CHINO BASIN WATERMASTER

NOTICE OF MEETINGS

Thursday, November 14, 2024

9:00 a.m. – Appropriative Pool Committee Meeting
11:00 a.m. – Non-Agricultural Pool Committee Meeting
1:30 p.m. – Agricultural Pool Committee Meeting

Watermaster's function is to administer and enforce provisions of the Judgment and subsequent orders of the Court, and to develop and implement an Optimum Basin Management Program

CHINO BASIN WATERMASTER
APPROPRIATIVE POOL COMMITTEE MEETING
9:00 a.m. November 14, 2024
Mr. Chris Diggs, Chair
Mr. Chris Berch, Vice-Chair
At The Offices Of
Chino Basin Watermaster
9641 San Bernardino Road
Rancho Cucamonga, CA 91730

(Call can be taken remotely via Zoom at this link)

AGENDA

CALL TO ORDER

ROLL CALL

AGENDA - ADDITIONS/REORDER

SAFETY MINUTE

I. CONSENT CALENDAR

All matters listed under the Consent Calendar are considered to be routine and non-controversial and will be acted upon by one motion in the form listed below. There will be no separate discussion on these items prior to voting unless any members, staff, or the public requests specific items be discussed and/or removed from the Consent Calendar for separate action.

A. MINUTES

Approve as presented:
1. Minutes of the Appropriative Pool Committee Meeting held on October 10, 2024 *(Page 1)*
2. Minutes of the Appropriative Pool Committee Special Meeting held on October 17, 2024 *(Page 5)*

B. FINANCIAL REPORTS

Receive and file as presented:
Financials for the period ended September 30, 2024 *(Page 24)*

C. FISCAL YEAR 2023/2024 ANNUAL FINDING OF SUBSTANTIAL COMPLIANCE WITH THE RECHARGE MASTER PLAN

Recommend to the Advisory Committee to recommend to the Watermaster Board to adopt the finding that Watermaster is in substantial compliance with the Recharge Master Plan. *(Page 39)*

D. 2023/24 ANNUAL REPORT OF THE GROUND-LEVEL MONITORING PROGRAM

Recommend to the Advisory Committee to recommend to the Watermaster Board to approve the 2023/24 Annual Report of the Ground-Level Monitoring Program (GLMP), and direct staff to file a copy with the Court. *(Page 47)*

E. APPLICATION FOR RECHARGE: JURUPA COMMUNITY SERVICES DISTRICT

Recommend to the Advisory Committee to recommend to the Watermaster Board to approve Jurupa Community Services District's Application for Recharge of 7,000 acre-feet from November 1, 2024 to October 31, 2029, and direct Watermaster staff to account for this recharge. *(Page 141)*

F. CALENDAR YEAR 2025 APPROPRIATIVE POOL COMMITTEE VOLUME VOTE
Approve the Calendar Year 2025 Appropriative Pool Committee Volume Vote as presented, subject to Watermaster Board approval of the Fiscal Year 2024/25 Assessment Package at the November 21, 2024 meeting. *(Page 151)*

II. BUSINESS ITEMS

A. FISCAL YEAR 2024/25 ASSESSMENT PACKAGE
Review Fiscal Year 2024/25 Assessment Package as presented and offer advice to Watermaster. *(Page 155)*

B. RESOLUTION 2024-05 TO LEVY REPLENISHMENT AND ADMINISTRATIVE ASSESSMENTS FOR FISCAL YEAR 2024/25, BASED ON PRODUCTION YEAR 2023/24
Review Resolution 2024-05 as presented and offer advice to Watermaster. *(Page 159)*

III. REPORTS/UPDATES

A. WATERMASTER LEGAL COUNSEL
1. November 8, 2024, Court Hearing (Appropriative Pool Motion for Costs and Fees)
2. Court of Appeal Consolidated Cases No. E080457 and E082127 (City of Ontario appeal re: Fiscal Year 2021-22 and 2022-23 Assessment Packages)
3. Court of Appeal Case No. E080533 (Cities of Chino, Ontario appeal re: Fiscal Year 2022-23 Watermaster budget expenses to support CEQA analysis)
4. San Sevaine Basins – 60-day Clean Water Act Violation Notice Letter

B. ENGINEER
1. 2025 Safe Yield Reevaluation
2. Water Rights and Replenishment Forecasting Tool
3. 2023/24 Annual Report of the Ground-Level Monitoring Program

C. GENERAL MANAGER
1. Financial Audit Status
2. Basin Plan Amendment Update
3. December Meeting Schedule – Pool direction requested
4. Other

IV. INFORMATION

RECHARGE INVESTIGATION AND PROJECTS COMMITTEE (PROJECT 23a STATUS) *(Page 205)*

V. POOL MEMBER COMMENTS

VI. OTHER BUSINESS

VII. CONFIDENTIAL SESSION – POSSIBLE ACTION

A Confidential Session may be held during the Pool Committee meeting for the purpose of discussion and possible action.

1. Approve Egoscue Law Group, Inc. Invoice #14569 dated October 02, 2024, in the amount of $4,200.00 for services performed during September 2024.
2. Approve Egoscue Law Group, Inc. Invoice #14612 dated November 01, 2024, in the amount of $15,050.00 for services performed during October 2024.

VIII. FUTURE MEETINGS AT WATERMASTER

11/12/24	Tue	9:00 a.m.	Groundwater Recharge Coordinating Committee (Held at CBWCD)
11/14/24	Thu	9:00 a.m.	Appropriative Pool Committee
11/14/24	Thu	11:00 a.m.	Non-Agricultural Pool Committee
11/14/24	Thu	1:30 p.m.	Agricultural Pool Committee
11/20/24	Wed	9:00 a.m.	Safe Yield Reevaluation Workshop
11/21/24	Thu	9:00 a.m.	Advisory Committee
11/21/24	Thu	11:00 a.m.	Watermaster Board*

* The Watermaster Board meeting is being advanced by a week due to the Thanksgiving Holiday.

ADJOURNMENT

CHINO BASIN WATERMASTER
NON-AGRICULTURAL POOL COMMITTEE MEETING
11:00 a.m. November 14, 2024
Mr. Brian Geye, Chair
Mr. Bob Bowcock, Vice-Chair
At The Offices Of
Chino Basin Watermaster
9641 San Bernardino Road
Rancho Cucamonga, CA 91730

AGENDA

CALL TO ORDER

ROLL CALL

AGENDA – ADDITIONS/REORDER

SAFETY MINUTE

I. BUSINESS ITEMS – ROUTINE

A. MINUTES
Receive and file as presented:
Minutes of the Non-Agricultural Pool Committee Meeting held on October 10, 2024 *(Page 14)*

B. FINANCIAL REPORTS
Receive and file as presented:
Financials for the period ended September 30, 2024 *(Page 24)*

C. FISCAL YEAR 2023/24 ANNUAL FINDING OF SUBSTANTIAL COMPLIANCE WITH THE RECHARGE MASTER PLAN
Recommend to the Advisory Committee to recommend to the Watermaster Board to adopt the finding that Watermaster is in substantial compliance with the Recharge Master Plan. *(Page 39)*

D. 2023/24 ANNUAL REPORT OF THE GROUND-LEVEL MONITORING PROGRAM
Recommend to the Advisory Committee to recommend to the Watermaster Board to approve the 2023/24 Annual Report of the Ground-Level Monitoring Program (GLMP), and direct staff to file a copy with the Court. *(Page 47)*

E. APPLICATION FOR RECHARGE: JURUPA COMMUNITY SERVICES DISTRICT
Recommend to the Advisory Committee to recommend to the Watermaster Board to approve Jurupa Community Services District's Application for Recharge of 7,000 acre-feet from November 1, 2024 to October 31, 2029, and direct Watermaster staff to account for this recharge. *(Page 141)*

F. CALENDAR YEAR 2025 NON-AGRICULTURAL POOL COMMITTEE VOLUME VOTE
Receive and file the Calendar Year 2025 Overlying (Non-Agricultural) Pool Committee Volume Vote as presented, subject to Watermaster Board approval of the Fiscal Year 2024/25 Assessment Package at the November 21, 2024 meeting. *(Page 151)*

II. BUSINESS ITEMS

A. FISCAL YEAR 2024/25 ASSESSMENT PACKAGE
Review Fiscal Year 2024/25 Assessment Package as presented and offer advice to Watermaster. *(Page 155)*

B. RESOLUTION 2024-05 TO LEVY REPLENISHMENT AND ADMINISTRATIVE ASSESSMENTS FOR FISCAL YEAR 2024/25, BASED ON PRODUCTION YEAR 2023/24

Review Resolution 2024-05 as presented and offer advice to Watermaster *(Page 159).*

C. MEMBER STATUS CHANGES

1. Any proposed transfer of Safe Yield by a Member.
2. Any transfer of Safe Yield that has actually closed or been completed.
3. Any change in name or corporate identity of a Member (such as results from a merger or filing of a change of name certificate).
4. Any change in the name of a representative or alternate representative of a Member, or a change in e-mail address for either such person.

III. REPORTS/UPDATES

A. WATERMASTER LEGAL COUNSEL

1. November 8, 2024, Court Hearing (Appropriative Pool Motion for Costs and Fees)
2. Court of Appeal Consolidated Cases No. E080457 and E082127 (City of Ontario appeal re: Fiscal Year 2021-22 and 2022-23 Assessment Packages)
3. Court of Appeal Case No. E080533 (Cities of Chino, Ontario appeal re: Fiscal Year 2022-23 Watermaster budget expenses to support CEQA analysis)
4. San Sevaine Basins – 60-day Clean Water Act Violation Notice Letter

B. ENGINEER

1. 2025 Safe Yield Reevaluation
2. Water Rights and Replenishment Forecasting Tool
3. 2023/24 Annual Report of the Ground-Level Monitoring Program

C. GENERAL MANAGER

1. Financial Audit Status
2. Basin Plan Amendment Update
3. December Meeting Schedule – Pool direction requested
4. Other

IV. INFORMATION

RECHARGE INVESTIGATION AND PROJECTS COMMITTEE (PROJECT 23a STATUS) *(Page 205)*

V. POOL MEMBER COMMENTS

VI. OTHER BUSINESS

VII. CONFIDENTIAL SESSION - POSSIBLE ACTION

A Confidential Session may be held during the Pool Committee meeting for the purpose of discussion and possible action.

1. Exhibit G – Section 9 Transfer Rate

VIII. FUTURE MEETINGS AT WATERMASTER

11/12/24	Tue	9:00 a.m.	Groundwater Recharge Coordinating Committee (Held at CBWCD)
11/14/24	Thu	9:00 a.m.	Appropriative Pool Committee
11/14/24	Thu	11:00 a.m.	Non-Agricultural Pool Committee
11/14/24	Thu	1:30 p.m.	Agricultural Pool Committee
11/20/24	Wed	9:00 a.m.	Safe Yield Reevaluation Workshop
11/21/24	Thu	9:00 a.m.	Advisory Committee
11/21/24	Thu	11:00 a.m.	Watermaster Board*

* The Watermaster Board meeting is being advanced by a week due to the Thanksgiving Holiday.

ADJOURNMENT

CHINO BASIN WATERMASTER
AGRICULTURAL POOL COMMITTEE MEETING
1:30 p.m. November 14, 2024
Mr. Bob Feenstra, Chair
Mr. Jeff Pierson, Vice-Chair
At The Offices Of
Chino Basin Watermaster
9641 San Bernardino Road
Rancho Cucamonga, CA 91730

AGENDA

CALL TO ORDER

ROLL CALL

AGENDA - ADDITIONS/REORDER

SAFETY MINUTE

I. CONSENT CALENDAR

All matters listed under the Consent Calendar are considered to be routine and non-controversial and will be acted upon by one motion in the form listed below. There will be no separate discussion on these items prior to voting unless any members, staff, or the public requests specific items be discussed and/or removed from the Consent Calendar for separate action.

A. MINUTES

Approve as presented:
Minutes of the Agricultural Pool Committee Meeting held on October 10, 2024 *(Page17)*

B. FINANCIAL REPORTS

Receive and file as presented:
Financials for the period ended September 30, 2024 *(Page 24)*

C. FISCAL YEAR 2023/24 ANNUAL FINDING OF SUBSTANTIAL COMPLIANCE WITH THE RECHARGE MASTER PLAN

Recommend to the Advisory Committee to recommend to the Watermaster Board to adopt the finding that Watermaster is in substantial compliance with the Recharge Master Plan. *(Page 39)*

D. 2023/24 ANNUAL REPORT OF THE GROUND-LEVEL MONITORING PROGRAM

Recommend to the Advisory Committee to recommend to the Watermaster Board to approve the 2023/24 Annual Report of the Ground-Level Monitoring Program (GLMP), and direct staff to file a copy with the Court. *(Page 47)*

E. APPLICATION FOR RECHARGE: JURUPA COMMUNITY SERVICES DISTRICT

Recommend to the Advisory Committee to recommend to the Watermaster Board to approve Jurupa Community Services District's Application for Recharge of 7,000 acre-feet from November 1, 2024 to October 31, 2029, and direct Watermaster staff to account for this recharge. *(Page 141)*

II. BUSINESS ITEMS

A. FISCAL YEAR 2024/25 ASSESSMENT PACKAGE

Review Fiscal Year 2024/25 Assessment Package as presented and offer advice to Watermaster. *(Page 151)*

B. RESOLUTION 2024-05 TO LEVY REPLENISHMENT AND ADMINISTRATIVE ASSESSMENTS FOR FISCAL YEAR 2024/25, BASED ON PRODUCTION YEAR 2023/24

Review Resolution 2024-05 as presented and offer advice to Watermaster. *(Page 155)*

C. OLD BUSINESS

III. REPORTS/UPDATES

A. WATERMASTER LEGAL COUNSEL

1. November 8, 2024, Court Hearing (Appropriative Pool Motion for Costs and Fees)
2. Court of Appeal Consolidated Cases No. E080457 and E082127 (City of Ontario appeal re: Fiscal Year 2021-22 and 2022-23 Assessment Packages)
3. Court of Appeal Case No. E080533 (Cities of Chino, Ontario appeal re: Fiscal Year 2022-23 Watermaster budget expenses to support CEQA analysis)
4. San Sevaine Basins – 60-day Clean Water Act Violation Notice Letter

B. ENGINEER

1. 2025 Safe Yield Reevaluation
2. Water Rights and Replenishment Forecasting Tool
3. 2023/24 Annual Report of the Ground-Level Monitoring Program

C. GENERAL MANAGER

1. Financial Audit Status
2. Basin Plan Amendment Update
3. December Meeting Schedule – Pool direction requested
4. Other

IV. INFORMATION

RECHARGE INVESTIGATION AND PROJECTS COMMITTEE (PROJECT 23a STATUS) *(Page 205)*

V. POOL MEMBER COMMENTS

VI. OTHER BUSINESS

VII. CONFIDENTIAL SESSION – POSSIBLE ACTION

A Confidential Session may be held during the Pool Committee meeting for the purpose of discussion and possible action.

1. Ontario Private Ag Well Testing

VIII. FUTURE MEETINGS AT WATERMASTER

11/12/24	Tue	9:00 a.m.	Groundwater Recharge Coordinating Committee (Held at CBWCD)
11/14/24	Thu	9:00 a.m.	Appropriative Pool Committee
11/14/24	Thu	11:00 a.m.	Non-Agricultural Pool Committee
11/14/24	Thu	1:30 p.m.	Agricultural Pool Committee
11/20/24	Wed	9:00 a.m.	Safe Yield Reevaluation Workshop
11/21/24	Thu	9:00 a.m.	Advisory Committee
11/21/24	Thu	11:00 a.m.	Watermaster Board*

* The Watermaster Board meeting is being advanced by a week due to the Thanksgiving Holiday.

ADJOURNMENT

DRAFT MINUTES
CHINO BASIN WATERMASTER
APPROPRIATIVE POOL COMMITTEE MEETING
October 10, 2024

The Appropriative Pool committee meeting was held at the Watermaster offices located at 9641 San Bernardino Road, Rancho Cucamonga, CA, and via Zoom (conference call and web meeting) on October 10, 2024.

APPROPRIATIVE POOL COMMITTEE MEMBERS PRESENT AT WATERMASTER

Chris Diggs, Chair	City of Pomona
Chris Berch, Vice-Chair	Jurupa Community Services District
Ron Craig	City of Chino Hills
Chad Nashida for Courtney Jones	City of Ontario
Amanda Coker	Cucamonga Valley Water District
Marty Zvirbulis	Fontana Union Water Company
Cris Fealy	Fontana Water Company
Marty Zvirbulis	Nicholson Family Trust

APPROPRIATIVE POOL COMMITTEE MEMBERS PRESENT ON ZOOM

Hye Jin Lee	City of Chino
Nicole deMoet	City of Upland
Ben Lewis	Golden State Water Company
Justin Scott-Coe	Monte Vista Irrigation Company
Justin Scott-Coe	Monte Vista Water Company
John Lopez	Santa Ana River Water Company
Nicole deMoet	West End Consolidated Water Co.

WATERMASTER BOARD MEMBERS PRESENT ON ZOOM

Jimmy Medrano	Agricultural Pool – State of CA
Mike Gardner	Western Municipal Water District

WATERMASTER STAFF PRESENT

Edgar Tellez Foster	Water Resources Mgmt. & Planning Dir.
Anna Nelson	Director of Administration
Justin Nakano	Water Resources Technical Manager
Frank Yoo	Data Services and Judgment Reporting Mgr.
Daniela Uriarte	Senior Accountant
Alonso Jurado	Water Resources Associate
Ruby Favela Quintero	Administrative Assistant
Jordan Garcia	Senior Field Operations Specialist
Erik Vides	Field Operations Specialist

WATERMASTER CONSULTANTS PRESENT AT WATERMASTER

Brad Herrema	Brownstein Hyatt Farber Schreck, LLP
Andy Malone	West Yost

WATERMASTER CONSULTANTS PRESENT ON ZOOM

Lucy Hedley	West Yost
Garrett Rapp	West Yost

OTHERS PRESENT AT WATERMASTER

John Bosler	Cucamonga Valley Water District
Eduardo Espinoza	Cucamonga Valley Water District
Rob Hills	Cucamonga Valley Water District
Jimmie Moffatt	Cucamonga Valley Water District
Megan Sims	Fontana Union Water Company
Bryan Smith	Jurupa Community Services District
Justin Castruita	Fontana Water Company

OTHERS PRESENT ON ZOOM

Lewis Callahan	Agricultural Pool – State of CA
Ben Orosco	City of Chino
Natalie Avila	City of Chino
Norberto Ferreira	City of Upland
Jiwon Seung	Cucamonga Valley Water District
Peter Dopulos	Egoscue Law Group, Inc.
Eddie Lin	Inland Empire Utilities Agency
John Russ	Inland Empire Utilities Agency
John Schatz	John J. Schatz, Attorney at Law
Bill Wyat	Sheppard, Mullin, Richter & Hampton
David De Jesus	Three Valleys Municipal Water District
Joshua Aguilar	Western Municipal Water District

CALL TO ORDER
Chair Diggs called the Appropriative Pool Committee meeting to order at 9:00 a.m.

ROLL CALL
(00:00:33) Mr. Tellez Foster conducted the roll call and announced that a quorum was present.

AGENDA - ADDITIONS/REORDER
(00:03:22) Mr. Tellez Foster suggested that Consent Calendar Item I.C., the Appropriative Pool application for a Local Storage agreement for separate discussion and action. The Pool concurred.

SAFETY MINUTE
(00:03:27) Mr. Tellez Foster announced that there are assisted listening devices available for those seated at the dais who might need it.

I. CONSENT CALENDAR

All matters listed under the Consent Calendar are considered to be routine and non-controversial and will be acted upon by one motion in the form listed below. There will be no separate discussion on these items prior to voting unless any members, staff, or the public requests specific items be discussed and/or removed from the Consent Calendar for separate action.

A. MINUTES

Approve as presented:

1. Minutes of the Appropriative Pool Committee Meeting held on September 12, 2024

B. FINANCIAL REPORTS
Financials for the period ended August 31, 2024

(00:04:06)
Motion by Mr. Chris Berch, seconded by Mr. Cris Fealy, there being no dissent, the item passed unanimously.
Moved* to *approve Consent Calendar Items I.A. and I.B., as presented.

C. APPLICATION: LOCAL STORAGE AGREEMENT – APPROPRIATIVE POOL
Recommend to the Advisory Committee to recommend to the Watermaster Board to approve the Application for Local Storage Agreement submitted on behalf of the Appropriative Pool members as presented.

(00:04:21) Mr. Tellez Foster announced that the current storage is at ~708 kaf (about 8 kaf above the Safe Storage Capacity). He also indicated that the CEQA approval in February of 2024 allows for up to 900 kaf and that staff and counsel are in the process of identifying the most expeditious path forward to ensure coverage for the overage. A discussion ensued.

(00:19:00)
Motion by Mr. Chris Berch, seconded by Ms. Amanda Coker, there being no dissent, the item passed unanimously.
Moved* to *approve Consent Calendar Item I.C., as presented.

II. BUSINESS ITEMS

A. ANNUAL STREAMFLOW MONITORING REPORT FOR WATER RIGHTS PERMIT 21225 (INFORMATION ONLY)

(00:19:13) Mr. Tellez Foster introduced the item and asked Mr. Rapp of West Yost to give a presentation. A discussion ensued.

B. ANNUAL AND SEMI-ANNUAL PLUME STATUS REPORTS (INFORMATION ONLY)

(00:28:54) Mr. Tellez Foster introduced Ms. Hedley of West Yost to give a presentation.

III. REPORTS/UPDATES

A. WATERMASTER LEGAL COUNSEL
1. November 8, 2024, Court Hearing (Appropriative Pool Motion for Costs and Fees)
2. Court of Appeal Consolidated Cases No. E080457 and E082127 (City of Ontario appeal re: Fiscal Year 2021-22 and 2022-23 Assessment Packages)
3. Court of Appeal Case No. E080533 (Cities of Chino, Ontario appeal re: Fiscal Year 2022-23 Watermaster budget expenses to support CEQA analysis)
4. San Sevaine Basins – 60-day Clean Water Act Violation Notice Letter

(00:43:00) Mr. Herrema gave a report.

B. ENGINEER
1. Ground-Level Monitoring Program
2. 2025 Safe Yield Reevaluation

(00:46:12) Mr. Malone gave a report on Item 1, and asked Mr. Rapp to report on Item 2.

C. GENERAL MANAGER

1. Assessment Package Workshops
2. Other

(00:50:10) Mr. Tellez Foster announced the two 2024/25 Assessment Package workshop dates.

IV. INFORMATION

A. RECHARGE INVESTIGATION AND PROJECTS COMMITTEE

(00:50:54) Mr. Nakano reminded parties of the RIPComm meeting happening next week following the Advisory Committee meeting.

V. POOL MEMBER COMMENTS

None

VI. OTHER BUSINESS

None

VII. CONFIDENTIAL SESSION – POSSIBLE ACTION

A Confidential Session may be held during the Pool Committee meeting for the purpose of discussion and possible action.

None

ADJOURNMENT

Chair Diggs adjourned the Appropriative Pool Committee meeting at 9:53 a.m.

Secretary: _____

Approved: _____

DRAFT MINUTES
CHINO BASIN WATERMASTER
APPROPRIATIVE POOL COMMITTEE – SPECIAL MEETING
October 17, 2024

The Appropriative Pool Committee special meeting was held via Zoom (conference call and web meeting) on October 17, 2024.

APPROPRIATIVE POOL COMMITTEE MEMBERS PRESENT AT WATERMASTER

Chris Berch, Vice-Chair	Jurupa Community Services District
Ben Orosco	City of Chino
Ron Craig	City of Chino Hills
Courtney Jones	City of Ontario
Melissa Cansino	City of Pomona
Amanda Coker	Cucamonga Valley Water District
Eduardo Espinoza	Cucamonga Valley Water District
Marty Zvirbulis	Fontana Union Water Company
Justin Castruita	Fontana Water Company
Megan Sims	Fontana Water Company
Bryan Smith	Jurupa Community Services District
Marty Zvirbulis	Nicholson Family Trust
Brian Lee	San Antonio Water Company

APPROPRIATIVE POOL COMMITTEE MEMBERS PRESENT ON ZOOM

Hye Jin Lee	City of Chino
Chad Nishida	City of Ontario
Nicole deMoet	City of Upland
John Bosler	Cucamonga Valley Water District
Ben Lewis	Golden State Water Company
Justin Scott-Coe	Monte Vista Water District
Justin Scott-Coe	Monte Vista Irrigation Company

OTHERS PRESENT ON ZOOM

Kevin Kenley	Cucamonga Valley Water District
Shawnda M. Grady	Ellison Schneider Harris & Donlan
John Schatz	John J. Schatz – Attorney at Law

CALL TO ORDER
Vice-Chair Berch called the Appropriative Pool Committee special meeting to order at 9:45 a.m.

ROLL CALL
As shown in the related attachments.

AGENDA - ADDITIONS/REORDER
None

I. CONFIDENTIAL SESSION
A Confidential Session may be held during the Pool Committee meeting for the purpose of discussion and possible action.

The Pool convened into Confidential Session to discuss Basin Storage Capacity.

Confidential Session concluded at 10:30 a.m. with the following reportable action:

A motion was made by Martin E. Zvirbulis (FUWC) and seconded by Amanda Coker (CVWD): To approve the increase in basin storage capacity, allowing the board to proceed with the necessary actions to address immediate storage needs. Motion Passed with 79.598% in favor, with Ontario (Courtney Jones) abstaining from the vote.

ADJOURNMENT
Vice-Chair Berch adjourned the Appropriative Pool Committee special meeting at 10:10 a.m.

Secretary: _____

Approved: _____

ATTACHMENTS
1. 20241017 Email from AP Leadership Containing Motion and Vote Outcome
2. 20241017 Attendance Sheet (Those at Watermaster)
3. 20241017 Attendance Sheet (Those on Zoom)
4. 20241017 Volume Vote Outcome for Basin Storage

Ruby Favela Quintero

From: Diggs, Chris <Chris.Diggs@pomonaca.gov>
Sent: Wednesday, November 13, 2024 10:42 AM
To: Ruby Favela Quintero
Cc: Chris Berch; Anna Nelson; Cansino, Melissa; John Schatz
Subject: RE: Special AP Closed Session Meeting – Basin Storage Discussion (10/17/24)

Ruby, please note the edit I made in the item below, highlighted in yellow. Let me know if you have any questions.

Thank you.

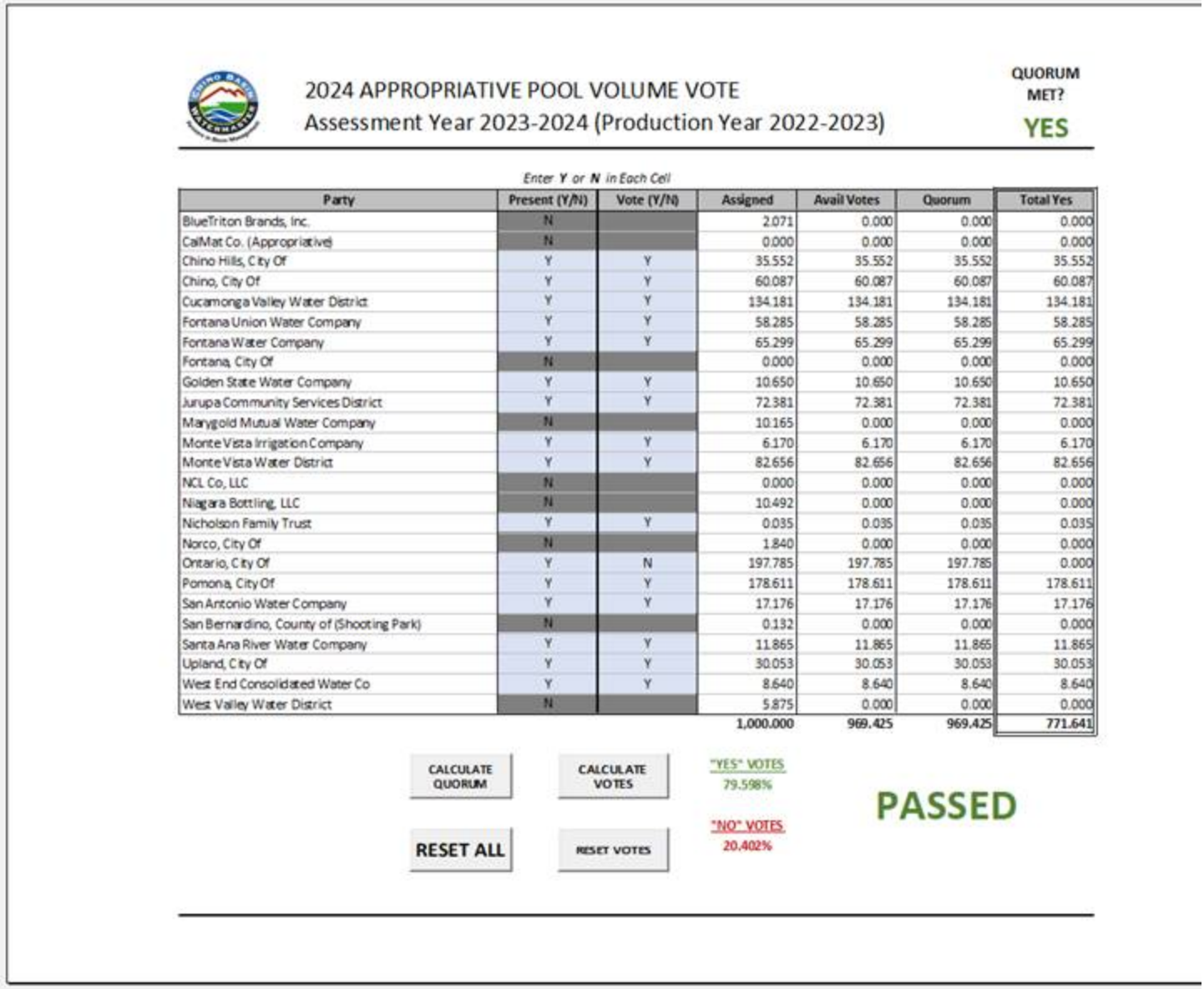
Chris Diggs
Water Resources Director
148 North Huntington Street
Pomona, CA 91768
909-802-7412

From: Cansino, Melissa <Melissa.Cansino@pomonaca.gov>
Sent: Thursday, October 17, 2024 3:55 PM
To: Ruby Favela Quintero <RFavelaQuintero@cbwm.org>
Cc: Diggs, Chris <Chris.Diggs@pomonaca.gov>; Chris Berch <cberch@jcsd.us>; Anna Nelson <atruongnelson@cbwm.org>
Subject: Special AP Closed Session Meeting – Basin Storage Discussion (10/17/24)

Hi Ruby,

The AP held a special closed session meeting this morning, October 17, 2024, from 9:45 AM to 10:10 AM. Please find the attached sign-in sheets for your reference and Volume Vote sheet.

Motion:
A motion was made by Martin E. Zvirbulis (FUWC) and seconded by Amanda Coker (CVWD): To approve the increase in basin storage capacity, allowing the board to proceed with the necessary actions to address immediate storage needs. Motion Passed with 79.598% in favor, with Ontario (Courtney Jones) abstained from voting.



2024 APPROPRIATIVE POOL VOLUME VOTE
Assessment Year 2023-2024 (Production Year 2022-2023)

QUORUM MET?
YES

Enter Y or N in Each Cell

Party	Present (Y/N)	Vote (Y/N)	Assigned	Avail Votes	Quorum	Total Yes
BlueTriton Brands, Inc.	N		2.071	0.000	0.000	0.000
CalMat Co. (Appropriative)	N		0.000	0.000	0.000	0.000
Chino Hills, City Of	Y	Y	35.552	35.552	35.552	35.552
Chino, City Of	Y	Y	60.087	60.087	60.087	60.087
Cucamonga Valley Water District	Y	Y	134.181	134.181	134.181	134.181
Fontana Union Water Company	Y	Y	58.285	58.285	58.285	58.285
Fontana Water Company	Y	Y	65.299	65.299	65.299	65.299
Fontana, City Of	N		0.000	0.000	0.000	0.000
Golden State Water Company	Y	Y	10.650	10.650	10.650	10.650
Jurupa Community Services District	Y	Y	72.381	72.381	72.381	72.381
Marygold Mutual Water Company	N		10.165	0.000	0.000	0.000
Monte Vista Irrigation Company	Y	Y	6.170	6.170	6.170	6.170
Monte Vista Water District	Y	Y	82.656	82.656	82.656	82.656
NCL Co, LLC	N		0.000	0.000	0.000	0.000
Niagara Bottling, LLC	N		10.492	0.000	0.000	0.000
Nicholson Family Trust	Y	Y	0.035	0.035	0.035	0.035
Norco, City Of	N		1.840	0.000	0.000	0.000
Ontario, City Of	Y	N	197.785	197.785	197.785	0.000
Pomona, City Of	Y	Y	178.611	178.611	178.611	178.611
San Antonio Water Company	Y	Y	17.176	17.176	17.176	17.176
San Bernardino, County of (Shooting Park)	N		0.132	0.000	0.000	0.000
Santa Ana River Water Company	Y	Y	11.865	11.865	11.865	11.865
Upland, City Of	Y	Y	30.053	30.053	30.053	30.053
West End Consolidated Water Co	Y	Y	8.640	8.640	8.640	8.640
West Valley Water District	N		5.875	0.000	0.000	0.000
			1,000.000	969.425	969.425	771.641

CALCULATE QUORUM

CALCULATE VOTES

"YES" VOTES
79.598%

"NO" VOTES
20.402%

PASSED

RESET ALL

RESET VOTES

Melissa Cansino
Water Conservation Specialist | Water Resources Department
752 W. Commercial St., Pomona, CA 91768
T: (909) 620-2236 | **M:** (909) 630-4985
Melissa.Cansino@pomonaca.gov

CITY OF POMONA
Water Resources Department

SIGN-IN SHEET

Date: 10/17/24

CBWM AP Confidential Session meeting

#	NAME	SIGNATURE	ORGANIZATION
1	Brian C Lee		SAWCO
2	RON CRAIG		CCM
3	Marty Zvirbulis		
4	Justin Castruita		FWC
5	Megan Sims		FWC
6	Amanda Coker		
7	Ben Orosco		City of Chino
8	Courtney Jones		Ontario
9	Bryan Smith		
10			CVWD
11	Eduardo Espinoza		CVWD
12	Chris Berch		Jurupa
13			
14			
15			

Name (original name)	Email	Join time
Melissa Cansino	melissa.cansino@pomonaca.gov	10/17/2024
Hye Jin Lee - Chino		10/17/2024
Shawnda Grady		10/17/2024
Nicole deMoet		10/17/2024
Justin Scott-Coe, Monte Vista Water District		10/17/2024
Ben Lewis		10/17/2024
Kevin Kenley - CVWD		10/17/2024
John Schatz Attorney at Law		10/17/2024
John Bosler		10/17/2024
Chad Nishida - Ontario		10/17/2024

2024 APPROPRIATIVE POOL VOLUME VOTE
Assessment Year 2023-2024 (Production Year 2022-2023)

QUORUM MET?

YES

*Enter **Y** or **N** in Each Cell*

Party	Present (Y/N)	Vote (Y/N)	Assigned	Avail Votes	Quorum	Total Yes
BlueTriton Brands, Inc.	N		2.071	0.000	0.000	0.000
CalMat Co. (Appropriative)	N		0.000	0.000	0.000	0.000
Chino Hills, City Of	Y	Y	35.552	35.552	35.552	35.552
Chino, City Of	Y	Y	60.087	60.087	60.087	60.087
Cucamonga Valley Water District	Y	Y	134.181	134.181	134.181	134.181
Fontana Union Water Company	Y	Y	58.285	58.285	58.285	58.285
Fontana Water Company	Y	Y	65.299	65.299	65.299	65.299
Fontana, City Of	N		0.000	0.000	0.000	0.000
Golden State Water Company	Y	Y	10.650	10.650	10.650	10.650
Jurupa Community Services District	Y	Y	72.381	72.381	72.381	72.381
Marygold Mutual Water Company	N		10.165	0.000	0.000	0.000
Monte Vista Irrigation Company	Y	Y	6.170	6.170	6.170	6.170
Monte Vista Water District	Y	Y	82.656	82.656	82.656	82.656
NCL Co, LLC	N		0.000	0.000	0.000	0.000
Niagara Bottling, LLC	N		10.492	0.000	0.000	0.000
Nicholson Family Trust	Y	Y	0.035	0.035	0.035	0.035
Norco, City Of	N		1.840	0.000	0.000	0.000
Ontario, City Of	Y	N	197.785	197.785	197.785	0.000
Pomona, City Of	Y	Y	178.611	178.611	178.611	178.611
San Antonio Water Company	Y	Y	17.176	17.176	17.176	17.176
San Bernardino, County of (Shooting Park)	N		0.132	0.000	0.000	0.000
Santa Ana River Water Company	Y	Y	11.865	11.865	11.865	11.865
Upland, City Of	Y	Y	30.053	30.053	30.053	30.053
West End Consolidated Water Co	Y	Y	8.640	8.640	8.640	8.640
West Valley Water District	N		5.875	0.000	0.000	0.000
			1,000.000	**969.425**	**969.425**	**771.641**

CALCULATE QUORUM

CALCULATE VOTES

RESET ALL

RESET VOTES

"YES" VOTES
79.598%

"NO" VOTES
20.402%

PASSED

DRAFT MINUTES
CHINO BASIN WATERMASTER
NON-AGRICULTURAL POOL COMMITTEE MEETING
October 10, 2024

The Non-Agricultural Pool committee meeting was held at the Watermaster offices located at 9641 San Bernardino Road, Rancho Cucamonga, CA, and via Zoom (conference call and web meeting) on October 10, 2024

NON-AGRICULTURAL POOL COMMITTEE MEMBERS PRESENT AT WATERMASTER

Brian Geye, Chair	California Speedway Corporation
Bob Bowcock, Vice-Chair	CalMat Co.

NON-AGRICULTURAL POOL COMMITTEE MEMBERS PRESENT ON ZOOM

Kathleen Brundage	California Steel Industries, Inc.
Alexis Mascarinas	City of Ontario

NON-AGRICULTURAL POOL COUNSEL PRESENT ON ZOOM

Kelly Alhadeff-Black	Lewis Brisbois

WATERMASTER BOARD MEMBERS PRESENT ON ZOOM

Mike Gardner	Western Municipal Water District

WATERMASTER STAFF PRESENT AT WATERMASTER

Edgar Tellez Foster	Water Resources Management & Planning Dir.
Frank Yoo	Data Services and Judgment Reporting Mgr.
Alonso Jurado	Water Resources Associate
Ruby Favela Quintero	Administrative Assistant
Jordan Garcia	Senior Field Operations Specialist
Erik Vides	Field Operations Specialist

WATERMASTER CONSULTANTS PRESENT AT WATERMASTER

Brad Herrema	Brownstein Hyatt Farber & Schreck, LLP
Andy Malone	West Yost

WATERMASTER CONSULTANTS PRESENT ON ZOOM

Lucy Hedley	West Yost
Garrett Rapp	West Yost

CALL TO ORDER
Chair Geye called the Non-Agricultural Pool committee meeting to order at 11:00 a.m.

ROLL CALL
(00:00:19) Mr. Tellez Foster conducted the roll call.

AGENDA – ADDITIONS/REORDER
(00:02:00) Mr. Tellez Foster suggested Consent Calendar Item I.C., the Appropriative Pool application for Local Storage Agreement is pulled for separate discussion and action. The Pool concurred.

SAFETY MINUTE
(00:02:30) Mr. Tellez Foster announced that Watermaster has assisted listening devices for participants who might need them.

I. BUSINESS ITEMS – ROUTINE

A. MINUTES

Receive and file:

1. Minutes of the Non-Agricultural Pool Committee Meeting held on September 12, 2024

(00:03:03)
Motion by Chair Brian Geye, seconded by Ms. Alexis Mascarinas. The Chair called for dissent, and, none being noted, the motion was deemed passed by unanimous vote of those present.
Moved to receive and file Business Item I.A. as presented.

B. FINANCIAL REPORTS

Financials for the period ended August 31, 2024

(00:03:33)
Motion by Vice-Chair Bob Bowcock, seconded by Chair Brian Geye. The Chair called for dissent, and, none being noted, the motion was deemed passed by unanimous vote of those present.
Moved to receive and file Business Item I.B. without approval as presented.

C. APPLICATION: LOCAL STORAGE AGREEMENT - APPRORIATIVE POOL

Recommend to the Advisory Committee to recommend to the Watermaster Board to approve the Application for Local Storage Agreement submitted on behalf of the Appropriative Pool members as presented.

(00:03:49) Mr. Tellez Foster gave a report. A discussion ensued.

(00:13:55)
Motion by Vice-Chair Bob Bowcock, seconded by Ms. Alexis Mascarinas. The Chair called for dissent, and, none being noted, the motion was deemed passed by unanimous vote of those present.
Moved to approve staff recommendation of Business Item I.C. and to direct the Pool representatives to support at the Advisory Committee and Watermaster Board meetings subject to changes which they deem appropriate.

II. BUSINESS ITEMS

A. ANNUAL STREAMFLOW MONITORING REPORT FOR WATER RIGHTS PERMIT 21225 (INFORMATION ONLY)

(00:15:17) Mr. Tellez Foster prefaced the item and asked Mr. Rapp of West Yost to give a presentation. A discussion ensued.

B. ANNUAL AND SEMI-ANNUAL PLUME STATUS REPORTS (INFORMATION ONLY)

(00:18:50) Mr. Tellez Foster prefaced the item and asked Ms. Hedley of West Yost to give a presentation. A discussion ensued.

C. MEMBER STATUS CHANGES

1. Any proposed transfer of Safe Yield by a Member.
2. Any transfer of Safe Yield that has actually closed or been completed.
3. Any change in name or corporate identity of a Member (such as results from a merger or filing of a change of name certificate).
4. Any change in the name of a representative or alternate representative of a Member, or a change in e-mail address for either such person.

There were no member status changes to note.

III. REPORTS/UPDATES

A. WATERMASTER LEGAL COUNSEL

1. November 8, 2024, Court Hearing (Appropriative Pool Motion for Costs and Fees)
2. Court of Appeal Consolidated Cases No. E080457 and E082127 (City of Ontario appeal re: Fiscal Year 2021-22 and 2022-23 Assessment Packages)
3. Court of Appeal Case No. E080533 (Cities of Chino, Ontario appeal re: Fiscal Year 2022-23 Watermaster budget expenses to support CEQA analysis)
4. San Sevaine Basins – 60-day Clean Water Act Violation Notice Letter

(00:26:50) Mr. Herrema gave a report. A discussion ensued.

B. ENGINEER

1. Ground-Level Monitoring Program
2. 2025 Safe Yield Reevaluation

(00:34:28) Mr. Malone gave a report on Item 1 and asked Mr. Rapp to report on Item 2. Mr. Rapp also indicated that the Water Rights and Replenishment Forecasting Tool Workshop is scheduled for October 30, 2024, at 1 :30 p.m., and may help parties to better assess the Safe Yield Reevaluation. A discussion ensued.

C. GENERAL MANAGER

1. Assessment Package Workshops
2. Other

(00:38:56) Mr. Tellez Foster announced the two upcoming 2024/25 Assessment Package Workshops.

IV. INFORMATION

A. RECHARGE INVESTIGATION AND PROJECTS COMMITTEE

(00:39:24) Mr. Nakano reminded the parties of the upcoming RIPComm meeting that will take place following the Advisory Committee meeting next week.

V. POOL MEMBER COMMENTS

None

VI. OTHER BUSINESS

None

VII. CONFIDENTIAL SESSION - POSSIBLE ACTION

A Confidential Session may be held during the Pool Committee meeting for the purpose of discussion and possible action.

None

ADJOURNMENT

Chair Geye adjourned the Non-Agricultural Pool Committee meeting at 11:41 a.m.

Secretary: _____

Approved: _____

DRAFT MINUTES
CHINO BASIN WATERMASTER
AGRICULTURAL POOL COMMITTEE MEETING
October 10, 2024

The Agricultural Pool committee meeting was held at the Watermaster offices located at 9641 San Bernardino Road, Rancho Cucamonga, CA, and via Zoom (conference call and web meeting) on October 10, 2024.

AGRICULTURAL POOL COMMITTEE MEMBERS PRESENT AT WATERMASTER

Bob Feenstra, Chair	Dairy
Jeff Pierson, Vice-Chair	Crops
Christen Miller	County of San Bernardino
Paul Hofer	Crops
Ruben Llamas	Crops
Gino Filippi for Ron LaBrucherie, Jr.	Crops
Tariq Awan	State of California – CDCR
Jimmy Medrano	State of California – CDCR

AGRICULTURAL POOL COMMITTEE MEMBERS PRESENT ON ZOOM

Nathan deBoom	Dairy
Henry DeHaan	Dairy
John Huitsing	Dairy
Imelda Cadigal	State of California – CDCR
Lewis Callahan	State of California – CDCR
Diana Frederick	State of California – CDCR
Noah Golden-Krasner	State of California – CDCR

WATERMASTER BOARD MEMBERS PRESENT ON ZOOM

Mike Gardner	Western Municipal Water District

WATERMASTER STAFF PRESENT

Edgar Tellez Foster	Water Resources Mgmt. & Planning Director
Anna Nelson	Director of Administration
Justin Nakano	Water Resources Technical Manager
Frank Yoo	Data Services and Judgment Reporting Mgr.
Daniela Uriarte	Senior Accountant
Alonso Jurado	Water Resources Associate
Ruby Favela Quintero	Administrative Assistant
Jordan Garcia	Senior Field Operations Specialist
Erik Vides	Field Operations Specialist

WATERMASTER CONSULTANTS PRESENT AT WATERMASTER

Brad Herrema	Brownstein Hyatt Farber Schreck, LLP
Andy Malone	West Yost

WATERMASTER CONSULTANTS PRESENT ON ZOOM

Garrett Rapp	West Yost
Lucy Hedley	West Yost

AGRICULTURAL POOL COMMITTEE LEGAL COUNSEL PRESENT AT WATERMASTER

Tracy Egoscue	Egoscue Law Group, Inc.

OTHERS PRESENT AT WATERMASTER

Rick Rees	WSP USA

CALL TO ORDER
Chair Feenstra called the Agricultural Pool committee meeting to order at 1:38 p.m.

ROLL CALL
(00:04:04) Mr. Tellez Foster conducted the roll call and announced that a quorum was present.

AGENDA - ADDITIONS/REORDER
(00:02:43) Mr. Tellez Foster suggested Consent Calendar Item I.C., the Appropriative Pool application for Local Storage Agreement is pulled for separate discussion and action. The Pool concurred.

(00:05:35) Mr. Medrano requested for Consent Calendar Item I.B., the financial reports, to be pulled for separate discussion.

SAFETY MINUTE
(00:05:45) Mr. Tellez Foster announced that there are assisted listening devices available for those seated at the dais who might need it.

I. CONSENT CALENDAR

All matters listed under the Consent Calendar are considered to be routine and non-controversial and will be acted upon by one motion in the form listed below. There will be no separate discussion on these items prior to voting unless any members, staff, or the public requests specific items be discussed and/or removed from the Consent Calendar for separate action.

A. MINUTES

Approve as presented:
1. Minutes of the Agricultural Pool Committee Meeting held on September 12, 2024

(00:06:08)
Motion by Vice-Chair Jeff Pierson, seconded by Mr. Jimmy Medrano, there being no dissent, the item passed unanimously by roll call vote as attached to these minutes.

Moved to approve the Consent Calendar Item I.A. as presented.

B. FINANCIAL REPORTS

Financials for the period ended August 31, 2024

(00:08:01) Mr. Medrano raised a question regarding the footnote for special projects. Ms. Uriarte stated that the line was a remnant and would be removed.

(00:09:19)
Motion by Vice-Chair Jeff Pierson, seconded by Mr. Jimmy Medrano, there being no dissent, the item passed unanimously by roll call vote as attached to these minutes.

Moved to approve the Consent Calendar Item I.B. as presented.

C. APPLICATION: LOCAL STORAGE AGREEMENT – APPRORIATIVE POOL

Recommend to the Advisory Committee to recommend to the Watermaster Board to approve the Application for Local Storage Agreement submitted on behalf of the Appropriative Pool members as presented.

(00:10:54) Mr. Tellez Foster gave a report regarding the exceedance of the Safe Storage Capacity and associated work underway. A discussion ensued.

(00:30:15)
Motion by Vice-Chair Jeff Pierson, seconded by Mr. Jimmy Medrano, there being no dissent, the item passed unanimously by roll call vote as attached to these minutes.

The Agricultural Pool hereby urges the Watermaster Board to seek relief from the Court regarding the limit on local storage per the 2021 Court Order.

Any approval of the Appropriative Pool Local Storage Agreement should be conditioned upon Court approval of an increase to the amount of water in storage in excess of 700,000 acre-feet.

II. BUSINESS ITEMS

A. ANNUAL STREAMFLOW MONITORING REPORT FOR WATER RIGHTS PERMIT 21225 (INFORMATION ONLY)

(00:32:27) Mr. Tellez Foster introduced Mr. Rapp of West Yost to give a presentation. A discussion ensued.

B. ANNUAL AND SEMI-ANNUAL PLUME STATUS REPORTS (INFORMATION ONLY)

(00:49:07) Mr. Tellez Foster introduced Ms. Hedley of West Yost to give a presentation. A discussion ensued.

C. OLD BUSINESS

None

III. REPORTS/UPDATES

A. WATERMASTER LEGAL COUNSEL

1. November 8, 2024, Court Hearing (Appropriative Pool Motion for Costs and Fees)
2. Court of Appeal Consolidated Cases No. E080457 and E082127 (City of Ontario appeal re: Fiscal Year 2021-22 and 2022-23 Assessment Packages)
3. Court of Appeal Case No. E080533 (Cities of Chino, Ontario appeal re: Fiscal Year 2022-23 Watermaster budget expenses to support CEQA analysis)
4. San Sevaine Basins – 60-day Clean Water Act Violation Notice Letter

(01:28:50) Mr. Herrema gave a report.

B. ENGINEER

1. Ground-Level Monitoring Program
2. 2025 Safe Yield Reevaluation

(01:32:45) Mr. Rapp gave a report.

C. GENERAL MANAGER

1. Assessment Package Workshops
2. Other

(01:36:44) Mr. Tellez Foster gave a report. A discussion ensued.

IV. INFORMATION

A. RECHARGE INVESTIGATION AND PROJECTS COMMITTEE

V. POOL MEMBER COMMENTS

(01:38:40) Chair Feenstra noted concern regarding the 9/25/24 letter from Mr. Chad Nishida (City of Ontario). A discussion ensued.

VI. OTHER BUSINESS

None

VII. CONFIDENTIAL SESSION – POSSIBLE ACTION

A Confidential Session may be held during the Pool Committee meeting for the purpose of discussion and possible action.

The Pool convened into Confidential Session at 3:03 p.m. to discuss the following:

Sampling of Ag Wells—Concerns and Discussion

Confidential Session concluded at 4:05 p.m. with no reportable action.

ADJOURNMENT

Chair Feenstra adjourned the Agricultural Pool Committee meeting at 4:24 p.m.

Secretary: _____

Approved: _____

Attachments:

1. 20241010 Roll Call Vote Outcome for Consent Calendar Item I.A.
2. 20241010 Roll Call Vote Outcome for Consent Calendar Item I.B.
3. 20241010 Roll Call Vote Outcome for Consent Calendar Item I.C.

20241010 Roll Call Vote Outcome		
Member	**Alternate**	**Consent Calendar I. A**
Filippi, Gino for LaBrucherie, Jr., Ron		Yes
Pierson, Jeff, Vice-Chair		Yes
deBoom, Nathan*		Absent
DeHaan, Henry*		Yes
Huitsing, John*		Yes
Pietersma, Ron		Absent
Llamas, Ruben		Yes
Miller, Christen		Yes
Awan, Tariq*		Yes
Cadigal, Imelda		Yes
Medrano, Jimmy		Yes
Feenstra, Bob - Chair		Yes
	OUTCOME:	**Passed Unanimously**

*Participated via Zoom

20241010 Roll Call Vote Outcome		

Member	Alternate	Consent Calendar I.B
Filippi, Gino for LaBrucherie, Jr., Ron		Yes
Pierson, Jeff, Vice-Chair		Yes
deBoom, Nathan*		Absent
DeHaan, Henry*		Yes
Huitsing, John*		Yes
Pietersma, Ron		Absent
Llamas, Ruben		Yes
Miller, Christen		Yes
Awan, Tariq*		Yes
Cadigal, Imelda		Yes
Medrano, Jimmy		Yes
Feenstra, Bob - Chair		Yes
	OUTCOME:	**Passed Unanimously**

*Participated via Zoom

20241010 Roll Call Vote Outcome		

Member	Alternate	Consent Calendar I.C
Filippi, Gino for LaBrucherie, Jr., Ron		Yes
Pierson, Jeff, Vice-Chair		Yes
deBoom, Nathan*		Absent
DeHaan, Henry*		Yes
Huitsing, John*		Yes
Pietersma, Ron		Absent
Llamas, Ruben		Yes
Miller, Christen		Yes
Awan, Tariq*		Yes
Cadigal, Imelda		Yes
Medrano, Jimmy		Yes
Feenstra, Bob - Chair		Yes
	OUTCOME:	**Passed Unanimously**

*Participated via Zoom

From: Edgar Tellez Foster
To: Anna Nelson; Ruby Favela Quintero; Brittany Modesto
Subject: Fwd: Ag Pool Storage Motion
Date: Thursday, October 10, 2024 2:11:21 PM
Attachments: image001.png

Edgar Tellez Foster, PhD
Water Resources Management and Planning Director
Chino Basin Watermaster

Begin forwarded message:

> **From:** Tracy Egoscue <tracy@egoscuelaw.com>
> **Date:** October 10, 2024 at 2:09:51 PM PDT
> **To:** Edgar Tellez Foster <etellezfoster@cbwm.org>, "Herrema, Brad" <BHerrema@bhfs.com>
> **Cc:** Jeff Pierson <jpierson@intexcorp.com>, Bob Feenstra <bobfeenstra@gmail.com>
> **Subject: Ag Pool Storage Motion**
>
> Motion of the Agricultural Pool regarding Item I.C.
>
> Motion: Vice Chair Pierson
> Second: JImmy Medrano
>
> The Agricultural Pool herby urges the Watermaster Board to seek relief from the Court regarding the limit on local storage per the 2021 Court Order.
>
> Any approval of the Appropriative Pool Local Storage Agreement should be conditioned upon Court approval of and increase to the amount of water in storage in excess of 700,000.
>
> Motion passed unanimously.
>
> Tracy J. Egoscue (she/her)
> Egoscue Law Group, Inc.
> 562.988.5978 office
> 562.981.4866 cell
> tracy@egoscuelaw.com
> www.egoscuelaw.com

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CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, CA 91730
909.484.3888 www.cbwm.org

STAFF REPORT

DATE: November 2024

TO: Watermaster Committees & Board

SUBJECT: Monthly Financial Reports (For the Reporting Period Ended September 30, 2024) (Consent Calendar Item I.B.)

Issue: Record of Monthly Financial Reports for the reporting period ended September 30, 2024 [Normal Course of Business]

Recommendation: Receive and file Monthly Financial Reports for the reporting periods ended September 30, 2024 as presented.

Financial Impact: None

ACTIONS AND FUTURE CONSIDERATIONS:
Advisory Committee – November 21, 2024: Receive and file
Watermaster Board – November 21, 2024: Receive and file

BACKGROUND

A monthly reporting packet is provided to keep all members apprised of Watermaster revenues, expenditures, and other financial activity. Monthly reports include the following:

1. Cash Disbursements – Summarized report of all payments made during the reporting month.
2. Credit Card Expense Detail – Detail report of all credit card activity during the reporting month.
3. Combining Schedule of Revenues, Expenses & Changes in Net Assets – Detail report of all revenue and expense activity for the fiscal YTD, summarized by pool category.
4. Treasurer's Report – Summary of Watermaster investments holdings and anticipated earnings as of month end.
5. Budget to Actual Report – Detail report of actual revenue and expense activity, shown for reporting month and YTD, comparatively to the adopted budget.
6. Monthly Variance Report & Supplemental Schedules – Supporting schedule providing explanation for major budget variances. Also provides several additional tables detailing pool fund balance, salaries expense, legal expense, and engineering expense.

DISCUSSION

Detailed explanation of major variances and other additional information can be found on the "Monthly Variance Report & Supplemental Schedules."

Watermaster staff will provide additional explanation or respond to any questions on these reports.

ATTACHMENTS

1. Monthly Financial Reports (September 30, 2024)

Chino Basin Watermaster
Cash Disbursements
September 2024

Date	Number	Vendor Name	Description	Amount
09/05/2024	25019	LOPEZ, NICHOLAS	Server room remodeling	$ (1,250.00)
09/05/2024	25020	ACWA JOINT POWERS INSURANCE AUTHORITY	October life insurance	(238.70)
09/05/2024	25021	BURRTEC WASTE INDUSTRIES, INC.	Utilities: Waste	(168.62)
09/05/2024	25022	C.J. BROWN & COMPANY, CPAs	FY 24 Audit services	(450.00)
09/05/2024	25023	CONCENTRA	Pre-employment screening	(181.00)
09/05/2024	25024	CUCAMONGA VALLEY WATER DISTRICT - UTILITY	Utilities: Water	(408.11)
09/05/2024	25025	CURATALO, JAMES		(1,500.00)
09/05/2024	25026	FEDEX	Shipping of Pools meeting packages	(12.41)
09/05/2024	25027	FILIPPI, GINO		(500.00)
09/05/2024	25028	FRONTIER COMMUNICATIONS	Landline connection for Bay Alarm system	(152.57)
09/05/2024	25029	KAVOUNAS, PETER	Health and dental premium reimbursements	(1,478.36)
09/05/2024	25030	PHILADELPHIA INSURANCE COMPANY	Policy renewal: Municipalities umbrella coverage	(2,080.76)
09/05/2024	25031	R&D PEST SERVICES	September pest control services	(100.00)
09/05/2024	25032	RAUCH COMMUNICATION CONSULTANTS, INC.	Annual report services	(225.00)
09/05/2024	25033	SAN BERNARDINO COUNTY - DEPT. AIRPORTS	September rent for extensometer site	(172.00)
09/05/2024	25034	STATE COMPENSATION INSURANCE FUND	FY 24 Worker's compensation insurance	(2,264.91)
09/05/2024	25035	THREE VALLEYS MUNICIPAL WATER DIST	Leadership breakfast - T. Corbin, E. Tellez Foster, A. Nelson, J. Nakano	(140.00)
09/05/2024	25036	UNION 76	August fuel purchases	(238.63)
09/05/2024	25037	USAFACT, INC.	Pre-employment background check	(179.18)
09/05/2024	25038	VANGUARD CLEANING SYSTEMS	September janitorial service and July electrostatic spraying	(1,000.00)
09/05/2024	25039	VELTO, BILL		(250.00)
09/06/2024	ACH9/6/24	CALPERS	September Medical Insurance Premiums	(14,134.07)
09/06/2024	ACH9/6/24	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	GASB 68 Reporting Services Fee	(700.00)
09/11/2024	ACH9/11/24	KAISER FOUNDATION HOSPITALS	Settlement payment	(150,000.00)
09/12/2024	25040	FULLER TRUCK ACCESSORIES	Light bar and accessories for new field truck	(4,284.44)
09/12/2024	25041	APPLEONE	Temporary employment services	(1,919.20)
09/12/2024	25042	CALIFORNIA BANK & TRUST	Account ending 6198 - See detail attached	(4,264.68)
09/12/2024	25043	DE BOOM, NATHAN		(125.00)
09/12/2024	25044	EGOSCUE LAW GROUP, INC.	August OAP legal services	(15,750.00)
09/12/2024	25045	GEYE, BRIAN		(375.00)
09/12/2024	25046	INLAND EMPIRE UTILITIES AGENCY	FY 25 RTS charges	(54,424.76)
09/12/2024	25047	LEGAL SHIELD	September employee paid legal insurance	(119.55)
09/12/2024	25048	SKILLPATH SEMINARS	All access annual pass - D. Uriarte	(249.00)
09/12/2024	25049	SOUTHERN CA EDISON	Utilities: Electric	(3,574.44)
09/12/2024	25050	VELTO, BILL		(125.00)
09/19/2024	25061	BROWNSTEIN HYATT FARBER SCHRECK	July legal services	(54,969.67)
09/19/2024	25062	WEST YOST	July engineering services	(245,367.86)
09/19/2024	25063	ABC LOCKSMITHS*	Electronic diagnosis and repair alarm lock issue	(180.00)
09/19/2024	25064	APPLEONE	Temporary employment services	(1,914.88)
09/19/2024	25065	BAY ALARM COMPANY	Security alarm monitoring service	(189.24)
09/19/2024	25066	BLUERIDGE SOFTWARE, INC.	Contracts database software annual support and maintenance	(629.82)
09/19/2024	25067	CORELOGIC INFORMATION SOLUTIONS	August geographic package services	(125.00)
09/19/2024	25068	CUBICLE AND OFFICE, LLC.	Deposit for room divider in copy room	(2,572.11)
09/19/2024	25069	CUCAMONGA VALLEY WATER DISTRICT	October lease	(11,727.00)
09/19/2024	25070	GREAT AMERICA LEASING CORP.	August copy machine lease	(2,163.64)
09/19/2024	25071	PIERSON, JEFFREY		(875.00)
09/19/2024	25072	READY REFRESH	Office water dispenser lease	(82.55)
09/19/2024	25073	UNITED HEALTHCARE	October dental insurance coverage	(1,451.03)
09/19/2024	25074	VERIZON WIRELESS	Internet services for Field Ops tablets	(277.17)
09/19/2024	25075	CUBICLE AND OFFICE, LLC.	Final payment for room divider in copy room	(2,572.11)
09/19/2024	25076	EMPLOYMENTOR, INC.	Harrasment prevention training for staff	(2,800.00)
09/19/2024	25077	PIERSON, JEFFREY		(3,125.00)
09/19/2024	25078	SOCALGAS	Utilities: Gas	(49.70)
09/23/2024	ACH9/23/24	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	Annual Unfunded Accrued Liability-Plan 3299	(12,164.17)
09/23/2024	ACH9/23/24	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	Annual Unfunded Accrued Liability-Plan 27239	(172.92)
09/26/2024	25080	APPLEONE	Temporary employment services	(1,535.36)
09/26/2024	25081	BROWNSTEIN HYATT FARBER SCHRECK	August legal services	(67,898.83)
09/26/2024	25082	CUCAMONGA VALLEY WATER DISTRICT - UTILITY	Utilities: Water	(368.87)
09/26/2024	25083	FEDEX	Shipping of Pools meeting packages	(22.50)
09/26/2024	25084	SOUTHERN CALIFORNIA EDISON	Utilities: Electric	(259.45)
09/26/2024	25085	VERIZON WIRELESS	Internet services and mobile broadband unlimited	(38.01)
09/26/2024	25086	VISION SERVICE PLAN	October vision insurance coverage	(146.38)
			Total for Month	**$ (676,713.66)**

Chino Basin Watermaster

Combining Schedule of Revenues, Expenses & Changes in Net Assets

For the Period of July 1, 2024 through September 30, 2024

(Unaudited)

	JUDGMENT ADMIN.	OPTIMUM BASIN MGMT.	TOTAL JUDGMENT ADMIN & OBMP	POOL ADMINISTRATION & SPECIAL PROJECTS			GROUND WATER REPLENISH.	GRAND TOTALS	ADOPTED BUDGET 2024-2025 WITH CARRYOVER
				AP POOL	OAP POOL	ONAP POOL			
Administrative Revenues:									
Administrative Assessments	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 9,833,780
Interest Revenue	-	107,523	107,523	5,041	17,781	824	2,281	133,450	478,500
Groundwater Replenishment	-	-	-	-	-	-	-	-	-
Mutual Agency Project Revenue	191,073	-	191,073	-	-	-	-	191,073	191,070
Miscellaneous Income	1,468	-	1,468	-	-	-	-	1,468	-
Total Administrative Revenues	**192,540**	**107,523**	**300,063**	**5,041**	**17,781**	**824**	**2,281**	**325,990**	**10,503,350**
Administrative & Project Expenditures:									
Watermaster Administration	758,788	-	758,788	-	-	-	-	758,788	2,528,540
Watermaster Board-Advisory Committee	68,494	-	68,494	-	-	-	-	68,494	422,420
Optimum Basin Mgmt Administration	-	195,779	195,779	-	-	-	-	195,779	1,437,940
OBMP Project Costs	-	826,886	826,886	-	-	-	-	826,886	4,971,020
Pool Legal Services	-	-	-	31,091	21,000	1,309	-	53,400	-
Pool Meeting Compensation	-	-	-	-	6,375	750	-	7,125	-
Pool Special Projects	-	-	-	-	9,454	-	-	9,454	-
Pool Administration	-	-	-	-	-	-	-	-	370,660
Debt Service	-	-	-	-	-	-	-	-	772,770
Agricultural Expense Transfer [1]	-	-	-	36,829	(36,829)	-	-	-	-
Replenishment Water Assessments	-	-	-	-	-	-	54,425	54,425	180,234
Total Administrative Expenses	**827,283**	**1,022,665**	**1,849,948**	**67,920**	**-**	**2,059**	**54,425**	**1,974,352**	**10,683,584**
Net Ordinary Income	**(634,742)**	**(915,142)**	**(1,549,885)**	**(62,879)**	**17,781**	**(1,235)**	**(52,144)**	**(1,648,361)**	**(180,234)**
Other Income/(Expense)									
Refund-Recharge Debt Service	-	-	-	-	-	-	-	-	-
Carryover Budget*	-	-	-	-	-	-	-	-	454,875
Net Other Income/(Expense)	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**454,875**
Net Transfers To/(From) Reserves	**$ (634,742)**	**$ (915,142)**	**$ (1,549,885)**	**$ (62,879)**	**$ 17,781**	**$ (1,235)**	**$ (52,144)**	**$ (1,648,361)**	**$ 274,640**
Net Assets, July 1, 2024			8,794,214	555,405	1,404,964	65,733	180,234	11,000,551	
Refund-Excess Operating Reserves			-					-	
Net Assets, End of Period			**7,244,329**	**492,526**	**1,422,745**	**64,499**	**128,091**	**9,352,189**	
Pool Assessments Outstanding				(86,315)	(586,852)	-			
Pool Fund Balance				**$ 406,211**	**$ 835,893**	**$ 64,499**			

[1] Fund balance transfer as agreed to in the Peace Agreement.

*Carryover budget will be updated once the FY 2023-24 has been finalized.

Chino Basin Watermaster
Credit Card Expense Detail
September 2024

Date	Number	Description	Expense Account	Amount
09/12/2024	25042	**CALIFORNIA BANK & TRUST**		
		Urban Water Institute (UWI) Conference - Registration - E. Tellez Foster	6191 · Conferences - General	(250.00)
		Paradise Point - UWI Conference - Lodging - E. Tellez Foster	6191 · Conferences - General	(275.25)
		Amazon - Amazon Web Services fee	6054 · Computer Software	(39.76)
		Yatai Sushi Express - IEUA lunch - E. Tellez Foster, J. Nakano, A. Jurado	6141.1 · Meeting Supplies	(147.09)
		Bamboo HR - HRIS and Timekeeping System	6061.2 · HRIS System	(227.59)
		Amazon - Misc. office supplies	6031.7 · General Office Supplies	(44.50)
		Microsoft Software - Software used by J. Garcia	6054 · Computer Software	(15.00)
		Amazon - Remote garage door opener and batteries	6031.7 · General Office Supplies	(39.48)
		REV Subscription - Speech to text transcription services	6112 · Subscriptions/Publications	(29.99)
		Paradise Point - UWI Conference - Dinner and Parking - E. Tellez Foster	6191 · Conferences - General	(104.25)
		ACWA Conference - Registration - E. Tellez Foster	6191 · Conferences - General	(899.00)
		Amazon - Bankers boxes	6031.7 · General Office Supplies	(30.42)
		Amazon - Remote garage door opener	6031.7 · General Office Supplies	(36.60)
		Costco - Meeting snacks and drinks	6312 · Meeting Expenses	(500.04)
		Costco - Misc. office supplies	6031.7 · General Office Supplies	(213.21)
		Amazon - Gate hinge box	6024 · Building Repair & Maintenance	(30.48)
		Amazon - Misc. office supplies	6031.7 · General Office Supplies	(5.70)
		Lowes - Return - Clear plant tray	6031.7 · General Office Supplies	18.30
		The Back Abbey - Meeting T. Corbin	6141.1 · Meeting Supplies	(48.61)
		Etsy - Retirement Gift - D. Crosley	6031.7 · General Office Supplies	(86.19)
		The Back Abbey - Meeting - T. Corbin, B. Bowcock	6141.1 · Meeting Supplies	(64.75)
		FedEx - Replacement credit card mailing fee	6042 · Postage - General	(25.00)
		LinkedIn - Premium Career Yearly Subscription 8/15/24 - 8/15/25	6112 · Subscriptions/Publications	(179.88)
		Engrave N Embroidery - Logo shirt - A. Nelson	6154 · Uniforms	(34.48)
		UPS Store - Framed certificate for M. Levin	6042 · Postage - General	(18.54)
		Domino's - Server room cleanup - Lunch for OPS team	6141.1 · Meeting Supplies	(99.82)
		Amazon - Misc. Office Supplies	6031.7 · General Office Supplies	(56.11)
		Lands End - Shirt order - R. Favela Quintero, A. Jurado	6154 · Uniforms	(255.66)
		Amazon - Misc. Office Supplies	6031.7 · General Office Supplies	(24.97)
		Amazon - Misc. Office Supplies	6031.7 · General Office Supplies	(40.63)
		Amazon - Wooden pendulums	6031.7 · General Office Supplies	(38.58)
		BlueHost - Monthly Software Renewal - Standard VPN Server with cPanel	6054 · Computer Software	(91.99)
		Amazon - Toner Black	6031.7 · General Office Supplies	(114.96)
		Amazon - Book - A. Nelson	6031.7 · General Office Supplies	(7.23)
		Amazon - Misc. Office Supplies	6031.7 · General Office Supplies	(55.18)
		Amazon - Key lanyards	6031.7 · General Office Supplies	(5.38)
		Crave Pizza - CalPERS Conference - Dinner A. Nelson	6141.1 · Meeting Supplies	(16.57)
		Hilton - CalPERS Conference - Coffee A. Nelson	6141.1 · Meeting Supplies	(7.37)
		Amazon - Toner Cyan	6031.7 · General Office Supplies	(122.72)
			Total for Month	**$ (4,264.68)**

Chino Basin Watermaster

Treasurer's Report

September 2024

	Type	Monthly Yield	Cost	Market	% Total
Cash & Investments					
Local Agency Investment Fund (LAIF) *	Investment	4.58%	$ 643,374	$ 644,700	6.4%
CA CLASS Prime Fund **	Investment	5.41%	9,283,287	$ 9,284,263	91.4%
Bank of America	Checking		223,750	223,750	2.2%
Bank of America	Payroll		-	-	0.0%
Total Cash & Investments			**$ 10,150,411**	**$ 10,152,712**	**100.0%**

* The LAIF Market Value factor is updated quarterly in September, December, March, and June.

** The CLASS Prime Fund Net Asset Value factor is updated monthly.

Certification

I certify that (1) all investment actions executed since the last report have been made in full compliance with Chino Basin Watermaster's Investment Policy, and (2) Funds on hand are sufficient to meet all foreseen and planned administrative and project expenditures for the next six months.

