CHINO BASIN WATERMASTER

NOTICE OF MEETINGS

Thursday, November 20, 2025

9:00 a.m. – Advisory Committee Meeting
11:00 a.m. – Watermaster Board 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
ADVISORY COMMITTEE MEETING
9:00 a.m. – November 20, 2025
Mr. Eduardo Espinoza, Chair
Mr. Brian Geye, Vice-Chair
Mr. Jeff Pierson, Second Vice-Chair
At The Offices Of
Chino Basin Watermaster
9641 San Bernardino Road
Rancho Cucamonga, CA 91730

(Meeting can also 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:
Minutes of the Advisory Committee Meeting held on October 16, 2025 (*Page 1)*

B. FINANCIAL REPORTS

Receive and file as presented:
Monthly Financial Reports for the Period Ended September 30, 2025 *(Page 12)*

C. 2024/25 ANNUAL REPORT OF THE GROUND-LEVEL MONITORING PROGRAM *(Page 28)*

Recommend to the Watermaster Board to approve the 2024/25 Annual Report of the Ground-Level Monitoring Program (GLMP), and direct staff to file a copy with the Court.

D. TASK ORDER 13 FOR COLLABORATIVE RECHARGE PROJECTS *(Page 127)*

Approve Task Order 13 under the Master Agreement between Watermaster and IEUA as presented.

E. TASK ORDER 14 FOR COLLABORATIVE RECHARGE PROJECTS *(Page 133)*

Approve Task Order 14 under the Master Agreement between Watermaster and IEUA as presented.

F. TASK ORDER 15 FOR COLLABORATIVE RECHARGE PROJECTS *(Page 139)*

Approve Task Order 15 under the Master Agreement between Watermaster and IEUA as presented.

G. TASK ORDER 16 FOR COLLABORATIVE RECHARGE PROJECTS *(Page 146)*

Approve Task Order 16 under the Master Agreement between Watermaster and IEUA as presented.

H. TASK ORDER 17 FOR COLLABORATIVE RECHARGE PROJECTS *(Page 153)*
Approve Task Order 17 under the Master Agreement between Watermaster and IEUA as presented.

I. CALENDAR YEAR 2026 ADVISORY COMMITTEE VOLUME VOTE *(Page 159)*
Approve the Calendar Year 2026 Advisory Committee Volume Vote as presented, subject to Watermaster Board approval of the Fiscal Year 2025/26 Assessment Package at the November 20, 2025 meeting.

II. BUSINESS ITEMS

A. CHINO BASIN WATERMASTER FISCAL YEAR 2025/26 INTERIM ASSESSMENTS
Recommend the Board to approve the Fiscal Year 2025/26 Interim Assessments as presented with the balance to be reconciled and assessed when the Assessment Package is completed and approved.

B. RESOLUTION 2025-03 TO LEVY FISCAL YEAR 2025/26 INTERIM ASSESSMENTS
Review Resolution 2025-03 as presented and offer recommendation to Watermaster Board.

III. REPORTS/UPDATES

A. WATERMASTER LEGAL COUNSEL
1. October 31, 2025, Court Hearing (Appropriative Pool Motion for Costs and Fees; Ontario Motion for Attorney's Fees and Costs); Status Conference re Court of Appeal Remittitur in Consolidated Cases No. E080457 and E082127)
2. January 30, 2026 Court Hearing (Ontario Motion for Attorney's Fees and Costs)
3. February 6, 2026 Court Hearing (Proposed Order following Court of Appeal Remittitur in Consolidated Cases No. E080457 and E082127
4. Court of Appeal Consolidated Cases No. E080457 and E082127 (City of Ontario appeal re: Fiscal Year 2021-22 and 2022-23 Assessment Packages)
5. Inland Empire Utilities Agency, et al. v. LS-Fontana LLC (C.D. Cal Cases Nos.: 5:25-cv-00809, 5:25 cv01159)

B. ENGINEER
1. 2024 State of the Basin Report (Part 2)
2. 2025 Safe Yield Reevaluation

C. GENERAL MANAGER
1. Optimum Basin Management Program – Economic Analysis (Update)
2. Field Work Improvement and Updates
3. December Meeting Schedule – Advisory and Board direction requested
4. Other

D. INLAND EMPIRE UTILITIES AGENCY *(Page 163)*
1. Metropolitan Water District Activities Report (Written)
2. Water Supply Conditions (Written)
3. State and Federal Legislative Reports (Written)
4. Ground Water Recharge update (Written)

E. OTHER METROPOLITAN MEMBER AGENCY REPORTS

IV. INFORMATION

A. RECHARGE INVESTIGATION AND PROJECTS COMMITTEE (PROJECT 23a STATUS) *(Page 187)*

V. COMMITTEE MEMBER COMMENTS

VI. OTHER BUSINESS

VII. CONFIDENTIAL SESSION - POSSIBLE ACTION

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

VIII. FUTURE MEETINGS AT WATERMASTER

11/18/25	Tue	9:00 a.m.	Groundwater Recharge Coordinating Committee
11/20/25	Thu	9:00 a.m.	Advisory Committee
11/20/25	Thu	11:00 a.m.	Watermaster Board*
12/11/25	Thu	9:00 a.m.	Appropriative Pool Committee
12/11/25	Thu	11:00 a.m.	Non-Agricultural Pool Committee
12/11/25	Thu	1:30 p.m.	Agricultural Pool Committee
12/18/25	Thu	9:00 a.m.	Advisory Committee
12/18/25	Thu	11:00 a.m.	Watermaster Board*

*****The Board meeting is being advanced by a week due to the Thanksgiving and Christmas holidays.

ADJOURNMENT

CHINO BASIN WATERMASTER
WATERMASTER BOARD MEETING
11:00 a.m. – November 20, 2025
Mr. James Curatalo, Chair
Mr. Jeff Pierson, Vice-Chair
Mr. Bob Bowcock, Secretary/Treasurer
At The Offices Of
Chino Basin Watermaster
9641 San Bernardino Road
Rancho Cucamonga, CA 91730

AGENDA

CALL TO ORDER

FLAG SALUTE

ROLL CALL

PUBLIC COMMENTS

This is an opportunity for members of the public to address the Board on any short non-agenda items that are within the subject matter jurisdiction of the Chino Basin Watermaster. No discussion or action can be taken on matters not listed on the agenda, per the Brown Act. Each member of the public who wishes to comment shall be allotted three minutes, and no more than three individuals shall address the same subject.

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 Watermaster Board Meeting held on October 23, 2025 *(Page 5)*
2. Minutes of the Watermaster Board Special Meeting held on November 4, 2025 *(Page 10)*

B. FINANCIAL REPORTS

Receive and file as presented:
Monthly Financial Report for the Period Ended September 30, 2025 *(Page 12)*

C. 2024/25 ANNUAL REPORT OF THE GROUND-LEVEL MONITORING PROGRAM *(Page 28)*

Approve the 2024/25 Annual Report of the Ground-Level Monitoring Program (GLMP), and direct staff to file a copy with the Court.

D. TASK ORDER 13 FOR COLLABORATIVE RECHARGE PROJECTS *(Page 127)*

Approve Task Order 13 under the Master Agreement between Watermaster and IEUA as presented.

E. TASK ORDER 14 FOR COLLABORATIVE RECHARGE PROJECTS *(Page 133)*
Approve Task Order 14 under the Master Agreement between Watermaster and IEUA as presented.

F. TASK ORDER 15 FOR COLLABORATIVE RECHARGE PROJECTS *(Page 139)*
Approve Task Order 15 under the Master Agreement between Watermaster and IEUA as presented.

G. TASK ORDER 16 FOR COLLABORATIVE RECHARGE PROJECTS *(Page 146)*
Approve Task Order 16 under the Master Agreement between Watermaster and IEUA as presented.

H. TASK ORDER 17 FOR COLLABORATIVE RECHARGE PROJECTS *(Page 153)*
Approve Task Order 17 under the Master Agreement between Watermaster and IEUA as presented.

II. BUSINESS ITEMS

A. CHINO BASIN WATERMASTER FISCAL YEAR 2025/26 INTERIM ASSESSMENTS
Approve the Fiscal Year 2025/26 Interim Assessments as recommended by the Advisory Committee with the balance to be reconciled and assessed when the Assessment Package is completed and approved.

B. RESOLUTION 2025-03 TO LEVY FISCAL YEAR 2025/26 INTERIM ASSESSMENTS
Adopt Resolution 2025-03 as presented.

III. REPORTS/UPDATES

A. WATERMASTER LEGAL COUNSEL

1. October 31, 2025, Court Hearing (Appropriative Pool Motion for Costs and Fees; Ontario Motion for Attorney's Fees and Costs); Status Conference re Court of Appeal Remittitur in Consolidated Cases No. E080457 and E082127)
2. January 30, 2026 Court Hearing (Ontario Motion for Attorney's Fees and Costs)
3. February 6, 2026 Court Hearing (Proposed Order following Court of Appeal Remittitur in Consolidated Cases No. E080457 and E082127
4. Court of Appeal Consolidated Cases No. E080457 and E082127 (City of Ontario appeal re: Fiscal Year 2021-22 and 2022-23 Assessment Packages)
5. Inland Empire Utilities Agency, et al. v. LS-Fontana LLC (C.D. Cal Cases Nos.: 5:25-cv-00809, 5:25 cv01159)

B. ENGINEER

1. 2024 State of the Basin Report (Part 2)
2. 2025 Safe Yield Reevaluation

C. GENERAL MANAGER

1. Optimum Basin Management Program – Economic Analysis (Update)
2. Field Work Improvement and Updates
3. December Meeting Schedule – Advisory and Board direction requested
4. Other

IV. INFORMATION

A. RECHARGE INVESTIGATION AND PROJECTS COMMITTEE (PROJECT 23a STATUS) *(Page 187)*

V. BOARD MEMBER COMMENTS

VI. OTHER BUSINESS

VII. CONFIDENTIAL SESSION - POSSIBLE ACTION

Pursuant to Article II, Section 2.6, of the Watermaster Rules & Regulations, a Confidential Session may be held during the Watermaster Board meeting for the purpose of discussion and possible action.

1. CONFERENCE WITH LEGAL COUNSEL – PENDING LITIGATION: a) Chino Basin Municipal Water District v. City of Ontario et al., 4th District Court of Appeal Case No. E080457 and E082127

VIII. FUTURE MEETINGS AT WATERMASTER

11/18/25	Tue	9:00 a.m.	Groundwater Recharge Coordinating Committee
11/20/25	Thu	9:00 a.m.	Advisory Committee
11/20/25	Thu	11:00 a.m.	Watermaster Board*
12/11/25	Thu	9:00 a.m.	Appropriative Pool Committee
12/11/25	Thu	11:00 a.m.	Non-Agricultural Pool Committee
12/11/25	Thu	1:30 p.m.	Agricultural Pool Committee
12/18/25	Thu	9:00 a.m.	Advisory Committee
12/18/25	Thu	11:00 a.m.	Watermaster Board*

*****The Board meeting is being advanced by a week due to the Thanksgiving and Christmas holidays.

ADJOURNMENT

DRAFT MINUTES
CHINO BASIN WATERMASTER
ADVISORY COMMITTEE MEETING
October 16, 2025

The Advisory Committee meeting was held at the Chino Basin Watermaster offices located at 9641 San Bernardino Road, Rancho Cucamonga, CA, and via Zoom (conference call and web meeting) on October 16, 2025.

ADVISORY COMMITTEE MEMBERS PRESENT

- **APPROPRIATIVE POOL COMMITTEE MEMBERS PRESENT AT WATERMASTER**

Eduardo Espinoza, **Chair** (for John Bosler)	Cucamonga Valley Water District
Ron Craig	City of Chino Hills
Chad Nishida (for Courtney Jones)	City of Ontario
Chris Diggs	City of Pomona
Megan Sims (for Cris Fealy)	Fontana Water Company
Justin Castruita (for Josh Swift)	Fontana Union Water Company
Chris Berch	Jurupa Community Services District
Justin Scott-Coe	Monte Vista Water District

- **APPROPRIATIVE POOL COMMITTEE MEMBERS PRESENT ON ZOOM**

Ben Orosco (for Hye Jin Lee)	City of Chino
Nicole deMoet	City of Upland

- **NON-AGRICULTURAL POOL COMMITTEE MEMBERS PRESENT AT WATERMASTER**

Brian Geye, **Vice-Chair**	California Speedway Corporation

- **NON-AGRICULTURAL POOL COMMITTEE MEMBERS PRESENT ON ZOOM**

Alexis Mascarinas	City of Ontario (Non-Ag)

- **AGRICULTURAL POOL COMMITTEE MEMBERS PRESENT AT WATERMASTER**

Jeff Pierson, **Second Vice-Chair**	Crops
Jimmy Medrano	State of California
Tariq Awan	State of California

- **AGRICULTURAL POOL COMMITTEE MEMBERS PRESENT ON ZOOM**

Imelda Cadigal	State of California
Lewis Callahan	State of California
Michael Maeda	State of California

- **MUNICIPAL REPRESENTATIVES PRESENT ON ZOOM**

Matt Litchfield	Three Valleys Municipal Water District
Ryan Shaw	Western Municipal Water District

WATERMASTER BOARD MEMBERS PRESENT ON ZOOM

Marty Zvirbulis	Fontana Water Company
Bob Kuhn	Three Valleys Municipal Water District
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 Manager
Daniela Uriarte	Senior Accountant

Ruby Favela Quintero	Executive Assistant
Alonso Jurado	Senior Field Operations Specialist
Kirk Richard Dolar	Administrative Analyst
Jordan Garcia	Senior Field Operations Specialist
Erik Vides	Field Operations Specialist

WATERMASTER CONSULTANTS PRESENT ON ZOOM

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

OTHERS PRESENT AT WATERMASTER

Amanda Coker	Cucamonga Valley Water District
Jiwon Seung	Cucamonga Valley Water District
Cris Fealy	Fontana Water Company
Josh Swift	Fontana Union Water Company
Bryan Smith	Jurupa Community Services District

OTHERS PRESENT ON ZOOM

Tom O'Neill	Chino Basin Desalter Authority
Curtis Burton	City of Chino
Hye Jin Lee	City of Chino
Derek Hoffman	Fennemore Law
Toby Moore	Golden State Water Company
John Schatz	John J. Schatz, Attorney at Law
Aimee Zhao	Inland Empire Utilities Agency
Eddie Lin	Inland Empire Utilities Agency
Manny Martinez	Monte Vista Water District
Kevin O'Toole	Orange County Water District
Alyssa Coronado	Santa Ana River Water Company
David De Jesus	Three Valleys Municipal Water District
Jorge Marquez	Three Valleys Municipal Water District
Nicole deMoet	West End Consolidated Water Company
Rick Rees	WSP USA

CALL TO ORDER

Chair Espinoza called the Advisory Committee meeting to order at 9:00 a.m.

ROLL CALL

(00:00:17) Ms. Nelson conducted the roll call and announced that a quorum was present.

AGENDA – ADDITIONS/REORDER

None

SAFETY MINUTE

(00:02:25) Mr. Tellez Foster mentioned that October 16 is the Great California Shakeout and emphasized the importance of practicing the key elements of drop, cover, and hold in the event of an earthquake.

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 Advisory Committee Meeting held on September 18, 2025

B. FINANCIAL REPORTS

Monthly Financial Reports for the Periods Ended July 31, 2025 and August 31, 2025

C. APPLICATION: WATER TRANSACTION – 300 AF FROM SANTA ANA RIVER WATER COMPANY TO BLUETRITON BRANDS, INC.

Provide advice and assistance to the Watermaster Board on the proposed transaction.

(00:02:55)
Motion by Second Vice-Chair Jeff Pierson, seconded by Vice-Chair Brian Geye, there being no dissent, the motion was deemed passed unanimously among those present.
Moved to approve the Consent Calendar as presented.

II. BUSINESS ITEMS

None

III. REPORTS/UPDATES

A. WATERMASTER LEGAL COUNSEL

1. October 31, 2025, Court Hearing (Appropriative Pool Motion for Costs and Fees; Ontario Motion for Attorney's Fees and Costs); Status Conference re Court of Appeal Remittitur in Consolidated Cases No. E080457 and E082127
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. Inland Empire Utilities Agency, et al. v. LS-Fontana LLC (C.D. Cal Cases Nos.: 5:25-cv-00809, 5:25 cv-01159)

(00:03:30) Mr. Herrema stated that the legal report remained unchanged from those given at the Pools meetings last week. The Committee declined to receive a report on them.

B. ENGINEER

1. 2024 State of the Basin Report (Update)
2. Ground-Level Monitoring Program Presentation
3. Model Update and Required Demonstration Task Order

(00:04:06) Mr. Malone mentioned that it was the last day to submit comments for the Ground-Level Monitoring Program and stated that the engineer's report remained unchanged from those given at the Pools meetings last week. The Committee declined to receive a report on them.

C. GENERAL MANAGER

1. Optimum Basin Management Program – Economic Analysis (Update)
2. Peer Review of the Draft 2025 Safe Yield Reevaluation Final Report (Update)
3. Annual Streamflow Monitoring Report for Water Rights Permit 21225
4. Changes to Financial Reporting Format
5. Other

(00:04:27) For Item 1, Mr. Tellez Foster announced that a draft is in progress and may be presented next week, with a possible workshop before the Board meeting if it is ready. For Item 2, he mentioned that staff is working with West Yost to have the draft final report completed by the end of October and plans to conduct a technical workshop to present the findings. For Item 3, he stated that Watermaster submitted the annual streamflow monitoring report for Permit 21225 to the California

Department of Fish and Wildlife. For Item 4, Mr. Tellez Foster informed the Advisory Committee that Ms. Uriarte presented updates to the financial statement format for Fiscal Year 25/26 which included separating restricted funds under the California Class investment account and included the addition of the new Carryover budget and Carryover funding categories which provides more clarity on the financials.

D. INLAND EMPIRE UTILITIES AGENCY

1. Metropolitan Water District Activities Report (Written)
2. Water Supply Conditions (Written)
3. State and Federal Legislative Reports (Written)
4. Ground Water Recharge update (Written)

No oral report was given.

E. OTHER METROPOLITAN MEMBER AGENCY REPORTS

None

IV. INFORMATION

A. SEMI-ANNUAL PLUME STATUS REPORTS (INFORMATION ONLY)

This was an informational item, and no oral report was given.

B. RECHARGE INVESTIGATION AND PROJECTS COMMITTEE (PROJECT 23a STATUS)

This was an informational item, and no oral report was given.

V. COMMITTEE MEMBER COMMENTS

None

VI. OTHER BUSINESS

None

VII. CONFIDENTIAL SESSION - POSSIBLE ACTION

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

None

ADJOURNMENT

Chair Espinoza adjourned the Advisory Committee meeting at 9:07 a.m.

Secretary: _____

Approved:_____

DRAFT MINUTES
CHINO BASIN WATERMASTER
WATERMASTER BOARD MEETING
October 23, 2025

The Watermaster Board meeting was held at the offices of the Chino Basin Watermaster located at 9641 San Bernardino Road, Rancho Cucamonga, CA, and via Zoom (conference call and web meeting) on October 23, 2025.

WATERMASTER BOARD MEMBERS PRESENT AT WATERMASTER

James Curatalo, Chair	Cucamonga Valley Water District
Jeff Pierson, Vice-Chair	Agricultural Pool – Crops
Bob Bowcock, Secretary/Treasurer	Non-Agricultural Pool – CalMat Co.
Steve Elie	Inland Empire Utilities Agency
Mike Gardner	Western Municipal Water District
Bob Kuhn	Three Valleys Municipal Water District
Jimmy Medrano	Agricultural Pool – State of CA
Bill Velto	City of Upland
Marty Zvirbulis	Fontana Water Company

WATERMASTER STAFF PRESENT

Todd Corbin	General Manager
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 Manager
Daniela Uriarte	Senior Accountant
Ruby Favela Quintero	Executive Assistant
Kirk Richard Dolar	Administrative Analyst
Jordan Garcia	Senior Field Operations Specialist
Erik Vides	Field Operations Specialist

WATERMASTER CONSULTANTS PRESENT AT WATERMASTER

Scott Slater	Brownstein Hyatt Farber Schreck, LLP
Jonathan Abadesco	C.J. Brown & Company CPAs
Andy Malone	West Yost

WATERMASTER CONSULTANTS ON ZOOM

Bradley Herrema	Brownstein Hyatt Farber Schreck, LLP
Garrett Rapp	West Yost

OTHERS PRESENT AT WATERMASTER

Bob Feenstra	Agricultural Pool – Dairy
Lewis Callahan	Agricultural Pool – State of CA
Nicole deMoet	City of Upland
Amanda Coker	Cucamonga Valley Water District
Jimmie Moffatt	Cucamonga Valley Water District
Jiwon Seung	Cucamonga Valley Water District
Shawn Harkness	CV Strategies
Josh Swift	Fontana Union Water Company
Justin Castruita	Fontana Union Water Company
Cris Fealy	Fontana Water Company
Megan Sims	Fontana Water Company
Chris Berch	Jurupa Community Services District
Eddie Lin	Inland Empire Utilities Agency
John Russ	Inland Empire Utilities Agency

Bryan Smith	Jurupa Community Services District
Jesse Pompa	Jurupa Community Services District
Laura Roughton	Western Municipal Water District

OTHERS PRESENT ON ZOOM

Tom O'Neill	Chino Basin Desalter Authority
Ben Orosco	City of Chino
Hye Jin Lee	City of Chino
Alexis Mascarinas	City of Ontario
Chad Nishida	City of Ontario
Courtney Jones	City of Ontario
Norberto Ferreira	City of Upland
Nicholas Miller	County of San Bernardino
Derek Hoffman	Fennemore Law
Toby Moore	Golden State Water Company
Aimee Zhao	Inland Empire Utilities Agency
Clifford Button	Jurupa Community Services District
Manny Martinez	Monte Vista Water District
Brian Geye	Non-Agricultural – CA Speedway Corporation
Alyssa Coronado	Santa Ana River Water Company
John Lopez	Santa Ana River Water Company
David De Jesus	Three Valleys Municipal Water District
Jeff Hanlon	Three Valleys Municipal Water District
Craig Miller	Western Municipal Water District
Mallory O'Conor	Western Municipal Water District
Ryan Shaw	Western Municipal Water District
Craig Stewart	WSP USA

CALL TO ORDER
Chair Curatalo called the Watermaster Board meeting to order at 11:00 a.m.

FLAG SALUTE
(00:00:15) Chair Curatalo led the Board in the flag salute.

ROLL CALL
(00:00:46) Ms. Nelson conducted the roll call and announced that a quorum was present.

PUBLIC COMMENTS
This is an opportunity for members of the public to address the Board on any short non-agenda items that are within the subject matter jurisdiction of the Chino Basin Watermaster. No discussion or action can be taken on matters not listed on the agenda, per the Brown Act. Each member of the public who wishes to comment shall be allotted three minutes, and no more than three individuals shall address the same subject.

None

AGENDA – ADDITIONS/REORDER
(00:01:54) Mr. Corbin noted edits to the September 30, 2025 special Board meeting minutes.

SAFETY MINUTE
(00:02:13) Mr. Corbin stated that this month was the Great California Shakeout and emphasized the importance of practicing the key elements of drop, cover, and hold in the event of an earthquake.

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 Watermaster Board Meeting held on September 25, 2025
2. Minutes of the Watermaster Board Special Meeting held on September 30, 2025

B. FINANCIAL REPORTS

Monthly Financial Reports for the Periods Ended July 31, 2025 and August 31, 2025

C. APPLICATION: WATER TRANSACTION – 300 AF FROM SANTA ANA RIVER WATER COMPANY TO BLUETRITON BRANDS, INC.

Approve the proposed transaction.

(00:03:18) Mr. Corbin reported a correction to the September 30, 2025 special Board meeting minutes, noting that Mr. Bob Feenstra attended in person for Vice-Chair Jeff Pierson who observed remotely via Zoom.

(00:03:53)
Motion by Mr. Mike Gardner, seconded by Mr. Marty Zvirbulis, there being no dissent, the item passed unanimously by voice vote.

Moved to approve the Consent Calendar as presented with the amendment to the September 30, 2025 special meeting minutes as noted.

II. BUSINESS ITEMS

A. CHINO BASIN WATERMASTER ANNUAL FINANCIAL REPORT FOR THE FISCAL YEARS ENDED JUNE 30, 2025 AND 2024; AND THE CHINO BASIN WATERMASTER MANAGEMENT REPORT FOR JUNE 30, 2025

Receive and file (1) the Chino Basin Watermaster Annual Financial Report for the Fiscal Years Ended June 30, 2025 and 2024 and (2) the Chino Basin Watermaster Management Report for June 30, 2025**.**

(00:04:34) Ms. Daniela Uriarte thanked the staff at C.J. Brown & Company, Eide Bailly, and the Watermaster team for their help with the audit this year. She introduced Mr. Jonathan Abadesco, audit partner of C.J. Brown & Company, to give a presentation of the audit findings. Mr. Abadesco reported another successful and clean audit with no issues to report.

(00:11:32)
Motion by Mr. Steve Elie, seconded by Vice-Chair Jeff Pierson, there being no dissent, the item passed unanimously by voice vote.

Moved to receive and file Business Item II.A. as presented.

III. REPORTS/UPDATES

A. WATERMASTER LEGAL COUNSEL

1. October 31, 2025, Court Hearing (Appropriative Pool Motion for Costs and Fees; Ontario Motion for Attorney's Fees and Costs); Status Conference re Court of Appeal Remittitur in Consolidated Cases No. E080457 and E082127
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. Inland Empire Utilities Agency, et al. v. LS-Fontana LLC (C.D. Cal Cases Nos.: 5:25-cv-00809, 5:25 cv-01159)

(00:12:06) Mr. Slater gave a report. A discussion ensued.

B. ENGINEER

1. 2024 State of the Basin Report (Update)
2. Ground-Level Monitoring Program Presentation
3. Model Update and Required Demonstration Task Order

(00:19:22) For Item 1, Mr. Malone presented the State of the Basin report in its new digital "story map" format and showed the parties how to navigate through the different reports and maps. The presentation for this meeting focused on the Introduction through Managed Aquifer Recharge sections; the remainder (Groundwater Levels, Quality, and Monitoring) will be presented at the next regular meeting. For Item 2, Mr. Malone gave a presentation of the highlights of the fiscal year 2024/25 Annual Report of the GLMP. For Item 3, Mr. Garrett Rapp gave an update. A discussion ensued.

C. GENERAL MANAGER

1. Optimum Basin Management Program – Economic Analysis (Update)
2. Peer Review of the Draft 2025 Safe Yield Reevaluation Final Report (Update)

4. Changes to Financial Reporting Format
5. Recharge Brainstorming Session
6. Other

(00:48:34) Mr. Corbin prefaced and invited Mr. Tellez Foster to give a presentation on Item 1. For Item 2, Mr. Corbin reported that the final Safe Yield Reevaluation peer review report from S.S. Papadopulos & Associates, Inc. is now completed. For Item 3, Mr. Tellez Foster reported that Watermaster submitted the annual streamflow monitoring report for Permit 21225 to the California Department of Fish and Wildlife. For Item 4, Mr. Corbin introduced Ms. Uriarte to present changes to the financial reporting format for fiscal year 2025/26, which included separating restricted funds under the California Class investment account, and the new Carryover budget and Carryover funding categories, which help to provide a clearer picture of the financials. For Item 5, Mr. Corbin asked Mr. Nakano to give a presentation. For Item 6, Mr. Corbin mentioned that this month Watermaster celebrated Water Professionals Week. He thanked everyone in the Chino Basin for their efforts. A discussion ensued.

IV. INFORMATION

A. SEMI-ANNUAL PLUME STATUS REPORTS (INFORMATION ONLY)

(01:07:08) Mr. Corbin informed the Board that this was an informational item provided every October and April.

B. RECHARGE INVESTIGATION AND PROJECTS COMMITTEE (PROJECT 23a STATUS)

(01:07:19) Mr. Corbin informed the Board that this was an informational item that is updated monthly.

V. BOARD MEMBER COMMENTS

None

VI. OTHER BUSINESS

None

VII. CONFIDENTIAL SESSION - POSSIBLE ACTION

Pursuant to Article II, Section 2.6, of the Watermaster Rules & Regulations, a Confidential Session may be held during the Watermaster Board meeting for the purpose of discussion and possible action.

The Board convened into Confidential Session at 12:07 p.m. to discuss the following:

1. CONFERENCE WITH LEGAL COUNSEL – PENDING LITIGATION: a) Chino Basin Municipal Water District v. City of Ontario et al., 4th District Court of Appeal Case No. E080457 and E082127

Confidential session concluded at 12:53 p.m. with no reportable action.

ADJOURNMENT

Chair Curatalo adjourned the Watermaster Board meeting at 12:53 p.m.

Secretary: _____

Approved: _____

DRAFT MINUTES
CHINO BASIN WATERMASTER
WATERMASTER BOARD – SPECIAL MEETING
November 4, 2025

The Watermaster Board special meeting was held at the offices of the Chino Basin Watermaster located at 9641 San Bernardino Road, Rancho Cucamonga, CA, and via Zoom (conference call and web meeting) on November 4, 2025.

WATERMASTER BOARD MEMBERS PRESENT AT WATERMASTER

James Curatalo, Chair	Cucamonga Valley Water District
Jeff Pierson, Vice-Chair	Agricultural Pool – Crops
Steve Elie	Inland Empire Utilities Agency
Brian Geye (for Bob Bowcock)	Non-Agricultural Pool – CA Speedway Corp.
Bob Kuhn	Three Valleys Municipal Water District
Jimmy Medrano	Agricultural Pool – State of CA
Laura Roughton (for Mike Gardner)	Western Municipal Water District
Bill Velto	City of Upland
Marty Zvirbulis	Fontana Water Company

WATERMASTER BOARD MEMBERS ABSENT

Mike Gardner	Western Municipal Water District

WATERMASTER CONSULTANTS PRESENT AT WATERMASTER

Scott Slater	Brownstein Hyatt Farber Schreck, LLP

WATERMASTER CONSULTANTS PRESENT ON ZOOM

Brad Herrema	Brownstein Hyatt Farber Schreck, LLP

OTHERS PRESENT AT WATERMASTER

Bob Feenstra	Agricultural Pool – Dairy
Eduardo Espinoza	Cucamonga Valley Water District

OTHERS PRESENT ON ZOOM

Lewis Callahan	Agricultural Pool – State of CA
Chris Diggs	City of Pomona
Bob Bowcock	Non-Agricultural Pool – CalMat Co.

CALL TO ORDER
Chair Curatalo called the Watermaster Board meeting to order at 11:00 a.m.

FLAG SALUTE
(00:00:11) Chair Curatalo led the Board in the flag salute.

ROLL CALL
(00:00:46) Ms. Nelson conducted the roll call and announced that a quorum was present.

PUBLIC COMMENTS
This is an opportunity for members of the public to address the Board on any short non-agenda items that are within the subject matter jurisdiction of the Chino Basin Watermaster. No discussion or action can be taken on matters not listed on the agenda, per the Brown Act. Each member of the public who wishes to comment shall be allotted three minutes, and no more than three individuals shall address the same subject.

AGENDA – ADDITIONS/REORDER
None

I. CONFIDENTIAL SESSION – POSSIBLE ACTION

Pursuant to Article II, Section 2.6, of the Watermaster Rules & Regulations, a Confidential Session may be held during the Watermaster Board meeting for the purpose of discussion and possible action.

The Board convened into confidential session at 11:01 a.m. to discuss the following:

1. CONFERENCE WITH LEGAL COUNSEL – PENDING LITIGATION: a) Chino Basin Municipal Water District v. City of Ontario et al., 4th District Court of Appeal Case No. E080457 and E082127

Confidential session concluded at 12:00 p.m. with no reportable action.

ADJOURNMENT

Chair Curatalo adjourned the Watermaster Board meeting at 12:00 p.m.

Secretary: _____

Approved: _____

CHINO BASIN WATERMASTER

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

STAFF REPORT

DATE: November 2025

TO: Watermaster Committees & Board

SUBJECT: Monthly Financial Reports (For the Reporting Period Ended September 30, 2025) (Consent Calendar Item I.B.)

Issue: Record of Monthly Financial Reports for the reporting period ended September 30, 2025 [Normal Course of Business]

Recommendation: Receive and file Monthly Financial Reports for the reporting period ended September 30, 2025 as presented.

Financial Impact: Unless otherwise noted, all expenditures were included in the Fiscal Year 2025/26 budget as approved by the Advisory Committee and adopted by the Watermaster Board in May 2025, and subsequently amended in July 2025.

ACTIONS:
Appropriative Pool – November 13, 2025 [Final]: Received and filed.
Non-Agricultural Pool – November 13, 2025 [Final]: Received and filed without approval.
Agricultural Pool – November 13, 2025 [Final]: Received and filed.
Advisory Committee – November 20, 2025 [Recommended]: Receive and file.
Watermaster Board – November 20, 2025 [Recommended]: Receive and file.

BACKGROUND

A monthly financial reporting packet is provided to keep all members apprised of Watermaster revenues, expenditures, and other financial activities. 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 year to date (YTD), summarized by pool category.
4. Treasurer's Report – Summary of Watermaster investment 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 amended budget and carryover budget.
6. Monthly Variance Report & Supplemental Schedules – Supporting schedule providing explanation for major budget variances, additional tables detailing pool fund balances, salaries expense, legal expense, and engineering expense.

DISCUSSION

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

Watermaster staff is available to provide additional explanations or respond to any questions on these reports during the monthly meetings as requested.

