MG/L
BCVWD-23	12/10/2020	Nitrate as N	1.9	MG/L
BCVWD-23	12/18/2018	Nitrite as N	0.4	MG/L
BCVWD-23	12/18/2018	pH	8.3	PH UNITS
BCVWD-23	12/18/2018	Potassium	1.5	MG/L
BCVWD-23	12/18/2018	Sodium	21	MG/L
BCVWD-23	12/18/2018	Specific Conductivity	440	UMHOS/CM
BCVWD-23	12/18/2018	Sulfate	19	MG/L
BCVWD-23	12/18/2018	Tetrachloroethene (PCE)	< 0.5	UG/L

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
BCVWD-23	12/18/2018	Total Dissolved Solids	260	MG/L
BCVWD-23	12/18/2018	Trichloroethene (TCE)	< 0.5	UG/L
BCVWD-23	12/18/2018	Zinc	< 0.05	MG/L
BCVWD-24	12/4/2019	1,2-Dibromo-3-chloropropa	< 0.01	UG/L
BCVWD-24	12/4/2019	Alkalinity, total	160	MG/L
BCVWD-24	12/4/2019	Aluminum	50	UG/L
BCVWD-24	12/4/2019	Antimony	< 6	UG/L
BCVWD-24	12/18/2018	Arsenic	< 2	UG/L
BCVWD-24	12/4/2019	Arsenic	< 2	UG/L
BCVWD-24	12/4/2019	Bicarbonate Alkalinity	160	MG/L
BCVWD-24	12/4/2019	Calcium	35	MG/L
BCVWD-24	12/4/2019	Chloride	6.6	MG/L
BCVWD-24	12/4/2019	Chromium	10	UG/L
BCVWD-24	12/4/2019	Copper	< 0.05	MG/L
BCVWD-24	12/4/2019	Fluoride	0.35	MG/L
BCVWD-24	12/4/2019	Hardness	140	MG/L
BCVWD-24	12/4/2019	Iron	100	UG/L
BCVWD-24	12/4/2019	Lead	< 5	UG/L
BCVWD-24	12/4/2019	Magnesium	12	MG/L
BCVWD-24	12/4/2019	Manganese	< 20	UG/L
BCVWD-24	12/4/2019	Mercury	< 1	UG/L
BCVWD-24	11/22/2017	Nitrate as N	1.7	MG/L
BCVWD-24	12/18/2018	Nitrate as N	1.8	MG/L
BCVWD-24	12/4/2019	Nitrate as N	1.7	MG/L
BCVWD-24	12/10/2020	Nitrate as N	0.99	MG/L
BCVWD-24	12/4/2019	Nitrite as N	0.4	MG/L
BCVWD-24	12/4/2019	pH	8.2	PH UNITS
BCVWD-24	12/4/2019	Potassium	1.3	MG/L
BCVWD-24	12/4/2019	Sodium	17	MG/L
BCVWD-24	12/4/2019	Specific Conductivity	350	UMHOS/CM
BCVWD-24	12/4/2019	Sulfate	11	MG/L
BCVWD-24	12/4/2019	Tetrachloroethene (PCE)	< 0.5	UG/L
BCVWD-24	12/4/2019	Total Dissolved Solids	200	MG/L
BCVWD-24	12/4/2019	Trichloroethene (TCE)	< 0.5	UG/L
BCVWD-24	12/4/2019	Zinc	< 0.05	MG/L
BCVWD-25	12/18/2018	1,2-Dibromo-3-chloropropa	< 0.01	UG/L
BCVWD-25	12/18/2018	Alkalinity, total	180	MG/L
BCVWD-25	12/18/2018	Aluminum	50	UG/L
BCVWD-25	12/18/2018	Antimony	< 6	UG/L
BCVWD-25	12/18/2018	Arsenic	< 2	UG/L

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
BCVWD-25	12/18/2018	Bicarbonate Alkalinity	180	MG/L
BCVWD-25	12/18/2018	Calcium	43	MG/L
BCVWD-25	12/18/2018	Chloride	9.7	MG/L
BCVWD-25	12/18/2018	Chromium	12	UG/L
BCVWD-25	12/18/2018	Copper	< 0.05	MG/L
BCVWD-25	12/18/2018	Fluoride	0.23	MG/L
BCVWD-25	12/18/2018	Hardness	160	MG/L
BCVWD-25	12/18/2018	Iron	100	UG/L
BCVWD-25	12/18/2018	Lead	< 5	UG/L
BCVWD-25	12/18/2018	Magnesium	13	MG/L
BCVWD-25	12/18/2018	Manganese	< 20	UG/L
BCVWD-25	12/18/2018	Mercury	< 1	UG/L
BCVWD-25	5/15/2017	Nitrate as N	1.6	MG/L
BCVWD-25	10/23/2017	Nitrate as N	1.1	MG/L
BCVWD-25	12/18/2018	Nitrate as N	1.1	MG/L
BCVWD-25	12/4/2019	Nitrate as N	0.76	MG/L
BCVWD-25	12/10/2020	Nitrate as N	1.1	MG/L
BCVWD-25	12/18/2018	Nitrite as N	0.4	MG/L
BCVWD-25	12/18/2018	pH	8.3	PH UNITS
BCVWD-25	12/18/2018	Potassium	1.5	MG/L
BCVWD-25	12/18/2018	Sodium	22	MG/L
BCVWD-25	12/18/2018	Specific Conductivity	400	UMHOS/CM
BCVWD-25	12/18/2018	Sulfate	13	MG/L
BCVWD-25	12/18/2018	Tetrachloroethene (PCE)	< 0.5	UG/L
BCVWD-25	12/18/2018	Total Dissolved Solids	230	MG/L
BCVWD-25	12/18/2018	Trichloroethene (TCE)	< 0.5	UG/L
BCVWD-25	12/18/2018	Zinc	< 0.05	MG/L
BCVWD-26	12/18/2018	1,2-Dibromo-3-chloropropa	< 0.01	UG/L
BCVWD-26	12/18/2018	Alkalinity, total	160	MG/L
BCVWD-26	12/18/2018	Aluminum	50	UG/L
BCVWD-26	12/18/2018	Antimony	< 6	UG/L
BCVWD-26	12/18/2018	Arsenic	< 2	UG/L
BCVWD-26	12/18/2018	Bicarbonate Alkalinity	160	MG/L
BCVWD-26	12/18/2018	Calcium	33	MG/L
BCVWD-26	12/18/2018	Chloride	8.8	MG/L
BCVWD-26	12/18/2018	Chromium	16	UG/L
BCVWD-26	12/18/2018	Copper	< 0.05	MG/L
BCVWD-26	12/18/2018	Fluoride	0.28	MG/L
BCVWD-26	12/18/2018	Hardness	120	MG/L
BCVWD-26	12/18/2018	Iron	100	UG/L

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
BCVWD-26	12/18/2018	Lead	< 5	UG/L
BCVWD-26	12/18/2018	Magnesium	9.2	MG/L
BCVWD-26	12/18/2018	Manganese	< 20	UG/L
BCVWD-26	12/18/2018	Mercury	< 1	UG/L
BCVWD-26	12/18/2018	Nitrate as N	0.89	MG/L
BCVWD-26	12/4/2019	Nitrate as N	0.64	MG/L
BCVWD-26	12/10/2020	Nitrate as N	0.72	MG/L
BCVWD-26	12/18/2018	Nitrite as N	0.4	MG/L
BCVWD-26	12/18/2018	pH	8.3	PH UNITS
BCVWD-26	12/18/2018	Potassium	1.5	MG/L
BCVWD-26	12/18/2018	Sodium	26	MG/L
BCVWD-26	12/18/2018	Specific Conductivity	340	UMHOS/CM
BCVWD-26	12/18/2018	Sulfate	10	MG/L
BCVWD-26	12/18/2018	Tetrachloroethene (PCE)	< 0.5	UG/L
BCVWD-26	12/18/2018	Total Dissolved Solids	180	MG/L
BCVWD-26	12/18/2018	Trichloroethene (TCE)	< 0.5	UG/L
BCVWD-26	12/18/2018	Zinc	< 0.05	MG/L
BCVWD-29	12/18/2018	1,2-Dibromo-3-chloropropa	< 0.01	UG/L
BCVWD-29	12/18/2018	Alkalinity, total	130	MG/L
BCVWD-29	12/18/2018	Aluminum	50	UG/L
BCVWD-29	12/18/2018	Antimony	< 6	UG/L
BCVWD-29	12/18/2018	Arsenic	< 2	UG/L
BCVWD-29	12/18/2018	Bicarbonate Alkalinity	130	MG/L
BCVWD-29	12/18/2018	Calcium	39	MG/L
BCVWD-29	12/18/2018	Chloride	11	MG/L
BCVWD-29	12/18/2018	Chromium	10	UG/L
BCVWD-29	12/14/2017	Chromium, Hexavalent (Cr6	8	UG/L
BCVWD-29	12/18/2018	Copper	< 0.05	MG/L
BCVWD-29	12/18/2018	Fluoride	0.3	MG/L
BCVWD-29	12/18/2018	Hardness	150	MG/L
BCVWD-29	12/18/2018	Iron	100	UG/L
BCVWD-29	12/18/2018	Lead	< 5	UG/L
BCVWD-29	12/18/2018	Magnesium	13	MG/L
BCVWD-29	12/18/2018	Manganese	< 20	UG/L
BCVWD-29	12/18/2018	Mercury	< 1	UG/L
BCVWD-29	12/14/2017	Nitrate as N	2.3	MG/L
BCVWD-29	12/18/2018	Nitrate as N	1.8	MG/L
BCVWD-29	12/4/2019	Nitrate as N	1.8	MG/L
BCVWD-29	12/10/2020	Nitrate as N	2.4	MG/L
BCVWD-29	12/18/2018	Nitrite as N	0.4	MG/L