Anna Nelson, Director of Administration

Prepared By:
Daniela Uriarte, Senior Accountant

Chino Basin Watermaster

Budget to Actual

For the Period July 1, 2024 to September 30, 2024

(Unaudited)

		September 2024	YTD Actual	FY 25 Adopted Budget with Carryover	$ Over / (Under) Budget	% of Budget
1	**Administration Revenue**					
2	Local Agency Subsidies	$ -	$ 191,073	$ 191,070	$ 3	100%
3	Admin Assessments-Appropriative Pool	-	-	9,521,030	(9,521,030)	0%
4	Admin Assessments-Non-Ag Pool	-	-	312,750	(312,750)	0%
5	**Total Administration Revenue**	**-**	**191,073**	**10,024,850**	**(9,833,777)**	**2%**
6	**Other Revenue**					
7	Appropriative Pool-Replenishment	-	-	-	-	N/A
8	Non-Ag Pool-Replenishment	-	-	-	-	N/A
9	Interest Income	31,910	107,523	478,500	(370,977)	22%
10	Miscellaneous Income	-	1,468	-	1,468	N/A
11	Carryover Budget	-	-	454,875	(454,875)	0%
12	**Total Other Revenue**	**31,910**	**108,990**	**933,375**	**(824,384)**	**12%**
13	**Total Revenue**	**31,910**	**300,063**	**10,958,225**	**(10,658,161)**	**3%**
14	**Judgment Administration Expense**					
15	Judgment Administration	34,030	113,661	721,010	(607,349)	16%
16	Admin. Salary/Benefit Costs	108,738	317,591	1,032,120	(714,529)	31%
17	Office Building Expense	22,991	64,171	234,470	(170,299)	27%
18	Office Supplies & Equip.	2,951	7,981	46,760	(38,779)	17%
19	Postage & Printing Costs	2,653	6,254	32,950	(26,696)	19%
20	Information Services	8,303	26,929	232,530	(205,601)	12%
21	Contract Services	6,378	17,566	111,460	(93,894)	16%
22	Watermaster Legal Services	30,228	103,657	414,060	(310,403)	25%
23	Insurance	-	38,572	50,950	(12,378)	76%
24	Dues and Subscriptions	11,857	12,137	25,900	(13,763)	47%
25	Watermaster Administrative Expenses	378	1,445	9,630	(8,185)	15%
26	Field Supplies	35	556	3,200	(2,644)	17%
27	Travel & Transportation	6,509	71,763	104,960	(33,197)	68%
28	Training, Conferences, Seminars	3,598	6,126	49,370	(43,244)	12%
29	Advisory Committee Expenses	1,354	7,094	134,130	(127,036)	5%
30	Watermaster Board Expenses	19,897	61,401	288,290	(226,889)	21%
31	ONAP - WM & Administration	4,130	8,503	120,940	(112,437)	7%
32	OAP - WM & Administration	5,302	11,852	124,220	(112,368)	10%
33	Appropriative Pool- WM & Administration	10,024	31,203	125,500	(94,297)	25%
34	Allocated G&A Expenditures	(33,760)	(81,180)	(540,830)	459,650	15%
35	**Total Judgment Administration Expense**	**245,595**	**827,283**	**3,321,620**	**(2,494,337)**	**25%**
36	**Optimum Basin Management Plan (OBMP)**					
37	Optimum Basin Management Plan	49,581	195,779	1,437,940	(1,242,161)	14%
38	Groundwater Level Monitoring	46,777	107,249	585,050	(477,801)	18%
39	Program Element (PE)2- Comp Recharge	23,429	57,151	1,774,300	(1,717,149)	3%
40	PE3&5-Water Supply/Desalte	2,114	2,954	122,010	(119,057)	2%
41	PE4- Management Plan	26,178	188,221	412,400	(224,179)	46%
42	PE6&7-CoopEfforts/SaltMgmt	80,586	216,502	669,380	(452,878)	32%
43	PE8&9-StorageMgmt/Conj Use	29,679	173,628	867,050	(693,422)	20%
44	Recharge Improvements	-	-	772,770	(772,770)	0%
45	Administration Expenses Allocated-OBMP	15,557	33,280	232,750	(199,470)	14%
46	Administration Expenses Allocated-PE 1-9	18,202	47,900	308,080	(260,180)	16%
47	**Total OBMP Expense**	**292,103**	**1,022,665**	**7,181,730**	**(6,159,065)**	**14%**
48	**Other Expense**					
49	Groundwater Replenishment	54,425	54,425	180,234	(125,810)	30%
50	Other Expenses	150,000	-	-	-	N/A
51	**Total Other Expense**	**204,425**	**54,425**	**180,234**	**(125,810)**	**30%**
52	**Total Expenses**	**742,123**	**1,904,373**	**10,683,584**	**(8,779,212)**	**18%**
53	**Increase / (Decrease) to Reserves**	**$ (710,213)**	**$ (1,604,309)**	**$ 274,640**	**$ (1,878,950)**	

Budget to Actual

The Budget to Actual report summarizes the operating and non-operating revenues and expenses of Chino Basin Watermaster for the fiscal year-to-date (YTD). Columns are included for current monthly and YTD activity shown comparatively to the FY 25 adopted budget. The final two columns indicate the amount over or under budget, and the YTD percentage of total budget used. As of September 30th, the target budget percentage is generally 25%.

Revenues

Lines 1-5 Administration Revenue – Includes local agency subsidies and administrative assessment for the Appropriative, Agricultural and Non-Agricultural Pools. Below is a summary of notable account variances at month end:

- Line 2 Local Agency Subsidies includes the annual Dy Year Yield (DYY) administrative fee received. This account is at 100% of budget due to the timing of payment.

Lines 6-12 Other Revenue – Includes Pool replenishment assessments, interest income, miscellaneous income, and carryover budget from prior years.

Expenses

Lines 14-35 Judgment Administration Expense – Includes Watermaster general administrative expenses, contract services, insurance, office and other administrative expenses. Below is a summary of notable account variances at month end:

- Line 16 Admin Salary/Benefit Costs includes wages and benefits for Watermaster administrative staff. The account is at 31% of budget due to vacation and severance payouts done in July.
- Line 23 Insurance includes general liability insurance, directors' and officers' liability, municipalities coverage, environmental pollution liability and other various insurance policies. The account is at 76% of budget due to the timing of policy renewals.
- Line 24 Dues and Subscriptions include annual dues for ACWA, SHRM, and other miscellaneous subscriptions. The account is at 47% of budget due to the timing of subscription renewals.
- Line 27 Travel & Transportation includes travel and transportation costs related to Watermaster business, not related to conferences and seminars, vehicle fuel, repairs and maintenance, and vehicle purchases. The account is at 68% of budget due to the timing of the new field vehicle purchase.

Lines 36-47 Optimum Basin Management Plan (OBMP) Expense – Includes legal, engineering, groundwater level monitoring, allocated administrative expenses, and other expenses.

Lines 48-51 Other Expense – Includes groundwater replenishment, settlement expenses, and various refunds as appropriate.

Pool Services Fund Accounting

Each Pool has a fund account created to pay their own legal service invoices. The legal services invoices are funded and paid using the fund accounts (8467 for the Overlying Agricultural Pool (OAP), 8567 for the Overlying Non-Agricultural Pool (ONAP), and 8367 for the Appropriate Pool (AP)). Along with the legal services fund account for the OAP (8467), the OAP also has two other fund accounts for Ag Pool Meeting Attendance expenses (8470), and Special Projects expenses (8471). The ONAP also has a meeting compensation fund account (8511). Additionally, the OAP has a reserve fund that is held by Watermaster and spent at the direction of the OAP. The AP also has account 8368 relating to the Tom Harder contract. These fund accounts are replenished at the direction of each Pool, and the legal service invoices are approved by the Pool leadership and when paid by Watermaster, are deducted from the existing fund account balances. If the fund account for any pool reaches zero, no further payments can be paid from the fund and a replenishment action must be initiated by the Pool.

The following tables detail the fund balance accounts as of September 30, 2024 (continued next page):

Fund Balance For Non-Agricultural Pool Account 8567 - Legal Services		
Beginning Balance July 1, 2024:	$	63,483.09
Additions:		
Interest Earnings		824.49
Subtotal Additions:		824.49
Reductions:		
Invoices paid July 2024 - Sep. 2024		(1,309.00)
Subtotal Reductions:		(1,309.00)
Available Fund Balance as of Sep. 30, 2024	**$**	**62,998.58**

Fund Balance For Appropriative Pool Account 8367 - Legal Services		
Beginning Balance July 1, 2024:	$	(9,472.87)
Additions:		
Interest Earnings		5,040.96
Subtotal Additions:		5,040.96
Reductions:		
Invoices paid July 2024 - Sep. 2024		(31,091.23)
Subtotal Reductions:		(31,091.23)
Available Fund Balance as of Sep. 30, 2024	**$**	**(35,523.14)**

Fund Balance For Non-Agricultural Pool Account 8511 - Meeting Compensation		
Beginning Balance July 1, 2024:	$	2,250.00
Reductions:		
Compensation paid July 2024 - Sep. 2024		(750.00)
Subtotal Reductions:		(750.00)
Available Fund Balance as of Sep. 30, 2024	**$**	**1,500.00**

Fund Balance For Appropriative Pool Account 8368 - Tom Harder Contract		
Beginning Balance July 1, 2024:	$	20,577.61
Reductions:		
Invoices paid July 2024 - Sep. 2024		-
Subtotal Reductions:		-
Available Fund Balance as of Sep. 30, 2024	**$**	**20,577.61**

Chino Basin Watermaster
Monthly Variance Report & Supplemental Schedules
For the period July 1, 2024 to September 30, 2024
(Unaudited)

Pool Services Fund Accounting – Cont.

Fund Balance for Agricultural Pool Account 8467 - Legal Services (Held by AP)		
Beginning Balance July 1, 2024*:	$	388,647.51
Reductions:		
Invoices paid July 2024 - Sep. 2024		(21,000.00)
Subtotal Reductions:		(21,000.00)
Available Fund Balance as of Sep. 30, 2024	**$**	**367,647.51**

*Balance includes payments received totaling $262,832.38 for Settlement Agreement outstanding invoices issued Apr. 15, 2022 and Jun. 17, 2022.

Agricultural Pool Reserve Funds As shown on the Combining Schedules		
Beginning Balance July 1, 2024*:	$	818,112.17
Additions:		
YTD Interest earned on Ag Pool Funds FY 25		17,780.70
Transfer of Funds from AP to Special Fund for Legal Service Invoices		21,000.00
Total Additions:		38,780.70
Reductions:		
Legal service invoices paid July 2024 - Sep. 2024		(21,000.00)
Total Reductions		(21,000.00)
Agricultural Pool Reserve Funds Balance as of Sep. 30, 2024:	**$**	**835,892.87**

*Balance includes payments of $102,245.10 and $42,025.61 received in FY 24 for outstanding invoices issued Sep. 9, 2022 and Apr. 20, 2023 for Ag Pool legal services, respectively.

Fund Balance For Agricultural Pool Account 8470 - Meeting Compensation (Held by AP)		
Beginning Balance July 1, 2024:	$	17,694.65
Reductions:		
Compensation paid July 2024 - Sep. 2024		(6,375.00)
Subtotal Reductions:		(6,375.00)
Available Fund Balance as of Sep. 30, 2024	**$**	**11,319.65**

Fund Balance For Agricultural Pool Account 8471 - Special Projects (Held by AP)		
Beginning Balance July 1, 2024:	$	51,643.00
Reductions:		
Invoices paid July 2024 - Sep. 2024		(9,454.00)
Subtotal Reductions:		(9,454.00)
Available Fund Balance as of Sep. 30, 2024	**$**	**42,189.00**

Watermaster Salary Expenses

The following table details the Year-To-Date (YTD) Actual Watermaster burdened salary costs compared to the FY 25 adopted budget. The "$ Over Budget" and the "% of Budget" columns are a comparison of the YTD actual to the annual budget. As of September 30th, the target budget percentage is generally 25%.

	Year to Date Actual	FY 24-25 Budget	$ Over / (Under) Budget	% of Budget
WM Salary Expense				
5901.1 · Judgment Admin - Doc. Review	12,055	93,860	(81,805)	12.8%
5901.3 · Judgment Admin - Field Work	1,716	11,860	(10,144)	14.5%
5901.5 · Judgment Admin - General	4,416	81,090	(76,674)	5.4%
5901.7 · Judgment Admin - Meeting	8,393	39,710	(31,317)	21.1%
5901.9 · Judgment Admin - Reporting	946	13,890	(12,944)	6.8%
5910 · Judgment Admin - Court Coord./Attendance	899	16,970	(16,071)	5.3%
5911 · Judgment Admin - Exhibit G	-	6,400	(6,400)	0.0%
5921 · Judgment Admin - Production Monitoring	60	5,440	(5,380)	1.1%
5931 · Judgment Admin - Recharge Applications	1,010	-	1,010	100.0%
5941 · Judgment Admin - Reporting	-	2,140	(2,140)	0.0%
5951 · Judgment Admin - Rules & Regs	-	11,260	(11,260)	0.0%
5961 · Judgment Admin - Safe Yield	14,311	9,510	4,801	150.5%
5971 · Judgment Admin - Storage Agreements	125	13,000	(12,875)	1.0%
5981 · Judgment Admin - Water Accounting/Database	25,240	108,290	(83,050)	23.3%
5991 · Judgment Admin - Water Transactions	4,510	5,330	(820)	84.6%
6011.11 · WM Staff - Overtime	2,306	18,000	(15,694)	12.8%
6011.10 · Admin - Accounting	58,897	278,330	(219,433)	21.2%
6011.15 · Admin - Building Admin	21,668	31,200	(9,532)	69.4%
6011.20 · Admin - Conference/Seminars	8,564	58,530	(49,966)	14.6%
6011.25 · Admin - Document Review	9,406	2,620	6,786	359.0%
6011.50 · Admin - General	78,132	362,560	(284,428)	21.6%
6011.60 · Admin - HR	27,178	50,450	(23,272)	53.9%
6011.70 · Admin - IT	15,567	34,070	(18,503)	45.7%
6011.80 · Admin - Meeting	24,320	39,760	(15,440)	61.2%
6011.90 · Admin - Team Building	2,080	41,550	(39,470)	5.0%
6011.95 · Admin - Training (Give/Receive)	7,820	64,160	(56,340)	12.2%
6017· Temporary Services	6,905	26,040	(19,135)	26.5%
6201 · Advisory Committee	3,110	82,850	(79,740)	3.8%
6301 · Watermaster Board	31,082	83,910	(52,828)	37.0%
8301 · Appropriative Pool	23,033	67,280	(44,247)	34.2%
8401 · Agricultural Pool	5,182	66,005	(60,823)	7.9%
8501 · Non-Agricultural Pool	2,438	62,725	(60,287)	3.9%
6901.1 · OBMP - Document Review	10,613	95,294	(84,681)	11.1%
6901.3 · OBMP - Field Work	1,044	50,870	(49,826)	2.1%
6901.5 · OBMP - General	20,317	81,120	(60,803)	25.0%
6901.7 · OBMP - Meeting	8,919	80,360	(71,441)	11.1%
6901.9 · OBMP - Reporting	5,527	11,040	(5,513)	50.1%
7104.1 · PE1 - Monitoring Program	43,752	275,499	(231,747)	15.9%
7201 · PE2 - Comprehensive Recharge	15,418	71,753	(56,335)	21.5%
7301 · PE3&5 - Water Supply/Desalter	-	9,515	(9,515)	0.0%
7301.1 · PE5 - Reg. Supply Water Prgm.	840	9,510	(8,671)	8.8%
7401 · PE4 - MZ1 Subsidence Mgmt. Plan	-	14,040	(14,040)	0.0%
7501 · PE6 - Coop. Programs/Salt Mgmt.	1,779	9,514	(7,735)	18.7%
7501.1 · PE 7 - Salt Nutrient Mgmt. Plan	-	9,510	(9,510)	0.0%
7601 · PE8&9 - Storage Mgmt./Recovery	5,160	22,520	(17,360)	22.9%
Subtotal WM Staff Costs	**516,010**	**2,529,335**	**(2,013,325)**	**20%**
60184.1 · Administrative Leave	-	6,550	(6,550)	0.0%
60185 · Vacation	37,725	90,280	(52,555)	41.8%
60185.1 · Comp Time	4,543	-	4,543	100.0%
60186 · Sick Leave	9,344	79,450	(70,106)	11.8%
60187 · Holidays	-	-	-	0.0%
Subtotal WM Paid Leaves	**51,612**	**176,280**	**(124,668)**	**29%**
Total WM Salary Costs	**567,622**	**2,705,615**	**(2,137,993)**	**21.0%**

Engineering

The following table details the Year-To-Date (YTD) Actual Engineering costs compared to the FY 24 adopted budget. The "$ Over Budget" and the "% of Budget" columns are a comparison of the YTD actual to the annual budget. As of September 30th, the target budget percentage is generally 25%.

	Year to Date Actual	FY 24-25 Budget	$ Over / (Under) Budget	% of Budget
Engineering Services Costs				
5901.8 · Judgment Admin - Meetings-Engineering Services	$ -	$ 37,066	$ (37,066)	0.0%
5906.71 · Judgment Admin - Data Requests-CBWM Staff	18,174	101,048	(82,874)	18.0%
5906.72 · Judgment Admin - Data Requests-Non-CBWM Staff	9,628	37,008	(27,381)	26.0%
5925 · Judgment Admin - Ag Production & Estimation	6,297	31,096	(24,799)	20.3%
5935 · Judgment Admin - Mat'l Physical Injury Requests	-	39,459	(39,459)	0.0%
5945 · Judgment Admin - WM Annual Report Preparation	5,882	16,924	(11,043)	34.8%
5965 · Judgment Admin - Support Data Collection & Mgmt Process	-	39,659	(39,659)	0.0%
6206 · Advisory Committee Meetings-WY Staff	2,280	23,510	(21,230)	9.7%
6306 · Watermaster Board Meetings-WY Staff	4,801	23,510	(18,709)	20.4%
8306 · Appropriative Pool Meetings-WY Staff	5,362	23,510	(18,148)	22.8%
8406 · Agricultural Pool Meetings-WY Staff	3,862	23,510	(19,648)	16.4%
8506 · Non-Agricultural Pool Meetings-WY Staff	3,257	23,510	(20,253)	13.9%
6901.8 · OBMP - Meetings-WY Staff	9,635	37,066	(27,431)	26.0%
6901.95 · OBMP - Reporting-WY Staff	22,399	62,606	(40,208)	35.8%
6906 · OBMP Engineering Services - Other	24,132	51,440	(27,309)	46.9%
6906.1 · OBMP Watermaster Model Update	986	67,596	(66,611)	1.5%
6906.21 · State of the Basin Report	-	195,188	(195,188)	0.0%
7104.3 · Grdwtr Level-Engineering	51,274	254,627	(203,353)	20.1%
7104.8 · Grdwtr Level-Contracted Services	11,800	26,174	(14,374)	45.1%
7104.9 · Grdwtr Level-Capital Equipment	-	17,000	(17,000)	0.0%
7202 · PE2-Comp Recharge-Engineering Services	2,135	23,496	(21,362)	9.1%
7202.2 · PE2-Comp Recharge-Engineering Services	39,598	75,944	(36,346)	52.1%
7302 · PE3&5-PBHSP Monitoring Program	-	73,305	(73,305)	0.0%
7303 · PE3&5-Engineering - Other	2,114	16,180	(14,066)	13.1%
7306 · PE3&5-Engineering - Outside Professionals	-	6,500	(6,500)	0.0%
7402 · PE4-Engineering	112,283	281,239	(168,956)	39.9%
7402.10 · PE4-Northwest MZ1 Area Project	53,206	16,656	36,550	319.4%
7403 · PE4-Eng. Services-Contracted Services-InSar	22,000	39,600	(17,600)	55.6%
7406 · PE4-Engineering Services-Outside Professionals	-	38,600	(38,600)	0.0%
7408 · PE4-Engineering Services-Network Equipment	44	17,555	(17,511)	0.3%
7502 · PE6&7-Engineering	120,543	398,309	(277,766)	30.3%
7505 · PE6&7-Laboratory Services	28,717	61,242	(32,525)	46.9%
7510 · PE6&7-IEUA Salinity Mgmt. Plan	5,832	-	5,832	100.0%
7511 · PE6&7-SAWBMP Task Force-50% IEUA	339	27,067	(26,728)	1.3%
7517 · Surface Water Monitoring Plan-Chino Creek - 50% IEUA	6,933	33,574	(26,641)	20.6%
7520 · Preparation of Water Quality Mgmt. Plan	2,783	130,164	(127,381)	2.1%
7610 · PE8&9-Support 2020 Mgmt. Plan	-	32,585	(32,585)	0.0%
7614 · PE8&9-Support Imp. Safe Yield Court Order	168,468	768,963	(600,495)	21.9%
7615 · PE8&9-Develop 2025 Storage Plan	-	42,632	(42,632)	0.0%
Total Engineering Services Costs	**$ 744,762**	**$ 3,215,118**	**$ (2,470,356)**	**23.2%**

Legal

The following table details the YTD Brownstein Hyatt Farber Schreck (BHFS) expenses and costs compared to the FY 24 adopted budget. The "$ Over Budget" and the "% of Budget" columns are a comparison of the YTD actual to the annual budget. As of September 30th, the target budget percentage is generally 25%.

	Year to Date Actual	FY 24-25 Budget	$ Over / (Under) Budget	% of Budget
6070 · Watermaster Legal Services				
6071 · BHFS Legal - Court Coordination	$ 16,357	$ 144,040	$ (127,683)	11.4%
6072 · BHFS Legal - Rules & Regulations	-	10,500	(10,500)	0.0%
6073 · BHFS Legal - Personnel Matters	54,199	28,150	26,049	192.5%
6074 · BHFS Legal - Interagency Issues	-	40,540	(40,540)	0.0%
6077 · BHFS Legal - Party Status Maintenance	-	13,590	(13,590)	0.0%
6078 · BHFS Legal - Miscellaneous (Note 1)	33,101	177,240	(144,139)	18.7%
Total 6070 · Watermaster Legal Services	**103,657**	**414,060**	**(310,403)**	**25.0%**
6275 · BHFS Legal - Advisory Committee	1,704	27,770	(26,066)	6.1%
6375 · BHFS Legal - Board Meeting	16,554	88,705	(72,151)	18.7%
6375.1 · BHFS Legal - Board Workshop(s)	-	14,000	(14,000)	0.0%
8375 · BHFS Legal - Appropriative Pool	2,808	34,710	(31,902)	8.1%
8475 · BHFS Legal - Agricultural Pool	2,808	34,705	(31,897)	8.1%
8575 · BHFS Legal - Non-Ag Pool	2,808	34,705	(31,897)	8.1%
Total BHFS Legal Services	**26,681**	**234,595**	**(207,914)**	**11.4%**
6907.3 · WM Legal Counsel				
6907.31 · Archibald South Plume	-	12,565	(12,565)	0.0%
6907.32 · Chino Airport Plume	-	12,565	(12,565)	0.0%
6907.33 · Desalter/Hydraulic Control	-	38,680	(38,680)	0.0%
6907.34 · Santa Ana River Water Rights	370	21,405	(21,035)	1.7%
6907.36 · Santa Ana River Habitat	-	31,280	(31,280)	0.0%
6907.38 · Reg. Water Quality Cntrl Board	-	63,200	(63,200)	0.0%
6907.39 · Recharge Master Plan	50,620	14,270	36,350	354.7%
6907.41 · Prado Basin Habitat Sustainability	-	10,290	(10,290)	0.0%
6907.44 · SGMA Compliance	284	10,290	(10,006)	2.8%
6907.45 · OBMP Update	-	177,240	(177,240)	0.0%
6907.47 · 2020 Safe Yield Reset	20,345	80,190	(59,846)	25.4%
6907.48 · Ely Basin Investigation	4,606	64,890	(60,284)	7.1%
6907.90 · WM Legal Counsel - Unanticipated	-	38,885	(38,885)	0.0%
Total 6907 · WM Legal Counsel	**76,225**	**575,750**	**(499,525)**	**13.2%**
Total Brownstein, Hyatt, Farber, Schreck Costs	**$ 206,563**	**$ 1,224,405**	**$ (1,017,842)**	**16.9%**

Optimum Basin Management Plan (OBMP)

The following table details the Year-To-Date (YTD) Actual OBMP costs compared to the FY 24 adopted budget. The "$ Over Budget" and the "% of Budget" columns are a comparison of the YTD actual to the annual budget. As of September 30th, the target budget percentage is generally 25%.

	Year to Date Actual	FY 24-25 Budget	$ Over / (Under) Budget	% of Budget
6900 · Optimum Basin Mgmt Plan				
6901.1 · OBMP - Document Review-WM Staff	$ 10,613	$ 95,294	$ (84,681)	11.1%
6901.3 · OBMP - Field Work-WM Staff	1,044	50,870	(49,826)	2.1%
6901.5 · OBMP - General-WM Staff	20,317	81,120	(60,803)	25.0%
6901.7 · OBMP - Meeting-WM Staff	8,919	80,360	(71,441)	11.1%
6901.8 · OBMP - Meeting-West Yost	9,635	37,066	(27,431)	26.0%
6901.9 · OBMP - Reporting-WM Staff	5,527	11,040	(5,513)	50.1%
6901.95 · OBMP - Reporting-West Yost	22,399	62,606	(40,208)	35.8%
Total 6901 · OBMP WM and West Yost Staff	**78,453**	**418,356**	**(339,903)**	**18.8%**
6903 · OBMP - SAWPA				
6903 · OBMP - SAWPA Group	15,984	15,990	(6)	100.0%
Total 6903 · OBMP - SAWPA	**15,984**	**15,990**	**(6)**	**100.0%**
6906 · OBMP Engineering Services				
6906.1 · OBMP - Watermaster Model Update	986	67,596	(66,611)	1.5%
6906.21 · State of the Basin Report	-	195,188	(195,188)	0.0%
6906 · OBMP Engineering Services - Other	24,132	51,440	(27,309)	46.9%
Total 6906 · OBMP Engineering Services	**25,117**	**314,224**	**(289,107)**	**8.0%**
6907 · OBMP Legal Fees				
6907.31 · Archibald South Plume	-	12,565	(12,565)	0.0%
6907.32 · Chino Airport Plume	-	12,565	(12,565)	0.0%
6907.33 · Desalter/Hydraulic Control	-	38,680	(38,680)	0.0%
6907.34 · Santa Ana River Water Rights	370	21,405	(21,035)	1.7%
6907.36 · Santa Ana River Habitat	-	31,280	(31,280)	0.0%
6907.38 · Reg. Water Quality Cntrl Board	-	63,200	(63,200)	0.0%
6907.39 · Recharge Master Plan	50,620	14,270	36,350	354.7%
6907.41 · Prado Basin Habitat Sustainability	-	10,290	(10,290)	0.0%
6907.44 · SGMA Compliance	284	10,290	(10,006)	2.8%
6907.45 · OBMP Update	-	177,240	(177,240)	0.0%
6907.47 · 2020 Safe Yield Reset	20,345	80,190	(59,846)	25.4%
6907.48 · Ely Basin Investigation	4,606	64,890	(60,284)	7.1%
6907.49 · San Sevaine Basin Discharge	-	110,080	(110,080)	0.0%
6907.90 · WM Legal Counsel - Unanticipated	-	38,885	(38,885)	0.0%
Total 6907 · OBMP Legal Fees	**76,225**	**685,830**	**(609,605)**	**11.1%**
6909 · OBMP Other Expenses				
6909.6 · OBMP Expenses - Miscellaneous	-	3,540	(3,540)	0.0%
Total 6909 · OBMP Other Expenses	**-**	**3,540**	**(3,540)**	**0.0%**
Total 6900 · Optimum Basin Mgmt Plan	**$ 195,779**	**$ 1,437,940**	**$ (1,242,161)**	**13.6%**

Judgment Administration

The following table details the Year-To-Date (YTD) Actual Judgment Administration costs compared to the FY 24 adopted budget. The "$ Over Budget" and the "% of Budget" columns are a comparison of the YTD actual to the annual budget. As of September 30th, the target budget percentage is generally 25%.

	Year to Date Actual	FY 24-25 Budget	$ Over / (Under) Budget	% of Budget
5901 · Admin-WM Staff				
5901.1 · Admin-Doc. Review-WM Staff	$ 12,055	$ 93,860	$ (81,805)	12.8%
5901.3 · Admin-Field Work-WM Staff	1,716	11,860	(10,144)	14.5%
5901.5 · Admin-General-WM Staff	4,416	81,090	(76,674)	5.4%
5901.7 · Admin-Meeting-WM Staff	8,393	39,710	(31,317)	21.1%
5901.8 · Admin-Meeting - West Yost	-	37,066	(37,066)	0.0%
5901.9 · Admin-Reporting-WM Staff	946	13,890	(12,944)	6.8%
Total 5901 · Admin-WM Staff	**27,526**	**277,476**	**(249,950)**	**9.9%**
5900 · Judgment Admin Other Expenses				
5906.71 · Admin-Data Req-CBWM Staff	18,174	101,048	(82,874)	18.0%
5906.72 · Admin-Data Req-Non CBWM Staff	9,628	37,008	(27,381)	26.0%
5910 · Court Coordination/Attend-WM	899	16,970	(16,071)	5.3%
5911 · Exhibit G-WM Staff	-	6,400	(6,400)	0.0%
5921 · Production Monitoring-WM Staff	60	5,440	(5,380)	1.1%
5925 · Ag Prod & Estimation-West Yost	6,297	31,096	(24,799)	20.3%
5931 · Recharge Applications-WM Staff	1,010	-	1,010	100.0%
5935 · Admin-Mat'l Phy Inj Requests	-	39,459	(39,459)	0.0%
5941 · Reporting-WM Staff	-	2,140	(2,140)	0.0%
5945 · WM Annual Report Prep-West Yost	5,882	16,924	(11,043)	34.8%
5951 · Rules & Regs-WM Staff	-	11,260	(11,260)	0.0%
5961 · Safe Yield-WM Staff	14,311	9,510	4,801	150.5%
5965 · Support Data Collect-West Yost	-	39,659	(39,659)	0.0%
5971 · Storage Agreements-WM Staff	125	13,000	(12,875)	1.0%
5981 · Water Acct/Database-WM Staff	25,240	108,290	(83,050)	23.3%
5991 · Water Transactions-WM Staff	4,510	5,330	(820)	84.6%
Total 5900 · Judgment Admin Other Expenses	**86,135**	**443,534**	**(357,399)**	**19.4%**
Total 5900 · Judgment Administration	**$ 113,661**	**$ 721,010**	**$ (607,349)**	**15.8%**

CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, CA 91730
909.484.3888 www.cbwm.org

STAFF REPORT

DATE: November 14, 2024

TO: AP/ONAP/OAP Committee Members

SUBJECT: Fiscal Year 2023/24 Annual Finding of Substantial Compliance with the Recharge Master Plan (Consent Calendar Item I.C.)

Issue: Watermaster's Finding of Substantial Compliance is required on an annual basis according to Section 8.3 of the Peace II Agreement. [Normal Course of Business]

Recommendation: Recommend to the Advisory Committee to recommend to the Watermaster Board to adopt the finding that Watermaster is in substantial compliance with the Recharge Master Plan.

Financial Impact: None.

ACTIONS AND FUTURE CONSIDERATIONS:
Advisory Committee – November 21, 2024: Advice and assistance
Watermaster Board – November 21, 2024: Approval

BACKGROUND

During the period of 2008-2010, Watermaster, in collaboration with the Inland Empire Utilities Agency (IEUA) and Chino Basin Water Conservation District (CBWCD), completed the 2010 Recharge Master Plan Update (RMPU). The RMPU was submitted to the Court in June 2010, and the Court subsequently approved the 2010 RMPU in October 2010. Watermaster completed the amendment of the 2010 RMPU, pursuant to the Court's order, which the Board adopted in September 2013. The IEUA and Watermaster completed the most recent version of the RMPU in 2023 and will complete the next update before the end of 2028.

Pursuant to Section 8.3 of the Peace II Agreement, Watermaster is obligated to make an annual finding that it is in substantial compliance with the 2023 Recharge Master Plan. This requirement exists to ameliorate any long-term risk attributable to reliance upon un-replenished groundwater production by the Desalters and is a condition for the annual availability of any portion of the 400,000 acre-feet set of controlled overdraft (Re-Operation) provided by the Court in the Peace Agreements. Recently, pursuant to Section 6.2(b) of the Peace Agreement, as the amendment is shown in the March 15, 2019 Court Order, the Desalter Replenishment Obligation is now being replenished by the Appropriative Pool through wet or stored water. West Yost (WY) has prepared the attached opinion regarding the adequacy of replenishment capacity, which includes the information that Watermaster needs to make an affirmative finding for Fiscal Year 2023-2024.

DISCUSSION

The analysis performed by WY finds that current projections indicate that Watermaster has sufficient recharge capacity to meet the future replenishment obligations based on the knowledge of the basin's conditions in FY 2023-24 and future water management projections provided by the Watermaster stakeholders. Current analysis indicates that even if Re-Operation were terminated at any time through 2030, Watermaster would be able to immediately increase its replenishment activity and replenish any overproduction in the Basin as required by the Judgment.

ATTACHMENTS

1. October 31, 2024 Letter from West Yost to Watermaster: *Annual Finding of Substantial Compliance with the Watermaster Recharge Master Plan – Fiscal Year 2023-24*

WEST YOST
Water. Engineered.

23692 Birtcher Drive
Lake Forest CA 92630

949.420.3030 phone
530.756.5991 fax
westyost.com

October 31, 2024

Project No.: 941-80-24-09
SENT VIA: EMAIL

Mr. Todd Corbin
General Manager
Chino Basin Watermaster
9641 San Bernardino Road
Rancho Cucamonga, CA 91730

SUBJECT: Annual Finding of Substantial Compliance with the Recharge Master Plan – Fiscal Year 2023-24

Mr. Corbin:

At your direction and pursuant to the Peace II Agreement, West Yost has prepared this opinion regarding the adequacy of replenishment capacity in the Chino Basin to support an annual finding of substantial compliance with the Chino Basin Watermaster (Watermaster) Recharge Master Plan (RMP).

In part, Section 7.3 of the Peace II Agreement reads:

> *Re-Operation and Watermaster's apportionment of controlled overdraft will not be suspended in the event that Hydraulic Control is achieved in any year before the full 400,000 acre-feet has been produced so long as: […] Watermaster is in substantial compliance with a Court approved Recharge Master Plan as set forth in Paragraph 8.1 below.*

Review of Section 8.1 of the Peace II Agreement indicates that this compliance relates to the implementation of plans to ensure that Watermaster has enough supplemental water recharge capacity to meet its replenishment obligation after re-operation water is completely exhausted. Section 8.3 of the Peace II Agreement states:

> *To ameliorate any long-term risks attributable to reliance upon un-replenished groundwater production by the Desalters, the annual availability of any portion of the 400,000 acre-feet set aside as controlled overdraft as a component of the Physical Solution, is expressly subject to Watermaster making an annual finding about whether it is in substantial compliance with the revised Watermaster Recharge Master Plan pursuant to Paragraphs 7.3 and 8.1 above.*

Pursuant to the Peace II Agreement, following the completion of the 2010 Recharge Master Plan Update (RMPU), Watermaster is obligated to make an annual finding that there is enough supplemental water recharge capacity to meet projected replenishment obligations.

This letter report includes the information required by Watermaster to determine if there is enough supplemental water recharge capacity to meet its projected replenishment obligations.

METHODOLOGY

The methodology used to determine if sufficient supplemental wet-water recharge capacity is available to meet projected replenishment obligations is to compare projected replenishment obligations to available supplemental wet-water recharge capacity over the period 2024 through 2050. Supplemental wet-water recharge capacity includes the capacity of spreading basins available for supplemental water recharge and the capacity to inject supplemental water at aquifer storage and recovery (ASR) wells. Figure 1 shows the locations of spreading basins and ASR wells in the Chino Basin. The supplemental water recharge capacity in the Chino Basin is listed in Table 1 by the type of recharge facility. [1,2]

Table 1. Supplemental Wet Water Recharge Capacity In the Chino Basin

Recharge Facility	Recharge Capacity acre-feet per year (afy)
Spreading basins[3]	40,180
ASR wells	5,480
Total	**45,660**

The most recent projections of replenishment obligations were developed in 2024 as part of the *2021 Data Collection and Evaluation* effort for the period of 2024 through 2050. These replenishment obligation projections are based on the Watermaster Parties' (Parties) best estimates of how future water supplies will be used to meet their water demands.

The most recent estimates of supplemental water recharge capacity were developed in 2023 as part of the 2023 RMPU. As of this writing, the supplemental water recharge capacity in the Chino Basin is assumed to be constant through 2050.

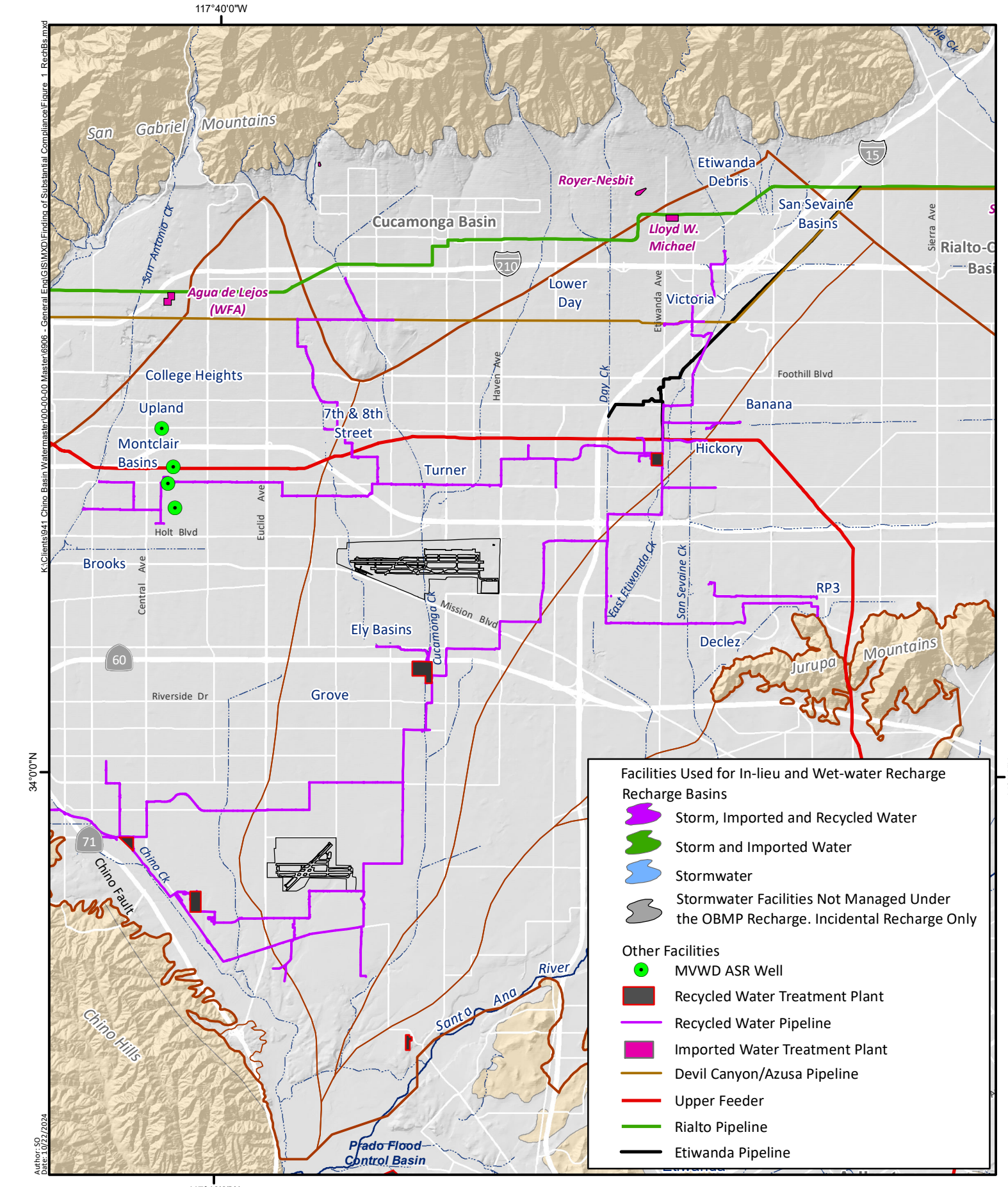
This analysis also considers the potential for certain conditions to impact Watermaster's ability to meet its replenishment obligations, including:

- Reduced availability of imported water
- Suspension of Basin Reoperation
- Contractual requirements of the Dry-Year Yield Program

[1] West Yost. (2023). *2023 Recharge Master Plan Update*. September 2023. http://www.cbwm.org/docs/engdocs/RMP/2023_Recharge_Master_Plan_Update.pdf

[2] For additional technical documentation on the development of wet-water recharge capacity estimates, refer to Section 6 of the *2013 Recharge Master Plan Update*.

[3] This estimate takes into consideration the use of spreading basins for stormwater recharge (*i.e.*, excludes the recharge capacity used for stormwater recharge). This estimates also excludes the recharge capacity that will be used for recharging recycled water. The recycled water recharge is accounted for in the Replenishment Obligation estimates.



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Author: SG
Date: 10/22/2024

Prepared by:
WEST YOST
Water. Engineered.

Chino Basin Watermaster
Annual Finding of Substantial Compliance
with the Recharge Master Plan

Groundwater Recharge in the Chino Basin

Figure 1

RESULTS

Table 2 shows the supplemental wet-water recharge capacity [Column *(b)*] and the projected annual replenishment obligation from 2024 to 2050 [Column *(c)*].[4] Comparing Columns *(b)* and *(c)* in Table 2 indicates there is sufficient supplemental wet-water recharge capacity (45,660 afy) to meet the projected wet-water replenishment obligations (up to 1,403 afy).

Analysis Under a Worst-Case Scenario

The worst-case scenario analysis considers the potential for certain conditions that may impact Watermaster's ability to meet its replenishment obligations, including:

- Reduced availability of imported water
- Suspension of Basin Reoperation
- Contractual requirements of the Dry-Year Yield Program

Reduced Availability of Imported Water

The Metropolitan Water District of Southern California (Metropolitan) provides imported water to the Chino Basin area through the Inland Empire Utilities Agency (IEUA). The imported water supplies are not guaranteed to Watermaster because during periods of shortages (when Metropolitan's demands exceed available supplies) Metropolitan may not deliver imported water to the Chino Basin for replenishment. For the purposes of the 2023 RMPU and this letter, it has been assumed that Watermaster will be able to purchase water from Metropolitan for replenishment purposes in one out of five years (20 percent of the time).

Suspension of Basin Reoperation

The annual maximum amount of Basin Reoperation water used to meet the replenishment obligation of the Desalters is 12,500 afy through 2030. If Basin Reoperation was discontinued at any time through 2030, the annual maximum replenishment obligation could increase. Table 2 [Column *(e)*] shows the projected recharge capacity required to meet replenishment obligations if Basin Reoperation were discontinued at any point before 2030.

Contractual Requirements of the Dry-Year Yield Program

The IEUA and Watermaster have a contractual requirement with Metropolitan to recharge up to 25,000 afy under the Dry-Year Yield Program (DYYP). The DYYP contract terminates in 2028. Table 2 [Column *(f)*] shows the projected recharge capacity required to meet replenishment obligations and to recharge 25,000 afy for DYYP through 2028.

[4] Assumes 90 percent of a replenishment obligation is satisfied from storage and 10 percent is satisfied by wet-water recharge via spreading and injection based on the Data Collection and Evaluation Report for Fiscal year 2022/2023 (West Yost, 2024).

Table 2. Supplemental Wet-Water Recharge Capacity, Projected Replenishment Obligation, and Recharge Capacity Required to Meet Replenishment Obligations Under Cumulative Adverse Conditions

FY 2024-2050; acre-feet per year

Fiscal Year (a)	Supplemental wet-water recharge capacity (b)	Projected annual replenishment obligation assumed to be satisfied by wet-water recharge (c)	Recharge capacity required to meet replenishment obligation under cumulative adverse conditions			Excess supplemental wet-water recharge capacity under worst-case scenario *Before 2028: (g) = (b) - (f) After 2028: (g) = (b) - (e)*
			If imported water is available one out of five years (d)	If reoperation were discontinued *(e) = (d) + reoperation offset*	If DYYP recharge occurs on the same year *(f) = (e) + 25,000*	
2024	45,660	0				
2025		0				
2026		0				
2027		62				
2028		279	340	15,321	40,321	5,339
2029		501				
2030		728				
2031		461				
2032		415				
2033		368	2,473	12,473	37,473	8,187
2034		322				
2035		275				
2036		501				
2037		726				
2038		952	2,776	2,776	27,776	17,884
2039		1,177				
2040		1,403				
2041		996				
2042		996				
2043		996	5,568	5,568	30,568	15,092
2044		996				
2045		996				
2046		996				
2047		996				
2048		996	4,979	4,979	29,979	15,681
2049		996				
2050		996				

(c) Assumes 90 percent of a replenishment obligation is satisfied from storage and 10 percent is satisfied by wet-water recharge via spreading and injection based on the Data Collection and Evaluation Report for Fiscal year 2021/2022 (West Yost, 2023).

Worst-Case Scenario Results

Comparing Columns *(b)* and *(f)* in Table 2 indicates there is sufficient supplemental wet-water recharge capacity (45,660 afy) to meet the maximum projected wet-water replenishment obligation and recharge up to 25,000 afy under the worst-case scenario (up to 40,321 afy).

Other Recharge and Excess Capacity

Some Parties want to utilize wet-water recharge capacity to store supplemental water in the Chino Basin. Table 2 [Column *(g)*] shows the excess supplemental wet-water recharge capacity under the worst-case scenario (*i.e.,* reduced imported water availability, suspension of Basin Reoperation, and DYYP recharge). The minimum excess supplemental wet-water recharge capacity under the worst-case scenario from 2024 to 2050 is projected to be about 5,339 afy. Therefore, this analysis indicates that at least 5,339 afy of wet-water recharge capacity will be available for the Parties to recharge and store supplemental water in the Chino Basin through 2050.

CONCLUSIONS

Watermaster's ability to recharge the Chino Basin with supplemental water is sufficient to meet its projected replenishment obligations, even under conditions of reduced availability of imported water, increased replenishment obligations (*i.e.,* suspension of Basin Reoperation), and/or decreased recharge capacity (*i.e.,* the need to recharge for the DYYP). Additionally, Watermaster can purchase imported surface water when it is available for use in-lieu of groundwater (in-lieu recharge). There is about 26,600 afy of in-lieu recharge capacity available that can be used to meet future replenishment obligations.

Please contact Carolina Sanchez if you have any questions or concerns regarding this opinion.

Sincerely,
WEST YOST

Carolina Sanchez, PE
Senior Engineer
RCE #85598

CHINO BASIN WATERMASTER

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STAFF REPORT

DATE: November 14, 2024

TO: AP/ONAP/OAP Committee Members

SUBJECT: 2023/24 Annual Report of the Ground-Level Monitoring Program
(Consent Calendar Item I.D.)

Issue: Watermaster is required annually to file a Ground-Level Monitoring report with the Court. The 2023/24 Annual Report has been drafted and reviewed by the Ground-Level Monitoring Committee. [Discretionary Function]

Recommendation: Recommend to the Advisory Committee to recommend to the Watermaster Board to approve the 2023/24 Annual Report of the Ground-Level Monitoring Program (GLMP), and direct staff to file a copy with the Court.

Financial Impact: Approval of the report does not result in additional expenses. All the recommendations in the 2023/24 Annual Report for the ongoing monitoring program are included in the approved FY 2024/25 budget.

ACTIONS AND FUTURE CONSIDERATION
Advisory Committee – November 21, 2024: Advice and assistance.
Watermaster Board – November 21, 2024: Approval.

BACKGROUND

In 1999, the OBMP Phase I Report identified pumping-induced drawdown and resultant aquifer-system compaction as the most likely cause of land subsidence and ground fissuring that had been observed in Management Zone 1 (MZ-1). Program Element 4 of the OBMP, "Develop and Implement a Comprehensive Groundwater Management Plan for Management Zone 1," called for the development and implementation of a long-term Subsidence Management Plan to minimize or abate the occurrence of subsidence and ground fissuring.

From 2001 to 2005, Watermaster developed, coordinated, and conducted a comprehensive investigation under the guidance of the MZ-1 Technical Committee (now called the Ground-Level Monitoring Committee or GLMC) to understand the causes of the subsidence and fissuring in the southwestern portion of MZ-1. The investigation provided enough information for Watermaster to develop Guidance Criteria for the producers in the investigation area that, if followed, would minimize the potential for subsidence and fissuring during the completion of the Subsidence Management Plan. The Guidance Criteria formed the basis for the Subsidence Management Plan, which was developed by the GLMC and approved by Watermaster in October 2007. The Court Order on November 15, 2007 approved the Subsidence Management Plan and ordered its implementation. The Subsidence Management Plan was updated in 2015 to include a recommendation to develop a Subsidence Management Plan specific to the northwestern portion of the Chino Basin where gradual and persistent subsidence is an ongoing concern.

The Subsidence Management Plan states that Watermaster will produce an annual report, which includes the results of ongoing monitoring efforts, interpretations of the data, recommendations for future monitoring efforts, and recommendations for adjustments to the Subsidence Management Plan, if any. The Court's 2007 Order directed Watermaster to file the annual reports with the Court.

DISCUSSION

The final 2023/24 Annual Report of the GLMP (Attachment 1) includes results and interpretations for data that were collected during FY 2023/24 and includes recommendations for Watermaster's Ground-Level Monitoring Program for FY 2024/25.

The GLMC met on March 7, 2024 to review and discuss the recent monitoring results and to develop a scope of work and budget for FY 2024/25. Subsequently, an overview of the monitoring results and the proposed scope of work and budget for FY 2024/25 were presented to the Pool Committees in May 2024 and at Watermaster's budget workshops.

The GLMC was provided with the draft annual report on September 20, 2024 for review and comment. The GLMC met on October 3, 2024 to review and discuss the draft annual report with Watermaster Staff and Engineer. The GLMC submitted comments during the comment window which were addressed in the final report attached.

ATTACHMENT
1. 2023/24 Annual Report of the Ground-Level Monitoring Program

FINAL REPORT | November 2024

2023/24 Annual Report for the Ground-Level Monitoring Program

PREPARED FOR

Ground-Level Monitoring Committee

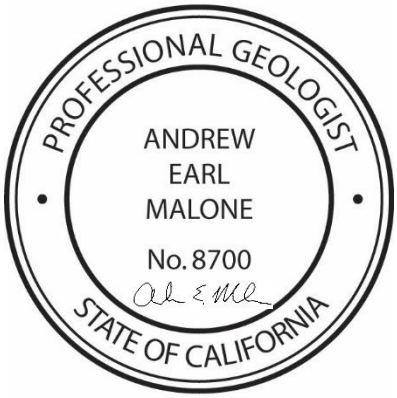
PREPARED BY

2023/24 Annual Report for the Ground-Level Monitoring Program

Prepared for

Ground-Level Monitoring Committee

Project No. 941-80-24-22



Project Manager, QA/QC Review: Andy Malone, PG	11/06/2024 Date
Andrea Arevalo Charles Martinez Clay Kelty Sean Yarborough Prepared By:	11/06/2024 Date

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LIST OF ACRONYMS, ABBREVIATIONS, AND INITIALISMS

af	Acre-feet
Ayala Park	Rubin S. Ayala Park
Ayala Park Extensometer	Extensometer at Ayala Park
BMA	Baseline Management Alternative
CCX	Chino Creek Extensometer Facility
DHX	Daniels Horizontal Extensometer
EDM	Electronic distance measurement
ft	Feet
ft-amsl	Feet above mean sea level
ft-btoc	Feet below top of casing
ft-bgs	Feet below ground surface
ft/yr	Feet per year
FY	Fiscal Year
GLMC	Ground-Level Monitoring Committee
GLMP	Ground-Level Monitoring Program
IMP	Management Zone 1 Interim Monitoring Program
InSAR	Interferometric synthetic aperture radar
ISMA	Initial Subsidence Management Alternative
MVWD	Monte Vista Water District
MZ-1	Chino Basin Optimum Basin Management Plan Management Zone 1
MZ-1 Plan	Management Zone 1 Subsidence Management Plan
OBMP	Optimum Basin Management Plan
PA	Piezometer A (Ayala Park extensometer facility)
PC	Piezometer C (Ayala Park extensometer facility)
PFAS	Per – and polyfluoroalkyl substances
PX	Pomona Extensometer Facility

SAR	Synthetic Aperture Radar
SCADA	Supervisory Control and Data Acquisition
SMA-2	Second Subsidence-Management Alternative
Subsidence Management Plan	2015 Chino Basin Subsidence Management Plan
TCP	1,2,3-trichloropropane
USGS	United States Geological Survey
Watermaster	Chino Basin Watermaster
WEI	Wildermuth Environmental, Inc.
Work Plan	Work Plan to Develop a Subsidence Management Plan for the Northwest MZ-1

1.0 INTRODUCTION

This section describes:

- Background information on the history of land subsidence and ground fissuring in the Chino Basin.
- Information on the formation of the Ground-Level Monitoring Committee (GLMC) and its responsibilities.
- A description of the development and implementation of the Chino Basin Subsidence Management Plan (Subsidence Management Plan).
- The organization of this annual report.

1.1 Background

In general, land subsidence is the sinking or settlement of the Earth's surface due to the rearrangement of subsurface materials. In the United States, over 17,000 square miles in 45 states have experienced land subsidence (United States Geologic Survey [USGS], 1999). In many instances, land subsidence is accompanied by adverse impacts at the ground surface, such as sinkholes, earth fissures, encroachment of adjacent water bodies, modified drainage patterns, and others. In populated regions, these subsidence-related impacts can result in severe damage to man-made infrastructure and costly remediation measures. Over 80 percent of the documented cases of land subsidence in the United States have been caused by groundwater extractions from the underlying aquifer-system (USGS, 1999).

For purposes of clarification in this document, subsidence refers to the inelastic deformation (i.e., sinking) of the land surface. The term *inelastic* typically refers to the permanent, non-recoverable deformation of the land surface or the aquifer-system. The term *elastic* typically refers to fully reversible deformation of the land surface or the aquifer-system. A glossary of terms and definitions discussed in this report, as well as other terms related to basic hydrogeology and land subsidence is included in Section 5.0.

1.1.1 Subsidence and Fissuring in the Chino Basin

One of the earliest indications of land subsidence in the Chino Basin was the appearance of ground fissures within the City of Chino. These fissures appeared as early as 1973, but an accelerated occurrence of ground fissuring ensued after 1991 and resulted in damage to existing infrastructure. Figure 1-1 shows the locations of these fissures and the land subsidence that contemporaneously occurred in this area. Several scientific studies of the area attributed the fissuring phenomenon to differential land subsidence caused by pumping of the underlying aquifer-system and the consequent drainage and compaction of aquitard sediments (Fife et al., 1976; Kleinfelder, 1993, 1996; Geomatrix, 1994; GEOSCIENCE, 2002).

1.1.2 The Optimum Basin Management Program

In 1999, the *Optimum Basin Management Program Phase I Report* (OBMP Phase I Report) identified the pumping-induced decline of hydraulic heads and subsequent aquifer-system compaction as the most likely cause of the land subsidence and ground fissuring observed in the Chino Basin OBMP Management Zone 1 (MZ-1; Wildermuth Environmental Inc. [WEI], 1999). Program Element 4 of the OBMP Implementation Plan, *Develop and Implement a Comprehensive Groundwater Management Plan for Management Zone 1*, called for the development and implementation of an interim management plan for MZ-1 that would:

- Minimize subsidence and fissuring in the short-term
- Collect the information necessary to understand the extent, rate, and mechanisms of subsidence and fissuring
- Abate future subsidence and fissuring or reduce it to tolerable levels

The OBMP called for an aquifer-system and land subsidence investigation in the southwestern region of MZ-1 to support the development of a management plan for MZ-1 (items 2 and 3 above). This investigation was titled the *MZ-1 Interim Monitoring Program* (WEI, 2003) and is described below.

The OBMP Phase I Report also identified that land subsidence was occurring in other parts of the basin besides in the City of Chino. Program Element 1 of the OBMP Implementation Plan, *Develop and Implement a Comprehensive Monitoring Program*, called for the collection of basin-wide data to characterize land subsidence, including ground-level surveys and remote-sensing (specifically, interferometric synthetic aperture radar [InSAR]), and for the development of an ongoing monitoring program based on the analysis of the collected data.

1.1.3 Interim Management Plan and the MZ-1 Summary Report

From 2001 to 2005, the Chino Basin Watermaster (Watermaster) developed, coordinated, and conducted the Interim Management Plan (IMP) under the guidance of the MZ-1 Technical Committee. The MZ-1 Technical Committee was comprised of representatives from all major MZ-1 producers and their technical consultants, including the Agricultural Pool; the Cities of Chino, Chino Hills, Ontario, Pomona, and Upland; the Monte Vista Water District (MVWD); the Golden State Water Company; and the California Institution for Men.

The IMP consisted of three main monitoring elements to analyze land subsidence: ground-level surveys, InSAR, and aquifer-system monitoring. The ground-level surveys and InSAR analyses were used to characterize vertical ground motion. Aquifer-system monitoring of hydraulic and mechanical changes within the aquifer system was used to characterize the causes of the ground motion.

The monitoring program was implemented in two phases: the Reconnaissance Phase and the Comprehensive Phase. The Reconnaissance Phase consisted of constructing 11 piezometers screened at various depths at Rubin S. Ayala Park (Ayala Park) in the City of Chino and installing pressure-transducers with integrated data loggers (transducers) in nearby pumping and monitoring wells to measure hydraulic head. Following installation of the monitoring network, several months of aquifer-system monitoring and testing were conducted. Testing included aquifer-system stress tests conducted at pumping wells in the area.

The Comprehensive Phase consisted of constructing a dual-borehole pipe extensometer at Ayala Park (Ayala Park Extensometer) near the area of historical fissuring. Figure 1-2 shows the location of the Ayala Park Extensometer. Following installation of the Ayala Park Extensometer, two aquifer-system stress tests were conducted followed by passive aquifer-system monitoring.

During implementation of the IMP, Watermaster's Engineer made the data available to the MZ-1 Technical Committee and prepared quarterly progress reports for the MZ-1 Technical Committee, the Watermaster Pools and Board, and the Court.[1] The progress reports contained data and analyses from the IMP and summarized the MZ-1 Technical Committee meetings.

[1] San Bernardino County Superior Court, which retains continuing jurisdiction over the Chino Basin Judgment.

The main conclusions derived from the IMP were:

- Groundwater pumping from the deep and confined aquifer-system in the southwestern region of MZ-1 causes the greatest stress to the aquifer-system. In other words, pumping of the deep aquifer-system causes a hydraulic head decline that is much greater in magnitude and lateral extent than the hydraulic head decline caused by pumping of the shallow aquifer-system.
- Hydraulic head decline due to pumping from the deep aquifer-system can cause inelastic compaction of the aquifer-system sediments, which results in land subsidence. The initiation of inelastic compaction within the aquifer-system was identified during the investigation when hydraulic heads in the deep aquifer-system at the Ayala Park PA-7 piezometer fell below a depth of about 250 feet (ft).
- The state of aquifer-system deformation in southern MZ-1 was essentially elastic during the Reconnaissance Phase of the IMP. Very little inelastic compaction was occurring in this area, which contrasted with the recent past when about 2.2 ft of land subsidence occurred from about 1987 to 1995 and resulted in ground fissuring.
- During the development of the IMP, a previously unknown barrier to groundwater flow was identified, shown on Figures 1-1. The barrier was named the "Riley Barrier" after Francis S. Riley, a retired USGS geologist who first detected the barrier during the IMP. This barrier is located within the deep aquifer-system and is aligned with the historical zone of ground fissuring. Pumping from the deep aquifer-system was limited to the area west of the barrier, and the resulting hydraulic head decline did not propagate eastward across the barrier. Thus, compaction occurred within the deep aquifer-system on the west side of the barrier but not on the east side, which caused concentrated differential subsidence across the barrier and created the potential for ground fissuring.
- The InSAR and ground-level surveys indicated that subsidence in Central MZ-1 had occurred in the past and was continuing to occur. InSAR also suggested that the groundwater barrier (Riley Barrier) extends northward into Central MZ-1 as shown in Figure 1-1. These observations suggested that the conditions that very likely caused ground fissuring near Ayala Park in the 1990s were also present in Central MZ-1. However, there was not enough historical hydraulic head data in this area to confirm this relationship. The IMP recommended that, if subsidence continued or increased in Central MZ-1, the mechanisms causing land subsidence should be studied in more detail.

The IMP provided enough information for Watermaster to develop Guidance Criteria for the Parties that pump from the southwestern region of MZ-1, that if followed, would minimize the potential for subsidence and fissuring in the investigation area. The methods, results, and conclusions of the IMP, including the Guidance Criteria, were described in detail in the *MZ-1 Summary Report* (WEI, 2006).

The Guidance Criteria consisted of:

- A list of "Managed Wells" subject to the Guidance Criteria. Table 1-1 is a list of the Managed Wells that are subject to the Guidance Criteria. Figure 1-2 is a map that shows the locations of the Managed Wells. These wells have well screens that penetrate the deep aquifer-system.

Table 1-1. Managed Wells Screened in the Deep Aquifer and Subject to the Guidance Criteria[a]

Well Name	CBWM ID	Owner	2024 Status	Well Screen Depth Interval(s) ft-bgs
CIM-11A[b]	3602461	California Institution for Men	Active[c]	174-187; 240-283; 405-465
C-7	3600461	City of Chino	Abandoned[d]	180-780
C-15	600670		Abandoned	270-400; 626-820
CH-1B	600487	City of Chino Hills	Inactive[e]	440-470; 490-610; 720-900; 940-1,180
CH-7C	600687		Abandoned	550-950
CH-7D	600498		Destroyed	320-400; 410-450; 490-810; 850-930
CH-15B	600488		Active	360-440; 480-900
CH-16	600489		Inactive	430-940
CH-17	600499		Inactive	300-460; 500-680
CH-19	600500		Inactive	300-460; 460-760; 800-1,000

(a) The MZ-1 Subsidence Management Plan identified the Managed Wells that are subject to the Guidance Criteria for the Managed Area that, if followed, would minimize the potential for subsidence and fissuring.

(b) The original casing was perforated from 135-148, 174-187, 240-283, 405-465, 484-512, and 518-540 feet below ground surface (ft-bgs). This casing collapsed below 471 ft-bgs in 2011. A liner was installed to 470 ft-bgs with a screen interval from 155 to 470 ft-bgs.

(c) Active = Well is currently being used for water supply.

(d) Abandoned = Unable to pump the well without major modifications.

(e) Inactive = Well can pump groundwater with little or no modifications.

- The spatial extent of the "Managed Area." Figures 1-1 and 1-2 show the boundary of the Managed Area where the Guidance Criteria apply. Within the boundaries of the Managed Area, both existing (Table 1-1) and newly constructed wells are subject to being classified as Managed Wells. This area was delineated based on the observed and/or predicted effects of pumping on hydraulic heads and aquifer-system deformation. The Managed Well designations were based on the effects measured at the Ayala Park Extensometer during the IMP or well construction and borehole lithology.
- A piezometric "Guidance Level." The Guidance Level is a specified depth to water, as measured in feet below the top of casing (ft-btoc) at the Ayala Park PA-7 piezometer. The initial Guidance Level was established as 245 ft-btoc. It was defined as the threshold hydraulic head at the onset of inelastic compaction of the aquifer-system as recorded by the extensometer minus five feet. The five-foot reduction was meant to be a safety factor to ensure that inelastic compaction does not occur. The Guidance Level can be updated by Watermaster based on the periodic review of monitoring data.
- Criteria for recommending pumping curtailment. If the hydraulic head in PA-7 falls below the Guidance Level, Watermaster recommends that the MZ-1 Parties curtail their pumping from designated Managed Wells as required to maintain hydraulic heads above the Guidance Level.
- Monitoring/reporting of hydraulic heads at PA-7. Watermaster was to provide the MZ-1 Parties with real-time hydraulic head data from PA-7.

- Reporting of pumping operations at Managed Wells. The MZ-1 Parties were requested to maintain and provide Watermaster with accurate records of operations at the Managed Wells, including pumping rates and on-off dates and times. The MZ-1 Parties were requested to promptly notify Watermaster of all operational changes made to maintain the hydraulic head at PA-7 above the Guidance Level.
- Request for ongoing monitoring at other monitoring wells. Watermaster recommended that the MZ-1 Parties allow it to continue to monitor hydraulic heads at the Managed Wells.
- Process for adapting the Guidance Criteria. Watermaster and Watermaster's Engineer were to evaluate the data collected as part of the MZ-1 Monitoring Program (now called the Ground-Level Monitoring Program or GLMP) after each fiscal year and determine if modifications, additions, and/or deletions to the Guidance Criteria were necessary. Changes to the Guidance Criteria could include additions or deletions to the list of Managed Wells, re-delineation of the Managed Area, raising or lowering of the Guidance Level, or additions and/or deletions to the Guidance Criteria, including the need to have periods of hydraulic head recovery.
- Acknowledgement of uncertainty. Watermaster cautioned that some subsidence and fissuring could occur in the future, even if the Guidance Criteria were followed. Watermaster made no warranties that faithful adherence to the Guidance Criteria would eliminate subsidence or fissuring.

1.1.4 MZ-1 Subsidence Management Plan

The Guidance Criteria formed the basis for the *MZ-1 Subsidence Management Plan* ([MZ-1 Plan]; WEI, 2007), which was developed by the MZ-1 Technical Committee and approved by the Watermaster Board in October 2007. In November 2007, the Court approved the MZ-1 Plan and ordered its implementation.

To minimize the potential for future subsidence and fissuring in the Managed Area, the MZ-1 Plan codified the Guidance Level and recommended that the MZ-1 Parties manage their groundwater pumping such that the hydraulic heads at PA-7 remain above the Guidance Level.

The MZ-1 Plan called for ongoing monitoring, data analysis, annual reporting, and adjustments to the MZ-1 Plan as warranted by the data. Implementation of the MZ-1 Plan began in 2008. The MZ-1 Plan called for the continued scope and frequency of monitoring implemented during the IMP within the Managed Area and expanded monitoring of the aquifer-system and land subsidence in other areas of the Chino Basin where the IMP indicated concern for future subsidence and ground fissuring. Figure 1-1 shows the location of these so-called Areas of Subsidence Concern: Central MZ-1, Northwest MZ-1, Northeast Area, and Southeast Area. The expanded monitoring efforts outside the Managed Area are consistent with the requirements of the OBMP Program Element 1 and its implementation plan contained in the Peace Agreement.[2]

Potential future efforts listed in the MZ-1 Plan included: (i) more intensive monitoring of horizontal strain across the zone of historical ground fissuring to assist in developing management strategies related to fissuring, (ii) injection feasibility studies within the Managed Area, (iii) additional pumping tests to refine the Guidance Criteria, (iv) computer-simulation modeling of groundwater flow and subsidence, and (v) the development of alternative pumping plans for the MZ-1 Parties affected by the MZ-1 Plan. The MZ-1 Technical Committee (now called the Ground-Level Monitoring Committee or GLMC) discusses these potential future efforts, and if deemed prudent and necessary, they are recommended to Watermaster for implementation in future fiscal years.

[2] Source: http://www.cbwm.org/docs/legaldocs/Peace_Agreement.pdf.

1.1.5 2015 Chino Basin Subsidence Management Plan

The MZ-1 Plan stated that if data from existing monitoring efforts in the Areas of Subsidence Concern indicate the potential for adverse impacts due to subsidence, Watermaster would revise it to avoid those adverse impacts. The 2014 Annual Report of the GLMC recommended that the MZ-1 Plan be updated to better describe Watermaster's land subsidence efforts and obligations, including areas outside of MZ-1. As such, the update included a name change to the 2015 Chino Basin Subsidence Management Plan ([Subsidence Management Plan]; WEI 2015a) and a recommendation to develop a subsidence management plan for Northwest MZ-1.

Watermaster had been monitoring vertical ground motion in Northwest MZ-1 via InSAR during the development of the MZ-1 Plan. Land subsidence in Northwest MZ-1 was first identified as a concern in 2006 in the MZ-1 Summary Report and again in 2007 in the MZ-1 Plan. Of particular concern, the subsidence across the San Jose Fault in Northwest MZ-1 has occurred in a pattern of concentrated differential subsidence—the same pattern of differential subsidence that occurred in the Managed Area during the time of ground fissuring. Ground fissuring is the main subsidence-related threat to infrastructure. The issue of differential subsidence, and the potential for ground fissuring in Northwest MZ-1, has been discussed at prior GLMC meetings, and the subsidence has been documented and described as a concern in Watermaster's State of the Basin Reports, the annual reports of the GLMC, and in the *Initial Hydrologic Conceptual Model and Monitoring and Testing Program for the Northwest MZ-1 Area* (WEI, 2017a). Watermaster increased monitoring efforts in Northwest MZ-1 beginning in Fiscal Year (FY) 2012/13 to include ground elevation surveys and electronic distance measurements (EDM) to monitor ground motion and the potential for fissuring.

In 2015, Watermaster's Engineer developed the *Work Plan to Develop a Subsidence Management Plan for the Northwest MZ-1 Area* ([Work Plan]; WEI 2015b). The Work Plan is characterized as an ongoing Watermaster effort and includes a description of a multi-year scope-of-work, a cost estimate, and an implementation schedule. The Work Plan was included in the Subsidence Management Plan as Appendix B. Implementation of the Work Plan began in July 2015.

The updated Subsidence Management Plan also addressed the need for hydraulic head "recovery periods" in the Managed Area by recommending that all deep aquifer-system pumping cease for a continuous six-month period between October 1 and March 31 of each year within the Managed Area. And, the Subsidence Management Plan recommends that every fifth year, all deep aquifer-system pumping cease for a continuous period until the hydraulic head at PA-7 reaches "full recovery" of 90 ft-btoc. These periodic cessations of pumping are intended to allow for sufficient hydraulic head recovery at PA-7 to recognize inelastic compaction, if any, at the Ayala Park Extensometer.