ATTACHMENT

1. Monthly Financial Reports (Period Ended September 30, 2025)

Chino Basin Watermaster
Cash Disbursements
September 2025

Date	Number	Vendor Name	Description	Amount
09/05/2025	ACH9/5/25	CALPERS	September medical insurance premiums	$ (18,177.31)
09/09/2025	25645	ACWA JOINT POWERS INSURANCE AUTHORITY	October life insurance	(284.47)
09/09/2025	25646	BOWCOCK, ROBERT		(625.00)
09/09/2025	25647	CHEF DAVE'S CATERING & EVENT SERVICES	August Board meeting catering services	(573.36)
09/09/2025	25649	CURATALO, JAMES		(875.00)
09/09/2025	25650	ELIE, STEVEN		(125.00)
09/09/2025	25651	FILIPPI, GINO		(375.00)
09/09/2025	25652	GEYE, BRIAN		(750.00)
09/09/2025	25653	KESSLER ALAIR INSURANCE SERVICES, INC.	Policy renewal: General liability	(11,887.42)
09/09/2025	25654	LEWIS BRISBOIS BISGAARD & SMITH LLP	July ONAP legal services	(935.00)
09/09/2025	25655	SKILLPATH SEMINARS	E-learning annual subscription	(698.00)
09/09/2025	25656	VANGUARD CLEANING SYSTEMS	September janitorial service	(1,000.00)
09/09/2025	25657	VELTO, BILL		(375.00)
09/09/2025	25658	KESSLER ALAIR INSURANCE SERVICES, INC.	Policy renewal: Umbrella insurance	(11,283.90)
09/11/2025	25659	BAY ALARM COMPANY	October burglar and fire alarm systems	(188.00)
09/11/2025	25660	BURRTEC WASTE INDUSTRIES, INC.	Utilities: Waste	(168.79)
09/11/2025	25661	C.J. BROWN & COMPANY, CPAs	FY 25 audit services	(120.00)
09/11/2025	25662	DE BOOM, NATHAN		(125.00)
09/11/2025	25663	EGOSCUE LAW GROUP, INC.	August OAP legal services	(18,700.00)
09/11/2025	25664	EIDE BAILLY LLP	July accounting consulting services	(1,949.25)
09/11/2025	25665	FRONTIER COMMUNICATIONS	September alarm system landline connection and office Teams phones	(316.72)
09/11/2025	25666	GREAT AMERICA LEASING CORP.	August copy machine lease	(1,193.47)
09/11/2025	25667	HUITSING, JOHN		(500.00)
09/11/2025	25668	KUHN, BOB		(500.00)
09/11/2025	25669	SPECTRUM ENTERPRISE	September internet services	(660.66)
09/11/2025	25670	STATE COMPENSATION INSURANCE FUND	FY 26 worker's compensation insurance	(2,265.50)
09/11/2025	25671	VANGUARD CLEANING SYSTEMS	August electrostatic spray	(220.00)
09/11/2025	25672	WESTERN MUNICIPAL WATER DISTRICT		(375.00)
09/11/2025	25673	CORELOGIC INFORMATION SOLUTIONS	August geographic package services	(125.00)
09/11/2025	25674	CUCAMONGA VALLEY WATER DISTRICT	Pumpkin Fest sponsorship refund	(500.00)
09/11/2025	25675	LEGAL SHIELD	August employee paid legal insurance	(119.55)
09/16/2025	ACH9/16/25	JOHN J. SCHATZ	May/July AP legal services	(7,034.00)
09/17/2025	25679	CALIFORNIA BANK & TRUST	Account ending 6198 - See detail attached	(5,505.65)
09/18/2025	25680	BAY ALARM COMPANY	Quarterly security alarm monitoring service	(206.07)
09/18/2025	25688	BROWNSTEIN HYATT FARBER SCHRECK	July and August legal services	(229,419.02)
09/18/2025	25689	CUCAMONGA VALLEY WATER DISTRICT	October lease	(12,736.11)
09/18/2025	25690	IN-SITU, INC.	Replacement pressure transducers and calibration solution	(3,726.61)
09/18/2025	25691	INLAND EMPIRE UTILITIES AGENCY	FY 26 RTS charges	(62,834.35)
09/18/2025	25692	SOUTHERN CA EDISON	Utilities: Electric - Main building	(3,458.19)
09/18/2025	25693	UNION 76	August fuel purchases	(117.71)
09/18/2025	25694	VERIZON WIRELESS	August internet services for Field Ops tablets	(239.16)
09/22/2025	ACH9/22/25	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	September Unfunded Accrued Liability-Plan 3299	(14,363.08)
09/22/2025	ACH9/22/25	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	September Unfunded Accrued Liability-Plan 27239	(379.08)
09/22/2025	ACH9/22/25	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	GASB 68 reporting services fee	(350.00)
09/25/2025	25696	BLUERIDGE SOFTWARE, INC.	Contract assistant annual support and maintenance renewal	(629.82)
09/25/2025	25697	CUCAMONGA VALLEY WATER DISTRICT - UTILITY	Utilities: Water	(444.52)
09/25/2025	25698	FONDRIEST ENVIRONMENTAL, INC.	Repair kits for water level meters	(75.23)
09/25/2025	25699	READY REFRESH	Office water dispenser September lease and deliveries	(92.20)
09/25/2025	25700	S.S. PAPADOPULOS & ASSOCIATES, INC.	July and August Safe Yield reevaluation peer review	(60,188.00)
09/25/2025	25701	SAN BERNARDINO COUNTY - DEPT. AIRPORTS	October rent for extensometer site	(190.98)
09/25/2025	25702	SOCALGAS	Utilities: Gas	(69.94)
09/25/2025	25703	STANDARD INSURANCE CO.	October life and disability coverage	(1,088.99)
09/25/2025	25707	KESSLER ALAIR INSURANCE SERVICES, INC.	Policy renewal: Employment practices liability	(282.71)
09/25/2025	25704	URIARTE, DANIELA	Reimbursement: OPS field day tour lunch	(196.10)
09/25/2025	25705	VERIZON WIRELESS	August internet services for extensometer site	(38.01)
09/25/2025	25706	WEST YOST	August engineering services	(220,294.94)
09/25/2025	25708	UNITED HEALTHCARE	September and October dental insurance coverage	(2,381.44)
			Total for Month	**$ (702,333.31)**

Chino Basin Watermaster
Credit Card Expense Detail
September 2025

Date	Number	Description	Expense Account	Amount
09/17/2025	25679	**CALIFORNIA BANK & TRUST**		
		Corner Bakery - OPS meeting	6141.1 Meeting Supplies	(109.25)
		Amazon - Amazon Web Services - July 2025	6056 Website Services	(356.22)
		Wateruse Association - 2025 WateReuse Conference - Registration - E. Tellez-Foster	6191 Conferences - General	(330.00)
		Town and Country - 2025 WateReuse Conference - Lodging - E. Tellez-Foster	6191 Conferences - General	(314.09)
		Microsoft Software - Mapping and visualization software subscription	6054 Computer Software	(15.00)
		REV Subscription - Speech to text transcription services	6112 Subscriptions/Publications	(29.99)
		Coffeecito House - WMWD Meeting - Coffee - E. Tellez-Foster	6141.1 Meeting Supplies	(16.68)
		Parking Concept - WMWD Meeting - Parking - E. Tellez-Foster	6173 Airfare/Mileage	(4.50)
		The Deli - GRCC Meeting - Lunch - E. Tellez Foster, M. Gardner	6141.1 Meeting Supplies	(42.32)
		El Pescador - CBWM & IEUA Lunch meeting - T. Corbin, IEUA	6141.1 Meeting Supplies	(67.58)
		Lowe's - Soil for office plants	6031.7 General Office Supplies	(12.89)
		Mission Hotel Inn - WMWD Meeting - A. Nelson, S. Zite	6141 Meeting Expenses	(85.00)
		Amazon - Miscellaneous office supplies	6031.7 General Office Supplies	(133.75)
		Costco - Meeting snacks and drinks	6312 Board Meeting Expenses	(362.26)
		Thai Diamond BBQ - Admin meeting - A. Nelson, D. Uriarte, R. Favela-Quintero, K. Dolar	6141.1 Meeting Supplies	(90.00)
		Amazon - Keurig coffee maker	6031.7 General Office Supplies	(495.60)
		BambooHR - HR and payroll system - August 2025	6061.2 HRIS System	(298.99)
		Amazon - Keyboard desk attachment	6031.7 General Office Supplies	(51.71)
		Amazon - Packing tape	6031.7 General Office Supplies	(19.47)
		Amazon - APC replacement battery	6031.7 General Office Supplies	(94.81)
		Lowe's - Soil for office plants	6031.7 General Office Supplies	(11.83)
		Amazon - APC replacement battery (x3)	6031.7 General Office Supplies	(255.21)
		Luna Grill Eastvale - Cybersecurity Training - Lunch - A. Nelson, E. Tellez Foster, F. Yoo	6141.1 Meeting Supplies	(70.44)
		Amazon - Water tubing kit for coffee maker	6031.7 General Office Supplies	(14.00)
		BlueHost - Monthly Software Renewal - Standard VPN Server with cPanel	6056 Website Services	(91.99)
		Otoro Sushi - Cybersecurity Training - Lunch - A. Nelson, F. Yoo	6141.1 Meeting Supplies	(53.35)
		Amazon - Office plants garden pots	6031.7 General Office Supplies	(10.76)
		Amazon - Samsung 2TB hard drive (x3)	6031.7 General Office Supplies	(436.56)
		LinkedIn - Annual subscription - Coverage period 08/15/25 - 08/14/26	6112 Subscriptions/Publications	(179.88)
		Eastvale Griddle - Cybersecurity Training - Lunch - A. Nelson	6141.1 Meeting Supplies	(31.27)
		PF Chang's - Pathways for Women Conference 2025 - Dinner - A. Nelson	6141.1 Meeting Supplies	(35.00)
		Marriot Anaheim - Pathways for Women Conference 2025 - Coffee - A. Nelson	6141.1 Meeting Supplies	(9.75)
		Amazon - Logitech mouse - K. Dolar	6031.7 General Office Supplies	(51.13)
		Amazon - Liquid I.V. Hydration Packets	6031.7 General Office Supplies	(25.36)
		Marriot Anaheim - Pathways for Women Conference 2025 - Lodging - A. Nelson	6191 Conferences - General	(233.91)
		The Deli - Economic study interviews - E. Tellez Foster, L. Pena-Levano	6141.1 Meeting Supplies	(76.99)
		Unity Escape Room - CBWM Team Building Activity	6011.90 Team Building-WM Staff	(350.00)
		Amazon - Headphones stand	6031.7 General Office Supplies	(7.51)
		Amazon - Desk lights and petty cash book	6031.7 General Office Supplies	(28.66)
		Smart & Final - Meeting supplies	6141.1 Meeting Supplies	(70.54)
		Amazon - Storage bins	6031.7 General Office Supplies	(40.93)
		Cucamonga Pediatrics - A. Nelson to reimburse	6031.7 General Office Supplies	(15.00)
		Amazon - Logitech keyboard - K. Dolar	6031.7 General Office Supplies	(53.86)
		NY Bagel - WM Academy meeting supplies	6141.1 Meeting Supplies	(92.47)
		FedEx - Board Meeting Package - J. Pierson, S. Elie	6042 Postage - General	(40.86)
		Bunn Corp - Coffee maker descaling service	6024 Building Repair & Maintenance	(288.28)
			Total for Month	**$ (5,505.65)**

Chino Basin Watermaster

Combining Schedule of Revenues, Expenses & Changes in Net Assets

For the Period of July 1, 2025 through September 30, 2025

(Unaudited)

	JUDGMENT ADMIN.	OPTIMUM BASIN MGMT.	TOTAL JUDGMENT ADMIN & OBMP	POOL ADMINISTRATION & SPECIAL PROJECTS			GROUND WATER REPLENISH.	GRAND TOTALS	ADOPTED BUDGET 2025-2026 WITH CARRYOVER
				AP POOL	OAP POOL	ONAP POOL			
Administrative Revenues:									
Administrative Assessments	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 11,453,849
Interest Revenue	-	84,824	84,824	4,775	14,662	785	427	105,472	
Groundwater Replenishment	-	-	-	-	-	-	-	-	-
Mutual Agency Project Revenue	195,850	-	195,850	-	-	-	-	195,850	195,850
Miscellaneous Income	-	-	-	-	-	-	-	-	-
Total Administrative Revenues	**195,850**	**84,824**	**280,673**	**4,775**	**14,662**	**785**	**427**	**301,322**	**12,017,729**
Administrative & Project Expenditures:									
Watermaster Administration	758,176	-	758,176	-	-	-	-	758,176	2,789,042
Watermaster Board-Advisory Committee	82,643	-	82,643	-	-	-	-	82,643	442,947
Optimum Basin Mgmt Administration	-	238,588	238,588	-	-	-	-	238,588	1,236,522
OBMP Project Costs	-	907,315	907,315	-	-	-	-	907,315	4,699,276
Pool Legal Services	-	-	-	7,034	56,588	935	-	64,557	-
Pool Meeting Compensation	-	-	-	-	4,250	1,750	-	6,000	-
Pool Special Projects	-	-	-	-	-	-	-	-	-
Pool Administration	-	-	-	-	-	-	-	-	411,149
Debt Service	-	-	-	-	-	-	-	-	2,438,793
Agricultural Expense Transfer [1]	-	-	-	60,838	(60,838)	-	-	-	-
Replenishment Water Assessments	-	-	-	-	-	-	62,834	62,834	-
Total Administrative Expenses	**840,819**	**1,145,902**	**1,986,721**	**67,872**	**-**	**2,685**	**62,834**	**2,120,112**	**12,017,729**
Net Ordinary Income	**(644,969)**	**(1,061,079)**	**(1,706,048)**	**(63,096)**	**14,662**	**(1,900)**	**(62,407)**	**(1,818,790)**	**-**
Other Income/(Expense)									
Refund-Recharge Debt Service	-	-	-	-	-	-	-	-	-
Carryover Budget	-	-	-	-	-	-	-	-	553,870
Net Other Income/(Expense)	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**553,870**
Net Transfers To/(From) Reserves	**$ (644,969)**	**$ (1,061,079)**	**$ (1,706,048)**	**$ (63,096)**	**$ 14,662**	**$ (1,900)**	**$ (62,407)**	**$ (1,818,790)**	**$ 553,870**
Net Assets, July 1, 2025			9,139,181	586,974	1,468,387	79,752	42,777	11,317,071	
Refund-Excess Operating Reserves			-	-	-	-	-	-	
Net Assets, End of Period			**7,433,133**	**523,878**	**1,483,049**	**77,851**	**(19,630)**	**9,498,281**	
Pool Assessments Outstanding				(86,315)	(586,852)	-			
Pool Fund Balance				**$ 437,563**	**$ 896,197**	**$ 77,851**			

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

Chino Basin Watermaster

Treasurer's Report

September 2025

	Type	Monthly Yield	Cost	Market	% Total
Cash & Investments					
Local Agency Investment Fund (LAIF) *	Investment	4.21%	$ 673,127	$ 674,426	6.8%
CA CLASS Prime Fund **	Investment	4.27%	6,466,319	6,467,588	64.9%
CA CLASS Pool Restricted Funds **	Investment	4.27%	1,411,611	1,411,888	14.2%
Bank of America	Checking		1,407,949	1,407,949	14.1%
Bank of America	Payroll		-	-	0.0%
Total Cash & Investments			**$ 9,959,006**	**$ 9,961,851**	**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, 2025 to September 30, 2025

(Unaudited)

		September 2025	YTD Actual	FY 25 Carryover Budget	FY 26 Adopted Budget	$ Over / (Under) Budget	% of Budget
1	**Administration Revenue**						
2	Local Agency Subsidies	$ 195,850	$ 195,850	$ -	$ 195,850	$ -	100%
3	Admin Assessments-Appropriative Pool	-	-	-	11,131,622	(11,131,622)	0%
4	Admin Assessments-Non-Ag Pool	-	-	-	322,227	(322,227)	0%
5	**Total Administration Revenue**	**195,850**	**195,850**	**-**	**11,649,699**	**(11,453,849)**	**2%**
6	**Other Revenue**						
7	Appropriative Pool-Replenishment	-	-	-	-	-	N/A
8	Non-Ag Pool-Replenishment	-	-	-	-	-	N/A
9	Interest Income	24,783	84,824	-	368,030	(283,207)	23%
10	Miscellaneous Income	-	-	-	-	-	N/A
11	**Total Other Revenue**	**24,783**	**84,824**	**-**	**368,030**	**(283,207)**	**23%**
12	**Total Revenue**	**220,633**	**280,673**	**-**	**12,017,729**	**(11,737,056)**	**2%**
13	**Judgment Administration Expense**						
14	Judgment Administration	60,614	172,419	14,344	910,511	(752,436)	19%
15	Admin. Salary/Benefit Costs	77,703	237,033	-	1,127,840	(890,807)	21%
16	Office Building Expense	19,905	70,626	-	228,535	(157,909)	31%
17	Office Supplies & Equip.	2,556	7,011	10,038	35,750	(38,777)	15%
18	Postage & Printing Costs	1,525	4,333	-	27,190	(22,857)	16%
19	Information Services	10,197	28,755	-	224,400	(195,645)	13%
20	Contract Services	7,879	21,330	-	103,950	(82,620)	21%
21	Watermaster Legal Services	47,536	144,866	-	346,011	(201,145)	42%
22	Insurance	16,652	65,894	-	55,000	10,894	120%
23	Dues and Subscriptions	13,175	30,312	-	40,900	(10,588)	74%
24	Watermaster Administrative Expenses	1,298	3,071	-	9,630	(6,559)	32%
25	Field Supplies	781	882	-	3,900	(3,018)	23%
26	Travel & Transportation	1,739	5,644	-	35,600	(29,956)	16%
27	Training, Conferences, Seminars	-	11,909	-	43,500	(31,591)	27%
28	Advisory Committee Expenses	8,016	16,066	-	111,785	(95,719)	14%
29	Watermaster Board Expenses	23,980	66,577	-	331,162	(264,585)	20%
30	ONAP - WM & Administration	3,103	13,288	-	123,585	(110,297)	11%
31	OAP - WM & Administration	5,661	18,724	-	140,528	(121,804)	13%
32	Appropriative Pool- WM & Administration	8,009	34,508	-	147,036	(112,528)	23%
33	Allocated G&A Expenditures	(45,009)	(112,431)	-	(403,675)	291,244	28%
34	**Total Judgment Administration Expense**	**265,324**	**840,819**	**24,382**	**3,643,138**	**(2,826,701)**	**23%**
35	**Optimum Basin Management Plan (OBMP)**						
36	Optimum Basin Management Plan	66,264	238,588	59,443	1,236,522	(1,057,378)	18%
37	Groundwater Quality Monitoring	-	-	-	4,500	(4,500)	0%
38	Groundwater Level Monitoring	57,162	140,511	15,800	500,880	(376,169)	27%
39	Program Element (PE)2- Comp Recharge	37,300	83,092	55,000	1,968,267	(1,940,175)	4%
40	PE3&5-Water Supply/Desalte	1,885	19,162	9,100	173,320	(163,258)	11%
41	PE4- Management Plan	38,787	104,811	124,788	604,076	(624,053)	14%
42	PE6&7-CoopEfforts/SaltMgmt	41,658	177,092	96,394	772,078	(691,379)	20%
43	PE8&9-StorageMgmt/Conj Use	48,219	270,215	168,963	272,480	(171,228)	61%
44	Recharge Improvements	-	-	-	2,438,793	(2,438,793)	0%
45	Administration Expenses Allocated-OBMP	15,488	38,237	-	139,094	(100,857)	27%
46	Administration Expenses Allocated-PE 1-9	29,521	74,194	-	264,581	(190,387)	28%
47	**Total OBMP Expense**	**336,283**	**1,145,902**	**529,488**	**8,374,591**	**(7,758,177)**	**13%**
48	**Other Expense**						
49	Groundwater Replenishment	62,834	62,834	-	42,777	20,058	147%
50	Other Expenses	-	-	-	-	-	N/A
51	**Total Other Expense**	**62,834**	**62,834**	**-**	**42,777**	**20,058**	**147%**
52	**Total Expenses**	**664,441**	**2,049,555**	**553,870**	**12,060,506**	**(10,564,820)**	**16%**
53	**Increase / (Decrease) to Reserves**	**$ (443,809)**	**$ (1,768,882)**		**$ (42,777)**	**$ (1,726,105)**	

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 26 amended budget and FY 25 carryover 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.

- Line 2 Local Agency Subsidies includes the annual Dry 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 13-34 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 Office Building Expense includes office lease, telephone, utilities, repair and maintenance, and building interior renovation costs. The account is at 31% of budget due to the timing of the office lease payment.
- Line 21 Watermaster Legal Services includes outside legal counsel expenses. The account is at 42% of budget due to the timing of administration matters and increased court coordination in August and September.
- Line 22 Insurance includes general liability insurance, directors' and officers' liability, umbrella coverage, environmental pollution liability and other various insurance policies. The account is over budget due to an unanticipated increase in the cost of Municipalities Umbrella coverage, as well as the implementation of a Cyber insurance policy that was not included in the original budget.
- Line 23 Dues and Subscriptions include annual dues for ACWA, CA Groundwater Coalition, SHRM, and other miscellaneous subscriptions. The account is at 74% of budget due to the timing of subscription renewals.

Lines 35-47 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, 2025 (continued next page):

Fund Balance For Non-Agricultural Pool Account 8567 - Legal Services	
Beginning Balance July 1, 2025:	$ 77,376.71
Additions:	
Interest Earnings	784.60
Subtotal Additions:	784.60
Reductions:	
Invoices paid July 2025 - September 2025	(935.00)
Subtotal Reductions:	(935.00)
Available Fund Balance as of September 30, 2025	**$ 77,226.31**

Fund Balance For Appropriative Pool Account 8367 - Legal Services	
Beginning Balance July 1, 2025:	$ 224,225.46
Additions:	
Interest Earnings	4,775.20
Subtotal Additions:	4,775.20
Reductions:	
Invoices paid July 2025 - September 2025	(7,034.00)
Subtotal Reductions:	(7,034.00)
Available Fund Balance as of September 30, 2025	**$ 221,966.66**

Fund Balance For Non-Agricultural Pool Account 8511 - Meeting Compensation	
Beginning Balance July 1, 2025:	$ 2,375.00
Reductions:	
Compensation paid July 2025 - September 2025	(1,750.00)
Subtotal Reductions:	(1,750.00)
Available Fund Balance as of September 30, 2025	**$ 625.00**

Fund Balance For Appropriative Pool Account 8368 - Tom Harder Contract	
Beginning Balance July 1, 2025:	$ 20,577.61
Reductions:	
Invoices paid July 2025 - September 2025	-
Subtotal Reductions:	-
Available Fund Balance as of September 30, 2025	**$ 20,577.61**

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Pool Services Fund Accounting – Cont.

Fund Balance for Agricultural Pool Account 8467 - Legal Services (Held by AP)		
Beginning Balance July 1, 2025:	$	225,597.51
Reductions:		
Invoices paid July 2025 - September 2025		(56,587.50)
Subtotal Reductions:		(56,587.50)
Available Fund Balance as of September 30, 2025	**$**	**169,010.01**

Agricultural Pool Reserve Funds As shown on the Combining Schedules		
Beginning Balance July 1, 2025:	$	881,534.98
Additions:		
YTD Interest earned on Ag Pool Funds FY 26		14,661.66
Transfer of Funds from AP to Special Fund for Legal Service Invoices		56,587.50
Total Additions:		71,249.16
Reductions:		
Legal service invoices paid July 2025 - September 2025		(56,587.50)
Subtotal Reductions:		(56,587.50)
Agricultural Pool Reserve Funds Balance as of September 30, 2025:	**$**	**896,196.64**

Fund Balance For Agricultural Pool Account 8470 - Meeting Compensation (Held by AP)		
Beginning Balance July 1, 2025:	$	18,069.65
Reductions:		
Compensation paid July 2025 - September 2025		(4,250.00)
Subtotal Reductions:		(4,250.00)
Available Fund Balance as of September 30, 2025	**$**	**13,819.65**

Fund Balance For Agricultural Pool Account 8471 - Special Projects (Held by AP)		
Beginning Balance July 1, 2025:	$	12,189.00
Reductions:		
Invoices paid July 2025 - September 2025		-
Subtotal Reductions:		-
Available Fund Balance as of September 30, 2025	**$**	**12,189.00**

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 25-26 Budget	$ Over / (Under) Budget	% of Budget
WM Salary Expense				
5901.1 · Judgment Admin - Doc. Review	37,997	74,466	(36,469)	51.0%
5901.3 · Judgment Admin - Field Work	594	14,357	(13,763)	4.1%
5901.5 · Judgment Admin - General	3,182	55,535	(52,353)	5.7%
5901.7 · Judgment Admin - Meeting	15,090	45,648	(30,558)	33.1%
5901.9 · Judgment Admin - Reporting	-	21,742	(21,742)	0.0%
5910 · Judgment Admin - Court Coord./Attendance	460	28,837	(28,377)	1.6%
5911 · Judgment Admin - Exhibit G	-	6,396	(6,396)	0.0%
5921 · Judgment Admin - Production Monitoring	-	9,471	(9,471)	0.0%
5931 · Judgment Admin - Recharge Applications	790	33,092	(32,302)	2.4%
5941 · Judgment Admin - Reporting	-	44,602	(44,602)	0.0%
5951 · Judgment Admin - Rules & Regs	-	11,350	(11,350)	0.0%
5961 · Judgment Admin - Safe Yield	31,203	106,006	(74,803)	29.4%
5971 · Judgment Admin - Storage Agreements	1,583	20,671	(19,088)	7.7%
5981 · Judgment Admin - Water Accounting/Database	23,639	112,036	(88,397)	21.1%
5991 · Judgment Admin - Water Transactions	3,596	13,062	(9,466)	27.5%
6011.11 · WM Staff - Overtime	388	18,000	(17,612)	2.2%
6011.10 · Admin - Accounting	55,637	280,410	(224,773)	19.8%
6011.15 · Admin - Building Admin	3,421	31,040	(27,619)	11.0%
6011.20 · Admin - Conference/Seminars	15,086	50,660	(35,574)	29.8%
6011.25 · Admin - Document Review	26,651	54,110	(27,459)	49.3%
6011.50 · Admin - General	68,202	278,870	(210,668)	24.5%
6011.60 · Admin - HR	8,861	100,980	(92,119)	8.8%
6011.70 · Admin - IT	25,626	72,830	(47,204)	35.2%
6011.80 · Admin - Meeting	32,493	93,640	(61,147)	34.7%
6011.90 · Admin - Team Building	5,717	33,490	(27,773)	17.1%
6011.95 · Admin - Training (Give/Receive)	17,917	79,580	(61,663)	22.5%
6017· Temporary Services	-	28,250	(28,250)	0.0%
6201 · Advisory Committee	7,871	61,397	(53,526)	12.8%
6301 · Watermaster Board	19,425	101,669	(82,244)	19.1%
8301 · Appropriative Pool	24,730	89,707	(64,977)	27.6%
8401 · Agricultural Pool	9,481	83,199	(73,718)	11.4%
8501 · Non-Agricultural Pool	5,728	66,256	(60,528)	8.6%
6901.1 · OBMP - Document Review	13,549	50,364	(36,815)	26.9%
6901.3 · OBMP - Field Work	1,782	9,471	(7,689)	18.8%
6901.5 · OBMP - General	9,982	52,005	(42,023)	19.2%
6901.7 · OBMP - Meeting	21,493	33,487	(11,994)	64.2%
6901.9 · OBMP - Reporting	3,305	39,176	(35,871)	8.4%
7104.1 · PE1 - Monitoring Program	57,924	166,708	(108,784)	34.7%
7201 · PE2 - Comprehensive Recharge	23,569	49,649	(26,080)	47.5%
7301 · PE3&5 - Water Supply/Desalter	-	19,189	(19,189)	0.0%
7301.1 · PE5 - Reg. Supply Water Prgm.	576	16,759	(16,183)	3.4%
7401 · PE4 - MZ1 Subsidence Mgmt. Plan	-	25,595	(25,595)	0.0%
7501 · PE6 - Coop. Programs/Salt Mgmt.	2,376	22,984	(20,608)	10.3%
7501.1 · PE 7 - Salt Nutrient Mgmt. Plan	594	16,786	(16,192)	3.5%
7601 · PE8&9 - Storage Mgmt./Recovery	12,347	33,288	(20,941)	37.1%
Subtotal WM Staff Costs	**592,864**	**2,656,820**	**(2,063,956)**	**22%**
60184.1 · Administrative Leave	2,389	-	2,389	100.0%
60185 · Vacation	19,639	110,082	(90,443)	17.8%
60185.1 · Comp Time	2,083	-	2,083	100.0%
60186 · Sick Leave	12,813	81,688	(68,875)	15.7%
60187 · Holidays	10,341	102,102	(91,761)	10.1%
Subtotal WM Paid Leaves	**47,266**	**293,872**	**(246,606)**	**16%**
Total WM Salary Costs	**640,130**	**2,950,692**	**(2,310,562)**	**21.7%**

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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 25-26 Budget	$ Over / (Under) Budget	% of Budget
Engineering Services Costs				
5901.8 · Judgment Admin - Meetings-Engineering Services	$ -	$ 38,909	$ (38,909)	0.0%
5906.71 · Judgment Admin - Data Requests-CBWM Staff	35,538	109,124	(73,586)	32.6%
5906.72 · Judgment Admin - Data Requests-Non-CBWM Staff	3,093	56,483	(53,390)	5.5%
5925 · Judgment Admin - Ag Production & Estimation	1,282	31,992	(30,710)	4.0%
5935 · Judgment Admin - Mat'l Physical Injury Requests	-	41,668	(41,668)	0.0%
5945 · Judgment Admin - WM Annual Report Preparation	3,069	17,762	(14,694)	17.3%
5965 · Judgment Admin - Support Data Collection & Mgmt Process	11,305	17,302	(5,998)	65.3%
6206 · Advisory Committee Meetings-WY Staff	3,491	22,624	(19,133)	15.4%
6306 · Watermaster Board Meetings-WY Staff	6,555	22,624	(16,069)	29.0%
8306 · Appropriative Pool Meetings-WY Staff	4,734	22,624	(17,890)	20.9%
8406 · Agricultural Pool Meetings-WY Staff	4,199	22,624	(18,425)	18.6%
8506 · Non-Agricultural Pool Meetings-WY Staff	2,516	22,624	(20,108)	11.1%
6901.8 · OBMP - Meetings-WY Staff	12,899	38,909	(26,011)	33.2%
6901.95 · OBMP - Reporting-WY Staff	20,913	66,832	(45,919)	31.3%
6906 · OBMP Engineering Services - Other	13,776	65,810	(52,035)	20.9%
6906.1 · OBMP Watermaster Model Update	1,658	8,176	(6,519)	20.3%
7104.3 · Grdwtr Level-Engineering	73,387	274,794	(201,407)	26.7%
7104.8 · Grdwtr Level-Contracted Services	238	29,128	(28,890)	0.8%
7104.9 · Grdwtr Level-Capital Equipment	5,063	19,000	(13,937)	26.6%
7202 · PE2-Comp Recharge-Engineering Services	1,816	23,350	(21,534)	7.8%
7202.2 · PE2-Comp Recharge-Engineering Services	57,707	181,496	(123,789)	31.8%
7302 · PE3&5-PBHSP Monitoring Program	10,161	77,792	(67,631)	13.1%
7303 · PE3&5-Engineering - Other	8,425	21,080	(12,655)	40.0%
7306 · PE3&5-Engineering - Outside Professionals	-	31,500	(31,500)	0.0%
7402 · PE4-Engineering	59,868	301,531	(241,663)	19.9%
7402.10 · PE4-Northwest MZ1 Area Project	26,015	169,378	(143,363)	15.4%
7403 · PE4-Eng. Services-Contracted Services-InSar	17,600	28,600	(11,000)	61.5%
7406 · PE4-Engineering Services-Outside Professionals	-	55,155	(55,155)	0.0%
7408 · PE4-Engineering Services-Network Equipment	451	19,107	(18,656)	2.4%
7502 · PE6&7-Engineering	111,189	365,564	(254,375)	30.4%
7502.2 · PE7-Groundwtr Quality Model	-	70,216	(70,216)	0.0%
7505 · PE6&7-Laboratory Services	29,176	41,300	(12,124)	70.6%
7510 · PE6&7-IEUA Salinity Mgmt. Plan	1,969	9,522	(7,553)	20.7%
7511 · PE6&7-SAWBMP Task Force-50% IEUA	15,265	28,022	(12,757)	54.5%
7517 · Surface Water Monitoring Plan-Chino Creek - 50% IEUA	16,524	28,434	(11,910)	58.1%
7520 · Preparation of Water Quality Mgmt. Plan	-	39,250	(39,250)	0.0%
7610 · PE8&9-Support 2020 Mgmt. Plan	-	21,720	(21,720)	0.0%
7614 · PE8&9-Support Imp. Safe Yield Court Order	257,868	79,656	178,212	323.7%
7615 · PE8&9-Develop 2025 Storage Plan	-	137,816	(137,816)	0.0%
Total Engineering Services Costs	**$ 817,747**	**$ 2,659,500**	**$ (1,841,751)**	**30.7%**

* West Yost and Subcontractor Engineering Budget of $2,659,500 plus Carryover Funds from FY 2024/25 of $508,838

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 25-26 Budget	$ Over / (Under) Budget	% of Budget
6070 · Watermaster Legal Services				
6071 · BHFS Legal - Court Coordination	$ 44,730	$ 76,000	$ (31,270)	58.9%
6072 · BHFS Legal - Rules & Regulations	-	10,495	(10,495)	0.0%
6073 · BHFS Legal - Personnel Matters	24,208	28,150	(3,942)	86.0%
6074 · BHFS Legal - Interagency Issues	-	40,536	(40,536)	0.0%
6077 · BHFS Legal - Party Status Maintenance	-	13,590	(13,590)	0.0%
6078 · BHFS Legal - Miscellaneous (Note 1)	75,928	177,240	(101,312)	42.8%
Total 6070 · Watermaster Legal Services	**144,866**	**346,011**	**(201,145)**	**41.9%**
6275 · BHFS Legal - Advisory Committee	4,704	27,764	(23,060)	16.9%
6375 · BHFS Legal - Board Meeting	27,366	88,704	(61,338)	30.9%
6375.1 · BHFS Legal - Board Workshop(s)	-	29,215	(29,215)	0.0%
8375 · BHFS Legal - Appropriative Pool	5,044	34,705	(29,661)	14.5%
8475 · BHFS Legal - Agricultural Pool	5,044	34,705	(29,661)	14.5%
8575 · BHFS Legal - Non-Ag Pool	5,044	34,705	(29,661)	14.5%
Total BHFS Legal Services	**47,202**	**249,798**	**(202,596)**	**18.9%**
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	1,334	21,405	(20,072)	6.2%
6907.38 · Reg. Water Quality Cntrl Board	-	63,200	(63,200)	0.0%
6907.39 · Recharge Master Plan	4,438	14,270	(9,832)	31.1%
6907.41 · Prado Basin Habitat Sustainability	-	10,290	(10,290)	0.0%
6907.44 · SGMA Compliance	-	10,290	(10,290)	0.0%
6907.45 · OBMP Update	6,636	177,240	(170,604)	3.7%
6907.47 · 2020 Safe Yield Reset	12,089	151,180	(139,092)	8.0%
6907.50 · San Sevaine Basin Discharge - State Court	-	54,130	(54,130)	0.0%
6907.51 · San Sevaine Basin Discharge CWA Litigatio	107,129	150,440	(43,311)	71.2%
6907.90 · WM Legal Counsel - Unanticipated	-	38,885	(38,885)	0.0%
Total 6907 · WM Legal Counsel	**131,625**	**755,140**	**(623,515)**	**17.4%**
Total Brownstein, Hyatt, Farber, Schreck Costs	**$ 323,693**	**$ 1,350,949**	**$ (1,027,256)**	**24.0%**

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 25-26 Budget	$ Over / (Under) Budget	% of Budget
6900 · Optimum Basin Mgmt Plan				
6901.1 · OBMP - Document Review-WM Staff	$ 13,549	$ 50,364	$ (36,815)	26.9%
6901.3 · OBMP - Field Work-WM Staff	1,782	9,471	(7,689)	18.8%
6901.5 · OBMP - General-WM Staff	9,982	52,005	(42,023)	19.2%
6901.7 · OBMP - Meeting-WM Staff	21,493	33,487	(11,994)	64.2%
6901.8 · OBMP - Meeting-West Yost	12,899	38,909	(26,011)	33.2%
6901.9 · OBMP - Reporting-WM Staff	3,305	39,176	(35,871)	8.4%
6901.95 · OBMP - Reporting-West Yost	20,913	66,832	(45,919)	31.3%
Total 6901 · OBMP WM and West Yost Staff	**83,921**	**290,244**	**(206,323)**	**28.9%**
6903 · OBMP - SAWPA				
6903 · OBMP - SAWPA Group	7,608	18,952	(11,344)	40.1%
Total 6903 · OBMP - SAWPA	**7,608**	**18,952**	**(11,344)**	**40.1%**
6906 · OBMP Engineering Services				
6906.1 · OBMP - Watermaster Model Update	1,658	8,176	(6,519)	20.3%
6906.21 · State of the Basin Report	-	-	-	0.0%
6906 · OBMP Engineering Services - Other	13,776	65,810	(52,035)	20.9%
Total 6906 · OBMP Engineering Services	**15,433**	**73,986**	**(58,553)**	**20.9%**
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	1,334	21,405	(20,072)	6.2%
6907.36 · Santa Ana River Habitat	-	-	-	0.0%
6907.38 · Reg. Water Quality Cntrl Board	-	63,200	(63,200)	0.0%
6907.39 · Recharge Master Plan	4,438	14,270	(9,832)	31.1%
6907.41 · Prado Basin Habitat Sustainability	-	10,290	(10,290)	0.0%
6907.44 · SGMA Compliance	-	10,290	(10,290)	0.0%
6907.45 · OBMP Update	6,636	177,240	(170,604)	3.7%
6907.47 · 2020 Safe Yield Reset	12,089	151,180	(139,092)	8.0%
6907.50 · San Sevaine Basin Discharge - State	-	54,130	(54,130)	0.0%
6907.51 · San Sevaine Basin Discharge CWA	107,129	150,440	(43,311)	71.2%
6907.90 · WM Legal Counsel - Unanticipated	-	38,885	(38,885)	0.0%
Total 6907 · OBMP Legal Fees	**131,625**	**755,140**	**(623,515)**	**17.4%**
6909 · OBMP Other Expenses				
6909.6 · OBMP Expenses - Miscellaneous	-	96,000	(96,000)	0.0%
Total 6909 · OBMP Other Expenses	**-**	**98,200**	**(98,200)**	**0.0%**
Total 6900 · Optimum Basin Mgmt Plan	**$ 238,588**	**$ 1,236,522**	**$ (997,935)**	**19.3%**

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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 25-26 Budget	$ Over / (Under) Budget	% of Budget
5901 · Admin-WM Staff				
5901.1 · Admin-Doc. Review-WM Staff	$ 37,997	$ 74,466	$ (36,469)	51.0%
5901.3 · Admin-Field Work-WM Staff	594	14,357	(13,763)	4.1%
5901.5 · Admin-General-WM Staff	3,182	55,535	(52,353)	5.7%
5901.7 · Admin-Meeting-WM Staff	15,090	45,648	(30,558)	33.1%
5901.8 · Admin-Meeting - West Yost	-	38,909	(38,909)	0.0%
5901.9 · Admin-Reporting-WM Staff	-	21,742	(21,742)	0.0%
Total 5901 · Admin-WM Staff	**56,863**	**250,657**	**(193,794)**	**22.7%**
5900 · Judgment Admin Other Expenses				
5906.71 · Admin-Data Req-CBWM Staff	35,538	109,124	(73,586)	32.6%
5906.72 · Admin-Data Req-Non CBWM Staff	3,093	56,483	(53,390)	5.5%
5910 · Court Coordination/Attend-WM	460	28,837	(28,377)	1.6%
5911 · Exhibit G-WM Staff	-	6,396	(6,396)	0.0%
5921 · Production Monitoring-WM Staff	-	9,471	(9,471)	0.0%
5925 · Ag Prod & Estimation-West Yost	1,282	31,992	(30,710)	4.0%
5931 · Recharge Applications-WM Staff	790	33,092	(32,302)	2.4%
5935 · Admin-Mat'l Phy Inj Requests	-	41,668	(41,668)	0.0%
5941 · Reporting-WM Staff	-	44,602	(44,602)	0.0%
5945 · WM Annual Report Prep-West Yost	3,069	17,762	(14,694)	17.3%
5951 · Rules & Regs-WM Staff	-	11,350	(11,350)	0.0%
5961 · Safe Yield-WM Staff	31,203	106,006	(74,803)	29.4%
5965 · Support Data Collect-West Yost	11,305	17,302	(5,998)	65.3%
5971 · Storage Agreements-WM Staff	1,583	20,671	(19,088)	7.7%
5981 · Water Acct/Database-WM Staff	23,639	112,036	(88,397)	21.1%
5991 · Water Transactions-WM Staff	3,596	13,062	(9,466)	27.5%
Total 5900 · Judgment Admin Other Expenses	**115,557**	**659,854**	**(544,297)**	**17.5%**
Total 5900 · Judgment Administration	**$ 172,419**	**$ 910,511**	**$ (738,092)**	**18.9%**

"Carry Over" Funding:

The "Carry Over" funding was calculated at the start of FY 26. The Total "Carry Over" funding amount of $553,870 has been posted to the general ledger accounts. The total amount consisted of $508,838 from Engineering Services, $34,994 from OBMP Activities, and $10,038 from Administration Services. More detailed information is provided on the table below.