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
BCVWD-29	12/14/2017	pH	8.1	PH UNITS
BCVWD-29	12/18/2018	pH	8.2	PH UNITS
BCVWD-29	12/18/2018	Potassium	1.6	MG/L
BCVWD-29	12/18/2018	Sodium	19	MG/L
BCVWD-29	12/14/2017	Specific Conductivity	400	UMHOS/CM
BCVWD-29	12/18/2018	Specific Conductivity	360	UMHOS/CM
BCVWD-29	12/18/2018	Sulfate	11	MG/L
BCVWD-29	12/18/2018	Tetrachloroethene (PCE)	< 0.5	UG/L
BCVWD-29	12/18/2018	Total Dissolved Solids	210	MG/L
BCVWD-29	12/18/2018	Trichloroethene (TCE)	< 0.5	UG/L
BCVWD-29	12/18/2018	Zinc	< 0.05	MG/L
Banning-C2A	3/17/2020	1,2-Dibromo-3-chloropropa	< 0.01	UG/L
Banning-C2A	3/17/2020	Alkalinity, total	160	MG/L
Banning-C2A	3/17/2020	Aluminum	50	UG/L
Banning-C2A	3/17/2020	Antimony	< 6	UG/L
Banning-C2A	3/17/2020	Arsenic	< 2	UG/L
Banning-C2A	3/17/2020	Bicarbonate Alkalinity	160	MG/L
Banning-C2A	3/17/2020	Calcium	41	MG/L
Banning-C2A	3/17/2020	Chloride	9.2	MG/L
Banning-C2A	3/17/2020	Chromium	16	UG/L
Banning-C2A	11/13/2017	Chromium, Hexavalent (Cr6	16	UG/L
Banning-C2A	3/17/2020	Copper	< 0.05	MG/L
Banning-C2A	3/17/2020	Fluoride	0.2	MG/L
Banning-C2A	3/17/2020	Hardness	140	MG/L
Banning-C2A	3/17/2020	Iron	100	UG/L
Banning-C2A	3/17/2020	Lead	< 5	UG/L
Banning-C2A	3/17/2020	Magnesium	8.8	MG/L
Banning-C2A	3/17/2020	Manganese	< 20	UG/L
Banning-C2A	3/17/2020	Mercury	< 1	UG/L
Banning-C2A	4/26/2017	Nitrate as N	1.9	MG/L
Banning-C2A	6/13/2018	Nitrate as N	2	MG/L
Banning-C2A	1/23/2019	Nitrate as N	2	MG/L
Banning-C2A	3/17/2020	Nitrate as N	1.3	MG/L
Banning-C2A	1/6/2021	Nitrate as N	1.9	MG/L
Banning-C2A	4/26/2017	Nitrite as N	0.1	MG/L
Banning-C2A	6/13/2018	Nitrite as N	0.1	MG/L
Banning-C2A	1/23/2019	Nitrite as N	0.4	MG/L
Banning-C2A	3/17/2020	Nitrite as N	0.4	MG/L
Banning-C2A	1/6/2021	Nitrite as N	0.4	MG/L
Banning-C2A	3/17/2020	pH	8.2	PH UNITS

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
Banning-C2A	3/17/2020	Potassium	1.3	MG/L
Banning-C2A	3/17/2020	Sodium	24	MG/L
Banning-C2A	3/17/2020	Specific Conductivity	390	UMHOS/CM
Banning-C2A	3/17/2020	Sulfate	8.5	MG/L
Banning-C2A	3/17/2020	Tetrachloroethene (PCE)	< 0.5	UG/L
Banning-C2A	3/17/2020	Total Dissolved Solids	220	MG/L
Banning-C2A	3/17/2020	Trichloroethene (TCE)	< 0.5	UG/L
Banning-C2A	3/17/2020	Zinc	< 0.05	MG/L
Banning-C3	3/8/2017	1,2-Dibromo-3-chloropropa	< 0.01	UG/L
Banning-C3	3/8/2017	Alkalinity, total	140	MG/L
Banning-C3	3/8/2017	Aluminum	50	UG/L
Banning-C3	3/8/2017	Antimony	< 6	UG/L
Banning-C3	3/8/2017	Arsenic	< 2	UG/L
Banning-C3	3/8/2017	Bicarbonate Alkalinity	160	MG/L
Banning-C3	3/8/2017	Calcium	31	MG/L
Banning-C3	3/8/2017	Chloride	9.9	MG/L
Banning-C3	3/8/2017	Chromium	15	UG/L
Banning-C3	5/12/2017	Chromium, Hexavalent (Cr6	14	UG/L
Banning-C3	8/14/2017	Chromium, Hexavalent (Cr6	14	UG/L
Banning-C3	11/13/2017	Chromium, Hexavalent (Cr6	15	UG/L
Banning-C3	3/8/2017	Copper	< 0.05	MG/L
Banning-C3	3/8/2017	Fluoride	0.4	MG/L
Banning-C3	3/8/2017	Hardness	100	MG/L
Banning-C3	3/8/2017	Iron	100	UG/L
Banning-C3	3/8/2017	Lead	< 5	UG/L
Banning-C3	3/8/2017	Magnesium	5.7	MG/L
Banning-C3	3/8/2017	Manganese	< 20	UG/L
Banning-C3	3/8/2017	Mercury	< 1	UG/L
Banning-C3	3/8/2017	Nitrate as N	1.6	MG/L
Banning-C3	4/25/2017	Nitrate as N	1.8	MG/L
Banning-C3	6/13/2018	Nitrate as N	1.8	MG/L
Banning-C3	1/23/2019	Nitrate as N	1.8	MG/L
Banning-C3	3/8/2017	Nitrite as N	0.1	MG/L
Banning-C3	4/25/2017	Nitrite as N	0.1	MG/L
Banning-C3	6/13/2018	Nitrite as N	0.1	MG/L
Banning-C3	1/23/2019	Nitrite as N	0.4	MG/L
Banning-C3	3/8/2017	pH	8	PH UNITS
Banning-C3	3/8/2017	Potassium	1.5	MG/L
Banning-C3	3/8/2017	Sodium	29	MG/L
Banning-C3	3/8/2017	Specific Conductivity	330	UMHOS/CM

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
Banning-C3	3/8/2017	Sulfate	6	MG/L
Banning-C3	3/8/2017	Tetrachloroethene (PCE)	< 0.5	UG/L
Banning-C3	3/8/2017	Total Dissolved Solids	170	MG/L
Banning-C3	3/8/2017	Trichloroethene (TCE)	< 0.5	UG/L
Banning-C3	3/8/2017	Zinc	< 0.05	MG/L
Banning-C4	3/6/2017	1,2-Dibromo-3-chloropropa	< 0.01	UG/L
Banning-C4	3/11/2020	1,2-Dibromo-3-chloropropa	< 0.01	UG/L
Banning-C4	3/6/2017	Alkalinity, total	120	MG/L
Banning-C4	3/11/2020	Alkalinity, total	150	MG/L
Banning-C4	3/6/2017	Aluminum	50	UG/L
Banning-C4	3/11/2020	Aluminum	50	UG/L
Banning-C4	3/6/2017	Antimony	< 6	UG/L
Banning-C4	3/11/2020	Antimony	< 6	UG/L
Banning-C4	3/6/2017	Arsenic	< 2	UG/L
Banning-C4	3/11/2020	Arsenic	< 2	UG/L
Banning-C4	3/6/2017	Bicarbonate Alkalinity	140	MG/L
Banning-C4	3/11/2020	Bicarbonate Alkalinity	150	MG/L
Banning-C4	3/6/2017	Calcium	22	MG/L
Banning-C4	3/11/2020	Calcium	36	MG/L
Banning-C4	3/6/2017	Chloride	5.6	MG/L
Banning-C4	3/11/2020	Chloride	8.2	MG/L
Banning-C4	3/6/2017	Chromium	9.9	UG/L
Banning-C4	3/11/2020	Chromium	16	UG/L
Banning-C4	5/25/2017	Chromium, Hexavalent (Cr6	11	UG/L
Banning-C4	8/14/2017	Chromium, Hexavalent (Cr6	15	UG/L
Banning-C4	11/13/2017	Chromium, Hexavalent (Cr6	15	UG/L
Banning-C4	3/6/2017	Copper	< 0.05	MG/L
Banning-C4	3/11/2020	Copper	< 0.05	MG/L
Banning-C4	3/6/2017	Fluoride	0.4	MG/L
Banning-C4	3/11/2020	Fluoride	0.25	MG/L
Banning-C4	3/6/2017	Hardness	67	MG/L
Banning-C4	3/11/2020	Hardness	120	MG/L
Banning-C4	3/6/2017	Iron	100	UG/L
Banning-C4	3/11/2020	Iron	100	UG/L
Banning-C4	3/6/2017	Lead	< 5	UG/L
Banning-C4	3/11/2020	Lead	< 5	UG/L
Banning-C4	3/6/2017	Magnesium	3.1	MG/L
Banning-C4	3/11/2020	Magnesium	7.2	MG/L
Banning-C4	3/6/2017	Manganese	< 20	UG/L
Banning-C4	3/11/2020	Manganese	< 20	UG/L