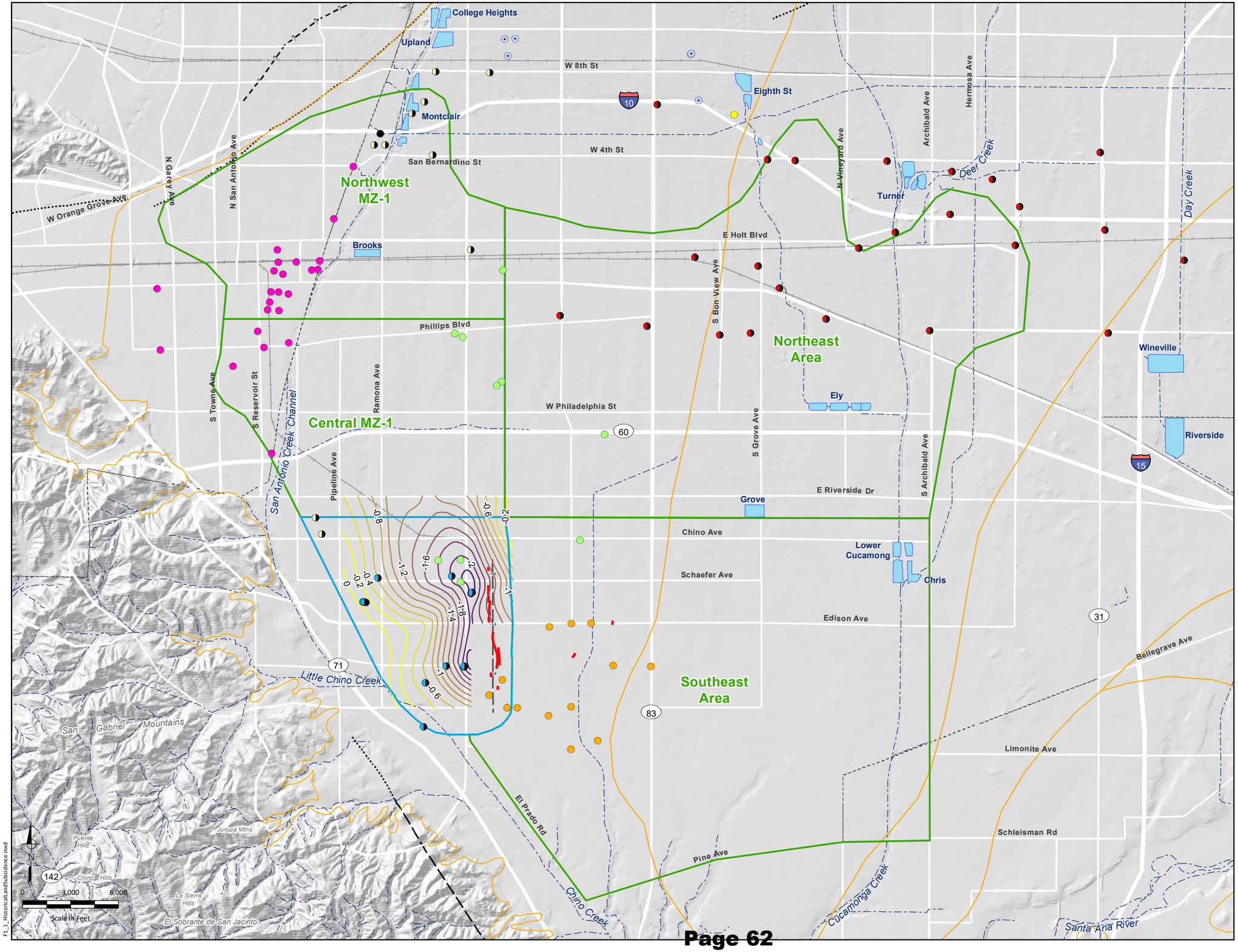
1.1.6 Annual Report for the Ground-Level Monitoring Program

Pursuant to the Subsidence Management Plan, Watermaster prepares an annual report containing the results of ongoing monitoring efforts, interpretations of the data, and recommended adjustments to the Subsidence Management Plan, if any. This Annual Report for the GLMP includes the results and interpretations for the data collected between March 2023 through March 2024, as well as recommendations for Watermaster's GLMP for FY 2024/25.

1.2 Report Organization

This report is organized into the following six sections:

- **Section 1.0 – Introduction**. This section provides background information on the history of land subsidence and ground fissuring in Chino Basin, information on the formation of the GLMC and its responsibilities, and a description of the development and implementation of the Subsidence Management Plan, which calls for annual reporting.
- **Section 2.0 – Ground-Level Monitoring Program.** This section describes the monitoring and testing activities performed by Watermaster for its GLMP between March 2023 and March 2024.
- **Section 3.0 – Results and Interpretations.** This section discusses and interprets the monitoring data collected between March 2023 and March 2024, including basin stresses (groundwater pumping and recharge) and responses (changes in hydraulic heads, aquifer-system deformation, and ground motion).
- **Section 4.0 – Conclusions and Recommendations.** This section summarizes the main conclusions derived from the monitoring program between March 2023 and March 2024 and describes recommended activities for the GLMP for FY 2024/25.
- **Section 5.0 – Glossary.** This section is a glossary of the terms and definitions utilized within this report and in discussions at GLMC meetings.
- **Section 6.0 – References.** This section lists the publications and reports cited in this report.



F1_1_HistoricalLandSubsidence.mxd

Contours of Relative Change in Land Surface Elevation as Estimated by Leveling Surveys 1987 to 1999

0.0 ft

-2.2 ft

Relative Change in Land Surface Elevation as Measured by InSAR Oct-1993 to Dec-1995

+ 1 ft

0

- 1 ft

InSAR absent or incoherent

Active Pumping Wells by Owner: 1987 to 1999

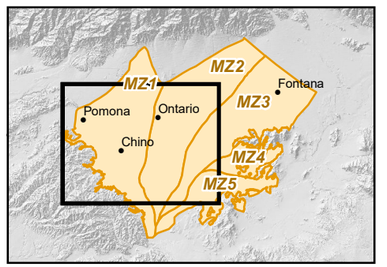
- CA Institution for Men
- City of Chino
- City of Chino Hills
- City of Ontario
- City of Pomona
- City of Upland
- Golden State WC
- Monte Vista WD
- San Antonia WC

Managed Areas

- Managed Area
- Areas of Subsidence Concern

Other Features

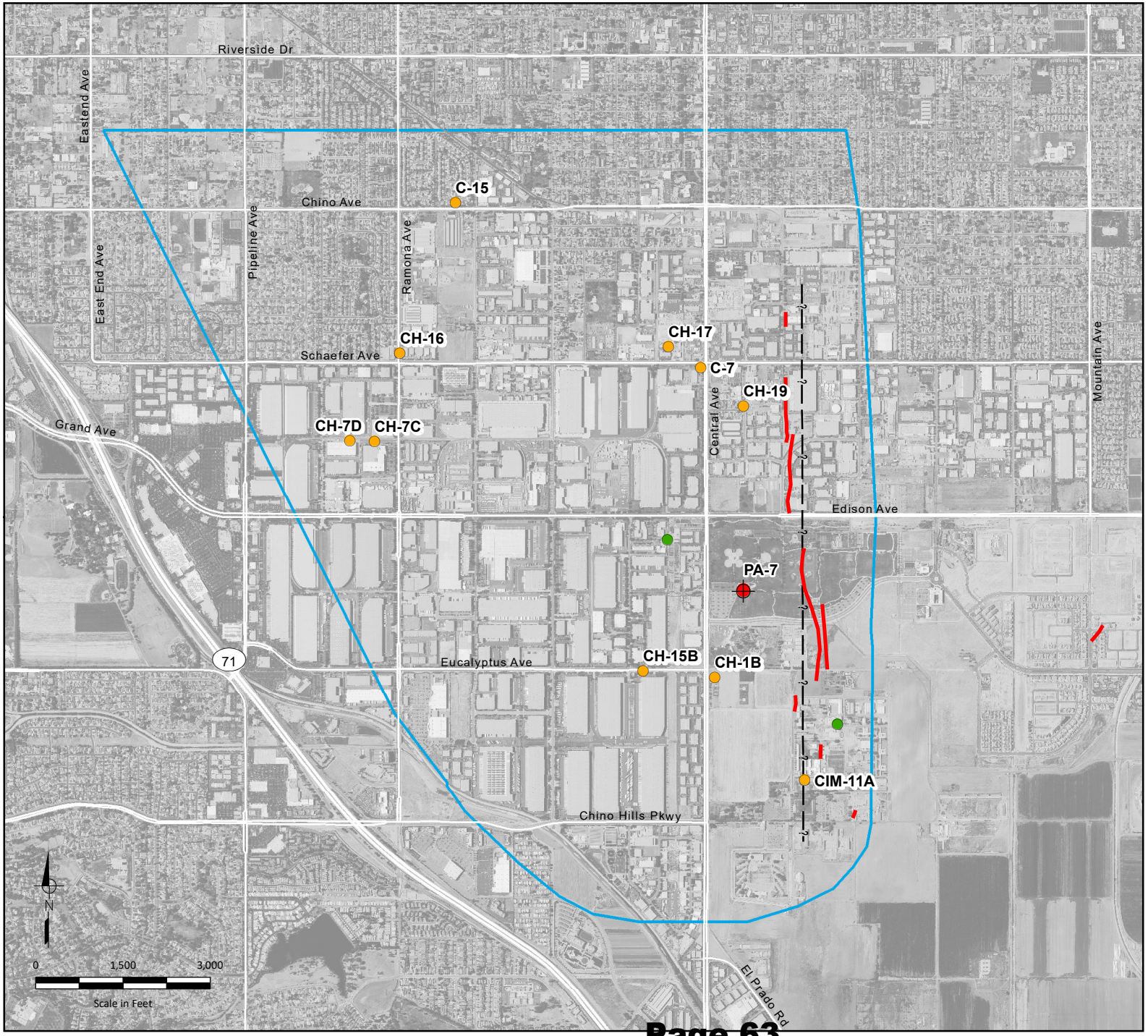
- Flood Control and Conservation Basins
- Fault (solid where accurately located; dashed where approximately located or inferred; dotted where concealed)



Chino Basin Watermaster
2023/24 Annual Report for the Ground-Level Monitoring Program

Figure 1-1

Historical Land Surface Deformation in Management Zone 1: 1987-1999



Managed

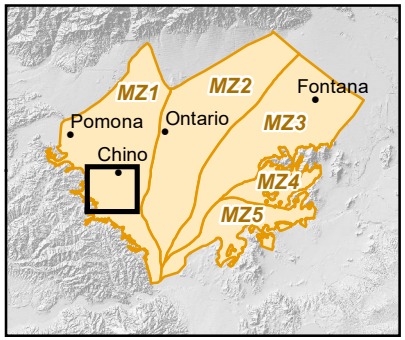
Ayala Park Extensometer Facility

Managed

Other Production

Ground

Groundwater Barrier (Riley Barrier) approximate location



Chino Basin Watermaster
2023/24 Annual Report for the Ground-Level Monitoring Program

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Figure 1-2

MZ-1 Managed Area and the Managed Wells

F1_2_MZ1ManagedWells.mxd

2.0 GROUND-LEVEL MONITORING PROGRAM

This section describes the activities performed by Watermaster for the GLMP between March 2023 and March 2024.

Figure 2-1 shows the groundwater pumping and recharge facilities in the western Chino Basin that impart pumping and recharge stresses to the aquifer-system. Figure 2-2 shows the locations of the monitoring facilities in Watermaster's ground-level monitoring network, including: wells equipped with a transducer; extensometers that measure vertical aquifer-system deformation; and benchmark monuments that are used to perform periodic ground-elevation and EDM surveys to measure vertical and horizontal deformation of the ground surface.

2.1 Ground-Level Monitoring Program

Watermaster conducts its GLMP in the Managed Area and other Areas of Subsidence Concern pursuant to the Subsidence Management Plan and the recommendations of the GLMC. The GLMP activities performed between March 2023 and March 2024 are described below.

2.1.1 Setup and Maintenance of the Monitoring Network

The Ayala Park, Chino Creek, and Pomona extensometer (PX) facilities are key monitoring facilities for the GLMP. They require monthly or as needed visits for maintenance and calibration to remain in good working order and to ensure the recording of accurate measurements.

2.1.1.1 Pomona Extensometer

During 2023/24, special maintenance and calibration efforts were conducted a the PX facility to improve the accuracy of the extensometer measurements. The background, methods, results, and recommendations associated with these efforts at PX are describe herein.

The PX is an experimental monitoring facility located within the City of Pomona. Its purpose is to monitor depth-specific head changes and the associated vertical compression/expansion of the aquifer-system sediments that can result in land subsidence. At the PX, there are four piezometers completed at progressively deeper elevations; each piezometer is equipped with a pressure transducer to measure hydraulic heads within the pumped aquifer system once every 15 minutes. A cable extensometer is installed within each piezometer to measure the vertical deformation of the overlying sediments relative to the head changes. Each extensometer cable is attached with a steel weight that rests on the bottom of the piezometer and is stretched taught by a counterweight and pully systems at the well head. Aquifer-system deformation is measured with a linear potentiometer as vertical displacement between the cable and the conductor casing (which is anchored to the ground surface) once every 15 minutes. The transducers and linear potentiometers are connected to a Campbell Scientific CR-1000X data logger to record the data. The PX facility is powered by two marine batteries. Figure 2-3 is a schematic diagram of a cable extensometer.

Typical data collected at a properly functioning extensometer facility will display a correlated relationship between head changes and extensometer displacement. For example, as heads decrease, the aquifer-system skeleton (and pore spaces) will contract, causing the land surface (and conductor casing) to sink relative to the extensometer cable. The PX has been measuring logical head changes that are consistent with head changes being measured at nearby wells, but has not been measuring and recording logically correlated extensometer data, which indicates that: (i) the extensometers are malfunctioning, (ii) the monitoring/recording equipment is malfunctioning, or (iii) both are malfunctioning.

Figures 2-4a, 2-4b, 2-4c, and 2-4d are time-series charts of the historical head data versus extensometer data for PX-1, PX-2, PX-3, and PX-4, respectively. In an effort to improve the accuracy of the extensometer data, the Watermaster Engineer has been making incremental adjustments to each extensometer by: (i) adding/subtracting counterweights, (ii) adjusting the position of the cable extensometer within the well casing, and/or (iii) making adjustments to the monitoring/recording equipment. Each adjustment is followed by an extended period of data collection and evaluation.

To date, the PX continues to record data that is not well correlated with the head changes. In addition, some data collected indicates that the monitoring equipment may be malfunctioning. Going forward, the Watermaster Engineer proposes two recommendations to improve the PX for GLMC consideration:

1. Continue to make incremental adjustments to the extensometers followed by extended periods of data collection and evaluation.
2. Reinstall the extensometer cables, counterweights, and monitoring/recording equipment and equip the facility with telemetry to analyze and evaluate the collected data more quickly.

2.1.2 Monitoring Activities

Changes in hydraulic heads are caused by the stresses of groundwater pumping and recharge. Changes in hydraulic head is the mechanism behind aquifer-system deformation, which in turn causes vertical and horizontal ground motion. Because of this cause-and-effect relationship, the Watermaster monitors groundwater pumping, recharge, hydraulic heads, aquifer-system deformation, and vertical and horizontal ground motion across the western portion of the Chino Basin. All data collected as part of the GLMP are compiled, checked, and stored in Watermaster databases.

The following sections describe Watermaster's monitoring activities between March 2023 and March 2024, as called for by the Subsidence Management Plan and in consideration of GLMC recommendations.

2.1.2.1 Monitoring of Pumping, Recharge, and Piezometric Levels

Watermaster staff collects and compiles groundwater pumping data on a quarterly basis from well owners in the Managed Area and Areas of Subsidence Concern. Figure 2-1 shows the well locations where groundwater was pumped between March 2023 and March 2024.

The Watermaster collects data from the Inland Empire Utilities Agency on the volumes of imported water, stormwater, and recycled water that are artificially recharged at spreading basins, and the volumes of recycled water for direct use within the Chino Basin.

Hydraulic heads were measured and recorded once every 15 minutes using transducers maintained by the Watermaster at 77 wells across the Managed Area and Areas of Subsidence Concern. Figure 2-2 shows the locations of these wells. Also, Watermaster staff and well owners typically measure hydraulic heads at other wells in western Chino Basin monthly.

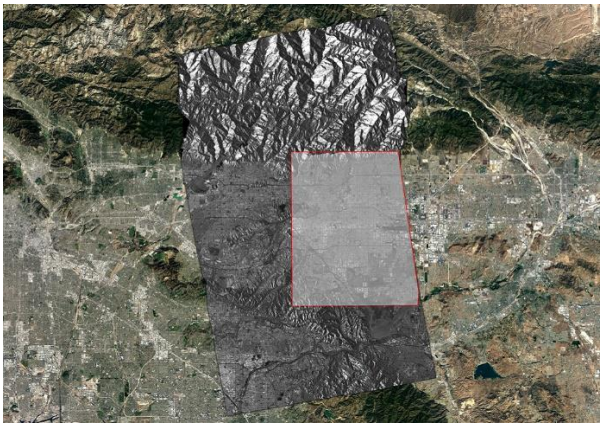
2.1.2.2 Monitoring Vertical Aquifer-System Deformation

The Watermaster measured and recorded the vertical component of aquifer -system deformation at the Ayala Park, Chino Creek, and PX Extensometer Facilities once every 15 minutes.

2.1.2.3 Monitoring Vertical Ground Motion

The Watermaster monitored vertical ground motion via InSAR and traditional leveling techniques.

For InSAR, the Watermaster obtained twelve TerraSAR-X collections through Airbus DS Geo, Inc., covering the western half[3] of the Chino Basin from March 2022 to March 2024. The SAR image collection area is shown in Figure 2-1, with the area of interest highlighted in white with a red outline. While motion estimates are created over the entirety of the image area as a processing by-product, only the highlighted area of interest is analyzed and delivered by the Watermaster, shown in Figure 2-2.



Full SAR Collection Area
Google Earth, Landsat/Copernicus 2020

Delivered Area of Interest
Google Earth, Airbus 2024

Including the final collection from the 2021-2022 monitoring period as a reference, thirteen SAR images were processed[4] to create 25 short- and long-term vertical ground motion estimates[5] over the periods listed in Table 2-1.

[3] The SAR image footprint is fixed in longitude by the satellite orbit and sensor collection parameters. Coverage of the eastern Basin requires separate collection, processing, and analysis. InSAR from 1993 to 2010 indicates minimal vertical motion in the eastern Basin, the GLMC decided in 2012 to acquire and analyze InSAR only in the western Basin as a cost-saving strategy.

[4] Neighboring SAR images are used to create interferograms showing surface deformation between the times of collection of each image. Radar scatterers throughout a pixel generally move up or down together in typical recovery/subsidence scenarios. Unchanging surfaces and objects, for example infrastructure and some types of terrain, produce stable estimates of surface motion over time. Significant change between SAR images causes the surface motion estimate to become noisy or unavailable. Examples of significant change are vegetation growth, urbanization, erosion, flooding, plowing and harvesting, earth-moving, and major construction. The change between SAR images is measured as "coherence," and any significant loss of coherence is referred to as "decorrelation." If the coherence of a pixel is calculated as below the general noise level of the interferogram, the pixel will be rejected as "incoherent" for that point in that interferogram. Various kinds of filtering and interpolation are used to preserve ground motion estimates in areas which may be intermittently coherent.

[5] Many factors influence the accuracy of InSAR ground motion estimates, including inaccuracies in satellite ephemerides, atmospheric moisture content, underlying elevation model, filtering and interpolation methods, complex averaging, and projection of results from native SAR resolution to the desired map projection and pixel spacing. On average, InSAR ground motion estimates are accurate to +/- 0.02 ft, based on analysis by Dr. D. Cohen for Wildermuth Environmental, February 2009.

Table 2-1. 2022 to 2024 Vertical Displacement Estimates	
2022 to 2023 Estimates	
March 2022 to May 2022	March 2011 to May 2023
May 2022 to June 2022	March 2022 to June 2022
June 2022 to July 2022	March 2022 to July 2022
July 2022 to September 2022	March 2022 to September 2022
September 2022 to October 2022	March 2022 to October 2022
October 2022 to May 2023[6]	March 2022 to May 2023[6]
2023 to 2024 Estimates	
May 2023 to July 2023	March 2011 to July 2023
July 2023 to September 2023	May 2023 to September 2023
September 2023 to October 2023	May 2023 to October 2023
October 2023 to January 2024	May 2023 to January 2024
January 2024 to February 2024	May 2023 to February 2024
February 2024 to March 2024	May 2023 to March 2024
InSAR Estimate for Comparison to 2014+ Benchmark Survey	
April 2014 to March 2024	

With a transition away from previous seasons' processing arrangement with General Atomics (formerly Neva Ridge Technologies, Inc.) all interferometry beginning March 2011 was reprocessed in-house by the Watermaster,[7] creating a vertical motion estimate independent of previously delivered results.[8] The new estimate was compared frame-by-frame with historic deliveries through March 2022 to verify accuracy, and showed improvements in vertical fidelity in the primary subsidence feature in Northwest MZ-1,[9] decreased

[6] The final collection of the 22-23 monitor would normally be in March. The satellite was tasked with a conflicting collection from November 2022 to April 2023. Airbus was notified of the need for continuing and regular collections over the western Chino Basin, and collections resumed in May 2023.

[7] The basic SAR processing suite (GAMMA) and SAR collection footprint are identical to previous monitoring seasons.

[8] The past processing agreement with General Atomics (previously Neva Ridge Technologies, Inc.) allowed for transferal of the original Airbus data products and some intermediate processing data, but not the scripts used to drive the GAMMA processing software. From 2022 to 2024, the Watermaster developed a new processing framework around the GAMMA software.

[9] InSAR results are subject to the Coastline Paradox. Small spatial filters preserve vertical estimate magnitude and fine spatial detail, but may generate artifacts over less-coherent areas. Broad spatial filters obscure displacement estimates and reduce spatial detail, but must be used to provide temporal continuity over areas with intermittent and spatially variant data quality. The current processing method balances the accuracy of small spatial filters with the necessity of broad spatial filters.

overall spatial noise, decreased time series noise at monitored points,[10] improved feature visibility near the Ontario and Chino airports,[11] and improvements in spatial quadratic phase trend correction.[12]

For the ground-level surveys, Watermaster retained Guida Surveying, Inc. to conduct traditional leveling surveys at selected benchmark monuments in the western part of the Chino Basin. Table 2-2 below shows the date of the most recent benchmark monument survey by ground-level survey area. The locations of the ground-level survey areas are shown in Figure 2-2.

Table 2-2. Benchmark Monuments Surveyed in Ground-Level Survey Areas

Ground-Level Survey Area	Date of Most Recent Survey
Managed Area[(a)]	January 2018
Central Area[a]	January 2018
Northwest Area	May 2022
San Jose Fault Zone Area	May 2022
Southeast Area	May 2022
Northeast Area[a]	April 2020

(a) The entire benchmark monument survey network for the ground-level survey area was not surveyed in 2022 based on the GLMC scope and budget recommendations for FY 2021/22.

2.1.2.4 Monitoring of Horizontal Ground Motion

Watermaster periodically measures horizontal ground motion between benchmarks across areas that are susceptible to ground fissuring via EDMs. The date of the most recent horizontal benchmark survey within the ground-level survey area are shown in Table 2-3. Horizontal benchmark surveys were not performed in 2023/24 and are not planned for 2024/25.

Table 2-3. Horizontal Benchmark Survey

Ground-Level Survey Area	Date of Most Recent Survey
Fissure Zone Area[(a)]	February 2018
San Jose Fault Zone Area[a]	May 2021

(a) EDMs across the Fissure Zone Area and San Jose Fault Zone Area were not conducted in 2022 based on GLMC scope and budget recommendations for FY 2021/22.

[10] The residual noise level in previous deliveries forced an overly complex workflow when converting InSAR displacement rasters to ArcGIS contours. The new processing method reduces the standard deviation over small areas while maintaining depth estimates. Though more complex than a spatially variant smoothing operation, it may be described as such.

[11] This improvement, particularly south of ONT around the Whispering Lakes golf course and extending southward toward Ontario Ranch, was made possible by the improvements noted above.

[12] Satellite ephemeris inaccuracies create quadratic phase trends in the processed interferometry. These trends may be thought of as "tilts" or "bends" across the complex data, and are a source of displacement error if left uncorrected. Inaccuracies in the underlying elevation model may also contribute to overall phase trends. Correction requires careful selection of high-quality control points via manual masking and automatic data quality estimation. The improvements were made possible by updates to the GAMMA software, improved computing resources within the Watermaster, detailed analysis of the processed interferometry and displacement results with respect to previous deliveries and ground truth, and substantial analyst time invested by the Watermaster.

2.2 Land-Subsidence Investigations

The Watermaster performs land subsidence investigations pursuant to the Subsidence Management Plan and/or recommendations from the GLMC that are approved in the annual Watermaster budget. The goals of these investigations are to refine the Guidance Criteria (described in Section 1.1.3) or assist in the development of subsidence management plans to minimize or abate land subsidence and maximize the prudent extraction of groundwater.

This section describes the land subsidence investigations conducted between March 2023 and March 2024 that are called for in the Subsidence Management Plan.

2.2.1 Subsidence Management Plan for Northwest MZ-1

In 2015, the GLMC developed the final Work Plan to develop a subsidence-management plan for Northwest MZ-1, which describes a multi-year effort with cost estimates to execute the Work Plan. The Work Plan was included in the Subsidence Management Plan as Appendix B.[13] The background and objectives of the Work Plan are described in Section 1.1.5. The Watermaster began implementation of the Work Plan in July 2015. The Work Plan has evolved over time as new data and information has been collected and evaluated by the GLMC. The following describes the Work Plan tasks and status of each task:

Task 1. Describe Initial Hydrogeologic Conceptual Model and Monitoring and Testing Program – A final report was submitted to the GLMC and Watermaster in December 2017 that summarized the current state of knowledge of the hydrogeology of Northwest MZ-1, the data gaps needed to be filled to fully describe the occurrence and mechanisms of aquifer-system deformation and the pre-consolidation stress, and a strategy to fill the data gaps.

Task 2. Implement the Initial Monitoring and Testing Program – The Watermaster's Engineer worked with the Watermaster, MVWD, City of Pomona, and SCADA Integrations, Inc. to identify and equip a set of wells with supervisory control and data acquisition (SCADA) monitoring capabilities and/or transducers. Through several field visits and technical meetings with the well owners, a protocol was developed to install monitoring equipment and collect pumping and piezometric data. For the City of Pomona, nine wells were equipped with transducers. For MVWD, seven wells were equipped with transducers, two wells with sonar units, and two wells with air-line units. Hydraulic heads are recorded once every 15 minutes. Nine of the 11 MVWD wells were connected to the MVWD's existing SCADA system. The hydraulic head data from these wells are currently being collected and analyzed as part of the Northwest MZ-1 monitoring and testing program. These data will be used in future efforts to recalibrate the Chino Valley Model (MODFLOW model of Chino Basin) and the 1D Models at PX and MVWD-28.

Task 3. Develop and Evaluate the Baseline Management Alternative (BMA) and Task 4. Develop and Evaluate the Initial Subsidence-Management Alternative – A final technical memorandum was submitted to the GLMC and Watermaster in December 2017 that described the construction, calibration, and use of a numerical one-dimensional aquifer-system compaction model (1D compaction model) at MVWD-28. The objective of this memo was also to explore the future occurrence of subsidence in Northwest MZ-1 under various basin-operation scenarios of groundwater pumping and artificial recharge and to identify potential subsidence mitigation strategies.

[13] Source: http://www.cbwm.org/pages/reports/engineering/

Task 5. Design and Install the Pomona Extensometer (PX) Facility – The Watermaster's Engineer completed construction of two dual-nested piezometers located in Montvue Park, Pomona, CA in August 2019. Each PX piezometer was equipped with transducers and cable extensometers in June and July 2020 and has been collecting preliminary depth-specific hydraulic head and aquifer-system deformation since December 2020.

The piezometers at the PX facility are providing accurate, depth-specific head data. These data will be used in future efforts to verify or recalibrate the 1D Models at PX. Unfortunately, the extensometers at PX are not recording reasonably accurate data for vertical aquifer-system deformation. The Watermaster Engineer is uncertain of the precise causes for the malfunction at PX extensometers and is proceeding with a stepwise methodology to test and improve the monitoring devices (see Section 2.1).

Task 6. Design and Conduct Aquifer-System Stress Tests (if necessary) – The objective of this task is to perform controlled aquifer-system stress tests at pumping wells in Northwest MZ-1 and to monitor the depth-specific hydraulic head and aquifer-system deformation response at PX. This information, along with hydraulic head data collected as part of Task 2 will be used to help identify the subsidence mechanisms and the pre-consolidation stress(es) in Northwest MZ-1. The Watermaster Engineer has not yet identified specific questions that need to be answered with the controlled aquifer-system stress tests. It is recommended a period of "passive" data collection and assessment of the data over time to determine if a controlled aquifer-system stress test is recommended in the future.

Task 7/8. Update the Hydrogeologic Conceptual Model/Construct and Calibrate Subsidence Modeling Tools – The objectives of these tasks are: (i) to update the hydrogeologic conceptual model of Northwest MZ-1 based on new lithologic information from PX and an improved understanding of hydraulic head data across Northwest MZ-1; (ii) describe the subsidence mechanisms and the pre-consolidation head by aquifer-system layer in Northwest MZ-1; and (iii) develop modeling tools that can be used to explore the future occurrence of subsidence in Northwest MZ-1 under various basin-operation scenarios of groundwater production and artificial recharge and to identify potential subsidence mitigation strategies.

A new 1D compaction model was constructed and calibrated using the hydrogeologic information collected at the PX. The 1D model at MVWD-28 was also updated and recalibrated using current information. This work was reviewed by the GLMC, and additional 1D model calibration refinements and sensitivity analyses were performed based on GLMC recommendations. In December 2022, the Watermaster Engineer, with review and input from the GLMC, deemed 1D model calibrations sufficient for simulation of future land subsidence under prospective plans for pumping and recharge (see Task 9 below).

Task 9. Refine and Evaluate Subsidence-Management Alternatives – This task began in FY 2023-24 and helps answer the question: *What are potential methods to manage the land subsidence in Northwest MZ-1?*

The 1D compaction models at MVWD-28 and PX were used to characterize the mechanical response of the aquifer-system to an initial Subsidence Management Alternative (SMA-1). In 2023, the Watermaster Engineer, with review and input from the GLMC, developed an SMA-1, which is equivalent to the planning scenario that was simulated with the 2020 Chino Valley Model (CVM) to support the 2020 Safe Yield Recalculation (2020 SYR). The 2020 SYR was intended to represent and simulate the Parties' projected pumping, recharge, and use of storage through 2050. The results of the 2020 SYR (*i.e.,* projected hydraulic heads by CVM layer) were used as input data for the 1D Model simulations to predict the potential future occurrence of subsidence through 2050. In February 2024, the Watermaster Engineer published a final TM titled *1D Model Simulation of Subsidence in Northwest MZ-1—Subsidence Management Alternative #1*. The Watermaster Engineer's recommendations from this work were the following:

a) Establish a preliminary "Northwest MZ-1 Guidance Level" of 630 ft-amsl for hydraulic heads in Layers 3 and 5 at the PX location. The preliminary Guidance Level is an aspirational Watermaster recommendation that, if achieved, would likely slow or stop aquitard compaction and land subsidence in Northwest MZ-1.

b) Compliance with the Guidance Level should be measured at the PX-2/3 piezometer, which is generally representative of heads in Layers 3 and 5.

c) The methods to achieve the Guidance Level could include but are not limited to: voluntary modification of pumping patterns; in-lieu recharge; wet-water recharge via spreading and/or injection; or a combination of methods. These methods might necessitate: voluntary modification of water-supply plans of the purveyors in the Chino Basin; modification of Watermaster practices for recharge and replenishment; and/or the implementation of regional-scale storage or conjunctive-use programs.

d) Additional SMAs should be developed and evaluated with the 1D Models to generate the necessary information to finalize the Guidance Level and the *Subsidence Management Plan for Northwest MZ-1*. The additional SMAs could be developed during Watermaster's groundwater modeling efforts associated with the 2025 Safe Yield Reevaluation and the development of the Storage and Recovery Master Plan. The GLMC should participate in the scenario building exercises associated with these Watermaster efforts to develop the SMAs, so that the scenarios include various methods to achieve the Guidance Level. Then, the 1D Models should be used to evaluate the potential future subsidence in Northwest MZ-1 under the SMAs. These model results and evaluations will support the establishment of a Guidance Level in the *Subsidence Management Plan for Northwest MZ-1*. It should be noted that future monitoring and analyses always hold the potential for revisions to the Guidance Level, consistent with the adaptive management approach called for in the Chino Basin Subsidence Management Plan.

Task 10. Update the Chino Basin Subsidence Management Plan – The objective of this task is to incorporate a preferred subsidence-management alternative for Northwest MZ-1 into the Chino Basin Subsidence Management Plan. The updated Subsidence Management Plan will require review and input by the GLMC and the Watermaster Pools, Advisory Committee, and Board. The Watermaster will apprise the Court of revisions to the Subsidence Management Plan as part of its OBMP implementation status reporting. The updated Chino Basin Subsidence Management Plan is anticipated to be completed by the end of FY 2025/26.

2.2.2 Northeast Area Subsidence Investigation

In the Northeast Area, the long- and short-term InSAR estimates indicate that persistent downward ground motion has occurred in a concentrated area in the vicinity of Whispering Lakes Golf Course, south of the Ontario Airport between Vineyard Avenue and Archibald Avenue. The western and eastern edges of this subsiding area exhibit steep subsidence gradients (i.e., differential subsidence").

In FY 2021/22, the Watermaster conducted a reconnaissance-level subsidence investigation of the Northeast Area focusing on the Whispering Lakes Subsidence Feature. This investigation included collection, review, and analysis of available borehole and lithologic data, pumping and recharge data, hydraulic head measurements, and InSAR estimates of vertical ground motion. Figures and charts were prepared for the *2021-22 Annual Report of the GLMC* to support the data analysis, interpretations, and recommendations for future investigations and monitoring.

For this annual report, additional monitoring and analysis of groundwater pumping, land use, and land subsidence as measured by InSAR were conducted for the period 2022-24. The results, conclusions, and recommendations of the analysis are reported in Section 3.5.

Active Groundwater Pumping Wells
April 1, 2023 to March 31, 2024

- Private
- California Institution for Men
- Chino Basin Desalter Authority
- City of Chino
- City of Chino HIlls
- City of Ontario
- City of Pomona
- City of Upland
- Cucamonga Valley Water District
- Golden State Water Company
- Jurupa Community Services District
- Monte Vista Water District

- Managed Area
- Areas of Subsidence Concern
- Flood Control and Conservation Basins

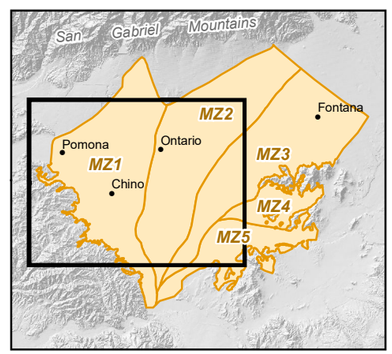


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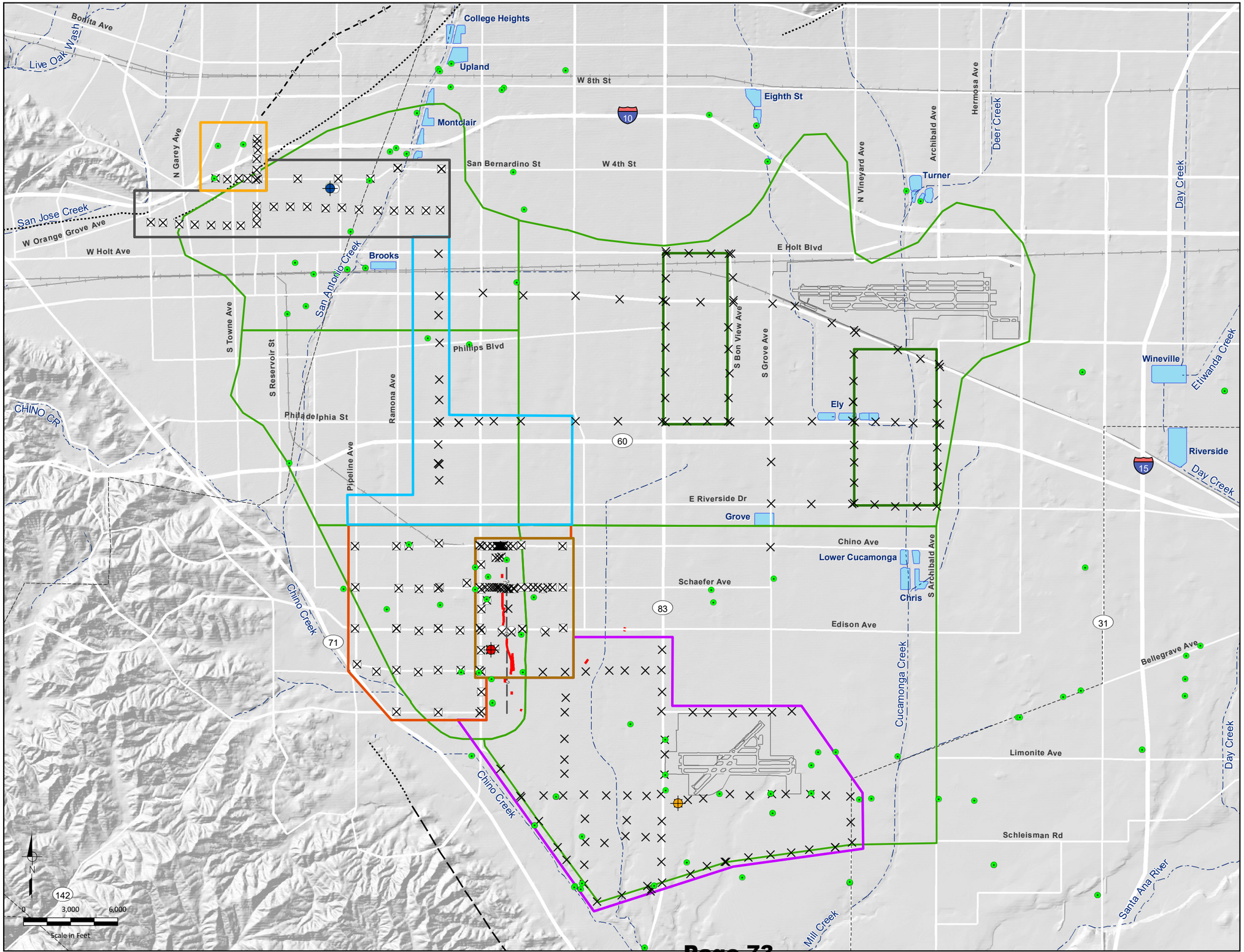
Figure 2-1

Pumping and Recharge Facilities
Western Chino Basin: 2023/24

F2_1_PumpingRechargeFacilities.mxd



Ground-Level Monitoring Network Facilities

- Pomona Extensometer
- Ayala Park Extensometer
- Chino Creek Extensometer
- All Program Transducer Wells
- Ground-Level Survey Benchmark
- Ground-Level Survey Benchmark (Measured May 3, 2024)

Ground-Level Survey Areas

- Managed Area
- Fissure Zone Area
- Central Area
- Northwest Area
- San Jose Fault Zone Area
- Northeast Area
- Southeast Area

- Areas of Subsidence Concern
- Flood Control and Conservation Basins

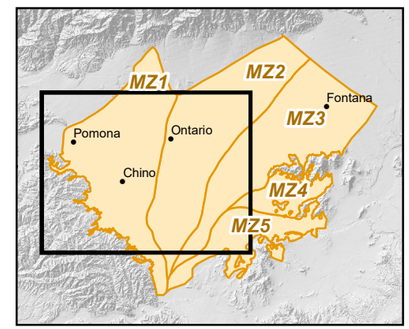


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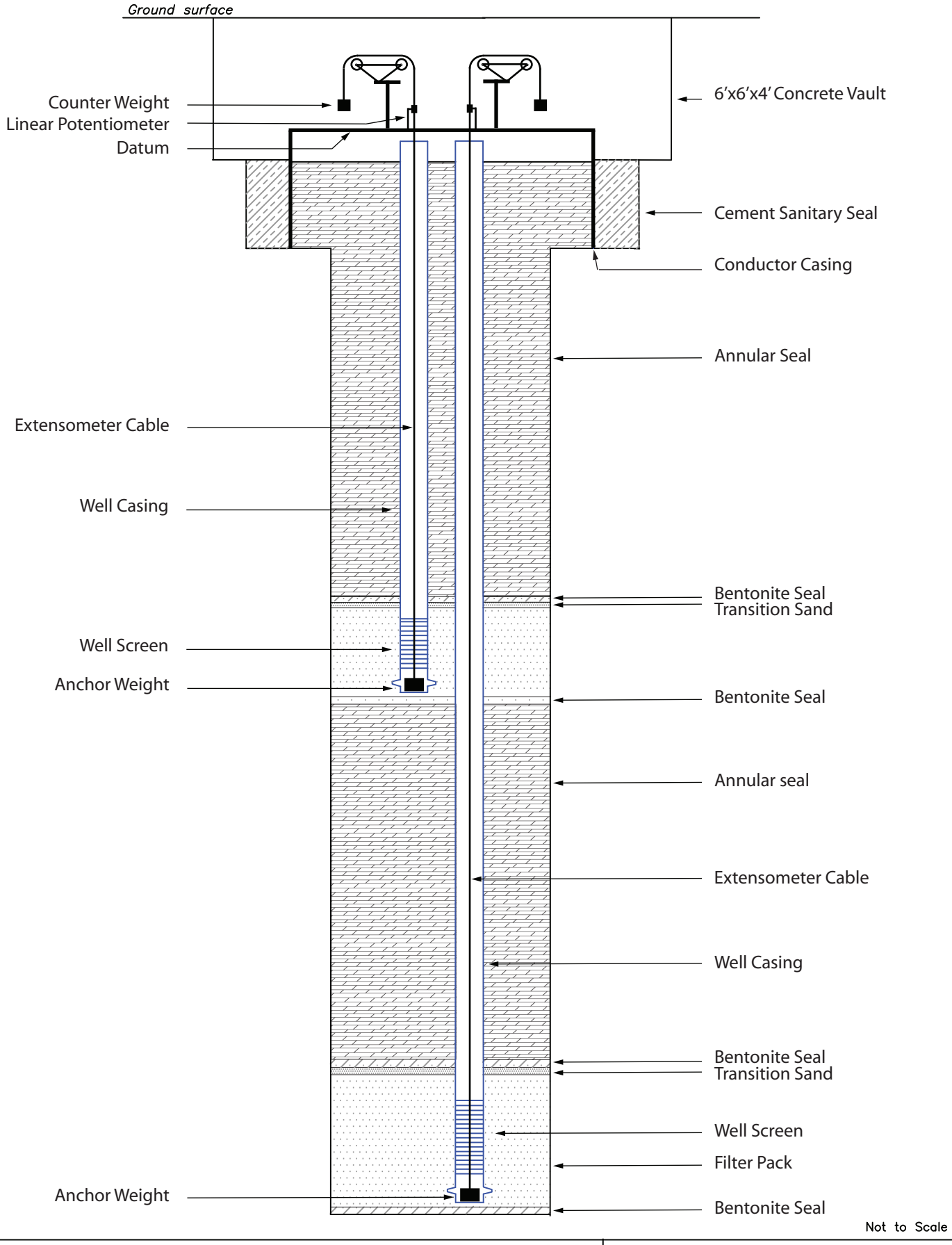
Figure 2-2

Ground-Level Monitoring Network Western Chino Basin



Prepared by:

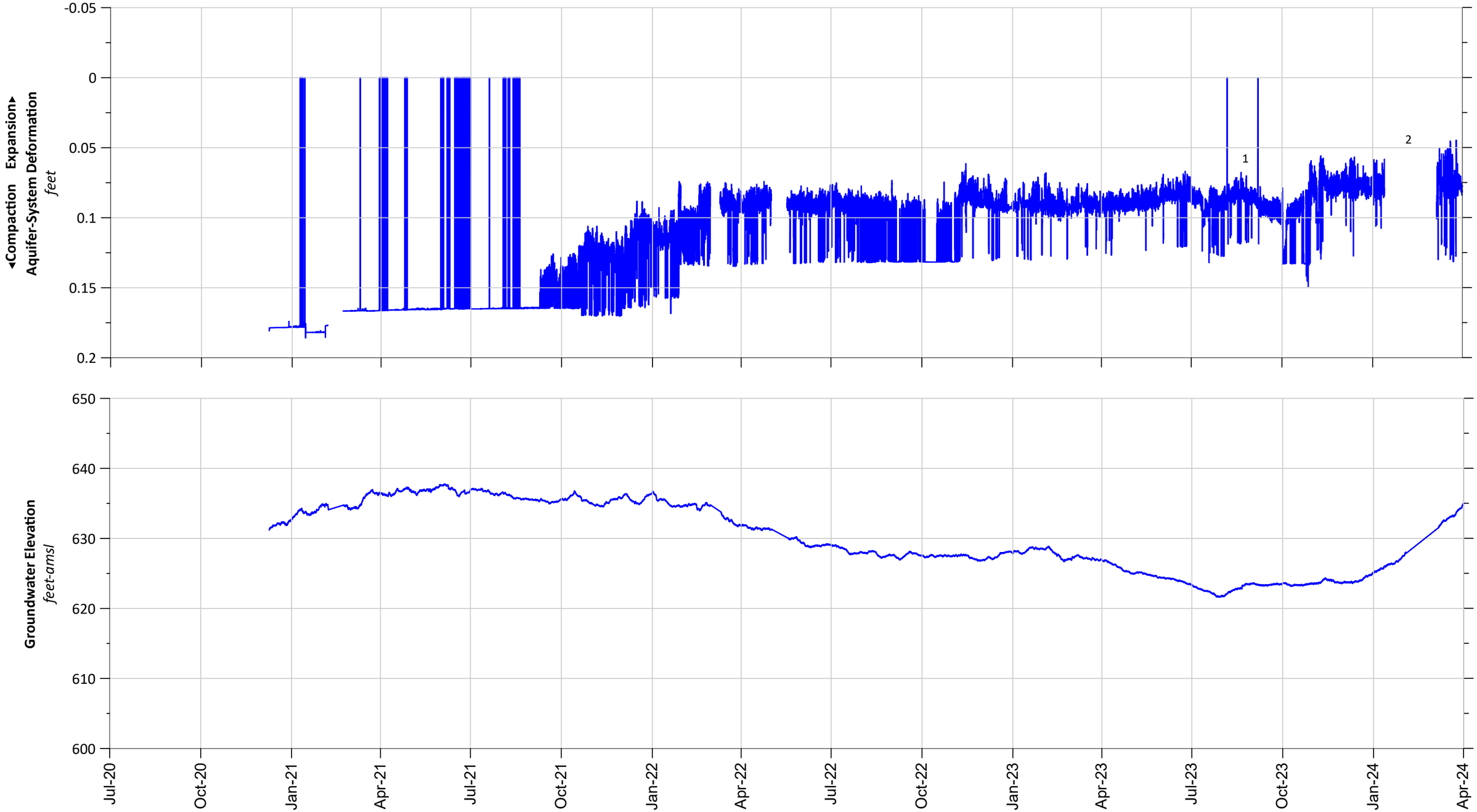
WEI
Wildermuth Environmental, Inc.

Author: TCR
Date: 20151110
File: Figure 3-2.pdf

Initial Hydrogeologic Conceptual Model,
Monitoring, and Testing Program
for the Northwest MZ-1 Area

Dual-Nested Cable Extensometer
Conceptual Schematic

Figure 2-3



1 Added counterweight sleeve approximately 10 lbs.
2 Battery voltage too low

WEST YOST - F2-3a_ManagedAreaStrsStrn.gpj

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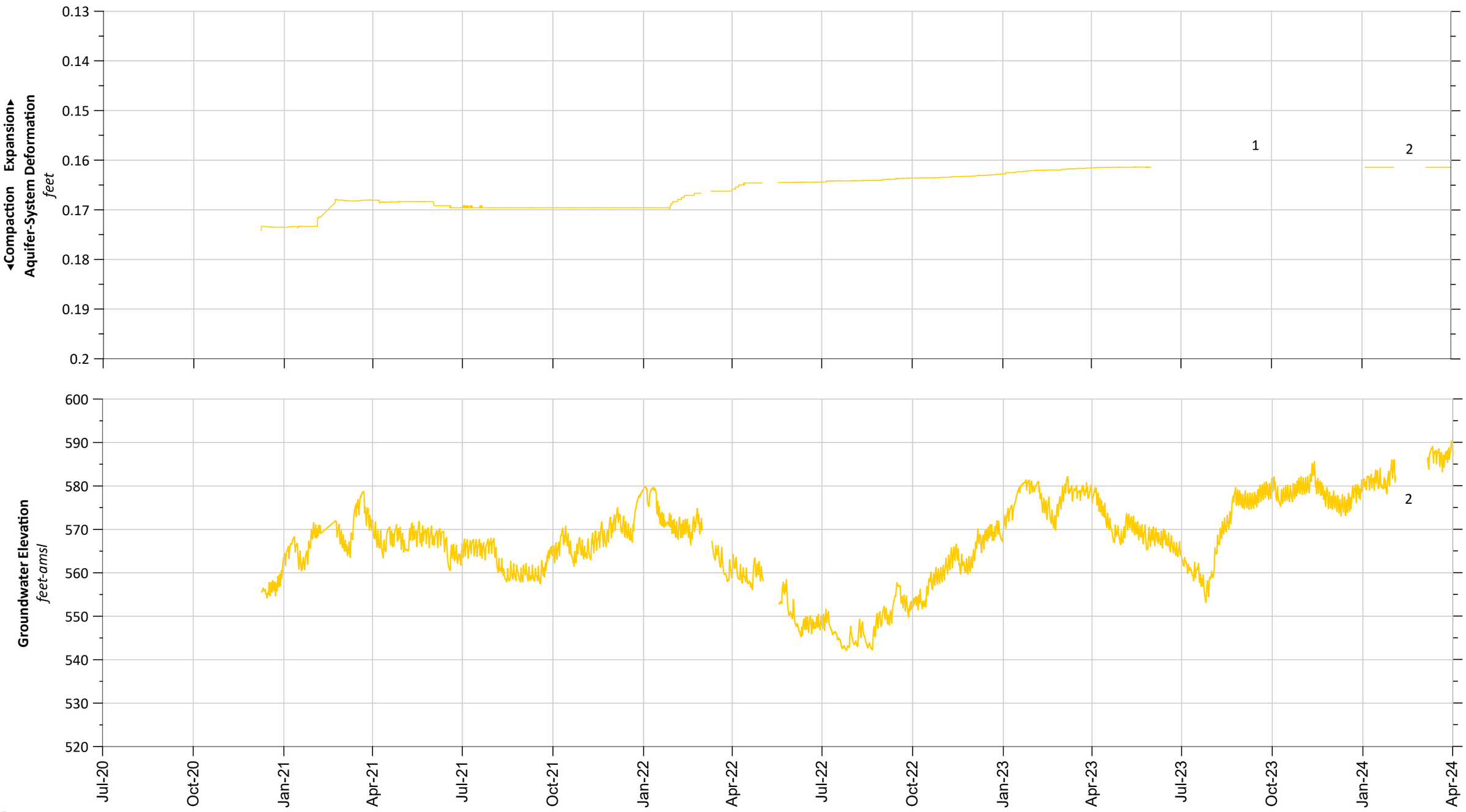
Figure 2-4a

Stress and Strain at PX-1 within the Managed Area



1 Removed Linear Potentiometer to test in office
2 Battery source low

WEST YOST - F2-3b_ManagedAreaStrainStrn.gpj

Chino Basin Water Master
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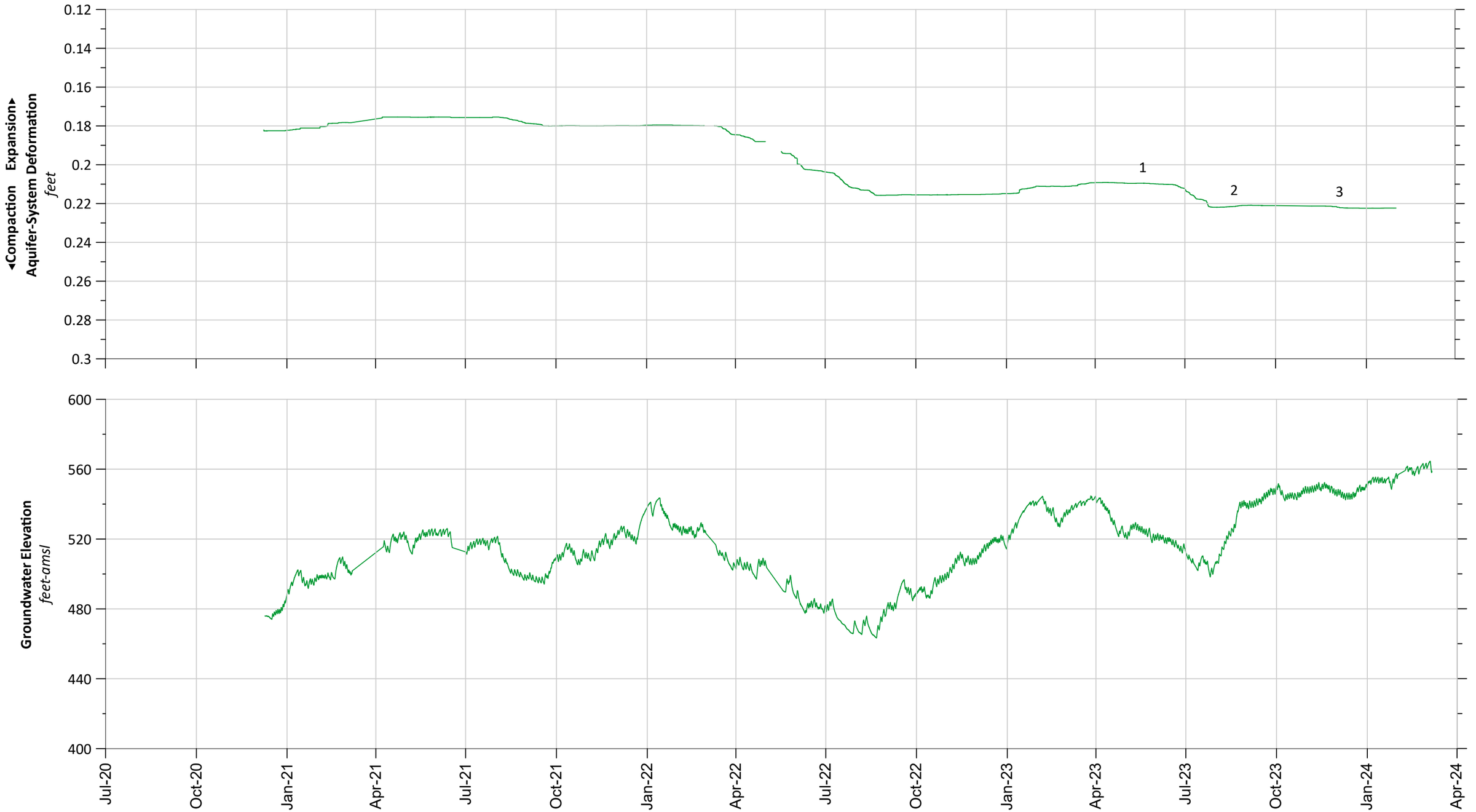
Figure 2-4b

Stress and Strain at PX-2 within the Managed Area



1 Adjusted linear potentiometer parallel to wire; added counterweight sleeve approximately 10 lbs.
2 Added one weight sleeve approximately 10lbs.
3 Removed one weidght sleeve approximately 10lbs.

WEST YOST - F2.3c_ManagedAreaStrsStrn

WEST YOST

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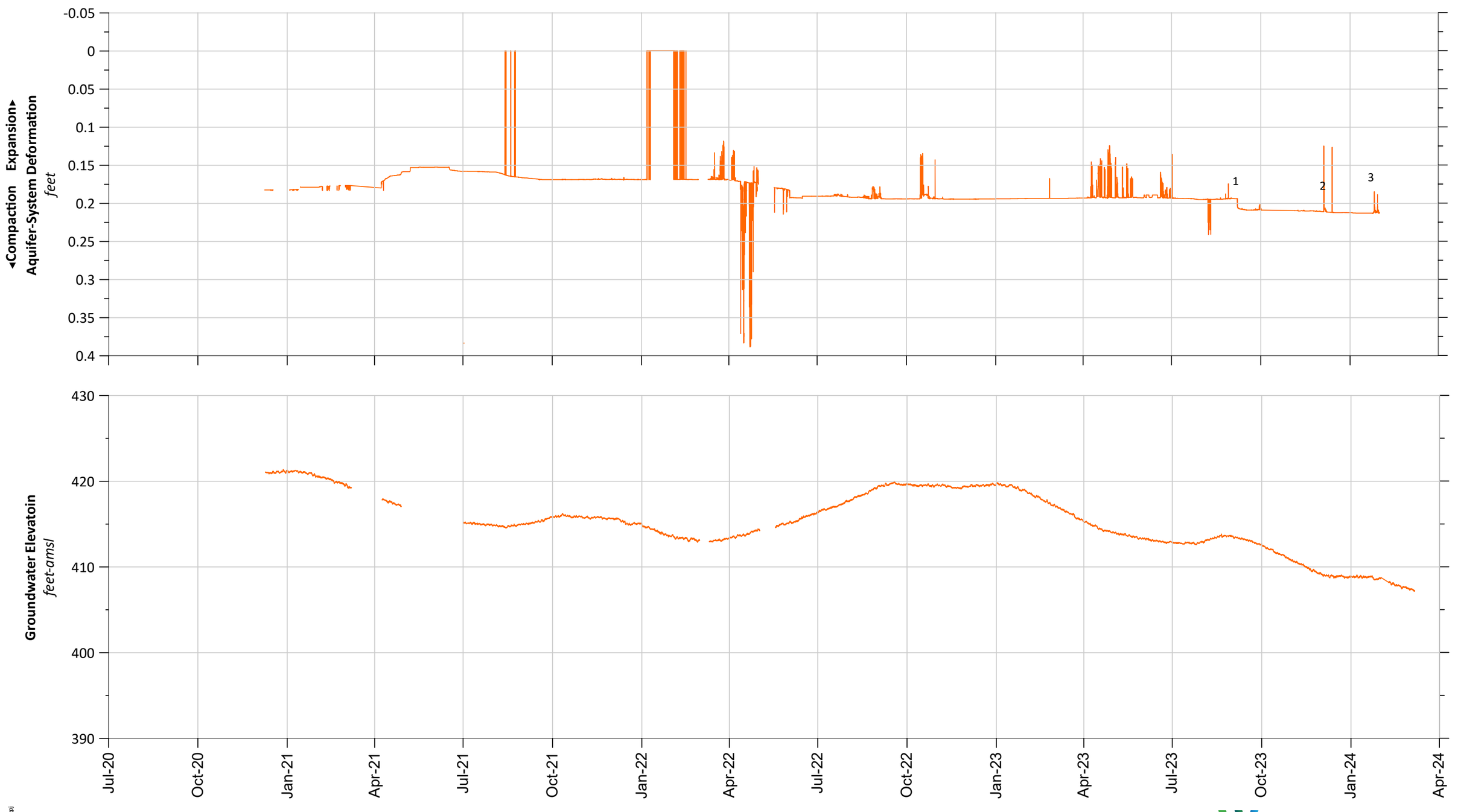
Figure 2-4c

Stress and Strain at PX-3 within the Managed Area



1 Adjusted linear potentiometer parallel to wire; added counterweight sleeve approximately 10 lbs.
2 Added one weight sleeve approximately 10lbs.
3 Removed one weidght sleeve approximately 10lbs.

WEST YOST - F2-3d_ManagedAreaStrStrn.gpj

WEST YOST

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Figure 2-4d

Stress and Strain at PX-4 within the Managed Area

3.0 RESULTS AND INTERPRETATIONS

This section describes the results and interpretations derived from the GLMP for the Managed Area and Areas of Subsidence Concern in the Chino Basin for the March 2022 to March 2024 reporting period. Figures 3-1a, 3-1b, and 3-1c are maps that display vertical ground motion as measured by InSAR across the western portion of the Chino Basin between the periods of March 2011 and March 2024, March 2022 and March 2023, and March 2023 and March 2024, respectively. The maps also show the locations and magnitude of pumping and artificial recharge—the stresses to the aquifer-system that can cause ground motion. Data shown on these and subsequent figures are described and interpreted in this section.

3.1 Managed Area

The Managed Area is the primary focus of the Subsidence Management Plan. The discussion below describes the results and interpretations of the monitoring program in the Managed Area and, where appropriate, relative to the Guidance Criteria in the Subsidence Management Plan.

3.1.1 History of Stress and Strain in the Aquifer-System

Figure 3-2a illustrates the long-term history of groundwater pumping, hydraulic heads, and vertical ground motion in the Managed Area. Also shown is the volume of the direct use of recycled water in the Managed Area, which is an alternative water supply that can result in decreased groundwater pumping from the area. Recycled water is often used for irrigation purposes and can contribute to groundwater recharge to the shallow aquifer-system as well. General observations and interpretations from this chart are:

- Pumping from the shallow aquifer-system between the 1930s and about 1977 caused hydraulic heads to decline by about 150 ft. From 1978 to 1990, hydraulic heads recovered by about 50 ft.
- Pumping from the confined, deep aquifer-system during the 1990s caused the hydraulic heads to a decline, coinciding with high rates of land subsidence. About 2.5 ft of subsidence occurred from 1987 to 1999, and ground fissures opened within the City of Chino in the early 1990s.
- Since the early 2000s, groundwater pumping decreased, hydraulic heads in the deep aquifer-system recovered, and the rate of land subsidence declined significantly across the Managed Area.
- The direct use of recycled water, which began in 1997, may have contributed to decreased groundwater pumping from the area, which in turn, may have contributed to the observed increases in hydraulic heads in the Managed Area.
- Since 2005, hydraulic heads at PA-7 have not declined below the Guidance Level, and very little inelastic compaction was recorded in the Managed Area. These observations demonstrate the effectiveness of the Subsidence Management Plan in the management of land subsidence in the Managed Area.

3.1.2 Recent Stress and Strain in the Aquifer-System

This section discusses the last 13 years of groundwater pumping, changes in hydraulic heads, and vertical ground motion in the Managed Area under the Subsidence Management Plan.

3.1.2.1 Groundwater Pumping and Hydraulic Heads

Table 3-1 summarizes groundwater pumping by well within the Managed Area for fiscal year 2012 through March 2024. Groundwater pumping in the Managed Area has declined from about 5,680 acre-feet (af) in 2012 to almost negligible volumes in 2024. A total of about 24 af of groundwater pumping occurred in the Managed Area from July 1, 2023 to March 31, 2024—97 percent of the groundwater pumping was from wells screened in the shallow aquifer-system.

Figure 3-3 displays the hydraulic stresses and mechanical strains that have occurred within the shallow and deep aquifer-systems in the Managed Area over the period January 2011 through March 2024. The figure includes three time-series charts: quarterly groundwater pumping (hydraulic stress to the aquifer-systems); the resultant head changes (hydraulic responses to pumping); and aquifer-system deformation as measured at the Ayala Park Extensometers (mechanical strain that occurred within the aquifer-system sediments in response to the head changes). The following are observations and interpretations regarding pumping and head changes:

- From 2011 to 2018, there was a seasonal pattern of pumping in the Managed Area – increased pumping during the spring to fall and decreased pumping during the winter. Since 2018, very little pumping has occurred in the Managed Area.
- Hydraulic heads respond differently to the pumping stresses in the shallow and deep aquifer-systems. Pumping from the deep confined aquifer-system causes a hydraulic head decline that is much greater in magnitude than the hydraulic head decline caused by pumping from the shallow aquifer-system despite that more groundwater pumping has occurred from the shallow aquifer-system.
- The hydraulic head at PA-7 (deep aquifer-system) has fluctuated from a low of approximately 190 ft-btoc in August 2013 to a high of about 55 ft-btoc in May 2021 and has not declined below the Guidance Level of 245 ft-btoc.
- The recovery of hydraulic heads in the deep aquifer-system to above 90 ft-btoc in December 2023 represented “full recovery” of hydraulic head at PA-7 as defined in the Subsidence Management Plan.
- Since the first instance of full recovery in 2012, the hydraulic head at PA-7 recovered to 90 ft-btoc or greater in 2016, 2018, 2019, 2022 and 2023 which complies with the recommendation in the Subsidence Management Plan for full recovery within the deep aquifer-system at least once every five years.[14]
- Since 2018, hydraulic heads at PA-10 and PA-7 have increased to relatively high levels because of very little pumping from the shallow and deep aquifer-systems in the Managed Area. On April 1, 2024, heads were at about 49 ft-btoc in PA-10 and about 56 ft-btoc in PA-7.

[14] Page 2-2 in the Subsidence Management Plan, Section 2.1.1.3—Recovery Periods: “Every fifth year, Watermaster recommends that all deep aquifer-system pumping cease for a continuous period until water-level recovery reaches 90 ft-btoc at PA-7. The cessation of pumping is intended to allow for sufficient water level recovery at PA-7 to recognize inelastic compaction, if any, at the Ayala Park Extensometer and at other locations where groundwater-level and ground-level data are being collected.”

3.1.2.2 Aquifer-System Deformation

Figure 3-3 also includes a time-series chart of vertical deformation of the aquifer-system as measured at the Ayala Park Extensometers for the period January 2011 through March 2024. The following are observations and interpretations regarding aquifer-system deformation in response to the pumping and head changes:

- There has been seasonal compression and expansion of the aquifer-system in response to the seasonal decline and recovery of hydraulic heads, which indicates that the vertical deformation of the aquifer-system was mainly elastic during this period.
- However, between April 6, 2011 and May 3, 2018 (dates of full recovery at PA-7 to 90 ft-btoc), the Ayala Park Deep Extensometer recorded about 0.03 ft of aquifer-system compression, which indicates that this compression was permanent compaction that occurred within the depth interval of 30-1,400 ft-bgs.[15]
- From May 3, 2018 to December 8, 2023 (dates of full recovery at PA-7), the Deep Extensometer recorded a multiple cycles of aquifer-system compression and expansion in response to a multiple cycles of decline and recovery of hydraulic heads at PA-7. For much of this period, hydraulic heads at PA-7 remained above 90 ft-btoc (*i.e.,* the full recovery threshold) and the Deep Extensometer recorded about 0.05 ft of expansion, indicating that the vertical deformation of the aquifer-system was mainly elastic.

Figure 3-4 is a stress-strain diagram of hydraulic heads measured at PA-7 (stress) versus vertical deformation of the aquifer-system sediments as measured at the Deep Extensometer (strain). This diagram provides additional information on the nature of the aquifer-system deformation (i.e., elastic versus inelastic deformation). The hysteresis loops on this figure represent cycles of hydraulic head decline-recovery and the resultant compression-expansion of the aquifer-system sediments. The diagram can be interpreted to understand the timing and magnitude of the occurrence of inelastic compaction within the depth interval of the aquifer-system that is penetrated by the Deep Extensometer. Hydraulic head decline (drawdown) is shown as increasing from bottom to top on the y-axis, and aquifer-system compression (compaction) is shown as increasing from left to right on the x-axis. The following are observations and interpretations regarding aquifer-system deformation in response to the head changes:

- From May 2006 to May 2018, the hysteresis loops progressively shifted to the right on this chart, indicating that about 0.065 ft of inelastic compaction occurred during this time-period. However, the rate of inelastic compaction appeared to gradually decline over this 12-year period.
- From May 2018 to December 2023, the hydraulic heads at PA-7 fluctuated between about 60-120 ft-btoc, with hydraulic heads remaining about 90 ft-btoc (*i.e.,* the full recovery threshold) for much of this time. During this period, the hysteresis loops started to overlap one another and then shifted to the left, indicating that the vertical deformation of the aquifer-system was mainly elastic expansion of the aquifer-system sediments.

[15] The analysis of full recovery and inelastic compaction at Ayala Park was included in the 2016 Annual Report (WEI, 2016).

3.1.2.3 Vertical Ground Motion

Vertical ground motion is measured across the Managed Area via InSAR, traditional ground-level surveys, and the Deep Extensometer. Figures 3-1a, 3-1b, and 3-1c and illustrate vertical ground motion[16] as estimated by InSAR for the periods March 2011 to March 2024, March 2022 to March 2023, and March 2023 to March 2024, respectively.

Where coherent, the InSAR estimates of vertical ground motion from 2011 to 2024 shown in Figure 3-1a range from about +0.04 ft to -0.10 ft across the Managed Area. The greatest downward ground motion occurred in the northern portions of the Managed Area. The InSAR estimates of vertical ground motion from 2022 to 2024 shown in Figures 3-1b and 3-1c indicate very little recent vertical ground motion across the Managed Area.

Figure 3-2b is a map that shows the ground-level survey results compared against the InSAR results across the Managed Area from 2011 to 2024. The figure shows a similar spatial pattern of ground motion for both monitoring techniques, but with slightly different magnitudes of ground motion. These differences in magnitudes are most likely related to the different timing of the ground level surveys and the SAR acquisition, differing methods to select the reference elevations, and/or relative errors associated with each monitoring technique.

As described above, Figures 3-1a and 3-2b show that maximum downward ground motion during 2011-2024 occurred in the northern portion of the Managed Area. The City of Chino Well 15 (C-15) is in the northern portion of the Managed Area, is screened across both the shallow and deep aquifers, and has been equipped with a transducer that measures and records hydraulic heads once every 15 minutes. These InSAR and hydraulic head data at the C-15 location provide information on the nature of the aquifer-system deformation that occurred in this area (i.e. elastic versus inelastic deformation). Figure 3-5 is a time-series chart that compares the hydraulic heads at C-15 to vertical ground motion as measured by InSAR at the same location between 2005 and 2024. The main observations from this chart are:

1. The InSAR record at C-15 is measuring seasonal elastic vertical ground motion which is caused by seasonal fluctuations in hydraulic head and the resultant seasonal elastic deformation in the aquifer-system(s). The seasonal fluctuations of hydraulic head at C-15 are coincident with the seasonal fluctuations of vertical ground motion measured by InSAR at the same location.
2. From 2007 to 2018, InSAR indicates a long-term trend of downward ground motion at C-15. However, hydraulic heads at C-15 during this same time-period increased, indicating that about 0.25 ft of subsidence was caused by inelastic compaction of the aquifer-system. The inelastic compaction that occurred during this period of increasing hydraulic head most likely represents the delayed drainage and compaction of aquitards due to historical head declines that occurred prior to 2007.
3. Since 2018, the long-term subsidence trend appears to have stopped, indicating that inelastic compaction of the aquitards has also stopped. This observation is supported by the Deep Extensometer record, which indicates mostly elastic deformation of the aquifer-system since 2018 (see Figure 3-4). The recent cessation of subsidence observed at C-15 is likely a result of increasing hydraulic heads in the aquifers, which has led to equilibration with hydraulic heads in the aquitards and the cessation of aquitard drainage and compaction.

[16] Upward vertical ground motion is indicated by positive values; downward vertical ground motion is indicated by negative values.

4. These monitoring data may be providing information on hydraulic head "thresholds" that could be used as management criteria to protect against the future occurrence of land subsidence. At C-15, when groundwater elevations remain above about 585 ft-above mean sea level (amsl), InSAR indicates that no permanent land subsidence has occurred.

3.2 Southeast Area

Vertical ground motion is measured across the Southeast Area via InSAR, traditional ground-level surveys, and the Chino Creek Extensometer Facility (CCX). The InSAR results (Figures 3-1a, 3-1b, 3-1c) are somewhat incoherent across much of this area because the overlying agricultural land uses are not hard, consistent reflectors of radar waves. Where InSAR results are incoherent, the history of subsidence is best characterized by ground-level surveys and the CCX.

Figure 3-6 is a time-series chart that displays and describes the history of groundwater pumping, the direct reuse of recycled water, hydraulic heads, and vertical ground motion in the Southeast Area from 1930 to 2024. Vertical ground motion is estimated by InSAR, extensometer data, and ground-level surveys across the southeast Area from 1987 to 2024. The main observations and interpretations from Figure 3-6 are:

- From the 1940s to about 1968, hydraulic heads declined by up to about 75 ft. There is a data gap from about 1968 to 1988; however, it is likely that hydraulic heads continued to decline from 1968 to 1978, as was the case in most portions of the Chino Basin during this period. In the western portion of the Southeast Area, hydraulic heads remained relatively stable from 1988 to 2010 and then gradually increased by about 10 to 25 ft from 2010 to 2024 (see wells CH-18A, C-13, CCPA-1, and CCPA-2). In the eastern portion of the Southeast Area, hydraulic heads have been gradually declining by about 22 ft between 2005 and March 2024 (see wells HCMP-1/1 and HCMP-1/2) likely in response to pumping at the Chino Basin Desalter Authority (CDA) wells.
- Figure 3-6 also displays vertical ground motion as estimated by InSAR and ground-level surveys from 1987 to 2024. Both methods indicate relatively minor ground motion over the period and similar, but not exact, spatial patterns and magnitudes of ground motion across the Southeast Area. These differences are likely related to the relative incoherence of the InSAR results, differences in the timing of the ground-level surveys and the SAR acquisition, and/or the relative errors associated with each monitoring technique. From 1987-2024, maximum downward ground motion of about 0.6 ft was estimated by ground-level surveys in the northwestern portion of the area (BM-137/61). From 2011-2024, maximum downward ground motion of about 0.4 ft was estimated by InSAR in the northeastern portion of the area. This gradual downward ground motion most likely represents the delayed drainage and compaction of aquitards due to the historical head declines that occurred prior to the Judgment.
- For the current period March 2022 and March 2024, hydraulic heads remained relatively stable or increased across most of the area, and Figures 3-1b, 3-1c, and 3-6 indicate very little, if any, downward ground motion across most of the Southeast Area.