Carry Over Budget Detail FY 2025/26

Account	Description	Amount	Fiscal Year	Type
6038	Other Office Equipment - Boardroom Upgrades	$ 10,038	FY 2020/21	ADMIN
7545	Meter Installation - New Meter Installation, Calibration and Testing	34,994	FY 2018/19	OBMP
5925	Agriculture Production and Estimation	4,344	FY 2024/25	ENG
5965	Support for Implementation of Improved Data Collection and Management Process	10,000	FY 2024/25	ENG
6906.1	Watermaster Model Application and Required Demonstrations	59,443	FY 2024/25	ENG
7104.3	Groundwater Level Monitoring Program	15,800	FY 2024/25	ENG
7202.2	Comprehensive Recharge Program	55,000	FY 2024/25	ENG
7302	PBHSP Monitoring Program- 50% IEUA Cost Share	9,100	FY 2024/25	ENG
7402.1	PE4/MZ-1: Subsidence Management Plan for Northwest MZ-1	124,788	FY 2024/25	ENG
7502	Groundwater Quality Monitoring and Reporting Program and as-needed Consulting	41,400	FY 2024/25	ENG
7517	Implementation of Chino Creek Monitoring Program - IEUA Cost Share	20,000	FY 2024/25	ENG
7614	Support Implementation of the Safe Yield Court Order	168,963	FY 2024/25	ENG
Total Carryover Budget		**$ 553,870**		

CHINO BASIN WATERMASTER

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

STAFF REPORT

DATE: November 20, 2025

TO: Advisory Committee and Board Members

SUBJECT: 2024/25 Annual Report of the Ground-Level Monitoring Program
(Consent Calendar Item I.C.)

Issue: Pursuant to the Court's November 15, 2007 Order, Watermaster is required annually to file a Ground-Level Monitoring report with the Court. The 2024/25 Annual Report has been drafted and reviewed by the Ground-Level Monitoring Committee at its October 2, 2025 meeting. [Discretionary Function]

Recommendation:
Advisory Committee: Recommend to the Watermaster Board to approve the 2024/25 Annual Report of the Ground-Level Monitoring Program (GLMP), and direct staff to file a copy with the Court.

Board Members: Approve 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 2024/25 Annual Report for the ongoing monitoring program are included in the approved FY 2025/26 budget.

ACTIONS:
Appropriative Pool – November 13, 2025 [Final]: Provided advice and assistance.
Non-Agricultural Pool – November 13, 2025 [Final]: Provided advice and assistance.
Agricultural Pool – November 13, 2025 [Final]: Provided advice and assistance.
Advisory Committee – November 20, 2025 [Recommended]: Advice and assistance.
Watermaster Board – November 20, 2025 [Recommended]: 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 as conceived in 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 2024/25 Annual Report of the GLMP (Attachment 1) includes results and interpretations for data that were collected during FY 2024/25 and includes recommendations for Watermaster's Ground-Level Monitoring Program for FY 2025/26.

The GLMC met on March 6, 2025 to review and discuss the recent monitoring results and to develop a scope of work and budget for FY 2025/26. Subsequently, an overview of the monitoring results and the proposed scope of work and budget for FY 2025/26 were presented to the Pool Committees in May 2025 and at Watermaster's budget workshops and ultimately approved.

The GLMC was provided with the draft annual report on September 18, 2025 for review and comment. The GLMC met on October 2, 2025 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.

The report was presented to the three Pool Committees on November 13, 2025; the Appropriative Pool recommended by majority 78.76% volume votes in favor with the request that the analysis of the 6,500 AF per year recharge be analyzed in the current fiscal year. The item was considered by the Overlying Non-Agricultural Pool where it unanimously moved to recommend its Advisory Committee and Board representatives to support subject to changes they deem appropriate, and the Overlying Agricultural Pool unanimously recommended Advisory Committee approval.

ATTACHMENTS
1. 2024/25 Annual Report of the Ground-Level Monitoring Program

2024/25 Annual Report for the Ground-Level Monitoring Program

PREPARED FOR

Ground-Level Monitoring Committee

PREPARED BY

2024/25 Annual Report for the Ground-Level Monitoring Program

Prepared for

Ground-Level Monitoring Committee

Project No. 941-80-25-21

Project Manager, QA/QC Review: Andy Malone, PG	11-06-2025 Date
Andrea Arevalo Charles Martinez Clay Kelty Sean Yarborough Prepared By:	11-06-2025 Date

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LIST OF ACRONYMS, ABBREVIATIONS, AND INITIALISMS

af	Acre-feet
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	

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.

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.

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

- 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 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.

In addition to the MZ-1 Plan, the Peace Agreement required the Watermaster to recharge a minimum of 6,500 afy of supplemental water in Management Zone 1. This requirement was continued under the Peace II Agreement as a long-term obligation to maintain hydrologic balance and control land subsidence in MZ1. The Watermaster is also required to evaluate this requirement and potentially increase the minimum recharge quantity above 6,500 afy after review of basin performance and subsidence studies.

[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 was the occurrence of concentrated differential subsidence across the San Jose Fault in Northwest MZ-1—a similar spatial pattern of differential subsidence 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

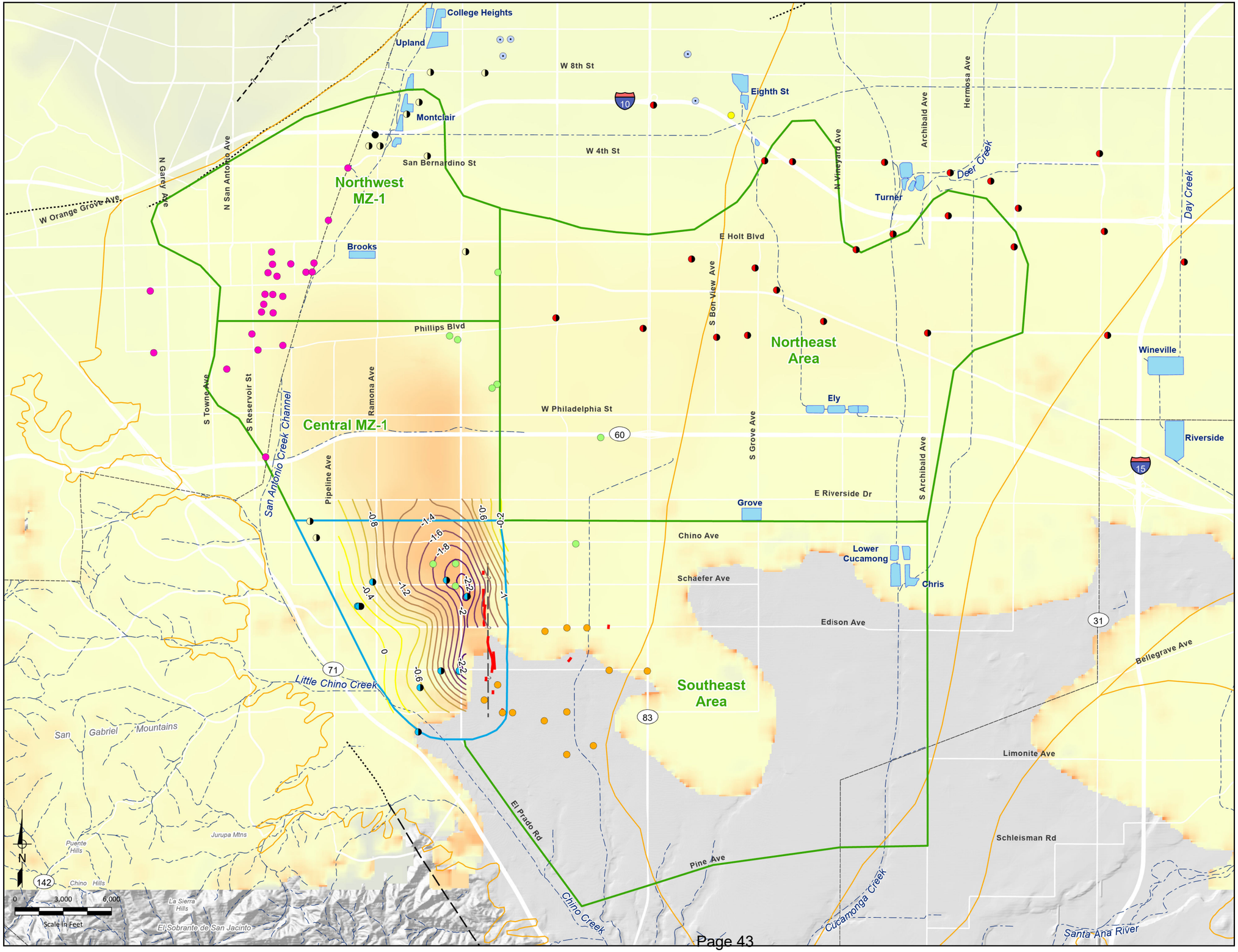
Pursuant to the Subsidence Management Plan, Watermaster prepares an annual report containing the results of ongoing monitoring efforts, interpretations of the data, and recommended adjustments to the Subsidence Management Plan, if any. This Annual Report for the GLMP includes the results and interpretations for the data collected between March 2024 through March 2025, as well as recommendations for Watermaster's GLMP for FY 2025/26.

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 2024 and March 2025.
- **Section 3.0 – Results and Interpretations.** This section discusses and interprets the monitoring data collected between March 2024 and March 2025, 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 2024 and March 2025 and describes recommended activities for the GLMP for FY 2025/26.
- **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

High : 1 ft

0 ft

Low : -1 ft

InSAR absent or incoherent

Active Pumping Wells by Owner: 1987 to 1999

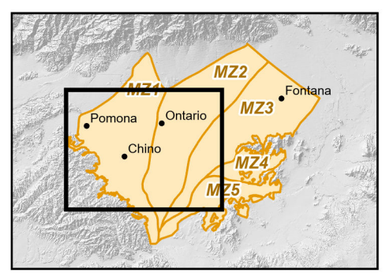
- CA Institution for Men
- City of Chino
- City of Chino Hills
- City of Ontario
- City of Pomona
- City of Upland
- Golden State WC
- Monte Vista WD
- San Antonia WC

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
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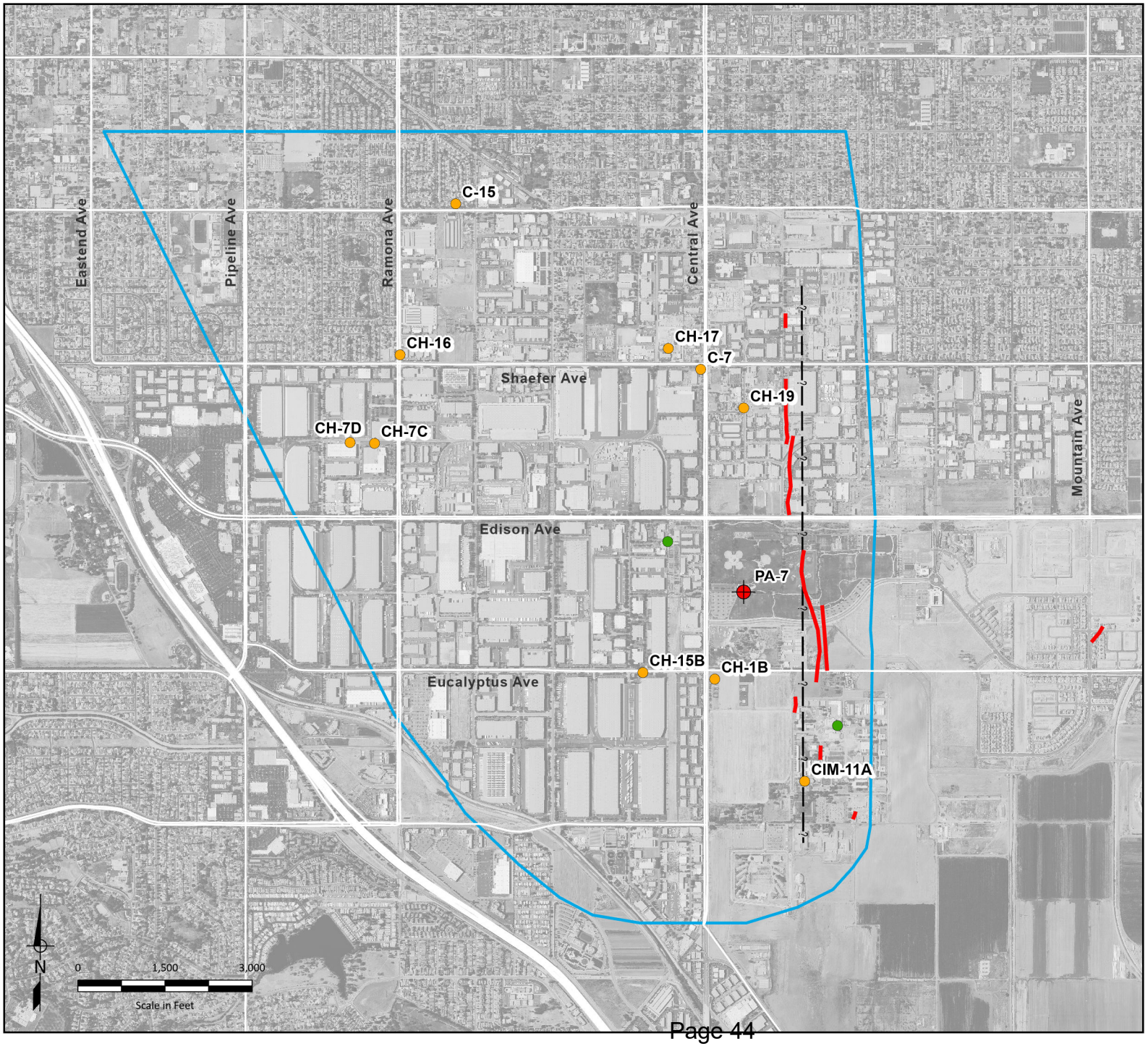
Figure 1-1

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



F1_2_MZ1ManagedWells.aprx

Chino Basin Watermaster
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Figure 1-2

MZ-1 Managed Area and the Managed Wells

2.0 GROUND-LEVEL MONITORING PROGRAM

This section describes the activities performed by Watermaster for the GLMP between March 2024 and March 2025.

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 2024 and March 2025 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 2024/25, special maintenance and calibration efforts were conducted at the PX facility to improve the accuracy of the extensometer measurements. The background, methods, results, and recommendations associated with these efforts at PX are described 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 with well screens installed 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 to a steel weight that rests on the bottom of the piezometer and is stretched taught by a counterweight and pully system at the well head. Vertical 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. 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. It appears that the transducer and steel wire extensometer cables have become tangled, which may be contributing to the poor data quality. Alternatively, the monitoring equipment itself 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. Inspect the existing monitoring and recording equipment, video log the well casings, separate the transducer and steel wire extensometer cables and reinstall the transducer in its own dedicated sounding tube, and install new monitoring equipment with the help of an outside professional to more effectively troubleshoot inaccurate data collection at the PX monitoring facility.

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 for the GLMP are compiled, checked, and stored in Watermaster databases.

The following sections describe Watermaster's monitoring activities between March 2024 and March 2025, 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 2024 and March 2025.

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 85 wells across the Managed Area and Areas of Subsidence Concern. Figure 2-2 shows the locations of these wells. Watermaster staff and well owners also measure hydraulic heads monthly at other wells in the western Chino Basin.

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 six TerraSAR-X collections through Airbus DS Geo, Inc., covering the western half[3]

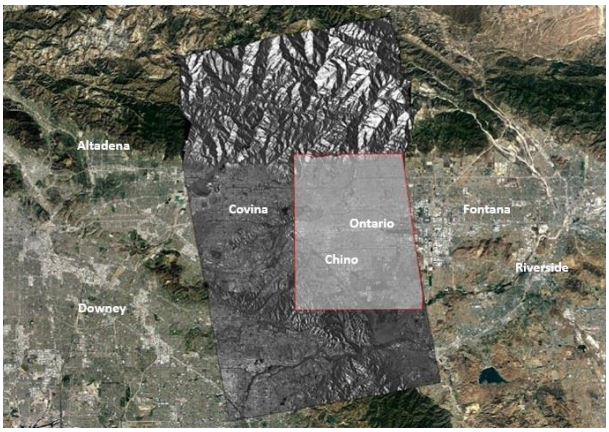


Photo 2-1: Full SAR Collection Area
Google Earth, Landsat/Copernicus 2020

Photo 2-2: Delivered Area of Interest
Google Earth, Airbus 2024

Including the final collection from the 2024-2025 monitoring period as a reference, six SAR images were processed to create 15 short- and long-term vertical ground motion estimates over the periods listed in Table 2-1.

Table 2-1. 2024 to 2025 Vertical Displacement Estimates

Short-Term (2024-2025) Vertical Ground Motion Estimates	
March 2024 to May 2024	March 2024 to June 2024
May 2024 to June 2024	March 2024 to August 2024
June 2024 to August 2024	March 2024 to October 2024
August 2024 to October 2024	March 2024 to March 2025
October 2024 to March 2025	
Long-Term (5+ year) Vertical Ground Motion Estimates	
March 2011 to March 2016	March 2011 to May 2024
March 2016 to March 2021	February 2017 to March 2025
March 2021 to March 2025	March 2011 to March 2025

[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.

With a transition away from previous processing arrangement with General Atomics (formerly Neva Ridge Technologies, Inc.), all interferometry beginning March 2011 was reprocessed in-house by the Watermaster,[4] creating a vertical motion estimate independent of previously delivered results.[5] The new estimate was compared frame-by-frame with historic deliveries through March 2024 to verify accuracy, and showed improvements in vertical fidelity in the primary subsidence feature in Northwest MZ-1,[6] decreased overall spatial noise, decreased time series noise at monitored points,[7] improved feature visibility near the Ontario and Chino airports,[8] and improvements in spatial quadratic phase trend correction.[9]

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]	May 2024
Central Area[a]	January 2018
Northwest Area	April 2025
San Jose Fault Zone Area	April 2025
Southeast Area[a]	May 2022
Northeast Area[a]	April 2020

(a) The entire benchmark monument survey network for the ground-level survey area was not surveyed in 2024 based on the GLMC scope and budget recommendations for FY 2024/25.

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

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

[6] 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.

[7] 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.

[8] 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.

[9] 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.

2.1.2.4 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 2024/25 and are not planned for 2025/26.

Table 2-3. Horizontal Benchmark Survey

	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 2024 based on GLMC scope and budget recommendations for FY 2024/25.

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 2024 and March 2025.

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.[10] 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

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

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.

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 provide 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.

Based on the outcomes of the 2025 SYR, the Watermaster Engineer may recommend that additional SMAs be developed and evaluated with the CVM and 1D Models to generate the necessary information to:

- Finalize the Guidance Level and the Subsidence Management Plan for Northwest MZ-1.
- Evaluate the minimum recharge quantity of supplemental water in MZ-1, as required by the Peace II Agreement.

To perform this analysis, the Watermaster Engineer will propose up to two (2) additional SMAs for evaluation with the CVM and the 1D Models. Then, the CVM and 1D Models will be used to evaluate the potential future subsidence in Northwest MZ-1 under the SMAs. 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.

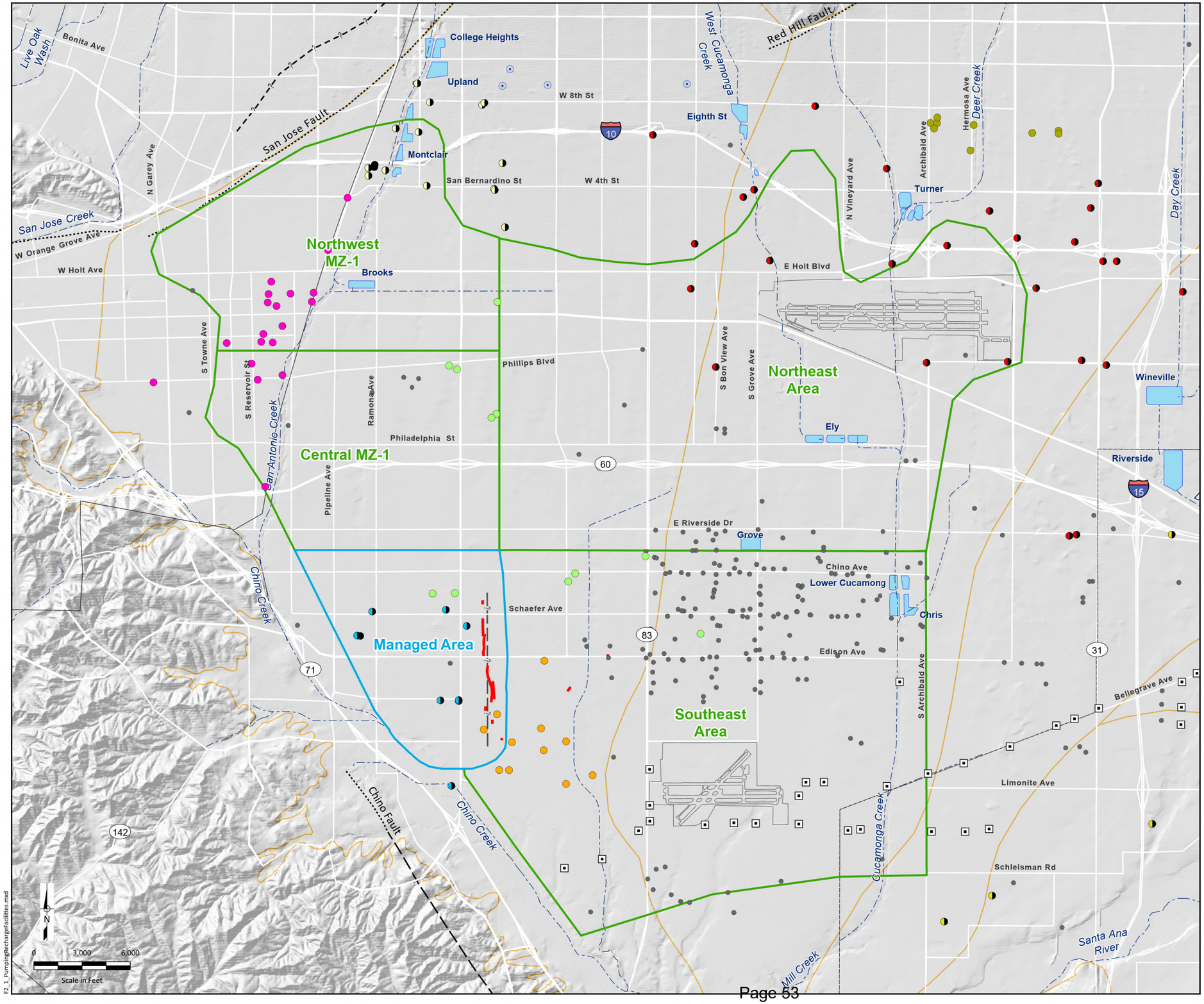
It should be noted that future monitoring and analyses always hold the potential for revisions to the Guidance Level, consistent with the adaptive management approach called for in the Chino Basin Subsidence Management Plan.

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 2024-25. The results, conclusions, and recommendations of the analysis are reported in Section 3.5.



F2_1_PumpingRechargeFacilities.mxd

Active Groundwater Pumping Wells
April 1, 2024 to March 31, 2025

- 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

Other Features

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

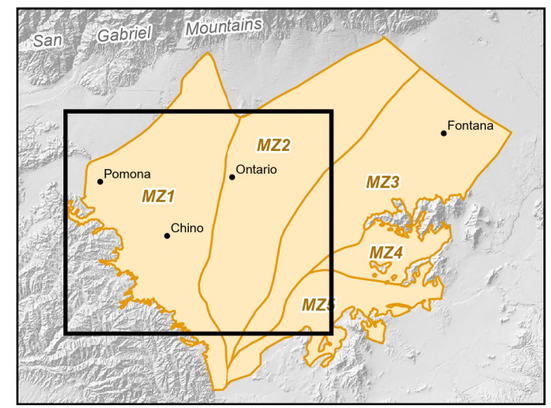


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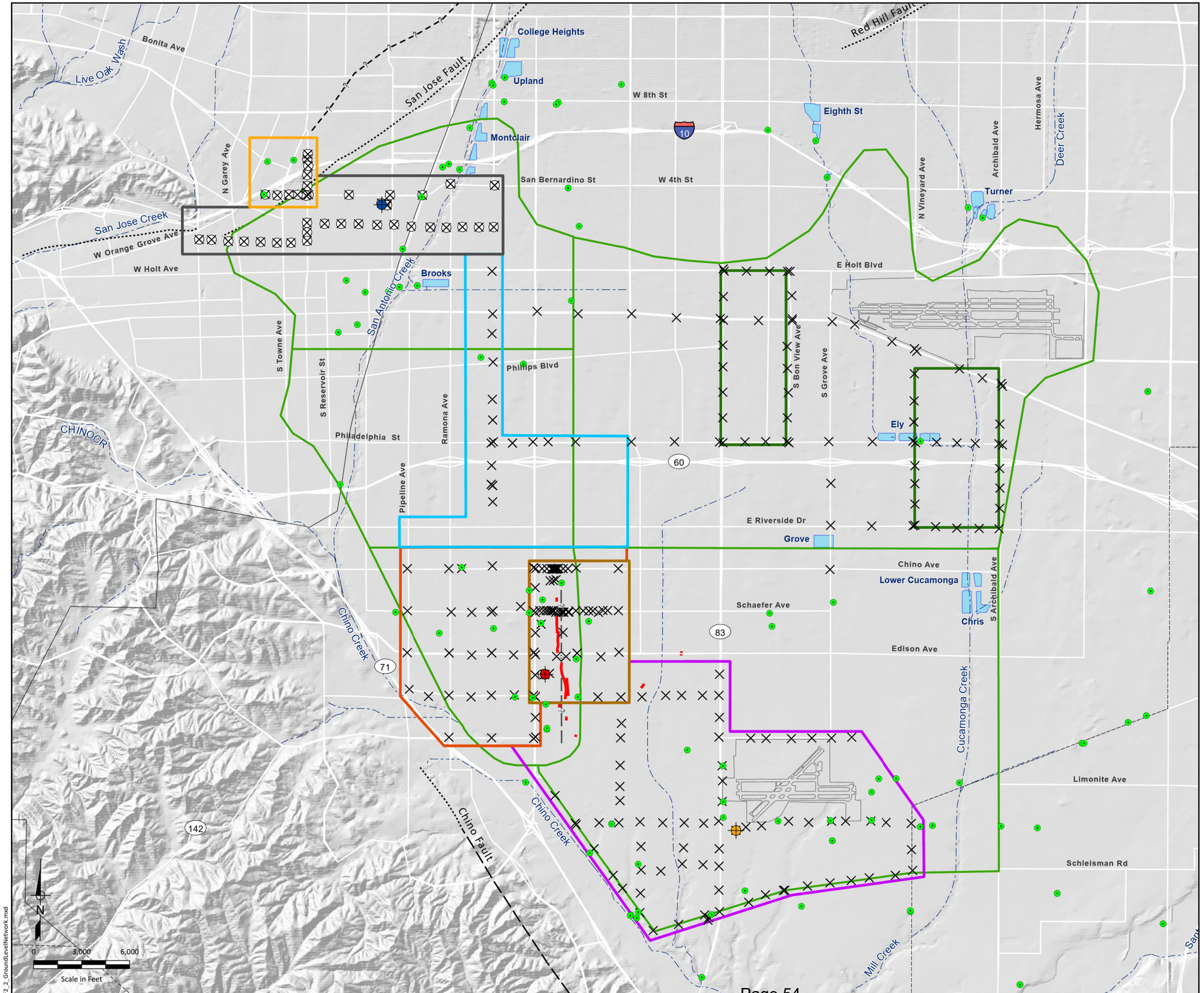
Figure 2-1

Pumping and Recharge Facilities
Western Chino Basin: 2024/25



Ground-Level Monitoring Network Facilities

- Pomona Extensometer
- Ayala Park Extensometer
- Chino Creek Extensometer
- All Program Transducer Wells
- Ground-Level Survey Benchmark
- Ground-Level Benchmark (Measured April 17, 2025)

Ground-Level Survey Areas

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

Other Features

- Areas of Subsidence Concern
- Flood Control and Conservation Basins

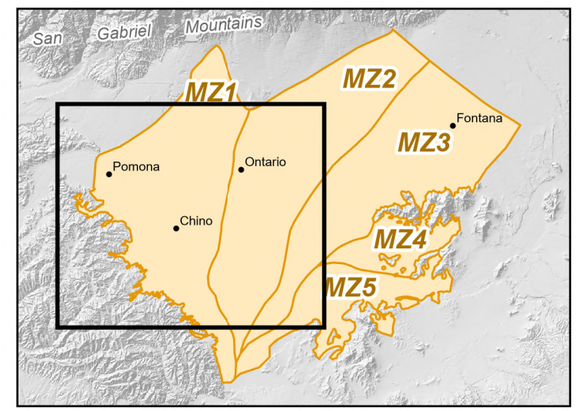


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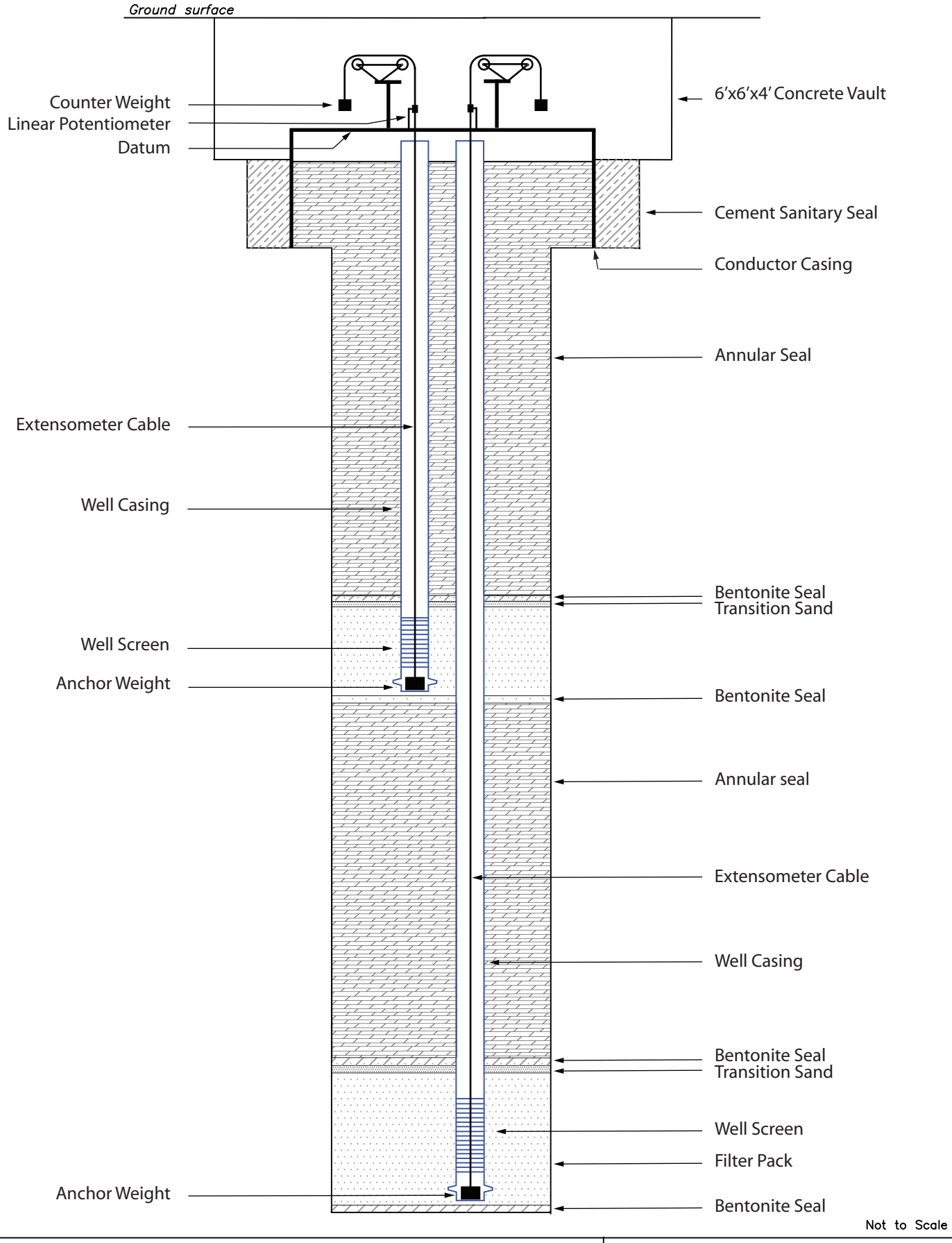
Figure 2-2