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
Banning-C4	3/6/2017	Mercury	< 1	UG/L
Banning-C4	3/11/2020	Mercury	< 1	UG/L
Banning-C4	3/6/2017	Nitrate as N	0.79	MG/L
Banning-C4	4/26/2017	Nitrate as N	0.91	MG/L
Banning-C4	6/13/2018	Nitrate as N	1.1	MG/L
Banning-C4	1/23/2019	Nitrate as N	0.95	MG/L
Banning-C4	3/11/2020	Nitrate as N	0.97	MG/L
Banning-C4	1/6/2021	Nitrate as N	0.93	MG/L
Banning-C4	3/6/2017	Nitrite as N	0.1	MG/L
Banning-C4	4/26/2017	Nitrite as N	0.1	MG/L
Banning-C4	6/13/2018	Nitrite as N	0.1	MG/L
Banning-C4	1/23/2019	Nitrite as N	0.4	MG/L
Banning-C4	3/11/2020	Nitrite as N	0.4	MG/L
Banning-C4	1/6/2021	Nitrite as N	0.4	MG/L
Banning-C4	3/6/2017	pH	7.9	PH UNITS
Banning-C4	3/11/2020	pH	8.1	PH UNITS
Banning-C4	3/6/2017	Potassium	1.4	MG/L
Banning-C4	3/11/2020	Potassium	1.5	MG/L
Banning-C4	3/6/2017	Sodium	37	MG/L
Banning-C4	3/11/2020	Sodium	27	MG/L
Banning-C4	3/6/2017	Specific Conductivity	290	UMHOS/CM
Banning-C4	3/11/2020	Specific Conductivity	350	UMHOS/CM
Banning-C4	3/6/2017	Sulfate	13	MG/L
Banning-C4	3/11/2020	Sulfate	12	MG/L
Banning-C4	3/6/2017	Tetrachloroethene (PCE)	< 0.5	UG/L
Banning-C4	3/11/2020	Tetrachloroethene (PCE)	< 0.5	UG/L
Banning-C4	3/6/2017	Total Dissolved Solids	190	MG/L
Banning-C4	3/11/2020	Total Dissolved Solids	200	MG/L
Banning-C4	3/6/2017	Trichloroethene (TCE)	< 0.5	UG/L
Banning-C4	3/11/2020	Trichloroethene (TCE)	< 0.5	UG/L
Banning-C4	3/6/2017	Zinc	< 0.05	MG/L
Banning-C4	3/11/2020	Zinc	< 0.05	MG/L
Banning-M3	2/14/2018	1,2-Dibromo-3-chloropropa	< 0.01	UG/L
Banning-M3	2/11/2021	1,2-Dibromo-3-chloropropa	< 0.01	UG/L
Banning-M3	2/14/2018	Alkalinity, total	180	MG/L
Banning-M3	2/11/2021	Alkalinity, total	170	MG/L
Banning-M3	2/14/2018	Aluminum	57	UG/L
Banning-M3	2/11/2021	Aluminum	50	UG/L
Banning-M3	2/14/2018	Antimony	< 6	UG/L
Banning-M3	2/11/2021	Antimony	< 6	UG/L

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
Banning-M3	2/14/2018	Arsenic	< 2	UG/L
Banning-M3	2/11/2021	Arsenic	< 2	UG/L
Banning-M3	2/14/2018	Bicarbonate Alkalinity	180	MG/L
Banning-M3	2/11/2021	Bicarbonate Alkalinity	170	MG/L
Banning-M3	2/14/2018	Calcium	41	MG/L
Banning-M3	2/11/2021	Calcium	37	MG/L
Banning-M3	2/14/2018	Chloride	16	MG/L
Banning-M3	2/11/2021	Chloride	16	MG/L
Banning-M3	2/14/2018	Chromium	9.9	UG/L
Banning-M3	2/11/2021	Chromium	10	UG/L
Banning-M3	5/25/2017	Chromium, Hexavalent (Cr6	9.9	UG/L
Banning-M3	8/14/2017	Chromium, Hexavalent (Cr6	9.2	UG/L
Banning-M3	11/15/2017	Chromium, Hexavalent (Cr6	9.1	UG/L
Banning-M3	2/14/2018	Copper	< 0.05	MG/L
Banning-M3	2/11/2021	Copper	< 0.05	MG/L
Banning-M3	2/14/2018	Fluoride	0.32	MG/L
Banning-M3	2/11/2021	Fluoride	0.32	MG/L
Banning-M3	2/14/2018	Hardness	160	MG/L
Banning-M3	2/11/2021	Hardness	150	MG/L
Banning-M3	2/14/2018	Iron	120	UG/L
Banning-M3	2/11/2021	Iron	100	UG/L
Banning-M3	2/14/2018	Lead	< 5	UG/L
Banning-M3	2/11/2021	Lead	< 5	UG/L
Banning-M3	2/14/2018	Magnesium	14	MG/L
Banning-M3	2/11/2021	Magnesium	13	MG/L
Banning-M3	2/14/2018	Manganese	< 20	UG/L
Banning-M3	2/11/2021	Manganese	< 20	UG/L
Banning-M3	2/14/2018	Mercury	< 1	UG/L
Banning-M3	2/11/2021	Mercury	< 1	UG/L
Banning-M3	4/26/2017	Nitrate as N	2.2	MG/L
Banning-M3	2/14/2018	Nitrate as N	2.2	MG/L
Banning-M3	6/13/2018	Nitrate as N	1.9	MG/L
Banning-M3	1/23/2019	Nitrate as N	2.2	MG/L
Banning-M3	1/6/2021	Nitrate as N	2.1	MG/L
Banning-M3	2/11/2021	Nitrate as N	2.3	MG/L
Banning-M3	4/26/2017	Nitrite as N	0.1	MG/L
Banning-M3	2/14/2018	Nitrite as N	0.1	MG/L
Banning-M3	6/13/2018	Nitrite as N	0.1	MG/L
Banning-M3	1/23/2019	Nitrite as N	0.4	MG/L
Banning-M3	1/6/2021	Nitrite as N	0.4	MG/L

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
Banning-M3	2/11/2021	Nitrite as N	0.4	MG/L
Banning-M3	2/14/2018	pH	8.2	PH UNITS
Banning-M3	2/11/2021	pH	8.1	PH UNITS
Banning-M3	2/14/2018	Potassium	2.1	MG/L
Banning-M3	2/11/2021	Potassium	2.2	MG/L
Banning-M3	2/14/2018	Sodium	39	MG/L
Banning-M3	2/11/2021	Sodium	39	MG/L
Banning-M3	2/14/2018	Specific Conductivity	460	UMHOS/CM
Banning-M3	2/11/2021	Specific Conductivity	430	UMHOS/CM
Banning-M3	2/14/2018	Sulfate	36	MG/L
Banning-M3	2/11/2021	Sulfate	33	MG/L
Banning-M3	2/14/2018	Tetrachloroethene (PCE)	< 0.5	UG/L
Banning-M3	2/11/2021	Tetrachloroethene (PCE)	< 0.5	UG/L
Banning-M3	2/14/2018	Total Dissolved Solids	280	MG/L
Banning-M3	2/11/2021	Total Dissolved Solids	260	MG/L
Banning-M3	2/14/2018	Trichloroethene (TCE)	< 0.5	UG/L
Banning-M3	2/11/2021	Trichloroethene (TCE)	< 0.5	UG/L
Banning-M3	2/14/2018	Zinc	< 0.05	MG/L
Banning-M3	2/11/2021	Zinc	< 0.05	MG/L
SMWC-04	4/15/2019	Alkalinity, total	110	MG/L
SMWC-04	4/15/2019	Aluminum	0	UG/L
SMWC-04	4/15/2019	Antimony	< 6	UG/L
SMWC-04	4/15/2019	Arsenic	3.8	UG/L
SMWC-04	4/15/2019	Bicarbonate Alkalinity	110	MG/L
SMWC-04	4/15/2019	Calcium	7.1	MG/L
SMWC-04	4/15/2019	Chloride	18	MG/L
SMWC-04	4/15/2019	Chromium	0	UG/L
SMWC-04	12/4/2017	Chromium, Hexavalent (Cr6	2.3	UG/L
SMWC-04	4/15/2019	Chromium, Hexavalent (Cr6	2.2	UG/L
SMWC-04	4/15/2019	Copper	< 0.05	MG/L
SMWC-04	4/15/2019	Fluoride	0.4	MG/L
SMWC-04	4/15/2019	Hardness	22	MG/L
SMWC-04	4/15/2019	Iron	0	UG/L
SMWC-04	4/15/2019	Lead	< 5	UG/L
SMWC-04	4/15/2019	Magnesium	1.1	MG/L
SMWC-04	4/15/2019	Manganese	< 20	UG/L
SMWC-04	4/15/2019	Mercury	< 1	UG/L
SMWC-04	3/3/2017	Nitrate as N	3.8	MG/L
SMWC-04	6/5/2017	Nitrate as N	3.1	MG/L
SMWC-04	9/12/2017	Nitrate as N	4.9	MG/L