Figure 3-7 displays the time series of hydraulic heads and vertical aquifer-system deformation recorded at the CCX, which began collecting data in July 2012. Groundwater pumping began at the Chino Creek Well Field in 2014, but appears to have had little, if any, effect on hydraulic heads or aquifer-system deformation at the CCX through March 2024. In general, hydraulic heads at the CCX vary seasonally and have gradually increased since 2012, and a small amount of elastic expansion of the aquifer-system has been measured by the CCX extensometers. In general, the aquifer-system deformation recorded at the CCX is minor and elastic, which is consistent with the estimates of vertical ground motion as measured by InSAR and ground-level surveys (as shown on Figures 3-1a, 3-1b, 3-1c, and 3-6).

3.3 Central MZ-1

Vertical ground motion is measured across Central MZ-1 via InSAR and traditional ground-level surveys. Figures 3-1a, 3-1b, and 3-1c are maps that display vertical ground motion as measured by InSAR across Central MZ-1 during the periods of March 2011 and March 2024, March 2022 and March 2023, and March 2023 and March 2024, respectively. The InSAR results are generally coherent across this area because the overlying land uses are urban and serve as hard and consistent reflectors of radar waves. Ground-level surveys are performed periodically along the eastern portion of the area. Figure 3-8 is a time-series chart that displays and describes the long-term history of pumping, recharge, hydraulic heads, and vertical ground motion in Central MZ-1. The following observations and interpretations are derived from these figures:

- Hydraulic head data are absent in the southern portion of Central MZ-1. In the northern portion of Central MZ-1, hydraulic heads declined by about 200 ft from 1930 to about 1978. From 1978 to 1986, hydraulic heads increased by about 80 ft and remained relatively stable or have slightly increased from 1986 to 2024. Recent hydraulic heads (1986 to 2024) in the northern portion of Central MZ-1 are about 120 ft lower than the hydraulic heads in the 1930s.
- About 1.8 ft of subsidence occurred near Walnut and Monte Vista Avenue from 1988 to 2000, as measured by ground-level surveys at BM 125/49. Since 2000, the rate of subsidence has slowed significantly—about 0.34 ft of subsidence occurred at a gradually declining rate from 2000 to 2024. This time history and magnitude of vertical ground motion along the eastern side of Central MZ-1 is like the time history and magnitude of vertical ground motion in the Managed Area, which suggests a relationship to the causes of land subsidence in the Managed Area; however, there is not enough historical hydraulic head data in this area to confirm this relationship.
- Figure 3-1a shows that the areas that experienced the greatest magnitude of subsidence from March 2011 to March 2024 are in the western portion of Central MZ-1, where up to about 0.25 ft of downward ground motion has occurred—an average rate of about 0.02 ft/yr. Hydraulic heads remained relatively stable in this area from 2011 to 2024, which indicates that the downward vertical ground motion was, at least in part, permanent subsidence due to delayed aquitard drainage in response to the historical declines in hydraulic heads that occurred from 1930 to 1978.
- The ground motion measured by InSAR in Figure 3-1a also shows that the groundwater barrier (Riley Barrier) may extend from the Managed Area northward into Central MZ-1 to at least Mission Boulevard. This observation is evidenced by a steep subsidence gradient located just east of Central Avenue.
- Figures 3-1b and 3-1c show that between March 2022 and March 2024, vertical ground motion across most of Central MZ-1 was minor.

3.4 Northwest MZ-1

Vertical ground motion is measured across Northwest MZ-1 via InSAR and ground-level surveys. The InSAR results are generally coherent across this area because the overlying land uses are urban and serve as hard, consistent reflectors of radar waves. Ground-level surveys have been performed annually in the early spring across the area to complement and check the InSAR estimates of vertical ground motion.

Figures 3-1a, 3-1b, and 3-1c are maps that display vertical ground motion as measured by InSAR across Northwest MZ-1 during the periods of March 2011 and March 2024, March 2022 and March 2023, and March 2023 and March 2024, respectively. Figure 3-9a is a time-series chart that displays and describes the long-term history of pumping, recharge, hydraulic heads, and vertical ground motion in Northwest MZ-1. Figure 3-9b is a map of the most recent data that illustrates vertical ground motion as estimated by InSAR and ground-level surveys across Northwest MZ-1 from April 2014 to March 2024. PX was used as the starting benchmark because it increases the accuracy of the ground-level surveys in this area.

The following observations and interpretations are derived from Figures 3-1a, 3-1b, 3-1c, 3-9a, and 3-9b:

- From about 1930 to 1978, hydraulic heads in Northwest MZ-1 declined by about 200 ft. From 1978 to 1985, hydraulic heads increased by about 100 ft. From 1985 to 2024 hydraulic heads fluctuated but remained relatively stable at elevations well below the levels of 1930.
- A maximum of about 1.4 ft of subsidence occurred in this area from 1992 through March 2024—an average rate of about 0.04 ft/yr—while hydraulic heads remained relatively stable. The persistent subsidence that occurred from 1992 to 2024 cannot be entirely explained by the concurrent changes in hydraulic heads. A plausible explanation for this subsidence is that thick, slow-draining aquitards are permanently compacting in response to the historical declines in hydraulic heads that occurred between 1930 and 1978.
- From March 2011 to March 2024, the InSAR results indicate that the maximum rate of downward ground motion in Northwest MZ-1 slowed to about 0.03 ft/yr. This resulted in a maximum of about 0.4 ft of downward ground motion near the intersection of Indian Hill Boulevard and San Bernardino Avenue.
- Figure 3-9b shows that the ground-level survey results from 2014 to 2024 indicate a similar spatial pattern of downward ground motion as estimated by InSAR but with slightly different magnitudes. Both methods indicate the maximum downward ground motion from December 2013 to March 2024 occurred near the intersection of Indian Hill Boulevard and San Bernardino Avenue. There is a minor difference in the magnitudes of vertical ground motion between InSAR and ground-level survey results, but these differences are most likely related to the different timing of the ground-level surveys and the SAR acquisition and/or relative errors associated with each monitoring technique.
- Figures 3-1c and 3-9a show minor upward ground motion occurred in Northwest MZ1 during 2023-2024, likely in response to reduced pumping and increased recharge in this area.

As described above, Figure 3-1a shows that maximum downward ground motion during 2011-2024 occurred near the intersection of Indian Hill Boulevard and San Bernardino Avenue. The City of Pomona Well 30 (P-30) is located just south of this area. P-30 is a non-pumping well, is screened across the shallow aquifer and upper portion of the deep aquifer and has been equipped with a transducer that measures and records hydraulic heads once every 15 minutes since September 2006. These data can provide information on the nature of the aquifer-system deformation that occurred in this area (i.e., elastic versus inelastic deformation). Figure 3-10 is a time-series chart that compares the hydraulic heads at P-30 to vertical ground motion as estimated by InSAR between 2006 and 2024. The main observations from this chart are:

- The InSAR record at P-30 is measuring seasonal elastic vertical ground motion that is caused by seasonal fluctuations in hydraulic head and the resultant seasonal elastic deformation in the aquifer-system(s). The seasonal fluctuations of hydraulic head at P-30 are coincident with the seasonal fluctuations of vertical ground motion measured by InSAR, but the long-term trend of subsidence remains persistent between 2005 and 2024 despite periods of hydraulic head recovery.
- InSAR indicates a long-term trend of downward ground motion at P-30 from 2005 to 2017. However, hydraulic heads at P-30 during this same period increased, indicating that at least about 0.37 ft of subsidence was caused by inelastic compaction of the aquifer-system. The inelastic compaction that occurred during this period of increasing hydraulic heads most likely represents the delayed drainage and compaction of aquitards due to historical head declines.
- Between mid-2017 and 2024, the long-term subsidence trend appeared to have slowed down, indicating that inelastic compaction of the aquitards had also slowed down. The recent slowing of subsidence observed at P-30 was likely a result of increasing hydraulic heads in the aquifers, which had led to equilibration with hydraulic heads in the aquitards and the slowing of aquitard drainage and compaction.
- Between late 2018 and early 2024, the hydraulic head at P-30 experienced five cycles of head decline and recovery. The head decline and recovery at P-30 appears to be contemporaneous with the downward and upward vertical ground motion measured by InSAR at P-30 during this same period. These observations suggest that in Northwest MZ-1: (i) changes in hydraulic heads, which are controlled by the pumping and recharge stresses in the area, have at least some control on the pattern and rate of subsidence and (ii) these monitoring data may be providing information on hydraulic head “thresholds” that could be used as management criteria to protect against the future occurrence of land subsidence.

3.5 Northeast Area

Vertical ground motion is measured across the Northeast Area via InSAR and ground-level surveys. In December 2017, a new network of benchmarks was installed across the Northeast Area (see Figure 2-2) and surveyed for initial elevations in January 2018. The Northeast Area benchmark network was last surveyed April 2020 and was not surveyed from spring 2022 to spring 2024.

Figures 3-1a, 3-1b, and 3-1c are maps that display vertical ground motion as measured by InSAR across Northeast Area during the periods of March 2011 and March 2024, March 2022 and March 2023, and March 2023 and March 2024, respectively. Figure 3-11 is a time-series chart that displays and describes the long-term history of pumping, recharge, hydraulic heads, and vertical ground motion in the Northeast Area. The following observations and interpretations are derived from these figures:

- From 1930 to 1978, hydraulic heads in the Northeast Area declined by about 125 ft. From 1978 to 1985, hydraulic heads increased by about 25 ft. From 1985 to 2024, hydraulic heads fluctuated but have generally remained relatively stable.
- From 1992 to 2024, about 1.2 ft of subsidence occurred in the Northeast Area near the intersection of Euclid Avenue and Phillips Street (Point D on the inset map on Figure 3-11). From 1992 to 2011, the subsidence occurred at a gradual and persistent rate of about 0.04 ft/yr. From 2011 to 2024, the subsidence rate declined to about 0.02 ft/yr. Hydraulic heads have remained relatively stable in this area from 1992-2024, which indicates that the downward ground motion was, at least in part, permanent subsidence due to delayed aquitard drainage in response to the historical declines in hydraulic heads that occurred from 1930 to 1978. The recent decline in the rate of subsidence at Point D may be due to recent decreases in pumping, recent increases in recharge, recent increases in hydraulic heads, or the gradual equilibration of heads between aquifers and aquitards.

3.5.1 Whispering Lakes Subsidence Feature

Figures 3-1a, 3-1b, and 3-1c also show that downward ground motion has occurred (and continues to occur) in a concentrated area between Vineyard Avenue and Archibald Avenue south of the Ontario International Airport in the vicinity of Whispering Lakes Golf Course in the City of Ontario (referred to herein as the Whispering Lakes Subsidence Feature). The map indicates that a maximum of about 0.6 ft of downward ground motion occurred in this area from March 2011 to March 2024. The Whispering Lakes Subsidence Feature was only recently observed via InSAR due to enhanced processing and interpolation techniques used by General Atomics in post-processing the InSAR data and preparing interferograms (see Section 2).

At the time of the recognition of the Whispering Lakes Subsidence Feature, there was not enough information to describe the history of the subsidence feature or its causes. As an initial step, the Watermaster Engineer performed a desktop investigation utilizing readily available data and information (the "Whispering Lakes Subsidence Investigation"). The specific objectives of the desktop investigation were to:

- Describe the history of the Whispering Lakes Subsidence Feature, including the extent and rate of subsidence.
- Attempt to identify the most plausible mechanism(s) causing the differential subsidence.
- Identify data gaps, if any, that need to be filled to characterize the extent, rate, and mechanisms of the differential subsidence.

The main potential mechanisms for the Whispering Lakes Subsidence Feature that were investigated included:

- Aquitard drainage and compaction
- Shallow soil consolidation due to historical land use and/or land use changes
- Differential tectonic movements

The results, conclusions, and recommendations of the Whispering Lakes Subsidence Investigation were published in the 2021/22 Annual Report of the GLMC.[17]

Since 2022, additional monitoring of vertical ground motion by InSAR was conducted for this annual report. Figure 3-12 is a series of air photo maps overlain with the subsidence contours shown on Figures 3-1a, 3-1b, and 3-1c. Figure 3-12 demonstrates that: (i) land subsidence has continued to occur in this area during 2022-24 and (ii) that the subsidence is spatially coincident with the Whispering Lakes Golf Course.

The Whispering Lakes Subsidence Investigation documented the history of overlying land uses in the vicinity of the Whispering Lakes Subsidence Feature, which included: agricultural, sewage disposal, and recreational (golf courses and parks). These overlying land uses could have involved disturbance, modifications, and additions to the shallow soils, which could have resulted in gradual consolidation of the shallow soils and the downward ground motion. These observations strongly suggest that the golf course and/or its prior land uses are related to the subsidence feature, and that shallow soil consolidation is responsible for the land subsidence. If true, groundwater management will have no effect on the Whispering Lakes Subsidence Feature.

Based on these results and conclusions, the Watermaster Engineer recommends a limited monitoring program going forward that includes:

- Continued monitoring of vertical ground motion by high-resolution InSAR that is currently conducted under the Watermaster's GLMP.
- Continued monitoring of groundwater pumping at wells within the Study Area that is currently conducted on a quarterly time-step by the Watermaster.
- Installing transducers in wells within the Study Area to measure and record hydraulic heads at high temporal frequency.

The results and interpretations from this monitoring should be included in subsequent annual reports, which may improve the understanding of how pumping affects the spatial and depth-specific distribution of hydraulic heads, and could be used to rule out aquitard drainage (and groundwater utilization) as the cause of the subsidence, or not.

3.6 Seismicity

Tectonic displacement of the land surface on either side of geologic faults can be horizontal, vertical, or a combination of both. During a large earthquake, the land surface can deform suddenly (Weischet, 1963; Myers and Hamilton, 1964; Plafker, 1965). Aseismic creep is a process where smaller, more frequent earthquakes cause the land surface to deform more gradually (Harris, 2017).

Figure 3-13 is a map that displays the location and magnitude of earthquake epicenters relative to vertical ground motion as estimated by InSAR from March 2011 to March 2024. The main observations and interpretations derived from this figure are:

- The earthquake epicenters on Figure 3-13 do not show a spatial relationship to the differential subsidence that has occurred in Northwest MZ-1. Therefore, tectonic movement along the San Jose Fault Zone, including aseismic creep, is not the likely mechanism for the differential land subsidence that has occurred in Northwest MZ-1.

[17] 2021/22 Annual Report of the GLMC

- Very little seismicity has occurred across the Areas of Subsidence Concern between March 2011 and March 2024. This observation indicates that the vertical ground motion that occurred in these areas is not related to tectonics.
- Most of the seismicity observed between March 2011 and March 2024 occurred in the eastern portion of the Chino Basin. The observed seismicity may reflect deep-seated convergence between the Perris Block that underlies the Chino Basin and the San Gabriel Mountains south of the Cucamonga Fault Zone (Morton and Yerkes, 1974; Morton et al., 1982; Morton and Matti, 1987).

Table 3-1. Groundwater Pumping in the Managed Area -- *Fiscal Year 2012 through 2024*

Well Name	Aquifer Layer	Fiscal Year, af												Fiscal Year 2024, af				
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Qtr 1	Qtr 2	Qtr 3	Qtr 4[a]	By Layer
C-4	Shallow	524	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
C-6		1049	594	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
CH-1A		1137	909	738	861	649	637	369	0	0	0	0	0	0	0	0	-	
CH-7A		530	380	170	286	156	66	0	0	0	0	0	0	0	0	0	-	
CH-7B		712	264	200	616	261	232	350	0	0	0	0	0	0	0	0	-	
CIM-1		724	1,109	1,127	878	911	908	586	0	0	0	0	0	1.56	0	0.01	-	
XRef 8730[b]		3	5	5	4	3	35	29	29	29	30	17	21	7.36	7.36	7.36	-	
Sub-Totals		**4,679**	**3,260**	**2,240**	**2,644**	**1,980**	**1,879**	**1,334**	**29**	**29**	**30**	**17**	**21**	**9**	**7**	**7**	**-**	**24**
CH-17	Deep[c]	758	1,444	937	1,142	567	624	571	0	0	0	0	0	0	0	0	-	
CH-15B		0	28	105	0	0	0	0	0	0	0	0	25	0	0	0	-	
CIM-11A		243	239	195	92	94	222	0	0	3	3	42	1	0.26	0.20	0.17	-	
Sub-Totals		**1,001**	**1,711**	**1,237**	**1,234**	**662**	**846**	**571**	**0**	**3**	**3**	**42**	**26**	**0**	**0**	**0**	**-**	**1**
Totals		**5,680**	**4,971**	**3,477**	**3,878**	**2,642**	**2,725**	**1,905**	**29**	**32**	**33**	**59**	**47**	**9**	**8**	**8**	**-**	**24**

"C" = City of Chino

"CH" = City of Chino Hills

"CIM" = California Institution for Men

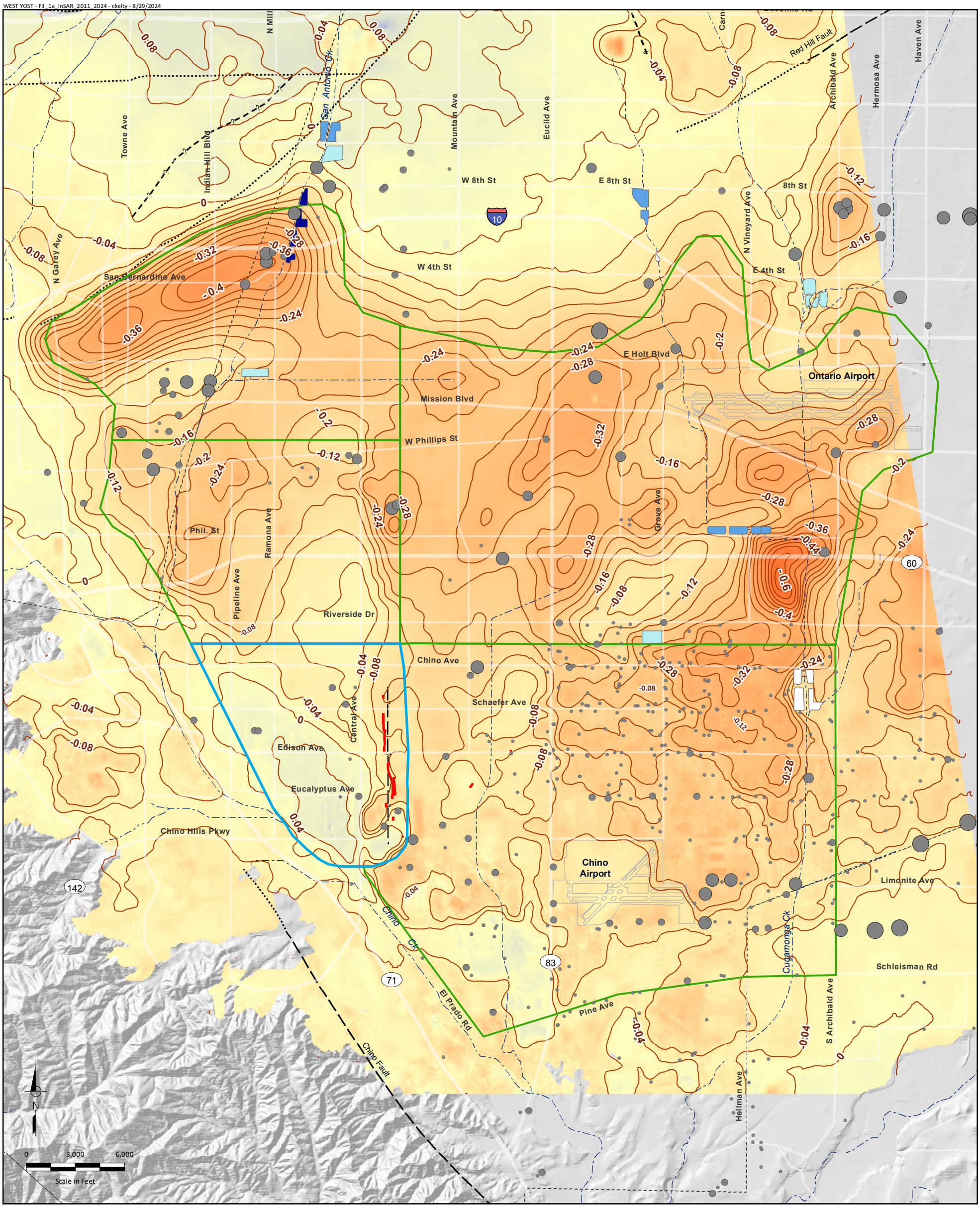
"XRef" = Private

(a) Data only available through March 2024.

(b) Well screen interval is unknown but assumed to be shallow based on typical well construction for other private wells in the vicinity.

(c) These wells have screen intervals that extend into the shallow-aquifer system, so a portion of the production comes from the shallow aquifer-system.

WEST YOST - F3_1a_InSAR_2011_2024 - ckelty - 8/29/2024



Relative Change in Land Surface Elevation
as Estimated by InSAR
(March 2011 to March 2024)

High : 0.6

0 ft

Low : -0.6

InSAR absent or incoherent

Managed Area

Areas of Subsidence Concern

Average Annual Groundwater Pumping
April 1, 2011 to March 31, 2024
(afy)

0 - 100

101 - 500

501 - 1,000

1,001 - 2,000

> 2,000

Historical Ground Fissures

Approximate Location of the Riley Barrier

Fault (solid where accurately located; dashed where approximately located or inferred; dotted where concealed)

Average Annual Basin Recharge
April 1, 2011 to March 31, 2024
(afy)

0

1- 1500

1500 - 2500

2500 - 3500

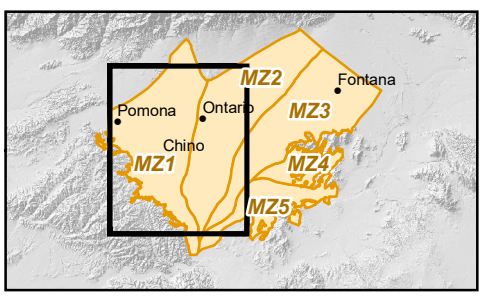


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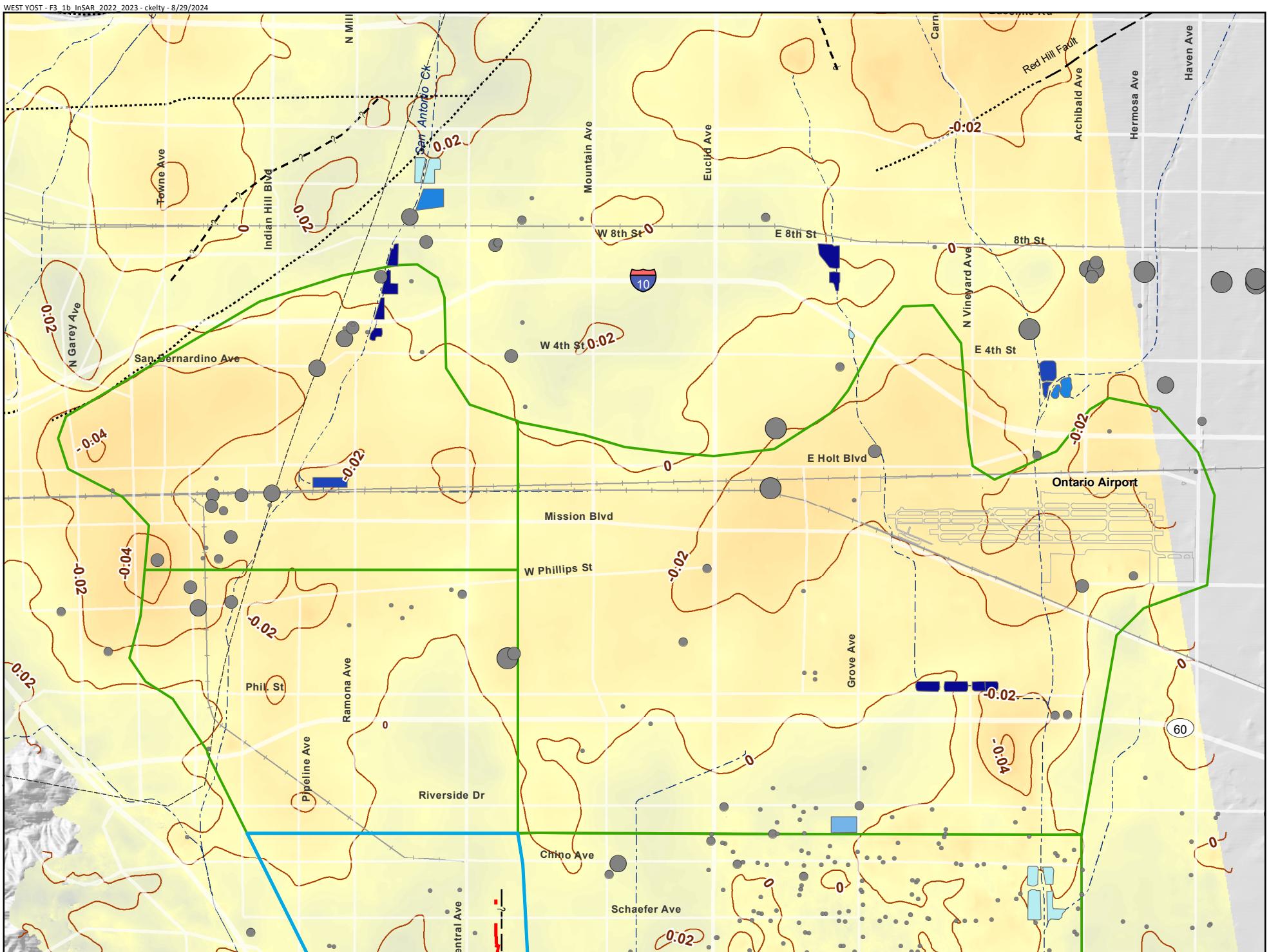
Figure 3-1a

Vertical Ground Motion across the Western Chino Basin: 2011-2024

WEST YOST - F3_1b_InSAR_2022_2023 - ckelty - 8/29/2024



Relative Change in Land Surface Elevation
as Estimated by InSAR
(March 2022 to May 2023)

+0.2 ft
0 ft
-0.2 ft
InSAR absent or incoherent

Managed Area
Areas of Subsidence Concern

Average Annual Groundwater Pumping
April 1, 2022 to March 31, 2023
(afy)

0 - 100
101 - 500
501 - 1,000
1,001 - 2,000
> 2,000

Historical Ground Fissures
Approximate Location of the Riley Barrier
Fault (solid where accurately located; dashed where approximately located or inferred; dotted where concealed)

Average Annual Basin Recharge
April 1, 2022 to March 31, 2023
(afy)

0 - 250
250 - 500
500 - 750
750 - 1,250
> 1,250

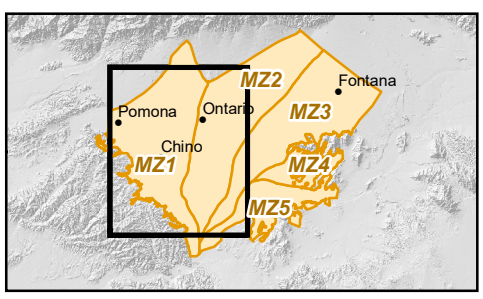


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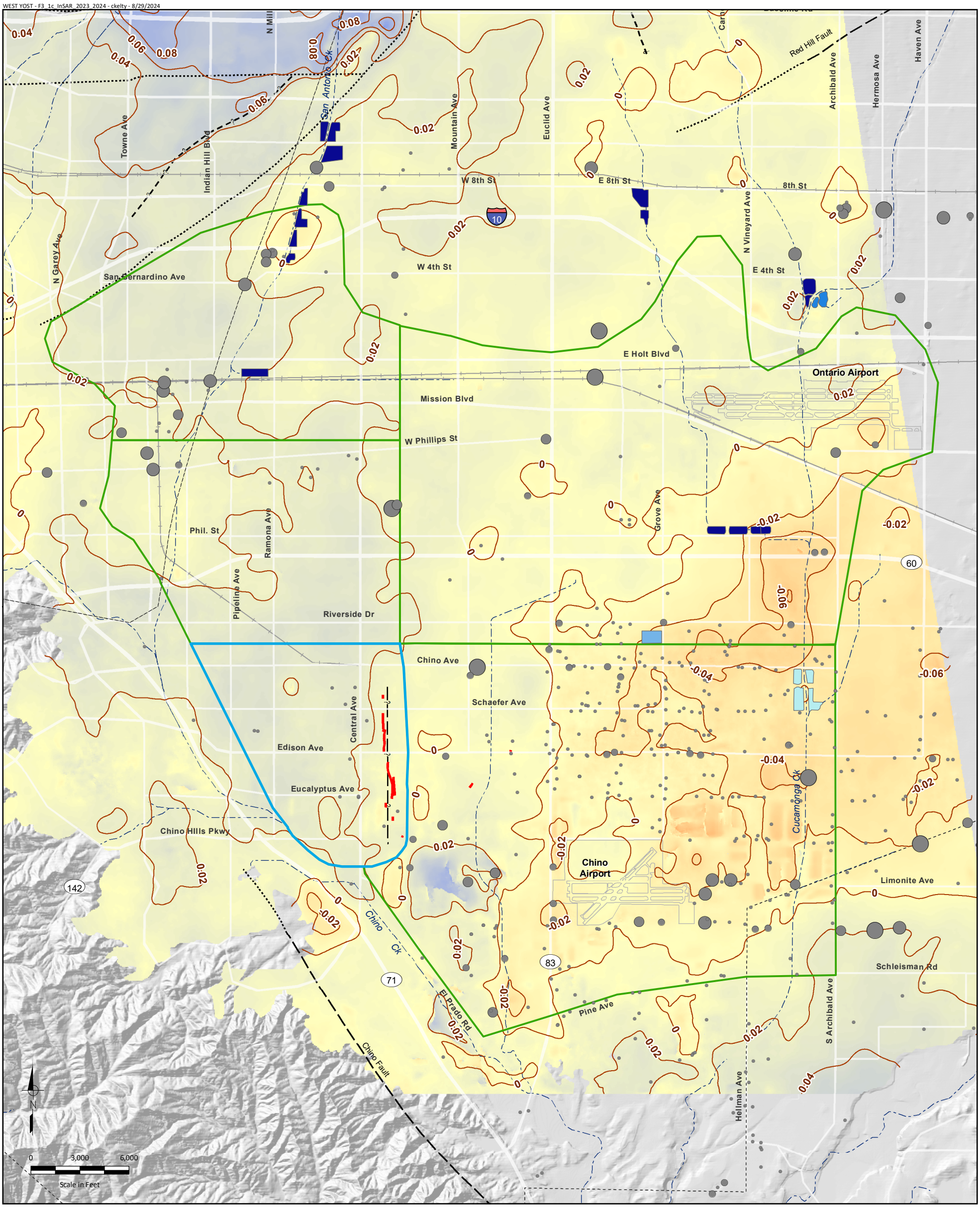
Figure 3-1b

Vertical Ground Motion across the Western Chino Basin: 2022-2023



Relative Change in Land Surface Elevation
as Estimated by InSAR
(May 2023 to March 2024)

+0.2 ft
0 ft
-0.2 ft
InSAR absent or incoherent

Managed Area
Areas of Subsidence Concern

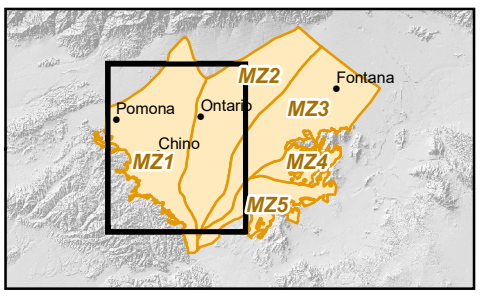
Average Annual Groundwater Pumping
April 1, 2023 to March 31, 2024
(afy)

0 - 100
101 - 500
501 - 1,000
1,001 - 2,000
> 2,000

Historical Ground Fissures
Approximate Location of the Riley Barrier
Fault (solid where accurately located; dashed where approximately located or inferred; dotted where concealed)

Average Annual Basin Recharge
April 1, 2023 to March 31, 2024
(afy)

0 - 250
250 - 500
500 - 750
750 - 1,250
> 1,250



Chino Basin Watermaster
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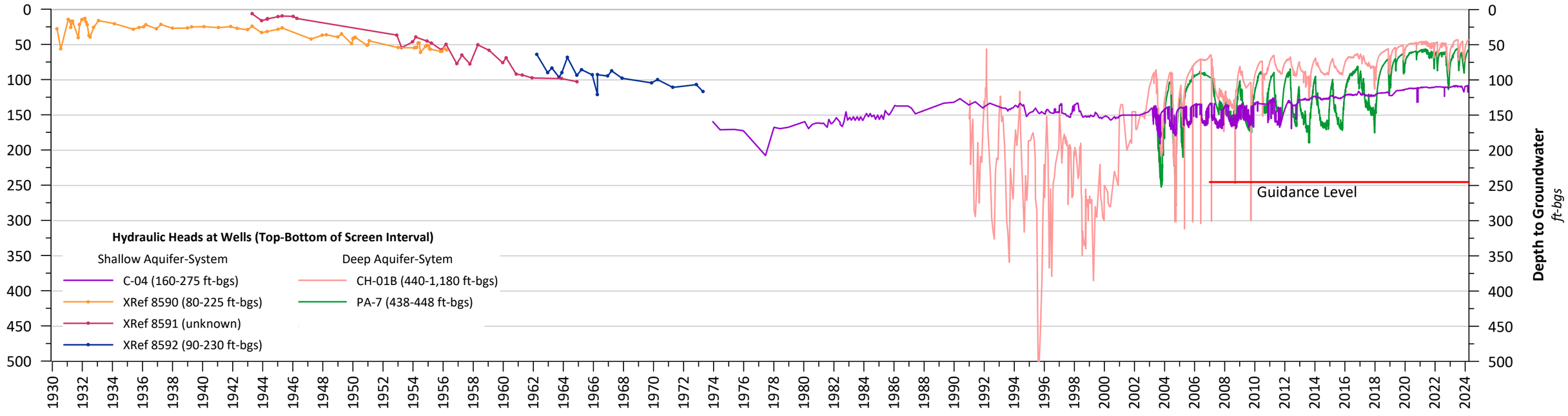
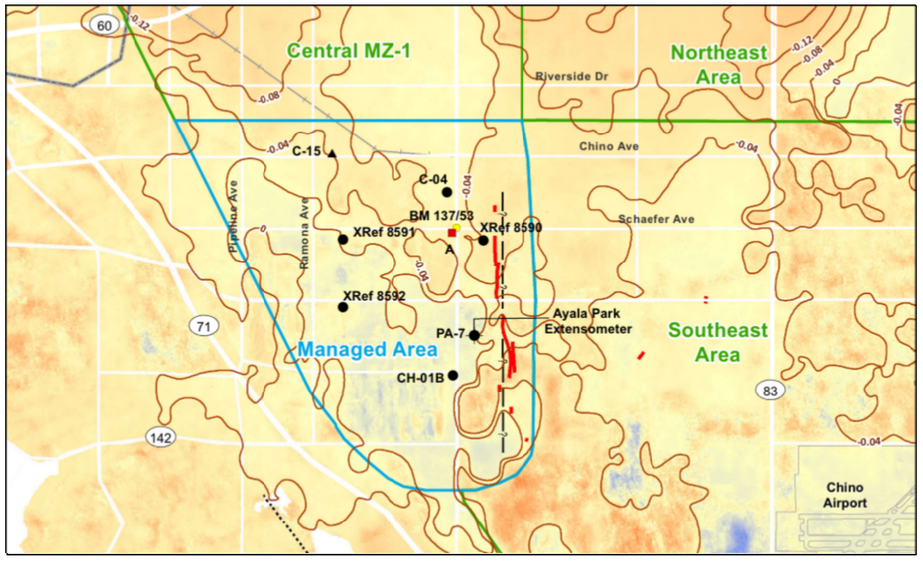
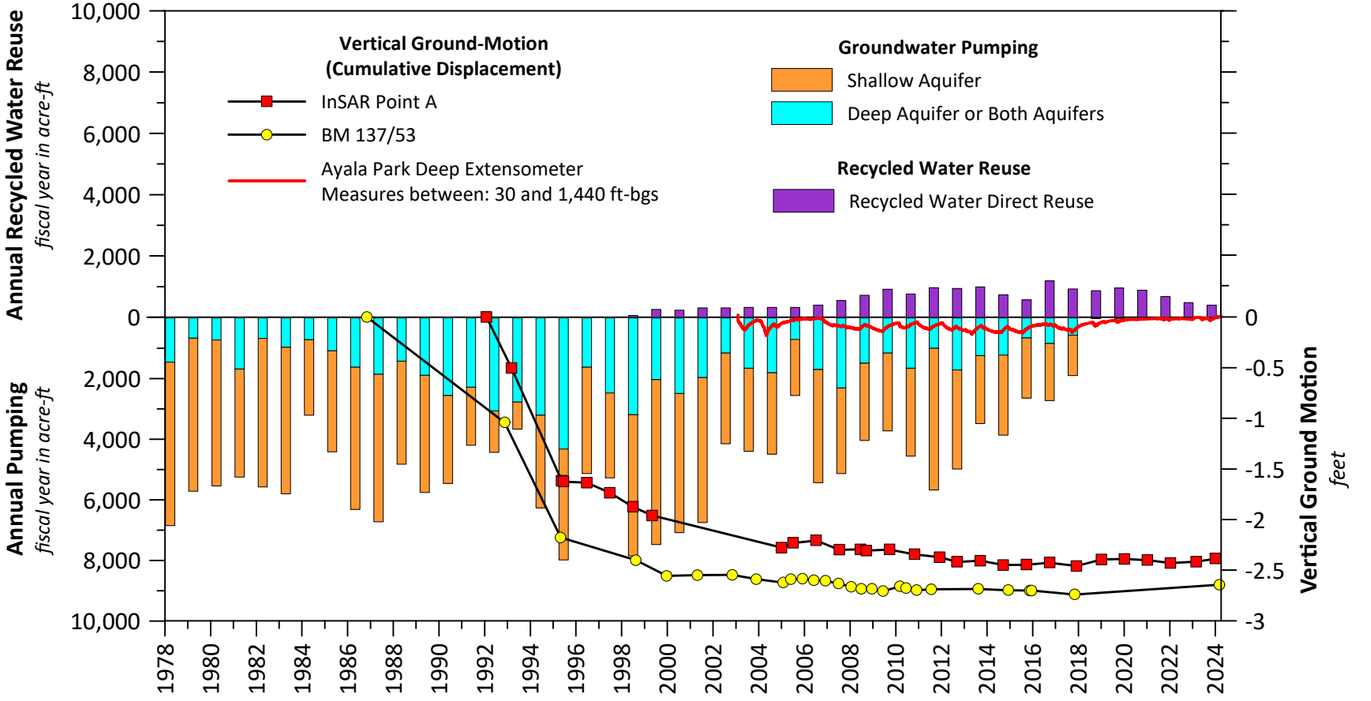
Figure 3-1c

Vertical Ground Motion across the Western Chino Basin: 2023-2024







Recharge and pumping data through March 31, 2024

For the time-period between April 1, 2023 and March 31, 2024:
Pumping from the shallow aquifer = 24 af
Pumping from the deep aquifer = 1 af

Figure 3-2a

History of Land Subsidence in the Managed Area

Riverside Dr
Chino Ave
Schaefer Ave
Edison Ave
Eucalyptus Ave
Chino Hills Pkwy
Ramona Ave
Pipeline Ave
Central Ave
Mountain Ave
C-15
71
142
0
2,000
4,000
Scale in Feet
N

Relative Change in Land Surface Elevation
as Estimated by InSAR
(March 2011 to March 2024)

High : 0.6
0
Low : -0.6
InSAR absent or incoherent

Ground-Level Survey Benchmark
(Measured May 3, 2024) Labeled
by Vertical Ground Motion
(in feet from November 2011 to
May 2024)

Average Annual Groundwater Pumping
April 1, 2011 to March 31, 2024
(afy)

- 0 - 100
- 101 - 500
- 501 - 1,000
- 1,001 - 2,000
- > 2,000

Ayala Park Extensometer
Groundwater Well (C-15)
Areas of Subsidence Concern
Fault (solid where accurately located; dashed where approximately located or inferred; dotted where concealed)
Historical Ground Fissures

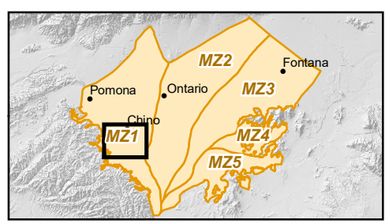


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Figure 3-2b

Vertical Ground Motion across Southeast MZ-1: 2011-2024

WEST YOST - F3-2b_InSAR_LT_Southeast - dkirby - 9/4/2024

◂Compaction Expansion▸
Aquifer-System Deformation
feet

-0.1
-0.05
0
0.05
0.1
0.15
0.2

Depth to Groundwater
feet-btoc

0
40
80
120
160
200
240

Full Recovery (90 ft-btoc) on 4/6/11
Full Recovery on 3/26/12
Full Recovery on 6/27/16
Full Recovery on 5/3/18
Full Recovery on 2/1/19
Full Recovery on 11/28/19
Full Recovery on 12/15/22
Full Recovery on 12/8/23

PA-7 Guidance Level = 245 feet-btoc

Quarterly Groundwater Pumping
acre-ft

2,000
1,600
1,200
800
400
0

For the time-period between July 1, 2023 and March 31, 2024:
Pumping from the shallow aquifer = 24 af
Pumping from the deep aquifer = 1 af

Jan-11 Apr-11 Jul-11 Oct-11 Jan-12 Apr-12 Jul-12 Oct-12 Jan-13 Apr-13 Jul-13 Oct-13 Jan-14 Apr-14 Jul-14 Oct-14 Jan-15 Apr-15 Jul-15 Oct-15 Jan-16 Apr-16 Jul-16 Oct-16 Jan-17 Apr-17 Jul-17 Oct-17 Jan-18 Apr-18 Jul-18 Oct-18 Jan-19 Apr-19 Jul-19 Oct-19 Jan-20 Apr-20 Jul-20 Oct-20 Jan-21 Apr-21 Jul-21 Oct-21 Jan-22 Apr-22 Jul-22 Oct-22 Jan-23 Apr-23 Jul-23 Oct-23 Jan-24 Apr-24

Aquifer-System Deformation at Ayala Park (Extensometer Depth Interval)
- Shallow Extensometer (30-550 ft-bgs)
- Deep Extensometer

Hydraulic Heads at Ayala Park (Screened Interval)
- Shallow Piezometer PA-10 (213-233 ft-bgs)
- Deep Piezometer PA-7 (438-448 ft-bgs)

Quarterly Groundwater Pumping (see Table 3-1 for groundwater pumping by well)
- Shallow Aquifer
- Deep Aquifer

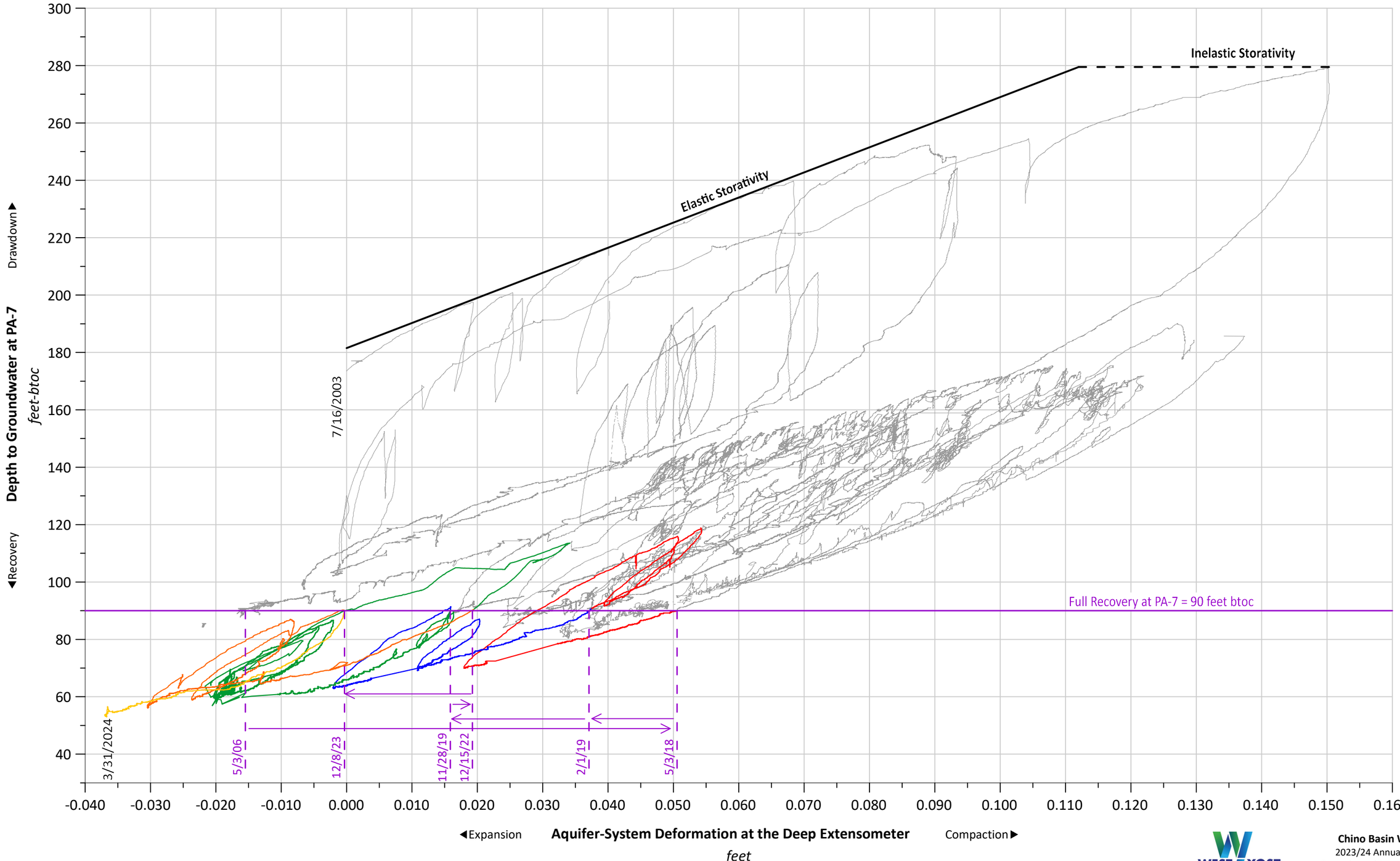
F3-3_ManagedAreaStrnStrn.gpj

WEST YOST

Chino Basin Water Master
2023/24 Annual Report for the Ground-Level Monitoring Program

Figure 3-3

Stress and Strain within the Managed Area



Stress - Strain Hysteresis Loops of Drawdown

- Drawdown and recovery between 7/16/03 and 5/3/18
- Drawdown and recovery between 5/3/18 to 2/1/19
- Drawdown and recovery between 2/1/19 and 11/28/19
- Drawdown and recovery between 11/28/19 and 12/15/22
- Drawdown and recovery between 12/15/22 and 12/8/23
- Drawdown and recovery between 12/8/23 and 3/31/2024

*PA-7 well-screen interval: 438-448 ft-bgs

Depth interval of the Deep Extensometer: 30-1,400 feet-bgs

WEST YOST - F3-4_ManagedAreaHysteresis.gpj

WEST YOST

Chino Basin Water Master
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Figure 3-4

Stress-Strain Diagram
Ayala Park Extensometer

Quarterly Groundwater Pumping
acre-ft

0
200
400
600
800
1,000
1,200
1,400
1,600
1,800
2,000
2,200

For the time-period between April 1, 2023 and March 31, 2024:
Pumping from the shallow aquifer = 24 af
Pumping from the deep aquifer = 1 af

When groundwater elevations remain above 585 ft-amsl,
InSAR indicates no permanent land subsidence.
Therefore, 585 ft-amsl is the current estimate of the
pre-consolidation stress threshold.

585 ft-amsl

Groundwater Elevation
ft-amsl

640
620
600
580
560
540
520
500

Vertical Ground Motion
feet

0.1
0.05
0
-0.05
-0.1
-0.15
-0.2
-0.25

2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024

Quarterly Groundwater Pumping
Managed Area
Shallow Aquifer
Deep Aquifer

Groundwater Elevation at Wells (Screen Interval)
C-15 (270 - 820 ft-bgs)

Vertical Ground Motion
Cumulative Displacment (C-15)

WEST YOST - F3-5C15_InSAR_PumpRecharge.gpj

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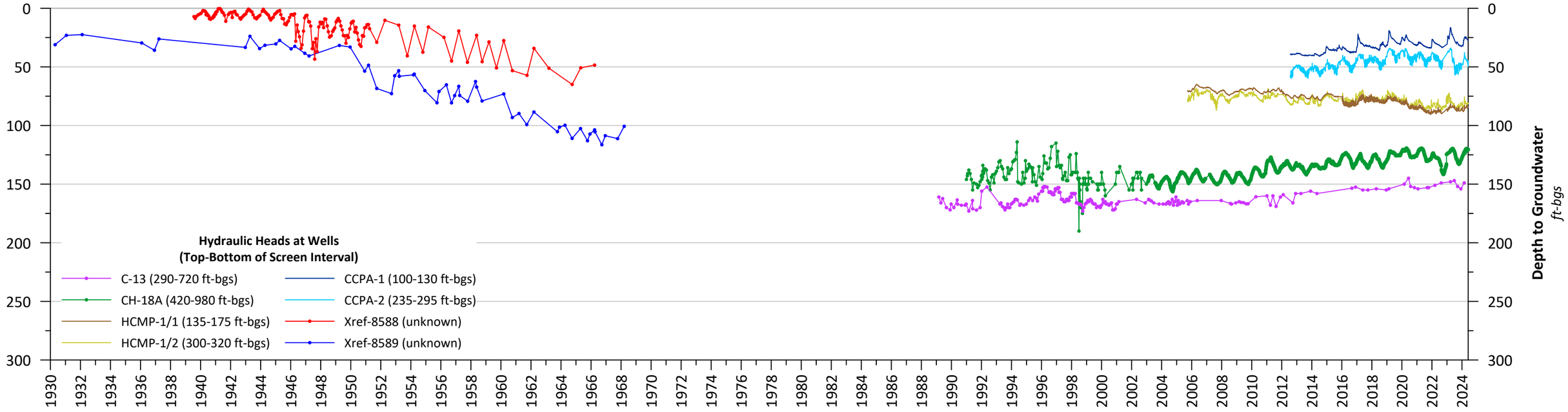
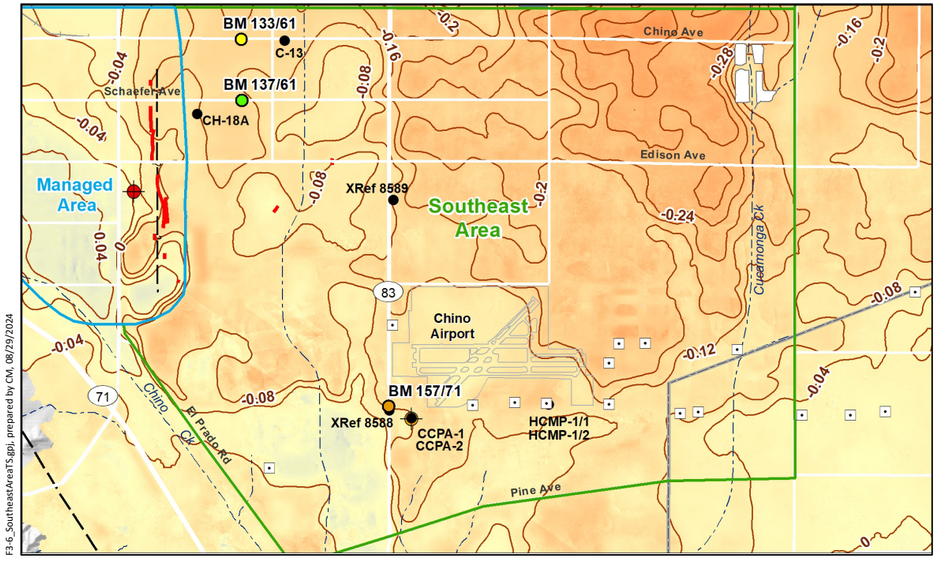
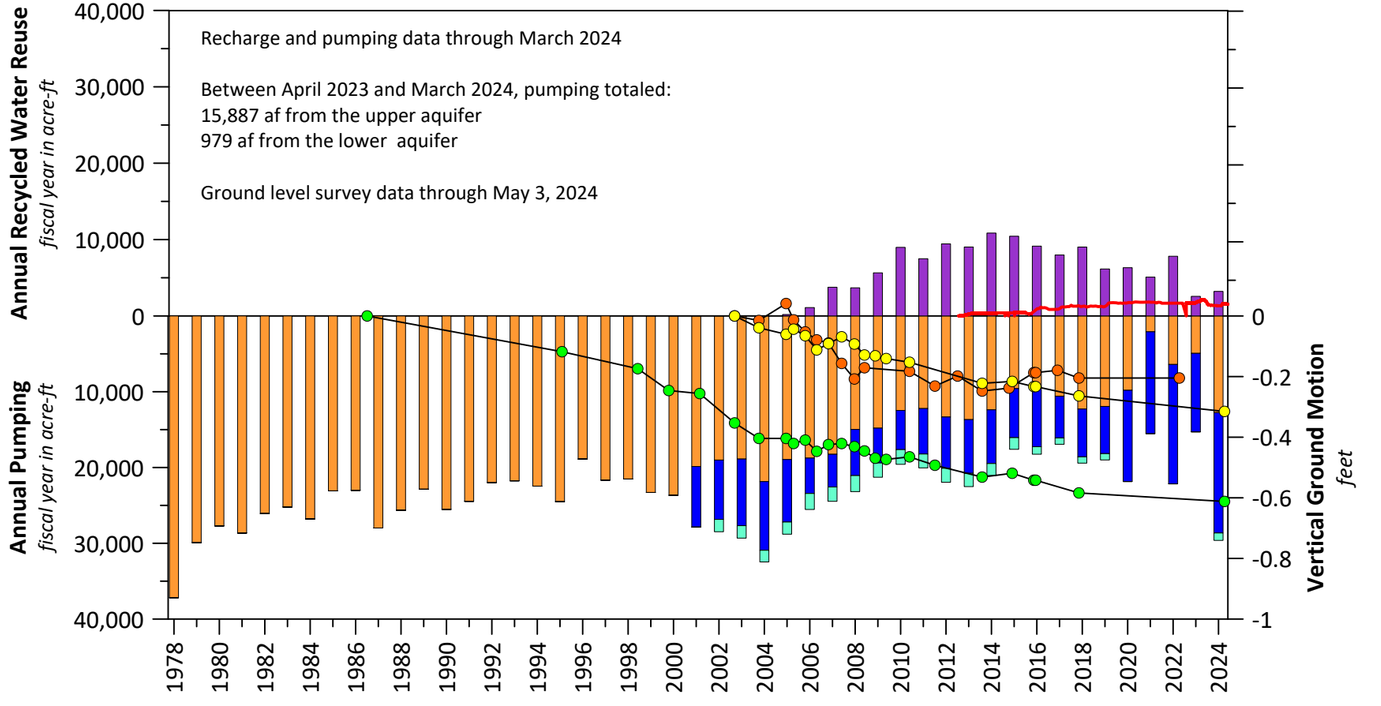
Figure 3-5

Hydraulic Heads at C-15 Versus Groundwater Pumping and Vertical Ground Motion





InSAR from March 2011 to March 2024 (see Figure 3-1a)



Vertical Ground-Motion (Cumulative Displacement)

- BM 133/61
- BM 137/61
- BM 157/71
- CCX-2 Extensometer Measures between: 50 and 610 ft-bgs

Groundwater Pumping

- Groundwater pumping from municipal and private wells in the Southeast Area
- Groundwater pumping from desalter wells in the upper aquifer
- Groundwater pumping from desalter wells in the lower aquifer

Recycled Water Reuse

- Recycled Water Direct Reuse

Chino Basin Watermaster
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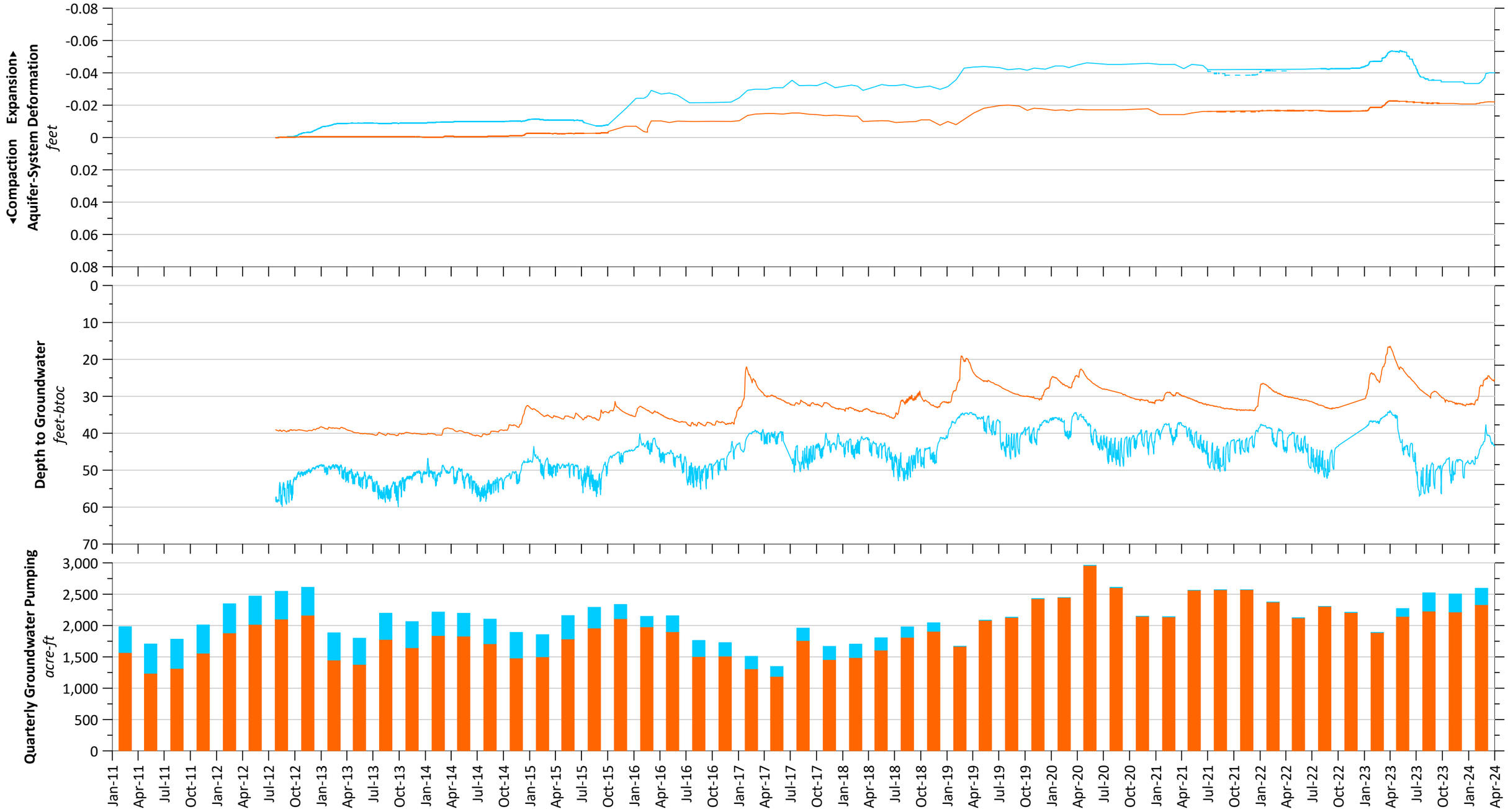
Figure 3-6

History of Land Subsidence in the Southeast Area



Aquifer-System Deformation (Extensometer Depth Interval)

- CCX-1 (0-140 ft-bgs)
- CCX-2 (50-610 ft-bgs)

Hydraulic Heads (Screened Interval)

- CCPA-1 (100-130 ft-bgs)
- CCPA-2 (235-295 ft-bgs)

Quarterly Groundwater Pumping

- Shallow Aquifer (CDA-5 to 11; 16, 17, 20 and 21)
- Deep Aquifer (CDA-1 to 4)

F3-7_SoutheastAreaStrsStrn.ggb, prepared by CM, 08/29/2024

WEST YOST

Chino Basin Watermaster
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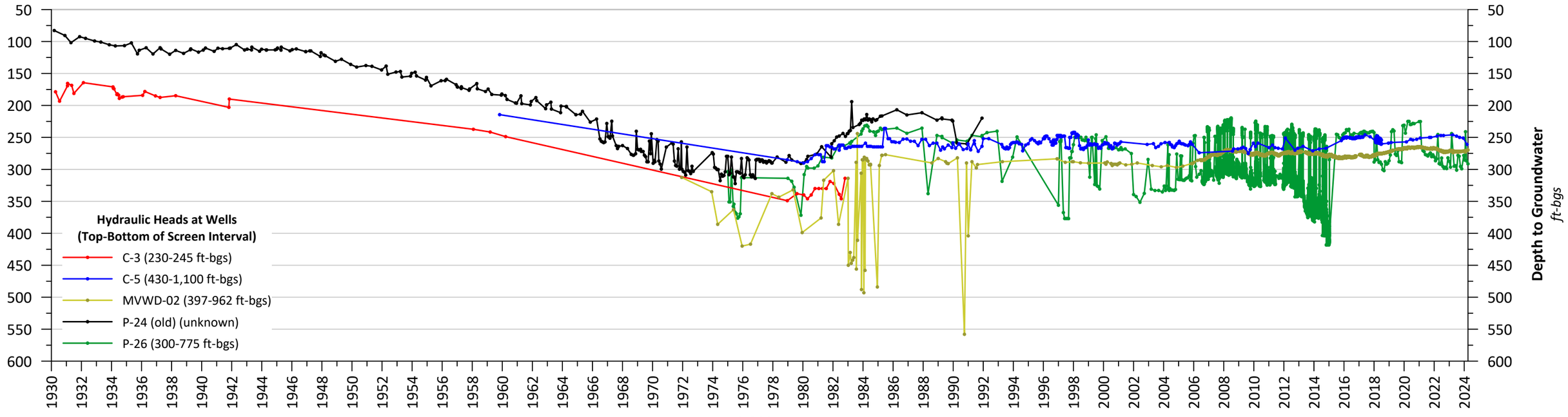
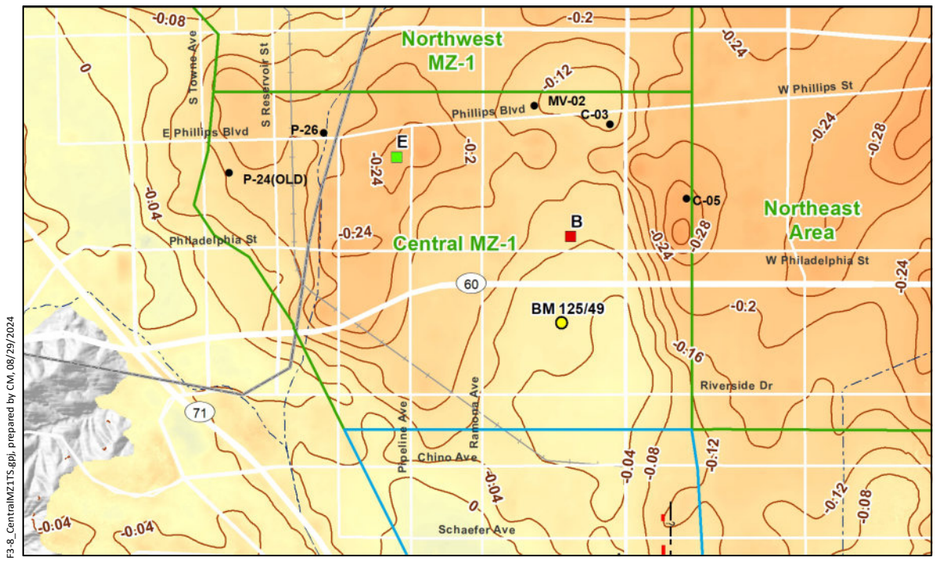
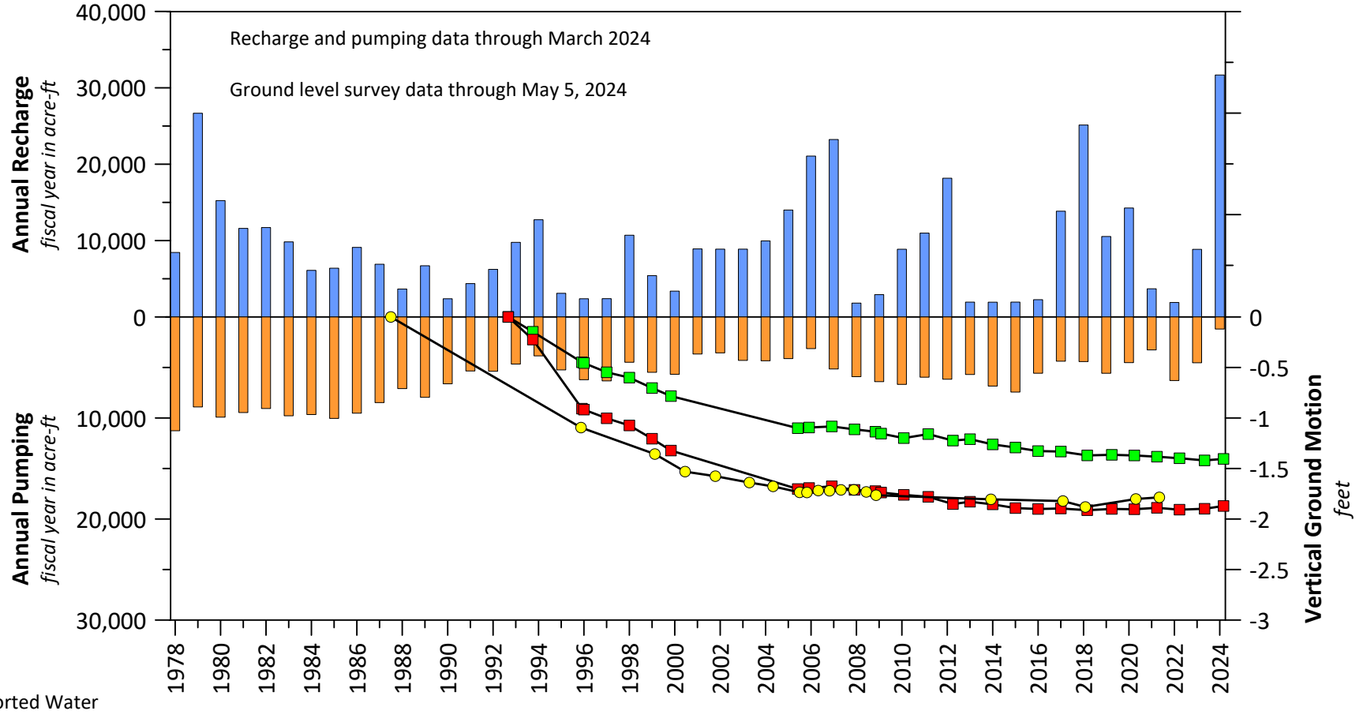
Figure 3-7

Stress and Strain within the Southeast Area





InSAR from March 2011 to March 2024 (see Figure 3-1a)



Vertical Ground-Motion (Cumulative Displacement)

- InSAR Point B
- InSAR Point E
- BM 125/49

Recharge and Pumping

Recharge of Recycled Water, Storm-water,* and Imported Water at the College Heights, Upland, Montclair, and Brooks Recharge Basins; and, at MVWD ASR Wells