Ground-Level Monitoring Network Western Chino Basin



Prepared by:

WEST YOST

Prepared for:

Chino Basin Watermaster
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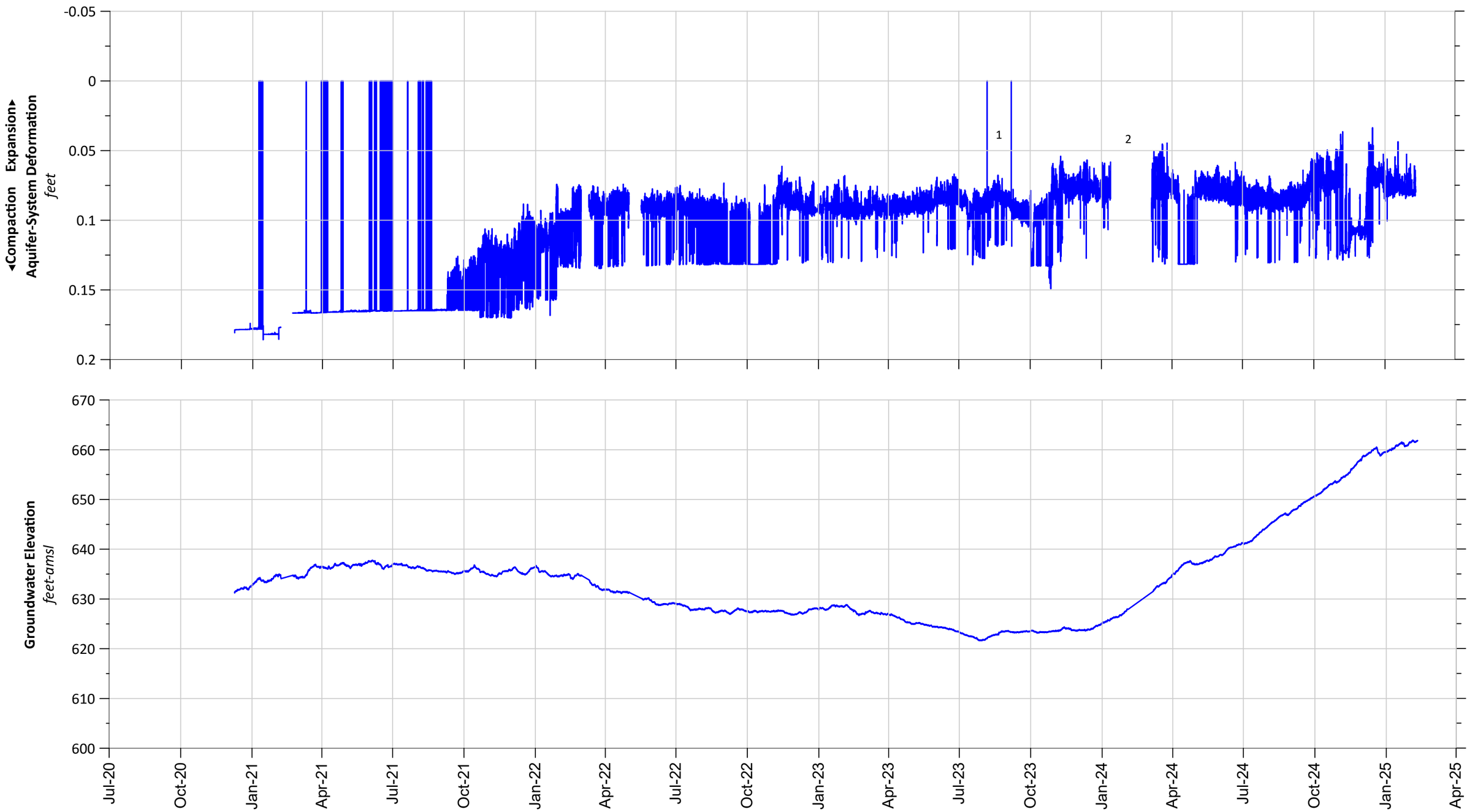
Dual-Nested Cable Extensometer
Conceptual Schematic

Figure 2-3



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

WEST YOST

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Figure 2-4a

Stress and Strain at PX-1 within the Managed Area

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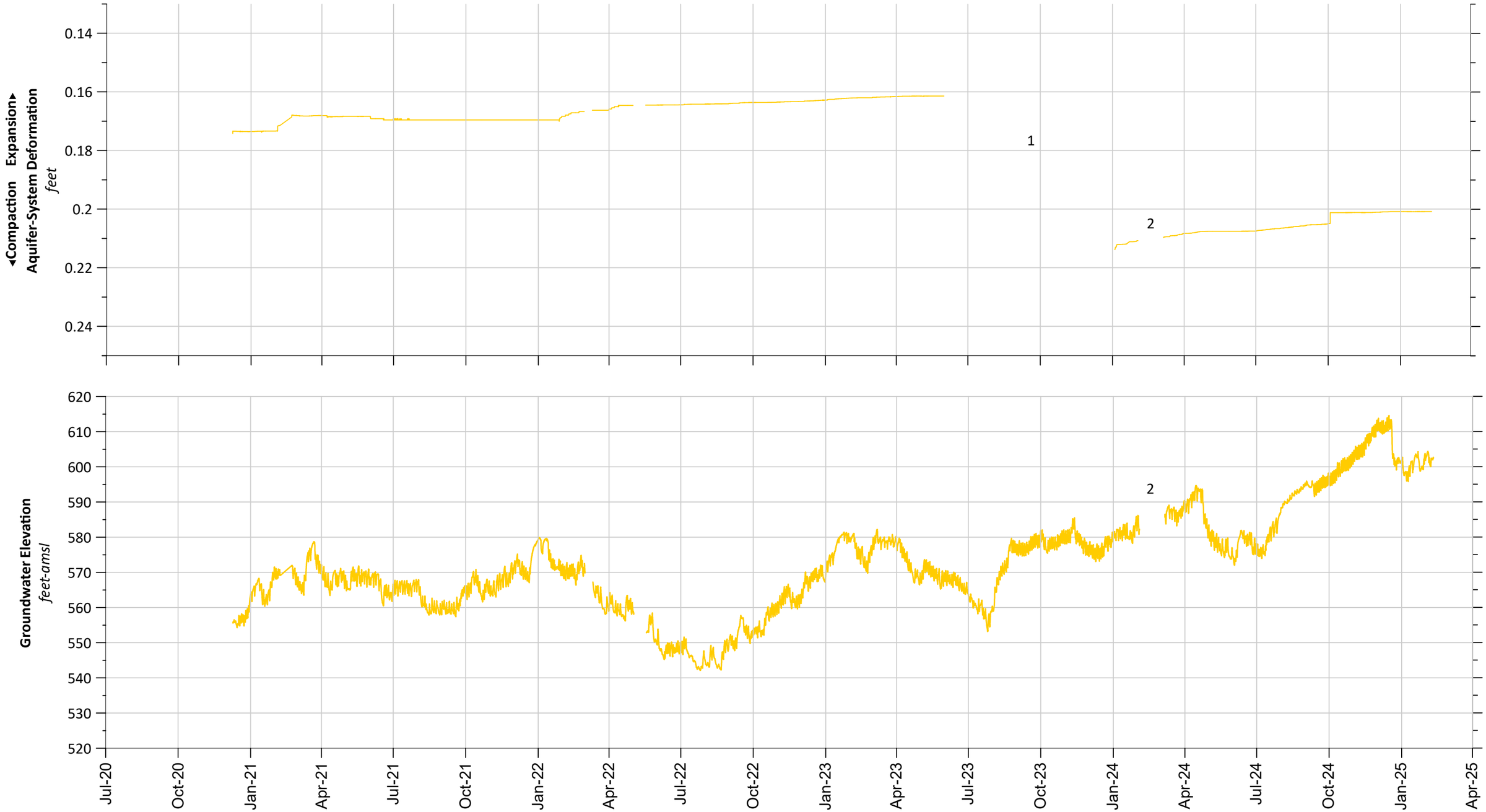

1 Removed Linear Potentiometer to test in office
2 Battery source low

WEST YOST - F2-3b_ManagedAreaStrainStrn.gpj

WEST YOST

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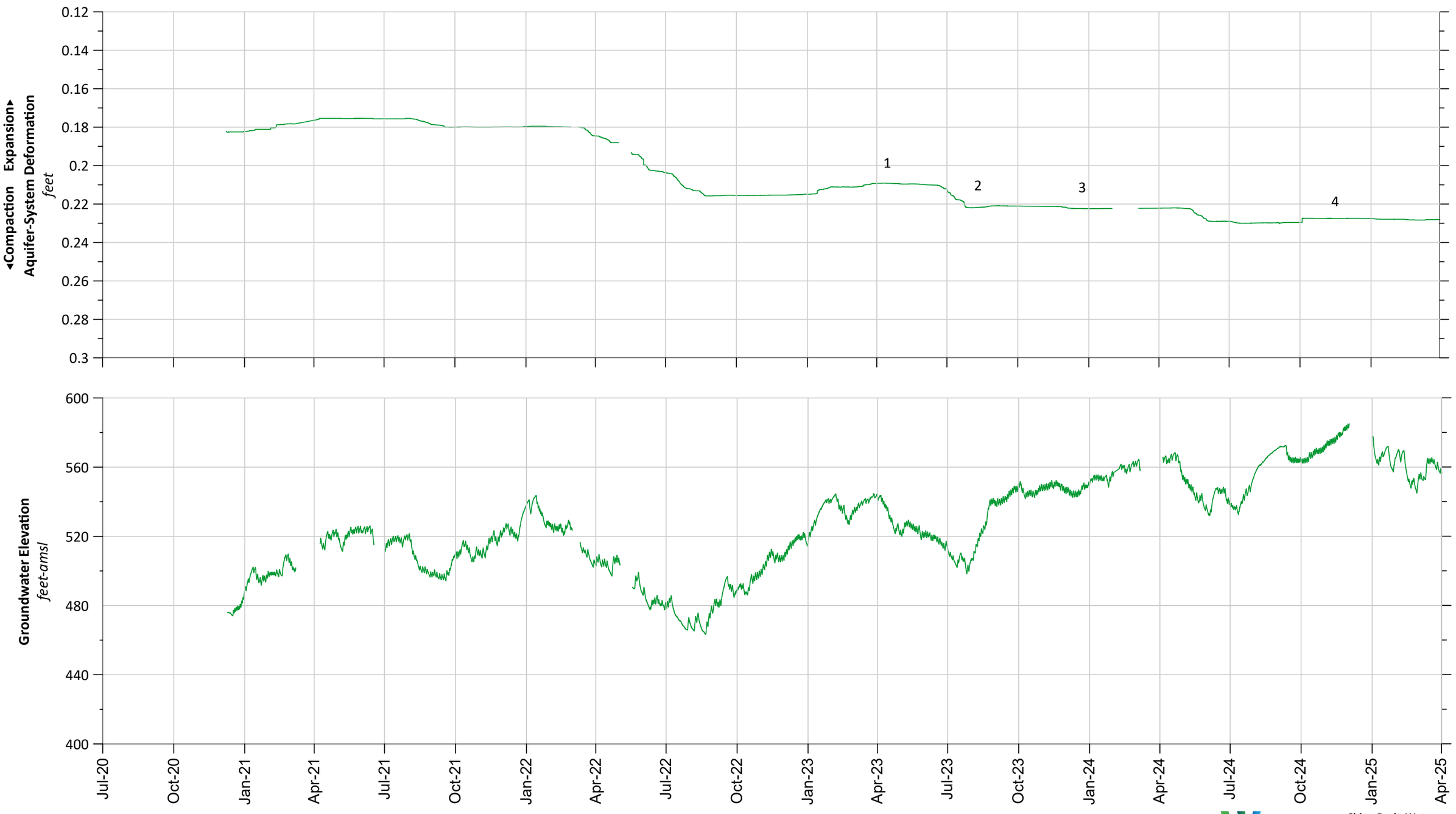
Figure 2-4b

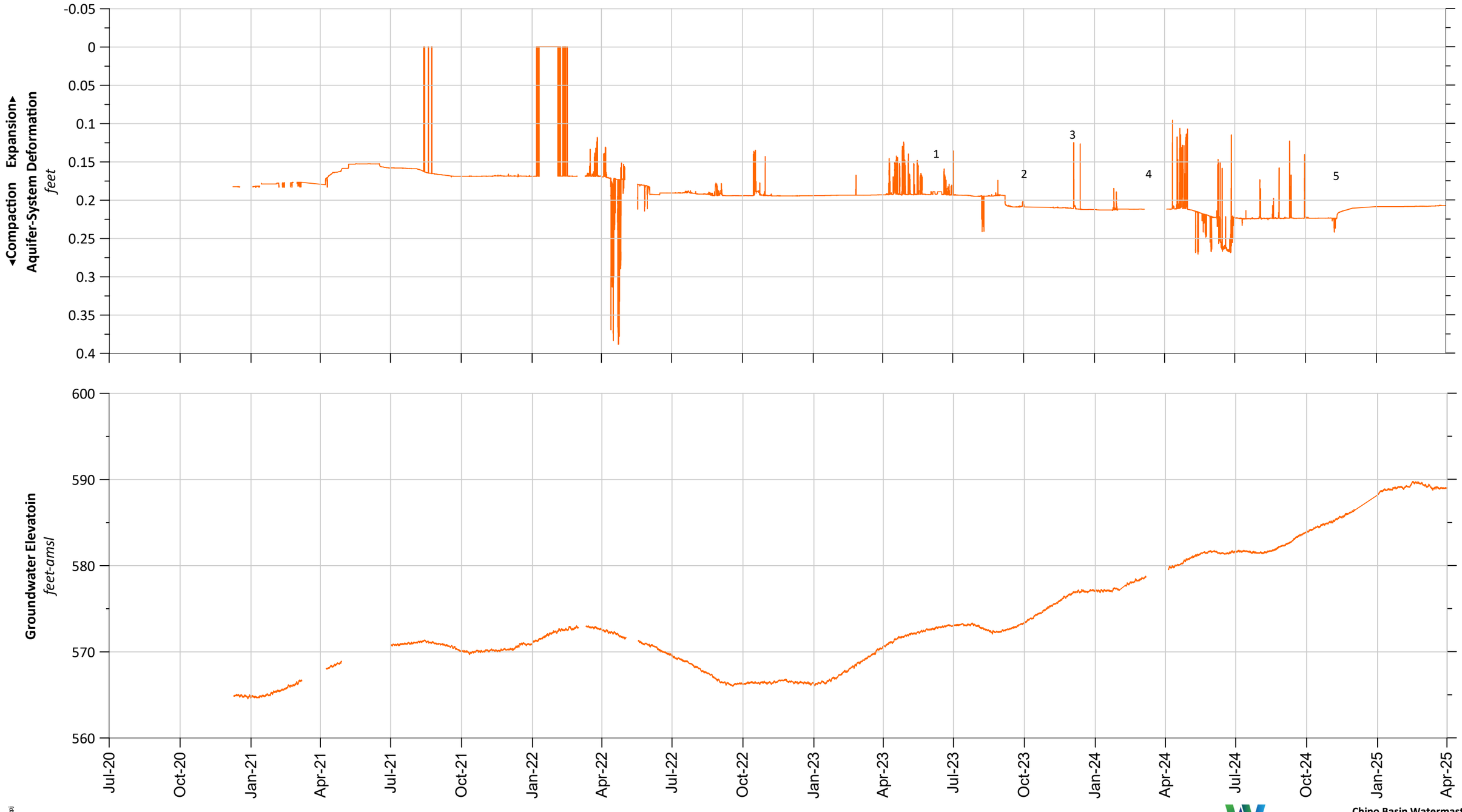
Stress and Strain at PX-2 within the Managed Area



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

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 weight sleeve approximately 10lbs.
4 Battery cable severed; power lost
5 Remvoed two weight sleeves approximatley 10 lbs.

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WEST YOST

Chino Basin Watermaster
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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 2023 to March 2025 reporting period. Figures 3-1a, 3-1b, 3-1c, 3-1d, and 3-1e 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 2025, March 2024 and March 2025, March 2011 and March 2016, March 2016 and March 2021, and March 2021 and March 2025, 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 other figures are described and interpreted in this section to describe the historical and current state of land subsidence across the five Areas of Subsidence Concern in the Chino Basin.

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 3-2 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.

This section discusses the last 14 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 2025. Groundwater pumping in the Managed Area has declined from about 5,680 acre-feet (af) in 2012 to almost negligible volumes since 2019 through 2025. A total of about 211 af of groundwater pumping occurred in the Managed Area from July 1, 2024 to March 31, 2025—99 percent of the groundwater pumping was from wells screened across 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 2025. 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.[11]

  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, 2025, heads were at about 50 ft-btoc in PA-10 and about 75 ft-btoc in PA-7.

[11] 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 2025. 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.[12]
- From May 3, 2018 to December 8, 2023 (dates of full recovery at PA-7), the Deep Extensometer recorded multiple cycles of aquifer-system compression and expansion in response to 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.

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

- Since December 2023, hydraulic heads at PA-7 have increased and remained between 52-60 ft-btoc. The hysteresis loops continued to overlap loops from prior time periods—also indicating that the vertical deformation of the aquifer-system was mainly elastic.

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, 3-1c, 3-1d, and 3-1e illustrate vertical ground motion[13] as estimated by InSAR for the periods of March 2011 and March 2025, March 2024 and March 2025, March 2011 and March 2016, March 2016 and March 2021, and March 2021 and March 2025, respectively.

Where coherent, the InSAR estimates of vertical ground motion from 2011 to 2025 shown in Figure 3-1a range from about +0.04 ft to -0.16 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 2024 to 2025 shown in Figures 3-1b indicate very little recent vertical ground motion across the Managed Area.

As described above, Figure 3-1a shows that maximum downward ground motion during 2011-2025 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 2025. 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 at least 0.28 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.

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

4. The California Department of Water Resources (DWR) has recently provided guidance for using monitoring data (i.e., ground motion and head data) to estimate critical head "thresholds" as management criteria to protect against the future occurrence of land subsidence.[14] Using the DWR's "Empirical Analysis" method, which is based on the draft Subsidence Best Management Practices and may be subject to change, when groundwater elevations at C-15 remain above about 588 ft-above mean sea level (ft-amsl), no permanent land subsidence occurs at this location.

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 through 3-1e) are somewhat incoherent across much of this area because the overlying agricultural land uses are not hard, consistent reflectors of radar waves. In addition, recent construction activities have altered land cover and surface reflectivity, further reducing InSAR reliability in some locations. 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 2025. Vertical ground motion is estimated by InSAR, extensometer data, and ground-level surveys across the southeast Area from 1987 to 2025; however, ground-level survey data were not acquired during 2024-25 in this area. 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 26 ft from 2010 to 2025 (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 26 ft between 2005 and March 2025 (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 periodic ground-level surveys. 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 2011-2025, 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.

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- For the current period March 2024 and March 2025, hydraulic heads remained relatively stable or increased across most of the area, and Figures 3-1b and 3-6 indicate little 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. 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. 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 2025. However, pumping from the deep aquifer system at CDA Wells 1 through 4 restarted in 2023 and caused about 10 ft of decline in hydraulic heads at the CCPA-2 well and about 0.02 ft of elastic compression of the aquifer system as recorded at the CCX-2 extensometer. 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 through 3-1e 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 through 3-1e are maps that display vertical ground motion as measured by InSAR across Central MZ-1 over various periods during March 2011 to March 2025. 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 slightly increased from 1986 to 2025. Recent hydraulic heads (1986 to 2025) 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 2021— the most recent year this benchmark was surveyed. 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 2025 are in the western portion of Central MZ-1, where up to about 0.32 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 2025, 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) in the Managed Area may extend 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.
- Figure 3-1b shows that between March 2024 and March 2025, 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 supplement and check the InSAR estimates of vertical ground motion.

Figures 3-1a through 3-1e are maps that display vertical ground motion as measured by InSAR across Northwest MZ-1 over various periods during March 2011 to March 2025. 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 2017 to March 2025. The following observations and interpretations are derived from these figures:

- 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 2025 hydraulic heads fluctuated but remained relatively stable at elevations well below the levels of 1930.
- A maximum of about 1.45 ft of subsidence occurred in this area from 1992 through March 2025—an average rate of about 0.04 ft/yr—while hydraulic heads remained relatively stable. The persistent subsidence that occurred from 1992 to 2025 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 2025, the InSAR results indicate that the maximum rate of downward ground motion in Northwest MZ-1 slowed to about 0.035 ft/yr. This resulted in a maximum of about 0.48 ft of downward ground motion near the intersection of Indian Hill Boulevard and San Bernardino Street.
- Figure 3-9b shows that the ground-level survey results from 2017 to 2025 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 occurred near the intersection of Indian Hill Boulevard and San Bernardino Street. 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.
- Figure 3-1b shows that InSAR data from March 2024 to March 2025 indicate minor downward ground motion of approximately 0.04 feet in the Northwest Area. In contrast, ground-level survey results (Figure 3-9a) show slight uplift in Northwest MZ1 during the same period. The discrepancy between the InSAR and benchmark observations may be attributed to atmospheric interference in the InSAR data or GPS acquisition errors at the PX reference point.

- Figures 3-1c through 3-1e are InSAR maps that illustrate the slowing rate of subsidence in Northwest MZ1 from 2011-2025: about 0.28 ft of subsidence from 2011 to 2016; 0.08 ft of subsidence from 2016 to 2021; and 0.05 ft of subsidence from 2021 to 2025. This trend is likely due to reduced groundwater pumping and increased recharge as shown in Figure 3-9a.

As described above, Figure 3-1a shows that maximum downward ground motion during 2011-2025 occurred near the intersection of Indian Hill Boulevard and San Bernardino Street. 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 from September 2006 to September 2024. The transducer is currently removed to accommodate ongoing well improvements and will be reinstalled upon completion of the work. In the meantime, water levels are being measured manually on a monthly basis. 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 2025. 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, slowing trend of subsidence remains persistent between 2005 and 2025 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 2018 and 2025, the long-term subsidence trend appeared to have slowed, indicating that inelastic compaction of the aquitards had also slowed. The recent slowing of subsidence observed at P-30 was likely a result of increasing hydraulic heads in the aquifers, which has led to equilibration with hydraulic heads in the aquitards and the slowing of aquitard drainage and compaction.

  Between 2018 and early 2025, the hydraulic head at P-30 experienced seven 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 changes in hydraulic heads, which are controlled by the pumping and recharge stresses in the area, control on the pattern and rate of subsidence.
- The DWR has recently provided guidance for using monitoring data (i.e., ground motion and head data) to estimate critical head "thresholds" as management criteria to protect against the future occurrence of land subsidence.[14] Using the DWR's "Empirical Analysis" method, which is based on the draft Subsidence Best Management Practices and may be subject to change, when groundwater elevations at P-30 remain above about 568 ft-amsl, no permanent land subsidence occurs at this location.

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.

Figures 3-1a through 3-1e are maps that display vertical ground motion as measured by InSAR across Northeast MZ-1 over various periods during March 2011 to March 2025. 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 2025, hydraulic heads fluctuated but have generally remained relatively stable.
- From 1992 to 2025, about 1.26 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 2025, the subsidence rate declined to about 0.03 ft/yr. Hydraulic heads have remained relatively stable in this area from 1992-2025, 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. 2024 data showed a decline in the rate of subsidence at Point D due to decreases in pumping, increases in recharge and hydraulic heads, or equilibrium between aquifers and aquitards.

3.5.1 Whispering Lakes Subsidence Feature

Figures 3-1a through 3-1e 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 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). Figure 3-1a indicates that a maximum of about 0.72 ft of downward ground motion occurred in this area from March 2011 to April 2025.

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.[15]

Since 2022, additional monitoring was conducted. Figure 3-12 is a series of air photo maps overlain with the annual subsidence contours from 2022-25 and cumulative subsidence contours from 2011-2025. Figure 3-12 demonstrates that: (i) land subsidence has continued to occur in this area at rates between 0.04- 0.06 ft/yr during 2022-25 and (ii) 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.

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 2025 (see Section 3.6 below). A concentrated occurrence of earthquake epicenters is located just east of the Whispering Lakes Subsidence Feature, which may indicate an alternative mechanism for the subsidence.

Based on these results and interpretations, 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 for the 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 or coordination with Niagara Water Company to provide water level data if transducer installation is not possible.
- Continued monitoring of seismicity.

The results and interpretations from this monitoring should be included in subsequent annual reports, which may improve the understanding of the subsidence mechanism(s) and could be used to rule out aquitard drainage (and groundwater utilization) as the cause of the subsidence, or not.

[15] 2021/22 Annual Report of the GLMC

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 2025. 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.
- Very little seismicity has occurred across the Areas of Subsidence Concern between March 2011 and March 2025. This observation indicates that the vertical ground motion that occurred in these areas is not related to tectonics (with the possible exception being the Whispering Lakes Subsidence Feature [see Section 3.5.1 above]).
- Most of the seismicity observed between March 2011 and March 2025 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 2025*

Well Name	Aquifer Layer	Fiscal Year, af													Fiscal Year 2025, af				
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	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	0	-	
C-6		1049	594	0	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	0	-	
CH-7A		530	380	170	286	156	66	0	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	0	-	
CIM-1		724	1,109	1,127	878	911	908	586	0	0	0	0	0	2	66.53	49	73.63	-	
XRef 8730[b]		3	5	5	4	3	35	29	29	29	30	17	21	29	7.36	7.35	7.35	-	
Sub-Totals		**4,679**	**3,260**	**2,240**	**2,644**	**1,980**	**1,879**	**1,334**	**29**	**29**	**30**	**17**	**21**	**31**	**74**	**56**	**81**	**-**	**211**
CH-17	Deep[c]	758	1,444	937	1,142	567	624	571	0	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	0	-	
CIM-11A		243	239	195	92	94	222	0	0	3	3	42	1	1	0.01	0.00	0.00	-	
Sub-Totals		**1,001**	**1,711**	**1,237**	**1,234**	**662**	**846**	**571**	**0**	**3**	**3**	**42**	**26**	**1**	**0**	**0**	**0**	**-**	**0.01**
Totals		**5,680**	**4,971**	**3,477**	**3,878**	**2,642**	**2,725**	**1,905**	**29**	**32**	**33**	**59**	**47**	**32**	**74**	**56**	**81**	**-**	**211**

"C" = City of Chino

"CH" = City of Chino Hills

"CIM" = California Institution for Men

"XRef" = Private

(a) Data only available through March 2025.

(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 - Sec3a_APRX - cmartinez - 9/2/2025

Relative Change in Land Surface Elevation
as Estimated by InSAR
(March 2011 to March 2025)

High : 0.75 ft
0 ft
Low : -0.75 ft
InSAR absent or incoherent

Managed Area
Areas of Subsidence Concern

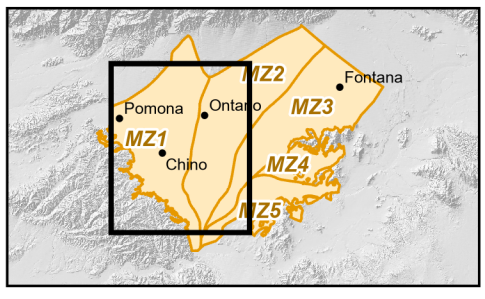
Average Annual Groundwater Pumping
April 1, 2011 to March 31, 2025
(afy)

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, 2025
(afy)

0
1- 1500
1500 - 2500
>2500



Chino Basin Watermaster

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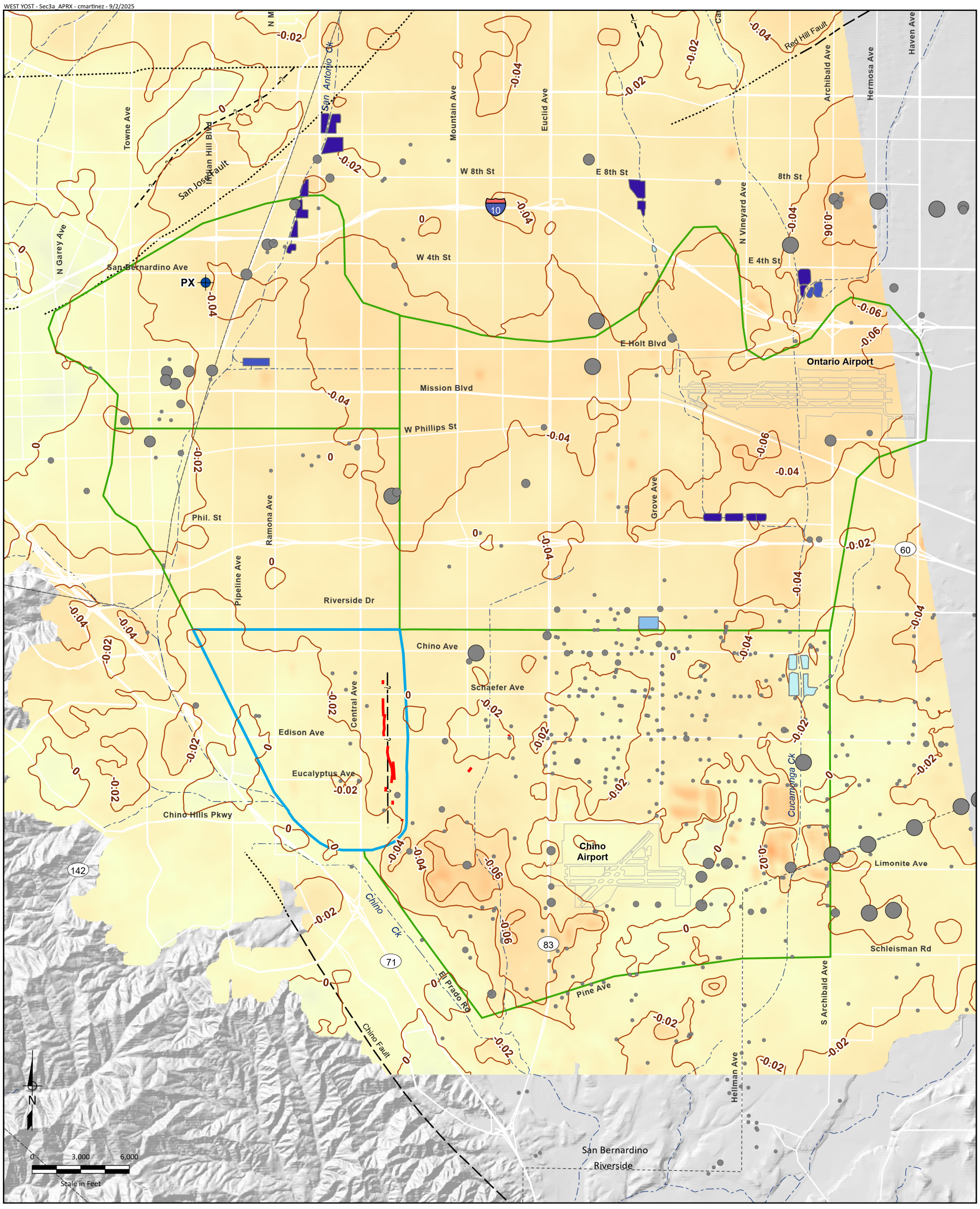
Figure 3-1a

Vertical Ground Motion across the Western Chino Basin: 2011-2025



Relative Change in Land Surface Elevation
as Estimated by InSAR
(March 2024 to March 2025)

High : 0.2 ft

0 ft

Low : -0.2 ft

InSAR absent or incoherent

Managed Area

Areas of Subsidence Concern

Average Annual Groundwater Pumping
April 1, 2024 to March 31, 2025
(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, 2024 to March 31, 2025
(afy)