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
SMWC-04	12/4/2017	Nitrate as N	3.2	MG/L
SMWC-04	12/4/2018	Nitrate as N	4.3	MG/L
SMWC-04	4/15/2019	Nitrate as N	3.8	MG/L
SMWC-04	6/4/2019	Nitrate as N	4.4	MG/L
SMWC-04	6/3/2020	Nitrate as N	3.1	MG/L
SMWC-04	4/15/2019	Nitrite as N	0	MG/L
SMWC-04	4/15/2019	pH	9	PH UNITS
SMWC-04	4/15/2019	Potassium	0	MG/L
SMWC-04	4/15/2019	Sodium	62	MG/L
SMWC-04	4/15/2019	Specific Conductivity	320	UMHOS/CM
SMWC-04	4/15/2019	Sulfate	17	MG/L
SMWC-04	8/12/2019	Tetrachloroethene (PCE)	0	UG/L
SMWC-04	4/15/2019	Total Dissolved Solids	180	MG/L
SMWC-04	8/12/2019	Trichloroethene (TCE)	0	UG/L
SMWC-04	4/15/2019	Vanadium	72	UG/L
SMWC-04	4/15/2019	Zinc	0	MG/L
YVWD-48	7/17/2019	1,2-Dibromo-3-chloropropa	< 0.01	UG/L
YVWD-48	7/13/2017	Alkalinity, total	96	MG/L
YVWD-48	7/14/2020	Alkalinity, total	140	MG/L
YVWD-48	7/13/2017	Aluminum	0	UG/L
YVWD-48	7/14/2020	Aluminum	0	UG/L
YVWD-48	7/13/2017	Antimony	< 6	UG/L
YVWD-48	7/14/2020	Antimony	< 6	UG/L
YVWD-48	7/13/2017	Arsenic	2.5	UG/L
YVWD-48	7/14/2020	Arsenic	< 2	UG/L
YVWD-48	7/13/2017	Bicarbonate Alkalinity	75	MG/L
YVWD-48	7/14/2020	Bicarbonate Alkalinity	170	MG/L
YVWD-48	7/13/2017	Calcium	11	MG/L
YVWD-48	7/14/2020	Calcium	32	MG/L
YVWD-48	7/13/2017	Chloride	8.8	MG/L
YVWD-48	7/14/2020	Chloride	11	MG/L
YVWD-48	7/13/2017	Chromium	0	UG/L
YVWD-48	7/14/2020	Chromium	0	UG/L
YVWD-48	7/13/2017	Chromium, Hexavalent (Cr6	5.8	UG/L
YVWD-48	7/14/2020	Chromium, Hexavalent (Cr6	7.5	UG/L
YVWD-48	7/13/2017	Copper	< 0.05	MG/L
YVWD-48	7/14/2020	Copper	< 0.05	MG/L
YVWD-48	7/13/2017	Fluoride	0.63	MG/L
YVWD-48	7/14/2020	Fluoride	0.39	MG/L
YVWD-48	7/13/2017	Hardness	38	MG/L

GAMA Water Quality for the 2017-21 Period for Domestic Wells in the Beaumont Basin

Owner	Date	Chemical	Concentration	Units
YVWD-48	7/14/2020	Hardness	100	MG/L
YVWD-48	7/13/2017	Iron	0	UG/L
YVWD-48	7/14/2020	Iron	0	UG/L
YVWD-48	7/13/2017	Lead	< 5	UG/L
YVWD-48	7/14/2020	Lead	< 5	UG/L
YVWD-48	7/13/2017	Magnesium	2.8	MG/L
YVWD-48	7/14/2020	Magnesium	4.8	MG/L
YVWD-48	7/13/2017	Manganese	< 20	UG/L
YVWD-48	7/14/2020	Manganese	< 20	UG/L
YVWD-48	7/13/2017	Mercury	< 1	UG/L
YVWD-48	7/14/2020	Mercury	< 1	UG/L
YVWD-48	7/13/2017	Nitrate as N	1.6	MG/L
YVWD-48	7/16/2018	Nitrate as N	2.1	MG/L
YVWD-48	7/17/2019	Nitrate as N	1.8	MG/L
YVWD-48	7/14/2020	Nitrate as N	2.4	MG/L
YVWD-48	2/18/2021	Nitrate as N	3.1	MG/L
YVWD-48	7/13/2017	Nitrite as N	0	MG/L
YVWD-48	7/14/2020	Nitrite as N	0	MG/L
YVWD-48	7/13/2017	pH	8.7	PH UNITS
YVWD-48	7/14/2020	pH	8.1	PH UNITS
YVWD-48	7/13/2017	Potassium	1.5	MG/L
YVWD-48	7/14/2020	Potassium	2	MG/L
YVWD-48	7/13/2017	Sodium	43	MG/L
YVWD-48	7/14/2020	Sodium	36	MG/L
YVWD-48	7/13/2017	Specific Conductivity	260	UMHOS/CM
YVWD-48	7/14/2020	Specific Conductivity	340	UMHOS/CM
YVWD-48	7/13/2017	Sulfate	14	MG/L
YVWD-48	7/14/2020	Sulfate	13	MG/L
YVWD-48	7/17/2019	Tetrachloroethene (PCE)	0	UG/L
YVWD-48	7/13/2017	Total Dissolved Solids	130	MG/L
YVWD-48	7/14/2020	Total Dissolved Solids	200	MG/L
YVWD-48	7/17/2019	Trichloroethene (TCE)	0	UG/L
YVWD-48	7/13/2017	Vanadium	90	UG/L
YVWD-48	7/14/2020	Vanadium	22	UG/L
YVWD-48	7/13/2017	Zinc	0	MG/L
YVWD-48	7/14/2020	Zinc	0	MG/L

ALDA Inc.

In Association with

Thomas Harder & Co.
Groundwater Consulting

BEAUMONT BASIN WATERMASTER
MEMORANDUM NO. 22-15

Date: **April 13th, 2022**

From: **Hannibal Blandon, ALDA Inc.**

Subject: **Certification of Groundwater Production and Imported Water Use during CY 2021**

Recommendation: **To certify groundwater production, imported water spreading, and change in storage in the Beaumont Groundwater Basin during CY 2021**

By April 1st, of every year, the Beaumont Basin Watermaster is required to fill out an on-line form with the State of California Department of Water Resources (DWR) documenting the use of water in the basin during the previous year. As part of the documentation required, a PDF copy of the Final Annual Report is normally attached.

Considering the 2021 Final Annual Report of the Beaumont Basin will not be ready until the June meeting, at the earliest, DWR indicated that the on-line forms can still be filled out and submitted to the state before the April 1st deadline. DWR requested that a formal letter from Watermaster be attached documenting that the production, storage, and imported water use quantities used in the form for 2021 are accurate and that a copy of the final annual report be submitted at a later date.

On March 28, 2022 a letter was written by Mr. Blandon to Mr. Jaggers, as Secretary of the Watermaster Committee, documenting the required information to fulfill the state requirements before the April 1st deadline. The information documented in that letter and presented below was compiled during the preparation of the 2021 Draft annual report.

- ✓ 2021 Groundwater Production
  - Total groundwater production: 19,938 ac-ft
  - Metered production: 19,924 ac-ft (Low uncertainty)
  - Other method (Water Duty): 14 ac-ft (Medium uncertainty)
- ✓ 2021 Surface Water Supply
  - State Water Project deliveries: 2,504 ac-ft (Low uncertainty)
- ✓ Total Water Use: 19,938 ac-ft
- ✓ 2021 Change in Storage: -9,522 ac-ft

Watermaster letter to DWR can be attached under Section F of the on-line form.