*Storm-water is an estimated amount prior to fiscal year 2004/05

Groundwater Pumping from Wells in Central MZ-1

Chino Basin Watermaster
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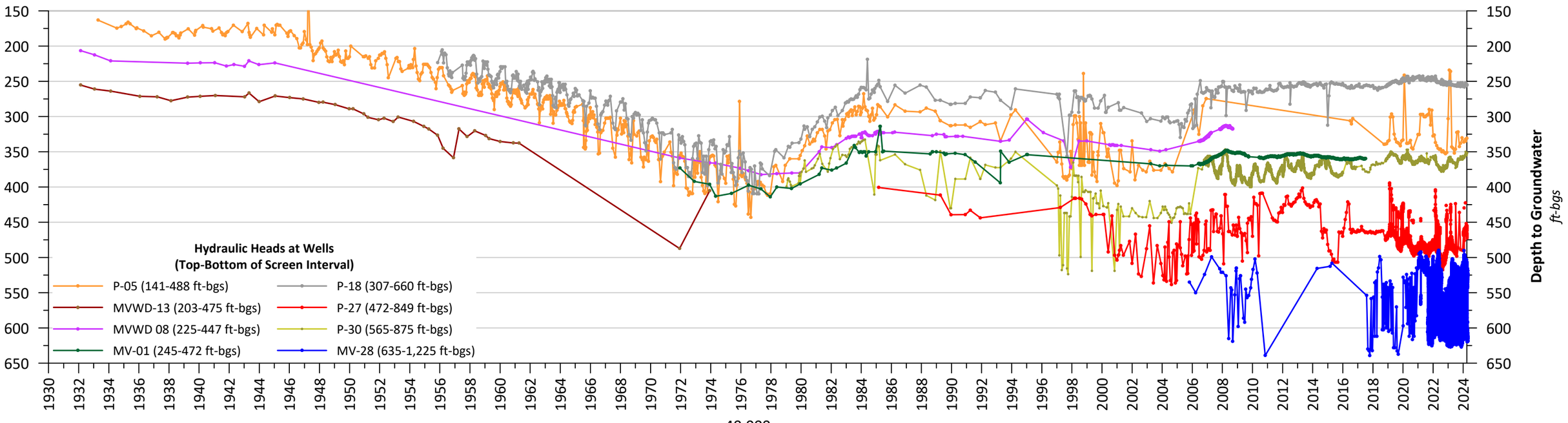
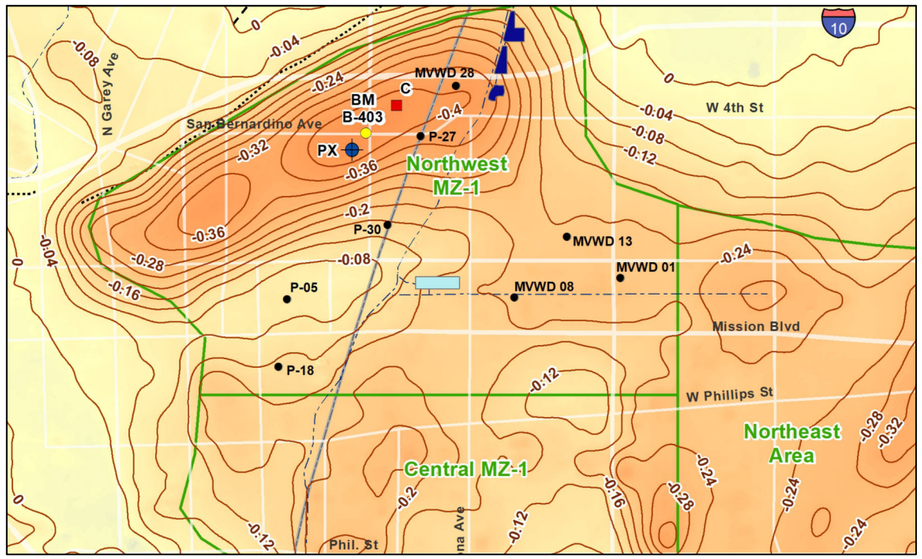
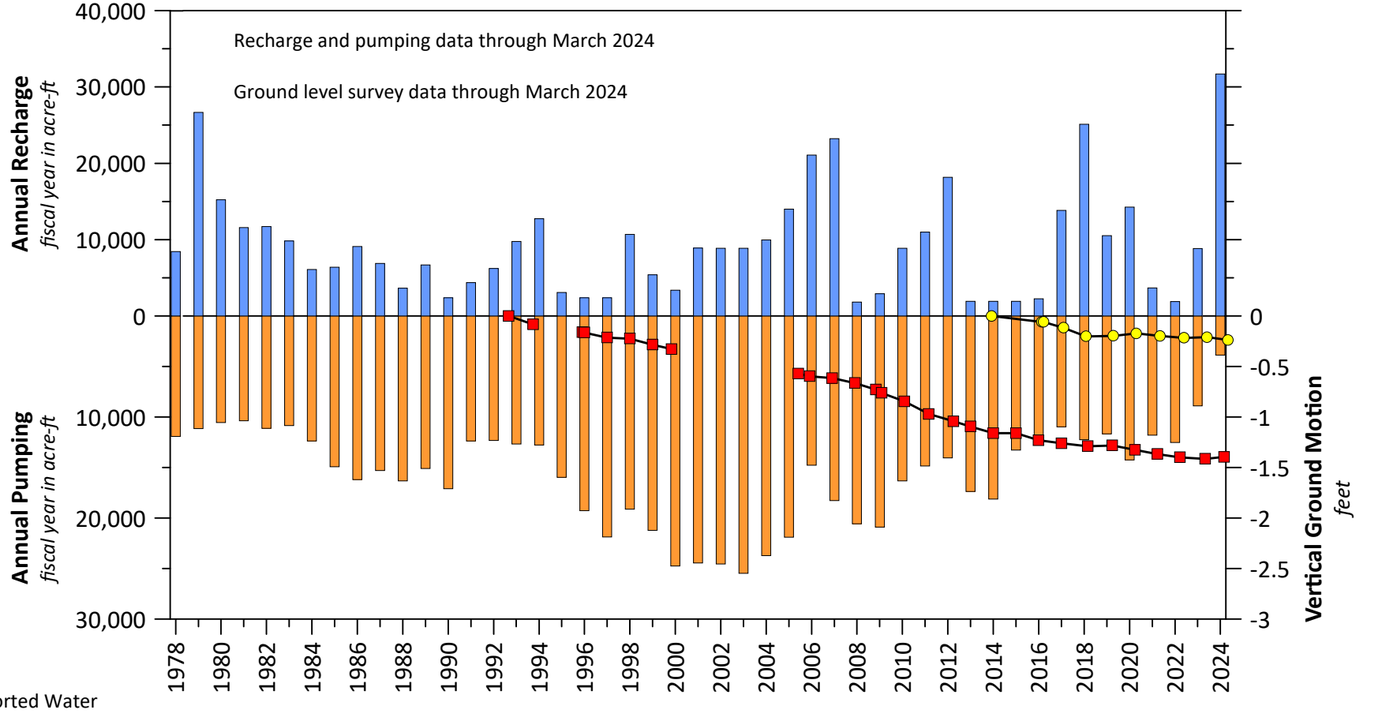
Figure 3-8

History of Land Subsidence in Central MZ-1





InSAR from March 2011 to March 2024 (see Figure 3-1a)



Vertical Ground-Motion (Cumulative Displacement)

- BM B-403
- InSAR at Point C

Recharge and Pumping

- Recharge of Recycled Water, Storm-water,* and Imported Water at the College Heights, Upland, Montclair, and Brooks Recharge Basins; and, at MVWD ASR Wells
  *Storm-water is an estimated amount prior to fiscal year 2004/05
- Groundwater Pumping from Wells in Northwest MZ-1

Chino Basin Water Master
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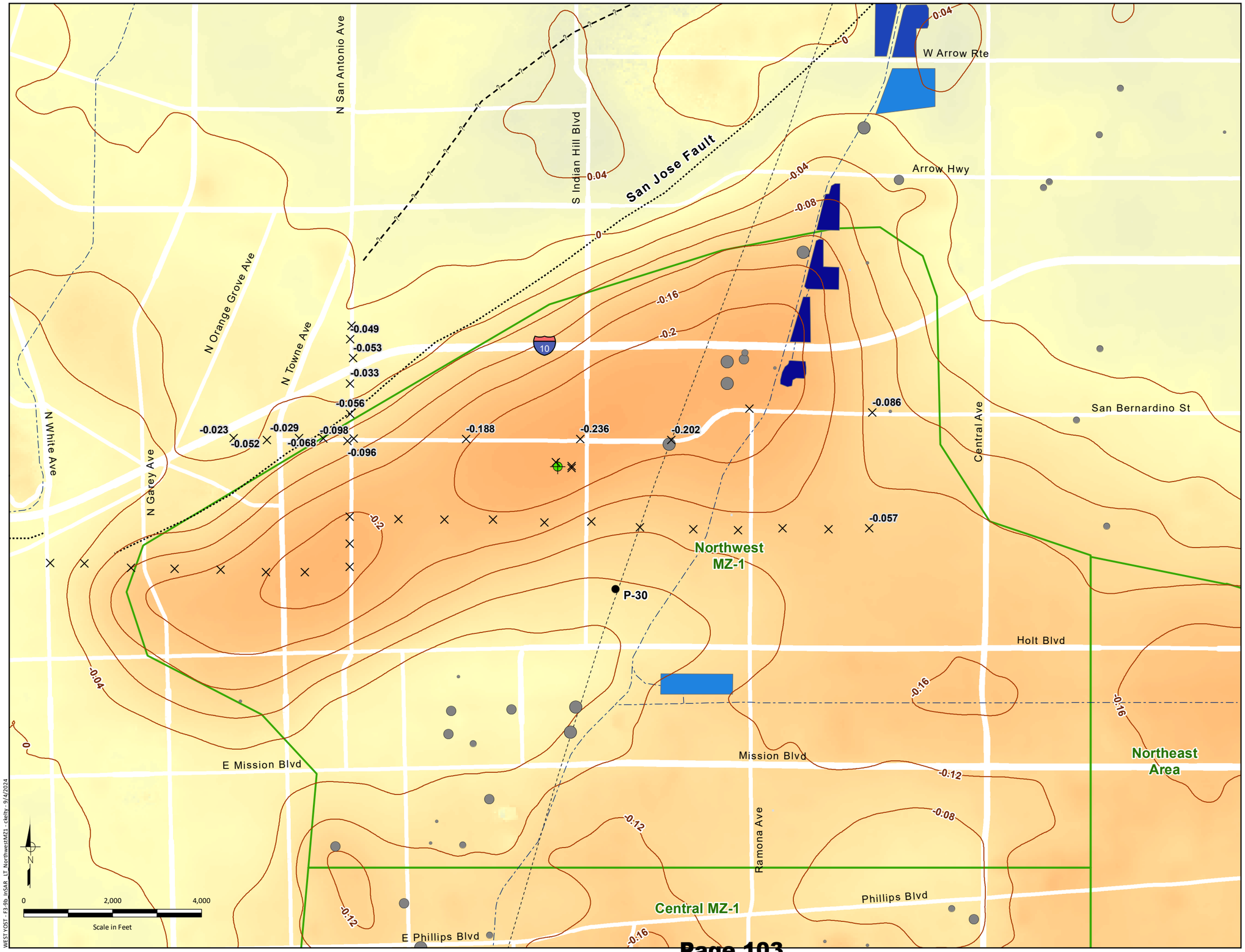
Figure 3-9a

History of Land Subsidence in Northwest MZ-1

WEST YOST - F3-9a_NorthwestMZ1TS.gpj - CK - 20240829



WEST YOST - F3-9b_InSAR_LT_NorthwestMZ1 - clelty - 9/4/2024

Relative Change in Land Surface Elevation
as Estimated by InSAR
(April 2014 to March 2024)

+0.45 ft
0 ft
- 0.25 ft
-0.45 ft

InSAR absent or incoherent

Ground-Level Survey Benchmark
(Measured May 3, 2024) Labeled by Vertical
Ground Motion (in feet from November 2014
to May 2024)

Average Annual Groundwater Pumping
April 1, 2014 to March 31, 2024
(afy)

- 0 - 100
- 101 - 500
- 501 - 1,000
- 1,000 - 2,000
- > 2,000

Average Annual Basin Recharge
April 1, 2014 to March 31, 2024
(afy)

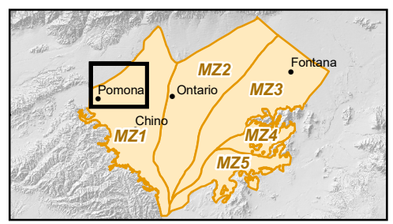
- 0 - 500
- 500 - 1,000
- 1,000 - 1,500
- 1,500 - 2,000
- 2,000 - 2,500
- > 2,500

Pomona Extensometer Facility

Groundwater Well (P-30)

Areas of Subsidence Concern

Fault (solid where accurately located;
dashed where approximately located
or inferred; dotted where concealed)



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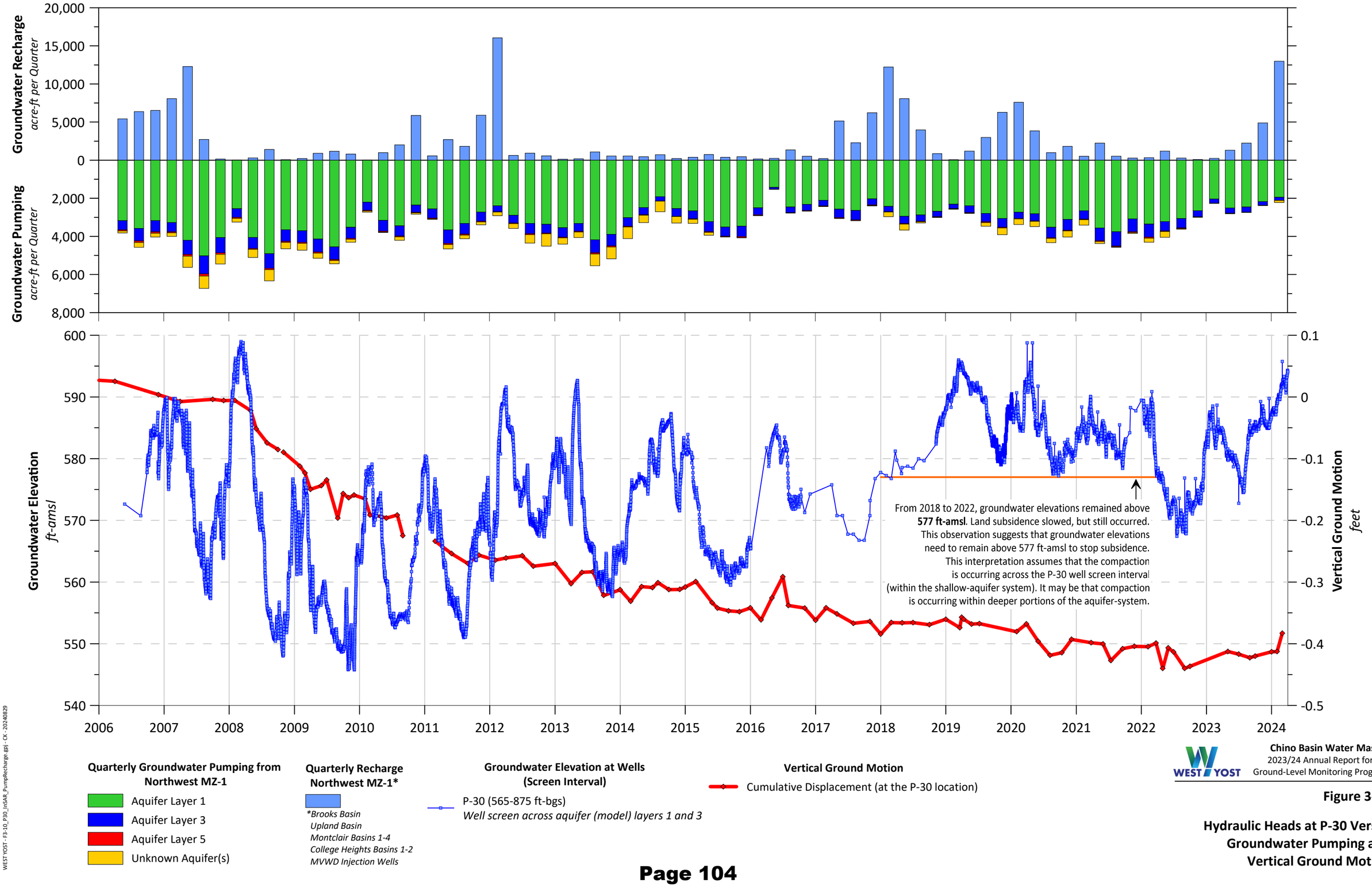
WEST YOST

Figure 3-9b

Vertical Ground Motion across Northwest MZ-1: 2014-2024



WEST YOST - F3-10_P30_InSAR_PumpRecharge.gpj - CK - 20240829

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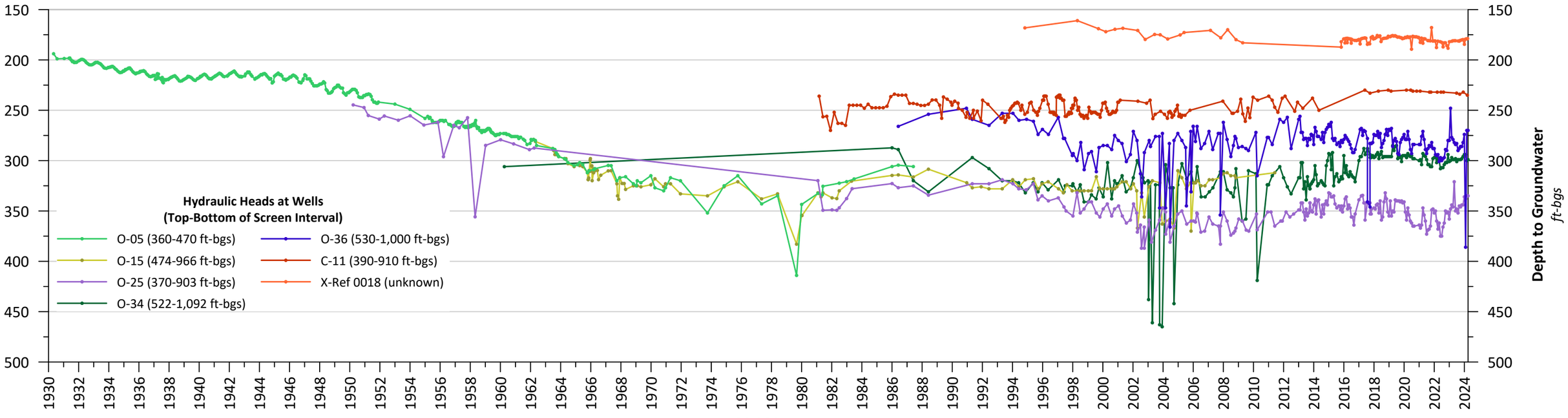
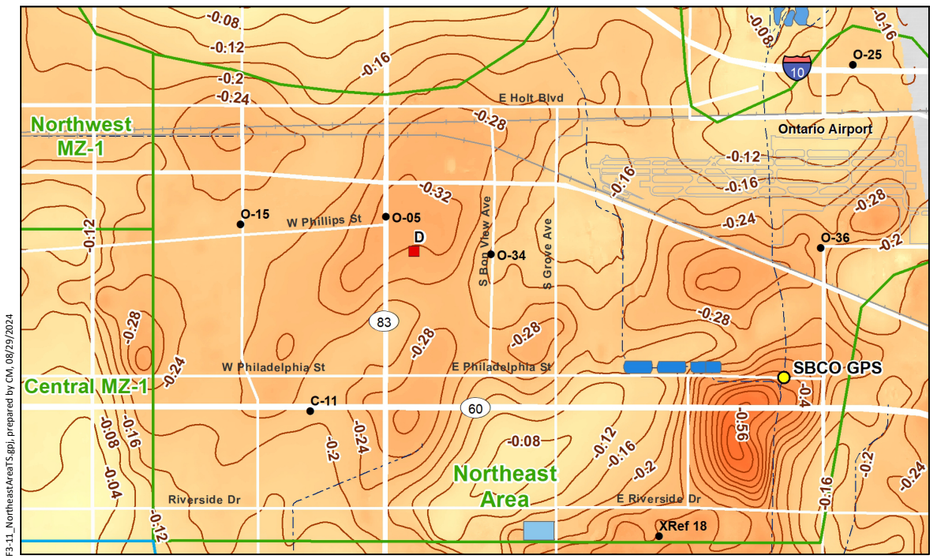
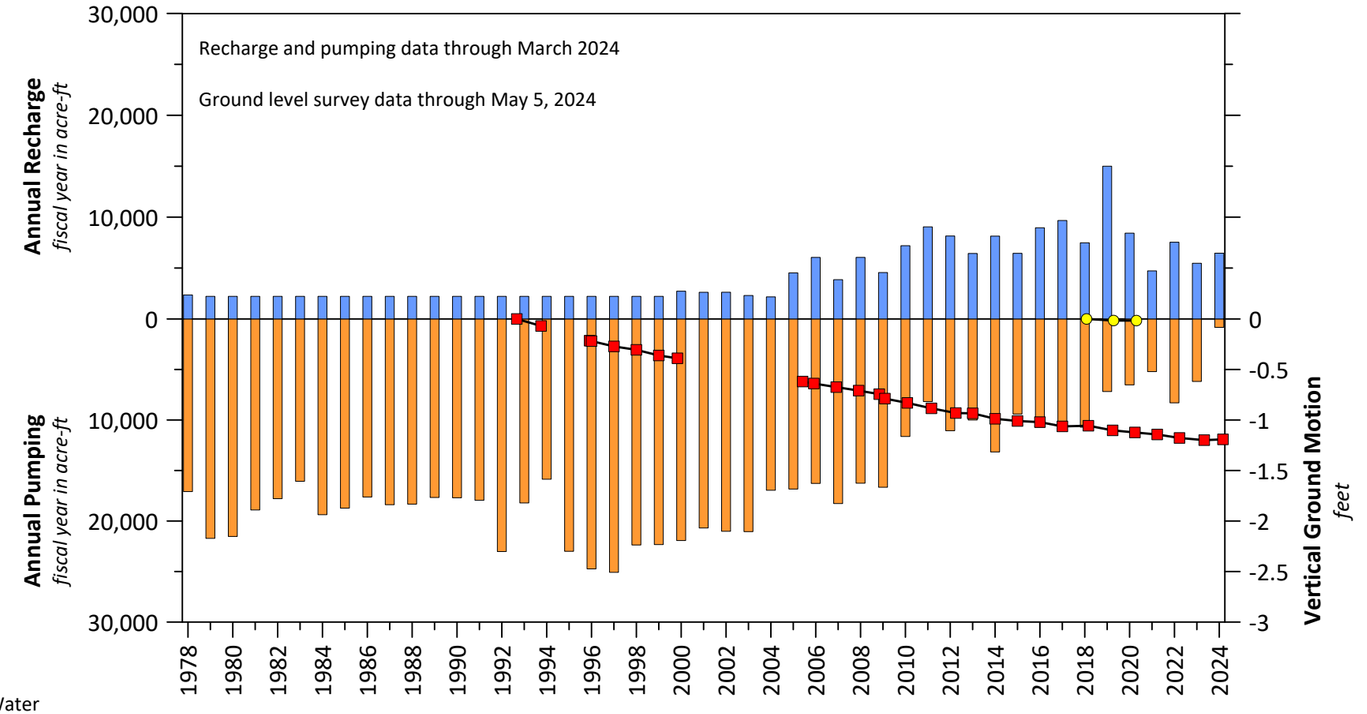
Figure 3-10

Hydraulic Heads at P-30 Versus Groundwater Pumping and Vertical Ground Motion





InSAR from March 2011 to March 2024 (see Figure 3-1a)

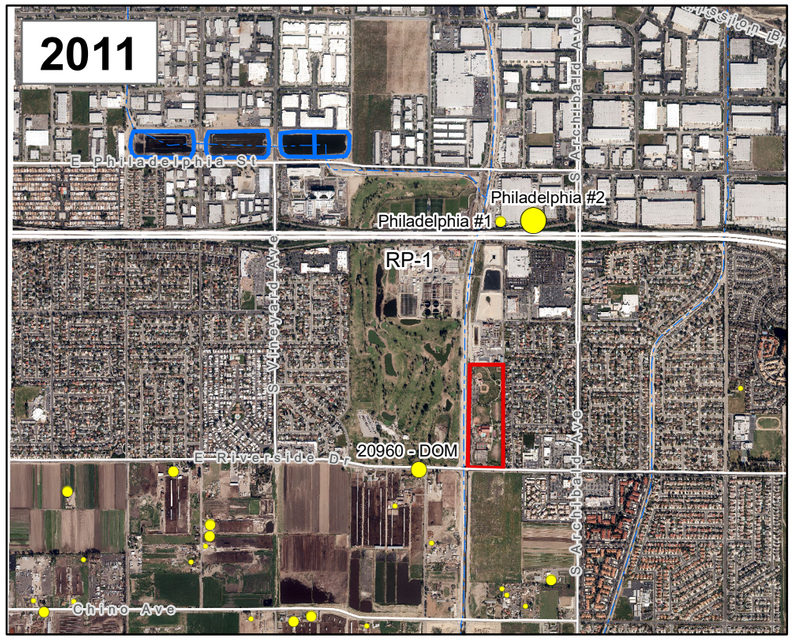


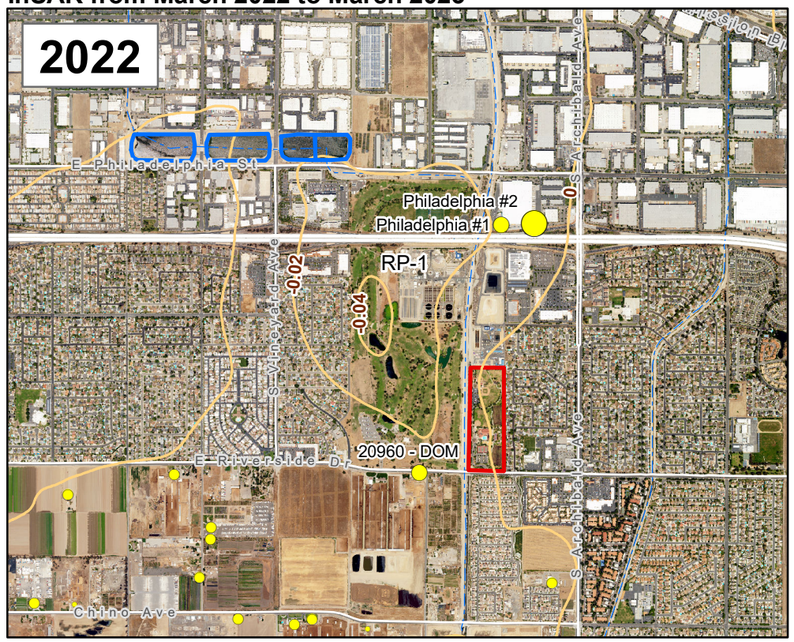
Vertical Ground-Motion (Cumulative Displacement)

- BM SBCO GPS
- InSAR at Point D

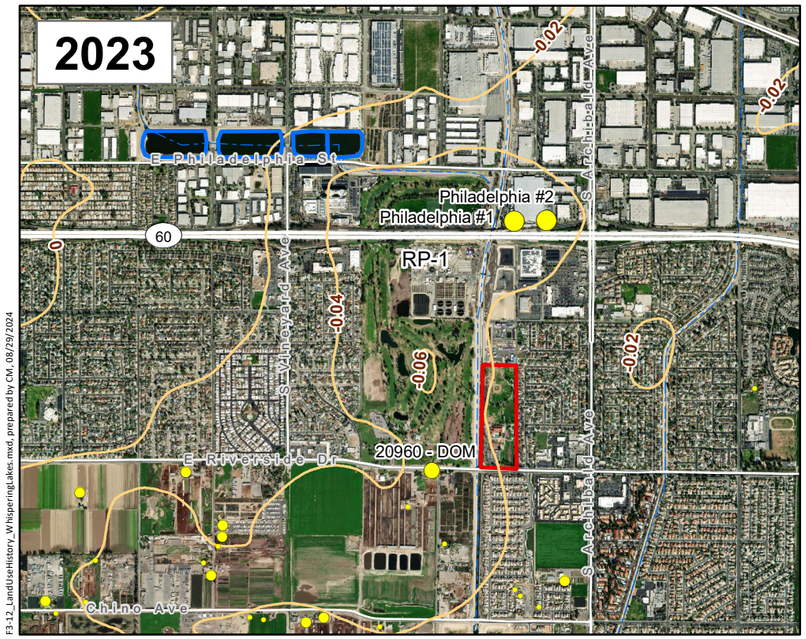
Recharge and Pumping

- Recharge of Recycled, Storm-water,* and Imported Water at the Ely, Grove, Turner, 7th Street and 8th Street Recharge Basins
  *Storm-water is an estimated amount prior to fiscal year 2004/05
- Groundwater Pumping from Wells in the Northeast Area

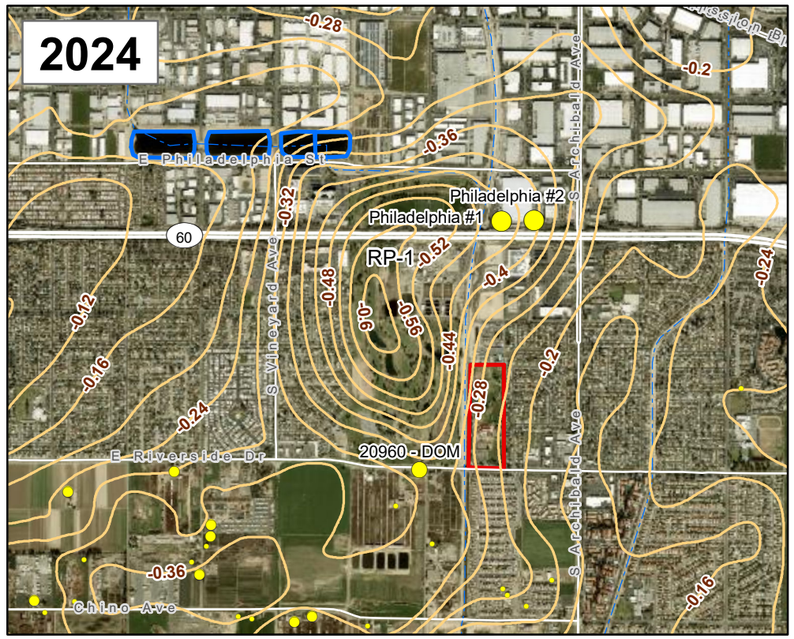




InSAR from March 2022 to March 2023



InSAR from March 2023 to March 2024



InSAR from March 2011 to March 2024

F3-12_LandUseHistory_WhisperingLakes.mxd, prepared by CM, 08/29/2024

N

0 0.125 0.25 0.5 0.75 1 Miles

Contours of the Relative Change in Land Surface Elevation as Estimated by InSAR (ft)

Annual Groundwater Production (af)
(reported by fiscal year)

- < 10
- 10 - 100
- 101 - 250
- 250 - 500
- 500 - 730

*Pumping records unavailable prior 1978 and the Stipulated Judgement
**Pumping for FY 2024 is limited to data from Q1 through Q3

Other Features

- Location of Historic Sewage Disposal Ponds
- Ely Recharge Basins
- Rivers and Streams

Chino Basin Watermaster

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Figure 3-12

Land Use, Pumping, and Vertical Ground Motion at the Whispering Lakes Subsidence Feature

Seismicity in the Chino Basin
March 1, 2011 to March 31, 2024
(Magnitude)

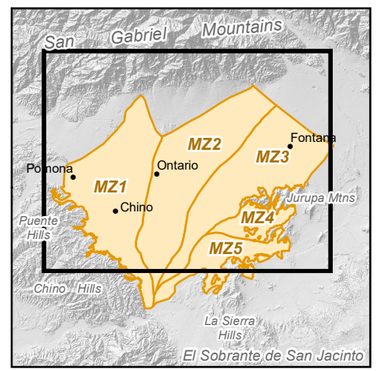
- 0 - 1
- 1 - 2
- 2 - 3
- 3 - 4
- 4 - 5
- 5 - 6

Relative Change in Land Surface Elevation
as Estimated by InSAR
(March 2011 to March 2024)

High : 0.6
0 ft
Low : -0.6

- Pomona Extensometer
- Ayala Park Extensometer
- Chino Creek Extensometer
- Managed Area
- Areas of Subsidence Concern
- Flood Control and Conservation Basins
- Historical Ground Fissures
- Approximate Location of the Riley Barrier

Fault (solid where accurately located; dashed where approximately located or inferred; dotted where concealed)



Chino Basin Watermaster
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Figure 3-13

Seismicity across the Chino Basin: 2011-2024

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions and Recommendations

The major conclusions and recommendations of this 2023/24 Annual Report for the GLMP are:

- At the Ayala Park Extensometer in the Managed Area, hydraulic heads within the shallow and deep aquifer-systems are at or near their highest levels since the inception of the GLMP in 2003, and the Ayala Park Extensometers recorded elastic compaction and expansion of the aquifer-system during the current reporting period of March 2023 to March 2024. The increases in hydraulic head were due to the virtual cessation of pumping in the Managed Area during the reporting period. The reduced pumping is largely due to the presence of water-quality contaminants in groundwater that constrain its use as drinking water. Hydraulic heads in the deep aquifer-system remain well above the Guidance Level, and the Ayala Park Extensometers recorded no inelastic compaction of the aquifer-system during the current reporting period.
- Across most of the other Areas of Subsidence Concern, prior annual reports have noted long-term trends of gradual land subsidence since 1992, even during periods of stable or increasing heads. The long-term trends in downward vertical ground motion have been of particular concern in Northwest MZ-1, where subsidence occurs differentially across the San Jose Fault and differential subsidence poses a threat for ground fissuring. The long-term trends of land subsidence have been attributed to the delayed drainage and compaction of aquitards as they slowly equilibrate with lower heads in the aquifers that were caused by historical pumping. Over the past several years, pumping has decreased across much of the western Chino Basin, partly due to the presence of contaminants in groundwater that constrain its use as drinking water. Also, artificial recharge of imported water in Northwest MZ-1 (Upland, College Heights, Montclair, and Brooks basins) has increased mainly due to a "put" cycle in the Dry-Year Yield Program. The decreases in pumping and increases in recharge have caused heads to stabilize or increase, and InSAR estimates of ground motion across most of the Areas of Subsidence Concern have shown that the long-term trends of land subsidence have slowed. These observations suggest:
  - The reductions in pumping, increases in recharge, and increases in hydraulic head may be causing equilibration of hydraulic heads in the aquitards and aquifers, which is slowing the drainage and compaction of the aquitards.
  - Hydraulic heads may be nearing "threshold levels" that, if achieved and maintained, could abate the future occurrence of permanent land subsidence. These hydraulic head thresholds, and various pumping and recharge strategies to maintain heads above these thresholds, were explored in 2023-24 using a numerical, one-dimensional aquifer-system compaction models in Northwest MZ-1. The past few years of reduced pumping and increased recharge in Northwest MZ-1 functioned as an empirical test of the model simulations and generally confirmed the model results that decreased pumping and increased recharge could elevate hydraulic heads and minimize or abate ongoing subsidence.
- The recent reduction in the rates of land subsidence across the Areas of Subsidence Concern does not mean that the future occurrence of subsidence and ground fissuring is no longer a threat. Future declines in hydraulic heads, which may be caused by increases in pumping or

decreases in recharge, among other causes, may cause aquitard compaction and rates of land subsidence to increase. For example, the pumpers in Northwest MZ-1 could increase pumping in the future, or there could be reduced or infrequent "put" cycles for the Dry-Year Yield Program. The future occurrence of subsidence remains possible in the event of future head declines.

RECOMMENDATION: Watermaster, with input from the GLMC, should continue implementation of the *Work Plan to Develop a Subsidence-Management Plan for the Northwest MZ-1 Area* to develop management strategies to avoid future occurrences of subsidence. This will include:

- Continuing aquifer-system monitoring and data analysis in Northwest MZ-1, including hydraulic head data and aquifer-system deformation data from the PX and hydraulic head data from Pomona and MVWD wells equipped with transducers.
- Using the one-dimensional compaction models at the MVWD-28 and PX locations to estimate the future occurrence of subsidence in Northwest MZ-1 under the planning alternatives that will be simulated as part of the 2025 SYR.
- Developing additional subsidence-management alternatives for evaluation in FY 2025/26 if the 2025 SYR alternatives are unsuccessful at minimizing or abating the future occurrence of subsidence in Northwest MZ-1.

These recommendations are consistent with the requirements of the OBMP Program Elements 1 and 4 and its implementation plan contained in the Peace Agreement.

- Since the inception of the GLMP, Watermaster has employed various methods to monitor ground motion via extensometers, InSAR, and traditional ground-level surveys. Analysis of these data over time has shown that InSAR has become an increasingly reliable and accurate method for monitoring of vertical ground motion across most of the Areas of Subsidence Concern for the following reasons:
  - Improvements in satellite technology over time have increased the spatial resolution, temporal resolution, and accuracy of InSAR. InSAR provides higher spatial and temporal resolution compared to traditional leveling surveys.
  - Sean Yarborough (formerly Neva Ridge Technologies, Inc.), a long-time subconsultant to the Watermaster, has been able to stay abreast of the newest InSAR products and processing techniques which in turn provides InSAR deliverables to the GLMC with high accuracy, resolution, and coherence.
  - Where and when the extensometer, InSAR, and traditional ground-leveling datasets overlap, InSAR shows a similar spatial pattern and magnitude of ground motion. Research performed for the GLMC has shown that the errors inherent in InSAR and traditional ground-level methods are similar.
  - Land-use changes from agricultural to urban uses have added hard, consistent radar wave reflectors to the ground surface over time. InSAR results are now coherent and useful across most of the Areas of Subsidence Concern.

  RECOMMENDATION: The Watermaster should continue to prepare high-quality, high-resolution InSAR deliverables (using data from the TerraSAR-X satellite) to estimate vertical ground motion and reduce the frequency of performing ground-level surveys.

- Section 3.5 described the results and conclusions of the Whispering Lakes Subsidence Investigation and concluded that shallow soil consolidation is the likely cause of the ongoing subsidence in this area.

  RECOMMENDATION: Continue a limited monitoring program to rule out aquitard drainage as a cause, including:

  - Continued monitoring of vertical ground motion by high-resolution InSAR that is currently conducted under the Watermaster's GLMP.
  - Continued monitoring of groundwater pumping at wells within the Study Area that is currently conducted on a quarterly time-step by the Watermaster.
  - Install transducers in wells within the Study Area to measure and record hydraulic heads at high temporal frequency.
  - Analyze and report on the monitoring data in these annual reports.

4.2 Recommended Scope and Budget for Fiscal Year 2024/25

The scope-of-work for the GLMP for FY 2024/25 was recommended by the GLMC in April 2024 and approved by Watermaster in May 2024. Appendix A is the technical memorandum prepared by the GLMC, titled *Recommended Scope and Budget for the Ground-Level Monitoring Program for FY 2024/25*.

In March 2025, Watermaster staff and the Watermaster Engineer will present the preliminary results of the GLMP through 2024 and a recommended FY 2025/26 scope and budget to the GLMC for consideration. As is typically done, the GLMC members can recommend changes to the proposed scope of work for the GLMP.

4.3 Changes to the Subsidence Management Plan

The Subsidence Management Plan calls for ongoing monitoring, data analysis, and annual reporting, and if the monitoring data in the Areas of Subsidence Concern indicate the potential for adverse impacts due to subsidence, Watermaster will revise the Subsidence Management Plan pursuant to the process outlined in Section 4 of the Subsidence Management Plan. Currently, there are no recommended changes to the Subsidence Management Plan.

5.0 GLOSSARY

The following glossary contains the terms and definitions used in this report and generally in the discussions at GLMC meetings.

Aquifer – A saturated, permeable, geologic unit that can transmit significant quantities of groundwater under ordinary hydraulic gradients and is permeable enough to yield economic quantities of water to wells.

Aquifer-system – A heterogeneous body of interbedded permeable and poorly permeable geologic units that function as a water-yielding hydraulic unit at a regional scale. The aquifer-system may comprise one or more aquifers within which aquitards are interspersed. Confining units may separate the aquifers and impede the vertical exchange of groundwater between aquifers within the aquifer-system.

Aquitard – A saturated, but poorly permeable geologic unit that impedes groundwater movement and does not yield water freely to wells but may transmit appreciable water to and from adjacent aquifers and, where sufficiently thick, may constitute an important groundwater storage unit. A really, extensive aquitards may function regionally as confining units within aquifer-systems.

Artesian – An adjective referring to confined aquifers. Sometimes the term artesian is used to denote a portion of a confined aquifer where the altitudes of the potentiometric surface are above land surface (flowing wells and artesian wells are synonymous in this usage). But, more generally, the term indicates that the altitudes of the potentiometric surface are above the altitude of the base of the confining unit (artesian wells and flowing wells are not synonymous in this case).

Compaction – Compaction of the aquifer-system reflects the rearrangement of the mineral grain pore structure and largely non-recoverable reduction of the porosity under stresses greater than the pre-consolidation stress. Compaction, as used here, is synonymous with the term “virgin consolidation” used by soils engineers. The term refers to both the process and the measured change in thickness. As a practical matter, a very small amount (1 to 5 percent) of compaction is recoverable as a slight elastic rebound of the compacted material if stresses are reduced.

Compression – A reversible compression of sediments under increasing effective stress; it is recovered by an equal expansion when aquifer-system heads recover to their initial higher values.

Consolidation – In soil mechanics, consolidation is the adjustment of a saturated soil in response to increased load, involving the squeezing of water from the pores and a decrease in the void ratio or porosity of the soil. For the purposes of this report, the term “compaction” is used in preference to consolidation when referring to subsidence due to groundwater extraction.

Confined Aquifer-system – A system capped by a regional aquitard that strongly inhibits the vertical propagation of head changes to or from an overlying aquifer. The heads in a confined aquifer-system may be intermittently or consistently different than in the overlying aquifer.

Deformation, Elastic – A fully reversible deformation of a material. In this report, the term “elastic” typically refers to the reversible (recoverable) deformation of the aquifer-system sediments or the land surface.

Deformation, Inelastic – A non-reversible deformation of a material. In this report, the term "inelastic" typically refers to the permanent (non-recoverable) deformation of the aquifer-system sediments or the land surface.

Differential Land Subsidence – Markedly different magnitudes of subsidence over a short horizontal distance, which can be the cause of ground fissuring.

Drawdown – Decline in aquifer-system head typically due to pumping by a well.

Expansion – In this report, expansion refers to the expansion of sediments. A reversible expansion of sediments under decreasing effective stress.

Extensometer – A monitoring well housing a free-standing pipe or cable that can measure vertical deformation of the aquifer-system sediments between the bottom of the pipe and the land surface datum.

Ground Fissures – Elongated vertical cracks in the ground surface that can extend several tens of feet in depth.

Hydraulic Conductivity – A measure of the medium's capacity to transmit a particular fluid. The volume of water at the existing kinematic viscosity that will move in a porous medium in unit time under a unit hydraulic gradient through a unit area. In contrast to permeability, it is a function of the properties of the liquid, as well as the porous medium.

Hydraulic Gradient – Change in head over a distance along a flow line within an aquifer-system.

Hydraulic Head – A measure of the potential for fluid flow. The height of the free surface of a body of water above a given subsurface point.

InSAR (Synthetic Aperture Radar Interferometry) – A remote-sensing method (radar data collected from satellites) that measures ground-surface displacement over time.

Linear Potentiometer – A highly sensitive electronic device that can generate continuous measurements of displacement between two objects. Used to measure movement of the land-surface datum with respect to the top of the extensometer measuring point.

Nested Piezometer – A single borehole containing more than one piezometer.

Overburden – The weight of overlying sediments, including their contained water.

Piezometer – A monitoring well that measures groundwater levels, or piezometric level, at a point, or in a very limited depth interval, within an aquifer-system.

Piezometric (Potentiometric) Surface – An imaginary surface representing the total head of groundwater within a confined aquifer-system, defined by the level to which the water will rise in wells or piezometers that are screened within the confined aquifer-system.

Pore pressure – Water pressure within the pore space of a saturated sediment.

Rebound – Elastic rising of the land surface.

Stress, Effective – The difference between the geostatic stress and fluid pressure at a given depth in a saturated deposit, representing the portion of the applied stress that becomes effective as intergranular stress.

Stress, Pre-consolidation – The maximum antecedent effective stress to which a deposit has been subjected and can withstand without undergoing additional permanent deformation. Stress changes in the range less than the pre-consolidation stress produce elastic deformations of small magnitude. In fine-grained materials, stress increases beyond the pre-consolidation stress produce much larger deformations that are principally inelastic (non-recoverable). Synonymous with "virgin stress."

Stress – Stress (pressure) that is borne by and transmitted through the grain-to-grain contacts of a deposit, thus affecting its porosity and other physical properties. In one-dimensional compression, effective stress is the average grain-to-grain load per unit area in a plane normal to the applied stress. At any given depth, the effective stress is the weight (per unit area) of sediments and moisture above the water table plus the submerged weight (per unit area) of sediments between the water table and a specified depth plus or minus the seepage stress (hydrodynamic drag) produced by downward or upward components, respectively, of water movement through the saturated sediments above the specified depth. Effective stress may also be defined as the difference between the geostatic stress and fluid pressure at a given depth in a saturated deposit and represents the portion of the applied stress that becomes effective as intergranular stress.

Subsidence – Permanent or non-recoverable sinking or settlement of the land surface due to any of several processes.

Transducer – An electronic device that can measure piezometric levels by converting water pressure to a recordable electrical signal. Typically, the transducer is connected to a data logger, which records the measurements.

Water Table – The surface of a body of unconfined groundwater at which the pressure is equal to atmospheric pressure and is defined by the level to which the water will rise in wells or piezometers that are screened within the unconfined aquifer-system.

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Appendix A

Recommended Scope and Budget of the Ground-Level Monitoring Committee for FY 2024/25

WEST YOST
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TECHNICAL MEMORANDUM

DATE: April 22, 2024 Project No.: 941-80-22-26

TO: Ground-Level Monitoring Committee

FROM: West Yost Associates

REVIEWED BY: Andy Malone, PG

SUBJECT: Recommended Scope of Work and Budget for the Ground-Level Monitoring Program for Fiscal Year 2024/25 **(FINAL)**

BACKGROUND AND PURPOSE

Pursuant to the Optimum Basin Management Program Implementation Plan and the Peace Agreement, the Chino Basin Watermaster (Watermaster) implements a Subsidence Management Plan (SMP) for the Chino Basin to minimize or stop the occurrence of land subsidence and ground fissuring. The Court approved the SMP and ordered its implementation in November 2007 (2007 SMP). The 2007 SMP was updated in 2015 (2015 SMP) and can be downloaded from the Watermaster website. The SMP outlines a program of monitoring, data analysis, and annual reporting. A key element of the SMP is its adaptive nature—Watermaster can adjust the SMP as warranted by the data.

The Watermaster Engineer, with the guidance of the Ground-Level Monitoring Committee (GLMC), prepares annual reports which include: the results of the monitoring program; interpretations of the data; recommendations for the Ground-Level Monitoring Program (GLMP) for the following fiscal year (FY); and recommendations for adjustments to the SMP, if any.

This Technical Memorandum (TM) describes the Watermaster Engineer's recommended activities for the GLMP for FY 2024/25 in the form of a proposed scope of services and budget.

Members of the GLMC were asked to:

- Review the draft TM prior to March 7, 2024.
- Attend a meeting of the GLMC at 10:00 am on March 7, 2024 to discuss the proposed scope of services and budget for FY 2024/25.
- Submit comments and suggested revisions on the proposed scope of services and budget for FY 2024/25 to the Watermaster by April 4, 2024.

This final scope of services and budget that addresses the comments and suggested revisions of the GLMC will be included in the Watermaster's proposed budget for FY 2024/25. The final scope of services, budget, and schedule for FY 2024/25 will be included in Section 4 of the *2023/24 Annual Report for the GLMP*.

RECOMMENDED SCOPE OF SERVICES AND BUDGET – FY 2024/25

A proposed scope of services for the GLMP for FY 2024/25 is shown in Table 1 as a line-item cost estimate. The proposed scope of services is summarized below.

Task 1. Setup and Maintenance of the Monitoring Network

The Chino Basin extensometer facilities are key monitoring facilities for the GLMP. They require regular and as-needed maintenance and calibration to remain in good working order and to ensure the recording of accurate measurements.

Task 1.1. Maintain Extensometer Facilities

This subtask includes performing monthly visits to the Ayala Park, Chino Creek, and Pomona extensometer (PX) facilities to ensure functionality and calibration of the monitoring equipment and data loggers. Two staff members are required for these visits due to safety concerns.

Non-routine efforts to be performed during FY 2024/25 under this subtask include:

- Monthly adjustments to the PX extensometers to improve the accuracy of the measurements of aquifer-system deformation.
- Purchase and install two metal covers for Ayala Park PA vault and PX 2 vault.
- Construct French drains around the PA vault to convey surface-water runoff away from the vault.

Task 1.2. Annual Lease Fees for the Chino Creek Extensometer Site

The County of San Bernardino (County) owns the land the Chino Creek extensometer facility is located on. As such, the Watermaster entered into a lease agreement with the County in 2012 and pays the County and annual rental payment of $1,596.

Task 2. Aquifer-System Monitoring and Testing

This task involves the collection, compilation, and checking of hydraulic head and aquifer-system deformation data from the Ayala Park, Chino Creek, and PX extensometer facilities.

Task 2.1. Conduct Quarterly Monitoring at Extensometer Facilities

This subtask involves the routine quarterly collection, processing, and checking of data from the three extensometer facilities in the Chino Basin. Quarterly data collection is necessary to ensure that the monitoring equipment is in good working order and to minimize the risk of losing data because of equipment malfunction. For this subtask, the complete extensometer and piezometer records from the Ayala Park, Chino Creek, and PX facilities are loaded to HydroDaVE^{SM} (Hydrologic Database and Visual Explanations), the annual report figures are updated, and all the new data are checked for accuracy. If the data indicated malfunctioning equipment or inaccurate measurements, then any necessary adjustments to the monitoring equipment are made. Two staff members are required for these visits due to safety concerns.

Task 3. Basin-Wide Ground-Level Monitoring Program (InSAR)

This task involves the annual collection and analysis of Synthetic Aperture Radar (SAR) scenes to estimate the vertical ground motion across the western portion of Chino Basin from March 2024 to March 2025.[1]

In this subtask, five SAR scenes that are acquired by the TerraSAR-X satellite from March 2024 to March 2025 are purchased from the German Aerospace Center. West Yost will use the SAR scenes to prepare 12 interferograms (InSAR) that describe the incremental and cumulative vertical ground motion that occurred from March 2024 to March 2025 and since 2011. The associated costs to task, acquire, purchase, and process the InSAR data is as follows:

- Task TerraSAR-X for five SAR acquisitions for the western Chino Basin ($1,000)
- Purchase TerraSAR-X data ($10,000)
- Prepare and check InSAR results, including the interferograms and GIS-generated rasters ($62,000)

In addition, West Yost purchased and maintains the GAMMA software that is necessary to process the SAR data and prepare the InSAR estimates of vertical ground motion. The one-time initial cost for the software was $44,000. Since the Watermaster is the only West Yost client that utilizes InSAR services, the Watermaster is paying for the GAMMA software over a three-year period ($11,000 in FY 2023/24, $22,000 in FY 2024/25, and $11,000 in FY 2025/26). The annual maintenance cost is $6,600. Therefore, in FY 2024/25 the Watermaster's costs for the GAMMA software is: $22,000 + $6,600 = $28,000.

Task 4. Perform Ground-Level Surveys

This task involves conducting elevation surveys at benchmark monuments across defined areas of western Chino Basin to estimate the vertical ground motion that occurred since the prior survey. Figure 1 shows the location of the benchmark monuments surveyed across the western Chino Basin. Electronic distance measurements (EDM surveys) are also performed periodically between monuments to estimate horizontal ground motion in areas where ground fissuring due to differential land subsidence is a concern. Table 2 documents the areas surveyed over the last six years as part of the GLMP.

[1] West Yost is now performing this task internally instead of subcontracting the work, as was done in the past. This was made possible by West Yost hiring the InSAR subconsultant directly and purchasing/maintaining the necessary hardware and software.

Table 2. History of Ground-Level Surveys

Ground-Level Survey Area	Ground-Level Survey Completed (Y/N)?						
	2018	2019	2020	2021	2022	2023	2024[(b)]
Managed Area	Y	N	N	N	N	N	Y
Fissure Zone Area[(a)]	Y	N	N	N	N	N	N
Central Area	N	N	N	N	N	N	N
Northwest Area	Y	Y	Y	Y	Y	Y	Y
San Jose Fault Zone Area[(a)]	Y	Y	Y	Y	Y	N	N
Southeast Area	Y	N	N	N	Y	N	N
Northeast Area	Y	Y	Y	N	N	N	N

(a) Denotes EDM survey area (measurements of horizontal strain).
(b) The 2024 ground-level surveys are scheduled to begin in March 2024.

The ground-level surveys recommended for FY 2024/25 include the following:

Task 4.1. Conduct Spring-2025 Elevation surveys in Northwest MZ-1

In this subtask, the surveyor conducts elevation and EDM surveys at the established benchmarks in Northwest MZ-1 in Spring 2025. The elevation survey will begin at the Pomona Extensometer Facility and includes benchmarks across Northwest MZ-1. The elevation survey will be referenced to the Ayala Park elevation datum at the Ayala Park Extensometer via a GPS survey performed at both Ayala Park and the Pomona Extensometers.

*The vertical elevation survey is recommended in Spring 2025 because of the recent subsidence that has occurred in Northwest MZ-1 and because the survey will support the development of a subsidence management plan in Northwest MZ-1. The EDM survey is **not** recommended to be performed across the San Jose fault zone because past surveys (2013-2021) have demonstrated that the horizontal strain measured between benchmark pairs appears to behave elastically. The EDM surveys should be conducted less frequently than annual (e.g., once every five years).*

Ground-Level Surveys Not Recommended for Spring 2025

Ground-level surveys are **not** recommended for Spring 2025 in the other Areas of Subsidence Concern (*i.e.,* Managed, Central, Southeast, and Northeast Areas). This recommendation is justified because:

- InSAR is proving to be an accurate, more efficient, higher-resolution method to monitor vertical ground motion across the western Chino Basin.
- Hydraulic heads and vertical ground motion in some of these areas are stable or increasing.

Ground-level surveys should be conducted in these areas less frequently than annual (*e.g.,* once every five years).

Task 4.5. Replace Destroyed Benchmarks (if needed)

In this subtask, the surveyor replaces benchmark monuments that have been destroyed since the last survey, if any.

Task 4.6. Process, Check, and Update Database

In this subtask, the Watermaster Engineer receives and catalogs the survey results provided by the surveyor, prepares the data for display as a GIS layer, and performs checks against InSAR and extensometer data for reasonableness and accuracy.

Task 5. Data Analysis and Reporting

Task 5.1. Prepare Draft 2023/24 Annual Report for the Ground-Level Monitoring Program

Prepare the text, tables, and figures for a draft *2023/24 Annual Report for the GLMP* and submit the report to the GLMC by September 20, 2024 for review and comment.

Task 5.2. Prepare Final 2023/24 Annual Report for the Ground-Level Monitoring Program

Update the text, tables, and figures based on the comments received from the GLMC and prepare a final *2023/24 Annual Report for the GLMP* by November 1, 2024. Responses to GLMC comments will be included as an appendix to the final report. The report will be included in the agenda packet for the November 2024 Watermaster meetings for approval.

Task 5.3. Compile and Analyze Data from the 2024/25 Ground-Level Monitoring Program

In this subtask, monitoring data generated from the GLMP during 2024/25 is checked, mapped, charted, and analyzed as the first step in the preparation of the subsequent annual report. Some of the maps, charts, and tables are shared with the GLMC at its meetings in early 2025 during the development of a recommended scope of services and budget for FY 2025/26.

Task 5.4. Conduct Whispering Lakes Subsidence Investigation of the Northeast Area

In the Northeast Area, the long-term and short-term InSAR estimates indicate that persistent downward ground motion has occurred in a concentrated area south of the Ontario International Airport between Vineyard Avenue and Archibald Avenue in the vicinity of Whispering Lakes Golf Course. The western edge of this subsiding area exhibits a steep subsidence gradient or “differential subsidence.”

In FY 2021/22, the Watermaster Engineer conducted a Reconnaissance-Level Investigation that included the review and analysis of readily-available borehole and lithologic data, historical air photos, pumping and recharge data, hydraulic head data, and InSAR estimates of vertical ground motion. Figures and charts were prepared and analyzed to derive interpretations and recommendations for future investigations and monitoring. The investigation and recommendations were included in the FY 2021/22 Annual Report of the GLMC. Plausible mechanisms for this subsidence feature include pumping-induced aquitard drainage and shallow soil consolidation associated with historical land uses. The investigation identified data gaps in available site-specific hydrogeologic data.

Potential next steps presented to the GLMC at its December 13, 2022 meeting included:

- Aquifer-system monitoring (*e.g.,* collecting existing hydrogeologic data; installing transducers at wells in the study area; constructing an aquifer-system monitoring facility within the subsidence feature)

- Further investigation of the historical land use practices in the vicinity of the Whispering Lakes Golf Course (e.g., agricultural disturbance and augmentation of soils; historical sewage disposal and spreading of solids; golf course construction and maintenance activities)
- Perform field studies of shallow soil consolidation (i.e., develop a dataset of site-specific shallow soil compaction that could be compared to the rates of subsidence estimated by InSAR).

The GLMC has recommended a stepwise, process-of-elimination approach to identify the subsidence mechanism(s). The GLMC approved a $10,000 budget for FY 2023/24 to implement the recommendations derived from the Reconnaissance-Level Investigation. This budget is being used to collect and evaluate existing data (e.g., hydrogeologic data, well information, reports, historical land use data) and install transducers at nearby pumping wells. The results of these efforts will be documented in the GLMC Annual Report for 2023/24 along with recommendations for follow-on work.

The GLMC should consider dedicating contingency budget for FY 2024/25 ($10,000) to continue the implementation of the recommendations derived Reconnaissance-Level Investigation and future recommendations based on results of work performed in 2023/24.

Task 6. Develop a Subsidence-Management Plan for Northwest MZ-1

The 2007 SMP called for ongoing monitoring and data analysis of the Managed Area; including annual reporting and adjustments to the SMP, as warranted by the data. The 2007 SMP also called for expanded monitoring of the aquifer-system and land subsidence in other areas of subsidence and ground fissuring concern. Figure 1 shows the location of these so-called Areas of Subsidence Concern: Central MZ-1, Northwest MZ-1, Northeast Area, and Southeast Area. The expanded monitoring efforts outside of the Managed Area are consistent with the requirements of OBMP Program Element 1 and its implementation plan contained in the Peace Agreement.[2]

The 2007 SMP stated that if data from existing monitoring efforts in the Areas of Subsidence Concern indicate the potential for adverse impacts due to subsidence, the Watermaster would revise the SMP to avoid those adverse impacts. The 2014 Annual Report of the GLMC recommended that the 2007 SMP be updated to better describe the Watermaster's land subsidence efforts and obligations, including areas outside of MZ-1. As such, the update included a name change to the 2015 Chino Basin Subsidence Management Plan (2015 SMP) and a recommendation to develop a subsidence management plan for Northwest MZ 1.

The Watermaster had been monitoring vertical ground motion in Northwest MZ-1 via InSAR during the development of the 2007 SMP. Land subsidence in Northwest MZ-1 was first identified as a concern in 2006 in the MZ-1 Summary Report and again in 2007 in the 2007 SMP. Of particular concern was the occurrence of concentrated differential subsidence across the San Jose Fault in Northwest MZ-1—the same spatial pattern of differential subsidence that occurred in the Managed Area during the time of ground fissuring. Ground fissuring is the main subsidence-related threat to infrastructure. The issue of differential subsidence, and the potential for ground fissuring in Northwest MZ-1, has been discussed at prior GLMC meetings, and the subsidence has been documented and described as a concern in the Watermaster's State of the Basin Reports, the annual reports of the GLMC, and in the *Initial Hydrologic*

[2] http://www.cbwm.org/docs/legaldocs/Peace_Agreement.pdf.

Conceptual Model and Monitoring and Testing Program for the Northwest MZ-1 Area (WEI, 2017). The Watermaster increased monitoring efforts in Northwest MZ-1 beginning in FY 2012/13 to include ground elevation surveys and electronic distance measurements (EDM) to monitor ground motion and the potential for fissuring.

In 2015, the Watermaster's Engineer developed the *Work Plan to Develop a Subsidence Management Plan for the Northwest MZ-1 Area* (Work Plan; WEI 2015b).[3] The Work Plan is characterized as an ongoing Watermaster effort and includes a description of a multi-year scope-of-work, a cost estimate, and an implementation schedule. The Work Plan was included in the 2015 SMP as Appendix B. Implementation of the Work Plan began in July 2015. On an annual basis, the GLMC analyzes the data and information generated by the implementation of the Work Plan. The results and interpretations generated from the analysis are documented in the annual report for the GLMP and used to prepare recommendations for future activities.

Progress to Implement Work Plan through FY 2023/24

The progress that has been made to implement the Work Plan through FY 2023/24 is described below:

- An initial hydrogeologic conceptual model of the Northwest MZ-1 Area was developed, and a report was published in 2017.[4] This report described the hydrogeology of the area, speculated on the causes of the observed land subsidence, and included a recommended monitoring program.

- A preliminary one-dimensional (1D) compaction model, based on hydrogeologic information from the MVWD-28 well site, was constructed, calibrated and used to explore the future occurrence of subsidence in Northwest MZ-1 under various basin-operation scenarios of groundwater production and artificial recharge and to identify potential subsidence mitigation strategies. A report[5] was published to document the results and interpretations of the modeling, which were: ***the deep aquifer system is most susceptible to future compaction and associated land subsidence, and hence, heads will need to increase in the deep aquifer system to minimize or abate future subsidence in Northwest MZ-1***. The report also included a recommendation to construct the Pomona Extensometer.

- The initial monitoring program was implemented to closely track groundwater-levels, groundwater production, recharge, and ground motion across Northwest MZ-1. This monitoring program included the construction of the Pomona Extensometer to measure and record depth-specific heads and aquifer-system deformation. Implementation of the monitoring program is ongoing.

- A new 1D model was constructed and calibrated using the hydrogeologic information collected at the Pomona Extensometer. The 1D model at MVWD-28 was also updated and recalibrated using current information. The objectives of this exercise were to: (i) describe the subsidence mechanisms and the pre-consolidation head by aquifer-system layer in Northwest MZ-1 and (ii)

[3] Work Plan to Develop a Subsidence-Management Plan for Northwest MZ-1
[4] https://www.cbwm.org/docs/engdocs/GLMC/nwmz1/Final_NWMZ1_Task1_Report.pdf
[5] https://www.cbwm.org/docs/engdocs/GLMC/nwmz1/20171220%20Final%20NWMZ1%20Task3-4%20Tech%20Memo.pdf

develop modeling tools that can be used to explore the future occurrence of subsidence in Northwest MZ-1 under various basin-operation scenarios of groundwater production and artificial recharge and to identify potential subsidence mitigation strategies. This work was reviewed by the GLMC, and additional model calibration refinements and sensitivity analyses were performed based on GLMC input. In November 2022, the Watermaster Engineer published a final report[6] on the 1D Model calibrations and sensitivity analyses (with review by the GLMC) and deemed the 1D Models sufficient to simulation future land subsidence under prospective plans for pumping and recharge.

- In 2023, the Watermaster Engineer, with review and input from the GLMC, developed an initial "Subsidence Management Alternative" for Northwest MZ-1 called SMA-1. SMA-1 is equivalent to the planning scenario that was simulated with the 2020 Chino Valley Model (CVM) to support the 2020 Safe Yield Recalculation (2020 SYR). The 2020 SYR was intended to represent and simulate the Parties' projected pumping, recharge, and use of storage through 2050. The results of the 2020 SYR (*i.e.,* projected hydraulic heads by CVM layer) were used as input data for the 1D Model simulations to predict the potential future occurrence of subsidence through 2050. In September 2023, the Watermaster Engineer published a draft TM titled *1D Model Simulation of Subsidence in Northwest MZ-1—Subsidence Management Alternative #1*. The Watermaster's recommendations from this work were the following:

    a. Establish a preliminary "Northwest MZ-1 Guidance Level" of 630 ft-amsl for hydraulic heads in Layers 3 and 5 at the PX location. The preliminary Guidance Level is an aspirational Watermaster recommendation that, if achieved, would likely slow or stop aquitard compaction and land subsidence in Northwest MZ-1.

    b. Compliance with the Guidance Level should be measured at the PX-2/3 piezometer, which is generally representative of heads in Layers 3 and 5.

    c. The methods to achieve the Guidance Level could include but are not limited to: voluntary modification of pumping patterns; in-lieu recharge; wet-water recharge via spreading and/or injection; or a combination of methods. These methods might necessitate: voluntary modification of water-supply plans of the purveyors in the Chino Basin; modification of Watermaster practices for recharge and replenishment; and/or the implementation of regional-scale storage or conjunctive-use programs.

    d. Additional SMAs should be developed and evaluated with the 1D Models to generate the necessary information to finalize the Guidance Level and the *Subsidence Management Plan for Northwest MZ-1*. The additional SMAs could be developed during Watermaster's groundwater modeling efforts associated with the 2025 Safe Yield Reevaluation and the development of the Storage and Recovery Master Plan. The GLMC should participate in the scenario building exercises associated with these Watermaster efforts to develop the SMAs, so that the scenarios include various methods to achieve the Guidance Level. Then, the 1D Models should be used to evaluate the potential future subsidence in Northwest MZ-1 under the SMAs. These model results and evaluations will support the establishment

[6] https://www.cbwm.org/docs/engdocs/GLMC/nwmz1/TM%20-%20941%20-%201D%20Model%20-%20Final.pdf

of a Guidance Level in the *Subsidence Management Plan for Northwest MZ-1*. It should be noted that future monitoring and analyses always hold the potential for revisions to the Guidance Level, consistent with the adaptive management approach called for in the Chino Basin Subsidence Management Plan.

Based on the expected progress through FY 2023/24, the following work is recommended for FY 2024/25 to develop the *Subsidence Management Plan for Northwest MZ-1*:

Task 6.1. Aquifer-System Monitoring

The established monitoring program of piezometric levels and pumping at wells in Northwest MZ-1 will continue through various techniques, including: (i) SCADA-based monitoring by the Monte Vista Water District; (ii) monitoring of piezometric levels via sonar[7]; (iii) monitoring of piezometric levels via pressure transducers at City of Pomona production wells; and (iv) manual measurements of piezometric levels. These data, along with data collected from the PX in Task 2.1, will improve the understanding of the hydrogeology in Northwest MZ-1, will be used to develop the *Subsidence Management Plan for Northwest MZ-1*, and in the future, will be used to adapt the Chino Basin Subsidence Management Plan, as appropriate.

In this subtask, all data is collected, compiled, checked, and analyzed every three months. Charts and data graphics of pumping, piezometric levels, and aquifer-system deformation will be updated to support the data collection and analysis. The PX extensometer data is charted and analyzed monthly in the ongoing effort to improve the reliability and accuracy of the extensometers.

Task 6.5. Provide Advice in the Development of the 2025 SYR Scenarios

The ongoing 2025 SYR involves the development of multiple projection scenarios of future hydrology, pumping, managed recharge, and use of managed storage in the Chino Basin. These projection scenarios will be simulated with an updated CVM. The CVM results will be used to determine a tentative Safe Yield, which will be evaluated for MPI and then used to evaluate the current Safe Yield of the Chino Basin. The evaluation of MPI associated with land subsidence will be performed using the 1D Models in Northwest MZ-1 and in other Areas of Subsidence Concern (see Task 7 below). In FY 2024/25, the GLMC can provide the Watermaster with valuable advice on the following:

- The development of the 2025 SYR scenarios to ensure a plausible range of future conditions are simulated.
- Interpretation of the 1D Model results re: potential subsidence-related MPI associated with the Safe Yield estimates.
- How the model results can be used to evaluate the minimum recharge quantity of supplemental water in MZ-1 as required by the Peace II Agreement.

[7] The use of sonar technology to measure piezometric levels in wells in currently being used in Monte Vista Water District wells 28 and 31.

Providing GLMC advice should be conducted in conjunction with the 2025 SYR and can be discussed at regularly scheduled GLMC meetings at no additional cost.[8]

Task 7. Construct and Calibrate Additional 1D Models Across Western Chino Basin

As described above in Task 6, the Watermaster has constructed, calibrated, and used 1D Models at the PX and MVWD-28 locations to evaluate the potential future subsidence in Northwest MZ-1 through 2040. The Watermaster used the information derived from the 1D Models to develop a preliminary "Guidance Level" to avoid future subsidence in Northwest MZ-1.

In Task 7, three additional 1D Models are constructed and calibrated across other Areas of Subsidence Concern in western Chino Basin, so that Watermaster can use all of the 1D Models during the 2025 SYR process to:

- Evaluate for subsidence-related MPI during the 2025 SYR.
- Refine the preliminary "Guidance Level" in Northwest MZ-1 and the Managed Area.
- Evaluate for the minimum recharge quantity of supplemental water in MZ-1 as required by the Peace II Agreement.

In FY 2023/24, the three additional 1D Models are being constructed and calibrated in the following areas: Northeast Area (at Ontario Well 33 location), in the Southeast Area near the CDA well field (at the CCX location), and in the Managed Area (at the Ayala Park Extensometer location).

The deliverables of this task are the following:

- A draft TM to describe the background/objectives of the task and the methods that will be used to complete the task. The methods include a description of the proposed locations for the additional 1D Models and the data that will be used to construct and calibrate the models.
- A draft TM that summarizes the construction and calibration of the additional 1D Models.

This task was budgeted and scheduled for completion in FY 2023/24, but the final work will likely spill over into FY 2024/25. If necessary, unspent budget from FY 2023/24 will be carried over to FY 2024/25 to complete this task. ***No additional budget in FY 2024/25 is necessary to complete this task***.

Task 8. Meetings and Administration

Task 8.1. Prepare for and Conduct Four Meetings of the Ground-Level Monitoring Committee

This subtask includes preparing for and conducting four meetings of the GLMC:

- August 2024 – Review and discuss GLMP for FY 2024/25. Review and discuss the draft TM on Task 7 – *Construction/Calibration of Additional 1D Models*.

[8] This is because most of these discussions will be occurring in the 2025 SYR peer review process with the same technical consultants that participate on the GLMC.

- September 2024 – Review the draft 2023/24 Annual Report for the GLMP
- March 2025 – Review the draft recommended scope and budget for FY 2025/26
- April 2025 – Review the final recommended scope and budget for FY 2025/26 (if needed)

Task 8.2. Prepare for and Conduct One As-Requested Ad-Hoc Meeting

This subtask includes preparing for and conducting one ad-hoc meeting of the GLMC, as requested by the GLMC or Watermaster staff.

Task 8.3. Perform Monthly Project Management

This subtask includes monthly project administration and management, including staffing, financial and schedule reporting to Watermaster and subcontractor coordination.

Task 8.4. Prepare a Recommended Scope and Budget for the GLMC for FY 2025/26

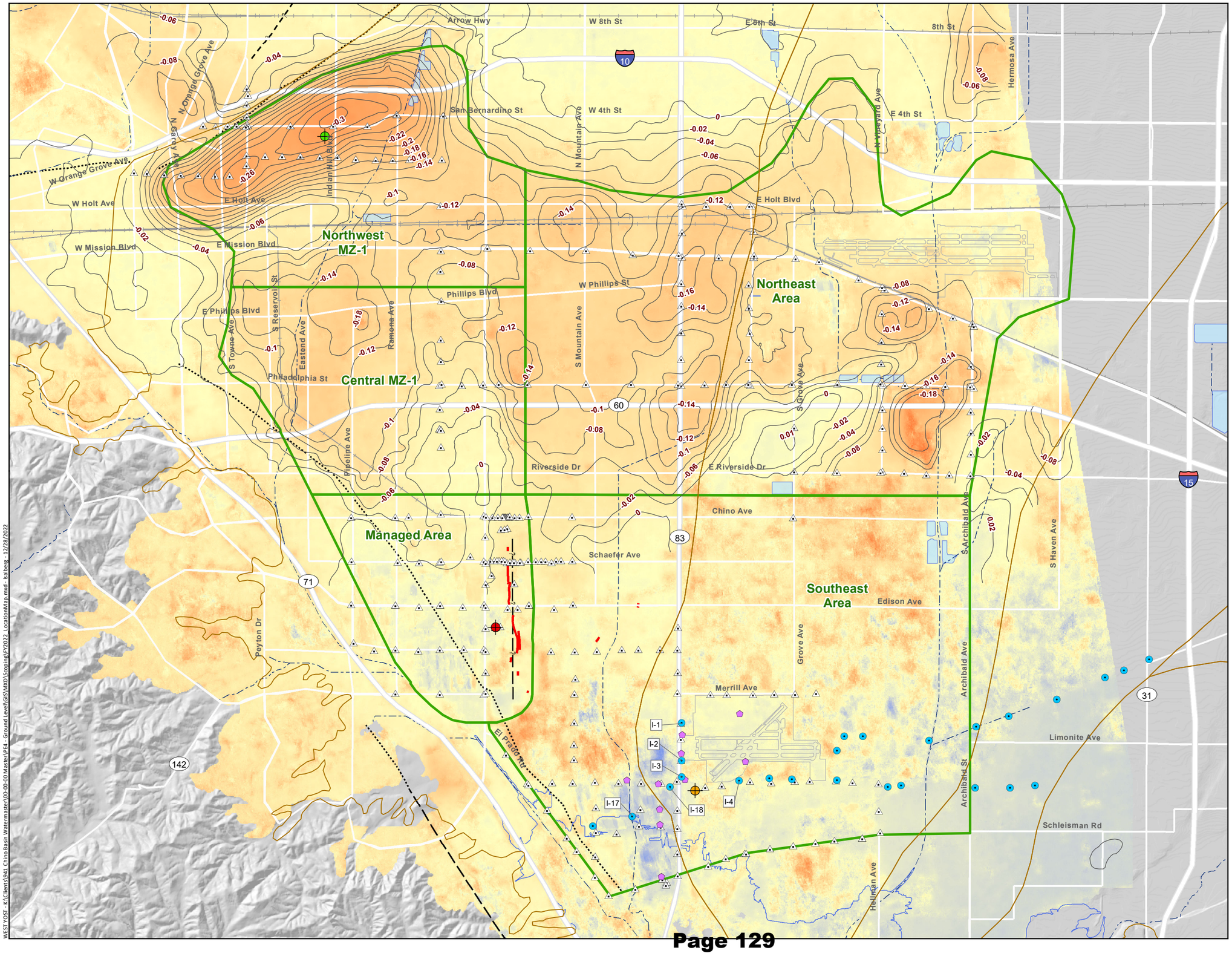
This subtask includes preparing a draft and final recommended scope of services and budget for FY 2025/26 for the GLMP to support the Watermaster's budgeting process.