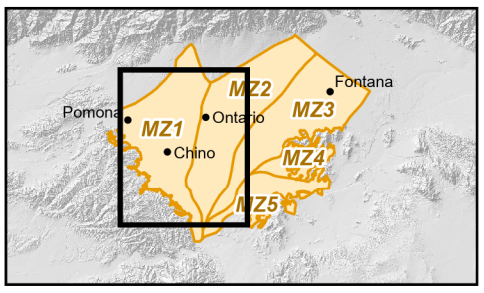
0 - 250

250 - 500

500 - 750

750 - 1,250

> 1,250



Chino Basin Watermaster

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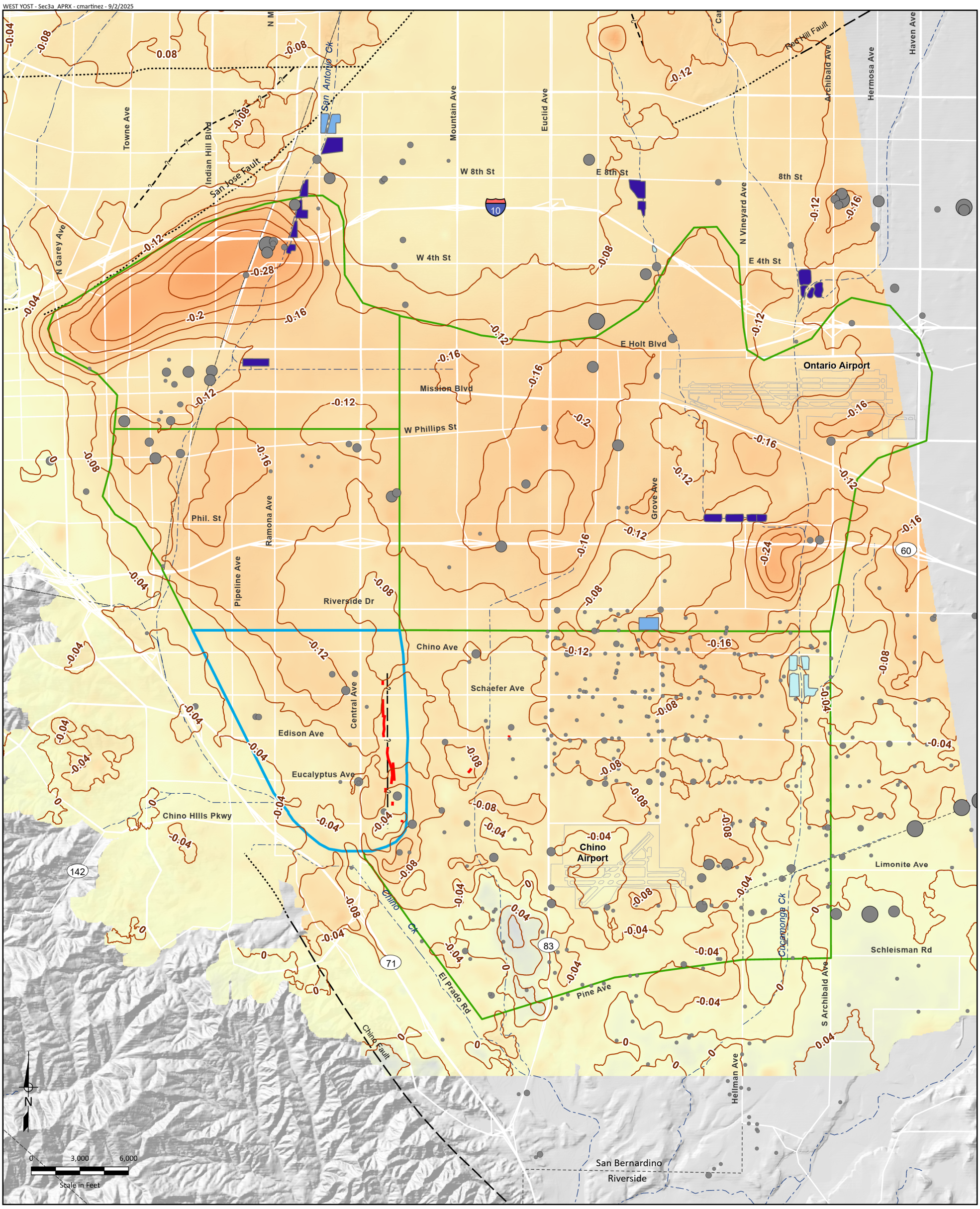
Figure 3-1b

Vertical Ground Motion across the Western Chino Basin: 2024-2025



Relative Change in Land Surface Elevation
as Estimated by InSAR
(March 2011 to March 2016)

High : 0.4 ft

0 ft

Low : -0.4 ft

InSAR absent or incoherent

Managed Area

Areas of Subsidence Concern

Average Annual Groundwater Pumping
April 1, 2011 to March 31, 2016
(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, 2016
(afy)

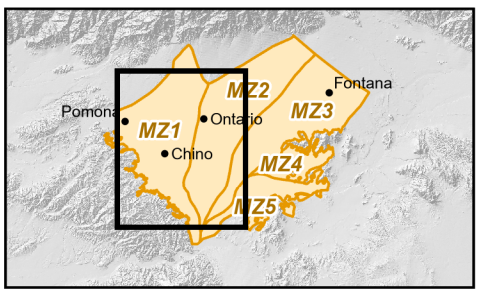
0 - 250

250 - 500

500 - 750

750 - 1,250

> 1,250



Chino Basin Watermaster

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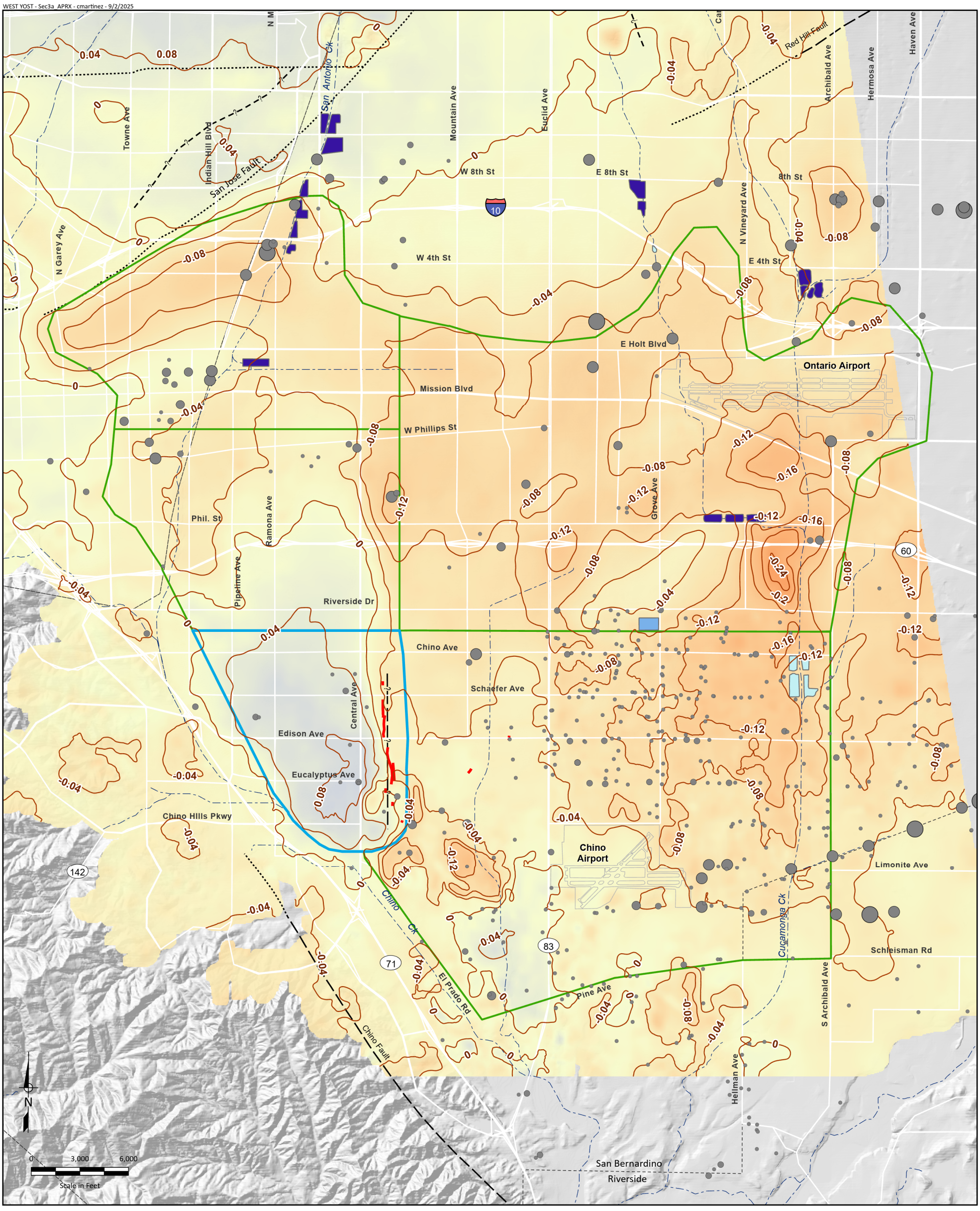
Figure 3-1c

Vertical Ground Motion across the Western Chino Basin: 2011-2016

WEST YOST - Sec3a_APRX - cmartinez - 9/2/2025



Relative Change in Land Surface Elevation
as Estimated by InSAR
(March 2016 to March 2021)

- High : 0.3 ft
- 0 ft
- Low : -0.3 ft
- InSAR absent or incoherent

- Managed Area
- Areas of Subsidence Concern

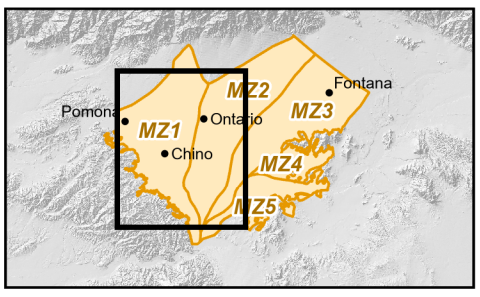
Average Annual Groundwater Pumping
April 1, 2016 to March 31, 2021
(afy)

- 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, 2016 to March 31, 2021
(afy)

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

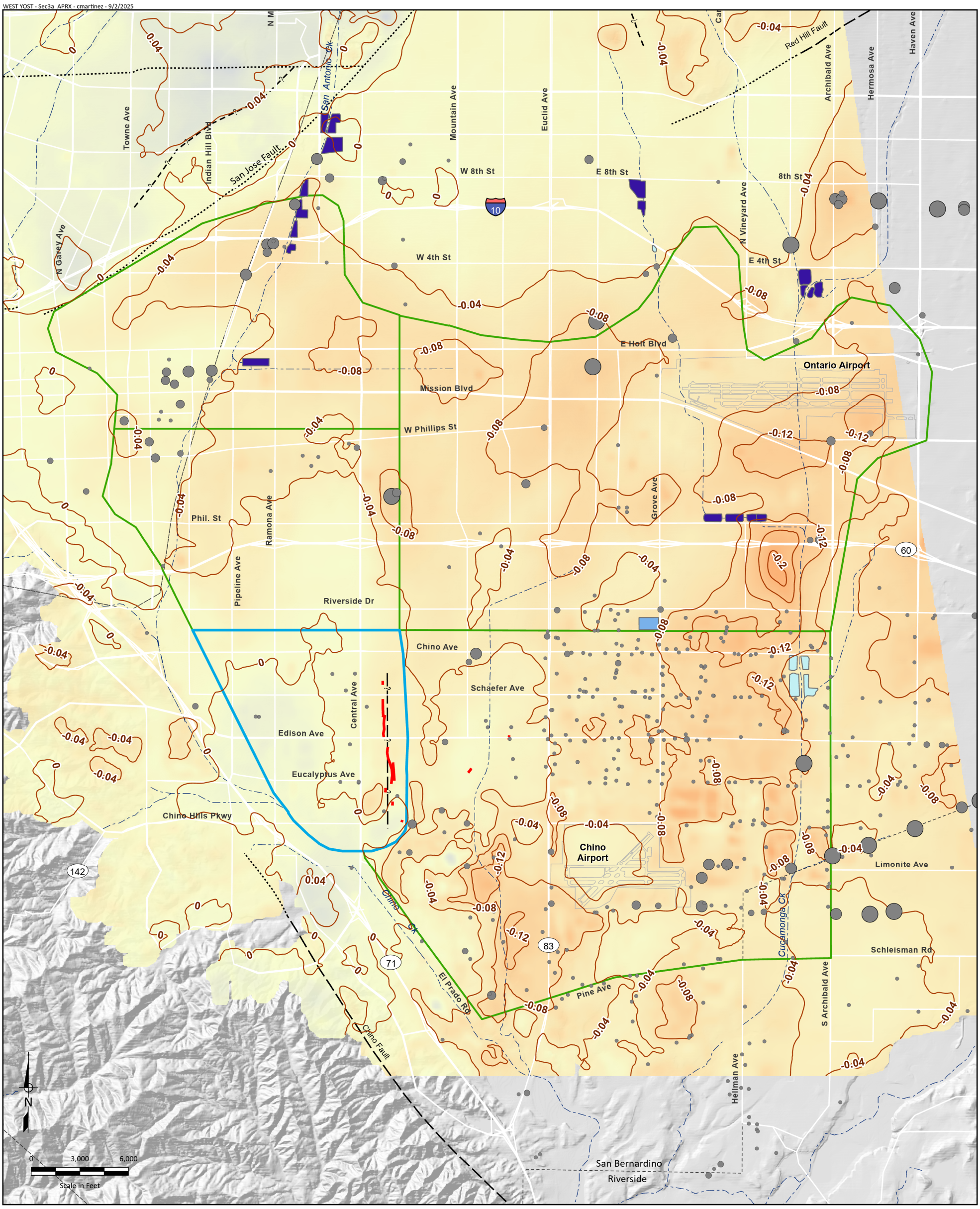


Chino Basin Watermaster

2024/25 Annual Report for the
Ground-Level Monitoring Program

Figure 3-1d

Vertical Ground Motion across the Western Chino Basin: 2016-2021



Relative Change in Land Surface Elevation as Estimated by InSAR (March 2021 to March 2025)

- High : 0.3 ft
- 0 ft
- Low : -0.3 ft
- InSAR absent or incoherent

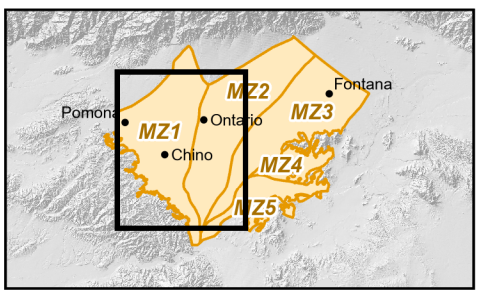
Average Annual Groundwater Pumping April 1, 2021 to March 31, 2025 (afy)

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

Average Annual Basin Recharge April 1, 2021 to March 31, 2025 (afy)

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

- Managed Area
- Areas of Subsidence Concern
- Historical Ground Fissures
- Approximate Location of the Riley Barrier
- Fault (solid where accurately located; dashed where approximately located or inferred; dotted where concealed)

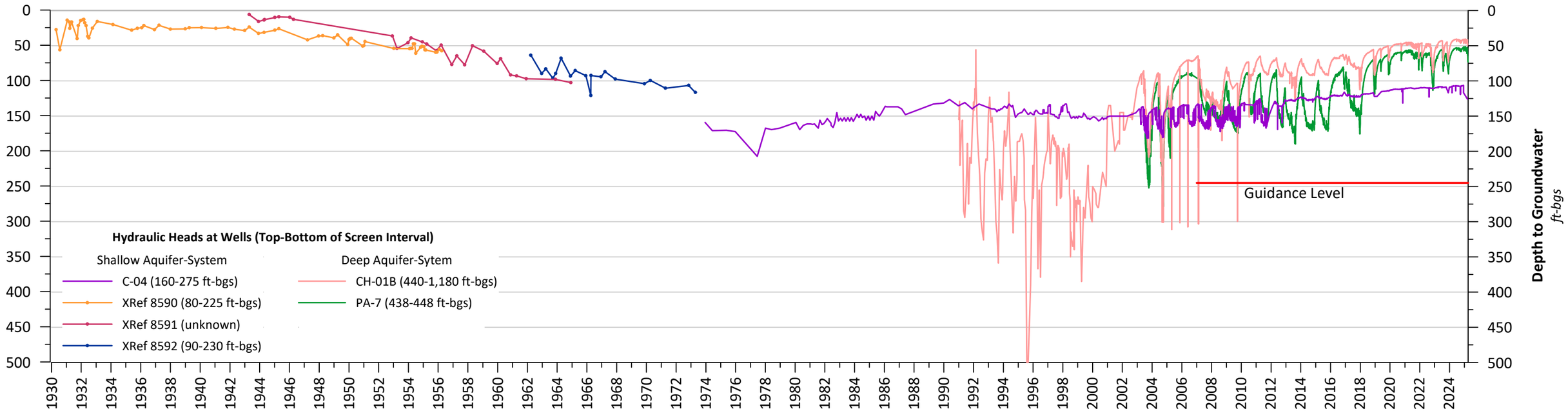


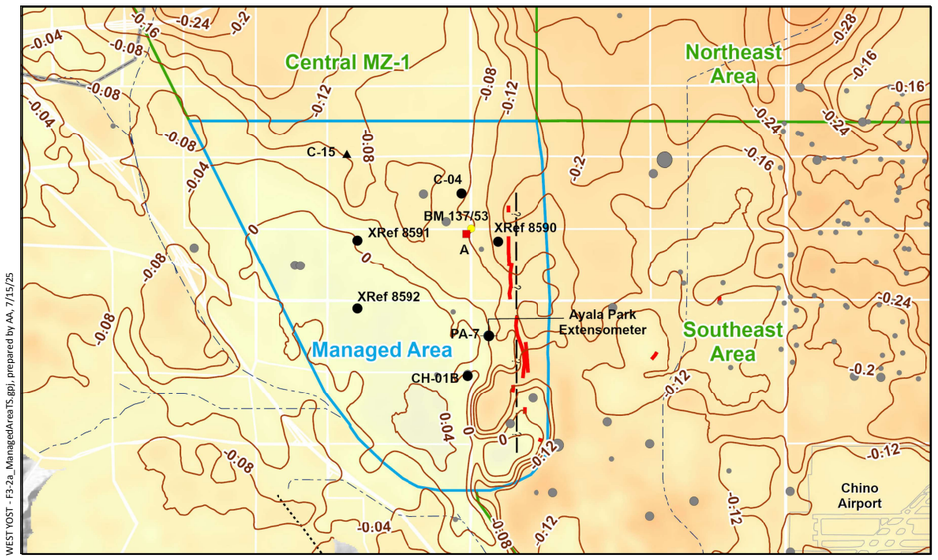
Chino Basin Watermaster

2024/25 Annual Report for the Ground-Level Monitoring Program

Figure 3-1e

Vertical Ground Motion across the Western Chino Basin: 2021-2025





InSAR from March 2011 to March 2025 (see Figure 3-1a)

Relative Change in Land Surface Elevation
as Estimated by InSAR
(March 2011 to March 2025)

High : 0.75 ft

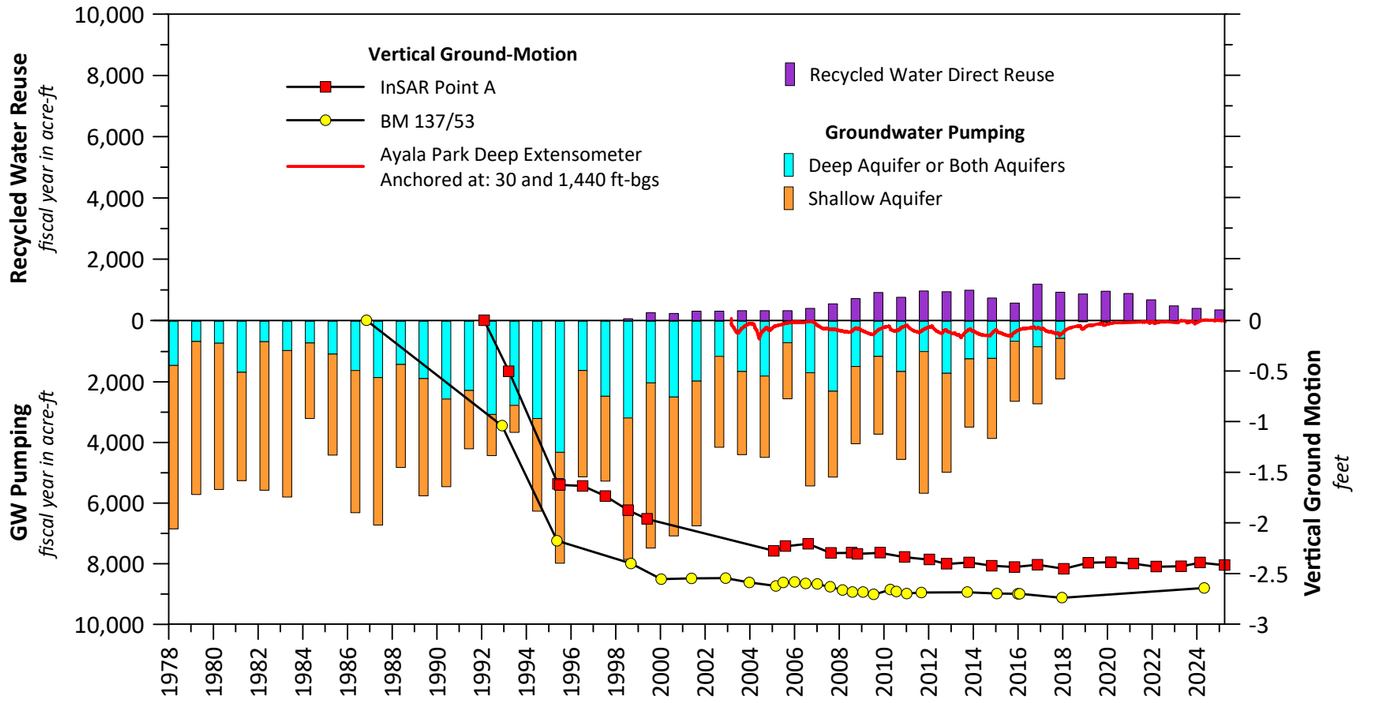
0 ft

Low : -0.75 ft

InSAR absent or incoherent

Average Annual Groundwater Pumping
April 1, 2011 to March 31, 2025
(afy)

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



Chino Basin Watermaster
2024/25 Annual Report for the
Ground-Level Monitoring Program

Figure 3-2

History of Land Subsidence in the Managed Area

◂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, 2024 and March 31, 2025:
Pumping from the shallow aquifer = 85 af
Pumping from the deep aquifer = 0 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 Jul-24 Oct-24 Jan-25 Apr-25

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

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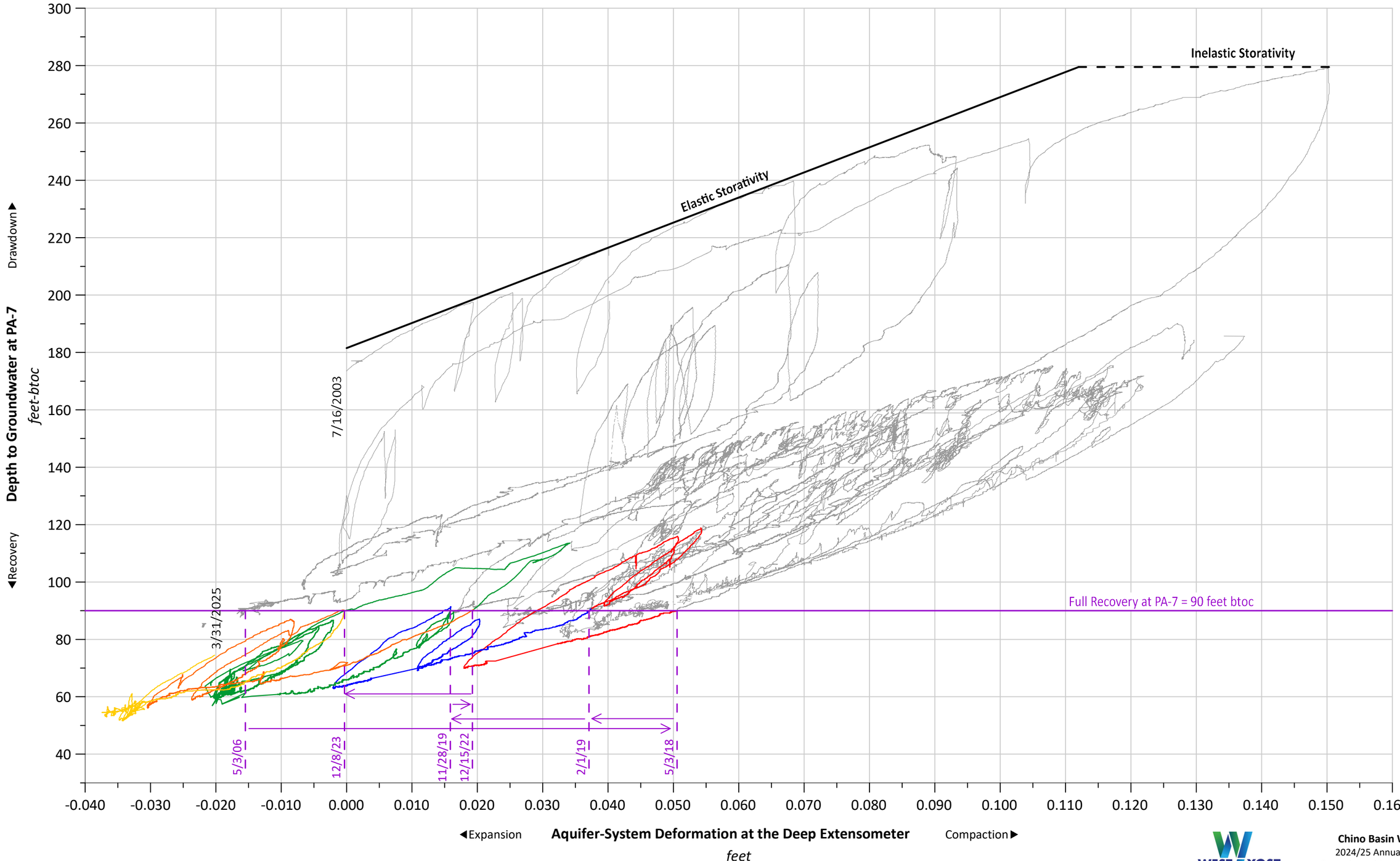
Chino Basin Water Master
2024/25 Annual Report for the Ground-Level Monitoring Program

Figure 3-3

Stress and Strain within the Managed Area



*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

Chino Basin Water Master
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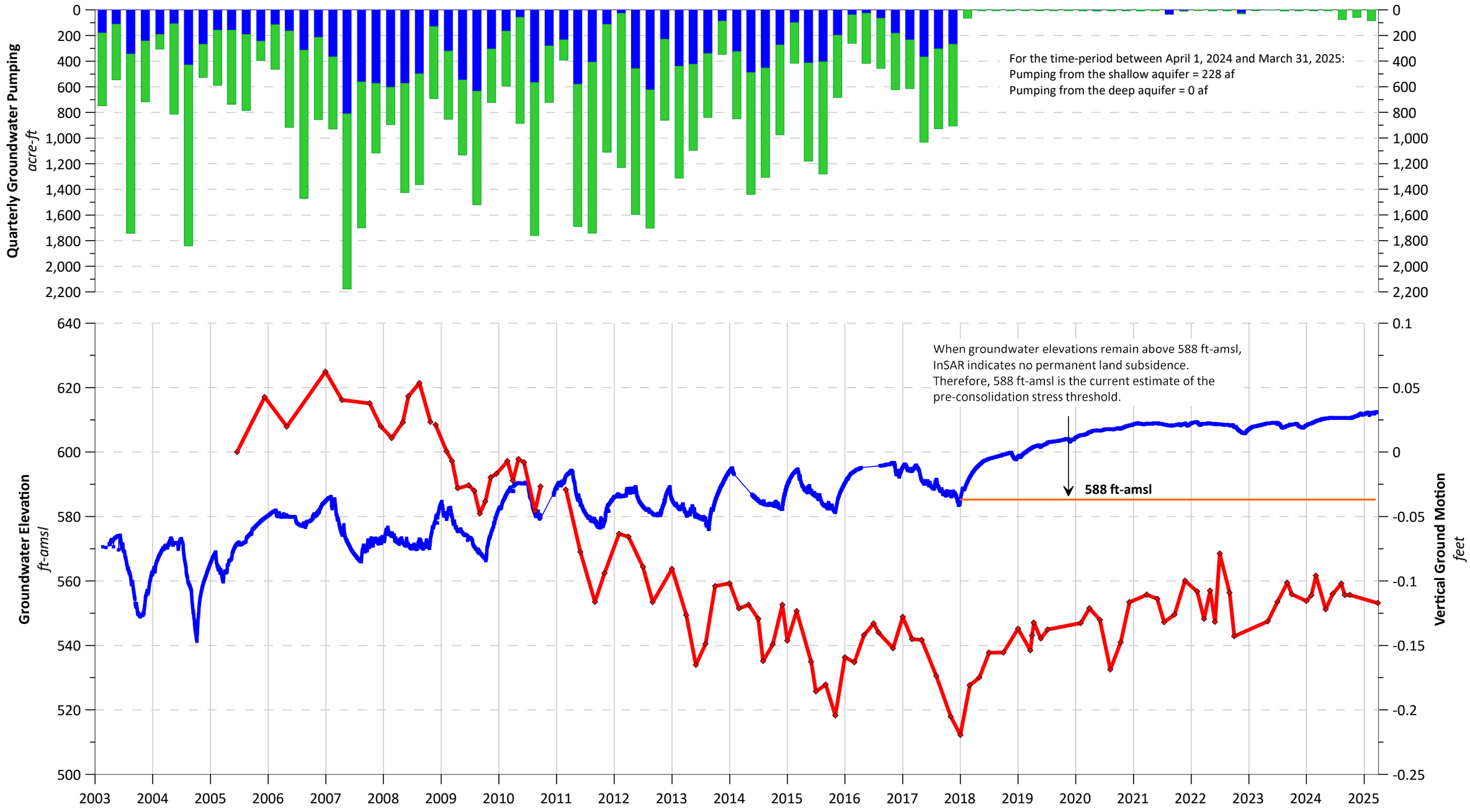
Figure 3-4

Stress-Strain Diagram
Ayala Park Extensometer



WEST YOST - F3-SC15_InSAR_PumpRecharge.gpj

Chino Basin Watermaster
2024/25 Annual Report for the
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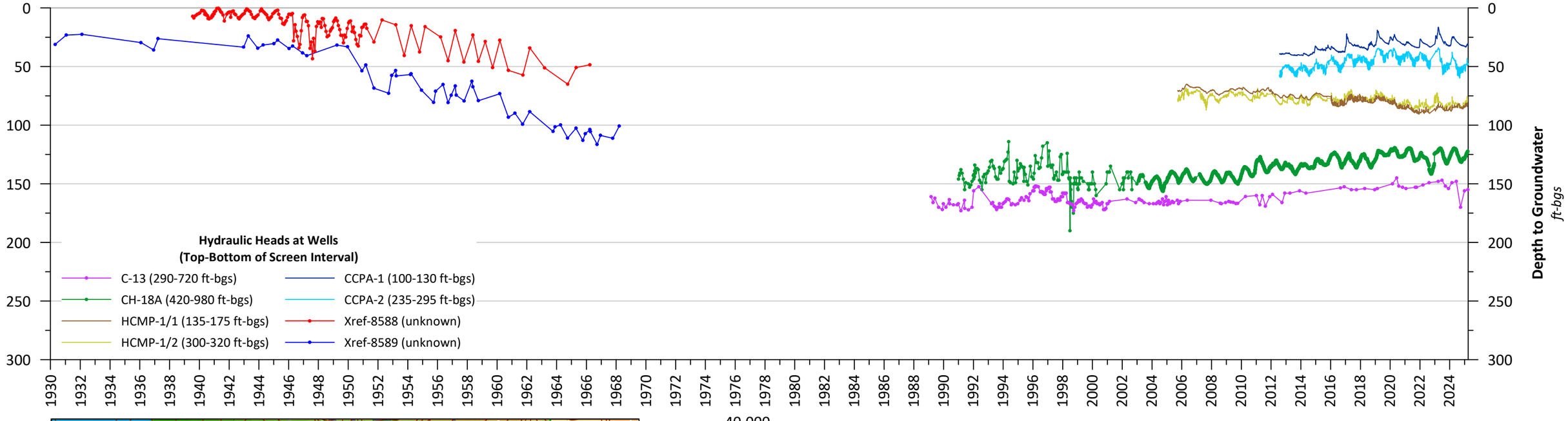
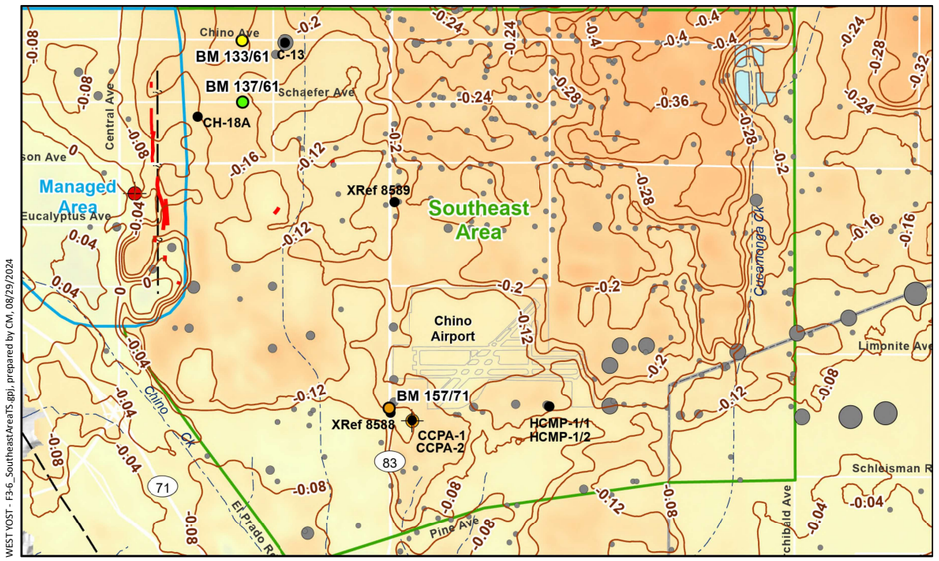
Figure 3-5

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





InSAR from March 2011 to April 2025 (see Figure 3-1a)

Relative Change in Land Surface Elevation
as Estimated by InSAR
(March 2011 to March 2025)

High : 0.75 ft

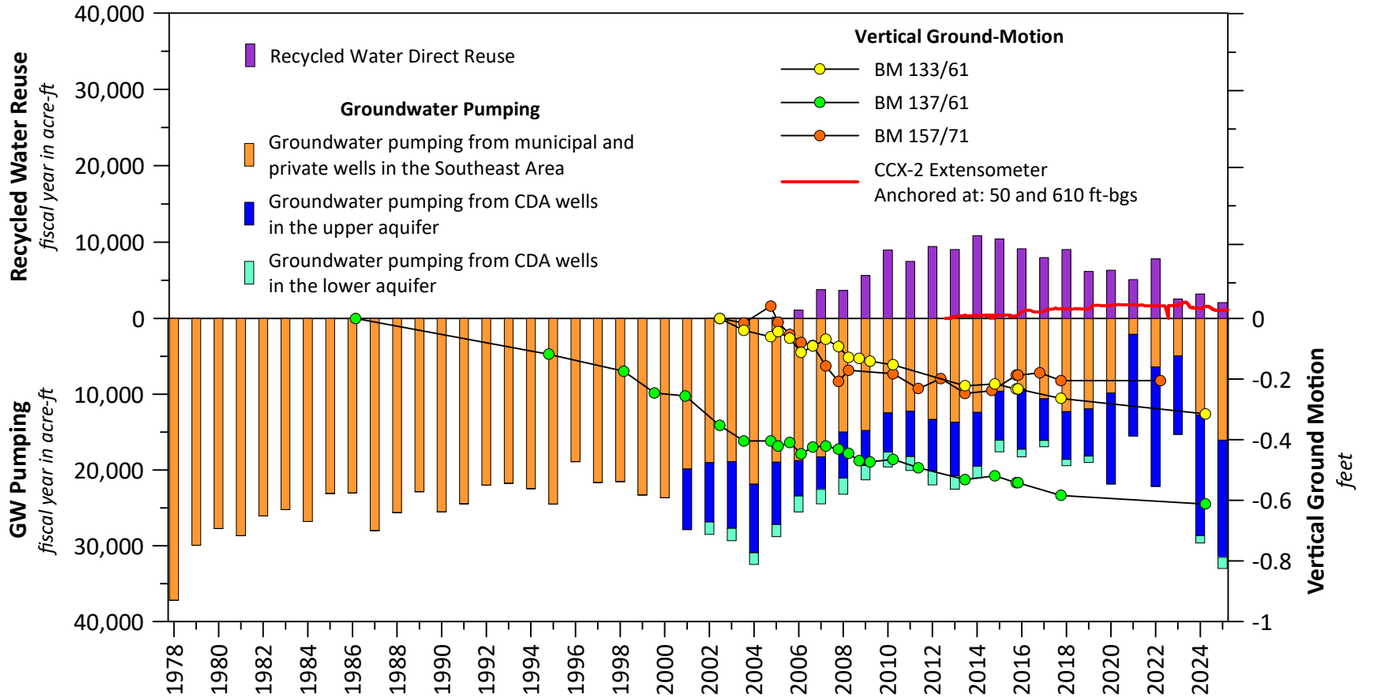
0 ft

Low : -0.75 ft

InSAR absent or incoherent

Average Annual Groundwater Pumping
April 1, 2011 to March 31, 2025
(afy)