ALDA Inc.
5928 Vineyard Avenue
Alta Loma, CA 91701
Tel: (909) 587-9916
Fax: (909) 498-0423

March 28, 2022

Dan Jaggers, Secretary
Beaumont Basin Watermaster
Beaumont Cherry Valley Water District
560 Magnolia Avenue
Beaumont, CA 92223

Subject: **Certification of Groundwater Production and Imported Water Use in CY 2021**

Dear Mr. Jagger:

The purpose of this letter is to provide you, as Secretary of the Beaumont Basin Watermaster, with the necessary information to fill out an on-line form with the State of California Department of Water Resources (DWR) documenting the use of water in the basin during CY 2021. This on-line form must be submitted by April 1, 2022. As part of the documentation required, a PDF copy of the 2021 Annual Report is normally attached.

Considering the 2021 Final Annual Report of the Beaumont Basin will not be ready until the June meeting, at the earliest, DWR has indicated in the past that the on-line forms can still be filled out and submitted to the state before the April 1st deadline. DWR requested that a formal letter from Watermaster be included in the on-line submittal documenting that the production, storage, and imported water use quantities used in the form for 2021 are accurate and that a copy of the final annual report be submitted at a later date. The information presented below was extracted during the preparation of the 2021 Draft report. This information can be used to fill out the on-line form on DWR's website.

- ✓ 2021 Groundwater Production
  - Total groundwater production: 19,938 ac-ft
  - Metered production: 19,924 ac-ft (Low uncertainty)
  - Other method (Water Duty): 14 ac-ft (Medium uncertainty)
- ✓ 2021 Surface Water Supply
  - State Water Project deliveries: 2,504 ac-ft (Low uncertainty)
- ✓ Total Water Use: 19,938 ac-ft
- ✓ 2021 Change in Storage: -9,522 ac-ft

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

Very truly yours,

F. Anibal Blandon, P.E.
ALDA Inc.
Beaumont Basin Watermaster Engineering Support

BEAUMONT BASIN WATERMASTER
MEMORANDUM NO. 22-16

Date: April 11, 2022

From: Joseph Zoba, Treasurer

Subject: Consideration of a Request for Proposals to Provide Professional Administrative and Technical Support Services to the Beaumont Basin Watermaster

Recommendation: That the Watermaster Committee authorize the release of the Request for Proposals.

On March 10, 2022, the Watermaster Committee discussed the need for additional administrative support services to assist with the overall operation of the Beaumont Basin Watermaster. Based on comments received at the meeting, the attached Request for Proposals was developed for review and additional discussion.

Request for Proposals to Provide Professional Administrative and Technical Support Services to the Beaumont Basin Watermaster

Proposals Due by

Tuesday, May 10, 2022 by 4:00 p.m.

Issued by:

Beaumont Basin Watermaster
c/o Beaumont Cherry Valley Water District
560 Magnolia Avenue
Beaumont, California 92223

Table of Contents

SECTION 1 - BACKGROUND INFORMATION

The Beaumont Basin Watermaster ("Watermaster") was formed on February 4, 2004 as a result of a negotiated Stipulated Agreement ("Judgment") between several parties with interests in the Beaumont Groundwater Basin. The judgment entered in the Superior Court of the State of California for the County of Riverside (Case No. RIC 389197) provides the Watermaster with the authority and responsibility to administer the adjudicated water rights within the Beaumont Groundwater Basin. The Watermaster's fundamental duties are to administer the terms of the Judgment.

Information about the Watermaster may be accessed online at:
www.beaumontbasinwatermaster.org.

The Beaumont Basin Watermaster seeks the services of a consultant (Consultant) to provide administrative and technical support services to assist in the requirements as set forth in the Judgment.

SECTION 2 - STATEMENT OF PURPOSE

The purpose of this Request for Proposals (RFP) is to demonstrate the background, qualification, competency, and capability of a Consultant seeking to undertake administrative and technical support services for the Watermaster.

SECTION 3 - SCOPE OF WORK

Interested Consultants should carefully review the requirements of this Request for Proposal to provide a proposal detailing an approach to the suggested scope of work. Be sure to provide any recommended deviation (addition or deletion) from said scope, qualifications, and experience of your firm or organization and its assigned personnel, and any other information that may be pertinent to the evaluation of the proposal.

The Watermaster Committee is interested in a Consultant's experience in relation to routine administrative and management of public entities that involve multiple partners and that focus on water issues, specifically related to adjudications or Sustainable Groundwater Management Agencies

To provide stability to the Beaumont Basin Watermaster, the selected Consultant will be utilized for the following services over a multi-year commitment. A Consultant or firm selected as Administrator(s) will serve at the pleasure of the Watermaster Committee. If the Watermaster Committee determines to award a contract for administrative services as a result of this Request for Proposals, a contract will be executed by the Parties establishing the terms and compensation for the subject services.

Since no reliable effort can be provided at this time as to the level of effort required for this work, proposing consultants are asked to submit their hourly rate schedules for personnel anticipated to work on such projects and the estimated annual level of effort for each task below. These billing schedules will be used by the Watermaster for said services and will be considered by Watermaster during the selection process upon receipt of proposals. The Watermaster reserves the right to solicit proposals from other individuals/firms for special projects and reports outside of

the scope of this Request for Proposal and the selected Consultant/firm is also able to propose on additional work offered by the Beaumont Basin Watermaster.

Task 1 – Administration and Management

The selected Consultant will provide administrative support prior to, during, and following the bimonthly Watermaster meetings as follows:

- Coordinate the preparation of memorandums and development of recommendations for consideration at regular meetings and special meetings of the Watermaster Committee.
- Coordinate, assemble, organize, and compile regular/special meeting materials to create a meeting packet of information that is distributed to Watermaster Committee members one week prior to Watermaster meetings. There are times when the Consultant will prepare meeting memoranda in order to provide a forum for dialogue, or administrative recommendations to the Watermaster Committee.
    - This task excludes the following unless otherwise determined to be an efficient use of resources between the Parties:
        - Sending meeting notices to the public via Constant Contact;
        - Posting meeting related materials on the Watermaster website; and
        - Preparing meeting minutes.
        -
- Collection and coordination of data related to basin management such as groundwater level measurements and water quality data.
- Coordination between Watermaster Committee members, professional consultants, and the public.
- Presentation of information at the regular/special meetings.
- Compliance with the Brown Act.
- Coordination with the Watermaster Treasurer (currently Joseph Zoba) for monthly financial reports, budget preparation and audit preparation.
- Coordination with the Watermaster Secretary (currently Dan Jaggers) for assistance with maintaining the official records of the Beaumont Basin Watermaster.
- Management of contracts – including monitoring contracts; contract negotiations and extensions; coordinating with General Counsel as needed.
- Regional water management coordination including routine contact with representatives from the San Gorgonio Pass Water Agency, Yucaipa Sustainable Groundwater Management Agency, and the San Gorgonio Pass Groundwater Sustainability Agency.
- Strategic development of the Beaumont Basin Watermaster including coordinating and participating in strategic planning meetings and processes with Watermaster Committee members, member agencies, and staff; arranging and participating in public workshops as needed; assisting with grant applications as needed; assist with outreach and website content; and coordination of records retention and public records archives.
- Develop and present draft Requests for Proposals to the Watermaster Committee for professional services as needed.

Task 2 – Review of Rules & Regulations

The Consultant will review, maintain, and provide a Word file of the existing Rules & Regulations to the Secretary and provide annual recommendations for changes, if needed, to reflect the goals, policies, and best management practices.

Task 3 – Basin Condition Report

Each year, the Consultant will coordinate with engineering staff following the production of the Annual Engineering Report to prepare a technical memorandum that provides a long-term view of the state of the Basin, water quality conditions, policies, practices, maximum benefit obligations, and availability of imported water from the State Water Project that will result in an unsustainable/unfavorable condition for the Beaumont Basin in the future.

The findings of this Basin Condition Report (see Section 2.13 of the Rules and Regulations) will be used as a strategic planning document to recommend and implement technological solutions and policies that improve transparency, sustainability, and cost-savings for the Watermaster.

Task 4 – Meeting Attendance

The selected Consultant will attend and participate in up to six (6) regular Watermaster meetings each year. Attendance at additional Watermaster meetings will be invoiced according to the terms of the consultant agreement.

Task 5 – Miscellaneous Special Projects

From time to time, Watermaster will require the Consultant to perform special projects. Prior to initiating any special project or additional work, the Consultant shall receive prior authorization from Watermaster Committee members as an agendized board action.