Table 1. Work Breakdown Structure and Cost Estimates for the Ground-Level Monitoring Program: FY 2024/25

Task Description			Notes	Labor (days)		Other Direct Costs						Totals			
				Person Days	Total	Travel	New Equip.	Equip. Rental	Outside Pro	Misc.	Total	Totals by Task	Recommended Budget *2024/25*	Approved Budget *2023/24*	Net Change *from 2023/24*
													a	*b*	*a - b*
Task 1. Setup and Maintenance of the Monitoring Network					**$40,221**						**$8,018**	**$48,239**	**$48,239**	**$47,789**	**$450**
1.1	Maintain Extensometer Facilities														
	1.1.1	Routine maintenance of Ayala Park, Chino Creek, and Pomona extensometer facilities		21	$29,437	$649	$250	$350			$1,249	$30,685	$30,685	$33,707	-$3,022
	1.1.2	Replacement/repair of equipment at extensometer facilities		6	$10,784	$173	$2,500		$2,500		$5,173	$15,957	$15,957	$12,485	$3,472
1.2	Annual Lease Fees for the Chino Creek extensometer facility			0	$0					$1,596	$1,596	$1,596	$1,596	$1,596	$0
Task 2. MZ-1: Aquifer-System Monitoring and Testing					**$32,724**						**$784**	**$33,508**	**$33,508**	**$31,456**	**$2,052**
2.1	Conduct Quarterly Monitoring at Extensometers Facilities														
	2.1.1	Download data from the Ayala Park Extensometer facility		4	$5,436	$332		$40			$372	$5,808	$5,808	$3,032	$2,776
	2.1.2	Download data from the Chino Creek Extensometer facility		4	$5,436			$40			$40	$5,476	$5,476	$2,700	$2,776
	2.1.3	Download data from Pomona Extensometer facility		4	$5,436	$332		$40			$372	$5,808	$5,808	$10,492	-$4,684
	2.1.4	Process, check, and upload data to database		10	$16,416						$0	$16,416	$16,416	$15,232	$1,184
Task 3. Basin Wide Ground-Level Monitoring Program (InSAR)					**$64,880**						**$39,600**	**$104,480**	**$104,480**	**$96,560**	**$7,920**
3.1	Satellite tasking and data selection with AirBus for 2024/25			0.5	$1,144					$1,000	$1,000	$2,144	$2,144		
3.2	Assess SAR baselines for 2024/25 and select/purchase TerraSAR-X frames from Airbus			0.5	$1,144					$10,000	$10,000	$11,144	$11,144	$96,560	$7,920
3.3	Prepare and check interferograms for 2024/25			28	$62,592						$0	$62,592	$62,592		
3.4	GAMMA software for InSAR processing (initial purchase + annual maintenance)			0	$0					$28,600	$28,600	$28,600	$28,600		
Task 4. Perform Ground-Level Surveys					**$7,144**						**$38,600**	**$45,744**	**$45,744**	**$84,280**	**-$38,536**
4.1	Conduct Spring-2024 Elevation surveys in Northwest MZ-1			0.5	$1,288				$28,600		$28,600	$29,888	$29,888	$28,360	$1,528
4.2	Conduct Spring-2024 Elevation Survey in the Northeast Area			0	$0				$53,416		$0	$0	$0	$0	$0
4.3	Conduct Spring-2024 Elevation Survey in the Southeast Area			0	$0				$56,584		$0	$0	$0	$0	$0
4.4	Conduct Spring-2024 Elevation and EDM Surveys in the Managed Area/Fissure Zone			0	$0				$46,800		$0	$0	$0	$31,248	-$31,248
4.5	Replace Destroyed Benchmarks (if needed)			0	$0				$10,000		$10,000	$10,000	$10,000	$19,280	-$9,280
4.6	Process, Check, and Update Database			3	$5,856						$0	$5,856	$5,856	$5,392	$464
Task 5. Data Analysis and Reporting					**$87,084**						**$0**	**$87,084**	**$87,084**	**$85,412**	**$1,672**
5.1	Prepare Draft 2023/24 Annual Report of the Ground-Level Monitoring Committee			19	$36,744						$0	$36,744	$36,744	$36,136	$608
5.2	Prepare Final 2023/24 Annual Report of the Ground-Level Monitoring Committee			8.5	$16,820						$0	$16,820	$16,820	$15,732	$1,088
5.3	Compile and Analyze Data from the 2024/25 Ground-Level Monitoring Program			14	$23,520						$0	$23,520	$23,520	$23,544	-$24
5.4	Continue Whispering Lakes Subsidence Investigation			0	$10,000						$0	$10,000	$10,000	$10,000	$0
Task 6. Develop a Subsidence-Management Plan for Northwest MZ-1					**$16,656**						**$0**	**$16,656**	**$16,656**	**$15,536**	**$1,120**
6.1	Aquifer-System Monitoring														
	6.1.1	Collect pumping and piezometric data from agencies every three months; check and upload data to HDX		6	$8,448						$0	$8,448	$8,448	$10,560	-$2,112
	6.1.2	Prepare and analyze charts and data graphics of pumping and recharge (Northwest MZ-1), piezometric levels, and aquifer-system deformation from PX		5	$8,208						$0	$8,208	$8,208	$4,976	$3,232
Task 7. Construct and Calibrate Additional 1D Models Across Western Chino Basin					**$0**						**$0**	**$0**	**$0**	**$192,511**	**-$192,511**
7.1	Prepare a draft TM summarizing the background, objectives, and methods; distribute to the GLMC			0	$0						$0	$0	$0	$12,760	-$12,760
7.2	Prepare for and conduct a GLMC meeting to receive feedback and comments on the draft TM			0	$0						$0	$0	$0	$5,110	-$5,110
7.3	Verify and/or recalibrate the 1D Model at Ayala Park Extensometer location			0	$0						$0	$0	$0	$22,736	-$22,736
7.4	Construct two additional 1D Models in the Southeast Area and Northeast Area			0	$0						$0	$0	$0	$62,368	-$62,368
7.5	Calibrate new 1D Models to derive properties of aquifers/aquitards and estimate the pre-consolidation stress(es)			0	$0						$0	$0	$0	$45,472	-$45,472
7.6	Prepare a draft TM summarizing the construction/calibration of additional 1D Models; distribute to the GLMC			0	$0						$0	$0	$0	$37,024	-$37,024
7.7	Prepare for and conduct a GLMC meeting to receive feedback and comments on the draft TM			0	$0						$0	$0	$0	$5,110	-$5,110
7.8	Incorporate the GLMC comments and prepare a final technical memorandum			0	$0						$0	$0	$0	$1,932	-$1,932
Task 8. Meetings and Administration					**$57,562**						**$375**	**$57,937**	**$57,937**	**$59,228**	**-$1,292**
8.1	Prepare for and Conduct Four Meetings of the Ground-Level Monitoring Committee		a	14	$31,744	$291					$291	$32,035	$32,035	$32,636	-$602
8.2	Prepare for and Conduct One As-Requested Ad-Hoc Meeting		a	3	$6,792	$84					$84	$6,876	$6,876	$5,470	$1,406
8.3	Perform Monthly Project Management			3	$7,728						$0	$7,728	$7,728	$11,592	-$3,864
8.4	Prepare a Recommended Scope and Budget for the GLMC for FY 2023/24			5.25	$11,298						$0	$11,298	$11,298	$9,530	$1,768
Totals					**$306,271**						**$87,376**		**$393,647**	**$612,772**	**-$219,125**

Notes:

a Assumes in-person meetings.



N

0 1 2

Miles

Relative Change in Land Surface Altitude as Estimated by InSAR (March 2011 to March 2022)

+ 0.55 ft

0 ft

-0.55 ft

InSAR absent or incoherent

- Areas of Subsidence Concern
- Pomona Extensometer Facility
- Chino Creek Extensometer Facility
- Ayala Park Extensometer Facility
- Chino Desalter Authority Well
- SB County Proposed Extraction Well
- Ground-Level Survey Benchmark
- Ground Fissures
- Approximate Location of the Riley Barrier

Figure 1

Ground-Level Monitoring Program
Fiscal Year 2022/23

Chino Basin Watermaster
Ground-Level Monitoring Committee

WEST YOST - K:\Clients\941 Chino Basin Watermaster\00-00-00 Master\PEA - Ground Level\GIS\WKS\Scoping\FY2022_LocationMap.mxd - kalberg - 12/28/2022

The comments received from the GLMC as of April 4, 2024 on the "Recommended Scope of Services and Budget of the Ground-Level Monitoring Committee for Fiscal Year 2024/25 (Draft)" and the Watermaster Engineer's response to comments are documented below.

Comments from the City of Chino (Hye Jin Lee)

Comment 1 – Task 1. Setup and Maintenance of the Monitoring Network.

Task 1.1. The City understands settling of the vault structure located at the Ayala Park Extensometer facility has occurred over time which allows water to enter the vault and potentially flow into the monitoring wells. Watermaster proposes to address this field condition by installing French drains around the vault. The City is concerned the construction of French drains may not be the most suitable means to address the field condition. Any contemplated construction activity at the park must be approved by the City of Chino and coordinated with the City of Chino's Community Services for any planned activities in the area. Prior to taking any steps towards implementing the French drains the Watermaster is advised to contact the City.

Response:

Watermaster staff and engineer will work closely with the City on any modifications at Ayala Park to prevent flooding of the piezometer vault.

Comments from the State of California (Rick Rees)

Comment 1 – Task 3. Basin-Wide Ground-Level Monitoring Program (InSAR)

The InSAR-based monitoring proposed in the 2024/2025 budget is only for the western portion of the Chino Basin. Therefore, it is not "basin-wide" as the task description implies (text and Table 1). The committee has discussed conducting occasional InSAR monitoring of the eastern part of the Chino Basin. This should be considered for the next budget. One option that would reduce cost is to provide InSAR results published by the Department of Water Resources (DWR) to cover the entire basin. Although the DWR InSAR data are not the same level of resolution and not directly comparable with the data that West Yost will process for the western part of the basin, it should be easy to generate true basin-wide InSAR results. This should be continued less frequently than annual (e.g., every five years) to verify that there are no subsidence issues outside of the western part of the Chino Basin where ground levels are well documented every year.

Response:

We concur. The effort to conduct InSAR monitoring of the eastern part of the Chino Basin using InSAR results published by the Department of Water Resources (DWR) will be described and budgeted for the proposed scope and budget for the GLMP for 2025/26.

Comments from Monte Vista Water District (Justin Scott-Coe)

Comment 1 – Task 1.1 Maintain Extensometer Facilities

"Non-routine efforts to be performed during FY 2024/25 under this subtask include… Monthly adjustments to the PX extensometers to improve the accuracy of the measurements of aquifer system deformation."

Watermaster has recognized the importance of the extensometer data in monitoring current conditions and understanding hydrogeologic conditions. As stated in the Technical Memorandum "Construction and Calibration of 1D Compaction Models in Northwest MZ 1 (September 23, 2022), "Continued monitoring and enhanced understanding of hydrogeologic conditions is crucial to minimizing model error and uncertainty, especially the monitoring of the PX in Northwest MZ-1." The District recommends providing a briefing and the currently available extensometer data to the Ground Level Monitoring Committee (GLMC) for review.

Key questions regarding the PX include:

- How is Watermaster assessing the reliability/accuracy of the extensometer data?
- What adjustments have been made and are proposed to be made to the PX in the upcoming year and what is the anticipated result of those changes?
- What does the extensometer data currently indicate regarding ground-level motion in Northwest MZ-1?

Response:

We concur with the recommendation to brief the GLMC re: the currently available extensometer data and answer the questions listed above. This topic will be included on the GLMC meeting agenda for August 1, 2024.

Comment 2 – Basin-Wide Ground-Level Monitoring Program (InSAR)

A significant cost identified under this task is $62,000 for "preparation and checking" of InSAR data. What is the basis for this cost, and are there opportunities for more efficiency by workflow automation in the data processing (e.g. save money over time)?

Response:

The basis for this cost is about 28 days of staff time multiplied by the various daily rates by staff position.

The Watermaster Engineer has recently hired Sean Yarborough to perform this task directly. Mr. Yarborough previously worked for the long-time InSAR subconsultant that worked for the Watermaster. The engineer expects the level of effort for this task to decrease in subsequent years as automated coding of processes are developed and implemented and as junior staff are trained to perform portions of this task.

Comment 3 – Develop a Subsidence-Management Plan for Northwest MZ-1

"…the same pattern of differential subsidence that occurred in the Managed Area during the time of ground fissuring."

The District suggests removing this clause from the sentence or revising to indicate that the differential subsidence conditions in the two areas are not identical. Groundwater levels in Northwest MZ-1 have

stabilized since the late 1970s and no ground fissuring has been reported in Northwest MZ-1 to date. Ground fissuring in the Managed Area was reported to occur as early as the early 1970s and accelerated in the early 1990s.

Response:

The phrase has been revised to read "*spatial* pattern of differential subsidence" to distinguish it from rates and magnitudes of subsidence.

Comment 4 – Progress to Implement Work Plan through FY 2023/24

"a. Establish a preliminary 'Northwest MZ-1 Guidance Level' of 630 ft-amsl for hydraulic heads in Layers 3 and 5 at the PX location. The preliminary Guidance Level is an aspirational Watermaster recommendation that, if achieved, would likely slow or stop aquitard compaction and land subsidence in Northwest MZ-1."

The District recommends removing language from this progress summary suggesting that the aspirational Watermaster recommendation would "likely slow or stop aquitard compaction and land subsidence in Northwest MZ-1." It is the District's understanding that modeling to support this statement has neither been conducted nor provided to the GLMC for review; as such, this statement is not supported by relevant technical analyses.

"d. Additional SMAs should be developed and evaluated with the 1D Models… The GLMC should participate in the scenario building exercises associated with these Watermaster efforts to develop the SMAs, so that the scenarios include various methods to achieve the Guidance Level."

Because the "Guidance Level" cited here has not yet been evaluated, scenario-building to meet this or any other proposed guidance level is premature. Any proposed guidance level should be simulated versus a no-action alternative to evaluate the effectiveness of the guidance level at reducing projected land subsidence versus a no-action alternative. The simulation results should then be presented to the GLMC for review prior to initiating any scenario-building to meet the proposed guidance level.

Response:

For (a), the statement suggesting that the aspirational Watermaster recommendation would "likely slow or stop aquitard compaction and land subsidence in Northwest MZ-1" is based on the physics of aquitard drainage—not on modeling. In other words, any increases in hydraulic heads within the deep aquifer system would have the result of slowing or stopping aquitard drainage.

For (d), the ongoing process to re-evaluate the Safe Yield will include a "no action" scenario(s) and will include 1D compaction modeling in Northwest MZ-1 for review by the GLMC.

Comment 5 – Construct and Calibrate Additional 1D Models Across Western Chino Basin

Regarding Additional Expenditure on 1-D Models

The District continues to have concerns regarding the use of 1-D Models as management tools in Northwest MZ-1 and other Areas of Subsidence Concern. Given the size and heterogeneity of the alluvial sediments across the Areas of Subsidence Concern, the limitations and appropriateness of 1-D models should be re-evaluated before additional budget expenditures. (See above comments on Proposed Locations and Data for Construction/Calibration of Additional 1D Models.)

"The Watermaster used the information derived from the 1D Models to develop a preliminary 'Guidance Level' to avoid future subsidence in Northwest MZ-1."

The District's understanding is that the "preliminary 'Guidance Level'" cited here for the deep aquifer was based on water levels in the shallow aquifer and not on "information derived from the 1D Models." If this is the case, this language does not reflect how the preliminary "Guidance Level" was developed. The preliminary "Guidance Level" was not based on an analysis of 1D Models with the guidance level implemented or evaluated compared to a no-action alternative. Whether the currently proposed guidance level will avoid future subsidence is also unknown. The District recommends that this sentence be removed or modified to reflect the approach taken and the uncertainty regarding the effectiveness of the preliminary "Guidance Level."

Response:

As stated in this memorandum, this task was budgeted and scheduled for completion in FY 2023/24. No additional budget in FY 2024/25 is necessary to complete this task.

Appendix B

Response to GLMC Comments

MONTE VISTA WATER DISTRICT (JUSTIN SCOTT-COE)

Comment 1 – Preliminary Guidance Level

The District has previously expressed concerns that the "preliminary guidance level" for groundwater levels of 630 feet above mean sea level (ft-amsl) in Northwest Management Zone 1 (MZ-1) was insufficiently supported by data and modeling when it was issued last year. Land subsidence trends in the interferometric synthetic aperture radar (InSAR) data in Northwest MZ-1 have abated over the latest monitoring period. Given groundwater elevations remain below the "preliminary guidance level" and conditions have stabilized and even rebounded recently, Watermaster should reconsider the issuance of the "preliminary guidance level."

The District also recommends additional discussion in the Report regarding:

1. How the current groundwater levels compare to the "preliminary guidance level"; and
2. How the evaluation of management alternatives would change if subsidence trends continue to stabilize as they have over the last five years.

Given the "No Action" alternative has yielded a cessation of subsidence in the Northwest MZ-1 based on InSAR, the District recommends evaluating an alternative with recent operations (capturing recharge and pumping cycles). Also, the District recommends assessing the feasibility of more frequent, higher volume recharge in the Northwest MZ-1 during the development of subsidence management alternatives.

In relation to recommendations regarding the frequency of ground level surveys, the District recommends that ground level surveys continue at a regular frequency in Northwest MZ-1. The ground level surveys remain an important second data source, given the issues at the Pomona Extensometer (PX) and as a confirmation of InSAR.

Finally, in relation to the predictions of the 1-D models, it will be important to demonstrate that the 1-D models predict the cessation of subsidence in the observed record in Northwest MZ-1 and to evaluate if the 1-D models are overpredicting future subsidence from the delayed drainage and compaction from historical 1930 to 1978 lowering of water levels.

Response:

The Watermaster Engineer considers the "preliminary guidance level" to be "preliminary" and subject to change based on additional data collection, data analysis, and 1D Model evaluations of additional Subsidence Management Alternatives (which will include the newly collected data over the past few years).

The Subsidence Management Alternatives are planned to be developed in a collaborative process with the GLMC and could (and should) include "more frequent, higher volume recharge in the Northwest MZ-1." These efforts are contemplated for FY 2025/26 and should be discussed by GLMC in early 2025 during its efforts to recommend a scope and budget for the GLMP for FY 2025/26.

The suggestion to compare current groundwater elevations at the PX-3 piezometer to the "preliminary guidance level" is reasonable, and such comparisons and evaluations should be included in future annual reports.

The ground-level surveys in Northwest MZ-1 are planned and budgeted for FY 2024/25.

The future 1D Model evaluations of additional Subsidence Management Alternatives will include the newly collected data over the past few years, and therefore, can be used to "validate" the 1D Models or demonstrate that the 1D Models require updates and/or recalibration.

Comment 2 – Section 2.1.1.1: *"The PX has been measuring logical head changes that are consistent with head changes being measured at nearby wells, but has not been measuring and recording logically correlated extensometer data, which indicates that: (i) the extensometers are malfunctioning, (ii) the monitoring/recording equipment is malfunctioning, or (iii) both are malfunctioning."*

Are these the only two possible explanations for the observations at the PX?

Response:

Yes. This interpretation is based on the Watermaster Engineer's past experiences with extensometers in the Chino Basin and elsewhere in California and Arizona.

Comment 3 – Section 2.1.2.4, Footnote 10: *"The residual noise level in previous deliveries forced an overly complex workflow when converting InSAR displacement rasters to ArcGIS contours. The new processing method reduces the standard deviation over small areas while maintaining depth estimates. Though more complex than a spatially variant smoothing operation, it may be described as such."*

Can the new processing methodology be explained more thoroughly? What GIS processes or statistical methods are used? How does the processing methodology affect the data interpretation and compare with the old methodology?

Response:

Yes, the new InSAR processing methodology be explained more thoroughly with comparisons to past InSAR results. However, this would require a significant effort and cost to prepare such documentation. Such documentation was not included in the scope and budget for FY 2024/25. The GLMC could recommend such an effort for the FY 2024/25 scope and budget for the GLMP.

Comment 4 – Section 2.1.2.4, Footnote 12: *"Satellite ephemeris inaccuracies create quadratic phase trends in the processed interferometry. These trends may be thought of as 'tilts' or 'bends' across the complex data, and are a source of displacement error if left uncorrected. Inaccuracies in the underlying elevation model may also contribute to overall phase trends. Correction requires careful selection of high-quality control points via manual masking and automatic data quality estimation."*

Please add some discussion on the magnitude of inaccuracies and manual and automated corrections in processing methodology. Ground-truthing and on-going ground level monitoring surveys are of continued importance. How is data in Northwest MZ-1 affected by these processing techniques and corrections?

Response:

The new InSAR processing methodology be explained more thoroughly with reference to specific areas in the Chino Basin (e.g., Northwest MZ-1), however, this would require a significant effort and cost to prepare such documentation. Such documentation was not included in the scope and budget for FY 2024/25. The GLMC could recommend such an effort for the FY 2024/25 scope and budget for the GLMP.

The InSAR results in Northwest MZ-1 are likely the most accurate in the Chino Basin with the least potential error, mostly due to the virtual complete coverage of the land surface by hard, reflective surfaces that have not changed over time (*e.g.,* an agricultural field being converted into a warehouse). This has been demonstrated by the good match between ground-level survey data and InSAR estimates of vertical ground motion in Northwest MZ-1.

Comment 5 – Section 2.2.1, Subsidence Management Plan for Northwest MZ-1, Task 6: *"The objective of this task is to perform controlled aquifer-system stress tests at pumping wells in Northwest MZ-1 and to monitor the depth-specific hydraulic head and aquifer-system deformation response at PX."*

The establishment of a reliable data record at the PX and future aquifer testing would be useful in confirming critical aspects of the conceptual model prior to establishing management guidance.

Response:

While it is always true that more data and testing are useful in making interpretations and recommendations, the Watermaster Engineer continues to support the data and modeling that were utilized to recommend a "preliminary guidance level" for Northwest MZ-1 and the proposed process to refine the "preliminary guidance level" in FY 2025/26 (see response to Comment 1).

Comment 6 – Section 2.2.1, Subsidence Management Plan for Northwest MZ-1, Task 9a: *"Establish a preliminary 'Northwest MZ-1 Guidance Level' of 630 ft-amsl for hydraulic heads in Layer 3 and 5 at the PX location."*

The preliminary guidance level was established prematurely without correlation of piezometric heads with aquifer deformation at the extensometer, or modeling in support of the guidance level. What do recent rebounds in land surface in Northwest MZ-1 indicate about the preliminary guidance level, given hydraulic heads in Layers 3 and 5 at the PX location remain at ~ 560 to 580 ft-amsl?

Response:

Please see Section 4.1 of the annual report, which explains the Watermaster Engineer's interpretations of the recent data/observations, including the recommendations for additional work to refine the "preliminary guidance level" for Northwest MZ-1 in FY 2024/25.

Comment 7 – Section 3.4, Northwest MZ-1, Second/Third Bullets: *"A maximum of about 1.4 ft of subsidence occurred in this area from 1992 through March 2024 – an average rate of about 0.04 ft/yr… … the maximum rate of downward ground motion in Northwest MZ-1 slowed to about – 0.03 ft/yr. This resulted in a maximum of about -0.4 ft of downward ground motion…"*

Can the sign convention be kept consistent in the discussion in these two bullets? In the third bullet, negative downward ground motion would indicate upward displacement, when this does not appear to be the intent.

Response:

The text of the annual report has been revised to address this comment.

Comment 8 – Section 3.4, Northwest MZ-1, Last Bullet: *"These observations suggest that in Northwest MZ-1: (i) changes in hydraulic heads, which are controlled by the pumping and recharge stresses in the area, have at least some control on the pattern and rate of subsidence and (ii) these monitoring data may be providing information on hydraulic head 'thresholds' that could be used as management criteria to protect against the future occurrence of land subsidence."*

What do the observations suggest about the "preliminary guidance level" and potential subsidence management alternatives? Can the subsidence management alternatives include more frequent higher volume recharge in the Northwest MZ-1?

Response:

This section is an analysis of subsidence at the P-30 location and therefore is not directly related to the "preliminary guidance level" which corresponds to the PX location (and specifically, the head at the PX-3 piezometer).

Yes, additional Subsidence Management Alternative could (and should) include greater recharge in Northwest MZ-1.

Comment 9 – Figure 3-10, Inset Note: *"From 2018 to 2022, groundwater elevations have remained above 577 ft-amsl…"*

The discussion in this note includes data from 2018 to 2022. From 2018 to 2024, subsidence trends from InSAR data have stabilized, and groundwater elevations varied across a broader range. Please update the discussion to include the latest data period.

Response:

The note on Figure 3-10 represents the Watermaster Engineer's most defensible interpretation of all available data on the figure (including the data from 2022-24).

Comment 10 – Section 4, Conclusions and Recommendations, Second Bullet: *"The past few years of reduced pumping and increased recharge in Northwest MZ-1 functioned as an empirical test of the model simulations and generally confirmed the model results that decreased pumping and increased recharge could elevate hydraulic heads and minimize or abate ongoing subsidence."*

Please add some discussion on how the current hydraulic heads compare with the "preliminary guidance level." Given the 1-D model predicted ongoing delayed drainage at the current hydraulic heads, and the current conditions/operations result in stabilized conditions, does the 1-D model still serve as a useful management tool for evaluating alternatives? Would a 1-D model of a "No Action" alternative at the current hydraulic heads predict the current stabilized condition?

Response:

Aquitard expansion, compression, and compaction are complex processes that are site-specific and depth-specific and can be influenced by site-specific and depth-specific recharge and pumping activities. For example, the recent increases in groundwater levels and slowing of subsidence are likely due to decreased pumping and increased recharge, which could be causing elastic expansion in some depth intervals of the aquifer system, which in turn, could be masking the delayed drainage of aquitards in other depth intervals of the aquifer system.

Please recall that subsidence management activities in the Chino Basin are an iterative, adaptive process. Ongoing monitoring and the 1D Model efforts work in tandem, and can be used over time to better understand the long-term depth-specific heads, that if maintained, could eliminate aquitard compaction over time.

Comment 11 – Section 4, Conclusions and Recommendations, Third Bullet: *"Developing additional subsidence-management alternatives for evaluation in FY 2025/26 if the 2025 [Safe Yield Reset] alternatives are unsuccessful at minimizing or abating the future occurrence of subsidence in Northwest MZ-1."*

This language and recommendation should be deleted. Safe Yield, by definition, cannot cause an "undesirable result" such as subsidence (Chino Basin Restated Judgement ¶4(x)). The 2022 Updated Safe Yield Reset Methodology allows Watermaster to identify and implement prudent measures necessary to mitigate an "undesirable result," but only after determining that groundwater production at the proposed Safe Yield will cause or threaten to cause an "undesirable result." To our knowledge, such a determination has not been made for projected groundwater production under any 2025 Safe Yield Reset alternative. Therefore, developing additional subsidence-management alternatives would be unnecessary and a waste of public funds.

Response:

The 2025 Safe Yield Reevaluation has not yet been completed, nor has an evaluation of the potential for subsidence under the 2025 Safe Yield Reevaluation. If subsidence is recognized as potential MPI in Northwest MZ-1 in the 2025 Safe Yield Reevaluation, then the 1D Models would become useful tools to explore prudent mitigation measures (*e.g.,* prioritization of recharge in Northwest MZ-1).

CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, CA 91730
909.484.3888 www.cbwm.org

STAFF REPORT

DATE: November 14, 2024

TO: AP/ONAP/OAP Committee Members

SUBJECT: Application: Recharge (Consent Calendar Item I.E.)

Issue: On October 1, 2024 Jurupa Community Services District submitted an Application for Recharge for up to 7,000 acre-feet from November 1, 2024 to October 31, 2029. [Within WM Duties and Powers]

Recommendation: Recommend to the Advisory Committee to recommend to the Watermaster Board to approve Jurupa Community Services District's Application for Recharge of 7,000 acre-feet from November 1, 2024 to October 31, 2029, and direct Watermaster staff to account for this recharge.

Financial Impact: None.

ACTIONS AND FUTURE CONSIDERATIONS:
Advisory Committee – January 16, 2025
Watermaster Board – January 23, 2025

BACKGROUND

The Court approved the Peace Agreement, the OBMP Implementation Plan and the goals and objectives identified in the OBMP Phase I Report on July 13, 2000 and ordered Watermaster to proceed in a manner consistent with the Peace Agreement. Under the Peace Agreement, Watermaster approval is required for Applications to store, recapture, recharge or transfer water, as well as for Applications for credits or reimbursements and storage and recovery programs.

Where there is no Material Physical Injury (MPI), Watermaster must approve the application. Where the request for Watermaster approval is submitted by a Party to the Judgment, there is a rebuttable presumption that most of the proposed activities do not result in Material Physical Injury to a Party to the Judgment or the Basin. Storage and Recovery Programs do not have this presumption.

DISCUSSION

On October 1, 2024, Jurupa Community Services District (JCSD) submitted an Application for Recharge for up to 7,000 acre-feet from November 2024 to October 2029. The Application states that the method of recharge will be surface spreading (see Attachment 1) and identifies the source of water to be State Water Project imported water. The amount recharged will not be subject to evaporative losses.

West Yost completed a MPI analysis on October 8, 2024 declaring no negative impacts to the Basin from this recharge event (see Attachment 3.) The spreading of the water will be monitored and accounted for in coordination with JCSD through Watermaster's Form 2b and Form 2c (Report of Supplemental Water Recharge by a Person).

Once approved, JCSD must complete Form 2b Request to Recharge Supplemental Water by a Person to Watermaster for each recharge event during the Applications proposed period. During the Recharge event, Watermaster will collect data to properly ensure the water is accounted for. Upon completion of the recharge event, JCSD will be required to submit Form 2c Report of Supplemental Water Recharge by a Person to Watermaster for final review and accounting.

ATTACHMENTS
1. JCSD Application for Recharge Dated October 1, 2024
2. Notice Forms
3. October 8, 2024 Letter from West Yost to Watermaster: Analysis of Material Physical Injury for the Jurupa Community Services District (JCSD) Recharge Application, Submitted to the Chino Basin Watermaster on October 1, 2024 (hereafter October 1, 2024 recharge application)

Form 2a - Application for Supplemental Water Recharge

Applicant Information and Recharge Request			
Person	Jurupa Community Services District	Date Requested	10/01/2024
Contact (individual)	Bryan Smith	Date Approved	
Street Address	11201 Harrel Street	Proposed Period of Time Covered by Recharge Application (mm/yyyy to mm/yyyy)	11/1/24-10/31/29
City	Jurupa Valley		
State	CA		
Zip Code	91752	Requested Total Amount of Recharge Over the Application Period (AF)	7,000
Telephone	951-685-7434		
Fax		Approved Total Amount of Recharge Over the Application Period (AF)	
Email	BSmith@JCSD.US		

Source(s) of Supply (check box and provide supporting information)		
(✔)	State Water Project	
( )	Colorado River Aqueduct	
( )	Local Supplemental (identify source and attach source water quality characterization including TDS and TN; use as many sheets as necessary)	
( )	Recycled Water (identify source and attach source water quality characterization including TDS and TN; use as many sheets as necessary)	
( )	Other (identify source and attach source water quality characterization including TDS and TN; use as many sheets as necessary)	

Method of Recharge (check box and provide supporting information)		
(✔)	Surface Spreading	
	Recharge Basin Name(s)	MZ-3 Basin preferred (CBWM choice)
	Expected Period of Recharge (mm/dd to mm/dd)	As excess MWD Table A water is available
	Depth to Water in Recharge Area (ft-bgs)	As determined be CBWM
	Water Quality in Recharge Area (attach characterization)	As determined be CBWM
( )	Injection	
	Well Names and Locations (attach well completion report if not on file with the Watermaster)	
	Expected Period of Recharge (mm/dd to mm/dd)	
	Depth to Water in Recharge Area (ft-bgs)	
	Water Quality in Recharge Area (attach characterization)	
( )	In-Lieu Exchange	
	Treatment Plant and Turnout	
	Share of Safe Yield (percent and AFY)	
	Carryover Right, if Applicable (AF)	
	Water in Storage (AF)	
	Pumping Capacity (mgd or AFM)	
	Expected Period of Recharge (mm/dd to mm/dd)	
	Depth to Water in Area Impacted by In-Lieu Recharge (ft-bgs)	
	Water Quality in Area Impacted by In-Lieu Recharge (attach characterization)	

Form 2a - Application for Supplemental Water Recharge

Material Physical Injury

Is the applicant aware of any potential material physical injury to a Party to the Judgment or the Basin that may be caused by the action covered by the Application? ☐ YES ☒ NO

If yes what are the proposed mitigation measures, if any, that might reasonably be imposed to ensure that the action does not result in Material Physical Injury to a Party or the Basin (provide list of mitigation measures and rational either below or attach one to this application)

BY: Bryan Smith291 Applicant

October 1, 2024 Date

To Be Completed by Watermaster

Is the Person a Party to the Judgment that has:

Previously contributed to the implementation of the OBMP? ☐ YES ☐ NO

Is in compliance with their continuing covenants under the Peace Agreement? ☐ YES ☐ NO

(If answer to previous question is NO)

Paid or delivered to Watermaster "financial equivalent" consideration to offset the past performance prior to the OBMP implementation? ☐ YES ☐ NO

Promised continued future compliance with Watermaster Rules and Regulations? ☐ YES ☐ NO

Date of Approval from Appropriative Pool (mm/dd/yyyy) _____

Date of Approval from Overlying Non-Ag Pool (mm/dd/yyyy) _____

Date of Approval from Overlying Ag Pool (mm/dd/yyyy) _____

Hearing Date (if any) (mm/dd/yyyy) _____

Date of Approval by Advisory Committee (mm/dd/yyyy) _____

Date of Approval from Board (mm/dd/yyyy) _____

Recharge Agreement Number _____

CHINO BASIN WATERMASTER

NOTICE

OF

APPLICATION(S)

RECEIVED FOR

RECHARGE

Date of Notice:

November 7, 2024

This notice is to advise interested persons that the attached application(s) will come before the Watermaster Board on or after 30 days from the date of this notice.

APPLICATION FOR RECHARGE

The attached staff report will be included in the meeting package at the time the transfer begins the Watermaster process.

NOTICE OF APPLICATION(S) RECEIVED

Date of Application: **October 01, 2024** Date of this notice: **November 07, 2024**

Please take notice that the following Application has been received by Watermaster:

- Notice of Application for Recharge – On October 1, 2024, Jurupa Community Services District submitted an Application for Recharge for up to 7,000 acre-feet from November 1, 2024 until October 31, 2029.

This ***Application*** will first be considered by each of the respective pool committees on the following dates:

Appropriative Pool:	November 14, 2024
Non-Agricultural Pool:	November 14, 2024
Agricultural Pool:	November 14, 2024

This ***Application*** will be scheduled for consideration by the Advisory Committee ***no earlier than thirty days from the date of this notice and a minimum of twenty-one calendar days*** after the last pool committee reviews it***.***

After consideration by the Advisory Committee, the ***Application*** will be considered by the Board.

Unless the ***Application*** is amended, as ***Contests*** must be submitted a minimum of fourteen (14) days prior to the Advisory Committee's consideration of an ***Application,*** parties to the Judgment may file ***Contests*** to the ***Application*** with Watermaster ***within seven calendar days*** of when the last pool committee considers it. Any ***Contest*** must be in writing and state the basis of the ***Contest***.

Watermaster address:

Chino Basin Watermaster
9641 San Bernardino Road
Rancho Cucamonga, CA 91730

Tel: (909) 484-3888
Web: www.cbwm.org
recharge_storage@cbwm.org

WEST YOST
Water. Engineered.

23692 Birtcher Drive
Lake Forest CA 92630

949.420.3030 phone
530.756.5991 fax
westyost.com

October 8, 2024

Project No.: 941-80-24-03
SENT VIA: EMAIL

Chino Basin Watermaster
Attention: Mr. Todd M. Corbin, General Manager
9641 San Bernardino Road
Rancho Cucamonga, CA 91730

SUBJECT: Analysis of Material Physical Injury for the Jurupa Community Services District Recharge Application, Submitted to the Chino Basin Watermaster on October 1, 2024

Mr. Corbin:

Pursuant to your direction, West Yost Associates, Inc. (West Yost) conducted a material physical injury (MPI) analysis on a Recharge Application submitted by the Jurupa Community Services District (JCSD) to the Chino Basin Watermaster on October 1, 2024 (hereafter, October 1, 2024 recharge application). This MPI analysis was completed pursuant to the Watermaster Rules and Regulations and the Peace Agreement.

In 2016, Watermaster approved a procedure for the recharge of supplemental water. This procedure includes three main steps:

1. Apply for and obtain Watermaster approval to recharge Supplemental Water;
2. Plan, schedule, coordinate, and execute a Supplemental Water recharge event; and
3. Provide the monitoring and accounting necessary to enable the applicant and Watermaster to determine how much water was actually recharged during a recharge event and to account for the recharged water

Under Step 1, Any Person seeking to recharge Supplemental Water is required to complete Watermaster Form No. 2a *Application for Recharge*.[1] Watermaster staff reviews the completed application and conducts an analysis to determine if the proposed recharge as described in the recharge application will cause potential MPI.

Pursuant to the Peace Agreement (page 8), MPI is defined as:

> *"[…] material injury that is attributable to Recharge, Transfer, storage and recovery, management, movement or Production of water or implementation of the OBMP,*

[1] https://www.cbwm.org/pages/forms/

> *including, but not limited to, degradation of water quality, liquefaction, land subsidence, increases in pump lift and adverse impacts associated with rising groundwater."*

Article 10 of the Watermaster Rules and Regulations (paragraph 10.10) requires that:

> *"[…] Watermaster prepare a written summary and analysis (which will include an analysis of the potential for material physical injury) of the Application and provide the Parties with a copy of the written summary and advanced notice of the date of Watermaster's scheduled consideration and possible action on any pending Applications."*

The MPI analysis presented herein is based on our professional experience and judgment in the Chino Basin, including the past analyses of monitoring data, past evaluations of Chino Basin storage programs, past groundwater modeling of various groundwater management alternatives in the Chino Basin, and prior MPI analyses.

JCSD'S RECHARGE APPLICATION OF OCTOBER 1, 2024

The JCSD proposes to recharge up to 7,000 acre-feet (af) over the five-year period from November 1, 2024 to October 31, 2029. The JCSD proposes to recharge untreated imported water from the State Water Project (SWP) into recharge basins located in Management Zone 3 (MZ3) — Banana, RP3, or Declez Basin. The JCSD will need to coordinate their proposed diversions for recharge with the Inland Empire Utilities Agency (IEUA) and Watermaster to determine the recharge basin(s) that should be used, as far in advance as requested by IEUA. JCSD will also need to coordinate with IEUA and Watermaster to ensure that their water is diverted as proposed, measured, and accounted for, and its recharge activities do not interfere with other recharge operations and stormwater management. When possible, recharge should be conducted at Banana Basin, as it is located further upstream and can provide a greater benefit to MZ3.

West Yost evaluated for the following to determine the potential for MPI from the proposed recharge into any of the three MZ3 recharge basins:

- Impacts to groundwater levels that could result in liquefaction, land subsidence, and/or increases in pump lifts at wells.
- Impacts to the balance of recharge and discharge in every area and subarea of the Chino Basin.
- Impacts to groundwater quality.

Potential Impacts to Groundwater Level

The proposed project will produce a localized increase in groundwater levels in the vicinity of the where the recharge occurs. The temporary increase in groundwater levels will be followed by a return to the groundwater levels that would occur had the water not been recharged. The impacts of these localized changes in groundwater levels are described below:

- *Liquefaction.* As of September 2024, the depth to groundwater:
  - at Wells BH-1/1 and BH-1/2, located downgradient of the Banana Basin, is about 403 and 432 feet below ground surface (ft-bgs), respectively.

- at Wells RP3-1/1 and RP3-1/2, located downgradient of the RP3 Basin, is about 219 and 221 ft-bgs, respectively.
- As of September 2024, the depth to groundwater at Wells DCZ-1 and DCZ-2, located downgradient of the Declez Basin, is about 139 and 209 feet below ground surface (ft-bgs), respectively.

Provided that JCSD conducts recharge such that groundwater levels remain below 50 ft-bgs,[2] there will be no threat of liquefaction due to the localized increases in groundwater levels.

- *Land subsidence*. The area that will experience the temporary increases and declines in groundwater levels is in a portion of the Chino Basin that is not susceptible to aquifer-system compaction (i.e., the aquifer-system lacks an abundance of clay layers). In addition, land subsidence due to changes in groundwater levels typically occurs with declining groundwater levels. Thus, there will be no threat of aquifer-system compaction and land subsidence due to the localized increases in groundwater levels caused by the recharge.
- *Pumping lifts*. Because of the temporary increases in groundwater levels, pumping lifts and pumping costs may be slightly reduced for wells in the vicinity of the recharge.

Balance of Recharge and Discharge in Every Area and Subarea

The JCSD did not provide information on how it plans to recover the recharged water, so the location of future recovery remains unknown; thus, the balance of recharge and discharge has not been analyzed in-depth.

However, Figure 7-11d from the 2020 Safe Yield Recalculation Final Report (WEI, 2020)[3] shows the projected change in groundwater levels from 2018 through 2050. Review of this map indicates that for the period 2018 through 2050, groundwater levels are projected to decline in the northern part of MZ3 (between 10 and 20 feet). The proposed recharge will contribute to improving recharge in MZ3.

Water Quality Impacts

The water source of the imported water in the JCSD October 1, 2024 application is the SWP. West Yost obtained water quality data of the SWP water from its database for the period of 2019 to 2024. These data indicate no exceedances of primary California Title 22 maximum contaminant levels (MCLs).

Impacts to Receiving Water

The proposed recharge water is of equal or better quality than current groundwater in the area of recharge; hence, recharge of this water will likely improve the general water quality in MZ3.

Watermaster recently conducted a groundwater modeling study to evaluate a 100,000 af storage and recovery program in the Chino Basin, which included recharge in at the recharge basins in MZ3. The study concluded that the "displacements [of contaminant plumes due to the storage and recovery program] are negligible and are not potential MPI."[4] Based on these results and the location and magnitude of the

[2] Per the County of Riverside's 2003 Riverside County Integrated Project (RCIP) Environmental Impact Report (EIR), areas with depth to groundwater of greater than 50 feet are considered low risk for liquefaction.
[3] https://cbwm.syncedtool.com/shares/folder/e83081106c3072/?folder_id=2512
[4] West Yost (2021). *Evaluation of the Local Storage Limitation Solution*. February 2021.

proposed recharge, our professional opinion is that the proposed recharge will not change the direction and/or speed of movement of known contaminant plumes in the Chino Basin.

Basin Plan Compliance

The proposed recharge will occur in the Management Zone 3 (MZ3). The 2004 Regional Water Quality Control Plan for the Santa Ana Basin (Basin Plan) has maximum benefit-based TDS and nitrate (expressed as nitrogen) concentration objectives in the Chino-North GMZ of 420 milligrams per liter (mgl) and 5 mgl, respectively. Pursuant to the Basin Plan, Watermaster and the IEUA are required to manage artificial recharge in MZ3 such that the five-year, volume-weighted average TDS and nitrate concentrations of the recycled water, imported water, and new stormwater recharged across all recharge facilities does not exceed the maximum benefit-based Basin Plan objectives.

Water quality data from 2019 to 2024 indicate that the TDS concentrations averaged 237 mgl (ranging from 82 to 327 mgl) and the nitrate concentration averaged 0.39 mgl (ranging from 0.09 to 1.04 mgl). The current ambient TDS and nitrate concentrations in the Chino-North GMZ (covering the 20-year period from 2001 to 2021) are 360 mg/L and 10.8 mg/L,[5] respectively. Thus, the proposed recharge will not encroach on the current assimilative capacity or interfere with Watermaster and the IEUA's regulatory obligations.

CONCLUSION

Based on the information available at this time, our professional opinion is that there will be no MPI due to JCSD's proposed recharge as described in its October 1, 2024, recharge application.

Please contact me if you have any questions or concerns regarding this MPI analysis.

Sincerely,
WEST YOST

Carolina Sanchez

Carolina Sanchez, PE
Senior Engineer
RCE #85598

cc: Justin Nakano

[5] West Yost (2023). *2021 Ambient Water Quality Pilot Study*. Prepared for the Santa Ana Watershed Project Authority Basin Monitoring Program Task Force. October 2023.

CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, CA 91730
909.484.3888 www.cbwm.org

STAFF REPORT

DATE: November 14, 2024

TO: AP Committee Members

SUBJECT: Calendar Year 2025 Appropriative Pool Committee Volume Vote
(Consent Calendar Item I.F.)

Issue: Volume Vote calculations for the new calendar year are performed annually and Parties are allocated a voting percentage.

Recommendation: Approve the Calendar Year 2025 Appropriative Pool Committee Volume Vote as presented, subject to Watermaster Board approval of the Fiscal Year 2024/25 Assessment Package at the November 21, 2024 meeting.

Financial Impact: None.

ACTIONS AND FUTURE CONSIDERATIONS:
No further actions required

BACKGROUND

Following the approval of the Assessment Package each year, Volume Vote calculations for the new calendar year are performed and Parties are allocated a voting percentage. The 2024/25 Assessment Package is scheduled for Watermaster Board approval on November 21, 2024, and thus the Appropriative Pool Committee's Calendar Year 2025 Volume Vote is predicated on that approval.

Pursuant to the Appropriative Pool Pooling Plan, the total voting power on the Pool Committee is 1,000 votes. Of these, 500 votes are allocated based on each Party's percentage of Operating Safe Yield. The remaining 500 votes are allocated proportionally based on production during the preceding year.

DISCUSSION

Most Water Activity Reports have now been received from Pool members, and the Volume Vote has been calculated. Once the Assessment Package is approved by the Board, the Volume Vote is then officialized for use during the coming calendar year.

The 2025 Appropriative Pool Committee Volume Vote allocation has been completed and is provided for review and use (Attachment 1). The current year (2024) Volume Vote allocation is also attached for reference (Attachment 2).

ATTACHMENTS
1. 2025 Appropriative Pool Volume Vote
2. 2024 Appropriative Pool Volume Vote

Chino Basin Watermaster
2025 Appropriative Pool Volume Vote

Assessment Year 2024-2025 (Production Year 2023-2024)

	Assessable Production			Share of Safe Yield		TOTAL VOLUME VOTE	
	Acre-Ft	Percentage	Votes	Acre-Ft	Votes	Non-Minor	Minor
BlueTriton Brands, Inc.	231.2	0.407%	2.035	0.0	0.000		2.035
CalMat Co. (Appropriative)	0.0	0.000%	0.000	0.0	0.000		0.000
Chino Hills, City Of	1,557.1	2.740%	13.702	1,572.5	19.255	32.957	
Chino, City Of	3,369.9	5.931%	29.654	3,004.2	36.785	66.439	
Cucamonga Valley Water District	12,621.4	22.213%	111.065	2,695.5	33.005	144.070	
Fontana Union Water Company	0.0	0.000%	0.000	4,760.0	58.285	58.285	
Fontana Water Company	2,861.8	5.037%	25.183	0.8	0.010	25.193	
Fontana, City Of	0.0	0.000%	0.000	0.0	0.000		0.000
Golden State Water Company	990.9	1.744%	8.720	306.3	3.750		12.470
Jurupa Community Services District	7,390.1	13.006%	65.030	1,535.0	18.795	83.825	
Marygold Mutual Water Company	584.9	1.029%	5.147	488.0	5.975		11.122
Monte Vista Irrigation Company	0.0	0.000%	0.000	503.9	6.170		6.170
Monte Vista Water District	5,132.1	9.032%	45.161	3,592.2	43.985	89.146	
NCL Co, LLC	0.0	0.000%	0.000	0.0	0.000		0.000
Niagara Bottling, LLC	1,254.9	2.209%	11.043	0.0	0.000		11.043
Nicholson Family Trust	0.0	0.000%	0.000	2.9	0.035		0.035
Norco, City Of	0.0	0.000%	0.000	150.3	1.840		1.840
Ontario, City Of	9,107.5	16.029%	80.143	8,469.8	103.710	183.853	
Pomona, City Of	10,453.8	18.398%	91.990	8,352.2	102.270	194.260	
San Antonio Water Company	104.0	0.183%	0.915	1,122.1	13.740		14.655
San Bernardino, County of (Shooting Park)	16.5	0.029%	0.145	0.0	0.000		0.145
Santa Ana River Water Company	0.0	0.000%	0.000	969.0	11.865		11.865
Upland, City Of	1,144.1	2.014%	10.068	2,124.2	26.010	36.078	
West End Consolidated Water Co	0.0	0.000%	0.000	705.6	8.640		8.640
West Valley Water District	0.0	0.000%	0.000	479.8	5.875		5.875
TOTAL	**56,820.2**	**100.000%**	**500.000**	**40,834.0**	**500.000**	**914.105**	**85.895**
							1,000.000

Chino Basin Watermaster
2024 Appropriative Pool Volume Vote

Assessment Year 2023-2024 (Production Year 2022-2023)

	Assessable Production			Share of Safe Yield		TOTAL VOLUME VOTE	
	Acre-Ft	Percentage	Votes	Acre-Ft	Votes	Non-Minor	Minor
BlueTriton Brands, Inc.	276.6	0.414%	2.071	0.0	0.000		2.071
CalMat Co. (Appropriative)	0.0	0.000%	0.000	0.0	0.000		0.000
Chino Hills, City Of	2,176.9	3.259%	16.297	1,572.5	19.255	35.552	
Chino, City Of	3,112.5	4.660%	23.302	3,004.2	36.785	60.087	
Cucamonga Valley Water District	13,514.7	20.235%	101.176	2,695.5	33.005	134.181	
Fontana Union Water Company	0.0	0.000%	0.000	4,760.0	58.285	58.285	
Fontana Water Company	8,721.0	13.058%	65.289	0.8	0.010	65.299	
Fontana, City Of	0.0	0.000%	0.000	0.0	0.000		0.000
Golden State Water Company	921.7	1.380%	6.900	306.3	3.750		10.650
Jurupa Community Services District	7,157.8	10.717%	53.586	1,535.0	18.795	72.381	
Marygold Mutual Water Company	559.7	0.838%	4.190	488.0	5.975		10.165
Monte Vista Irrigation Company	0.0	0.000%	0.000	503.9	6.170		6.170
Monte Vista Water District	5,165.5	7.734%	38.671	3,592.2	43.985	82.656	
NCL Co, LLC	0.0	0.000%	0.000	0.0	0.000		0.000
Niagara Bottling, LLC	1,401.4	2.098%	10.492	0.0	0.000		10.492
Nicholson Family Trust	0.0	0.000%	0.000	2.9	0.035		0.035
Norco, City Of	0.0	0.000%	0.000	150.3	1.840		1.840
Ontario, City Of	12,566.1	18.815%	94.075	8,469.8	103.710	197.785	
Pomona, City Of	10,197.4	15.268%	76.341	8,352.2	102.270	178.611	
San Antonio Water Company	459.0	0.687%	3.436	1,122.1	13.740		17.176
San Bernardino, County of (Shooting Park)	17.6	0.026%	0.132	0.0	0.000		0.132
Santa Ana River Water Company	0.0	0.000%	0.000	969.0	11.865		11.865
Upland, City Of	540.0	0.809%	4.043	2,124.2	26.010	30.053	
West End Consolidated Water Co	0.0	0.000%	0.000	705.6	8.640		8.640
West Valley Water District	0.0	0.000%	0.000	479.8	5.875		5.875
TOTAL	**66,788.0**	**100.000%**	**500.000**	**40,834.0**	**500.000**	**914.889**	**85.111**
							1,000.000

CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, CA 91730
909.484.3888 www.cbwm.org

STAFF REPORT

DATE: November 14, 2024

TO: ONAP Committee Members

SUBJECT: Calendar Year 2025 Overlying (Non-Agricultural) Pool Committee Volume Vote (Routine Business Item I.F.)

Issue: Following the approval of the Assessment Package each year, Volume Vote calculations for the new Calendar Year are performed and Parties are allocated a voting percentage.

Recommendation: Receive and file the Calendar Year 2025 Overlying (Non-Agricultural) Pool Committee Volume Vote as presented, subject to Watermaster Board approval of the Fiscal Year 2024/25 Assessment Package at the November 21, 2024 meeting.

Financial Impact: None.

ACTIONS AND FUTURE CONSIDERATIONS:
No further actions required

BACKGROUND

The Overlying (Non-Agricultural) Pool Committee Volume Vote calculation is updated, and Parties are allocated a voting percentage following the approval of the Assessment Package each year. The 2024/25 Assessment Package is scheduled for Watermaster Board approval on November 21, 2024, and thus the Calendar Year 2025 Overlying (Non-Agricultural) Pool Committee Volume Vote is predicated on that approval.

The total voting power on the Pool Committee is 1,484 votes. Of these, 742 votes are to be allocated based on one vote for every ten acre-feet or fraction thereof of Safe Yield. The remaining 742 votes are allocated proportionally based on production during the preceding year.

DISCUSSION

Occasionally due to water transfers, if each Party is given one vote for every ten acre-feet or fraction thereof of Safe Yield, the total for that portion of the Volume Vote is 743 rather than 742. A reasonable solution is to reduce the 743 votes down to 742 votes on a pro-rata basis. This is the same methodology that has been used and approved by the Pool in recent years. Please note that this approach has a very minor effect on each Party's vote.

The 2025 Overlying (Non-Agricultural) Pool Committee Volume Vote allocation has been completed and is provided for review and use (Attachment 1). The current year (2024) Volume Vote allocation is also attached for reference (Attachment 2).

ATTACHMENTS
1. 2025 Non-Ag Pool Volume Vote
2. 2024 Non-Ag Pool Volume Vote

Chino Basin Watermaster
2025 Non-Ag Pool Volume Vote

Assessment Year 2024-2025 (Production Year 2023-2024)

	Assessable Production			Share of Safe Yield			TOTAL VOLUME VOTE
	Acre-Ft	Percentage	Votes	Acre- Ft	WV Realloc	Votes	
9W Halo Western OpCo L.P.	37.5	1.302%	9.660	18.8	0.0	2.000	11.660
ANG II (Multi) LLC	0.0	0.000%	0.000	0.0	0.0	0.000	0.000
California Speedway Corporation	29.2	1.013%	7.514	1,000.0	2.1	101.000	108.514
California Steel Industries, Inc.	1,221.2	42.421%	314.764	1,615.1	3.4	162.000	476.764
CalMat Co.	0.0	0.000%	0.000	0.0	0.0	0.000	0.000
CCG Ontario, LLC	0.0	0.000%	0.000	0.0	0.0	0.000	0.000
City of Ontario (Non-Ag)	1,066.3	37.040%	274.835	3,920.6	8.4	393.000	667.835
County of San Bernardino (Non-Ag)	71.3	2.477%	18.379	133.9	0.3	14.000	32.379
General Electric Company	1.2	0.043%	0.322	0.0	0.0	0.000	0.322
Hamner Park Associates, a California Limited Partnership	335.2	11.643%	86.393	464.2	1.0	47.000	133.393
Linde Inc.	0.0	0.000%	0.000	1.0	0.0	1.000	1.000
Monte Vista Water District (Non-Ag)	22.5	0.782%	5.804	50.0	0.1	6.000	11.804
Riboli Family and San Antonio Winery, Inc.	0.7	0.024%	0.176	0.0	0.0	0.000	0.176
Space Center Mira Loma, Inc.	93.7	3.255%	24.153	104.1	0.2	11.000	35.153
TAMCO	0.0	0.000%	0.000	42.6	0.1	5.000	5.000
West Venture Development Company	0.0	0.000%	0.000	0.0	0.0	0.000	0.000
TOTAL	**2,878.8**	**100.000%**	**742.000**	**7,350.3**	**15.7**	**742.000**	**1,484.000**

Chino Basin Watermaster
2024 Non-Ag Pool Volume Vote

Assessment Year 2023-2024 (Production Year 2022-2023)

	Assessable Production			Share of Safe Yield			TOTAL VOLUME VOTE
	Acre-Ft	Percentage	Votes	Acre- Ft	WV Realloc	Votes	
9W Halo Western OpCo L.P.	25.8	0.862%	6.396	18.8	0.0	2.000	8.396
ANG II (Multi) LLC	0.0	0.000%	0.000	0.0	0.0	0.000	0.000
California Speedway Corporation	274.2	9.154%	67.926	1,000.0	2.1	101.000	168.926
California Steel Industries, Inc.	1,057.5	35.310%	262.002	1,615.1	3.4	162.000	424.002
CalMat Co.	0.0	0.000%	0.000	0.0	0.0	0.000	0.000
CCG Ontario, LLC	0.0	0.000%	0.000	0.0	0.0	0.000	0.000
City of Ontario (Non-Ag)	1,151.3	38.442%	285.243	3,920.6	8.4	393.000	678.243
County of San Bernardino (Non-Ag)	75.5	2.520%	18.701	133.9	0.3	14.000	32.701
General Electric Company	0.0	0.000%	0.000	0.0	0.0	0.000	0.000
Hamner Park Associates, a California Limited Partnership	299.2	9.989%	74.116	464.2	1.0	47.000	121.116
Linde Inc.	0.0	0.000%	0.000	1.0	0.0	1.000	1.000
Monte Vista Water District (Non-Ag)	15.9	0.532%	3.944	50.0	0.1	6.000	9.944
Riboli Family and San Antonio Winery, Inc.	1.8	0.061%	0.455	0.0	0.0	0.000	0.455
Space Center Mira Loma, Inc.	93.7	3.129%	23.216	104.1	0.2	11.000	34.216
TAMCO	0.0	0.000%	0.000	42.6	0.1	5.000	5.000
West Venture Development Company	0.0	0.000%	0.000	0.0	0.0	0.000	0.000
TOTAL	**2,994.9**	**100.000%**	**742.000**	**7,350.3**	**15.7**	**742.000**	**1,484.000**

CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, CA 91730
909.484.3888 www.cbwm.org

STAFF REPORT

DATE: November 14, 2024

TO: AP/ONAP/OAP Committee Members

SUBJECT: Fiscal Year 2024/25 Assessment Package (Business Item II.A.)

Issue: To review the Chino Basin Watermaster Fiscal Year 2024/25 Assessment Package, based on Production Year 2023/24, by the Pools prior to consideration of the Watermaster Board. [Within WM Duties and Powers]

Recommendation: Review Fiscal Year 2024/25 Assessment Package as presented and offer advice to Watermaster.

Financial Impact: Collection of assessments according to the Assessment Package creates the funds that are used during the current fiscal year for budgeted expenses and the purchase of water (if available) for replenishment obligations.

ACTIONS AND FUTURE CONSIDERATIONS:
Advisory Committee – November 21, 2024: Advice and assistance.
Watermaster Board – November 21, 2024: Approval.

BACKGROUND

Watermaster issues an Assessment Package annually based on production during the previous production year (July 1 through June 30). Production information is generally collected quarterly, and other necessary information is collected annually or as it occurs. Assessments are used during the current fiscal year to fund budgeted expenses. Assessments are based on the approved budget allocated across the total assessable production in the Basin.

DISCUSSION

The Parties of the Overlying (Non-Agricultural) Pool and the Appropriative Pool were each sent a copy of their Water Activity Report in August 2024 that summarized their water activity for the previous year, including production, Dry Year Yield (DYY), land use conversion, transfers, voluntary agreements, and assignments. Each Party was asked to verify the data gathered and summarized by Watermaster. The Water Activity Reports were received back, and all necessary corrections were made.

Each Appropriative Pool Party's Water Activity Report was accompanied by a "Transfer from Storage to Satisfy Desalter Replenishment Obligation (DRO)" form, and summaries of DRO and Local Storage Accounts' balances. Using the form, the Parties submitted their preference on how they would like their share of DRO to be satisfied with stored water. Those transfers were then executed in September 2024 and the Parties' storage account balances were adjusted accordingly.

Assessments generate funds to cover the current FY 2024/25 approved budget and reserves pursuant to existing reserve policies. The Assessment Package does not factor in unspent monies as those are returned to Parties as a credit on the assessment invoicing. If credit is due, it will appear as a line item on the invoice which will be accompanied by a refund calculation table.

The total Operating Safe Yield (OSY) of the Appropriative Pool is 40,834 acre-feet, and Land Use Conversion has priority ahead of Early Transfer in calculating the Agricultural Pool Safe Yield Reallocation.

The Assessment Package is based on the production-based assessments of $9,061,010 from the FY 2024/25 Approved Budget and identifies total assessable production for all Pools as 77,415.6 acre-feet, resulting in assessments of $42.91/acre-foot for Judgment Administration and $74.14/acre-foot for OBMP & Program Elements 1-9, excluding recharge debt service, recharge improvement project expenses, "Pomona Credit" assessments, and assessments for replenishment and CURO water.

Since the FY 2024/25 Approved Budget was prepared before the end of the production year, the assessments were estimated based on a projected production of 94,668.7 acre-feet, which resulted in projected assessments of $35.09/acre-foot for Judgment Administration and $60.63/acre-foot for OBMP & Program Elements 1-9. Once the actual production numbers were compiled, it was realized that the actual production was lower than the projected production, causing the per acre-foot assessments to increase. However, the total required funding for the approved fiscal year 2024/2025 budget to be assessed remains unchanged.

For the production year 2023/24, there is a replenishment obligation of 39.0 acre-feet for overproduction, and 2.8 acre-feet for DRO. The new replenishment rate is $920 per acre-foot, which is MWD's 2024 Tier 1 Untreated rate at $903 plus OCWD's $2 connection fee plus TVMWD's $15 surcharge.

In September 2024, Watermaster received an RTS invoice from IEUA in the amount of $54,424.76. The Readiness to Serve (RTS) assessment is for water purchased during FY 2016/17 and FY 2017/18 through IEUA. A portion of the RTS is the seventh of ten annual installments for the 5,767.037 acre-feet of water purchased during FY 2016/17. The other portion is the sixth of ten annual installments for the 1,145.9 acre-feet of water purchased during FY 2017/18. The 85/15 Rule is applied where applicable for the RTS charges.

The additional assessments approved as part of the budget, allocated amongst the Appropriators based on their percentage of OSY, are the Pomona Credit assessment of $66,667.00, recharge debt payment assessment of $772,770, and recharge improvement project assessment of $0. Any additional approved assessments will be invoiced based on formulas separate from the Assessment Package.

The total DRO for production year 2023/24 is 27,073.5 acre-feet. This includes the 10,000 acre-feet of DRO Contribution and 17,073.5 acre-feet of Remaining DRO. In August and September 2024, the Appropriative Pool Parties were given an opportunity to transfer water to satisfy their share of DRO. The Parties have submitted their requests and the DRO was satisfied with a combination of stored water, annual water rights, and Exhibit "G" Form A transfers. These transfers resulted in 2.8 acre-feet of the residual DRO to be assessed.

The storage loss rate applied to water held in storage accounts continues to be 0.07%. This rate is reflected in the Assessment Package and has been applied to the beginning balances of locally stored water accounts.

In cases where the ending balances of a storage account have increased from the beginning balance on July 1, 2024, a new storage agreement is required. Parties with increased storage balances as of the approval of the Assessment Package have already submitted storage applications to Watermaster. The application submitted by the Overlying (Non-Agricultural) Pool was approved by the Watermaster Board on June 27, 2024, and the application submitted by the Appropriative Pool is being presented to the Watermaster Board for consideration on November 21, 2024. Following the approval of the FY 2024/25 Assessment Package and the Appropriative Pool's Local Storage Agreement Application, a new storage agreement will be sent for signature to those Parties with increased balances. This action is contingent on the trial court's approval of Watermaster's recommendation to increase the safe storage capacity limit up to 900,000 acre-feet since the total of all water in storage as of June 30, 2024 exceeded the current safe storage capacity limit of 700,000 acre-feet by approximately 8,000 acre-feet.

Watermaster held two Assessment Package Workshops: one on October 15, 2024, and the other on October 29, 2024. The purpose of the workshops was to provide the Parties with information pertaining to the Assessment Package and opportunities to raise questions, concerns, and provide feedback.

The FY 2024/25 Assessment Package is being presented to the Pool Committees for advice and assistance. It is also scheduled for presentation to the Advisory Committee for advice and assistance, and to the Watermaster Board for approval on November 21, 2024. If approved by the Board, invoices will be emailed to the Parties immediately following the Board's approval, and payments will be due within 30 days of issuance.

In addition to the line items detailed within the FY 2024/25 Assessment Package, additional credits and charges will be added to assessment invoices as directed by specific action of the Pool(s), or by action of Watermaster per past practice; these items are not dependent on the Board's approval of the Assessment Package. Charges for Pool Administration/Legal Services will also be included on the FY 2024/25 Assessment invoices as approved by each Pool Committee.

ATTACHMENTS
1. Fiscal Year 2024/25 Assessment Package (DRAFT)

CHINO BASIN WATERMASTER

DRAFT

2024/2025 ASSESSMENT PACKAGE
(PRODUCTION YEAR 2023/2024)

PRINTED OCTOBER 23, 2024

Table of Contents

Assessment Year 2024-2025 (Production Year 2023-2024)

Assessment Year 2024-2025 (Production Year 2023-2024)

Water Production Overview

AGRICULTURAL POOL SUMMARY IN ACRE FEET

Agricultural Pool Safe Yield	82,800.0
Agricultural Total Pool Production	(17,716.6)
	65,083.4
Safe Yield Reduction (Backfill)	(9,000.0)
Total Conversions	(34,596.4)
	(43,596.4)
Early Transfer:	**21,487.0**

Well County	Physical Production	Voluntary Agreements	Total Ag Pool Production
Los Angeles County	162.1	0.0	162.1
Riverside County	1,776.4	0.0	1,776.4
San Bernardino County	9,158.0	6,620.1	15,778.1
	11,096.5	**6,620.1**	**17,716.6**

POOL 2

Assessment Year 2024-2025 (Production Year 2023-2024)

Assessment Fee Summary

		Non-Agricultural Pool		Replenishment Assessments					
	AF Production	$42.91 AF/Admin	$74.14 AF/OBMP	*AF Over Annual Right*	$920.00 Per AF	CURO Adjmnt	RTS Charges	Other Adjmnts	Total Assmnts Due
9W Halo Western OpCo L.P.	*37.5*	1,608.14	2,778.54	*20.6*	18,921.64	(2,135.61)	597.56	0.00	21,770.27
ANG II (Multi) LLC	*0.0*	0.00	0.00	*0.0*	0.00	0.00	0.00	0.00	0.00
Aqua Capital Management LP	*0.0*	0.00	0.00	*0.0*	0.00	0.00	452.46	0.00	452.46
California Speedway Corporation	*29.2*	1,251.00	2,161.48	*0.0*	0.00	0.00	0.00	0.00	3,412.48
California Steel Industries, Inc.	*1,221.2*	52,402.12	90,540.51	*0.0*	0.00	0.00	0.00	0.00	142,942.63
CalMat Co.	*0.0*	0.00	0.00	*0.0*	0.00	0.00	0.00	0.00	0.00
CCG Ontario, LLC	*0.0*	0.00	0.00	*0.0*	0.00	0.00	0.00	0.00	0.00
City of Ontario (Non-Ag)	*1,066.3*	45,754.76	79,055.19	*0.0*	0.00	0.00	0.00	0.00	124,809.95
County of San Bernardino (Non-Ag)	*71.3*	3,059.78	5,286.70	*0.0*	0.00	0.00	0.00	0.00	8,346.48
General Electric Company	*1.2*	53.59	92.60	*1.2*	1,149.08	0.00	0.48	0.00	1,295.75
Hamner Park Associates, a California Limited Partnership	*335.2*	14,382.79	24,850.62	*0.0*	0.00	0.00	0.00	0.00	39,233.41
Linde Inc.	*0.0*	0.00	0.00	*0.0*	0.00	0.00	0.00	0.00	0.00
Monte Vista Water District (Non-Ag)	*22.5*	966.29	1,669.56	*0.0*	0.00	0.00	0.00	0.00	2,635.85
Riboli Family and San Antonio Winery, Inc.	*0.7*	29.35	50.71	*0.7*	629.28	(4,194.35)	299.37	0.00	(3,185.64)
Space Center Mira Loma, Inc.	*93.7*	4,021.01	6,947.51	*0.0*	0.00	0.00	0.00	0.00	10,968.52
TAMCO	*0.0*	0.00	0.00	*0.0*	0.00	0.00	286.27	0.00	286.27
West Venture Development Company	*0.0*	0.00	0.00	*0.0*	0.00	0.00	0.00	0.00	0.00
	2,878.8	**123,528.83**	**213,433.42**	***22.5***	**20,700.00**	**(6,329.96)**	**1,636.15**	**0.00**	**352,968.44**
	2A	2B	2C	2D	2E	2F	2G	2H	2I

Notes:

POOL 2

Assessment Year 2024-2025 (Production Year 2023-2024)

Water Production Overview

	Physical Production	Assignments	Other Adjustments	Actual FY Production (Assmnt Pkg Column 4H)
9W Halo Western OpCo L.P.	37.5	0.0	0.0	37.5
ANG II (Multi) LLC	0.0	0.0	0.0	0.0
Aqua Capital Management LP	0.0	0.0	0.0	0.0
California Speedway Corporation	29.2	0.0	0.0	29.2
California Steel Industries, Inc.	1,221.2	0.0	0.0	1,221.2
CalMat Co.	0.0	0.0	0.0	0.0
CCG Ontario, LLC	0.0	0.0	0.0	0.0
City of Ontario (Non-Ag)	0.0	1,066.3	0.0	1,066.3
County of San Bernardino (Non-Ag)	0.0	71.3	0.0	71.3
General Electric Company	1,204.1	0.0	(1,202.8)	1.2
Hamner Park Associates, a California Limited Partnership	0.0	335.2	0.0	335.2
Linde Inc.	0.0	0.0	0.0	0.0
Monte Vista Water District (Non-Ag)	0.0	22.5	0.0	22.5
Riboli Family and San Antonio Winery, Inc.	0.7	0.0	0.0	0.7
Space Center Mira Loma, Inc.	0.0	93.7	0.0	93.7
TAMCO	0.0	0.0	0.0	0.0
West Venture Development Company	0.0	0.0	0.0	0.0
	2,492.6	**1,589.0**	**(1,202.8)**	**2,878.8**
	3A	3B	3C	3D

Notes:
Other Adj:
1) General Electric Company extracted 1,204.09 AF of water and subsequently injected 1,174.36 AF and discharged 28.481 AF into the Ely Basins during the fiscal year.