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



Chino Basin Watermaster
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Figure 3-6
History of Land Subsidence in Southeast Area

◂Compaction Expansion▸
Aquifer-System Deformation
feet

-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08

Depth to Groundwater
feet-btoc

0
10
20
30
40
50
60
70

Quarterly Groundwater Pumping
acre-ft

3,000
2,500
2,000
1,500
1,000
500
0

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 Jul-24 Oct-24 Jan-25 Apr-25

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)

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Chino Basin Water Master
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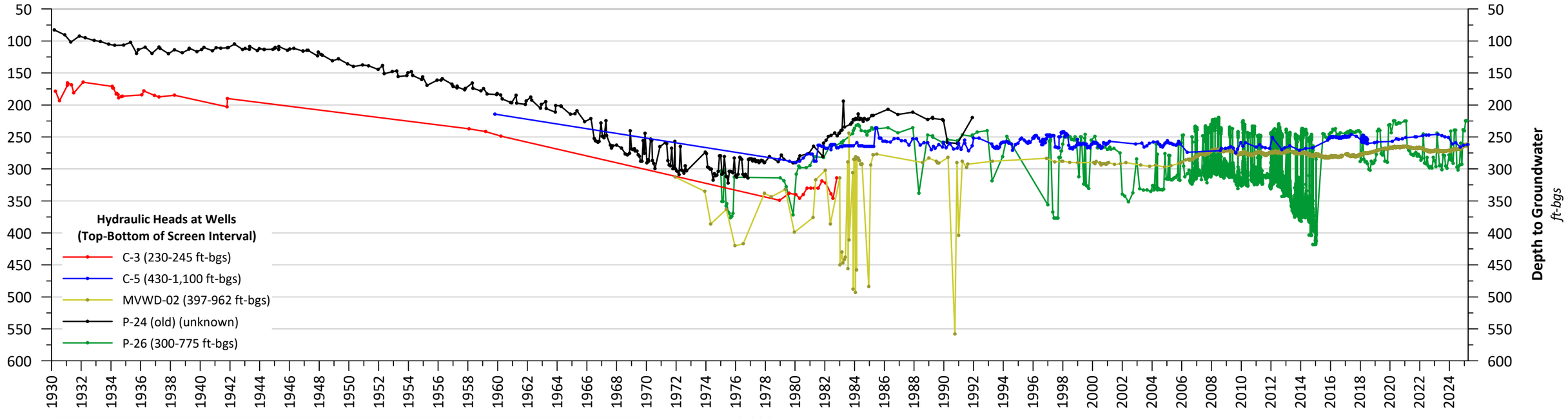
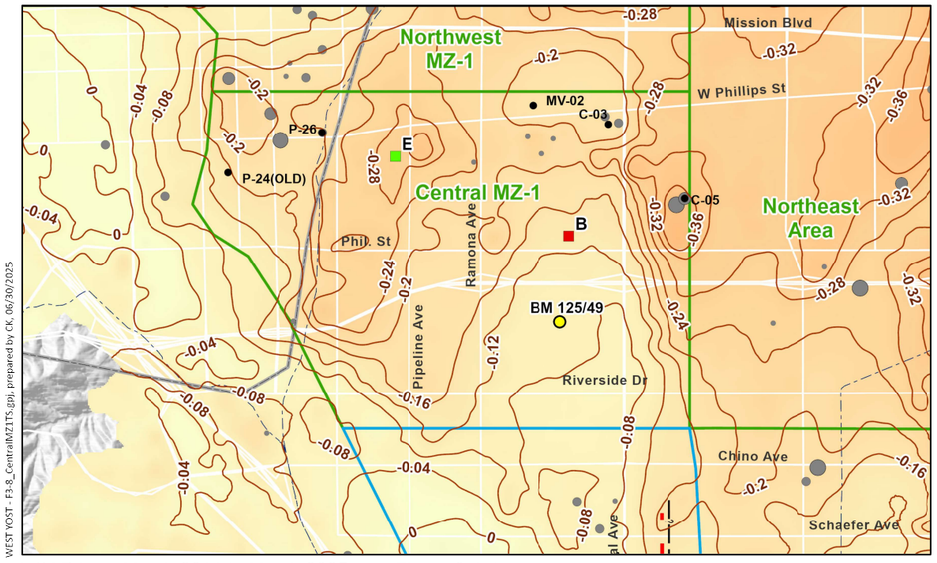
Figure 3-7

Stress and Strain within the Southeast Area

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





InSAR from March 2011 to March 2025 (see Figure 3-1a)

Relative Change in Land Surface Elevation
as Estimated by InSAR
(March 2011 to March 2025)

High : 0.75 ft

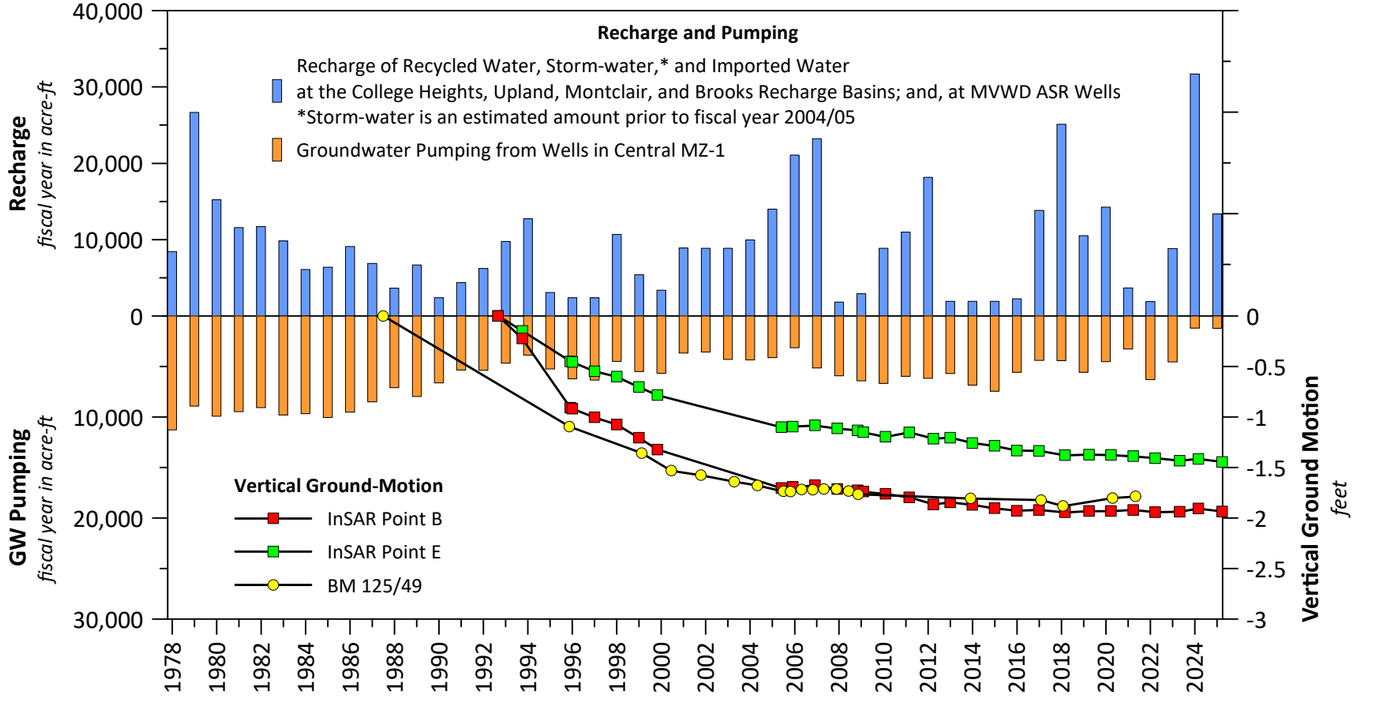
0 ft

Low : -0.75 ft

InSAR absent or incoherent

Average Annual Groundwater Pumping
April 1, 2011 to March 31, 2025
(afy)

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



Chino Basin Watermaster
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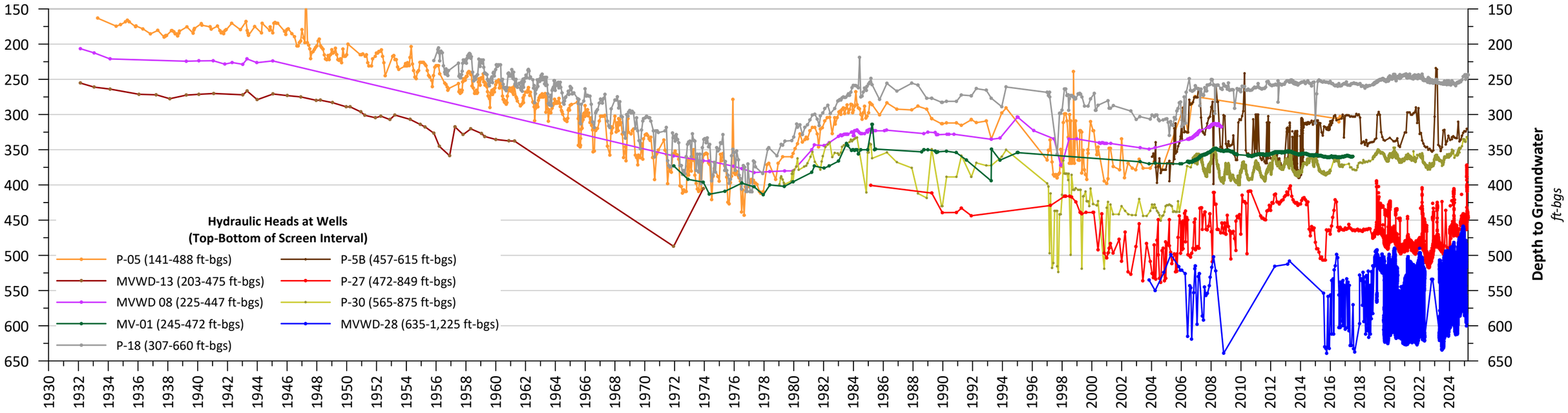
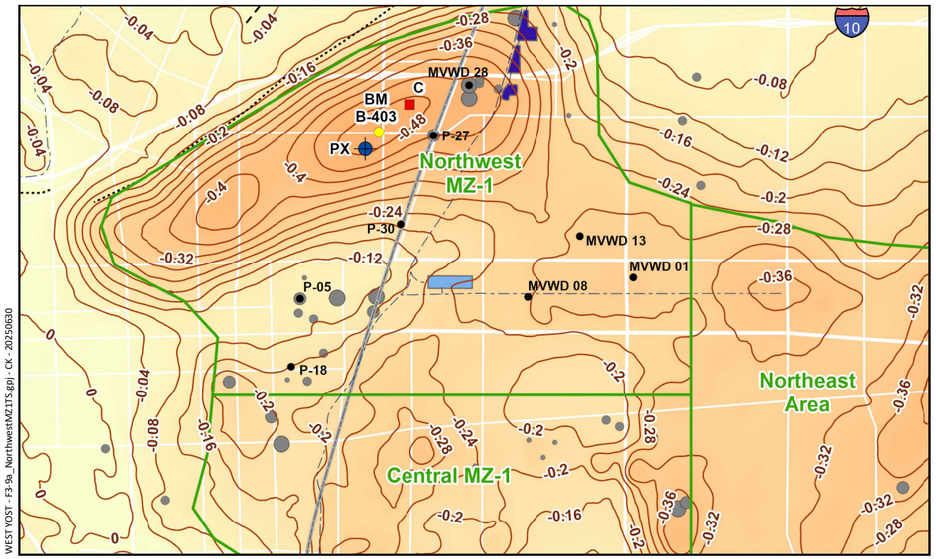
Figure 3-8
History of Land Subsidence in Central MZ-1





InSAR from March 2011 to March 2025 (see Figure 3-1a)

Relative Change in Land Surface Elevation
as Estimated by InSAR
(March 2011 to March 2025)

High : 0.75 ft

0 ft

Low : -0.75 ft

InSAR absent or incoherent

Average Annual Groundwater Pumping
April 1, 2011 to March 31, 2025
(afy)

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

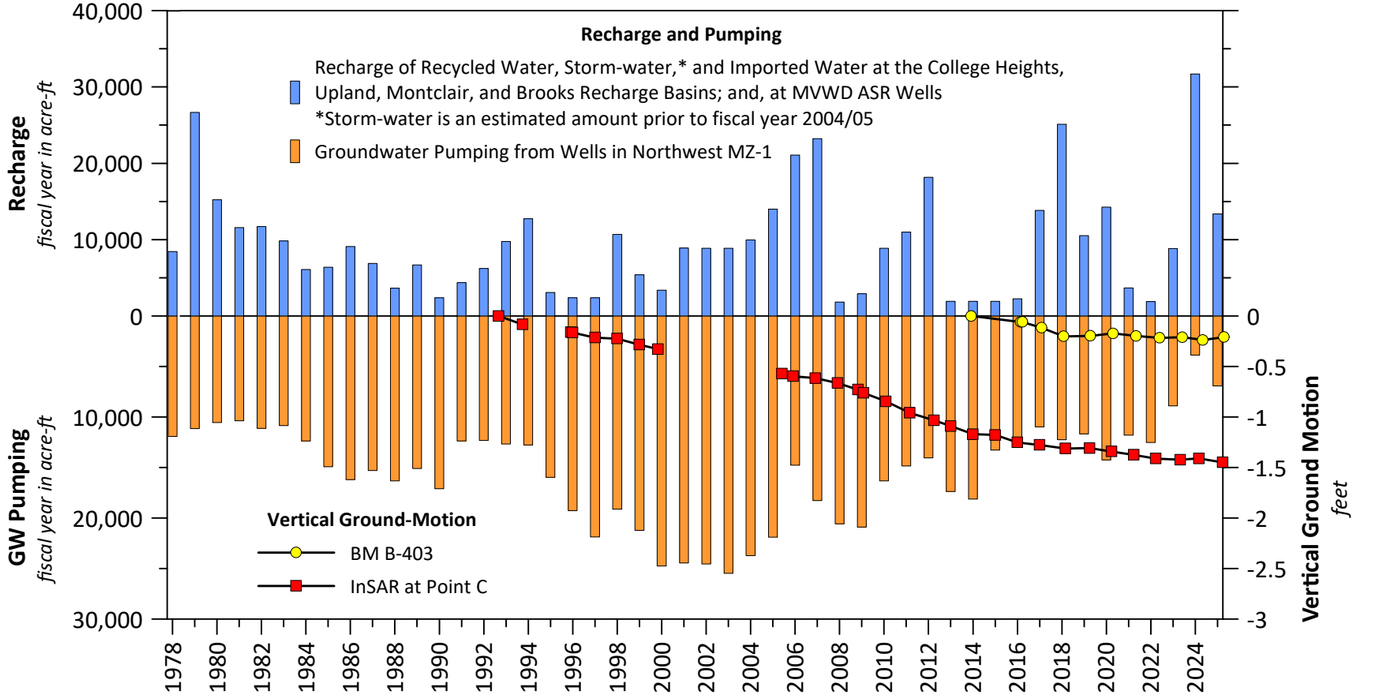
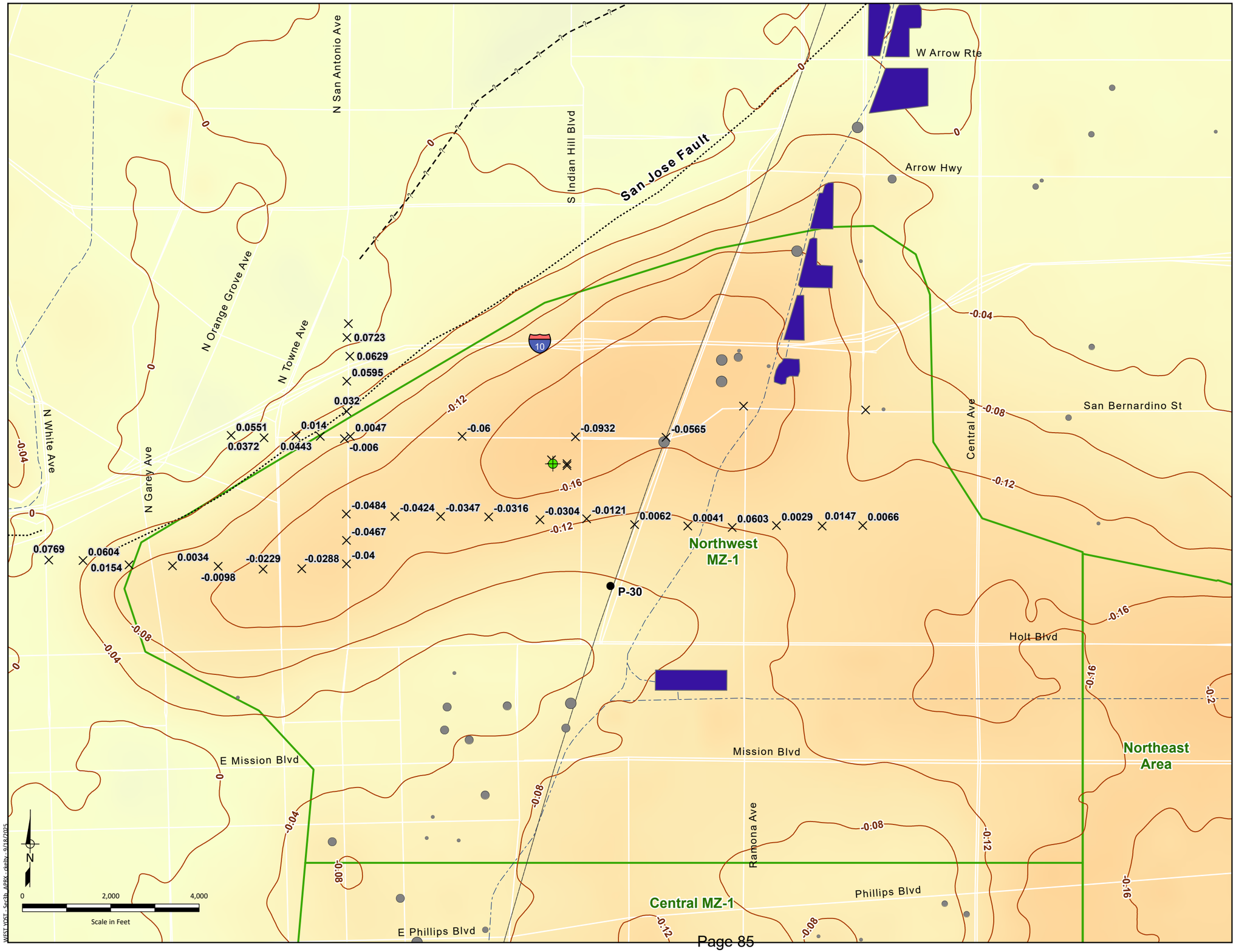


Figure 3-9a
History of Land Subsidence in Northwest MZ-1



Relative Change in Land Surface Elevation as Estimated by InSAR (March 2017 to March 2025)

- High : 0.5 ft
- 0 ft
- Low : -0.5 ft
- InSAR absent or incoherent
- Ground-Level Survey Benchmark (Measured April 17, 2025) Labeled by Vertical Ground Motion (in feet from February 2017 to April 2025)

Average Annual Groundwater Pumping April 1, 2017 to March 31, 2025 (afy)

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

Average Annual Basin Recharge April 1, 2017 to March 31, 2025 (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)

Chino Basin Watermaster
2024/25 Annual Report for the Ground-Level Monitoring Program

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Figure 3-9b

Vertical Ground Motion across Northwest MZ-1: 2017-2025

Groundwater Recharge
acre-ft per Quarter

Groundwater Pumping
acre-ft per Quarter

When groundwater elevations remain above 568 ft-amsl, InSAR indicates no permanent land subsidence. Therefore, 568 ft-amsl is the current estimate of the pre-consolidation stress threshold.

568 ft-amsl

Groundwater Elevation
ft-amsl

Vertical Ground Motion
feet

Quarterly Groundwater Pumping from Northwest MZ-1
- Aquifer Layer 1
- Aquifer Layer 3
- Aquifer Layer 5
- Unknown Aquifer(s)

Quarterly Recharge Northwest MZ-1*

**Brooks Basin*
Upland Basin
Montclair Basins 1-4
College Heights Basins 1-2
MVWD Injection Wells

Groundwater Elevation at Wells (Screen Interval)
- P-30 (565-875 ft-bgs)
  Well screen across aquifer (model) layers 1 and 3

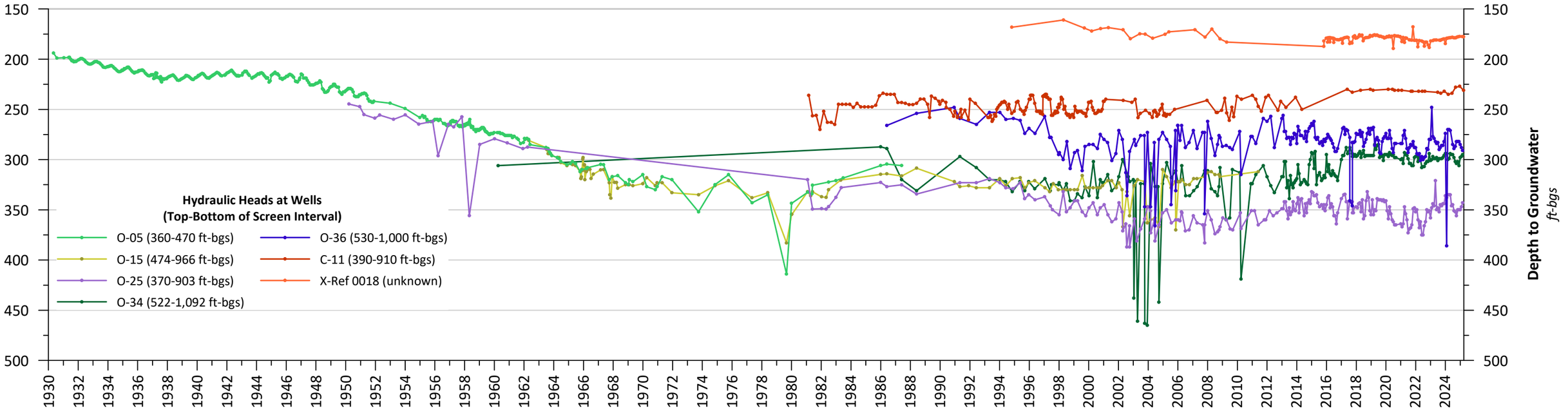
Vertical Ground Motion
- Cumulative Displacement (at the P-30 location)

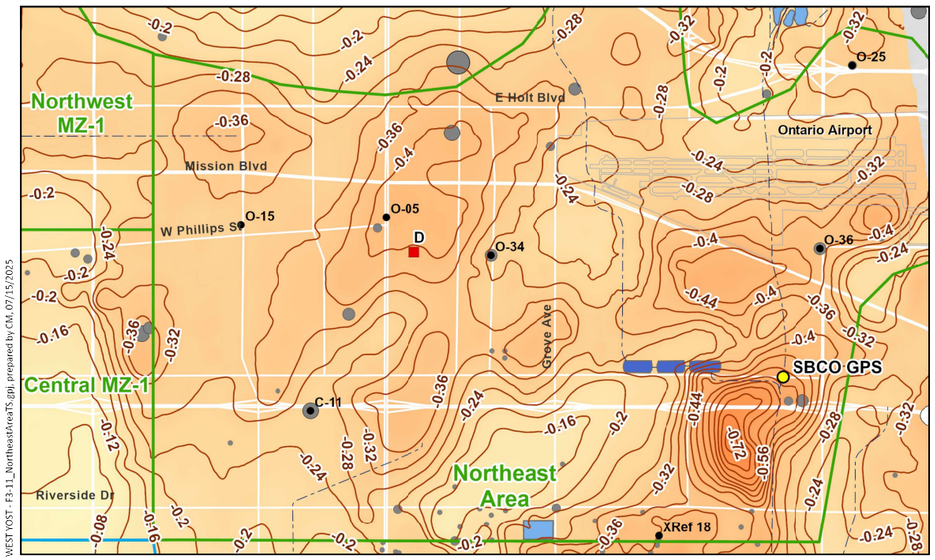
WEST YOST - F3-10_P30_InSAR_PumpRecharge.gpj - CK - 20250630

Chino Basin Watermaster
2024/25 Annual Report for the Ground-Level Monitoring Program

Figure 3-10

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





InSAR from March 2011 to March 2025 (see Figure 3-1a)

Relative Change in Land Surface Elevation
as Estimated by InSAR
(March 2011 to March 2025)

High : 0.75 ft

0 ft

Low : -0.75 ft

InSAR absent or incoherent

Average Annual Groundwater Pumping
April 1, 2011 to March 31, 2025
(afy)

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

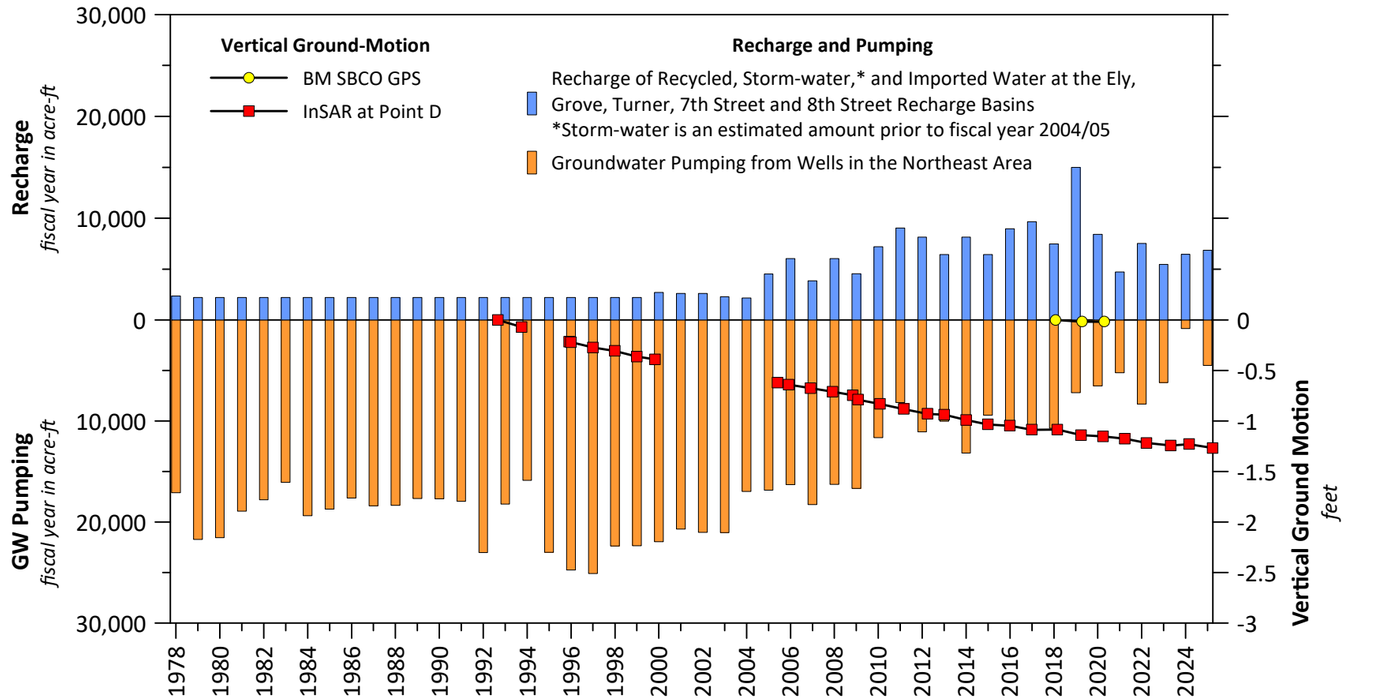
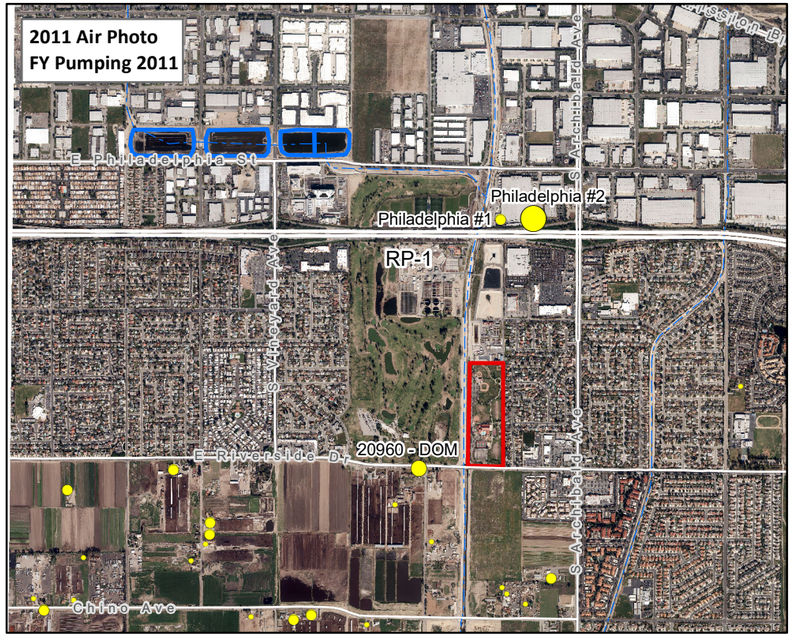
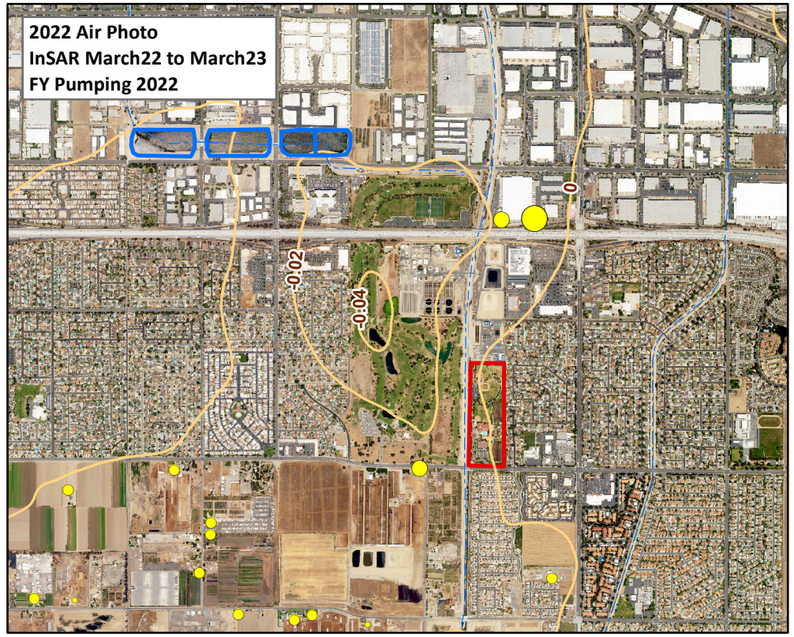
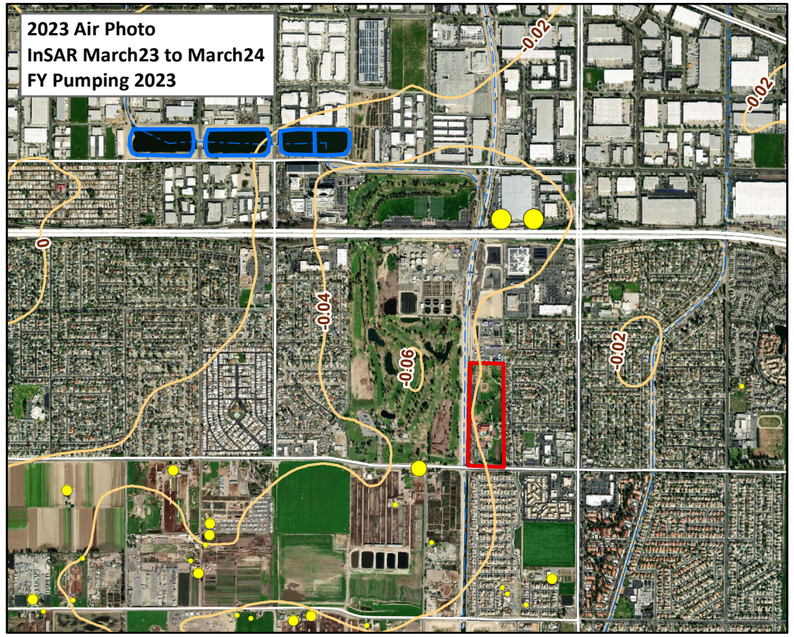
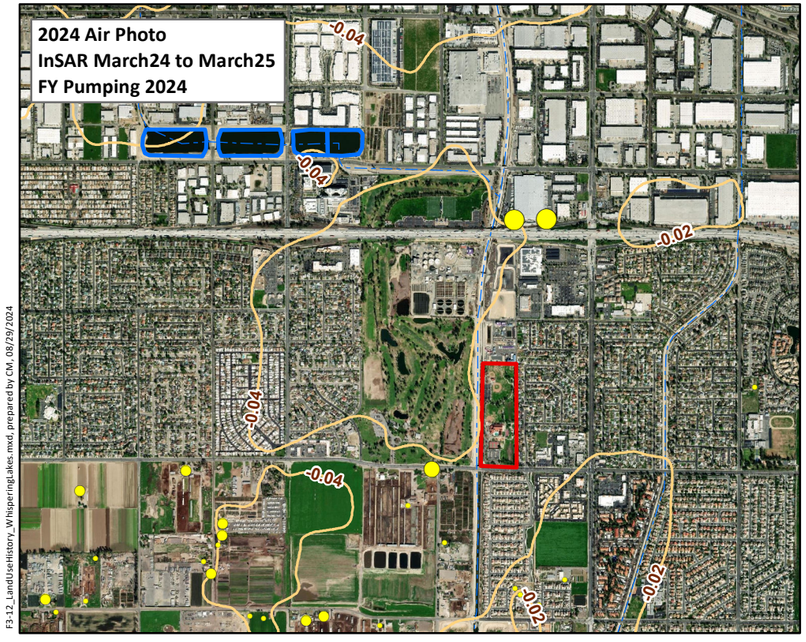


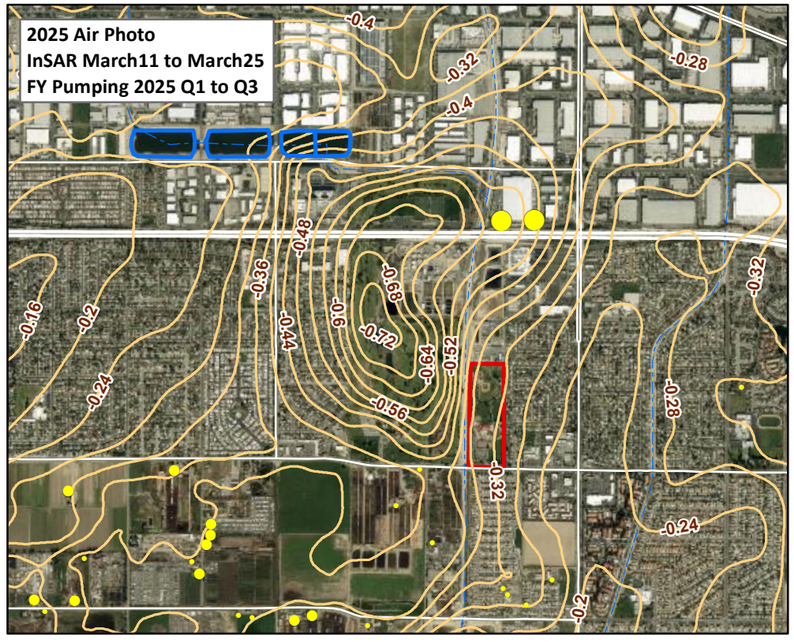
Figure 3-11
History of Land Subsidence in Northeast Area

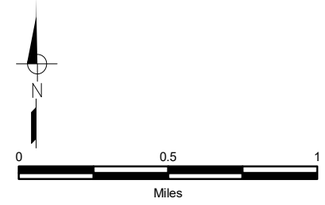


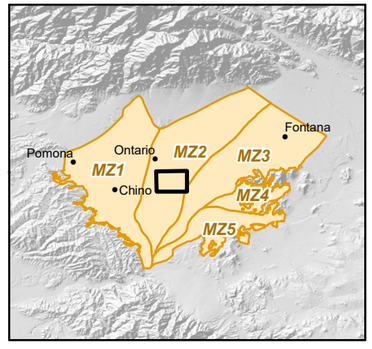












F3-12_LandUseHistory_WhisperingLakes.mxd, prepared by CM, 08/29/2024

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

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

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

Location of Historic Sewage Disposal Ponds

Ely Recharge Basins

Chino Basin Watermaster

2024/25 Annual Report for the Ground-Level Monitoring Program

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, 2025
(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 2025)

- High : 0.75 ft
- 0 ft
- Low : -0.75 ft
- InSAR absent or incoherent

- Managed Area
- Areas of Subsidence Concern
- Recharge 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

2024/25 Annual Report for the Ground-Level Monitoring Program

Figure 3-13

Seismicity across the Chino Basin: 2011-2025

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions and Recommendations

The major conclusions and recommendations of this 2024/25 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 2024 to March 2025. The elevated hydraulic head was 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 and storm waters in Northwest MZ-1 (Upland, College Heights, Montclair, and Brooks basins) has increased mainly due to "put" cycles in the Dry-Year Yield Program and relative wet years that resulted in increased storm water recharge. 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 during the facility refurbishment, as well as 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.
  -
  - 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. However, the TerraSAR-X data only covers the western portion of the Chino Basin. Based on GLMC comments from 2024/25, a new subtask is recommended for 2025/26 to conduct InSAR monitoring across the eastern portion of the Chino Basin using data published by the DWR for the period 2015-2025 (i.e., the portion of the Basin not currently analyzed with TerraSAR-X). This subtask involves downloading and processing InSAR datasets published by the DWR to support SGMA implementation, analyzing ground motion across the eastern portion of Chino Basin, comparing DWR InSAR results to TerraSAR-X results across the western portion of the Chino Basin, and documenting the results, interpretations, and recommendations in the 2025/26 annual report.