SECTION 4 - QUALIFICATIONS

Describe the qualifications of the key staff and any subconsultants that will perform desired services for the Watermaster. The Consultant shall demonstrate competence to perform these services by including, at a minimum, the following information:

- Names of key staff and subconsultants designated to complete the Scope of Work;
- At least five references including the agency name, contact person, addresses, and telephone number.
- A brief description of type and extent of services provided to others that uniquely qualify the key staff members to perform the work for the Watermaster.
- Total costs of the projects or contracts completed for others.

SECTION 5 - CONFLICTS OF INTEREST

It is the desire of the Watermaster Committee to hire a Consultant that does not frequently have to recuse itself from issues due to conflict of interest or concerns. Please address this issue in your proposal. Also, provide a statement identifying any potential conflicts of interest with other Watermaster Committee member, client or related interests.

The Consultant should identify and disclose any business relationship, direct or indirect, with any of the five Committee member agencies and any other party in the Judgment. Specifically state any present or past relationship with any of the following agencies:

- City of Banning
- City of Beaumont
- Beaumont Cherry Valley Water District

- South Mesa Mutual Water Company
- Yucaipa Valley Water District
- Any other Appropriator or Overlying entity within the Beaumont Basin.
- Any other entity or individual that the firm believes warrants disclosure.

SECTION 6 - PROPOSAL REQUIREMENTS

All Proposals must include and will be evaluated based on the following criteria:

1. Content & Format

Organize and present a Letter Proposal in a neat and logical format, relevant to these services. The proposals shall be clear, accurate, and comprehensive. Excessive or irrelevant material will not be favorably received.

Proposals shall use an 11-point minimum font size, (maximum of 30 pages) including transmittal/offer letter and resumes of key people, but excluding Index/Table of Contents, tables, charts, and graphic exhibits. The purpose of these restrictions is to minimize the costs of proposal preparation and to ensure that the response to the RFP is fully relevant. Submit a separate Fee Proposal to contain only enough pages to clearly respond to the information that is requested in the RFP.

The letter proposal should include the following:

a) Consultant and subconsultants, including an organizational diagram is necessary.

b) Descriptions of similar projects by the key staff used on this assignment.

c) Brief resumes of key staff and subconsultants (one page per resume).

d) Project schedule indicating the time frame for completing each task contained within the scope of work.

e) Provide a billing schedule of current hourly billing rates for all key staff members and subconsultants.

f) List and describe any existing or potential conflicts of interest for this project as described above.

2. Scope of Services

A demonstration of an understanding of each task provided in Section 3 above describing the activities and concepts for conducting the work. The description should explain the approach, methodology, and specific activities that will be performed and designed to address the specific issues and work items identified in the Request for Proposals.

Additionally, state in what ways and for what reasons the proposal deviates from the scope of work as provided above.

3. Project Team

The purpose of this section is to describe the organization of the Consultant including subconsultants and key staff. A liaison shall be named who shall be the prime contact and be responsible for coordinating all activities for the Watermaster. There shall be a brief description of the role and responsibilities of all key staff and subconsultants identified in the team organization.

4. Fee Proposal

The Consultant's estimated fee for each task shall be clearly itemized describing the work performed for the first year of contracted services. In preparing the fee proposal for this Request for Proposals, the consultant shall take into consideration the following:

a) Compensation for services provided shall be represented as an hourly rate, which will be sufficient to include indirect costs such as copying, postage, mileage, travel, accommodations, outside services, computer charges, cost of telephone/facsimile equipment, administrative charges, markups of expenses and mark ups on subconsultants. The Watermaster will not process payment for any indirect costs, administrative charges, non-labor expenses, or mark ups.

b) A work plan, together with a breakdown of labor hours by employee billing classification, together with the cost of subconsultant services shall be included with the fee proposal. The labor breakdown shall be compiled by project tasks. This information will be used to evaluate the reasonableness of the fee proposal and may be used in negotiating the final fee amounts for the contract agreement.

c) The Consultant's standard billing rates for all classifications of staff likely to be involved shall be included with the fee proposal along with the costs for any subconsultants.

5. Statement of Offer & Signature

The Proposal shall be signed by an individual authorized to bind the consultant and shall contain a statement that the proposal is a firm offer for a 90-day period.

SECTION 7 - TERMS AND CONDITIONS

Interested Consultants should review and acknowledge the following provisions in the proposed contract:

1) Insurance Requirements:

a) Workers' Compensation: Consultant shall maintain Workers' Compensation insurance, as required by law in the State of California.

b) General Liability: Consultant shall maintain general liability insurance including provisions for contractual liability, independent contractors, and broad form property damage coverage. This insurance shall be on a comprehensive, occurrence basis form with a standard cross liability clause and endorsement (ISO CG 2010 or equivalent). The Watermaster shall be named as an additional

insured, and the limit for this insurance shall be not less than $1,000,000.00 per occurrence, combined single limit for bodily injury and property damage.

c) Automobile Liability: Consultant shall maintain automobile liability insurance with coverage for any vehicle including those owned, leased, rented, or borrowed. This insurance shall have an endorsement naming the Watermaster as an additional insured and with a standard cross liability clause and endorsement (ISO CG 2010 or equivalent). The limit amount for this insurance shall be not less than $1,000,000.00 per occurrence, combined single limit for bodily injury and property damage.

d) Professional Liability: Consultant shall maintain professional liability insurance with coverage for wrongful acts, errors, or omissions committed by Consultant in the course of work performed for the Watermaster under this Agreement. This insurance shall include coverage for liability assumed under this Agreement when Consultant's wrongful acts, errors, or omissions cause such liability. The limit for this insurance shall be not less than $1,000,000.00 per claim.

2) Indemnification: Consultant shall hold harmless, defend at its own expense, and indemnify the Watermaster, its officers, employees, and agents against any and all liability, claims, losses, damages or expenses, including reasonable attorneys' fees, arising from all negligent or reckless acts or omissions, or acts of willful misconduct of the company or its officers, agents, or employees in rendering services under this agreement; excluding, however such liability, claims, losses, damages, or expenses arising solely from Watermaster's gross negligence or willful acts.

3) Term: The term of agreement between the Beaumont Basin Watermaster and the consultant shall be for four years. Compensation for the first year will be the amount submitted in the proposal or as otherwise negotiated with the selected consultant. The compensation for the remaining three years shall be negotiated annually and approved by the Watermaster Committee prior to the beginning of each calendar year. Therefore, the first foreseeable adjustment to the consultant agreement will be completed prior to May 1, 2023. Early termination provisions will be allowed for either party and incorporated into the agreement.

4) The selected consultant shall not be specifically compensated for use of computers, office equipment, office supplies, office space, transportation, hardware, or software materials. Said costs are non-compensable. Time expended by personnel or on such equipment shall be paid within the fees for service provided for the tasks listed in the Scope of Work.

5) Detailed invoices for services shall be submitted by the selected firm on a monthly basis and shall report the percentage of time allotted to each task relative to the annual compensation for such task. The Watermaster will remit payment in a timely manner but no later than 30 days after receipt of approved invoice

6) Watermaster shall select the consultant based on the merits of the proposal including understanding of services needed, scope of work, cost, qualifications, and experience. No specific weighting system will be used for the above factors. All questions must be submitted in writing (via e-mail) to the Beaumont Basin Watermaster c/o Mr. Dan Jaggers, General Manager of the Beaumont Cherry Valley Water District.

Interviews may or may not be conducted at the discretion of Watermaster.

A final selection will be made by the Watermaster at a meeting following the proposal submittal and review process. Watermaster anticipates authorizing a professional services agreement with the selected firm by the end of June 2022, with a Notice to Proceed provided after the execution of an agreement.

Watermaster reserves the right not to select any of the consulting firms responding to this Request for Proposals.

Upon execution of the agreement and issuance of a Notice to Proceed, the Watermaster will make every effort to make available to the selected consultant necessary data, information, maps, and other resources to perform said services.