POOL 2

Assessment Year 2024-2025 (Production Year 2023-2024)

Water Production Summary

	Percent of Safe Yield	Carryover Beginning Balance	Prior Year Adjustments	Assigned Share of Safe Yield (AF)	Water Transaction Activity	Other Adjust-ments	Annual Production Right	Actual Fiscal Year Production	Net Over Production	Under Production Balances		
										Total Under-Produced	Carryover: Next Year Begin Bal	To Excess Carryover Account
9W Halo Western OpCo L.P.	*0.256%*	0.0	0.0	18.8	(1.9)	0.0	16.9	37.5	20.6	0.0	0.0	0.0
ANG II (Multi) LLC	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aqua Capital Management LP	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
California Speedway Corporation	*13.605%*	1,000.0	0.0	1,000.0	(100.0)	0.0	1,900.0	29.2	0.0	1,870.8	1,000.0	870.8
California Steel Industries, Inc.	*21.974%*	1,615.1	0.0	1,615.1	(161.5)	0.0	3,068.8	1,221.2	0.0	1,847.6	1,615.1	232.4
CalMat Co.	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CCG Ontario, LLC	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Ontario (Non-Ag)	*53.338%*	0.0	0.0	3,920.6	(2,854.3)	0.0	1,066.3	1,066.3	0.0	0.0	0.0	0.0
County of San Bernardino (Non-Ag)	*1.821%*	133.9	0.0	133.9	(13.4)	0.0	254.4	71.3	0.0	183.0	133.9	49.2
General Electric Company	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	0.0	0.0	0.0
Hamner Park Associates, a California Limited Partnership	*6.316%*	464.2	0.0	464.2	(46.4)	0.0	882.1	335.2	0.0	546.9	464.2	82.6
Linde Inc.	*0.014%*	1.0	0.0	1.0	(0.1)	0.0	1.9	0.0	0.0	1.9	1.0	0.9
Monte Vista Water District (Non-Ag)	*0.680%*	50.0	0.0	50.0	(5.0)	0.0	95.0	22.5	0.0	72.5	50.0	22.5
Riboli Family and San Antonio Winery, Inc.	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.0	0.0	0.0
Space Center Mira Loma, Inc.	*1.417%*	0.0	0.0	104.1	(10.4)	0.0	93.7	93.7	0.0	0.0	0.0	0.0
TAMCO	*0.579%*	42.6	0.0	42.6	(4.3)	0.0	81.0	0.0	0.0	81.0	42.6	38.4
West Venture Development Company	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	100.00%	**3,306.9**	**0.0**	**7,350.3**	**(3,197.2)**	**0.0**	**7,460.0**	**2,878.8**	**22.5**	**4,603.7**	**3,306.9**	**1,296.8**
	4A	4B	4C	4D	4E	4F	4G	4H	4I	4J	4K	4L

Notes:
1) City of Ontario (Non-Ag) dedicated 2,462.2 AF of Annual Share of Operating Safe Yield, to satisfy City of Ontario's 2024/25 DRO pursuant to an Exhibit "G" Section 10 Form A.

POOL 2

Assessment Year 2024-2025 (Production Year 2023-2024)

Local Storage Accounts Summary

	Local Excess Carry Over Storage Account (ECO)					Local Supplemental Storage Account				Combined
	Beginning Balance	0.07% Storage Loss	Transfers To / (From)	From Under-Production	Ending Balance	Beginning Balance	0.07% Storage Loss	Transfers To / (From)	Ending Balance	Ending Balance
9W Halo Western OpCo L.P.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANG II (Multi) LLC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aqua Capital Management LP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
California Speedway Corporation	3,018.5	(2.1)	0.0	870.8	3,887.2	0.0	0.0	0.0	0.0	3,887.2
California Steel Industries, Inc.	3,686.0	(2.6)	0.0	232.4	3,915.9	0.0	0.0	0.0	0.0	3,915.9
CalMat Co.	5.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	5.0
CCG Ontario, LLC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Ontario (Non-Ag)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
County of San Bernardino (Non-Ag)	341.8	(0.2)	0.0	49.2	390.8	0.0	0.0	0.0	0.0	390.8
General Electric Company	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hamner Park Associates, a California Limited Partnership	1,918.1	(1.3)	0.0	82.6	1,999.4	0.0	0.0	0.0	0.0	1,999.4
Linde Inc.	66.0	0.0	0.0	0.9	66.9	0.0	0.0	0.0	0.0	66.9
Monte Vista Water District (Non-Ag)	174.2	(0.1)	0.0	22.5	196.6	0.0	0.0	0.0	0.0	196.6
Riboli Family and San Antonio Winery, Inc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Space Center Mira Loma, Inc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAMCO	332.4	(0.2)	0.0	38.4	370.5	0.0	0.0	0.0	0.0	370.5
West Venture Development Company	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	9,542.0	**(6.7)**	**0.0**	**1,296.8**	**10,832.2**	**0.0**	**0.0**	**0.0**	**0.0**	**10,832.2**
	5A	5B	5C	5D	5E	5F	5G	5H	5I	5J

Notes:

POOL 2

Assessment Year 2024-2025 (Production Year 2023-2024)

Water Transaction Summary

	Percent of Safe Yield	Assigned Share of Safe Yield (AF)	Water Transactions: 10% of Operating Safe Yield ("Haircut")	Water Transactions: Transfers (To) / From ECO Account	Water Transactions: General Transfers / Exhibit G Water Sales	Water Transactions: Total Water Transactions
9W Halo Western OpCo L.P.	0.256%	18.8	(1.9)	0.0	0.0	(1.9)
ANG II (Multi) LLC	0.000%	0.0	0.0	0.0	0.0	0.0
Aqua Capital Management LP	0.000%	0.0	0.0	0.0	0.0	0.0
California Speedway Corporation	13.605%	1,000.0	(100.0)	0.0	0.0	(100.0)
California Steel Industries, Inc.	21.974%	1,615.1	(161.5)	0.0	0.0	(161.5)
CalMat Co.	0.000%	0.0	0.0	0.0	0.0	0.0
CCG Ontario, LLC	0.000%	0.0	0.0	0.0	0.0	0.0
City of Ontario (Non-Ag)	53.338%	3,920.6	(392.1)	0.0	(2,462.2)	(2,854.3)
County of San Bernardino (Non-Ag)	1.821%	133.9	(13.4)	0.0	0.0	(13.4)
General Electric Company	0.000%	0.0	0.0	0.0	0.0	0.0
Hamner Park Associates, a California Limited Partnership	6.316%	464.2	(46.4)	0.0	0.0	(46.4)
Linde Inc.	0.014%	1.0	(0.1)	0.0	0.0	(0.1)
Monte Vista Water District (Non-Ag)	0.680%	50.0	(5.0)	0.0	0.0	(5.0)
Riboli Family and San Antonio Winery, Inc.	0.000%	0.0	0.0	0.0	0.0	0.0
Space Center Mira Loma, Inc.	1.417%	104.1	(10.4)	0.0	0.0	(10.4)
TAMCO	0.579%	42.6	(4.3)	0.0	0.0	(4.3)
West Venture Development Company	0.000%	0.0	0.0	0.0	0.0	0.0
	100.000%	**7,350.3**	**(735.0)**	**0.0**	**(2,462.2)**	**(3,197.2)**
	6A	6B	6C	6D	6E	6F

Notes:
1) City of Ontario (Non-Ag) dedicated 2,462.2 AF of Annual Share of Operating Safe Yield, to satisfy City of Ontario's 2024/25 DRO pursuant to an Exhibit "G" Section 10 Form A.

POOL 2

Assessment Year 2024-2025 (Production Year 2023-2024)

Cumulative Unmet Replenishment Obligation (CURO)

Remaining Replenishment Obligation:	AF
Appropriative - 100	0.0
Appropriative - 15/85	0.0
Non-Agricultural - 100	0.0
	0.0

Replenishment Rates	
2024 Rate	$920.00
2023 Rate	$872.00

Pool 2 Non-Agricultural

Company	Outstanding Obligation (AF)	Fund Balance ($)	Outstanding Obligation ($)
9W Halo Western OpCo L.P.	0.0	$2,135.61	($2,135.61)
ANG II (Multi) LLC	0.0	$0.00	$0.00
Aqua Capital Management LP	0.0	$0.00	$0.00
California Speedway Corporation	0.0	$0.00	$0.00
California Steel Industries, Inc.	0.0	$0.00	$0.00
CalMat Co.	0.0	$0.00	$0.00
CCG Ontario, LLC	0.0	$0.00	$0.00
City of Ontario (Non-Ag)	0.0	$0.00	$0.00
County of San Bernardino (Non-Ag)	0.0	$0.00	$0.00
General Electric Company	0.0	$0.00	$0.00
Hamner Park Associates, a California Limited Partnership	0.0	$0.00	$0.00
Linde Inc.	0.0	$0.00	$0.00
Monte Vista Water District (Non-Ag)	0.0	$0.00	$0.00
Riboli Family and San Antonio Winery, Inc.	0.0	$4,194.35	($4,194.35)
Space Center Mira Loma, Inc.	0.0	$0.00	$0.00
TAMCO	0.0	$0.00	$0.00
West Venture Development Company	0.0	$0.00	$0.00
Pool 2 Non-Agricultural Total	**0.0**	**$6,329.96**	**($6,329.96)**
	7A	7B	7C

Notes:
1) The 2024 replenishment rate includes MWD's Full Service Untreated Tier 1 volumic cost of $903/AF, a $15/AF surcharge from Three Valleys Municipal Water District, and a $2/AF connection fee from Orange County Water District.

Assessment Year 2024-2025 (Production Year 2023-2024)

Assessment Fee Summary

	AF Production and Exchanges	Appropriative Pool		Ag Pool SY Reallocation			Replenishment Assessments			85/15 Activity		CURO Adjmt	ASSESSMENTS DUE							
		$42.91 AF/Admin	$74.14 AF/OBMP	AF Total Realloc-ation	$760,153 $11.68 AF/Admin	$1,313,461 $20.18 AF/OBMP	$138.00 AF/15%	$782.00 AF/85%	$920.00 AF/100%	15% Producer Credits	15% Pro-rated Debits		Total Production Based	Pomona Credit	Recharge Debt Payment	Recharge Imprvmnt Project	RTS Charges	Other Adjmts	DRO	Total Due
BlueTriton Brands, Inc.	231.2	9,921.86	17,143.02	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27,064.88	0.00	0.00	0.00	11,682.13	0.00	0.00	38,747.01
CalMat Co. (Appropriative)	0.0	0.00	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chino Hills, City Of	1,557.1	66,814.73	115,442.65	2,452.1	28,639.35	49,485.66	79.98	0.00	0.00	0.00	8,197.67	(19.93)	268,640.11	2,567.35	29,759.37	0.00	1.61	0.00	0.00	300,968.44
Chino, City Of	3,369.9	144,601.94	249,843.57	11,833.7	138,214.01	238,818.64	173.09	0.00	0.00	0.00	17,741.57	(43.13)	789,349.69	4,904.69	56,852.69	0.00	0.08	0.00	0.00	851,107.15
Cucamonga Valley Water District	12,621.4	541,585.56	935,752.82	2,610.8	30,493.42	52,689.28	648.29	0.00	0.00	0.00	66,448.49	(161.54)	1,627,456.32	4,400.69	51,010.55	0.00	18.79	0.00	0.00	1,682,886.35
Desalter Authority	40,308.5	0.00	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fontana Union Water Company	0.0	0.00	0.00	3,553.9	41,508.04	71,721.33	0.00	0.00	0.00	0.00	0.00	0.00	113,229.37	7,771.37	90,081.80	0.00	0.00	0.00	0.00	211,082.54
Fontana Water Company	2,861.8	122,801.34	212,176.45	834.6	9,747.97	16,843.42	147.00	0.00	0.00	(205,774.73)	15,066.80	(36.63)	170,971.63	1.33	15.46	0.00	14.21	0.00	0.00	171,002.63
Fontana, City Of	0.0	0.00	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Golden State Water Company	990.9	42,519.82	73,465.84	228.7	2,670.59	4,614.49	50.90	0.00	0.00	(27,428.63)	5,216.86	(12.68)	101,097.20	500.00	5,795.78	0.00	0.78	0.00	0.00	107,393.76
Jurupa Community Services District	7,390.1	317,107.09	547,898.38	16,804.2	196,267.29	339,128.35	379.59	0.00	0.00	0.00	38,906.66	(94.58)	1,439,592.78	2,506.01	29,048.42	0.00	9.02	0.00	0.00	1,471,156.23
Marygold Mutual Water Company	584.9	25,098.49	43,365.23	364.3	4,255.14	7,352.41	0.00	0.00	0.00	0.00	0.00	0.00	80,071.27	796.67	9,234.60	0.00	1,187.80	0.00	0.00	91,290.34
Monte Vista Irrigation Company	0.0	0.00	0.00	376.2	4,394.01	7,592.37	0.00	0.00	0.00	0.00	0.00	0.00	11,986.38	822.67	9,535.98	0.00	0.00	0.00	0.00	22,345.03
Monte Vista Water District	5,132.1	220,216.74	380,491.00	2,787.6	32,557.75	56,256.22	263.61	0.00	0.00	0.00	27,018.94	(65.68)	716,738.58	5,864.70	67,980.58	0.00	7.56	0.00	0.00	790,591.42
NCL Co, LLC	0.0	0.00	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Niagara Bottling, LLC	1,254.9	53,848.32	93,039.25	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(120,810.95)	26,076.62	0.00	0.00	0.00	37,186.69	(48,762.28)	0.00	14,501.03
Nicholson Family Trust	0.0	0.00	0.00	2.1	24.92	43.07	0.00	0.00	0.00	0.00	0.00	0.00	67.99	4.67	54.09	0.00	0.00	0.00	0.00	126.75
Norco, City Of	0.0	0.00	0.00	112.2	1,310.37	2,264.17	0.00	0.00	0.00	0.00	0.00	0.00	3,574.54	245.33	2,843.79	0.00	0.00	0.00	0.00	6,663.66
Ontario, City Of	9,107.5	390,801.37	675,227.53	12,855.1	150,143.02	259,430.66	467.80	0.00	0.00	0.00	47,948.40	(116.57)	1,523,902.21	13,828.07	160,287.95	0.00	17.48	0.00	0.00	1,698,035.71
Pomona, City Of	10,453.8	448,573.76	775,046.81	6,235.8	72,832.23	125,846.10	0.00	0.00	0.00	0.00	0.00	0.00	1,422,298.90	(53,030.93)	158,062.38	0.00	0.00	0.00	0.00	1,527,330.35
San Antonio Water Company	104.0	4,463.11	7,711.38	837.8	9,785.03	16,907.46	5.34	0.00	0.00	0.00	547.59	(1.33)	39,418.58	1,832.01	21,235.72	0.00	0.88	0.00	0.00	62,487.19
San Bernardino, County of (Shooting Park)	16.5	707.46	1,222.35	0.0	0.00	0.00	0.85	12,892.83	0.00	0.00	86.80	(3,212.81)	11,697.48	0.00	0.00	0.00	420.74	(551.75)	2,564.96	14,131.43
Santa Ana River Water Company	0.0	0.00	0.00	723.5	8,449.74	14,600.22	0.00	0.00	0.00	0.00	0.00	0.00	23,049.96	1,582.01	18,337.83	0.00	1,498.59	0.00	0.00	44,468.39
Upland, City Of	1,144.1	49,094.83	84,826.17	1,585.9	18,523.19	32,006.04	58.77	0.00	0.00	0.00	6,023.57	(14.64)	190,517.93	3,468.02	40,199.50	0.00	2.16	0.00	0.00	234,187.61
West End Consolidated Water Co	0.0	0.00	0.00	526.8	6,153.03	10,631.75	0.00	0.00	0.00	0.00	0.00	0.00	16,784.78	1,152.01	13,353.47	0.00	0.00	0.00	0.00	31,290.26
West Valley Water District	0.0	0.00	0.00	358.2	4,183.92	7,229.35	0.00	0.00	0.00	0.00	0.00	0.00	11,413.27	783.34	9,080.05	0.00	740.08	0.00	0.00	22,016.74
	97,128.8	**2,438,156.42**	**4,212,652.45**	**65,083.4**	**760,153.00**	**1,313,461.00**	**2,275.22**	**12,892.83**	**0.00**	**(233,203.35)**	**233,203.35**	**(124,590.47)**	**8,615,000.46**	**0.01**	**772,770.01**	**0.00**	**52,788.61**	**(49,314.03)**	**2,564.96**	**9,393,810.02**
	8A	8B	8C	8D	8E	8F	8G	8H	8I	8J	8K	8L	8M	8N	8O	8P	8Q	8R	8S	8T

Notes:
1) IEUA is collecting the seventh of ten annual RTS charges for water purchased in FY 2016/17, and sixth of ten annual RTS charges for water purchased in FY 2017/18.
2) "Other Adjustments" (Column [8R]) includes adjustments from replenishment purchase for DRO. If water was not available for purchase in the previous year, this adjustment is based on the previous year's obligation, multipled by the current replenishment rate, minus the fund balance, similar to the CURO.

POOL 3

Assessment Year 2024-2025 (Production Year 2023-2024)

Water Production Overview

	Physical Production	Voluntary Agreements (w/ Ag)	Assignments (w/ Non-Ag)	Other Adjustments	Actual FY Production (Assmnt Pkg Column 10l)
BlueTriton Brands, Inc.	231.2	0.0	0.0	0.0	231.2
CalMat Co. (Appropriative)	0.0	0.0	0.0	0.0	0.0
Chino Hills, City Of	1,599.0	(41.9)	0.0	0.0	1,557.1
Chino, City Of	5,857.9	(2,416.7)	(71.3)	0.0	3,369.9
Cucamonga Valley Water District	12,633.3	0.0	0.0	(11.9)	12,621.4
Desalter Authority	40,337.1	0.0	0.0	(28.6)	40,308.5
Fontana Union Water Company	0.0	0.0	0.0	0.0	0.0
Fontana Water Company	2,861.8	0.0	0.0	0.0	2,861.8
Fontana, City Of	0.0	0.0	0.0	0.0	0.0
Golden State Water Company	990.9	0.0	0.0	0.0	990.9
Jurupa Community Services District	7,790.4	0.0	(428.9)	28.6	7,390.1
Marygold Mutual Water Company	584.9	0.0	0.0	0.0	584.9
Monte Vista Irrigation Company	0.0	0.0	0.0	0.0	0.0
Monte Vista Water District	3,287.5	(104.6)	(22.5)	(126.4)	3,034.0
NCL Co, LLC	0.0	0.0	0.0	0.0	0.0
Niagara Bottling, LLC	1,254.9	0.0	0.0	0.0	1,254.9
Nicholson Family Trust	0.0	0.0	0.0	0.0	0.0
Norco, City Of	0.0	0.0	0.0	0.0	0.0
Ontario, City Of	14,230.6	(4,056.9)	(1,066.3)	0.0	9,107.5
Pomona, City Of	10,453.8	0.0	0.0	0.0	10,453.8
San Antonio Water Company	104.0	0.0	0.0	0.0	104.0
San Bernardino, County of (Shooting Park)	16.5	0.0	0.0	0.0	16.5
Santa Ana River Water Company	0.0	0.0	0.0	0.0	0.0
Upland, City Of	1,547.0	0.0	0.0	(402.9)	1,144.1
West End Consolidated Water Co	0.0	0.0	0.0	0.0	0.0
West Valley Water District	0.0	0.0	0.0	0.0	0.0
	103,781.0	**(6,620.1)**	**(1,589.0)**	**(541.2)**	**95,030.7**
Less Desalter Authority Production					**(40,308.5)**
Total Less Desalter Authority Production					**54,722.1**
	9A	9B	9C	9D	9E

Notes:
Other Adjustments:
1) Cucamonga Valley Water District received credit of 11.910 AF after evaporative loss due to Pump-to-Waste activities in which the water was recaptured into a recharge basin.
2) CDA provided 28.570 AF to JCSD for irrigation at Orchard Park.
3) Monte Vista Water District received a credit of 126.402 AF after evaporative loss due to Pump-to-Waste activities in which the water was recaptured into a recharge basin.
4) City of Upland received a credit of 402.898 AF after evporative loss due to Pump-to-Waste activities in which the water was recaptured into a recharge basin.

POOL 3

Assessment Year 2024-2025 (Production Year 2023-2024)

Water Production Summary

	Percent of Operating Safe Yield	Carryover Beginning Balance	Prior Year Adjustments	Assigned Share of Operating Safe Yield	Net Ag Pool Reallocation	Water Transaction Activity	Other Adjustments	Annual Production Right	Actual Fiscal Year Production	Storage and Recovery Program(s)	Total Production and Exchanges	Net Over-Production		Under Production Balances		
												85/15%	100%	Total Under-Produced	Carryover: Next Year Begin Bal	To Excess Carryover Account
BlueTriton Brands, Inc.	*0.000%*	0.0	0.0	0.0	0.0	231.2	0.0	231.2	231.2	0.0	231.2	0.0	0.0	0.0	0.0	0.0
CalMat Co. (Appropriative)	*0.000%*	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	0.0	0.0
Chino Hills, City Of	*3.851%*	1,572.5	0.0	1,572.5	2,452.1	0.0	0.0	5,597.1	1,557.1	0.0	1,557.1	0.0	0.0	4,040.0	1,572.5	2,467.5
Chino, City Of	*7.357%*	3,004.2	0.0	3,004.2	11,833.7	0.0	0.0	17,842.0	3,369.9	0.0	3,369.9	0.0	0.0	14,472.1	3,004.2	11,468.0
Cucamonga Valley Water District	*6.601%*	2,695.5	0.0	2,695.5	2,610.8	4,619.7	0.0	12,621.4	12,621.4	0.0	12,621.4	0.0	0.0	0.0	0.0	0.0
Desalter Authority	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40,308.5	0.0	40,308.5	0.0	40,308.5	0.0	0.0	0.0
Fontana Union Water Company	*11.657%*	0.0	0.0	4,760.0	3,553.9	(8,313.9)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fontana Water Company	*0.002%*	0.8	0.0	0.8	834.6	7,503.5	0.0	8,339.7	2,861.8	0.0	2,861.8	0.0	0.0	5,477.9	0.8	5,477.1
Fontana, City Of	*0.000%*	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	0.0	0.0
Golden State Water Company	*0.750%*	158.3	0.0	306.3	228.7	336.4	0.0	1,029.6	990.9	0.0	990.9	0.0	0.0	38.7	38.7	0.0
Jurupa Community Services District	*3.759%*	1,535.0	0.0	1,535.0	16,804.2	0.0	0.0	19,874.1	7,390.1	0.0	7,390.1	0.0	0.0	12,484.0	1,535.0	10,949.1
Marygold Mutual Water Company	*1.195%*	488.0	0.0	488.0	364.3	0.0	0.0	1,340.3	584.9	0.0	584.9	0.0	0.0	755.3	488.0	267.4
Monte Vista Irrigation Company	*1.234%*	503.9	0.0	503.9	376.2	0.0	0.0	1,384.0	0.0	0.0	0.0	0.0	0.0	1,384.0	503.9	880.1
Monte Vista Water District	*8.797%*	3,592.2	0.0	3,592.2	2,787.6	(2,236.5)	0.0	7,735.4	3,034.0	2,098.1	5,132.1	0.0	0.0	2,603.4	2,603.4	0.0
NCL Co, LLC	*0.000%*	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	0.0	0.0
Niagara Bottling, LLC	*0.000%*	0.0	0.0	0.0	0.0	2,000.0	0.0	2,000.0	1,254.9	0.0	1,254.9	0.0	0.0	745.1	0.0	745.1
Nicholson Family Trust	*0.007%*	2.2	0.0	2.9	2.1	(4.6)	0.0	2.6	0.0	0.0	0.0	0.0	0.0	2.6	2.6	0.0
Norco, City Of	*0.368%*	150.3	0.0	150.3	112.2	0.0	0.0	412.7	0.0	0.0	0.0	0.0	0.0	412.7	150.3	262.5
Ontario, City Of	*20.742%*	8,469.8	0.0	8,469.8	12,855.1	0.0	0.0	29,794.6	9,107.5	0.0	9,107.5	0.0	0.0	20,687.2	8,469.8	12,217.4
Pomona, City Of	*20.454%*	8,352.2	0.0	8,352.2	6,235.8	0.0	0.0	22,940.2	10,453.8	0.0	10,453.8	0.0	0.0	12,486.4	8,352.2	4,134.2
San Antonio Water Company	*2.748%*	1,122.1	0.0	1,122.1	837.8	0.0	0.0	3,082.0	104.0	0.0	104.0	0.0	0.0	2,978.0	1,122.1	1,855.9
San Bernardino, County of (Shooting P	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.5	0.0	16.5	16.5	0.0	0.0	0.0	0.0
Santa Ana River Water Company	*2.373%*	969.0	0.0	969.0	723.5	0.0	0.0	2,661.4	0.0	0.0	0.0	0.0	0.0	2,661.4	969.0	1,692.4
Upland, City Of	*5.202%*	2,124.2	0.0	2,124.2	1,585.9	438.3	0.0	6,272.6	1,144.1	0.0	1,144.1	0.0	0.0	5,128.5	2,124.2	3,004.3
West End Consolidated Water Co	*1.728%*	705.6	0.0	705.6	526.8	(66.4)	0.0	1,871.6	0.0	0.0	0.0	0.0	0.0	1,871.6	705.6	1,166.0
West Valley Water District	*1.175%*	479.8	0.0	479.8	358.2	0.0	0.0	1,317.8	0.0	0.0	0.0	0.0	0.0	1,317.8	479.8	838.0
	100.00%	**35,925.4**	**0.0**	**40,834.0**	**65,083.4**	**4,507.8**	**0.0**	**146,350.6**	**95,030.7**	**2,098.1**	**97,128.8**	**16.5**	**40,308.5**	**89,546.8**	**32,121.9**	**57,424.9**
Less Desalter Authority Production									**(40,308.5)**		**(40,308.5)**		**(40,308.5)**			
Total Less Desalter Authority Production									**54,722.1**		**56,820.2**		**0.0**			
		10A	10B	10C	10D	10E	10F	10G	10H	10I	10J	10K	10L	10M	10N	10O	10P

Notes:
1) BlueTriton Brands, Inc. transferred 231.2 AF out of their ECO account to offset their Production Year 2023/24 overproduction obligations.
2) Cucamonga Valley Water District transferred 5,601.6 AF out of their ECO account to offset their Production Year 2023/24 overproduction obligations.

POOL 3

Assessment Year 2024-2025 (Production Year 2023-2024)

Local Excess Carry Over Storage Account Summary

	Excess Carry Over Account (ECO)					
	Beginning Balance	0.07% Storage Loss	Transfers To / (From)	From Supplemental Storage	From Under-Production	Ending Balance
BlueTriton Brands, Inc.	835.2	(0.6)	(270.3)	0.0	0.0	564.3
CalMat Co. (Appropriative)	0.4	0.0	0.0	0.0	0.0	0.4
Chino Hills, City Of	16,440.5	(11.5)	0.0	0.0	2,467.5	18,896.5
Chino, City Of	115,090.2	(80.6)	(2,323.4)	0.0	11,468.0	124,154.2
Cucamonga Valley Water District	9,613.9	(6.7)	(7,513.8)	0.0	0.0	2,093.4
Desalter Authority	0.0	0.0	0.0	0.0	0.0	0.0
Fontana Union Water Company	0.0	0.0	0.0	0.0	0.0	0.0
Fontana Water Company	15,670.2	(11.0)	(520.4)	0.0	5,477.1	20,615.9
Fontana, City Of	0.0	0.0	0.0	0.0	0.0	0.0
Golden State Water Company	0.0	0.0	0.0	0.0	0.0	0.0
Jurupa Community Services District	48,577.6	(34.0)	(2,507.7)	0.0	10,949.1	56,985.0
Marygold Mutual Water Company	166.3	(0.1)	(283.0)	0.0	267.4	150.6
Monte Vista Irrigation Company	12,244.2	(8.6)	(190.1)	0.0	880.1	12,925.7
Monte Vista Water District	2,255.4	(1.6)	0.0	0.0	0.0	2,253.8
NCL Co, LLC	4.0	0.0	0.0	0.0	0.0	4.0
Niagara Bottling, LLC	2,914.4	(2.0)	(212.2)	0.0	745.1	3,445.2
Nicholson Family Trust	0.0	0.0	0.0	0.0	0.0	0.0
Norco, City Of	3,007.4	(2.1)	(56.7)	0.0	262.5	3,211.1
Ontario, City Of	55,469.4	(38.8)	(4,164.4)	0.0	12,217.4	63,483.6
Pomona, City Of	26,706.5	(18.7)	(4,918.8)	0.0	4,134.2	25,903.2
San Antonio Water Company	5,953.9	(4.2)	0.0	0.0	1,855.9	7,805.6
San Bernardino, County of (Shooting Park)	0.0	0.0	0.0	0.0	0.0	0.0
Santa Ana River Water Company	7,213.4	(5.0)	(365.6)	0.0	1,692.4	8,535.2
Upland, City Of	15,119.6	(10.6)	(994.9)	0.0	3,004.3	17,118.5
West End Consolidated Water Co	5,949.0	(4.2)	(974.5)	0.0	1,166.0	6,136.3
West Valley Water District	9,341.6	(6.5)	(2,181.0)	0.0	838.0	7,992.1
	352,573.2	**(246.8)**	**(27,476.7)**	**0.0**	**57,424.9**	**382,274.6**
	11A	11B	11C	11D	11E	11F

Notes:
1) BlueTriton Brands, Inc. transferred 231.2 AF out of their ECO account to offset their Production Year 2023/24 overproduction obligations.
2) Cucamonga Valley Water District transferred 5,601.6 AF out of their ECO account to offset their Production Year 2023/24 overproduction obligations.

POOL 3

Assessment Year 2024-2025 (Production Year 2023-2024)

Local Supplemental Storage Account Summary

	Recharged Recycled Account					Quantified (Pre 7/1/2000) Account					New (Post 7/1/2000) Account					Combined
	Beginning Balance	0.07% Storage Loss	Transfers To / (From)	Transfer to ECO Account	Ending Balance	Beginning Balance	0.07% Storage Loss	Transfers To / (From)	Transfer to ECO Account	Ending Balance	Beginning Balance	0.07% Storage Loss	Transfers To / (From)	Transfer to ECO Account	Ending Balance	Ending Balance
BlueTriton Brands, Inc.	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	0.0	0.0	0.0
CalMat Co. (Appropriative)	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	0.0	0.0	0.0
Chino Hills, City Of	15,162.8	(10.6)	1,156.7	0.0	16,308.8	2,833.5	(2.0)	(915.5)	0.0	1,916.0	0.0	0.0	0.0	0.0	0.0	18,224.9
Chino, City Of	10,077.5	(7.1)	1,469.9	0.0	11,540.4	1,049.6	(0.7)	0.0	0.0	1,048.8	1,922.6	(1.3)	0.0	0.0	1,921.2	14,510.4
Cucamonga Valley Water District	48,317.8	(33.8)	3,140.8	0.0	51,424.8	10,670.9	(7.5)	0.0	0.0	10,663.5	1,184.8	(0.8)	481.9	0.0	1,665.9	63,754.1
Desalter Authority	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	0.0	0.0	0.0
Fontana Union Water Company	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	0.0	0.0	0.0
Fontana Water Company	1,623.4	(1.1)	0.0	0.0	1,622.3	0.0	0.0	0.0	0.0	0.0	331.8	(0.2)	241.2	0.0	572.8	2,195.0
Fontana, City Of	43.9	0.0	0.0	0.0	43.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	43.9
Golden State Water Company	0.0	0.0	0.0	0.0	0.0	872.9	(0.6)	(283.1)	0.0	589.1	0.0	0.0	0.0	0.0	0.0	589.1
Jurupa Community Services District	4,822.3	(3.4)	0.0	0.0	4,818.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,083.5	0.0	2,083.5	6,902.4
Marygold Mutual Water Company	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	0.0	0.0	0.0
Monte Vista Irrigation Company	0.0	0.0	0.0	0.0	0.0	5,438.6	(3.8)	0.0	0.0	5,434.8	0.0	0.0	0.0	0.0	0.0	5,434.8
Monte Vista Water District	585.9	(0.4)	541.3	0.0	1,126.7	3,369.4	(2.4)	0.0	0.0	3,367.1	0.0	0.0	0.0	0.0	0.0	4,493.8
NCL Co, LLC	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	0.0	0.0	0.0
Niagara Bottling, LLC	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	0.0	0.0	0.0
Nicholson Family Trust	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	0.0	0.0	0.0
Norco, City Of	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	96.2	(0.1)	0.0	0.0	96.1	96.1
Ontario, City Of	59,632.5	(41.7)	5,838.2	0.0	65,428.9	8,033.2	(5.6)	0.0	0.0	8,027.6	0.0	0.0	0.0	0.0	0.0	73,456.5
Pomona, City Of	0.0	0.0	0.0	0.0	0.0	10,889.2	(7.6)	0.0	0.0	10,881.5	1,556.6	(1.1)	0.0	0.0	1,555.5	12,437.0
San Antonio Water Company	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,561.4	(3.9)	2,250.5	0.0	7,808.0	7,808.0
San Bernardino, County of (Shooting Park)	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	0.0	0.0	0.0
Santa Ana River Water Company	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	480.1	(0.3)	0.0	0.0	479.7	479.7
Upland, City Of	16,359.0	(11.5)	1,221.9	0.0	17,569.4	5,791.0	(4.1)	0.0	0.0	5,786.9	0.0	0.0	0.0	0.0	0.0	23,356.3
West End Consolidated Water Co	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	451.6	(0.3)	0.0	0.0	451.3	451.3
West Valley Water District	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	307.1	(0.2)	0.0	0.0	306.9	306.9
	156,624.9	**(109.6)**	**13,368.7**	**0.0**	**169,884.0**	**48,948.3**	**(34.3)**	**(1,198.6)**	**0.0**	**47,715.4**	**11,892.0**	**(8.3)**	**5,057.1**	**0.0**	**16,940.8**	**234,540.3**
	12A	12B	12C	12D	12E	12F	12G	12H	12I	12J	12K	12L	12M	12N	12O	12P

Notes:

POOL 3

Assessment Year 2024-2025 (Production Year 2023-2024)

Other Storage and Replenishment Accounts

DESALTER REPLENISHMENT

	Beginning Balance	Water Purchases	Transfers To	Transfers From	Ending Balance
CONTROLLED OVERDRAFT AND OFFSETS					
Re-Op Offset Pre-Peace II / CDA	1,286.7		0.0	0.0	1,286.7
Re-Op Offset Peace II Expansion	50,000.0		0.0	(12,500.0)	37,500.0
Non-Ag OBMP Special Assessment	0.0		735.0	(735.0)	0.0
Non-Ag Dedication	0.0		0.0	0.0	0.0
	51,286.7		**735.0**	**(13,235.0)**	**38,786.7**
DEDICATED REPLENISHMENT					
BlueTriton Brands, Inc.	0.0	0.0	0.0	0.0	0.0
CalMat Co. (Appropriative)	0.0	0.0	0.0	0.0	0.0
Chino Hills, City Of	0.0	0.0	0.0	0.0	0.0
Chino, City Of	0.0	0.0	0.0	0.0	0.0
Cucamonga Valley Water District	0.0	0.0	0.0	0.0	0.0
Fontana Union Water Company	0.0	0.0	1,795.8	(1,795.8)	0.0
Fontana Water Company	0.0	0.0	0.0	0.0	0.0
Fontana, City Of	0.0	0.0	0.0	0.0	0.0
Golden State Water Company	0.0	0.0	0.0	0.0	0.0
Jurupa Community Services District	0.0	0.0	0.0	0.0	0.0
Marygold Mutual Water Company	0.0	0.0	0.0	0.0	0.0
Monte Vista Irrigation Company	0.0	0.0	0.0	0.0	0.0
Monte Vista Water District	0.0	0.0	2,236.5	(2,236.5)	0.0
NCL Co, LLC	0.0	0.0	0.0	0.0	0.0
Niagara Bottling, LLC	0.0	0.0	0.0	0.0	0.0
Nicholson Family Trust	0.0	0.0	1.1	(1.1)	0.0
Norco, City Of	0.0	0.0	0.0	0.0	0.0
Ontario, City Of	0.0	0.0	2,462.2	(2,462.2)	0.0
Pomona, City Of	0.0	0.0	0.0	0.0	0.0
San Antonio Water Company	0.0	0.0	0.0	0.0	0.0
San Bernardino, County of (Shooting Park)	0.0	0.0	0.0	0.0	0.0
Santa Ana River Water Company	0.0	0.0	0.0	0.0	0.0
Upland, City Of	0.0	0.0	0.0	0.0	0.0
West End Consolidated Water Co	0.0	0.0	0.0	0.0	0.0
West Valley Water District	0.0	0.0	0.0	0.0	0.0
	0.0	**0.0**	**6,495.5**	**(6,495.5)**	**0.0**
	13A	13B	13C	13D	13E

STORAGE AND RECOVERY

	Beginning Balance	Storage Loss	MWD "Puts"	In-Lieu "Puts"/ (Takes)	Ending Balance
METROPOLITAN WATER DISTRICT					
Dry Year Yield / Conjuctive Use Program	7,939.1	(5.6)	35,876.6	2,098.1	45,908.2
	13F	13G	13H	13I	13J

Notes:

POOL 3

Assessment Year 2024-2025 (Production Year 2023-2024)

Water Transaction Summary

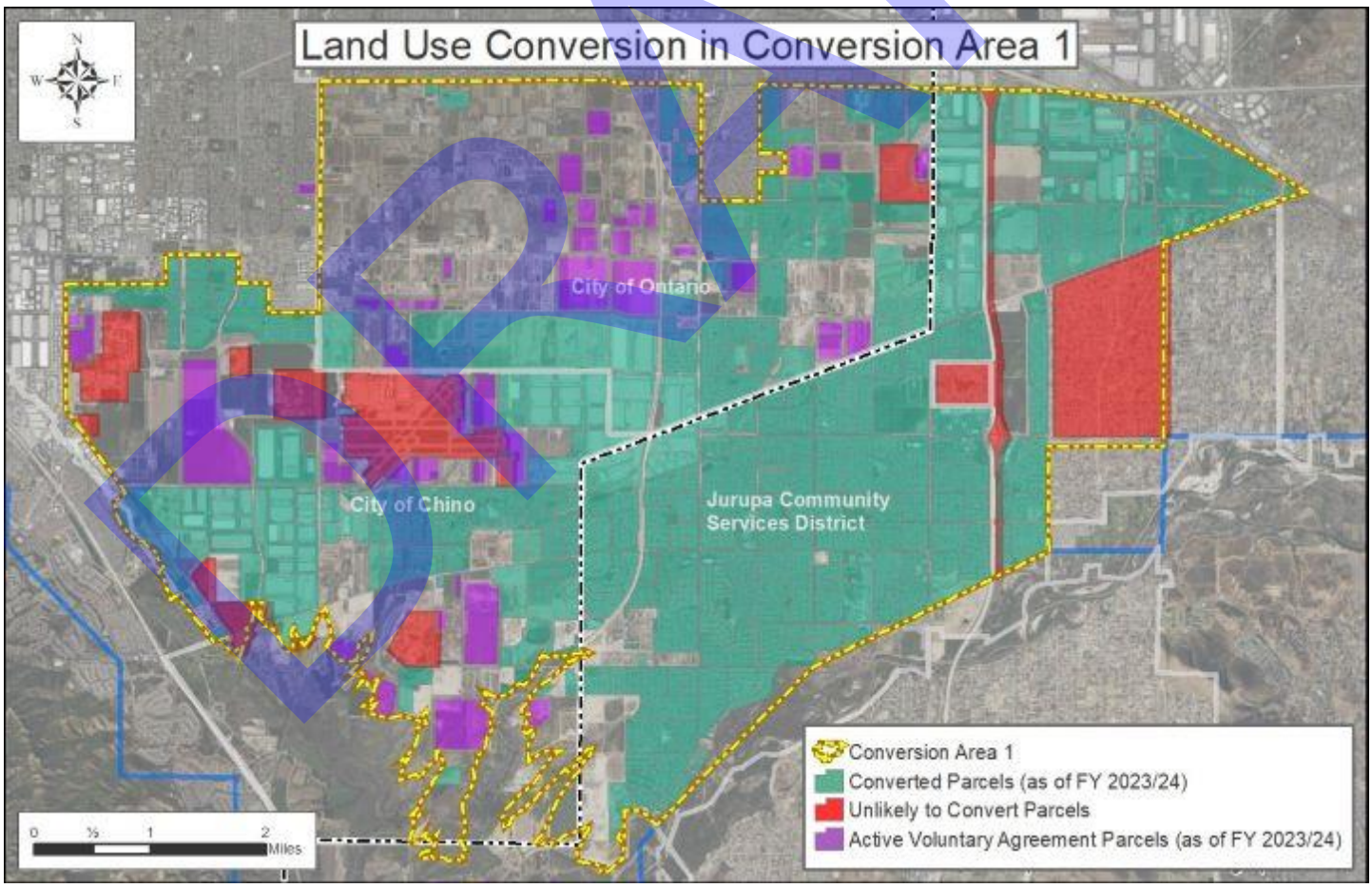
	Water Transactions				
	Assigned Rights	General Transfer	Transfers (To) / From ECO Account	Transfers (To) Desalter Replenishment	Total Water Transactions
BlueTriton Brands, Inc.	0.0	0.0	231.2	0.0	231.2
CalMat Co. (Appropriative)	0.0	0.0	0.0	0.0	0.0
Chino Hills, City Of	0.0	0.0	0.0	0.0	0.0
Chino, City Of	0.0	0.0	0.0	0.0	0.0
Cucamonga Valley Water District	(6,235.0)	5,253.1	5,601.6	0.0	4,619.7
Desalter Authority	0.0	0.0	0.0	0.0	0.0
Fontana Union Water Company	0.0	(6,518.1)	0.0	(1,795.8)	(8,313.9)
Fontana Water Company	7,503.5	0.0	0.0	0.0	7,503.5
Fontana, City Of	0.0	0.0	0.0	0.0	0.0
Golden State Water Company	336.4	0.0	0.0	0.0	336.4
Jurupa Community Services District	0.0	0.0	0.0	0.0	0.0
Marygold Mutual Water Company	0.0	0.0	0.0	0.0	0.0
Monte Vista Irrigation Company	0.0	0.0	0.0	0.0	0.0
Monte Vista Water District	0.0	0.0	0.0	(2,236.5)	(2,236.5)
NCL Co, LLC	0.0	0.0	0.0	0.0	0.0
Niagara Bottling, LLC	2,000.0	0.0	0.0	0.0	2,000.0
Nicholson Family Trust	(3.5)	0.0	0.0	(1.1)	(4.6)
Norco, City Of	0.0	0.0	0.0	0.0	0.0
Ontario, City Of	(1,265.0)	2,462.2	1,265.0	(2,462.2)	0.0
Pomona, City Of	0.0	0.0	0.0	0.0	0.0
San Antonio Water Company	0.0	0.0	0.0	0.0	0.0
San Bernardino, County of (Shooting Park)	0.0	0.0	0.0	0.0	0.0
Santa Ana River Water Company	0.0	0.0	0.0	0.0	0.0
Upland, City Of	438.3	0.0	0.0	0.0	438.3
West End Consolidated Water Co	(774.7)	0.0	708.3	0.0	(66.4)
West Valley Water District	(2,000.0)	0.0	2,000.0	0.0	0.0
	0.0	**1,197.2**	**9,806.1**	**(6,495.5)**	**4,507.8**
	14A	14B	14C	14D	14E

Notes:

Assessment Year 2024-2025 (Production Year 2023-2024)

Land Use Conversion Summary

	Prior Conversion	Conversion @ 1.3 af/ac		Total Prior to Peace Agrmt Converted AF	Conversion @ 2.0 af/ac		Total Land Use Conversion Acre-Feet
		Acres	Acre-Feet		Acres	Acre-Feet	
Chino Hills, City Of	0.0	670.266	871.3	871.3	203.334	406.7	1,278.0
Chino, City Of	196.2	1,434.750	1,865.2	2,061.4	3,764.692	7,529.4	9,590.8
Cucamonga Valley Water District	0.0	460.280	598.4	598.4	0.000	0.0	598.4
Fontana Water Company	0.0	0.000	0.0	0.0	417.000	834.0	834.0
Jurupa Community Services District	0.0	2,756.920	3,584.0	3,584.0	6,037.088	12,074.2	15,658.2
Monte Vista Water District	0.0	48.150	62.6	62.6	21.510	43.0	105.6
Ontario, City Of	209.4	527.044	685.2	894.6	2,818.450	5,636.9	6,531.5
	405.6	**5,897.410**	**7,666.6**	**8,072.3**	**13,262.074**	**26,524.1**	**34,596.4**
	15A	15B	15C	15D	15E	15F	15G



Notes:

POOL 3

Assessment Year 2024-2025 (Production Year 2023-2024)

Agricultural Pool Reallocation Summary

	% Share of Operating Safe Yield	Reallocation of Agricutural Pool Safe Yield			
		Safe Yield Reduction[1]	Land Use Conversions	Early Transfer	Total AG Pool Reallocation
BlueTriton Brands, Inc.	*0.000%*	0.0	0.0	0.0	0.0
CalMat Co. (Appropriative)	*0.000%*	0.0	0.0	0.0	0.0
Chino Hills, City Of	*3.851%*	346.6	1,278.0	827.5	2,452.1
Chino, City Of	*7.357%*	662.1	9,590.8	1,580.8	11,833.7
Cucamonga Valley Water District	*6.601%*	594.1	598.4	1,418.4	2,610.8
Desalter Authority	*0.000%*	0.0	0.0	0.0	0.0
Fontana Union Water Company	*11.657%*	1,049.1	0.0	2,504.7	3,553.9
Fontana Water Company	*0.002%*	0.2	834.0	0.4	834.6
Fontana, City Of	*0.000%*	0.0	0.0	0.0	0.0
Golden State Water Company	*0.750%*	67.5	0.0	161.2	228.7
Jurupa Community Services District	*3.759%*	338.3	15,658.2	807.7	16,804.2
Marygold Mutual Water Company	*1.195%*	107.6	0.0	256.8	364.3
Monte Vista Irrigation Company	*1.234%*	111.1	0.0	265.2	376.2
Monte Vista Water District	*8.797%*	791.7	105.6	1,890.2	2,787.6
NCL Co, LLC	*0.000%*	0.0	0.0	0.0	0.0
Niagara Bottling, LLC	*0.000%*	0.0	0.0	0.0	0.0
Nicholson Family Trust	*0.007%*	0.6	0.0	1.5	2.1
Norco, City Of	*0.368%*	33.1	0.0	79.1	112.2
Ontario, City Of	*20.742%*	1,866.8	6,531.5	4,456.8	12,855.1
Pomona, City Of	*20.454%*	1,840.9	0.0	4,395.0	6,235.8
San Antonio Water Company	*2.748%*	247.3	0.0	590.5	837.8
San Bernardino, County of (Shooting Park)	*0.000%*	0.0	0.0	0.0	0.0
Santa Ana River Water Company	*2.373%*	213.6	0.0	509.9	723.5
Upland, City Of	*5.202%*	468.2	0.0	1,117.8	1,585.9
West End Consolidated Water Co	*1.728%*	155.5	0.0	371.3	526.8
West Valley Water District	*1.175%*	105.8	0.0	252.5	358.2
	100%	**9,000.0**	**34,596.4**	**21,487.0**	**65,083.4**
		16A	16B	16C	16D	16E

Agricultural Pool Safe Yield	82,800.0
Agricultural Pool Production	(17,716.6)
Safe Yield Reduction[1]	(9,000.0)
Land Use Conversions	(34,596.4)
Early Transfer [16D]	21,487.0

Notes:
[1] Paragraph 10, Subdivision (a)(1) of Exhibit "H" of the Judgment states "to supplement, in the particular year, water available from Operating Safe Yield to compensate for any reduction in the Safe Yield by reason of recalculation thereof after the tenth year of operation hereunder."

Assessment Year 2024-2025 (Production Year 2023-2024)

Cumulative Unmet Replenishment Obligation (CURO)

Remaining Replenishment Obligation:	AF
Appropriative - 100	0.0
Appropriative - 15/85	0.0
Non-Agricultural - 100	0.0
	0.0

Replenishment Rates	
2024 Rate	$920.00
2023 Rate	$872.00

Pool 3 Appropriative

Company	Outstanding Obligation (AF)	Fund Balance ($)	Outstanding Obligation ($)	*AF Production and Exchanges*	85/15 Producers	Percent	15%	85%	100%	Total
BlueTriton Brands, Inc.	0.0	$0.00	$0.00	*231.2*	xxxxxxxxxx	0.000%	xxxxxxxxxx	xxxxxxxxxx	$0.00	$0.00
CalMat Co. (Appropriative)	0.0	$0.00	$0.00	*0.0*	xxxxxxxxxx	0.000%	xxxxxxxxxx	xxxxxxxxxx	$0.00	$0.00
Chino Hills, City Of	0.0	$0.00	$0.00	*1,557.1*	1,557.1	3.515%	($19.93)	$0.00	xxxxxxxxxx	($19.93)
Chino, City Of	0.0	$0.00	$0.00	*3,369.9*	3,369.9	7.608%	($43.13)	$0.00	xxxxxxxxxx	($43.13)
Cucamonga Valley Water District	0.0	$0.00	$0.00	*12,621.4*	12,621.4	28.494%	($161.54)	$0.00	xxxxxxxxxx	($161.54)
Desalter Authority	0.0	$0.00	$0.00	*40,308.5*	xxxxxxxxxx	0.000%	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	$0.00
Fontana Union Water Company	0.0	$0.00	$0.00	*0.0*	0.0	0.000%	$0.00	$0.00	xxxxxxxxxx	$0.00
Fontana Water Company	0.0	$0.00	$0.00	*2,861.8*	2,861.8	6.461%	($36.63)	$0.00	xxxxxxxxxx	($36.63)
Fontana, City Of	0.0	$0.00	$0.00	*0.0*	xxxxxxxxxx	0.000%	xxxxxxxxxx	xxxxxxxxxx	$0.00	$0.00
Golden State Water Company	0.0	$0.00	$0.00	*990.9*	990.9	2.237%	($12.68)	$0.00	xxxxxxxxxx	($12.68)
Jurupa Community Services District	0.0	$0.00	$0.00	*7,390.1*	7,390.1	16.684%	($94.58)	$0.00	xxxxxxxxxx	($94.58)
Marygold Mutual Water Company	0.0	$0.00	$0.00	*584.9*	xxxxxxxxxx	0.000%	xxxxxxxxxx	xxxxxxxxxx	$0.00	$0.00
Monte Vista Irrigation Company	0.0	$0.00	$0.00	*0.0*	0.0	0.000%	$0.00	$0.00	xxxxxxxxxx	$0.00
Monte Vista Water District	0.0	$0.00	$0.00	*5,132.1*	5,132.1	11.586%	($65.68)	$0.00	xxxxxxxxxx	($65.68)
NCL Co, LLC	0.0	$0.00	$0.00	*0.0*	xxxxxxxxxx	0.000%	xxxxxxxxxx	xxxxxxxxxx	$0.00	$0.00
Niagara Bottling, LLC	0.0	$120,810.95	($120,810.95)	*1,254.9*	xxxxxxxxxx	0.000%	xxxxxxxxxx	xxxxxxxxxx	($120,810.95)	($120,810.95)
Nicholson Family Trust	0.0	$0.00	$0.00	*0.0*	0.0	0.000%	$0.00	$0.00	xxxxxxxxxx	$0.00
Norco, City Of	0.0	$0.00	$0.00	*0.0*	0.0	0.000%	$0.00	$0.00	xxxxxxxxxx	$0.00
Ontario, City Of	0.0	$0.00	$0.00	*9,107.5*	9,107.5	20.561%	($116.57)	$0.00	xxxxxxxxxx	($116.57)
Pomona, City Of	0.0	$0.00	$0.00	*10,453.8*	xxxxxxxxxx	0.000%	xxxxxxxxxx	xxxxxxxxxx	$0.00	$0.00
San Antonio Water Company	0.0	$0.00	$0.00	*104.0*	104.0	0.235%	($1.33)	$0.00	xxxxxxxxxx	($1.33)
San Bernardino, County of (Shooting Park)	0.0	$3,779.53	($3,779.53)	*16.5*	16.5	0.037%	($0.21)	($3,212.60)	xxxxxxxxxx	($3,212.81)
Santa Ana River Water Company	0.0	$0.00	$0.00	*0.0*	0.0	0.000%	$0.00	$0.00	xxxxxxxxxx	$0.00
Upland, City Of	0.0	$0.00	$0.00	*1,144.1*	1,144.1	2.583%	($14.64)	$0.00	xxxxxxxxxx	($14.64)
West End Consolidated Water Co	0.0	$0.00	$0.00	*0.0*	0.0	0.000%	$0.00	$0.00	xxxxxxxxxx	$0.00
West Valley Water District	0.0	$0.00	$0.00	*0.0*	0.0	0.000%	$0.00	$0.00	xxxxxxxxxx	$0.00
Pool 3 Appropriative Total	**0.0**	**$124,590.48**	**($124,590.48)**	***97,128.8***	**44,295.4**	**100.000%**	**($566.92)**	**($3,212.60)**	**($120,810.95)**	**($124,590.47)**
	17A	17B	17C	17D	17E	17F	17G	17H	17I	17J

Notes:
1) The 2024 replenishment rate includes MWD's Full Service Untreated Tier 1 volumic cost of $903/AF, a $15/AF surcharge from Three Valleys Municipal Water District, and a $2/AF connection fee from Orange County Water District.

Assessment Year 2024-2025 (Production Year 2023-2024)

Desalter Replenishment Accounting[1]

Production Year	Desalter Production			Desalter Replenishment										
								Controlled Overdraft / Re-Op, PIIA, 6.2(a)(vi)						
	Pre-Peace II Desalter Production	Peace II Desalter Expansion Production[2]	Total	Desalter (aka Kaiser) Account PIIA, 6.2 (a)(i)	Paragraph 31 Settlement Agreements Dedication[3] PIIA, 6.2(a)(ii)	"Leave Behind" Losses PIIA, 6.2(a)(iv)	Safe Yield Contributed by Parties PIIA, 6.2(a)(v)	Allocation to Pre-Peace II Desalters[4,8]	Allocation to All Desalters[5]	Balance	Appropriative Pool DRO Contribution PIIA, 6.2(b)(ii)	Non-Ag OBMP Assessment (10% Haircut)[6] PIIA, 6.2(b)(i)	Remaining Desalter Replenishment Obligation[4,7] PIIA, 6.2(b)(iii)
2000 / 2001	7,989.0	0.0	7,989.0	3,994.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,994.5
2001 / 2002	9,457.8	0.0	9,457.8	4,728.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,728.9
2002 / 2003	10,438.5	0.0	10,438.5	5,219.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,219.3
2003 / 2004	10,605.0	0.0	10,605.0	5,302.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,302.5
2004 / 2005	9,853.6	0.0	9,853.6	4,926.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,926.8
2005 / 2006	16,475.8	0.0	16,475.8	11,579.1	0.0	0.0	0.0	0.0	0.0	400,000.0	0.0	0.0	0.0	4,896.7
2006 / 2007	26,356.2	0.0	26,356.2	608.4	4,273.1	0.0	0.0	21,474.7	0.0	378,525.3	0.0	0.0	0.0	0.0
2007 / 2008	26,972.1	0.0	26,972.1	0.0	0.0	0.0	0.0	26,972.1	0.0	351,553.2	0.0	0.0	0.0	0.0
2008 / 2009	32,920.5	0.0	32,920.5	0.0	0.0	0.0	0.0	61,989.1	0.0	289,564.1	0.0	0.0	0.0	(29,068.6)
2009 / 2010	28,516.7	0.0	28,516.7	0.0	0.0	0.0	0.0	28,516.7	0.0	261,047.4	0.0	0.0	0.0	0.0
2010 / 2011	29,318.7	0.0	29,318.7	0.0	0.0	0.0	0.0	29,318.7	0.0	231,728.7	0.0	0.0	0.0	0.0
2011 / 2012	28,378.9	0.0	28,378.9	0.0	0.0	0.0	0.0	28,378.9	0.0	203,349.7	0.0	0.0	0.0	0.0
2012 / 2013	27,061.7	0.0	27,061.7	0.0	0.0	0.0	0.0	27,061.7	0.0	176,288.1	0.0	0.0	0.0	0.0
2013 / 2014	29,228.0	14.6	29,242.6	0.0	0.0	0.0	0.0	0.0	12,500.0	163,788.1	10,000.0	0.0	0.0	6,742.6
2014 / 2015	29,541.3	448.7	29,990.0	0.0	0.0	0.0	0.0	0.0	12,500.0	151,288.1	10,000.0	0.0	0.0	7,490.0
2015 / 2016	27,008.8	1,154.1	28,162.9	0.0	0.0	0.0	0.0	0.0	12,500.0	138,788.1	10,000.0	0.0	0.0	5,662.9
2016 / 2017	26,725.6	1,527.2	28,252.8	0.0	0.0	0.0	0.0	0.0	12,500.0	126,288.1	10,000.0	735.0	0.0	5,017.8
2017 / 2018	28,589.8	1,462.5	30,052.3	0.0	0.0	0.0	0.0	0.0	12,500.0	113,788.1	10,000.0	735.0	0.0	6,817.3
2018 / 2019	25,502.9	5,696.3	31,199.2	0.0	0.0	0.0	0.0	0.0	12,500.0	101,288.1	10,000.0	735.0	0.0	7,964.2
2019 / 2020	27,593.6	8,003.4	35,597.1	0.0	0.0	0.0	0.0	0.0	12,500.0	88,788.1	10,000.0	735.0	0.0	12,362.0
2020 / 2021	31,944.8	8,169.7	40,114.5	0.0	0.0	0.0	0.0	0.0	12,500.0	76,288.1	10,000.0	735.0	0.0	16,879.4
2021 / 2022	28,678.0	11,847.4	40,525.4	0.0	0.0	0.0	0.0	0.0	12,500.0	63,788.1	10,000.0	735.0	0.0	17,290.4
2022 / 2023	30,223.8	9,591.2	39,815.0	0.0	0.0	0.0	0.0	0.0	12,500.0	51,288.1	10,000.0	735.0	0.0	16,580.0
2023 / 2024	**29,007.3**	**11,301.2**	**40,308.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**12,500.0**	**38,788.1**	**10,000.0**	**735.0**	**0.0**	**17,073.5**
2024 / 2025	30,000.0	10,000.0	40,000.0	0.0	0.0	0.0	0.0	0.0	12,500.0	26,288.1	10,000.0	735.0	0.0	16,765.0
2025 / 2026	30,000.0	10,000.0	40,000.0	0.0	0.0	0.0	0.0	0.0	5,000.0	21,288.1	10,000.0	735.0	0.0	24,265.0
2026 / 2027	30,000.0	10,000.0	40,000.0	0.0	0.0	0.0	0.0	0.0	5,000.0	16,288.1	10,000.0	735.0	0.0	24,265.0
2027 / 2028	30,000.0	10,000.0	40,000.0	0.0	0.0	0.0	0.0	0.0	5,000.0	11,288.1	10,000.0	735.0	0.0	24,265.0
2028 / 2029	30,000.0	10,000.0	40,000.0	0.0	0.0	0.0	0.0	0.0	5,000.0	6,288.1	10,000.0	735.0	0.0	24,265.0
2029 / 2030	30,000.0	10,000.0	40,000.0	0.0	0.0	0.0	0.0	0.0	5,000.0	1,288.1	10,000.0	735.0	0.0	24,265.0
	758,388.5	**119,216.3**	**877,604.8**	**36,359.6**	**4,273.1**	**0.0**	**0.0**	**223,711.9**	**175,000.0**		**170,000.0**	**10,290.5**	**257,970.0**
	18A	18B	18C	18D	18E	18F	18G	18H	18I	18J	18K	18L	18M	

Notes:
[1] Original table format and content: WEI, Response to Condition Subsequent Number 7, November 2008. Table has since been revised as a result of the March 15, 2019 Court Order.
[2] Peace II Desalter Expansion was anticipated to have an annual production of approximately 10,000 AF.
[3] 3,956.877 acre-feet + 316.177 acre-feet added as Non-Ag dedicated stored water per Paragraph 31 Settlement Agreements. Per Agreements, the water is deemed to have been dedicated as of June 30, 2007.
[4] Six years of Desalter tracking (Production Year 2000-2001 through Production Year 2005/2006) may have incorrectly assumed that a significant portion of Desalter production was being offset by Desalter Induced Recharge. Condition Subsequent 7 included an adjustment of 29,070 AF against Desalter replenishment in Production Year 2008/2009.
[5] Pursuant to section 7.2(e)(ii) of the Peace II Agreement, the initial schedule for the Peace II Desalter Expansion controlled overdraft of 175,000 acre-feet had been amended to be allocated to Desalter replenishment over a 17-year period, beginning in 2013/14 and ending in 2029/30.
[6] For the first 10 years following the Peace II Agreement (2006/2007 through 2015/2016), the Non-Ag "10% Haircut" water is apportioned among the specific seven members of the Appropriative Pool, per PIIA 9.2(a). In the eleventh year and in each year thereafter, it is dedicated to Watermaster to further offset desalter replenishment. However, to the extent there is no remaining desalter replenishment obligation in any year after applying the offsets set forth in 6.2(a), it will be distributed pro rata among the members of the Appropriative Pool based upon each Producer's combined total share of OSY and the previous year's actual production.
[7] Per the Peace II Agreement, Section 6.2(b)(iii) (as amended by the March 15, 2019 Court Order), the Remaining Desalter Replenishment Obligation is to be assessed against the Appropriative Pool, pro-rata based on each Producer's combined total share of OSY and their Adjusted Physical Production.
[8] Due to the Re-Operation Schedule amendments in 2019, the Pre-Peace II Controlled Overdraft is left with a balance of 1,288.054 AF, which may be utilized at a later date to offset a future Desalter Replenishment Obligation.

POOL 3

Assessment Year 2024-2025 (Production Year 2023-2024)

Desalter Replenishment Obligation Contribution

	Percent of Operating Safe Yield	Land Use Conversions	Percent of Land Use Conversions	85% DROC Based on % OSY	15% DROC Based on % of LUC	Total DRO Contribution
BlueTriton Brands, Inc.	0.000%	0.0	0.000%	0.0	0.0	0.0
CalMat Co. (Appropriative)	0.000%	0.0	0.000%	0.0	0.0	0.0
Chino Hills, City Of	3.851%	1,278.0	3.694%	327.3	55.4	382.7
Chino, City Of	7.357%	9,590.8	27.722%	625.3	415.8	1,041.2
Cucamonga Valley Water District	6.601%	598.4	1.730%	561.1	25.9	587.0
Fontana Union Water Company	11.657%	0.0	0.000%	990.8	0.0	990.8
Fontana Water Company	0.002%	834.0	2.411%	0.2	36.2	36.3
Fontana, City Of	0.000%	0.0	0.000%	0.0	0.0	0.0
Golden State Water Company	0.750%	0.0	0.000%	63.8	0.0	63.8
Jurupa Community Services District	3.759%	15,658.2	45.260%	319.5	678.9	998.4
Marygold Mutual Water Company	1.195%	0.0	0.000%	101.6	0.0	101.6
Monte Vista Irrigation Company	1.234%	0.0	0.000%	104.9	0.0	104.9
Monte Vista Water District	8.797%	105.6	0.305%	747.7	4.6	752.3
NCL Co, LLC	0.000%	0.0	0.000%	0.0	0.0	0.0
Niagara Bottling, LLC	0.000%	0.0	0.000%	0.0	0.0	0.0
Nicholson Family Trust	0.007%	0.0	0.000%	0.6	0.0	0.6
Norco, City Of	0.368%	0.0	0.000%	31.3	0.0	31.3
Ontario, City Of	20.742%	6,531.5	18.879%	1,763.1	283.2	2,046.3
Pomona, City Of	20.454%	0.0	0.000%	1,738.6	0.0	1,738.6
San Antonio Water Company	2.748%	0.0	0.000%	233.6	0.0	233.6
San Bernardino, County of (Shooting Park)	0.000%	0.0	0.000%	0.0	0.0	0.0
Santa Ana River Water Company	2.373%	0.0	0.000%	201.7	0.0	201.7
Upland, City Of	5.202%	0.0	0.000%	442.2	0.0	442.2
West End Consolidated Water Co	1.728%	0.0	0.000%	146.9	0.0	146.9
West Valley Water District	1.175%	0.0	0.000%	99.9	0.0	99.9
	100.000%	**34,596.4**	**100.000%**	**8,500.0**	**1,500.0**	**10,000.0**
	19A	19B	19C	19D	19E	19F

Notes:
Section 6.2(b)(ii) of the Peace II Agreement as the amendment is shown in the March 15, 2019 Court Order states: "The members of the Appropriative Pool will contribute a total of 10,000 afy toward Desalter replenishment, allocated among the Appropriative Pool members as follows: 1) 85% of the total (8,500 afy) will be allocated according to the Operating Safe Yield percentage of each Appropriative Pool members; and 2) 15% of the total (1,500 afy) will be allocated according to each land use conversion agency's percentage of the total land use conversion claims. The formula is to be adjusted annually based on the actual land use conversion allocations of the year."

POOL 3

Assessment Year 2024-2025 (Production Year 2023-2024)

Remaining Desalter Replenishment Obligation (RDRO)

	Assigned Share of Operating Safe Yield	CALCULATING THE ADJUSTED PHYSICAL PRODUCTION						ALLOCATING THE RDRO		
		Physical Production	50% of Voluntary Agreements with Ag	Assignments with Non-Ag	Storage and Recovery Programs	Other Adjustments	Total Adjusted Physical Production	Total Production and OSY Basis (20A+20G)	Percentage (20H) / Sum(20H)	Total Remaining Desalter Replenishment Obligation
BlueTriton Brands, Inc.	0.0	231.2	0.0	0.0	0.0	0.0	231.2	231.2	0.229%	39.1
CalMat Co. (Appropriative)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.0
Chino Hills, City Of	1,572.5	1,599.0	(21.0)	0.0	0.0	0.0	1,578.0	3,150.6	3.120%	532.8
Chino, City Of	3,004.2	5,857.9	(1,208.4)	(71.3)	0.0	0.0	4,578.3	7,582.4	7.510%	1,282.2
Cucamonga Valley Water District	2,695.5	12,633.3	0.0	0.0	0.0	(11.9)	12,621.4	15,316.9	15.171%	2,590.1
Fontana Union Water Company	4,760.0	0.0	0.0	0.0	0.0	0.0	0.0	4,760.0	4.715%	804.9
Fontana Water Company	0.8	2,861.8	0.0	0.0	0.0	0.0	2,861.8	2,862.7	2.835%	484.1
Fontana, City Of	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.0
Golden State Water Company	306.3	990.9	0.0	0.0	0.0	0.0	990.9	1,297.2	1.285%	219.4
Jurupa Community Services District	1,535.0	7,790.4	0.0	(428.9)	0.0	28.6	7,390.1	8,925.0	8.840%	1,509.3
Marygold Mutual Water Company	488.0	584.9	0.0	0.0	0.0	0.0	584.9	1,072.9	1.063%	181.4
Monte Vista Irrigation Company	503.9	0.0	0.0	0.0	0.0	0.0	0.0	503.9	0.499%	85.2
Monte Vista Water District	3,592.2	3,287.5	(52.3)	(22.5)	2,098.1	(126.4)	5,184.4	8,776.5	8.693%	1,484.1
NCL Co, LLC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.0
Niagara Bottling, LLC	0.0	1,254.9	0.0	0.0	0.0	0.0	1,254.9	1,254.9	1.243%	212.2
Nicholson Family Trust	2.9	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.003%	0.5
Norco, City Of	150.3	0.0	0.0	0.0	0.0	0.0	0.0	150.3	0.149%	25.4
Ontario, City Of	8,469.8	14,230.6	(2,028.4)	(1,066.3)	0.0	0.0	11,135.9	19,605.7	19.418%	3,315.4
Pomona, City Of	8,352.2	10,453.8	0.0	0.0	0.0	0.0	10,453.8	18,806.0	18.626%	3,180.2
San Antonio Water Company	1,122.1	104.0	0.0	0.0	0.0	0.0	104.0	1,226.1	1.214%	207.3
San Bernardino, County of (Shooting Park)	0.0	16.5	0.0	0.0	0.0	0.0	16.5	16.5	0.016%	2.8
Santa Ana River Water Company	969.0	0.0	0.0	0.0	0.0	0.0	0.0	969.0	0.960%	163.9
Upland, City Of	2,124.2	1,547.0	0.0	0.0	0.0	(402.9)	1,144.1	3,268.3	3.237%	552.7
West End Consolidated Water Co	705.6	0.0	0.0	0.0	0.0	0.0	0.0	705.6	0.699%	119.3
West Valley Water District	479.8	0.0	0.0	0.0	0.0	0.0	0.0	479.8	0.475%	81.1
	40,834.0	**63,443.9**	**(3,310.0)**	**(1,589.0)**	**2,098.1**	**(512.6)**	**60,130.2**	**100,964.3**	**100.000%**	**17,073.5**
	20A	20B	20C	20D	20E	20F	20G	20H	20I	20J

Notes:
Section 6.2(b)(iii) of the Peace II Agreement as the amendment is shown in the March 15, 2019 Court Order states: "A Replenishment Assessment against the Appropriative Pool for any remaining Desalter replenishment obligation after applying both 6(b)(i) and 6(b)(ii), allocated pro-rata to each Appropriative Pool member according to the combined total of the member's share of Operating Safe Yield and the member's Adjusted Physical Production."

POOL 3

Assessment Year 2024-2025 (Production Year 2023-2024)

Desalter Replenishment Summary

	Desalter Replenishment Obligation in AF			Total DRO Fulfillment Activity							Assessments	
	Desalter Replenishment Obligation Contribution	Remaining Desalter Replenishment Obligation	Total Desalter Replenishment Obligation	Transfer from Dedicated Replenishment Account	Transfer from Excess Carry Over Storage Account	Transfer from Recharged Recycled Storage Account	Transfer from Quantified Storage Account	Transfer from Post 7/1/2000 Storage Account	Replenishment Water Purchase	Total Transfers and Water Purchases	Residual DRO (AF)	Assessments Due On Residual DRO ($)
BlueTriton Brands, Inc.	0.0	(39.1)	(39.1)	0.0	39.1	0.0	0.0	0.0	0.0	39.1	0.0	0.00
CalMat Co. (Appropriative)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
Chino Hills, City Of	(382.7)	(532.8)	(915.5)	0.0	0.0	0.0	915.5	0.0	0.0	915.5	0.0	0.00
Chino, City Of	(1,041.2)	(1,282.2)	(2,323.4)	0.0	2,323.4	0.0	0.0	0.0	0.0	2,323.4	0.0	0.00
Cucamonga Valley Water District	(587.0)	(2,590.1)	(3,177.2)	0.0	3,177.2	0.0	0.0	0.0	0.0	3,177.2	0.0	0.00
Fontana Union Water Company	(990.8)	(804.9)	(1,795.8)	1,795.8	0.0	0.0	0.0	0.0	0.0	1,795.8	0.0	0.00
Fontana Water Company	(36.3)	(484.1)	(520.4)	0.0	520.4	0.0	0.0	0.0	0.0	520.4	0.0	0.00
Fontana, City Of	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
Golden State Water Company	(63.8)	(219.4)	(283.1)	0.0	0.0	0.0	283.1	0.0	0.0	283.1	0.0	0.00
Jurupa Community Services District	(998.4)	(1,509.3)	(2,507.7)	0.0	2,507.7	0.0	0.0	0.0	0.0	2,507.7	0.0	0.00
Marygold Mutual Water Company	(101.6)	(181.4)	(283.0)	0.0	283.0	0.0	0.0	0.0	0.0	283.0	0.0	0.00
Monte Vista Irrigation Company	(104.9)	(85.2)	(190.1)	0.0	190.1	0.0	0.0	0.0	0.0	190.1	0.0	0.00
Monte Vista Water District	(752.3)	(1,484.1)	(2,236.5)	2,236.5	0.0	0.0	0.0	0.0	0.0	2,236.5	0.0	0.00
NCL Co, LLC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
Niagara Bottling, LLC	0.0	(212.2)	(212.2)	0.0	212.2	0.0	0.0	0.0	0.0	212.2	0.0	0.00
Nicholson Family Trust	(0.6)	(0.5)	(1.1)	1.1	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.00
Norco, City Of	(31.3)	(25.4)	(56.7)	0.0	56.7	0.0	0.0	0.0	0.0	56.7	0.0	0.00
Ontario, City Of	(2,046.3)	(3,315.4)	(5,361.7)	2,462.2	2,899.4	0.0	0.0	0.0	0.0	5,361.7	0.0	0.00
Pomona, City Of	(1,738.6)	(3,180.2)	(4,918.8)	0.0	4,918.8	0.0	0.0	0.0	0.0	4,918.8	0.0	0.00
San Antonio Water Company	(233.6)	(207.3)	(440.9)	0.0	0.0	0.0	0.0	440.9	0.0	440.9	0.0	0.00
San Bernardino, County of (Shooting Park)	0.0	(2.8)	(2.8)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(2.8)	2,564.96
Santa Ana River Water Company	(201.7)	(163.9)	(365.6)	0.0	365.6	0.0	0.0	0.0	0.0	365.6	0.0	0.00
Upland, City Of	(442.2)	(552.7)	(994.9)	0.0	994.9	0.0	0.0	0.0	0.0	994.9	0.0	0.00
West End Consolidated Water Co	(146.9)	(119.3)	(266.2)	0.0	266.2	0.0	0.0	0.0	0.0	266.2	0.0	0.00
West Valley Water District	(99.9)	(81.1)	(181.0)	0.0	181.0	0.0	0.0	0.0	0.0	181.0	0.0	0.00
	(10,000.0)	**(17,073.5)**	**(27,073.5)**	**6,495.5**	**18,935.6**	**0.0**	**1,198.6**	**440.9**	**0.0**	**27,070.7**	**(2.8)**	**2,564.96**
	21A	21B	21C	21D	21E	21F	21G	21H	21I	21J	21K	21L

Notes:
1) City of Ontario (Non-Ag) dedicated 2,462.2 AF of Annual Share of Operating Safe Yield, to satisfy City of Ontario's 2024/25 DRO pursuant to an Exhibit "G" Section 10 Form A.