- 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 or coordination with Niagara Water Company to provide water level data if transducer installation is not possible.

  — Continue to collect and analyze seismicity data in the Study Area.

  — Analyze and report on the monitoring data in these annual reports.

4.2 Recommended Scope and Budget for Fiscal Year 2025/26

The scope-of-work for the GLMP for FY 2025/26 was recommended by the GLMC in April 2025 and approved by Watermaster in May 2025. Appendix A is the technical memorandum prepared by the GLMC, titled *Recommended Scope and Budget for the Ground-Level Monitoring Program for FY 2025/26*.

In March 2026, Watermaster staff and the Watermaster Engineer will present the preliminary results of the GLMP through 2025 and a recommended FY 2026/27 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 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 2025/26

TECHNICAL MEMORANDUM

DATE: April 7, 2025 Project No.: 941-80-24-22

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 2025/26 **(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 2025/26 in the form of a proposed scope-of-work and budget.

Members of the GLMC are asked to:

- Review this draft TM prior to March 6, 2025.
- Attend a meeting of the GLMC at 10:00 am on March 6, 2025 to discuss the proposed scope-of-work and budget for FY 2025/26.
- Submit comments and suggested revisions on the proposed scope-of-work and budget for FY 2025/26 to the Watermaster by April 3, 2025.

A final scope-of-work and budget that addresses the comments and suggested revisions of the GLMC will be included in the Watermaster's proposed budget for FY 2025/26. The final scope-of-work and budget for FY 2025/26 will be included in Section 4 of the *2025/26 Annual Report for the GLMP*.

RECOMMENDED SCOPE-OF-WORK AND BUDGET – FY 2025/26

A proposed scope-of-work for the GLMP for FY 2025/26 is shown in Table 1 as a line-item cost estimate. The proposed scope-of-work is summarized below.

Table 1. Work Breakdown Structure and Cost Estimates for the Ground-Level Monitoring Program: FY 2025/26

	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 *2025/26*	Approved Budget *2024/25*	
												a	*b*	*a - b*
Task 1.	**Setup and Maintenance of the Monitoring Network**			**$42,291**						**$9,066**	**$51,357**	**$51,357**	**$48,239**	**$3,118**
1.1	Maintain Extensometer Facilities													
1.1.1	Routine maintenance of Ayala Park, Chino Creek, and Pomona extensometer facilities		21	$30,963	$687	$250	$350			$1,287	$32,250	$32,250	$30,685	$1,565
1.1.2	Replacement/repair of equipment at extensometer facilities		6	$11,328	$183	$6,000				$6,183	$17,511	$17,511	$15,957	$1,554
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**			**$34,408**						**$822**	**$35,230**	**$35,230**	**$33,508**	**$1,722**
2.1	Conduct Quarterly Monitoring at Extensometers Facilities													
2.1.1	Download data from the Ayala Park Extensometer facility		4	$5,720	$351		$40			$391	$6,111	$6,111	$5,808	$303
2.1.2	Download data from the Chino Creek Extensometer facility		4	$5,720			$40			$40	$5,760	$5,760	$5,476	$284
2.1.3	Download data from Pomona Extensometer facility		4	$5,720	$351		$40			$391	$6,111	$6,111	$5,808	$303
2.1.4	Process, check, and upload data to database		10	$17,248						$0	$17,248	$17,248	$16,416	$832
Task 3.	**Basin Wide Ground-Level Monitoring Program (InSAR)**			**$82,616**						**$28,600**	**$111,216**	**$111,216**	**$104,480**	**$6,736**
3.1	Satellite tasking and data selection with AirBus for 2025/26		0.5	$1,200					$1,000	$1,000	$2,200	$2,200		
3.2	Assess SAR baselines for 2025/26 and select/purchase TerraSAR-X frames from Airbus		0.5	$1,200					$10,000	$10,000	$11,200	$11,200		
3.3	Prepare and check interferograms for 2025/26		28	$66,144						$0	$66,144	$66,144	$104,480	$6,736
3.4	GAMMA software for InSAR processing (initial purchase + annual maintenance)		0	$0					$17,600	$17,600	$17,600	$17,600		
3.5	Compile and prepare DWR InSAR estimates for Chino Basin; Compare to TerraSAR-X		7.5	$14,072						$0	$14,072	$14,072		
Task 4.	**Perform Ground-Level Surveys**			**$8,876**						**$55,155**	**$64,031**	**$64,031**	**$45,744**	**$18,287**
4.1	Conduct Spring-2026 Elevation surveys in Northwest MZ-1		1.5	$2,732				$40,155		$40,155	$42,887	$42,887	$29,888	$12,999
4.2	Conduct Spring-2026 Elevation Survey in the Northeast Area		0	$0				$53,805		$0	$0	$0	$0	$0
4.3	Conduct Spring-2026 Elevation Survey in the Southeast Area		0	$0				$56,584		$0	$0	$0	$0	$0
4.4	Conduct Spring-2026 Elevation and EDM Surveys in the Managed Area/Fissure Zone		0	$0				$46,800		$0	$0	$0	$0	$0
4.5	Conduct GPS Survey in the Northeast Area		0	$0				$5,000		$5,000	$5,000	$5,000	$0	$5,000
4.6	Replace Destroyed Benchmarks (if needed)		0	$0				$10,000		$10,000	$10,000	$10,000	$10,000	$0
4.7	Process, Check, and Update Database		3	$6,144						$0	$6,144	$6,144	$5,856	$288
Task 5.	**Data Analysis and Reporting**			**$81,668**						**$0**	**$81,668**	**$81,668**	**$87,084**	**-$5,416**
5.1	Prepare Draft 2024/25 Annual Report of the Ground-Level Monitoring Committee		19	$34,896						$0	$34,896	$34,896	$36,744	-$1,848
5.2	Prepare Final 2024/25 Annual Report of the Ground-Level Monitoring Committee		6.5	$14,432						$0	$14,432	$14,432	$16,820	-$2,388
5.3	Compile and Analyze Data from the 2025/26 Ground-Level Monitoring Program		12	$22,704						$0	$22,704	$22,704	$23,520	-$816
5.4	Continue Whispering Lakes Subsidence Investigation		6.25	$9,636						$0	$9,636	$9,636	$10,000	-$364
Task 6.	**Develop a Subsidence-Management Plan for Northwest MZ-1**			**$139,091**						**$30,287**	**$169,378**	**$169,378**	**$16,656**	**$152,722**
6.1	Aquifer-System Monitoring													
6.1.1	Collect pumping and piezometric data from agencies every three months; check and upload data to HDX		0	$0						$0	$0	$0	$8,448	-$8,448
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		2.5	$4,792						$0	$4,792	$4,792	$8,208	-$3,416
6.1.3	Refurbish PX with help from outside professional; Continue to periodically check and adjust extensometers		9.25	$15,963	$287	$15,000		$15,000		$30,287	$46,250	$46,250	$0	$46,250
6.2	Refine and Evaluate Subsidence-Management Alternatives													
6.2.1	Review 2025 SYR results and prepare up to two (2) SMAs		4	$9,416						$0	$9,416	$9,416		
6.2.2	Prepare draft TM that describes the SMAs		6.5	$15,192						$0	$15,192	$15,192		
6.2.3	Prepare for and meet with the GLMC to receive feedback on the draft TM		2	$4,992						$0	$4,992	$4,992		
6.2.4	Run the SMAs with the CVM and 1D Models		25.25	$59,988						$0	$59,988	$59,988	$0	$118,336
6.2.5	Prepare draft TM to describe SMA results, interpretations and recommendations		7.5	$16,912						$0	$16,912	$16,912		
6.2.6	Prepare for and meet with the GLMC to receive feedback on the draft TM		2	$4,992						$0	$4,992	$4,992		
6.2.7	Prepare final TM to describe SMA results, interpretations and recommendations		3	$6,844						$0	$6,844	$6,844		
Task 7.	**Meetings and Administration**			**$60,496**						**$395**	**$60,891**	**$60,891**	**$57,937**	**$2,955**
7.1	Prepare for and Conduct Four Meetings of the Ground-Level Monitoring Committee	a	14	$33,312	$307					$307	$33,619	$33,619	$32,035	$1,585
7.2	Prepare for and Conduct One As-Requested Ad-Hoc Meeting	a	3	$7,128	$88					$88	$7,216	$7,216	$6,876	$340
7.3	Perform Monthly Project Management		3	$8,112						$0	$8,112	$8,112	$7,728	$384
7.4	Prepare a Recommended Scope and Budget for the GLMC for FY 2026/27		5.25	$11,944						$0	$11,944	$11,944	$11,298	$646
Totals				**$449,446**						**$124,325**		**$573,772**	**$393,647**	**$180,125**

Notes:

a Assumes in-person meetings.

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 2025/26 under this subtask include:

- Monthly adjustments to the PX extensometers to improve the accuracy of the measurements of aquifer-system deformation.
- Replace extensometer transducers and CR1000 control panel as needed.

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 2025 to March 2026.[1]

In this subtask, five SAR scenes that are acquired by the TerraSAR-X satellite from March 2025 to March 2026 are purchased from the German Aerospace Center. West Yost will use the SAR scenes to

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

prepare 12 interferograms (InSAR) that describe the incremental and cumulative vertical ground motion that occurred from March 2025 to March 2026, 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 ($66,144)

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: $11,000 + $6,600 = $17,600.

Based on GLMC comments from 2024/25, a new subtask is recommended for 2025/26 to conduct InSAR monitoring across the eastern portion of the Chino Basin using data published by the Department of Water Resources (DWR) for the period 2015-2025 (i.e., the portion of the Basin not currently analyzed with TerraSAR-X). This subtask involves downloading and processing InSAR datasets published by the DWR to support SGMA implementation, analyzing ground motion across the eastern portion of Chino Basin, and comparing DWR InSAR results to TerraSAR-X results across the western portion of the Chino Basin. The analysis will be documented and presented in the 2025/26 annual report. This new subtask in FY 2025/26 will cost about $14,072.

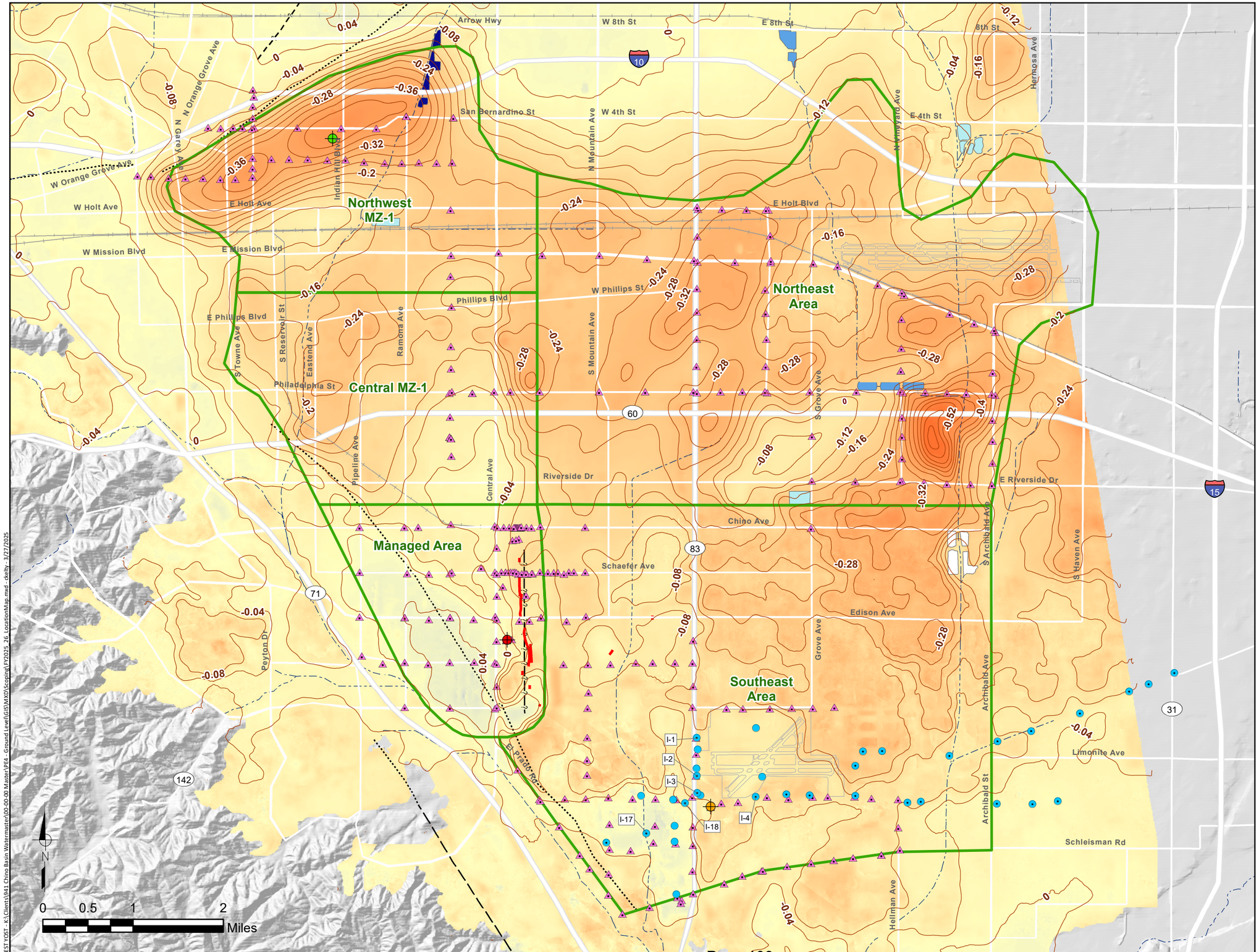
Task 4. Perform Ground-Level Surveys

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.

Table 2. History of Ground-Level Surveys

Ground-Level Survey Area	Ground-Level Survey Completed (Y/N)?							
	2018	2019	2020	2021	2022	2023	2024	2025[b]
Managed Area	Y	N	N	N	N	N	Y	N
Fissure Zone Area[a]	Y	N	N	N	N	N	N	N
Central Area	N	N	N	N	N	N	N	N
Northwest Area	Y	Y	Y	Y	Y	Y	Y	Y
San Jose Fault Zone Area[a]	Y	Y	Y	Y	Y	N	N	N
Southeast Area	Y	N	N	N	Y	N	N	N
Northeast Area	Y	Y	Y	N	N	N	N	N

(a) Denotes EDM survey area (measurements of horizontal strain).
(b) The 2025 ground-level surveys are scheduled to begin in March 2025.

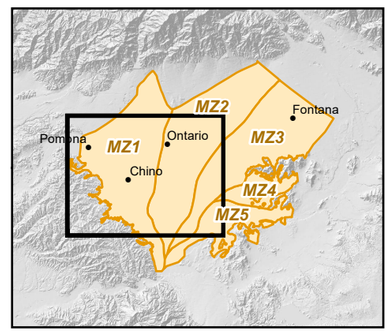


Relative Change in Land Surface Altitude as Estimated by InSAR (March 2011 to March 2024)

+ 0.6 ft
0 ft
-0.6 ft

InSAR absent or incoherent

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



WEST YOST

Chino Basin Watermaster
Ground-Level Monitoring Program

Figure 1

Ground-Level Monitoring Program
Fiscal Year 2025/26

WEST YOST - K:\Clients\941 Chino Basin Watermaster\00-00-00 Master\PE4 - Ground Level\GIS\MXD\Scoping\FY2025_26_LocationMap.mxd - dkelly - 3/27/2025

The ground-level surveys recommended for FY 2025/26 include the following:

Task 4.1. Conduct Spring-2026 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 2026. 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 2026 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 (2013-2022) 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 2026

Ground-level surveys are **not** recommended for Spring 2026 in the other Areas of Subsidence Concern (*i.e.,* Managed, Central, Northeast and Southeast). 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 to ten years).

Task 4.5. Conduct GPS Survey in the Northeast Area

This GPS survey will be used to verify InSAR estimates of vertical ground motion in the Northeast Area and can also serve as a reference point for future differential leveling surveys. Based on verbal input received at the GLMC meeting in March 2025, the GPS survey will be located at the intersection of Grove Avenue and Philadelphia Street.

Task 4.6. Replace Destroyed Benchmarks (if needed)

In this subtask, the surveyor replaces benchmark monuments that have been destroyed since the last survey, if any. If additional benchmarks are required, the surveyor will provide a cost estimate to complete the task.

Task 4.7. 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 2024/25 Annual Report for the Ground-Level Monitoring Program

Prepare the text, tables, and figures for a draft *2024/25 Annual Report for the GLMP* and submit the report to the GLMC by September 18, 2025, for review and comment.

Task 5.2. Prepare Final 2024/25 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 *2024/25 Annual Report for the GLMP* by November 3, 2025. 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 2025 Watermaster meetings for approval.

Task 5.3. Compile and Analyze Data from the 2025/26 Ground-Level Monitoring Program

During the winter and spring of 2026, the monitoring data generated from the GLMP during 2025/26 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 2026 during the development of a recommended scope of services and budget for FY 2026/27.

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. This concentrated area of subsidence is herein referred to as the Whispering Lakes Subsidence Feature.

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 for the GLMP*.

The investigation and subsequent monitoring show that the subsidence feature directly overlies the Whispering Lakes Golf Course, and hence, suggest that the most plausible mechanism for this subsidence feature is shallow soil consolidation associated with the golf course and/or the prior overlying land uses. If true, groundwater management will have no effect on the Whispering Lakes Subsidence Feature. However, the possibility remains that deeper aquifer-system compaction is at least a contributing mechanism for the land subsidence.

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.

During 2025/26, the monitoring data should be analyzed and interpreted, which could rule out aquitard drainage (and groundwater utilization) as the cause of the subsidence, or not. This analysis will be documented in the *2024/25 Annual Report for the GLMP* along with recommendations for future work, if any.

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 GLMP 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 GLMP, and in the *Initial Hydrologic 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 GLMP 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 2024/25

The progress that has been made to implement the Work Plan through FY 2024/25 is described below:

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

- 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) 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:

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[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

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

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 GLMP 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.

Based on the expected progress through FY 2024/25, the following work is recommended for FY 2025/26 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.

[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.

The Watermaster Engineer has previously reported that the PX monitoring facility is not recording accurate extensometer data. The reasons for the inaccuracies could include, but not limited to, incorrect arrangement of the extensometer cables within the well casings, incorrect counterweights on the extensometer cables, malfunctioning linear potentiometers and/or data loggers, and/or other unknown factors. For FY 2025/26, this task includes a recommendation to refurbish the PX and its monitoring equipment with the help of an outside professional. By inspecting the existing equipment, video logging the well casings, and installing new monitoring equipment with the help of an outside professional, we can more effectively troubleshoot the inaccurate data collection at the PX monitoring facility. The cost estimate to refurbish the PX with the help of an outside professional is about $46,250.[8]

Task 6.2. Refine and Evaluate Subsidence-Management Alternatives

During 2024/25, the Watermaster is conducting the 2025 SYR, which involves the development and evaluation of multiple projection scenarios of future hydrology, pumping, managed recharge, and use of managed storage in the Chino Basin. These projection scenarios are being simulated with an updated CVM. The CVM results are being 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 in Northwest MZ-1 is being performed using the CVM results, which will then be the input data for the 1D Models at PX and MVWD-28 to predict the potential for future subsidence associated with the Safe Yield.

Based on the outcomes of the 2025 SYR, the Watermaster Engineer may recommend that additional SMAs be developed and evaluated with the CVM and 1D Models to generate the necessary information to:

- Finalize the Guidance Level and the *Subsidence Management Plan for Northwest MZ-1*.
- Evaluate the minimum recharge quantity of supplemental water in MZ-1, as required by the Peace II Agreement.

To perform this analysis, the Watermaster Engineer will propose up to two (2) additional SMAs for evaluation with the CVM and the 1D Models. A draft TM will be prepared and distributed to the GLMC that describes the assumptions of the SMA(s), including the groundwater production and replenishment/recharge plans of the Chino Basin parties. A GLMC meeting will be held to review the recommended SMA(s) and to receive feedback on the TM. The verbal and written feedback from the GLMC will be used to finalize the SMA(s).

Then, the CVM and 1D Models will be used to evaluate the potential future subsidence in Northwest MZ-1 under the SMAs. Again, the objective of this task is to recommend a final Guidance Level for Northwest MZ-1 and evaluate the minimum recharge quantity of supplemental water in MZ-1, as required by the Peace II Agreement. The model results, interpretations, and recommendations will be documented in a draft TM and distributed to the GLMC. A GLMC meeting will be held to review the draft TM and receive GLMC feedback. The verbal and written feedback from the GLMC will be used to finalize the TM. The final TM and its recommendations will be shared with all Watermaster Parties through the monthly Pool, Advisory Committee, and Board meetings.

[8] See Appendix A for a cost breakdown by task to refurbish the PX monitoring facility.

Task 7. Meetings and Administration

Task 7.1. 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 2025 – Review and discuss GLMP for FY 2025/26. Review and discuss the draft TM that describes the assumptions of the SMA(s), including the groundwater production and replenishment/recharge plans of the Chino Basin parties.
- September 2025 – Review the draft 2024/25 Annual Report for the GLMP.
- March 2026 – Review the draft recommended scope and budget for FY 2026/27. Review and discuss the draft TM that describes the results of the SMA evaluation(s), including the recommended final Guidance Level for Northwest MZ-1 and the evaluation of the minimum recharge quantity of supplemental water in MZ-1.
- April 2026 – Review the final recommended scope and budget for FY 2026/27 (if needed).

Task 7.2. 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 7.3. Perform Monthly Project Management

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

Task 7.4. Prepare a Recommended Scope and Budget for the GLMC for FY 2026/27

This subtask includes preparing a draft and final recommended scope of services and budget for FY 2026/27 for the GLMP to support the Watermaster's budgeting process.

Appendix A. Estimated Costs for Pomona Extensometer Improvements FY2025-26

Item		Description	Estimated Costs	Notes
1.	Telemetry Equipment		$0	Removed task due to GLMC comments
2.	Electrical Power Installation	Assumes power available from nearby lighting pole (150 ft @ $45/ft)	$0	Removed task due to GLMC comments
3.	Monitoring Equipment	Purchase of linear potentiometers, transducers etc.	$15,000	
4.	Equipment Installation	Installation of new equipment	$11,250	
5.	Programming/Configuration	Field work including system testing	$0	Removed task due to GLMC comments
6.	IT Infrastructure	Equipment, software and labor for data collection automation	-	Removed task due to GLMC comments
7.	Automation of data transfer	Equipment, software and labor for database automation	$0	Removed task due to GLMC comments
8.	Video Logs and Well Assessments	Outside professional costs to video log wells and assess equipment.	$15,000	
Totals			**$41,250**	

Appendix B

Response to GLMC Comments

Listed below are:

- Comments received from the GLMC as of April 7, 2025 on the draft *Recommended Scope-of-Work and Budget for the Ground Level Monitoring Program for Fiscal Year 2025/26* (dated March 7, 2025 and April 3, 2025)
- Watermaster staff responses to GLMC comments

Comments from the City of Ontario (Alexis Mascarinas) – March 7, 2025

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

In Task 3.5, West Yost proposes using DWR InSAR data to fill the gap in evaluating subsidence in the eastern part of Chino Basin, as recommended by comments received on the FY 2023-2024 Annual Report. Once a comparison between TerraSAR-X and DWR InSAR data is completed, the addition of the DWR InSAR data may be proven to be acceptable long-term monitoring despite different satellites and potentially different resolutions. The City wants to understand:

- What level of data quality is needed to continue monitoring land subsidence?
- Is there a threshold for where a management zone would warrant a certain resolution of data collection as opposed to relying on this additional, free database?

Watermaster Response:

The magnitude of subsidence that has been occurring across the Chino Basin over the last 10-20 years has been relatively minor, hence, the subsidence monitoring techniques need to be of high resolution and accuracy.

The TerraSAR-X satellite acquires ground motion data at relatively high temporal and spatial resolution. The Watermaster has gained confidence in the accuracy of the TerraSAR-X InSAR data through repeated comparison of the InSAR results against other measured ground-motion data, such as the Ayala Park Extensometer and the periodic leveling surveys at benchmarks. In addition, the TerraSAR-X data has been favorably compared against changes in groundwater levels, which are the main driver of aquifer system deformation and vertical ground motion.

Although the DWR InSAR data do not have the same resolution as TerraSAR-X, one of the main objectives of this proposed effort is to evaluate the ability of the DWR InSAR data to produce results similar to those of TerraSAR-X. This evaluation will focus on how well the DWR InSAR data reflect measured changes in groundwater levels and vertical ground motion, as determined by other techniques (e.g., extensometers, GPS, and leveling surveys).Additionally, the basin-wide DWR InSAR data will be used to verify that there are no subsidence issues outside the western part of the Chino Basin, where ground levels are well documented each year.

Comment 2 – Task 4. Perform Ground Level Surveys.

In Task 4.2, West Yost recommends performing elevation surveys for Northeast Area since the previous survey was conducted five years ago. While the City understands the importance of maintaining accurate and up-to-date data, it was noted in the March meeting that these level surveys serve primarily as back-up for the InSAR data, which has been described as having increased accuracy in this region over time although West Yost has recommended conducting this survey every 5 years, if it is proven there is

less need for conducting these surveys, the City suggests the surveys occur every 10 years or longer as a budget saving measure. Additionally, the City recommends only using GPS acquisition on any new benchmarks, without additional differential level surveying, for elevation verification to save on costs.

Watermaster Response:

Since the TerraSAR-X InSAR data is providing high-resolution, accurate data on vertical ground with good spatial coverage across the Northeast Area, the ground-level survey across the Northeast Area will be removed from the recommended scope of work for FY 2025-26. The GPS survey at a location within the Northeast Area will be included in the recommended scope of work as a validation method for the InSAR data.

Comments from Monte Vista Water District (Justin Scott-Coe) – March 7, 2025

Comment 1 – Task 4.5. Benchmark Reconnaissance.

"The Northeast area has not been surveyed in 5 years and will be unfamiliar to the current surveyor crew, as the previous staff members are no longer with Guida. Guida anticipates that some benchmarks may have been disturbed or destroyed. Therefore, prior to the beginning leveling surveys, the surveyor crew will traverse the Northeast area to recover, flag, and repaint the benchmarks to ensure a more efficient leveling survey. Disturbed or destroyed benchmarks will be documented, and the final count for subtask 4.6 (replacement – if needed) will be determined. This benchmark reconnaissance is estimated to cost $20,980."

- The reconnaissance cost to traverse one leveling survey route seems high. How was the cost for reconnaissance developed?

Watermaster Response:

The cost for the benchmark reconnaissance was developed by Guida.

However, this task has been removed from the recommended scope of work (see response above to the City of Ontario's comment #2.

Comment 2 – Task 5.4. Conduct Whispering Lakes Subsidence Investigation of the Northeast Area.

"The investigation and subsequent monitoring show that the subsidence feature directly overlies the Whispering Lakes Golf Course, and hence, suggest that the most plausible mechanism for this subsidence feature is shallow soil consolidation associated with the golf course and/or the prior overlying land uses. If true, groundwater management will have no effect on the Whispering Lakes Subsidence Feature"

- What specific work is being conducted under this subtask?
- It seems that an investigation has already been conducted and suggests that deep aquifer compaction is not the likely mechanism. The scope of work for this task should be clearly identified or it should be eliminated as a budget item in the 25/26 budget.

The description of Task 5.4 includes the following text:

> *"….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.*
>
> *During 2025/26, the monitoring data should be analyzed and interpreted, which could rule out aquitard drainage (and groundwater utilization) as the cause of the subsidence, or not. This analysis*

will be documented in the 2024/25 Annual Report for the GLMP along with recommendations for future work, if any."

The scope of work for this task includes:

- Field work associated with the maintenance and download of data from the transducers at wells.
- The data analysis and interpretation that will be documented in the Annual Report for the GLMP.

Comment 3 – Task 6. 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."

- Groundwater levels in Northwest MZ-1 have stabilized since the late 1970's 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 1970's and accelerated in the early 1990's.

"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."*

> MVWD Continues to recommend removing language suggesting that the aspirational Watermaster recommendation would "likely slow or stop aquitard compaction and land subsidence in Northwest MZ-1." It is our understanding that modeling to support this statement has not yet been conducted. In addition, recent InSAR data suggest that subsidence trends have stabilized in Northwest MZ-1 with groundwater levels well below the preliminary guidance level.

Watermaster Response:

Regarding the first comment above:

- The phrase has been revised to read "*spatial* pattern of differential subsidence" to distinguish it from rates and magnitudes of subsidence.
- While it is true that groundwater levels in Northwest MZ-1 have increased and remained relatively stable since the late 1970s, there is no guarantee that groundwater levels remain stable in the future; hence, the threat of future subsidence (and ground fissuring) remains, which is a reason why the Watermaster conducts the subsidence monitoring program and is developing a Subsidence Management Plan for Northwest MZ-1.

Regarding the second comment above:

- 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.
- While it is true that the rate of subsidence has slowed in Northwest MZ-1, the threat of future groundwater level declines and associated subsidence (and ground fissuring) remains, which is a reason why the Watermaster conducts the subsidence monitoring program and is developing a Subsidence Management Plan for Northwest MZ-1.

Comment 4 – Task 6.1. Aquifer-System Monitoring.

"The Watermaster Engineer has previously reported that the PX monitoring facility is not recording accurate extensometer data. The reasons for the inaccuracies could include, but not limited to, incorrect arrangement of the extensometer cables within the well casings, incorrect counterweights on the extensometer cables, malfunctioning linear potentiometers and/or data loggers, and/or other unknown factors. For FY 2025/26, this task includes a recommendation to refurbish the PX and its monitoring equipment, and add telemetry to facilitate real-time observation of the collected data. This effort will accelerate potential improvements by allowing the Watermaster Engineer to rapidly assess the effects of any adjustments made to the PX to improve its accuracy. The cost estimate to refurbish the PX and add telemetry is about $118,000."

- About $85,000 (Appendix A, Tasks 1, 5, 7) of the refurbishment cost seems to be related to the installation of telemetry equipment. Installing telemetry will not fix the data issue, only telemeter incorrect data to another location. Any additional investment in the PX, which is currently not functional, should be in diagnosing and addressing the problem with the PX, not in installing telemetry.
- An alternative cost proposal focused on resolving the issues related to the PX without the cost of telemetry should be prepared, or the cost-effectiveness of the proposed telemetry solution versus a cost alternative without it should be demonstrated.

Watermaster Response:

The intent of installing telemetry is to accelerate potential improvements to the PX extensometers by allowing the Watermaster Engineer to rapidly assess the effects of any adjustments made to the extensometers to improve their accuracy. In addition, the longer-term benefit of telemetry is a reduced need for field visits to the PX to download and maintain the facility.

An alternative proposal that does not include telemetry would include:

- Refurbishment of the PX monitoring and data logging equipment
- Continued incremental adjustments to the extensometers
- Manual data downloads and data analysis to check on the effectiveness of the incremental extensometer adjustments

Comment 5 – Task 6.2. Refine and Evaluate Subsidence-Management Alternatives

"Based on the outcomes of the 2025 SYR, the Watermaster Engineer may recommend that additional SMA's be developed and evaluated with the CVM and 1D Models to generate the necessary information to:

Finalize the Guidance Level and the Subsidence Management Plan for Northwest MZ-1.

Evaluate the minimum recharge quantity of supplemental water in MZ-1, as required by the Peace II Agreement."

- MVWD recommends evaluating the existing model's ability to predict the recent stabilization of subsidence trends in Northwest MZ-1 at current groundwater levels in the deep aquifer. If not,

the conceptual and numerical model should be re-evaluated and updated so that they reflect the recent stabilization of subsidence in Northwest MZ-1. Does the current model match the latest observed data and trends with additional recharge in Northwest MZ-1?