7) Delivery address: All information documents and proposals shall be submitted to the following address:

Dan Jaggers, General Manager
c/o Beaumont Cherry Valley Water District
560 Magnolia Avenue
Beaumont, CA 92223

BEAUMONT BASIN WATERMASTER
MEMORANDUM NO. 22-17

Date: April 11, 2022

From: Joseph Zoba, Treasurer

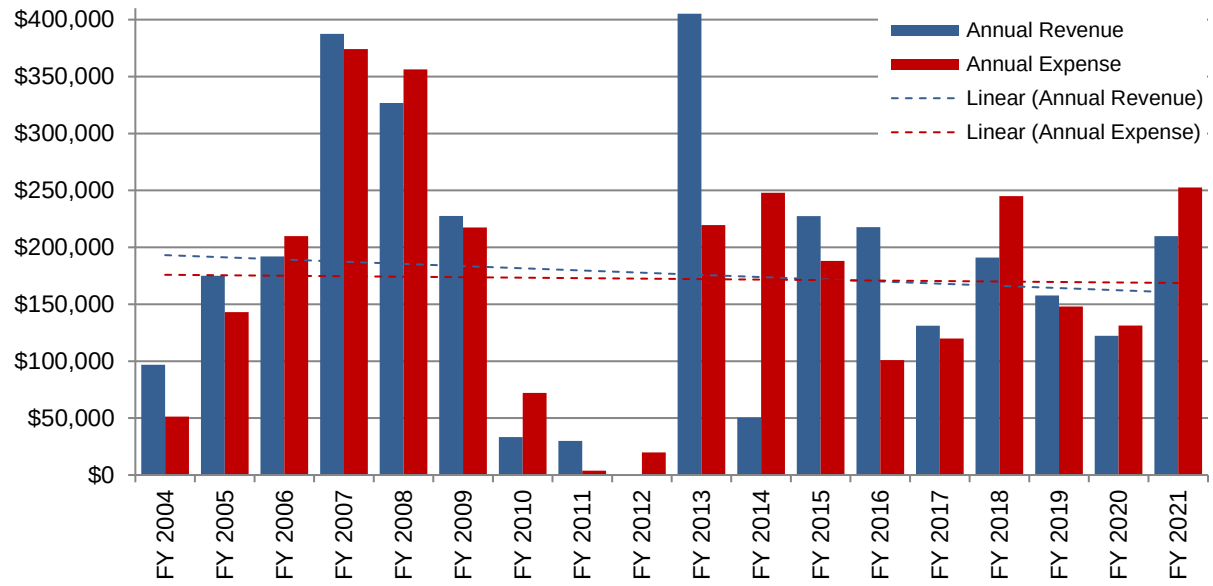
Subject: Independent Accountant's Financial Report of Agreed-Upon Procedures for the Beaumont Basin Watermaster

Recommendation: That the Watermaster Committee receive and file the Independent Accountant's Financial Report for the period ending June 30, 2021.

The Beaumont Basin Watermaster engaged the firm of Rogers, Anderson, Malody & Scott to perform an independent financial review of the Watermaster activities for the fiscal year ending June 30, 2020. The independent financial review was conducted under the same terms and scope as the prior fiscal year.

At the beginning of the 2019-2020 fiscal year, the Beaumont Basin Watermaster had an unrestricted net position of $144,902. During the fiscal year, the Watermaster collected $122,336 in revenues and expended $131,217. As of June 30, 2020, the Watermaster had unrestricted net position of $136,021.

The following illustration provides a summary of the annual revenues and expenses of the Beaumont Basin Watermaster since its formation in 2004.



BEAUMONT BASIN WATERMASTER

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

JUNE 30, 2021

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

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Independent Accountant's Report

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

We have performed the procedures enumerated below on the Watermaster Schedules (Schedules), attached as Exhibit A and Exhibit B, on the full accrual basis of accounting as of June 30, 2021, and for the year then ended. Yucaipa Valley Water District (District) management, as treasurer of the Beaumont Basin Watermaster (Watermaster), is responsible for the Schedules.

The District has agreed to and acknowledged that the procedures performed are appropriate to meet the intended purpose of evaluating certain amounts reported in the Schedules, attached as Exhibit A and Exhibit B, on the full accrual basis of accounting as of June 30, 2021, and for the year then ended and its compliance with the Rules and Regulations regarding assessments and expenses. Additionally, the Watermaster has agreed to and acknowledged that the procedures performed are appropriate to meet their purposes. This report may not be suitable for any other purpose. The procedures performed may not address all the items of interest to a user of this report and may not meet the needs of all users of this report and, as such, users are responsible for determining whether the procedures performed are appropriate for their purposes.

The procedures and the associated findings are as follows:

1. Procedure

Agree the unrestricted net position, beginning of year amount on the Schedule of Revenues and Expenses (Exhibit B) to the unrestricted net position, end of year amount noted on the trial balance for the fiscal year ended June 30, 2020.

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.

3. **Procedure**

Trace all member agency assessments recorded in the Schedule of Revenues and Expenses (Exhibit B) to the 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, 2020 to the beginning check number for the period beginning on July 1, 2020. Note any breaks in check sequence for the period of July 1, 2020 through June 30, 2021.

Finding

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

5. **Procedure**

Based on the population of checks issued during July 1, 2020 through June 30, 2021, 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, 2020 to June 30, 2021. 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 engaged by the District to perform this agreed-upon procedures engagement and conducted our engagement in accordance with attestation standards established by the AICPA. We were not engaged to and did not conduct an examination or review, the objective of which would be the expression of an opinion or conclusion, respectively, on the schedules of assets, liabilities and net position (Exhibit A) and revenues and expenses (Exhibit B). Accordingly, we do not express such an opinion or conclusion. Had we performed additional procedures, other matters might have come to our attention that would have been reported to you.

We are required to be independent of the District and Watermaster and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements related to our agreed-upon procedures engagement.

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

Rogers, Anderson, Malody & Scott, LLP.

September 1, 2021
San Bernardino, California

Beaumont Basin Watermaster
Schedule of Assets, Liabilities and Net Position
(Unaudited)
June 30, 2021

Assets	
Cash and cash equivalents	$ 114,371
Accounts receivable	14,000
Total assets	128,371
Liabilities	
Accounts payable	35,113
Net position	
Unrestricted	$ 93,258

Beaumont Basin Watermaster
Schedule of Revenues and Expenses
(Unaudited)
For the Year Ended June 30, 2021

Revenues	
Assessments	$ 209,813
Interest	43
Total revenues	209,856
Expenses	
Special projects	
Acquisition/computation and annual report	62,497
Engineering	58,015
Monitoring and data acquisition	63,660
Administrative	
Legal and professional	68,434
Bank charges	13
Total expenses	252,619
Change in net position	(42,763)
Unrestricted net position, beginning of year	136,021
Unrestricted net position, end of year	$ 93,258

BEAUMONT BASIN WATERMASTER
MEMORANDUM NO. 22-18

Date: April 11, 2022

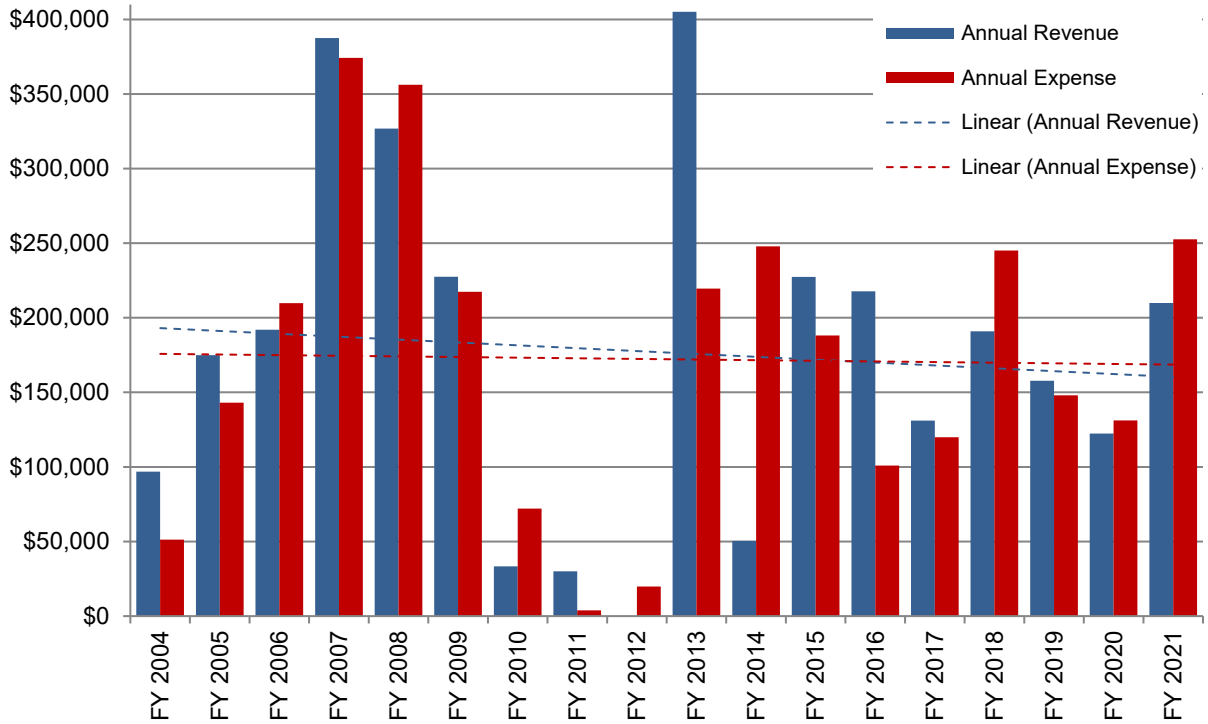
From: Joseph Zoba, Treasurer

Subject: Consideration of the Watermaster Budget for Fiscal Year 2022-2023

Recommendation: That the Watermaster Committee approve the budget for Fiscal Year 2022-2023.