ALL POOLS

Assessment Year 2024-2025 (Production Year 2023-2024)

Assessment Calculation - Projected (Includes "10% Judgment Administration and 15% OBMP & Program Elements 1-9 Operating Reserves")

				APPROPRIATIVE POOL		AGRICULTURAL POOL		NON-AG POOL	
PRODUCTION BASIS	FY 2023/24 Budget [5]	**FY 2024/25 Budget**	**ASSESSMENT**						
2022/2023 Production and Exchanges in Acre-Feet (Actuals)			86,865.190	66,788.048	76.887%	17,082.226	19.665%	2,994.916	3.448%
2023/2024 Production and Exchanges in Acre-Feet (Actuals)[1]			77,415.609	56,820.238	73.396%	17,716.582	22.885%	2,878.789	3.719%
BUDGET				**Judgment Administration**	**OBMP & PE 1-9**	**Judgment Administration**	**OBMP & PE 1-9**	**Judgment Administration**	**OBMP & PE 1-9**
Judgment Administration [2,3]	$3,681,911	$3,321,620	$3,321,620	$2,437,948		$760,153		$123,518	
OBMP & Program Elements 1-9 [2]	$5,283,151	$6,408,960	$6,408,960		$4,703,943		$1,466,692		$238,325
Judgment Administration, OBMP & PE 1-9 Assessments	$8,965,062	$9,730,580	$9,730,580	$2,437,948	$4,703,943	$760,153	$1,466,692	$123,518	$238,325
TOTAL BUDGET			$9,730,580	$2,437,948	$4,703,943	$760,153	$1,466,692	$123,518	$238,325
Less: Budgeted Interest Income	($312,500)	($478,500)	($478,500)		($351,202)		($109,505)		($17,794)
Less: Contributions from Outside Agencies	($186,412)	($191,070)	($191,070)		($140,238)		($43,726)		($7,105)
Subtotal: CASH DEMAND	$8,466,150	$9,061,010	$9,061,010	$2,437,948	$4,212,503	$760,153	$1,313,461	$123,518	$213,426
Add: OPERATING RESERVE									
Judgment Administration (10%)	$368,191	$332,162	$332,162	$243,795		$76,015		$12,352	
OBMP & PE 1-9 (15%)	$792,473	$961,344	$961,344		$705,591		$220,004		$35,749
Subtotal: OPERATING RESERVE	$1,160,664	$1,293,506	$1,293,506	$243,795	$705,591	$76,015	$220,004	$12,352	$35,749
Less: Cash Balance on Hand Available for Assessments [4]	($1,160,664)	($1,293,506)	($1,293,506)	($243,795)	($705,591)	($76,015)	($220,004)	($12,352)	($35,749)
FUNDS REQUIRED TO BE ASSESSED	$8,466,150	$9,061,010	$9,061,010	$2,437,948	$4,212,503	$760,153	$1,313,461	$123,518	$213,426
Proposed Assessments									
Judgment Administration, OBMP & PE 1-9 Assessments (Minimum $5.00 Per Producer)		[A]	Per Acre-Foot	$42.91	$74.14	$42.91	$74.14	$42.91	$74.14
Grand Total					$117.05		$117.05		$117.05
Prior Year Assessments, (Actuals) Information Only		[B]	Per Acre-Foot	$42.39	$55.08	$42.39	$55.08	$42.39	$55.08
Grand Total					$97.47		$97.47		$97.47
Variance Between Proposed Assessments and Prior Year Assessments		[A] - [B]		$0.52	$19.06	$0.52	$19.06	$0.52	$19.06
Grand Total					$19.58		$19.58		$19.58
Estimated Assessment as of "Approved" Budget May 23, 2024, Information Only				$35.09	$60.63	$35.09	$60.63	$35.09	$60.63
Grand Total					$95.72		$95.72		$95.72

Notes:
[1] Due to the timing of when the Budget and the Assessment Package are prepared, actual production numbers on this page may differ from the Budget depending on any last minute corrections during the Assessment Package preparation process.
[2] Total costs are allocated to Pools by actual production percentages. Does not include Recharge Debt Payment, Recharge Improvement Projects, Replenishment Water Purchases, or RTS charges.
[3] Judgment Administration excludes OAP, AP, and ONAP specific legal services, meeting compensation, or Special Funds. These items invoiced separately on the Assessment invoices.
[4] June 30th fund balance (estimated) less funds required for Operating Reserves, Agricultural Pool Reserves, and Carryover replenishment obligations.
[5] The previous fiscal year's budget numbers are from the previously approved Assessment Package and does not reflect numbers from any amended budget that may have followed.

ALL POOLS

Assessment Year 2024-2025 (Production Year 2023-2024)

Water Transaction Detail

Standard Transactions

To:	From:	Date of Submittal	Quantity	$ / Acre Feet	Total $	If 85/15 Rule Applies: 85%	15%	WM Pays
Cucamonga Valley Water District	Ontario, City Of Storage Account	10/30/2023	1,265.0					
Fontana Water Company	Cucamonga Valley Water District Annual Account	5/15/2024	2,025.6	677.25	1,371,831.50	1,166,056.78	205,774.73	Fontana Water Company
	Cucamonga Valley Water District Annual Account	5/15/2024	5,474.4	677.25	3,707,543.50			
	Nicholson Family Trust Annual Account	5/27/2024	3.5	677.25	2,370.38			
Golden State Water Company	Upland, City Of Annual Account	6/13/2024	270.0	677.25	182,857.50	155,428.88	27,428.63	Golden State Water Company
	West End Consolidated Water Co Annual Account	6/13/2024	66.4	49.00	3,253.60			
	85/15 does not apply; utilizing West End shares							
Niagara Bottling, LLC	West Valley Water District Storage Account	5/6/2024	2,000.0					
Upland, City Of	West End Consolidated Water Co Storage Account	5/29/2024	708.3	49.00	34,706.70			
	85/15 Rule does not apply; utilizing West End shares							
			11,813.2		**5,302,563.17**	**1,321,485.65**	**233,203.35**	

Total 15% Credits from all Transactions: $233,203.35

Assessment Year 2024-2025 (Production Year 2023-2024)

Water Transaction Detail

Applied Recurring Transactions:

From:	To:	Quantity	$ / Acre Feet	
Fontana Union Water Company Annual Account - Assigned Share of Operating Safe Yield	Cucamonga Valley Water District Annual Account - Transfer (To) / From	All	0.00	*Transfer FUWC Share of Safe Yield to CVWD.*
Fontana Union Water Company Annual Account - Stormwater New Yield	Cucamonga Valley Water District Annual Account - Transfer (To) / From	All	0.00	*Transfer FUWC New Yield to CVWD.*
Fontana Union Water Company Annual Account - Diff - Potential vs. Net	Cucamonga Valley Water District Annual Account - Transfer (To) / From	All	0.00	*Transfer FUWC Ag Pool Reallocation Difference (Potential vs. Net) to CVWD.*
Fontana Union Water Company Annual Account - Transfer (To) / From	Cucamonga Valley Water District Annual Account - Transfer (To) / From	All	0.00	*Transfer FUWC water transfer rights to CVWD.*
Fontana Union Water Company Annual Account - Assigned Rights	Cucamonga Valley Water District Annual Account - Assigned Rights	All	0.00	*Transfer FUWC water transfer rights to CVWD.*
Fontana Union Water Company Annual Account - Total AG SY Reallocation	Cucamonga Valley Water District Annual Account - Transfer (To) / From	All	0.00	*Transfer FUWC Total Ag SY to CVWD.*
Fontana Union Water Company Annual Account - Desalter Replenishment Obligation	Cucamonga Valley Water District Annual Account - Transfer (To) / From	All	0.00	*Transfer of FUWC DRO*

Notes:
1) The Water Transaction between Fontana Water Company and Cucamonga Valley Water District submitted on 5/15/2024 for the amount of 7,500 AF had been split because the amount purchased exceeds what is required to satisfy overproduction; the 85/15 Rule only applies to the portion that satisfies overproduction per the direction of the Appropriative Pool on November 2, 2011.

ALL POOLS

Assessment Year 2024-2025 (Production Year 2023-2024)

Analysis of the 85/15 Rule Application to Water Transfers

To	(Over)/Under Production Excluding Water Transfer(s)	From	Date of Submittal	Transfer Quantity	Is Buyer an 85/15 Party?	Is Transfer Being Placed into Annual Account?	Is Purpose of Transfer to Utilize SAWCO or West End Shares?	Amount of Transfer Eligible for 85/15 Rule
Cucamonga Valley Water District	633.4	Ontario, City Of Storage Account	10/30/2023	1,265.0	Yes	No	No	0.0
Fontana Water Company	(2,025.6)	Cucamonga Valley Water District Annual Account	5/15/2024	2,025.6	Yes	Yes	No	2,025.6
		Cucamonga Valley Water District Annual Account	5/15/2024	5,474.4	Yes	Yes	No	0.0
		Nicholson Family Trust Annual Account	5/27/2024	3.5	Yes	Yes	No	0.0
Golden State Water Company	(297.7)	Upland, City Of Annual Account	6/13/2024	270.0	Yes	Yes	No	270.0
		West End Consolidated Water Co Annual Account	6/13/2024	66.4	Yes	Yes	Yes	0.0
		85/15 does not apply; utilizing West End shares						
Niagara Bottling, LLC	(1,254.9)	West Valley Water District Storage Account	5/6/2024	2,000.0	No	Yes	No	0.0
Upland, City Of	4,690.2	West End Consolidated Water Co Storage Account	5/29/2024	708.3	Yes	Yes	Yes	0.0
		85/15 Rule does not apply; utilizing West End shares						

Notes:
1) The Water Transaction between Fontana Water Company and Cucamonga Valley Water District submitted on 5/15/2024 for the amount of 7,500 AF had been split because the amount purchased exceeds what is required to satisfy overproduction; the 85/15 Rule only applies to the portion that satisfies overproduction per the direction of the Appropriative Pool on November 2, 2011.

ALL POOLS

Assessment Year 2024-2025 (Production Year 2023-2024)

Watermaster Replenishment Calculation

Cost of Replenishment Water per acre foot:

Watermaster Replenishment Cost	$903.00
Projected Spreading - OCWD Connection Fee	$2.00
Projected Spreading - Delivery Surcharge	$15.00
Pre-purchased Credit	$0.00
Total Replenishment Cost per acre foot (see footnote)	**$920.00**

Replenishment Obligation:	**AF @ $920.00**	**15%**	**85%**	**Total**
Appropriative - 100	0.0			$0.00
Appropriative - 15/85	16.5	$2,275.21	$12,892.83	$15,168.04
Non-Agricultural - 100	22.5			$20,700.00
	39.0			**$35,868.04**

Company	**AF Production and Exchanges**	**85/15 Producers**	**Percent of Total 85/15 Producers**	**15% Replenishment Assessment**	**15% Water Transaction Debits**
BlueTriton Brands, Inc.	231.2			-	-
CalMat Co. (Appropriative)	0.0			-	-
Chino Hills, City Of	1,557.1	1,557.1	3.515%	$79.98	$8,197.67
Chino, City Of	3,369.9	3,369.9	7.608%	$173.09	$17,741.57
Cucamonga Valley Water District	12,621.4	12,621.4	28.494%	$648.29	$66,448.49
Desalter Authority	40,308.5			-	-
Fontana Union Water Company	0.0	0.0	0.000%	-	-
Fontana Water Company	2,861.8	2,861.8	6.461%	$147.00	$15,066.80
Fontana, City Of	0.0			-	-
Golden State Water Company	990.9	990.9	2.237%	$50.90	$5,216.86
Jurupa Community Services District	7,390.1	7,390.1	16.684%	$379.59	$38,906.66
Marygold Mutual Water Company	584.9			-	-
Monte Vista Irrigation Company	0.0	0.0	0.000%	-	-
Monte Vista Water District	5,132.1	5,132.1	11.586%	$263.61	$27,018.94
NCL Co, LLC	0.0			-	-
Niagara Bottling, LLC	1,254.9			-	-
Nicholson Family Trust	0.0	0.0	0.000%	-	-
Norco, City Of	0.0	0.0	0.000%	-	-
Ontario, City Of	9,107.5	9,107.5	20.561%	$467.80	$47,948.40
Pomona, City Of	10,453.8			-	-
San Antonio Water Company	104.0	104.0	0.235%	$5.34	$547.59
San Bernardino, County of (Shooting Park)	16.5	16.5	0.037%	$0.85	$86.80
Santa Ana River Water Company	0.0	0.0	0.000%	-	-
Upland, City Of	1,144.1	1,144.1	2.583%	$58.77	$6,023.57
West End Consolidated Water Co	0.0	0.0	0.000%	-	-
West Valley Water District	0.0	0.0	0.000%	-	-
*** Fee assessment total is 15% of Appropriative 15/85 replenishment obligation*	**97,128.8**	**44,295.4**	******	**$2,275.22**	**$233,203.35**
				Transfers to **8G**	*Transfers to* **8K**

Notes: The 2024 rate includes a $15 delivery surcharge from Three Valleys Municipal Water District.

ALL POOLS

Assessment Year 2024-2025 (Production Year 2023-2024)

Readiness to Serve (RTS) Charges

Total Water Purchased: 6,912.9 AF **Total RTS Charge: $54,424.76 ($7.87/AF)**

RO = Replenishment Obligation
DRO = Desalter Replenishment Obligation
yyyymmdd = Order #

Appropriative or Non-Agricultural Pool Party	FY 2016/2017 Water Purchases: Purchased Water in AF 20160623 RO	20160623 DRO	20161216 DRO	20170418 RO	85/15 Breakdown AF @ 100%	AF @ 85/15	AF Total	2015/16 Prod & Exch From 85/15 Producers Acre-Feet	Percent	Year 7 RTS Charges 15% $1.18	85% $6.69	100% $7.87	FY 2017/2018 Water Purchase: Purchased Water in AF 20171211 RO	20171211 DRO	2016/17 Prod & Exch From 85/15 Producers Acre-Feet	Percent	Year 6 RTS Charges 15% $1.18	85% $6.69	100% $7.87	TOTAL RTS CHARGES
BlueTriton Brands, Inc.	1,135.3	8.9	4.0	335.7	1,483.8	0.0	1,483.8	0.0	0.000%	0.00	0.00	11,681.42	0.1	0.0	0.0	0.000%	0.00	0.00	0.71	11,682.13
CalMat Co. (Appropriative)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Chino Hills, City Of	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,548.3	2.009%	1.14	0.00	0.00	0.0	0.0	2,152.0	3.002%	0.47	0.00	0.00	1.61
Chino, City Of	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	388.9	0.543%	0.08	0.00	0.00	0.08
Cucamonga Valley Water District	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20,534.7	26.648%	15.18	0.00	0.00	0.0	0.0	16,562.0	23.104%	3.61	0.00	0.00	18.79
Fontana Union Water Company	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Fontana Water Company	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15,317.2	19.877%	11.32	0.00	0.00	0.0	0.0	13,250.5	18.484%	2.89	0.00	0.00	14.21
Fontana, City Of	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Golden State Water Company	0.0	0.0	0.0	0.0	0.0	0.0	0.0	807.4	1.048%	0.60	0.00	0.00	0.0	0.0	850.3	1.186%	0.19	0.00	0.00	0.78
Jurupa Community Services District	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8,952.8	11.618%	6.62	0.00	0.00	0.0	0.0	11,023.2	15.377%	2.40	0.00	0.00	9.02
Marygold Mutual Water Company	78.7	51.9	20.3	0.0	150.9	0.0	150.9	0.0	0.000%	0.00	0.00	1,187.80	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	1,187.80
Monte Vista Irrigation Company	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Monte Vista Water District	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8,203.7	10.646%	6.06	0.00	0.00	0.0	0.0	6,865.0	9.577%	1.50	0.00	0.00	7.56
NCL Co, LLC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Niagara Bottling, LLC	2,567.5	35.5	0.0	1,174.3	3,777.3	0.0	3,777.3	0.0	0.000%	0.00	0.00	29,738.47	946.1	0.0	0.0	0.000%	0.00	0.00	7,448.22	37,186.69
Nicholson Family Trust	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Norco, City Of	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Ontario, City Of	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18,053.8	23.429%	13.34	0.00	0.00	0.0	0.0	18,970.2	26.463%	4.14	0.00	0.00	17.48
Pomona, City Of	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
San Antonio Water Company	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,030.8	1.338%	0.76	0.00	0.00	0.0	0.0	537.7	0.750%	0.12	0.00	0.00	0.88
San Bernardino, County of (Shooting Park)	38.8	0.3	0.1	9.4	0.4	48.2	48.6	9.4	0.012%	0.01	322.77	3.13	13.2	0.8	13.0	0.018%	0.00	88.59	6.24	420.74
Santa Ana River Water Company	0.0	48.0	23.7	0.0	71.7	0.0	71.7	0.0	0.000%	0.00	0.00	564.35	0.0	118.7	0.0	0.000%	0.00	0.00	934.24	1,498.59
Upland, City Of	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,600.7	3.375%	1.92	0.00	0.00	0.0	0.0	1,071.9	1.495%	0.23	0.00	0.00	2.16
West End Consolidated Water Co	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
West Valley Water District	0.0	23.5	11.8	0.0	35.3	0.0	35.3	0.0	0.000%	0.00	0.00	277.53	0.0	58.8	0.0	0.000%	0.00	0.00	462.55	740.08
9W Halo Western OpCo L.P.	62.2	0.0	0.0	10.6	72.9	0.0	72.9	0.0	0.000%	0.00	0.00	573.72	3.0	0.0	0.0	0.000%	0.00	0.00	23.84	597.56
ANG II (Multi) LLC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Aqua Capital Management LP	57.5	0.0	0.0	0.0	57.5	0.0	57.5	0.0	0.000%	0.00	0.00	452.46	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	452.46
California Speedway Corporation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
California Steel Industries, Inc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
CalMat Co.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
CCG Ontario, LLC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
City of Ontario (Non-Ag)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
County of San Bernardino (Non-Ag)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
General Electric Company	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.000%	0.00	0.00	0.48	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.48
Hamner Park Associates, a California Limited Partnershi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Linde Inc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Monte Vista Water District (Non-Ag)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Riboli Family and San Antonio Winery, Inc.	28.8	0.0	0.0	4.0	32.8	0.0	32.8	0.0	0.000%	0.00	0.00	257.94	5.3	0.0	0.0	0.000%	0.00	0.00	41.44	299.37
Space Center Mira Loma, Inc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
TAMCO	19.8	0.0	0.0	16.5	36.4	0.0	36.4	0.0	0.000%	0.00	0.00	286.24	0.0	0.0	0.0	0.000%	0.00	0.00	0.03	286.27
West Venture Development Company	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
	3,988.7	**168.0**	**59.9**	**1,550.5**	**5,718.8**	**48.2**	**5,767.0**	**77,058.9**	**100.0%**	**56.96**	**322.77**	**45,023.55**	**967.7**	**178.2**	**71,684.9**	**100.0%**	**15.63**	**88.59**	**8,917.25**	**54,424.74**
	26A	26B	26C	26D	26E	26F	26G	26H	26I	26J	26K	26L	26M	26N	26O	26P	26Q	26R	26S	26T

Notes:
1) This year's RTS includes the seventh of ten annual RTS charges for water purchased in FY 2016/17, and sixth of ten annual RTS charges for water purchased in FY 2017/18.

Assessment Year 2024-2025 (Production Year 2023-2024)

Assessment Package Notes

Page	Note
All (a)	A change in a Party's name will be reflected in the Assessment Package for the production year in which the name change occurred. For example, if a Party changed its name on June 30, 2024, it will be reflected in the FY 2024/2025 Assessment Package (for Production Year 2023/2024). Additionally, if a Party changed its name on July 1, 2024, it will be reflected in the FY 2025/2026 Assessment Package (for Production Year 2024/2025).
All (b)	To avoid the possibility of being mistakenly identified as one of other similarly named organizations, the Chino Basin Desalter Authority is referred to as Desalter Authority.
pg01	"Agricultural Total Pool Production" includes Voluntary Agreements between Appropriators and Agricultural Pool Parties.
pg02-07	ANG II (Multi) LLC temporarily leased their rights to 9W Halo Western OpCo L.P. (as successor to Angelica) beginning on March 2010 through January 2030.
pg04 (a)	Transfers in Column [4E] include the annual transfer of 10% of the Non-Ag Safe Yield to be utilized to offset the overall Desalter Replenishment Obligation in accordance with the Peace II Agreement Section 6.2, and also the Exhibit "G" physical solution.
pg04 (b)	Column [4H], "Actual Fiscal Year Production," includes physical production and Assignments between Appropriators and Non-Ag Pool Parties.
pg04 (c)	"Net Over Production" does not include evaporative loss. Additional water will be purchased in order to adequately cover evaporative losses. The rates are 1.5% from November through March, 4.2% from April through October.
pg05 (a)	Hydraulic Control was achieved on February 1, 2016. Pursuant to Paragraph 7.4(b) of the Peace II Agreement, Storage Loss is now calculated at 0.07%.
pg05 (b)	When applicable, Column [5C] includes the Exhibit "G" physical solution transfers to the Appropriative Pool.
pg06	Transfers in Column [6C] is the annual transfer of 10 percent of the Non-Ag Safe Yield to be utilized to offset the overall Desalter Replenishment Obligation in accordance with the Peace II Agreement Section 6.2.
pg07 (a)	The financial Outstanding Obligations are reconciled on pages 7.1 and 17.1.
pg07 (b)	Fund Balance is maintained on a spreadsheet by Watermaster.
pg07 (c)	Outstanding Obligation ($) is calculated by multiplying Outstanding Obligation (AF) by the current rate, reduced by the Fund Balance ($).
pg07 (d)	Fund Balance is the money collected by Watermaster, Outstanding Obligation ($) is the money owed by the Parties or credited to the Parties.
pg08 (a)	Recharge Debt Payment expenses [8O] and Recharge Improvement Project expenses [8P] are each allocated on % OSY, based on the approved budget.
pg08 (b)	Pursuant to Paragraph 5.4(b) of the Peace Agreement, the City of Pomona shall be allowed a credit of up to $2 million against OBMP Assessments through 2030. This equates to $66,667 per year. TVMWD elected to discontinue payment of the "Pomona Credit," effective FY 2012/2013. It is now paid by the Appropriative Pool Parties, allocated on % OSY (Column [8N]).
pg09 (a)	Other Adjustments [9D] include water provided to another Appropriator, pump-to-waste that has been captured in a recharge basin (as verified by IEUA), and other miscellaneous recharge / injection of native water.
pg09 (b)	Evaporative Losses will be applied to recharged water from Pump-to-Waste activities beginning in October 2017. (Evaporative Loss Rates: 1.5% Nov - Mar; 4.2% Apr - Oct)
pg10 (a)	The Restated Judgment allowed an accumulated overdraft of 200,000 AF over 40 years. The total Operating Safe Yield is now 40,834 AF, allocated by percentage of Operating Safe Yield.
pg10 (b)	Column [10I], "Actual Fiscal Year Production," includes physical production, Voluntary Agreements, Assignments, and, if applicable, other adjustments. A detailed breakdown can be found on Page 9.1.

Assessment Year 2024-2025 (Production Year 2023-2024)

Assessment Package Notes

Page	Note
pg10 (c)	"Net Over Production" does not include evaporative loss. Additional water will be purchased in order to adequately cover evaporative losses. The rates are 1.5% from November through March, 4.2% from April through October.
pg11 (a)	The Assessment Package database is set up so that all water must go through the Party Annual Accounts on the way to or from ECO Storage Accounts, and through the ECO Storage Accounts on the way to or from Supplemental Storage Accounts (does not apply to water dedicated to offset the Desalter Replenishment Obligation).
pg11 (b)	Column [11C] includes transfers to the Desalter Replenishment Obligation.
pg12 (a)	The Assessment Package database is set up so that all water must go through the Party Annual Accounts on the way to or from ECO Storage Accounts, and through the ECO Storage Accounts on the way to or from Supplemental Storage Accounts (does not apply to water dedicated to offset the Desalter Replenishment Obligation).
pg12 (b)	Columns [12C], [12H], and [12M] include transfers to the Desalter Replenishment Obligation.
pg12 (c)	The first 3,000 AF of City of Fontana's recharged recycled water transfers to the City of Ontario, and all of the City of Montclair's recharged recycled water transfers to MVWD.
pg13 (a)	"Re-Operation Offset: Pre-Peace II Desalters" had an original beginning balance of 225,000.000 AF. The 29,070 AF correction required by Condition Subsequent 7 is included. (See Page 18.1)
pg13 (b)	"Re-Operation Offset: Peace II Expansion" had an original beginning balance of 175,000.000 AF. It will now be allocated to Desalter replenishment over a 17-year period, beginning in 2013/14 and ending in 2029/30, according to a schedule. (See Page 18.1)
pg13 (c)	There is no loss assessed on the native Basin water allocated to offset Desalter production as a result of Basin Reoperation as approved in the Peace II Agreement.
pg13 (d)	"Non-Ag Dedication" was used in a prior Assessment Package to indicate the Paragraph 31 Settlement Agreements Dedication.
pg13 (e)	The "Non-Ag" OBMP Special Assessment", also referred to as the "10% Haircut", will indicate the movement of water when it is being utilized to further offset the Desalter Replenishment Obligation. See [18L] on Page 18.1.
pg13 (f)	Columns [13C] and [13D] under "Dedicated Replenishment" include transfers of water from an Annual Account to DRO, including Party to Party transfers such as those executed with the Exhibit "G" Form A.
pg14	Transfers in Column [14A] include annual water transfers/leases between Appropriators and/or from Appropriators to Watermaster for replenishment purposes, and also the Exhibit "G" physical solution transfers from the Non-Ag Pool.
pg15 (a)	Most of the remaining eligible parcels for Land Use Conversion are within the Conversion Area 1 boundary.
pg15 (b)	"Unlikely to Convert Parcels" regardless of eligibility are not likely to convert due to pre-existing land use. Eligibility will be determined on a case by case basis.
pg16	Beginning with the 2015/16 Assessment Package, the Agricultural Pool Safe Yield Reallocation is now being calculated with a new formula in accordance with the March 15, 2019 Court Order.
pg17 (a)	The financial Outstanding Obligations are reconciled on pages 7.1 and 17.1.
pg17 (b)	Fund Balance is maintained on a spreadsheet by Watermaster.
pg17 (c)	Outstanding Obligation is calculated by multiplying Outstanding Obligation (AF) by the current rate, reduced by the Fund Balance.
pg17 (d)	Fund Balance is the money collected by Watermaster, Outstanding Obligation ($) is the money owed by the Parties or credited to the Parties.
pg21 (a)	Any balance in a Dedicated Replenishment Account is utilized first to satisfy new or carried over Desalter Replenishment Obligation beginning with the fiscal year such water was made available. The balance, if any, can be found on page 13.1.

Assessment Year 2024-2025 (Production Year 2023-2024)

Assessment Package Notes

Page	Note
pg21 (b)	Due to an agreement between CVWD and FUWC, all of FUWC's rights are automatically tranferred to CVWD. A recurring transaction was created so that a portion of that water gets returned to FUWC to satisfy their share of DRO.
pg22	The table on this page is a replica of the table found in the Watermaster Budget.
pg24	The column titled "(Over)/Under Production Excluding Water Transfer(s)" excludes Exhibit "G" water sales and water transfers between Appropriators and to Watermaster (if any). ([10B] + [10C] + [10D] + [10E] + [14B] - [10K])
pg25 (a)	The "15% Water Transaction Debits" total is the "Total 15% Credits from all Transaction" from Page 23.1.
pg25 (b)	"Replenishment Obligation" does not include evaporative loss. Additional water will be purchased in order to adequately cover evaporative losses. The rates are 1.5% from November through March, 4.2% from April through October.
pg26 (a)	Beginning with fiscal year 2016/17, water purchased through the IEUA will be charged with an annual RTS fee over a ten year period commencing two years after the initial purchase. This fee will vary year to year based on a ten-year rolling average.
pg26 (b)	RTS will be allocated based on the total RTS charge for the year and not on the calculated cost per acre-foot.

Assessment Year 2024-2025 (Production Year 2023-2024)

Assessment Package References and Definitions

Column	Title Description
2A	**AF Production** Actual fiscal year production by each Party. Copied from [4H].
2B	**Non-Agricultural Pool - AF/Admin** Production [2A] <times> per acre-foot Admin fee.
2C	**Non-Agricultural Pool - AF/OBMP** Production [2A] <times> per acre-foot OBMP fee.
2D	**Replenishment Assessments - AF Exceeding Annual Right** Over-production for each Party beyond their annual production right. Copied from [4I].
2E	**Replenishment Assessments - $872 Per AF** Amount overproduced [2D] <times> the current replenishment rate.
2F	**CURO Adjustment** Monetary amount needed (or to be credited) for each Party's Cumulative Unmet Replenishment Obligation (CURO). Calculated on Page 7.1.
2G	**RTS Charges** Annual Readiness to Serve charges for water purchased in prior years.
2H	**Other Adjustments** Used as necessary for any other monetary adjustments needed to the Assessment Package.
2I	**Total Assessments Due** Total fees assessed based on Party production. [2B] + [2C] + [2E] + [2F] + [2G] + [2H].
3A	**Physical Production** Fiscal year physical production by each Party.
3B	**Assignments** Total of water received from an Appropriator by each Party.
3C	**Other Adjustments** Any other adjustments that result in off-set of the fiscal year's production.
3D	**Actual FY Production (Assmnt Pkg Column 4H)** Total adjusted production for the fiscal year. Also known as Assessable Production. [3A] + [3B] + [3C].
4A	**Percent of Safe Yield** The Party's yearly percentage of Safe Yield.
4B	**Carryover Beginning Balance** The beginning balance in each Annual Account. This number carries forward from the ending balance in the previous period Assessment Package.
4C	**Prior Year Adjustments** This number reflects the adjusted production rights from a previous Assessment Package, in the event that corrections are needed.
4D	**Assigned Share of Safe Yield (AF)** The Party's yearly volume of Safe Yield.
4E	**Water Transaction Activity** Total of one-time water transfers between Parties for this period, including the annual transfer of 10 percent of the Non-Ag Safe Yield to be utilized to offset the overall Desalter Replenishment Obligation, as stated in the Peace II Agreement, and Exhibit "G" physical solution transfers to the Appropriative Pool.
4F	**Other Adjustments** This number reflects adjusted production rights, in the event that corrections are needed.
4G	**Annual Production Right** Current Year Production Right. [4B] + [4C] + [4D] + [4E] + [4F].

Assessment Year 2024-2025 (Production Year 2023-2024)

Assessment Package References and Definitions

Column	Title Description
4H	**Actual Fiscal Year Production** Fiscal year production, including Assignments, from CBWM's production system (as verified by each Party on their Water Activity Report). Also known as Assessable Production.
4I	**Net Over Production** Over-production, if any, for each Party beyond their annual production right. [4H] <minus> [4G], equaling more than zero.
4J	**Under Production Balances - Total Under-Produced** Production rights [4G] <minus> production [4H], equaling more than zero.
4K	**Under Production Balances - Carryover: Next Year Begin Bal** Either total under-produced [4J] or share of Safe Yield [4D], whichever is less.
4L	**Under Production Balances - To Excess Carryover Account** Total under-produced [4J] <minus> Carryover to next year [4K], equaling more than zero.
5A	**Local Excess Carry Over Storage Account (ECO) - Beginning Balance** The beginning balance in each ECO account. This number will carry forward from the ending balance in the previous period Assessment Package.
5B	**Local Excess Carry Over Storage Account (ECO) - 0.07% Storage Loss** Beginning balance [5A] <times> -0.0007.
5C	**Local Excess Carry Over Storage Account (ECO) - Transfers To / (From)** Total of water transferred to and from the ECO Account.
5D	**Local Excess Carry Over Storage Account (ECO) - From Under-Production** Total of water transferred from the Annual Account due to under production. Copied from [4L].
5E	**Local Excess Carry Over Storage Account (ECO) - Ending Balance** The current balance in each ECO account. [5A] + [5B] + [5C] + [5D].
5F	**Local Supplemental Storage Account - Beginning Balance** The beginning balance in each Supplemental Account. This number will carry forward from the ending balance in the previous period Assessment Package.
5G	**Local Supplemental Storage Account - 0.07% Storage Loss** Beginning balance [5F] <times> -0.0007.
5H	**Local Supplemental Storage Account - Transfers To / (From)** Total of water transferred to and from the Annual and/or ECO Account.
5I	**Local Supplemental Storage Account - Ending Balance** The current balance in each Supplemental Account. [5F] + [5G] + [5H].
5J	**Combined - Ending Balance** The combined amount in all local storage accounts. [5E] + [5I].
6A	**Percent of Safe Yield** The Party's yearly percentage of Operating Safe Yield.
6B	**Assigned Share of Safe Yield (AF)** The Party's yearly volume of Operating Safe Yield.
6C	**Water Transactions - 10% of Operating Safe Yield ("Haircut")** Operating Safe Yield [6B] <times> -0.1.
6D	**Water Transactions - Transfers (To) / From ECO Account** Total of water transferred between the Annual Account and ECO Account.
6E	**Water Transactions - General Transfers / Exhibit G Water Sales** Total of water transfers between Parties for this period including Exhibit G Water Sales.
6F	**Water Transactions - Total Water Transactions** Total water transactions. [6C] + [6D] + [6E]. This column is used to populate [4E].

Assessment Year 2024-2025 (Production Year 2023-2024)

Assessment Package References and Definitions

Column	Title Description
7A	**Outstanding Obligation (AF)** The amount of obligation carried over from prior Assessment Package(s) that were not met due to various reason, including but not limited to MWD not having replenishment water available to purchase.
7B	**Fund Balance ($)** The amount of money collected or owed for replenishment assessments from prior Assessment Package(s).
7C	**Outstanding Obligation ($)** The amount of money that each Party owes or is credited based on current replenishment rate. [7A] <times> [CURRENT RATE] <minus> [7B].
8A	**AF Production and Exchanges** Total production and exchanges. Copied from [10K].
8B	**Appropriative Pool - AF/Admin** Production and Exchanges [8A] <times> per acre-foot Admin fee.
8C	**Appropriative Pool - AF/OBMP** Production and Exchanges [8A] <times> per acre-foot OBMP fee.
8D	**Ag Pool SY Reallocation - AF Total Reallocation** Reallocation of Ag Pool Safe Yield. Copied from [10E] and [16E].
8E	**Ag Pool SY Reallocation - AF/Admin** Party Ag Pool reallocation [8D] <divided by> Total Ag Pool Reallocation [8D Total] <times> total dollar amount needed for Ag Pool Administration.
8F	**Ag Pool SY Reallocation - AF/OBMP** Party Ag Pool reallocation [8D] <divided by> Total Ag Pool Reallocation [8D Total] <times> total dollar amount needed for Ag Pool OBMP.
8G	**Replenishment Assessments - AF/15%** For Parties participating in the 85/15 Rule: Percentage of total 85/15 participant production <times> required credit amount. Copied from Page 25.1.
8H	**Replenishment Assessments - AF/85%** For parties participating in the 85/15 Rule: Total volume overproduced [10L] <times> 85% of the replenishment rate.
8I	**Replenishment Assessments - AF/100%** For parties not participating in the 85/15 Rule: Total volume overproduced [10M] <times> 100% of the replenishment rate.
8J	**85/15 Water Transaction Activity - 15% Producer Credits** For parties participating in the 85/15 Rule: Credit amount equals 15% of the cost of the water purchased. Total to be credited copied from Page 23.1.
8K	**85/15 Water Transaction Activity - 15% Pro-rated Debits** For parties participating in the 85/15 Rule: Percentage of total 85/15 participant production <times> required credit amount. Copied from Page 25.1.
8L	**CURO Adjustment** Monetary amount needed (or to be credited) for each Party's Cumulative Unmet Replenishment Obligation (CURO). Calculated on Page 17.1.
8M	**ASSESSMENTS DUE - Total Production Based** Total fees assessed based on Party production. [8B] + [8C] + [8E] + [8F] + [8G] + [8H] + [8I] + [8J] + [8K] + [8L].
8N	**ASSESSMENTS DUE - Pomona Credit** Debit amount to Pomona <times> -1 <times> percent share of Operating Safe Yield [10A].
8O	**ASSESSMENTS DUE - Recharge Debt Payment** Total recharge debt payment <times> percent share of Operating Safe Yield [10A].
8P	**ASSESSMENTS DUE - Recharge Improvement Project** Total Recharge Improvement Project <times> Percent Share of Operating Safe Yield [10A].

Assessment Year 2024-2025 (Production Year 2023-2024)

Assessment Package References and Definitions

Column	Title Description
8Q	**ASSESSMENTS DUE - RTS Charges** Annual Readiness to Serve charges for water purchased in prior years.
8R	**ASSESSMENTS DUE - Other Adjustments** Used as necessary for any other monetary adjustments needed to the Assessment Package.
8S	**ASSESSMENTS DUE - DRO** Total assessments due for Desalter Replenishment. Copied from [21L].
8T	**ASSESSMENTS DUE - Total Due** Total assessments. [8M] + [8N] + [8O] + [8P] + [8Q] + [8R] + [8S].
9A	**Physical Production** Fiscal year physical production by each Party.
9B	**Voluntary Agreements (w/ Ag)** Total of water provided to Agricultural Pool Parties.
9C	**Assignments (w / Non-Ag)** Total of water provided to Non-Agricultural Pool Parties.
9D	**Other Adjustments** Total of water received from, or provided to, another Appropriator. Also includes production off-sets.
9E	**Actual FY Production (Assmnt Pkg Column 10I)** Total adjusted production for the fiscal year. [9A] + [9B] + [9C] + [9D].
10A	**Percent of Operating Safe Yield** The Party's yearly percentage of Operating Safe Yield.
10B	**Carryover Beginning Balance** The beginning balance in each Annual Account. This number carries forward from the ending balance in the previous period Assessment Package.
10C	**Prior Year Adjustments** This number reflects the adjusted production rights from a previous Assessment Package, in the event that corrections are needed.
10D	**Assigned Share of Operating Safe Yield** The Party's yearly volume of Operating Safe Yield.
10E	**Net Ag Pool Reallocation** Reallocation of Ag Pool Safe Yield. Copied from [16E]. The calculations that lead to this are made on Page 16.1.
10F	**Water Transaction Activity** Water transactions. Copied from [14E]. The calculations that lead to this are made on Page 14.1.
10G	**Other Adjustments** This number reflects adjusted production rights, in the event that corrections are needed.
10H	**Annual Production Right** Current Year Production Right. [10B] + [10C] + [10D] + [10E] + [10F] + [10G].
10I	**Actual Fiscal Year Production** Fiscal year production, including Assignments and Voluntary Agreements, from CBWM's production system (as verified by each Party on their Water Activity Report). Includes a sub note subtracting Desalter production.
10J	**Storage and Recover Program(s)** Total exchanges for the period (July 1 - June 30) including MZ1 forbearance and DYY deliveries (as reported to CBWM by IEUA and TVMWD and as verified by each Party on their Water Activity Report). A DYY in-lieu "put" is shown as a positive number and a DYY "take" is shown as a negative number.
10K	**Total Production and Exchanges** Actual production [10I] <plus> Storage and Recovery exchanges [10J]. Includes a sub note subtracting Desalter production. Also known as Assessable Production.

Assessment Year 2024-2025 (Production Year 2023-2024)

Assessment Package References and Definitions

Column	Title Description
10L	**Net Over-Production - 85/15%** For 85/15 Rule participants: Production rights [10H] <minus> total production and exchanges [10K], equaling less than zero.
10M	**Net Over-Production - 100%** For non-85/15 Rule participants: Production rights [10H] <minus> total production and exchanges [10K], equaling less than zero. Includes a sub note subtracting Desalter production.
10N	**Under Production Balances - Total Under-Produced** Production rights [10H] <minus> total production and exchanges [10K], equaling more than zero.
10O	**Under Production Balances - Carryover: Next Year Begin Bal** Either total under-produced [10N] or share of Operating Safe Yield [10D], whichever is less.
10P	**Under Production Balances - To Excess Carryover Account** Total under produced [10N] <minus> Carryover to next year [10O], equaling more than zero.
11A	**Excess Carry Over Account (ECO) - Beginning Balance** The beginning balance in each ECO account. This carries forward from the ending balance in the previous period Assessment Package.
11B	**Excess Carry Over Account (ECO) - 0.07% Storage Loss** Beginning balance [11A] <times> -0.0007.
11C	**Excess Carry Over Account (ECO) - Transfers To / (From)** Total of water transferred to and from ECO and the Annual Account. Also includes Desalter Replenishment Obligation transfers.
11D	**Excess Carry Over Account (ECO) - From Supplemental Storage** Total of water transferred to and from Local Supplemental Storage accounts, as shown on Page 12.1.
11E	**Excess Carry Over Account (ECO) - From Under-Production** Total of water transferred from the Annual Account due to under production. Copied from [10P].
11F	**Excess Carry Over Account (ECO) - Ending Balance** The current balance in each ECO account. [11A] + [11B] + [11C] + [11D] + [11E].
12A	**Recharged Recycled Account - Beginning Balance** The beginning balance in each Recharged Recycled Account. This number carries forward from the ending balance in the previous period Assessment Package.
12B	**Recharged Recycled Account - 0.07% Storage Loss** Beginning balance [12A] <times> -0.0007.
12C	**Recharged Recycled Account - Transfers To / (From)** Total recharged recycled water credited to each Party for the year, as provided by IEUA. Also includes Desalter Replenishment Obligation transfers.
12D	**Recharged Recycled Account - Transfer to ECO Account** Total of water transferred to the ECO Account, as shown on Page 11.1.
12E	**Recharged Recycled Account - Ending Balance** The current balance in each Recharged Recycled account. [12A] + [12B] + [12C] + [12D].
12F	**Quantified (Pre 7/1/2000) Account - Beginning Balance** The beginning balance in each Quantified Supplemental Account. This number carries forward from the ending balance in the previous period Assessment Package.
12G	**Quantified (Pre 7/1/2000) Account - 0.07% Storage Loss** Beginning balance [12F] <times> -0.0007.
12H	**Quantified (Pre 7/1/2000) Account - Transfers To / (From)** Total of water transferred to and from the Annual Account. Also includes Desalter Replenishment Obligation transfers.
12I	**Quantified (Pre 7/1/2000) Account - Transfer to ECO Account** Total of water transferred to the ECO Account, as shown on Page 11.1.

Assessment Year 2024-2025 (Production Year 2023-2024)

Assessment Package References and Definitions

Column	Title Description
12J	**Quantified (Pre 7/1/2000) Account - Ending Balance** The current balance in each Quantified Supplemental account. [12F] + [12G] + [12H] + [12I].
12K	**New (Post 7/1/2000) Account - Beginning Balance** The beginning balance in each New Supplemental Account. This number carries forward from the ending balance in the previous period Assessment Package.
12L	**New (Post 7/1/2000) Account - 0.07% Storage Loss** Beginning balance [12K] <times> -0.0007.
12M	**New (Post 7/1/2000) Account - Transfers To / (From)** Total of water transferred to and from the Annual Account. Also includes Desalter Replenishment Obligation transfers.
12N	**New (Post 7/1/2000) Account - Transfer to ECO Account** Total of water transferred to the ECO Account, as shown on Page 11.1.
12O	**New (Post 7/1/2000) Account - Ending Balance** The current balance in each New Supplemental Account. [12K] + [12L] + [12M] + [12N].
12P	**Combined - Ending Balance** The combined amount in all supplemental storage accounts [12E] + [12J] + [12O].
13A	**Dedicated Replenishment - Beginning Balance** The beginning balances in each Dedicated Replenishment account. These numbers carry forward from the ending balances in the previous period Assessment Package.
13B	**Dedicated Replenishment - Water Purchases** Where applicable, the total of water purchased by each Dedicated Replenishment account.
13C	**Dedicated Replenishment - Transfers To** Where applicable, the total of water transferred to each Dedicated Replenishment account. Includes transfers from Exhibit "G" Section 10 Form A, and transfers from the Annual Account.
13D	**Dedicated Replenishment - Transfers From** Total of water transferred from each Dedicated Replenishment account. The inverse amounts in this column goes to column [21D] on page 21.1.
13E	**Dedicated Replenishment - Ending Balance** The current balances in each Dedicated Replenishment account. [13A] + [13B] + [13C] + [13D].
13F	**Storage and Recovery - Beginning Balance** The beginning balance in the Storage and Recovery (DYY) Account. This number carries forward from the ending balance in the previous period Assessment Package.
13G	**Storage and Recovery - Storage Loss** Beginning balance [13F] <times> -0.0007.
13H	**Storage and Recovery - Transfers To** Total of water transferred to the Storage and Recovery Account (“puts”).
13I	**Storage and Recovery - Transfers From** Total of water transferred from the Storage and Recovery Account (“takes”).
13J	**Storage and Recovery - Ending Balance** The current balance in the Storage and Recovery Account. [13F] + [13G] + [13H] + [13I].
14A	**Water Transactions - Assigned Rights** Total of assigned transactions for this period, including annual water transfers/leases between Appropriators and/or from Appropriators to Watermaster for replenishment purposes, and also the Exhibit “G” physical solution transfers from the Non-Ag Pool.
14B	**Water Transactions - General Transfer** Total of water transfers between Parties for this period.
14C	**Water Transactions - Transfers (To) / From ECO Account** Total of water transferred between the Annual Account and ECO Account.

Assessment Year 2024-2025 (Production Year 2023-2024)

Assessment Package References and Definitions

Column	Title Description
14D	**Water Transactions - Transfers (To) Desalter Replenishment** Total of water transferred from the ECO Account to the Desalter Replenishment Account.
14E	**Water Transactions - Total Water Transactions** Total water transactions. [14A]+ [14B] + [14C] + [14D]. This column is used to populate [10F].
15A	**Prior Conversion** Prior Land Use Conversion in acre-feet.
15B	**Conversion @ 1.3 af/ac - Acres** Converted parcels in acres at 1.3 acre-feet per acre.
15C	**Conversion @ 1.3 af/ac - Acre-Feet** Converted parcels in acre-feet at 1.3 acre-feet per acre. [15B] <times> 1.3.
15D	**Total Prior to Peace Agrmt Converted AF** Total Land Use Conversion in acre-feet prior to the Peace Agreement. [15A] + [15C].
15E	**Conversion @ 2.0 af/ac - Acres** Converted parcels in acres at 2.0 acre-feet per acre.
15F	**Conversion @ 2.0 af/ac - Acre-Feet** Converted parcels in acre-feet at 2.0 acre-feet per acre. [15E] <times> 2.0.
15G	**Total Land Use Conversion Acre-Feet** Total Land Use Conversion in acre-feet for each Party. [15D] + [15F].
16A	**% Share of Operating Safe Yield** The Party's yearly percentage of Operating Safe Yield. Copied from [10A].
16B	**Reallocation of Agricultural Pool Safe Yield - Safe Yield Reduction** The Party's percent share of Operating Safe Yield [16A] multiplied by 9,000.
16C	**Reallocation of Agricultural Pool Safe Yield - Land Use Conversions** Total land use conversions claimed on Page 15.1 (as verified by each Party on their Water Activity Report). Copied from [15G].
16D	**Reallocation of Agricultural Pool Safe Yield - Early Transfer** The remaining Agricultural Pool Safe Yield (82,800 <minus> Agricultural Pool Production <minus> Safe Yield Reduction <minus> Land Use Conversion) multiplied by percent share of Operating Safe Yield [16A].
16E	**Reallocation of Agricultural Pool Safe Yield - Total Ag Pool Reallocation** Each Party's Agricultural Pool Reallocation. [16B] + [16C] + [16D]. This column is used to populate [10E].
17A	**Outstanding Obligation (AF)** The amount of obligation carried over from prior Assessment Package(s) that were not met due to various reasons, including but not limited to MWD not having replenishment water available to purchase.
17B	**Fund Balance ($)** The amount of money collected or owed for replenishment assessments from prior Assessment Package(s).
17C	**Outstanding Obligation ($)** The amount of money that each Party owes or is credited based on current replenishment rate. [17A] <times> [CURRENT RATE] <minus> [17B].
17D	**AF Production and Exchanges** Each Party's total production and exchanges. Copied from [10K].
17E	**85/15 Producers** The total production and exchanges of 85/15 Producers only.
17F	**Percent** The percentage of each 85/15 Producer's total production and exchanges [17E] divided by the sum of [17E].

Assessment Year 2024-2025 (Production Year 2023-2024)

Assessment Package References and Definitions

Column	Title Description
17G	**15%** If an 85/15 Producer, then the 85/15 Producers' total Outstanding Obligation ($) at 15%, multiplied by their production and exchanges percentage. [17C] total of 85/15 Producers <times> 15% <times> [17F].
17H	**85%** If an 85/15 Producer, then the Outstanding Obligation ($) at 85%.
17I	**100%** If not an 85/15 Producer, then the Outstanding Obligation ($) at 100%.
17J	**Total** The total CURO for the year. [17G] + [17H] + [17I].
18A	**Desalter Production - Pre-Peace II Desalter Production** Production from the Pre-Peace II Desalter Wells.
18B	**Desalter Production - Peace II Desalter Expansion Production** Production from the Peace II Desalter Expansion Wells.
18C	**Desalter Production - Total** The combined production from all Desalter Wells. [18A] + [18B].
18D	**Desalter Replenishment - Desalter (aka Kaiser) Account PIIA, 6.2 (a)(i)** Credit applied to the total Desalter Production from the Kaiser account.
18E	**Desalter Replenishment - Paragraph 31 Settlement Agreements Dedication PIIA, 6.2(a)(ii)** Credit applied to the total Desalter Production from "dedication of water from the Overlying (Non-Agricultural) Pool Storage Account or from any contribution arising from an annual authorized Physical Solution Transfer in accordance with amended Exhibit G.
18F	**Desalter Replenishment - "Leave Behind" Losses PIIA, 6.2(a)(iv)** Credit applied to the total Desalter Production from "any declared losses from storage in excess of actual losses enforced as a "Leave Behind"".
18G	**Desalter Replenishment - Safe Yield Contributed by Parties PIIA, 6.2(a)(v)** Credit applied to the total Desalter Production from "Safe Yield that may be contributed by the parties."
18H	**Desalter Replenishment - Controlled Overdraft / Re-Op, PIIA, 6.2(a)(vi) - Allocation to Pre-Peace II Desalters** The 225,000 AF portion of the 400,000 AF Controlled Overdraft that was originally allocated to the Pre-Peace II Desalter production.
18I	**Desalter Replenishment - Controlled Overdraft / Re-Op, PIIA, 6.2(a)(vi) - Allocation to All Desalters** The 175,000 AF portion of the 400,000 AF Controlled Overdraft that was originally allocated to the Peace II Desalter Expansion production but is now allocated to all Desalter production per set schedule.
18J	**Desalter Replenishment - Controlled Overdraft / Re-Op, PIIA, 6.2(a)(vi) - Balance** The remaining balance of the 400,000 AF Controlled Overdraft.
18K	**Desalter Replenishment - Appropriative Pool DRO Contribution PIIA, 6.2(b)(ii)** The 10,000 AF contribution to the Desalter Replenishment Obligation by the Appropriative Pool.
18L	**Desalter Replenishment - Non-Ag OBMP Assessment (10% Haircut) PIIA, 6.2(b)(i)** The 10% of the Non-Agricultural Pool Safe Yield used to offset the total Desalter Replenishment Obligation beginning with production year 2016/2017.
18M	**Remaining Desalter Replenishment Obligation PIIA, 6.2(b)(iii)** Total Desalter Production minus Desalter Replenishment. [18C] - [18D] - [18E] - [18F] - [18G] - [18H] - [18I] - [18K] - [18L].
19A	**Percent of Operating Safe Yield** The Party's yearly percentage of Operating Safe Yield. Copied from [10A].
19B	**Land Use Conversions** Total Land Use Conversion in acre-feet for each Party. Copied from [15G].
19C	**Percent of Land Use Conversions** Each Party's pro rata share of Land Use Conversions [19B] from the total of [19B].

Assessment Year 2024-2025 (Production Year 2023-2024)

Assessment Package References and Definitions

Column	Title Description
19D	**85% DROC Based on Percent OSY** Each Party's share of the 10,000 AF Desalter Replenishment Obligation based on OSY. 10,000 <times> 0.85 <times> [19A].
19E	**15% DROC Based on Percent of LUC** Each Party's share of the 10,000 AF Desalter Replenishment Obligation based on Percent of Land Use Conversions. 10,000 <times> 0.15 <times> [19C].
19F	**Total Desalter Replenishment** Each Party's share of the 10,000 AF Desalter Replenishment Obligation. [19D] + [19E].
20A	**Assigned Share of Operating Safe Yield** The Party's yearly volume of Operating Safe Yield. Copied from [10D].
20B	**Physical Production Adjustment Calculation - Physical Production** Fiscal year physical production by each Party. Copied from [9A].
20C	**Physical Production Adjustment Calculation - 50% of Voluntary Agreements with Ag** Total of water provided to Agricultural Pool Parties multiplied by 50%. [9B] <times> 0.50.
20D	**Physical Production Adjustment Calculation - Assignments with Non-Ag** Total of water provided to Non-Agricultural Pool Parties. Copied from [9C].
20E	**Physical Production Adjustment Calculation - Storage and Recovery Programs** Total exchanges for the period (July 1 - June 30) including MZ1 forbearance and DYY deliveries (as reported to CBWM by IEUA and TVMWD and as verified by each Party on their Water Activity Report). Copied from [10J].
20F	**Physical Production Adjustment Calculation - Other Adjustments** Total of water received from, or provided to, another Appropriator. Also includes production off-sets. Copied from [9D] but does not include production adjustments to prevent a negative annual production to a Party.
20G	**Physical Production Adjustment Calculation - Total Adjusted Production** Each Party's Adjusted Physical Production. [20B] + [20C] + [20D] + [20E] + [20F].
20H	**RDRO Calculation - Total Production and OSY Basis** The sum of each Party's Adjusted Physical Production and Assigned Share of Operating Safe Yield. [20A] + [20G].
20I	**RDRO Calculation - Percentage** The percentage of each Party's Adjusted Physical Production and Assigned Share of Operating Safe Yield basis. [20H] divided by the sum of [20H].
20J	**RDRO Calculation - Individual Party RDRO** Each Party's pro rata share of the Remaining Desalter Replenishment Obligation. [20I] <times> Total RDRO.
21A	**Desalter Replenishment Obligation in AF - Desalter Replenishment Obligation Contribution (DROC)** Each Party's share of the 10,000 AF Desalter Replenishment Obligation Contribution. Copied from [19F].
21B	**Desalter Replenishment Obligation in AF - Remaining Desalter Replenishment Obligation (RDRO)** Each Party's pro rata share of the Remaining Desalter Replenishment Obligation. Copied from [20J].
21C	**Desalter Replenishment Obligation in AF - Total Desalter Replenishment Obligation** The sum of Desalter Replenishment Obligation Contribution, and Remaining Desalter Replenishment Obligation. [21A] + [21B].
21D	**Total DRO Fulfillment Activity - Transfer from Dedicated Replenishment Account** Total of water transferred from Desalter Dedicated Replenishment Account to satisfy the desalter replenishment obligation.
21E	**Total DRO Fulfillment Activity - Transfer from Excess Carry Over Storage Account** Total of water transferred from Excess Carry Over Storage Account to satisfy the desalter replenishment obligation.
21F	**Total DRO Fulfillment Activity - Transfer from Recharged Recycled Storage Account** Total of water transferred from Recharged Recycle Storage Account to satisfy the desalter replenishment obligation.
21G	**Total DRO Fulfillment Activity - Transfer from Quantified Storage Account** Total of water transferred from Quantified Storage Account to satisfy the desalter replenishment obligation.

Assessment Year 2024-2025 (Production Year 2023-2024)

Assessment Package References and Definitions

Column	Title Description
21H	**Total DRO Fulfillment Activity - Transfer from Post 7/1/2000 Storage Account** Total of water transferred from Post 7/1/2000 Storage Account to satisfy the desalter replenishment obligation.
21I	**Total DRO Fulfillment Activity - Replenishment Water Purchase** Total of water purchased to satisfy the desalter replenishment obligation.
21J	**Total DRO Fulfillment Activity - Total Transfers and Water Purchases** The sum of all transfers and purchases to satisfy the desalter replenishment obligation. [21D] + [21E] + [21F] + [21G] + [21H] + [21I].
21K	**Assessments - Residual DRO (AF)** Total residual Desalter Replenishment Obligation after transfers and purchases. [21C] + [21J].
21L	**Assessments - Assessments Due On Residual DRO ($)** Total assessments due for Desalter Replenishment. [21K] <times> [Current Replenishment Rate]. This column is used to populate [8S].
26A	**FY 2016/2017 Water Purchases - Purchased Water in AF - 20160623 - RO** The amount of water purchased to satisfy the accumulated replenishment obligation through the end of production year 2014/15. Water was delivered in October 2016.
26B	**FY 2016/2017 Water Purchases - Purchased Water in AF - 20160623 - DRO** The amount of water purchased to be used towards the Desalter Replenishment Obligation. Water was delivered in October 2016.
26C	**FY 2016/2017 Water Purchases - Purchased Water in AF - 20161216 - DRO** The amount of water purchased to be used towards the Desalter Replenishment Obligation. Water was delivered in December 2016.
26D	**FY 2016/2017 Water Purchases - Purchased Water in AF - 20170418 - RO** The amount of water purchased to satisfy production year 2015/16 replenishment obligation. Water was delivered in April 2018.
26E	**FY 2016/2017 Water Purchases - Purchased Water in AF - 85/15 Breakdown - AF @ 100%** The amount of water purchased subject to 100% RTS rate. This applies to: DRO water; RO water of non-85/15 Pool 3 producers; and RO water of Pool 2 producers. 1) Pool 3, 85/15 Ineligible: [26A] + [26B] + [26C] + [26D]. 2) Pool 3, 85/15 Eligible: [26B] + [26C]. 3) Pool 2: [26A] + [26D].
26F	**FY 2016/2017 Water Purchases - Purchased Water in AF - 85/15 Breakdown - AF @ 85/15** The amount of water purchased subject to the 85/15 Rule. This applies to RO water of 85/15 Pool 3 producers. 1) Pool 3, 85/15 Eligible: [26A] + [26D].
26G	**FY 2016/2017 Water Purchases - Purchased Water in AF - 85/15 Breakdown - AF Total** Total water purchased by each Appropriative Pool or Non-Agricultural Pool Party. [26E] + [26F].
26H	**FY 2016/2017 Water Purchases - 2015/16 Prod & Exch From 85/15 Producers - Acre-Feet** Total production and exchanges of 85/15 Producers from fiscal year 2015/16. This is the basis of the 85/15 Rule for water purchased in fiscal year 2016/17.
26I	**FY 2016/2017 Water Purchases - 2015/16 Prod & Exch From 85/15 Producers - Percent** The percentage of each 85/15 Producer's total production and exchanges. [26H] divided by the sum of [26H].
26J	**FY 2016/2017 Water Purchases - Year 7 RTS Charges - 15%** If an 85/15 Producer, then each 85/15 Producer's share of the total RTS charge of 85/15 eligible water. "Total RTS Charge" <divided by> "Total Water Purchased" <times> 0.15 <times> [26F] Total <times> [26I].
26K	**FY 2016/2017 Water Purchases - Year 7 RTS Charges - 85%** If an 85/15 Producer, then their RTS charge of 85/15 eligible water at 85%. "Total RTS Charge" <divided by> "Total Water Purchased" <times> [26F] <times> 0.85.
26L	**FY 2016/2017 Water Purchases - Year 7 RTS Charges - 100%** RTS charge on all water not subject to the 85/15 Rule. "Total RTS Charge" <divided by> "Total Water Purchased" <times> [26E].
26M	**FY 2017/2018 Water Purchase - Purchased Water in AF - 20171211 - RO** The amount of water purchased to satisfy replenishment obligations through the end of production year 2014/15. Water was delivered in December 2017.

Assessment Year 2024-2025 (Production Year 2023-2024)

Assessment Package References and Definitions

Column	Title Description
26N	**FY 2017/2018 Water Purchase - Purchased Water in AF - 20171211 - DRO** The amount of water purchased to be used towards the Desalter Replenishment Obligation. Water was delivered in December 2017.
26O	**FY 2017/2018 Water Purchase - 2016/17 Prod & Exch From 85/15 Producers - Acre-Feet** Total production and exchanges of 85/15 Producers from fiscal year 2016/17. This is the basis of the 85/15 Rule for water purchased in fiscal year 2017/18.
26P	**FY 2017/2018 Water Purchase - 2016/17 Prod & Exch From 85/15 Producers - Percent** The percentage of each 85/15 Producer's total production and exchanges. [26O] divided by the sum of [26O].
26Q	**FY 2017/2018 Water Purchase - Year 6 RTS Charges - 15%** If an 85/15 Producer, then each 85/15 Producer's share of the total RTS charge of 85/15 eligible water in [26M].
26R	**FY 2017/2018 Water Purchase - Year 6 RTS Charges - 85%** If an 85/15 Producer, then their RTS charge of 85/15 eligible water in [26M] at 85%.
26S	**FY 2017/2018 Water Purchase - Year 6 RTS Charges - 100%** RTS charge on all water in {26N] and water not subject to the 85/15 Rule in [26M].
26T	**TOTAL RTS CHARGES** Total RTS Charge. [26J] + [26K] + [26L] + [26Q] + [26R] + [26S].

CHINO BASIN WATERMASTER

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909.484.3888 www.cbwm.org

STAFF REPORT

DATE: November 14, 2024

TO: AP/ONAP/OAP Committee Members

SUBJECT: Resolution 2024-05 to Levy Replenishment and Administrative Assessments for Fiscal Year 2024/25, Based on Production Year 2023/24. (Business Item II.B.)

Issue: A resolution is required for the Chino Basin Watermaster to levy administrative, special project, and replenishment assessments for Fiscal Year 2024/25. [Within WM Duties and Powers]

Recommendation: Review Resolution 2024-05 as presented and offer advice to Watermaster.

Financial Impact: Collection of the assessments according to the Assessment Package creates the funds that are used during the current fiscal year for budgeted expenses.

ACTIONS AND FUTURE CONSIDERATIONS:
Advisory Committee – November 21, 2024: Advice and assistance
Watermaster Board – November 21, 2024: Approval

BACKGROUND

Watermaster issues an Assessment Package annually based on the previous production year (July 1 through June 30). Production information is generally collected quarterly, and other necessary information is collected annually. Watermaster calculates the proposed assessments in the annual Assessment Package which are charged and collected to fund current fiscal year for budgeted expenses. Assessments are based on the approved budget divided by the total assessable production of the previous fiscal year in the Basin.

Watermaster has authorized powers to levy and collect administrative, special project, and replenishment assessments necessary to maintain water levels and to fund the costs of administering the Chino Basin Restated Judgment. A resolution of the Watermaster Board is needed to levy the assessments and issue invoices to parties. Pursuant to the Restated Judgment, each party has thirty (30) days from the date of invoice to remit the payment for assessments due. After that date, interest will accrue on any portion which was due as provided for in Section 55(c) of the Restated Judgment.

DISCUSSION

The draft Fiscal Year 2024/25 Assessment Package is being presented to the Committees for advice and assistance and approval by the Board this month under Business Item II.A. The corresponding Resolution 2024-05 to levy assessments has been drafted for the Watermaster Board's consideration as shown in Attachment 1.

If Resolution 2024-05 is approved through the Watermaster process in November 2024, the invoices will be emailed in late November and assessments will be due 30 days later.

ATTACHMENTS
1. Resolution 2024-05: A Resolution of the Chino Basin Watermaster Levying Administrative, Replenishment, and Special Project Assessments for Fiscal Year 2024/25

RESOLUTION 2024-05

A RESOLUTION OF THE CHINO BASIN WATERMASTER LEVYING ADMINISTRATIVE, REPLENISHMENT, AND SPECIAL PROJECT ASSESSMENTS FOR FISCAL YEAR 2024-2025

WHEREAS, the Chino Basin Watermaster was appointed on January 27, 1978, under Case No. RCVRS 51010 (formerly case No. SCV 164327) entitled Chino Basin Municipal Water District v. City of Chino, et al., with powers to levy and collect administrative and replenishment assessments necessary to maintain water levels and to cover the cost of administering the Chino Basin Judgment; and

WHEREAS, the Watermaster Advisory Committee approved and the Watermaster Board adopted the Fiscal Year 2024-2025 Budget on May 23, 2024, to carry out the necessary Watermaster functions under the Judgment; and

WHEREAS, the production-based assessments to be collected for the Fiscal Year 2024-2025 Budget is $9,061,010, covering Judgment Administration and OBMP & Program Elements 1 through 9; and

WHEREAS, the parties named in this Judgment have pumped 39.0 acre-feet of water in excess of the operating safe yield, which is required to be replaced at the expense of the parties in accordance with the assessment formulas for the respective pools.

NOW, THEREFORE, BE IT RESOLVED that the Chino Basin Watermaster levies the respective assessments for each pool effective November 21, 2024 as shown on Exhibit “A” attached hereto.

BE IT FURTHER RESOLVED, that pursuant to the Judgment, each party has thirty (30) days from the date of invoice to remit the amount of payment for assessments due. After that date, interest will accrue on that portion which was due as provided for in Section 55 (c) of the Restated Judgment.

THE FOREGOING RESOLUTION was
ADOPTED by the Watermaster Board on the 21st day of November 2024.

By:_____
Chair – Watermaster Board

ATTEST:

_____
Secretary/Treasurer – Watermaster Board

Exhibit “A”
Resolution 2024-05

Summary of Assessments
Fiscal Year 2024-2025
Production Year 2023-2024

1.	OVERLYING (NON-AGRICULTURAL) POOL		
	a. 2024-2025 Budget	$ 42.91	Per AF - Admin.
		$ 74.14	Per AF - OBMP
	b. Replenishment	$ 920.00	Per AF
	c. CURO	$ (6,329.96)	Total
2.	APPROPRIATIVE POOL		
	a. Administration		
	1. 2024-2025 Budget	$ 42.91	Per AF - Admin.
		$ 74.14	Per AF - OBMP
	2. Ag Pool Reallocated		
		$ 11.68	Per AF - Admin.
		$ 20.18	Per AF - OBMP
	b. 100% Net Replenishment	$ 920.00	Per AF
	c. 15/85 Water Activity		
	15% Replenishment Assessments	$ 2,275.22	Total
	15% Water Transaction Activity	$ 233,203.35	Total
	d. CURO	$ (124,590.47)	Total
	e. Pomona Credit	$ 66,667.00	Total
	f. Recharge Debt Payment	$ 772,770.00	Total
	g. Recharge Improvement Project	$ 0.00	Total

STATE OF CALIFORNIA)
) ss
COUNTY OF SAN BERNARDINO)

I, Robert Bowcock, Secretary/Treasurer of the Chino Basin Watermaster, DO HEREBY CERTIFY that the foregoing Resolution being No. 2024-05, was adopted at a regular meeting of the Chino Basin Watermaster Board on November 21, 2024 by the following vote:

AYES: 0

NOES: 0

ABSENT: 0

ABSTAIN: 0

CHINO BASIN WATERMASTER

_____

Secretary

Date: November 21, 2024

Project Status: Wineville/Jurupa/RP3 Basin Improvements

Budget:

- Authorized capital budget: $28,846,016

Available Funding:

- $15.4 M in SRF Loan at 0.55%
- $10.8 M is State and Federal Grants

Progress:

- Construction 85% completed

Pending Completion:

- Electrical wiring & SCE work
- Control Programming
- Rubber Dam
- Procuring and installation of Pumps

Current Activities:

- Pipes for Wineville Pumps to arrive in November
  - Planned completion November 30, 2024.
- Electrical wiring & SCE work in progress
  - Planned completion November 30, 2024
- Control Programming awaiting electrical
  - Planned completion November 30, 2024
- Received 95% of Rubber Dam equipment
  - Planned Completion November 30, 2024
- Procuring and installation of Pumps
  - See schedule

Updates:

- Extended the efforts to draft procurement documents for the pumps (see revised schedule)

Detailed Schedule for the Pumps

TASK	PROGRESS	START	END
Prepare Solicitation Documents		**6-Jun-24**	**11-Nov-24**
Draft Documents	100%	6-Jun-24	22-Aug-24
Review Documents	100%	23-Aug-24	28-Aug-24
Finalize Documents	91%	29-Aug-24	11-Nov-24
Request for Qualification of Pump Suppliers		**14-Nov-24**	**14-Jan-25**
Enter PlanetBids	0%	14-Nov-24	14-Nov-24
Solicitation (Q&A Period)	0%	15-Nov-24	12-Dec-24
Final Week of Solicitation for RFQ	0%	16-Dec-24	19-Dec-24
Close Solicitation for RFQ (milestone)	0%	19-Dec-24	19-Dec-24
Review Responses to the RFQ	0%	20-Dec-24	30-Dec-24
Notify Prequalified Suppliers (milestone)	0%	14-Jan-25	14-Jan-25
Request for Proposal of Prequalified Suppliers		**14-Jan-25**	**14-May-25**
Prequalified Supplier Draft Initial Submittal and Pricing	0%	14-Jan-25	13-Feb-25
Receive Initial Submittal (milestone)	0%	13-Feb-25	13-Feb-25
Review Initial Submittal	0%	13-Feb-25	27-Feb-25
Prequalified Supplier Draft Final Submittal	0%	28-Feb-25	21-Mar-25
Receive Final Submittal (milestone)	0%	21-Mar-25	21-Mar-25
IEUA Reviews Final Submittal to Decide Pump Supplier	0%	24-Mar-25	7-Apr-25
Board of Directors' Authorization of Purchase Order (milestone)	0%	14-May-25	14-May-25
Pump Fabrication/Installation/Testing/Close-out		**15-May-25**	**12-Feb-26**
Fabrication (22 weeks)	0%	15-May-25	16-Oct-25
Delivery	0%	16-Oct-25	30-Oct-25
Installation	0%	30-Oct-25	29-Dec-25
Testing	0%	29-Dec-25	29-Jan-26
Close Out	0%	29-Jan-26	12-Feb-26