The Treasurer of the Beaumont Basin Watermaster sends invoices to Watermaster Committee members when one of the following events occur: (1) the Watermaster Committee approves a task order; (2) the Watermaster Committee approves a special project; (3) when a budget is approved to replenish the anticipated administrative funds for the year; or (4) when the administrative funds have been depleted.

As of February 28, 2022, the Watermaster had an operating fund balance of $198,827.21 in a designated account at Bank of America. The historical annual revenue and expense information is shown below.



Based on the typical expenses incurred by the Beaumont Basin Watermaster, the estimated annual contribution needed for each member agency at the beginning of the fiscal year will be $0 at this time for routine administrative expenses.

The Watermaster Treasurer will continue to send invoices to Watermaster Committee members when task orders are approved at Watermaster Committee meetings throughout the year.

Operating Expenses:	Approved Budget Fiscal Year 2022	Year-To-Date Expenses February 2022	Proposed Budget Fiscal Year 2023
Bank Fees & Interest	$50	-$16.006	$50
Miscellaneous & Meeting Expenses	$250	$0.00	$250
Acquisition/Computation & Annual Report	$100,000	$23,865.00	$110,000
Annual Audit	$1,400	$1,425.00	$1,500
Engineering Services	$50,000	$15,412.50	$50,000
Monitoring & Data Acquisition	$50,000	$30,140.00	$50,000
Meter Installation	$0	$0.00	$0
Legal Expenses	$35,000	$9,707.55	$25,000
Reserve Funding	$10,000	$0.00	$10,000
Special Project - Engineering	$0	$0.00	$0
Special Project - Litigation	$0	$0.00	$0
Total Operating Expense	**$246,700**	**$80,534.04**	**$246,800**

	Account Number	Proposed Budget for Fiscal Year 2022-2023
Bank Fees & Interest	5000	$50
Meetings & Miscellaneous	5010	$250
Acquisition/Computation & Annual Report	5020	$110,000
Annual Audit	5040	$1,500
Engineering Services	5060	$50,000
Monitoring & Data Acquisition	5063	$50,000
Meter Installation and Repair	5064	$0
Legal Expenses	5070	$25,000
Reserves	5080	$10,000
	Total	**$246,800**

BEAUMONT BASIN WATERMASTER
MEMORANDUM NO. 22-19

Date: April 11, 2022

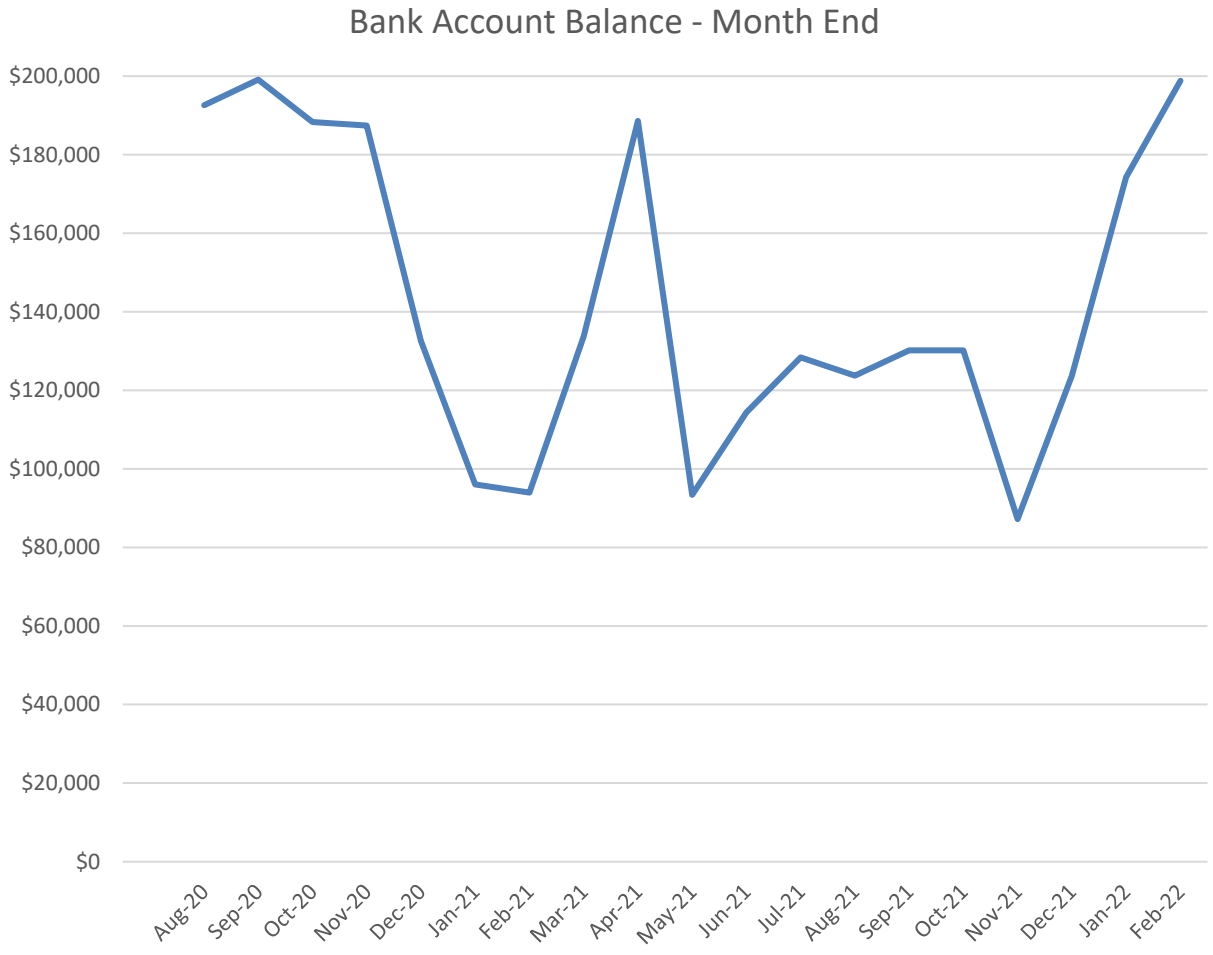
From: Joseph Zoba, Treasurer

Subject: Financial Status Report

Recommendation: Presentation Only - No Action Required

The following information has been compiled to provide an update on the financial status of the Beaumont Basin Watermaster.

Account Balance - The bank account balance will increase with the receipt of payments from the Watermaster Committee and decrease with the payment of routine expenses incurred by the Watermaster.



Budget Monitoring - Revenue for the Beaumont Basin Watermaster is received when one of the following events occur: (1) the Watermaster Committee approves a task order; (2) the Watermaster Committee approves a special project; (3) when a budget is adopted with a recommendation to replenish the anticipated administrative expenses for the year; or (4) when the administrative funds have been depleted and additional funds are required.

Based on the current status of the budget, the anticipated budget line item overage for Legal Expenses will be funded from Reserve Funds.

OPERATING EXPENSES:	Approved Budget Fiscal Year 2022	Year-To-Date Expenses (Feb-22)	Percentage of Approved Budget
Bank Fees & Interest	$50.00	-$16.006	-32.0%
Miscellaneous & Meeting Expenses	$250.00	$0.00	0.0%
Acquisition/Computation & Annual Report	$100,000.00	$23,865.00	23.9%
Annual Audit	$1,300.00	$1,425.00	109.6%
Engineering Services	$50,000.00	$15,412.50	30.8%
Monitoring & Data Acquisition	$50,000.00	$30,140.00	60.3%
Meter Installation	$10,000.00	$0.00	0.0%
Legal Expenses - Special Project	- -	$17,974.56	- -
Legal Expenses	$25,000.00	$9,707.55	38.8%
Reserve Funding	$10,000.00	$0.00	0.0%
Special Project - Engineering	$0.00	$0.00	0.0%
Special Project - Litigation	$0.00	$0.00	0.0%
Total Operating Expense	**$246,600.00**	**$98,508.61**	**39.9%**

Summary of Consultant Task Orders - The following Task Orders are open with our consultants.

Task Order	Description	Contract Amount	Payments to Date	Percent Billed to Date
8	On-Call Services	$20,000	$18,062.50	90%
17	Return Flow Analysis	$98,280	$67,431.25	69%
20	2020 Support Services	$95,970	$83,442.50	87%
21	2020 Water Level Monitoring	$21,520	$18,000.00	84%
22	Water Quality Monitoring	$43,750	$43,741.25	100%
23	2020 Annual Report	$95,970	$86,373.00	90%
24	2021 Water Level Monitoring	$21,520	$20,940.00	97%
25	On Call Engineering Services	$25,000	- -	- -
26	Account for Storage Losses	$16,700	$16,700	100%
27	Data Compilation & Distribution	$15,000	$13,625.00	91%
28	2021 Annual Report	$103,600	- -	- -
29	Water Level Monitoring	$24,975	- -	- -