- MVWD continues to recommend assessing the recent recharge/pumping cycles that resulted in stabilization of land subsidence trends in InSAR data in Northwest MZ-1, as well as the feasibility of more frequent, higher volume recharge in the Northwest MZ-1 during the development of subsidence management alternatives.
- Additional development and 1-D modeling of SMA's is unnecessary at this time and should be postponed as continued monitoring occurs to see if InSAR and survey data continue to show a cessation of subsidence in Northwest MZ-1.

Watermaster Response:

- Regarding the first bulleted comment above: During the 2025 SYR, the existing 1D Model will be run over the projection period of 2022-2080, so the comparison of 1D Model results to recent InSAR measurements of land subsidence can be made.
- Regarding the second bulleted comment above: We agree that Watermaster should assess the effectiveness of managed recharge and pumping at minimizing and/or abating land subsidence in Northwest MZ-1. This assessment is proposed in *Task 6.2. Refine and Evaluate Subsidence-Management Alternatives*.
- Regarding the third bulleted comment above: The development and evaluation of subsidence management strategies requires testing of these strategies under future conditions of pumping and recharge using the best available modeling tools. These evaluations are proposed in *Task 6.2. Refine and Evaluate Subsidence-Management Alternatives*. Monitoring of pumping, recharge, groundwater levels, and land subsidence are important to track in real time, but such monitoring does not replace the need for model projections to support the development of effective subsidence management strategies.

Comments from City of Chino (Hye Jin Lee) – March 7, 2025

Comment 1 – Figure 1 Ground-Level Monitoring Program Fiscal Year 2025/26.

The street left of the fissure, is that Central Ave? It's not annotated in the map. Also, can you identify Ayala Park boundary and the CIM and CIW boundaries for reference? If I understand this map correctly, the fissure is in Ayala Park and even to the north of Ayala Park in private businesses area. Am I correct?

Watermaster Response:

The major street to the west of the historical ground fissures in Figure 1 is Central Avenue. The figure has been updated to include a label for Central Avenue.

The historical ground fissuring occurred on CIM property, Ayala Park, and to the north of Ayala Park in areas that are now mainly commercial land uses.

Please reference Figure 1-2 of the most recent Annual Report of the Ground-Level Monitoring Program for an air photo of the Manage Area that shows the extent of Ayala Park and CIM. The CIW is located to the southwest of CIM (off the map).

Follow-Up Comments from Monte Vista Water District (Justin Scott-Coe) – April 3, 2025

Comment 1 – Task 4.2 Conduct Elevation Survey in the Northeast Area.

"1. Do you support the removal of Task 4.2 Conduct Elevation Survey in the Northeast Area (-$56,537), and its replacement with Task 4.5 Conduct GPS Survey at Grove/Philadelphia ($5,000)?"

Yes, that would be a more reasonable approach.

Watermaster Response:

The recommended scope of work no longer includes elevation surveys for the Northeast Area. Instead, a single GPS elevation survey will be conducted at the intersection of Grove Avenue and Philadelphia Street. The GPS survey will be used to verify InSAR estimates of vertical ground motion in the Northeast Area and can also serve as a reference point for future differential leveling surveys. The estimated cost for this GPS collection is $5,000.

Comment 2 - Task 6.1.3 Refurbish PX and Add Telemetry

"2. Do you support the original Task 6.1.3 Refurbish PX and Add Telemetry ($118,000) or the alternative approach to refurbish PX without telemetry ($31,250)?"

MVWD support the alternative approach.

Watermaster Response:

The telemetry recommendation for the PX extensometers has been removed. The alternative proposal, which costs $31,250 and involves refurbishing the PX equipment without telemetry, is included in the recommended scope of work. We recommend allocating an additional $15,000 for an outside professional to video log the PX facilities, help inspect the existing equipment, and assist with the installation of new equipment. This brings the total cost for the alternative proposal to $46,250.

Comment 3

"3. Do you have any other comments and/or suggested revisions to the Recommended Scope and Budget for the GLMP for FY 2025-26?"

No additional comments.

WSP, ON BEHALF OF THE STATE OF CALIFORNIA (RICK REES)

Comment 1 – Section 2.1.2.3: Monitoring Vertical Ground Motion, Photos 2-1 and 2-2

Photos 2-1 and 2-2 are difficult to interpret. The boundary of the "Full SAR Collection Area" on Photo 2-1 does not stand out clearly from the base image, and both photos might benefit from having labels added to a few readily-identifiable features.

Response:

Photos 2-1 and 2-2 have been updated with features to provide improved spatial reference. Next year's annual report will include a new figure of the SAR coverage area with improved spatial reference.

Comment 2 – Section 2.1.2.3: Monitoring Vertical Ground Motion, Table 2-1

In Table 2-1, the date range of 2011 – 2024 appears incorrect or misplaced as listed under "Short-Term."

Response:

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

Comment 3 – Sections 3.2 and 3.4 and Figures 3-5 and 3-10: DWR's Empirical Analysis Method

The Draft Report describes application of DWR's Empirical Analysis method for using ground motion and hydraulic head data to estimate groundwater levels at wells C-15 and P-30 above which no permanent subsidence occurs. (It may be worth noting that the cited DWR document is still a draft document and therefore may be subject to change.) DWR also describes Modeling methods similar to those currently being used for Northwest MZ-1. Although not as detailed as the Modeling methods, we support the use of the Empirical Analysis method to provide general information to help understand conditions in parts of the basin where more detailed work hasn't been done or isn't needed. We are not requesting additional effort or analysis at this time but suggest that comparisons of Empirical Analysis method results and Modeling method results might be informative when Modeling method results are available for additional locations in the future.

Response:

The final report will note that DWR's Empirical Analysis method is based on the draft Subsidence BMP and may be subject to change. Watermaster agrees that comparing future Empirical and 1-D model results will help understand "critical heads" across the areas of subsidence concern. We plan to explore this further in the subsidence modeling efforts in 2026.

MONTE VISTA WATER DISTRICT (JUSTIN SCOTT-COE)

Comment 1 – 1.0 Introduction: Peace II Agreement Recharge Obligation

Please add to the background section a description of the Watermaster's obligation under the Peace II Agreement to recharge in MZ-1, and to assess whether or not sufficient recharge is being conducted within the subarea to maintain hydrologic balance and prevent land subsidence. See Section 8 of the Peace II Agreement for additional discussion. Section 8(e) is provided below for reference:

- Section 8(e): "Five years from the effective date of the Peace II Measures, Watermaster will cause an evaluation of the minimum recharge quantity for MZ1. After consideration of the information developed in accordance with the studies conducted…, the observed experiences in complying with the Dry Year Yield Agreements as well as any other pertinent information, Watermaster may increase the minimum requirement for MZ1 to quantities greater than 6,500 acre-feet per year. In no circumstance will the commitment to recharge 6,500 acre-feet be reduced for the duration of the Peace Agreement."

Response:

The introduction has been revised to include the following:

"In addition to the MZ-1 Plan, the Peace Agreement required the Watermaster to recharge a minimum of 6,500 afy of supplemental water in Management Zone 1. This requirement was continued under the Peace II Agreement as a long-term obligation to maintain hydrologic balance and control land subsidence in MZ1. The Watermaster is also required to evaluate this requirement and potentially increase the minimum recharge quantity above 6,500 afy after review of basin performance and subsidence studies."

Comment 2 – Section 1.1.5: 2015 Chino Basin Subsidence Management 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."

Please remove or reword this sentence. The "same pattern of differential subsidence" has not occurred across the San Jose Fault as occurred in the Managed Area during the time of ground fissuring. Groundwater levels in Northwest MZ-1 have stabilized since the late 1970's and no ground fissuring events have been reported in Northwest MZ-1 to date. Ground fissuring in the Managed Area was reported to occur as early as the early 1970's and accelerated in the early 1990's. It is different in magnitude, geologic setting, spatial and temporal pattern, etc.

Response:

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

While it is true that groundwater levels in Northwest MZ-1 have increased and remained relatively stable since the late 1970s, there is no guarantee that groundwater levels remain stable in the future;

hence, the threat of future subsidence (and ground fissuring) remains, which is a reason why the Watermaster conducts the subsidence monitoring program and is developing a Subsidence Management Plan for Northwest MZ-1.

Comment 3 – Section 2.1.1.1: Pomona Extensometer

"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. *Inspect the existing monitoring/recording equipment, video log the well casings, and install new monitoring equipment with the help of an outside professional to more effectively troubleshoot the inaccurate data collection at the PX monitoring facility."*

Please add additional discussion to the Annual Report regarding the interference between the water level monitoring data loggers/cables and the extensometer reported during the October 2, 2025, Ground Level Monitoring Committee meeting as a potential cause for extensometer malfunction.

Response:

The text has been revised to note that tangled transducer cables with the steel extensometer cables may have contributed to the poor data quality. The Watermaster Engineer plans to untangle the cables and reinstall the transducer in its own dedicated sounding tube as part of the PX refurbishment.

Comment 4 – Section 2.2.1: Subsidence-Management Plan for Northwest MZ-1, Task 9 - Refine and Evaluate Subsidence-Management Alternatives

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."*

Response:

The Watermaster issued a "preliminary guidance level" which was characterized as provisional and subject to change based on additional data collection, data analysis, and model evaluations.

While it is true that subsidence rates have slowed across most of the western Chino Basin coincident with increasing groundwater levels, aquifer-system compaction is a complex process that can include both temporary elastic expansion of aquifer-system due to increasing groundwater levels and residual compaction of the aquifer-system due to historical overdraft conditions. It is important to understand that guidance levels are designed to halt subsidence completely without "offsetting" the residual subsidence by increasing groundwater levels and the temporary elastic expansion of the aquifer system sediments.

It is prudent to continue to collect and analyze data and periodically reassess guidance levels. In 2026, studies are planned under Task 6.2 of the GLMP, in a collaborative process with the GLMC, to reassess the preliminary guidance level in Northwest MZ-1.

Comment 5 – Section 3.4: Northwest MZ-1

"Figure 3-9b shows that the ground-level survey results from 2017 to 2025 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 occurred near the intersection of Indian Hill Boulevard and San Bernardino Street. 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."

Please describe the differences in magnitude in more detail. It appears that the benchmark data shows a stable trend back to 2018 while the InSAR has indicated continued downward ground motion. There is a consistent difference in both magnitude and trend. In the 2017 to 2025 period, at most locations, InSAR has overestimated downward ground motion by a factor of 2 or 3 (several hundredths of a foot by benchmark vs. one to two tenths in the InSAR data) in Northwest MZ-1.

Response:

In recent years, the small magnitudes of ground motion are near the resolution limits of both monitoring methods (+/- 0.02 ft). Hence, it is not warranted nor informative to make interpretations about the differences between the monitoring results over the last year or two. What appears to be true is that both monitoring techniques have measured similar spatial patterns and rates of subsidence across Northwest MZ-1 since 2014 as depicted in the time-series chart on Figure 3-9a and the map on Figure 3-9b. The differences in the monitoring results are relatively minor, and the main conclusion of the GLMP is supported by both data sets: over recent years, the subsidence rates in Northwest MZ-1 have slowed to virtually zero under increasing groundwater levels.

Comment 6 – Section 3.4: Northwest MZ-1

"Figure 3-1b shows that InSAR data from March 2024 to March 2025 indicate minor downward ground motion of approximately 0.04 feet in the Northwest Area. In contrast, ground-level survey results (Figure

3-9a) show slight uplift in Northwest MZ1 during the same period. The discrepancy between the InSAR and benchmark observations may be attributed to atmospheric interference in the InSAR data or GPS acquisition errors at the PX reference point."

Describe in more detail the overestimation bias observed between InSAR, the BM-403 benchmark, and other benchmarks. In addition to the annual data from 2024 to 2025, the InSAR record overestimates the land subsidence trend relative to BM-403 benchmark from the period for 2018 to current. This bias is also observed at other locations. Is it systematic? Related to measurement technique?

Response:

See response to Comment 5 above.

Comment 7 – Section 3.4: Northwest MZ-1

"The DWR has recently provided guidance for using monitoring data (i.e., ground motion and head data) to estimate critical head "thresholds" as management criteria to protect against the future occurrence of land subsidence. Using the DWR's "Empirical Analysis" method on Figure 3-10, when groundwater elevations at P-30 remain above about 568 ft-amsl, no permanent land subsidence occurs at this location."

How does this groundwater level compare to the "preliminary guidance level" issued at the PX? Is Watermaster considering issuance of additional "preliminary guidance levels" at this location in the future?

Response:

The preliminary guidance level at PX-3 is 630 ft-amsl. The empirical estimate of "critical head" at P-30 is 568 ft-amsl. The main differences between the PX-3 monitoring well and the P-30 production well are the well screen intervals. PX-3 measures hydraulic head within a deep portion of the aquifer system (980-1,010 ft-bgs). P-30 measures hydraulic head across a shallower portion of the aquifer system (565-878 ft-bgs). These two wells and analyses could be used to help identify critical heads in different depth intervals of the aquifer system. However, we advise for additional data collection and analysis before drawing such conclusions since InSAR is a measure of compaction across the entire thickness of the aquifer-system, while hydraulic head data at these wells provide information for different depth intervals. This topic is worthy of additional discussion at future GLMC meetings.

Comment 8 – Figure 3-9a: History of Land Subsidence in Northwest MZ-1

Data from BM B-403 indicates land subsidence trends have stabilized since 2018, while InSAR indicates a continued decline. Please discuss in more detail in the discussion of Figure 3-9a?

Response:

See response to Comment 5 above.

Benchmark data do not show differential subsidence across the San Jose Fault for the 2017 to 2025 period. Benchmark data are generally 2 or 3 times lower in magnitude than the InSAR data in Northwest MZ-1 near the PX. Please discuss in more detail in the discussion of Figure 3-9b.

Response:

Inspection of the map on Figure 3-9b show that while the magnitudes of ground motion may differ slightly between the monitoring techniques, both datasets show a similar spatial pattern of differential land subsidence across the San Jose Fault. On the northwest side of the fault, both the InSAR contours and benchmark data indicate uplift, whereas on the southeast side, both show subsidence, with the greatest downward motion occurring near the PX facility.

Comment 10 – Figure 3-6: History of Land Subsidence in Southeast Area

Can InSAR at a point corresponding to the benchmarks or extensometer be added to this plot for comparison?

Response:

The InSAR results have sometimes been incoherent across much of the Southeast Area because the overlying agricultural land uses are not hard, consistent reflectors of radar waves. In addition, recent construction activities have altered land cover and surface reflectivity, further reducing InSAR reliability in some locations.

However, this is a reasonable suggestion and recent improvements in InSAR data processing have made it possible to generate more reliable subsidence estimates in this area. In future annual reports, the Watermaster Engineer will attempt to identify a reliable location in the Southeast Area to extract InSAR data for inclusion in Figure 3-6, allowing comparison with the Chino Creek Extensometer and benchmark data.

CHINO BASIN WATERMASTER

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STAFF REPORT

DATE: November 20, 2025

TO: Advisory Committee and Board Members

SUBJECT: Task Order 13 for Collaborative Recharge Projects Under the Master Agreement Between Watermaster and IEUA (Consent Calendar Item I.D.)

Issue: Approval is required for Task Order 13 under the Master Agreement between Watermaster and IEUA Regarding the Management of Collaborative Recharge Projects. [Advisory Committee Approval Required]

Recommendation:
Advisory Committee: Approve and recommend the Watermaster Board to approve Task Order 13 College Heights Well Sensor Installation.

Board Members: Approve Task Order 13 College Heights Well Sensor Installation and authorize the General Manager to execute the agreement on behalf of Watermaster.

Financial Impact: The grand total cost of the Task Order to Watermaster is $75,000 over one fiscal year and has been included in the Fiscal Year 2025/2026 budget approved in May of this year.

ACTIONS:
Appropriative Pool – October 9, 2025 [Final]: Provided Advice and Assistance
Non-Agricultural Pool – October 9, 2025 [Final]: Provided Advice and Assistance
Agricultural Pool – November 13,2025 [Final]: Provided Advice and Assistance
Advisory Committee – November 20, 2025 [Recommended]: Approval
Watermaster Board – November 20, 2025 [Recommended]: Approval

BACKGROUND

Since the adoption of the initial Recharge Master Plan in 2003, Chino Basin Watermaster (CBWM) stakeholders have made substantial investments in the Basin's Recharge Program. Basin infrastructure enhancements have included the automation of control gates, installation of hydraulic control structures, construction of retention berms, development of pump stations with associated conveyance systems, and deployment of monitoring and instrumentation equipment. While routine maintenance and minor repairs have been coordinated through the Groundwater Recharge Coordinating Committee (GRCC), the scope and financial magnitude of certain rehabilitation and replacement needs are more appropriately classified as Capital Improvement Projects (CIPs). Many of these projects were formally identified in the Asset Management section of the 2023 Recharge Master Plan Update. To facilitate the implementation and cost-sharing of these CIPs, Watermaster has, since 2014, executed Task Order Agreements under the "Master Agreement Between CBWM and IEUA Regarding the Management of Collaborative Recharge Projects" with the Inland Empire Utilities Agency (IEUA), designating them to provide project management and oversight.

DISCUSSION

The purpose of this Task Order is to install a sensor that will allow groundwater levels to be monitored at the College Heights Basin, ensuring regular operation of the Basin. The activities include designing the trenching of conduit from Rubber Dam building under the San Antonio Channel and to the existing monitoring well at the College West Basin, installing a level transmitter and communication cable, programming to the SCADA system, and acquiring associated as-built drawings. The total project cost to Watermaster is $75,000 as presented in the Fiscal Year 2025/26 budget and approved in May 2025.

On October 9, 2025 the Appropriative Pool unanimously recommended Advisory Committee approval of Task Order 13, College Heights Well Sensor Installation and the Non-Agricultural Pool unanimously moved to support Task Order 13 as presented and directed its Pool representatives to support at the Advisory Committee and Watermaster Board meetings subject to changes they deem appropriate. On November 13, 2025 the Agricultural Pool unanimously recommended to the Advisory Committee approval of Task Order 13.

ATTACHMENTS
1. Task Order 13 Under the Master Agreement between Chino Basin Watermaster and Inland Empire Utilities Agency Regarding the Management of Collaborative Recharge Projects

MASTER AGREEMENT BETWEEN CHINO BASIN WATERMASTER AND INLAND EMPIRE UTILITIES AGENCY REGARDING THE MANAGEMENT OF COLLABORATIVE RECHARGE PROJECTS

TASK ORDER NO.13
College Heights Basin Well Sensor Installation

This Task Order is made and entered into as of the ____ day of October, 2025 by and between the Chino Basin Watermaster, hereinafter referred to as "Watermaster," and the Inland Empire Utilities Agency, hereinafter referred to as "IEUA" (each a "Party" and collectively, the "Parties").

In consideration of the mutual promises, covenants, and conditions as addressed in the Master Agreement dated July 24, 2014, as amended thereafter, and as specifically hereinafter set forth, the Parties do hereby agree as follows:

1. PURPOSE

The purpose of this Task Order is to install a sensor that will allow groundwater levels to be monitored at the College Heights Basin. This will ensure that regular operations of the College Heights Basin continue and are coordinated accordingly.

2. SCOPE

The activities to be undertaken pursuant to this Task Order include designing the trenching of conduit from Rubber Dam building under the San Antonio Channel and to the existing monitoring well at College West Basin, installing a level transmitter and communication cable, programming to SCADA system, and acquiring associated as-built drawings.

3. IEUA RESPONSIBILITIES

IEUA agrees to provide project management and contract administration services that include, but are not limited to:

- Engagement of consulting services as needed for:
  - Preliminary design and design engineering services;
  - CEQA compliance and permitting;
  - Bid and award efforts; and,
  - Engineering support during construction
- Management of consultants for the above;
- Approval of progress payments for consultants;
- Recommendations as to change orders for consultants; and,

- Payment of consultant invoices

During construction, IEUA agrees to provide construction management and contract administration services that include, but are not limited to:

- Engagement of construction contract services for:
    - Construction work to implement the upgrades
- Management of contractors for the above;
- Approval of progress payments for contractors;
- Recommendations as to change orders for contractors; and,
- Payment of contractor invoices

IEUA will supply all personnel and equipment required to perform the assigned services.

4. WATERMASTER RESPONSIBILITIES

Watermaster agrees that it and its employees and consultants will cooperate with IEUA and its contractors in the performance of services under this Task Order and will provide any necessary documentation and information in Watermaster's possession.

5. BUDGET AND COST ALLOCATION

Unless the scope of work is changed and an increase is authorized by the Parties, the budget for the activities to be undertaken pursuant to this Task Order is seventy-five thousand dollars ($75,000) ("Budget"), covering a one year project duration. The $75,000 Budget is approximately allocated as follows:

- $6,300 for project development activities
- $11,200 for design activities
- $40,500 for construction costs
- $15,000 for warranty costs

The Parties agree that these costs are shared consistent with the methodology described in Peace II Agreement Section 8.1(b), and that IEUA's share of the costs is based on a 50% allocation of the costs of those portions of the project for which there is a recycled water component. The Budget includes IEUA capital, administrative, and overhead expenses associated with IEUA's provision of the services described in Section 3 above. The Parties shall budget, pursuant to their own budget mechanism, such that each is able to expend the amounts shown in the Fiscal Years shown in the table below.

Well Sensor Installation	Fiscal Year 2025/26	Total
Watermaster	$75,000	$75,000
IEUA	-	-
Grant Funding	-	-
Total	**$75,000**	**$75,000**

6. TOTAL BUDGETED COST

The Parties agree to pay their respective portion of the Budget. The Parties shall not be required to pay more than $75,000. ("Total Budgeted Cost").

7. MAXIMUM COSTS TO WATERMASTER

The costs to be required of Watermaster shall not exceed its share of the Total Budgeted Cost, as shown in Section 5 above, or $75,000.

8. MAXIMUM COSTS TO IEUA

There are no costs to be required of IEUA under this agreement.

9. TERM

Work to be undertaken pursuant to this Task Order shall be initiated upon the Effective Date, as described in Section 11 below. The terms of this Task Order shall remain effective until IEUA's receipt of Watermaster's share of costs expended pursuant to the Budget shown above, so that IEUA may close out the activities.

10. REIMBURSEMENT

Watermaster's reimbursement of IEUA for work performed under this Task Order shall be as provided in Article 3 of the July 24, 2014 Master Agreement and as amended thereafter.

11. EFFECTIVE DATE

This Task Order No. 13 will be deemed effective as of _____, 2025. The Task Order will apply retroactively and govern all work undertaken on the Project from July 1, 2025 until the Project is completed and this Task Order expires.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the day and year and at the place first above written.

CHINO BASIN WATERMASTER

By _____
TODD M. CORBIN
General Manager

INLAND EMPIRE UTILITIES AGENCY

By _____
SHIVAJI DESHMUKH
General Manager

CHINO BASIN WATERMASTER

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STAFF REPORT

DATE: November 20, 2025

TO: Advisory Committee and Board Members

SUBJECT: Task Order 14 for Collaborative Recharge Projects Under the Master Agreement Between Watermaster and IEUA (Consent Calendar Item I.E.)

Issue: Approval is required for Task Order 14 under the Master Agreement between Watermaster and IEUA Regarding the Management of Collaborative Recharge Projects. [Advisory Committee Approval Required]

Recommendation:
Advisory Committee: Approve and recommend the Watermaster Board to approve Task Order 14 GWR Condition Assessment.

Board Members: Approve Task Order 14 GWR Condition Assessment and authorize the General Manager to execute the agreement on behalf of Watermaster.

Financial Impact: The grand total cost of the Task Order to Watermaster is $250,000 over ten fiscal years. The current year's cost of $25,000 has been included in the 2025/26 approved budget approved in May of this year.

ACTIONS:
Appropriative Pool – October 9, 2025 [Final]: Provided Advice and Assistance
Non-Agricultural Pool – October 9, 2025 [Final]: Provided Advice and Assistance
Agricultural Pool – November 13,2025 [Final]: Provided Advice and Assistance
Advisory Committee – November 20, 2025 [Recommended]: Approval
Watermaster Board – November 20, 2025 [Recommended]: Approval

BACKGROUND

Since the adoption of the initial Recharge Master Plan in 2003, Chino Basin Watermaster (CBWM) stakeholders have made substantial investments in the Basin's Recharge Program. Basin infrastructure enhancements have included the automation of control gates, installation of hydraulic control structures, construction of retention berms, development of pump stations with associated conveyance systems, and deployment of monitoring and instrumentation equipment. While routine maintenance and minor repairs have been coordinated through the Groundwater Recharge Coordinating Committee (GRCC), the scope and financial magnitude of certain rehabilitation and replacement needs are more appropriately classified as Capital Improvement Projects (CIPs). Many of these projects were formally identified in the Asset Management section of the 2023 Recharge Master Plan Update. To facilitate the implementation and cost-sharing of these CIPs, Watermaster has, since 2014, executed Task Order Agreements under the "Master Agreement Between CBWM and IEUA Regarding the Management of Collaborative Recharge Projects" with the Inland Empire Utilities Agency (IEUA), designating them to provide project management and oversight.

DISCUSSION

The purpose of this Task Order is to 1) Solicitate a Master Service Contractor. 2) Perform corrosion and structural condition assessments (exposed piping, metal structures, concrete walls, and floor slabs) within the Groundwater Recharge (GWR). Since this is a reoccurring project, a new project number will be assigned for subsequent fiscal years. The project cost is $500,000 over ten fiscal years, which is cost shared with IEUA

On October 9, 2025 the Appropriative Pool unanimously recommended the Advisory Committee approval of Task Order 14, GWR Condition Assessment and the Non-Agricultural Pool unanimously moved to support Task Order 14 as presented and directed its Pool representatives to support at the Advisory Committee and Watermaster Board meetings subject to changes they deem appropriate. On November 13, 2025 the Agricultural Pool unanimously recommended to the Advisory Committee approval of Task Order 14.

ATTACHMENTS
1. Task Order 14 Under the Master Agreement between Chino Basin Watermaster and Inland Empire Utilities Agency Regarding the Management of Collaborative Recharge Projects

MASTER AGREEMENT BETWEEN CHINO BASIN WATERMASTER AND INLAND EMPIRE UTILITIES AGENCY REGARDING THE MANAGEMENT OF COLLABORATIVE RECHARGE PROJECTS

TASK ORDER NO. 14
Groundwater Recharge Condition Assessments

This Task Order is made and entered into as of the ____ day of October, 2025 by and between the Chino Basin Watermaster, hereinafter referred to as "Watermaster," and the Inland Empire Utilities Agency, hereinafter referred to as "IEUA" (each a "Party" and collectively, the "Parties").

In consideration of the mutual promises, covenants, and conditions as addressed in the Master Agreement dated July 24, 2014, as amended thereafter, and as specifically hereinafter set forth, the Parties do hereby agree as follows:

1. PURPOSE

The purpose of this Task Order is to allocate funding for master service contractors to perform corrosion and structural condition assessments of critical assets within the Groundwater Recharge (GWR) Fund 10300. These assets include exposed piping, metal structures, concrete walls, and floor slabs. The assessments are essential to determine the current condition, estimate the remaining useful life, and develop recommendations for rehabilitation or repair. This Task Order also supports internal asset management staff involved in the program.

2. SCOPE

Under this Task Order, master service contractors will be solicited to conduct condition assessments of selected GWR assets. The assessments will evaluate the current condition, remaining useful life, and rehabilitation/ repair recommendations of critical assets within GWR. Funding is also allocated for internal asset management staff to support the project. Assets requiring assessment will be identified on an as-needed basis throughout the duration of the program.

3. IEUA RESPONSIBILITIES

IEUA agrees to provide project management and contract administration services that include, but are not limited to:

- Engagement of consulting services as needed for:
  - Preliminary design and design engineering services;
  - CEQA compliance and permitting;

    - Bid and award efforts; and,
    - Engineering support during construction
- Management of consultants for the above;
- Approval of progress payments for consultants;
- Recommendations as to change orders for consultants; and,
- Payment of consultant invoices

During construction, IEUA agrees to provide construction management and contract administration services that include, but are not limited to:

- Engagement of construction contract services for:
    - Construction work to implement the upgrades
- Management of contractors for the above;
- Approval of progress payments for contractors;
- Recommendations as to change orders for contractors; and,
- Payment of contractor invoices

IEUA will supply all personnel and equipment required to perform the assigned services.

4. WATERMASTER RESPONSIBILITIES

Watermaster agrees that it and its employees and consultants will cooperate with IEUA and its contractors in the performance of services under this Task Order and will provide any necessary documentation and information in Watermaster's possession.

5. BUDGET AND COST ALLOCATION

Unless the scope of work is changed and an increase is authorized by the Parties, the budget for the activities to be undertaken pursuant to this Task Order is five hundred thousand dollars ($500,000) ("Budget"), covering a ten-year project duration. Each fiscal year, the project will incur a cost of $50,000, which includes:

- $10,000 for project development activities
- $40,000 for design-related activities

The Parties agree that these costs are shared consistent with the methodology described in Peace II Agreement Section 8.1(b), and that IEUA's share of the costs is based on a 50% allocation of the costs of those portions of the project for which there is a recycled water component. The Budget includes IEUA capital, administrative, and overhead expenses associated with IEUA's provision of the services described in Section 3 above. The Parties shall budget, pursuant to their own budget mechanism, such that each is able to expend the amounts shown in the Fiscal Years shown in the table below.

GWR Condition Assessment	Fiscal Year (FY) 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30
Watermaster	$25,000	$25,000	$25,000	$25,000	$25,000
IEUA	$25,000	$25,000	$25,000	$25,000	$25,000
Grant Funding	-	-	-	-	-
Total	**$50,000**	**$50,000**	**$50,000**	**$50,000**	**$50,000**

GWR Condition Assessment	FY 2030/31	FY 2031/32	FY 2032/33	FY 2033/34	FY 2034/35	Total
Watermaster	$25,000	$25,000	$25,000	$25,000	$25,000	$250,000
IEUA	$25,000	$25,000	$25,000	$25,000	$25,000	$250,000
Grant Funding	-	-	-	-	-	-
Total	**$50,000**	**$50,000**	**$50,000**	**$50,000**	**$50,000**	**$500,000**

6. TOTAL BUDGETED COST

The Parties agree to pay their respective portion of the Budget. The Parties shall not be required to pay more than $500,000 ("Total Budgeted Cost").

7. MAXIMUM COSTS TO WATERMASTER

The costs to be required of Watermaster shall not exceed its share of the Total Budgeted Cost, as shown in Section 5 above, or $250,000.

8. MAXIMUM COSTS TO IEUA

The costs to be required of IEUA shall not exceed its share of the Total Budgeted Cost, as shown in Section 5 above, or $250,000.

9. TERM

Work to be undertaken pursuant to this Task Order shall be initiated upon the Effective Date, as described in Section 11 below. The terms of this Task Order shall remain effective until IEUA's receipt of Watermaster's share of costs expended pursuant to the Budget shown above, so that IEUA may close out the activities.

10. REIMBURSEMENT

Watermaster's reimbursement of IEUA for work performed under this Task Order shall be as provided in Article 3 of the July 24, 2014 Master Agreement and as amended thereafter.

11. EFFECTIVE DATE

This Task Order No. 14 will be deemed effective as of _____, 2025. The Task Order will apply retroactively and govern all work undertaken on the Project from July 1, 2025, until the Project is completed and this Task Order expires.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the day and year and at the place first above written.

CHINO BASIN WATERMASTER

By _____
TODD M. CORBIN
General Manager

INLAND EMPIRE UTILITIES AGENCY

By _____
SHIVAJI DESHMUKH
General Manager

CHINO BASIN WATERMASTER

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STAFF REPORT

DATE: November 20, 2025

TO: Advisory Committee and Board Members

SUBJECT: Task Order 15 for Collaborative Recharge Projects Under the Master Agreement Between Watermaster and IEUA (Consent Calendar Item I.F.)

Issue: Approval is required for Task Orders 15 under the Master Agreement between Watermaster and IEUA Regarding the Management of Collaborative Recharge Projects. [Advisory Committee Approval Required]

Recommendation:
Advisory Committee: Approve and recommend the Watermaster Board to approve Task Order 15 GWR OIT & PLC.

Board Members: Approve Task Order 15 GWR OIT & PLC and authorize the General Manager to execute the agreement on behalf of Watermaster.

Financial Impact: The grand total cost of the Task Order to Watermaster is $696,667 over two fiscal years. The current year's cost of $275,000 has been included in the Fiscal Year 2025/26 budget approved in May of this year.

ACTIONS:
Appropriative Pool – October 9, 2025 [Final]: Provided Advice and Assistance
Non-Agricultural Pool – October 9, 2025 [Final]: Provided Advice and Assistance
Agricultural Pool – November 13,2025 [Final]: Provided Advice and Assistance
Advisory Committee – November 20, 2025 [Recommended]: Approval
Watermaster Board – November 20, 2025 [Recommended]: Approval

BACKGROUND

Since the adoption of the initial Recharge Master Plan in 2003, Chino Basin Watermaster (CBWM) stakeholders have made substantial investments in the Basin's Recharge Program. Basin infrastructure enhancements have included the automation of control gates, installation of hydraulic control structures, construction of retention berms, development of pump stations with associated conveyance systems, and deployment of monitoring and instrumentation equipment. While routine maintenance and minor repairs have been coordinated through the Groundwater Recharge Coordinating Committee (GRCC), the scope and financial magnitude of certain rehabilitation and replacement needs are more appropriately classified as Capital Improvement Projects (CIPs). Many of these projects were formally identified in the Asset Management section of the 2023 Recharge Master Plan Update. To facilitate the implementation and cost-sharing of these CIPs, Watermaster has, since 2014, executed Task Order Agreements under the "Master Agreement Between CBWM and IEUA Regarding the Management of Collaborative Recharge Projects" with the Inland Empire Utilities Agency (IEUA), designating them to provide project management and oversight.

DISCUSSION

The purpose of this Task Order is to replace aging Programmable Logic Controller (PLC) and Operator Interface Terminal (OIT) display screens at groundwater recharge locations. The current equipment will become obsolete and unsupported by the manufacturer, and a newer model is needed to ensure that groundwater recharge staff have continued and reliable access to the controls at the local level. The total project cost of $1,100,000 over two fiscal years, which is cost shared with IEUA as presented in the Fiscal Year 2025/26 budget and approved in May 2025.

On October 9, 2025 the Appropriative Pool unanimously recommended Advisory Committee approval of Task Order 15, GWR OIT & PLC Upgrades. and the Non-Agricultural Pool unanimously moved to support Task Order 15 as presented and directed its Pool representatives to support at the Advisory Committee and Watermaster Board meetings subject to changes they deem appropriate. On November 13, 2025 the Agricultural Pool unanimously recommended to the Advisory Committee approval of Task Order 15.

ATTACHMENTS
1. Task Order 15 Under the Master Agreement between Chino Basin Watermaster and Inland Empire Utilities Agency Regarding the Management of Collaborative Recharge Projects

MASTER AGREEMENT BETWEEN CHINO BASIN WATERMASTER AND INLAND EMPIRE UTILITIES AGENCY REGARDING THE MANAGEMENT OF COLLABORATIVE RECHARGE PROJECTS

TASK ORDER NO. 15
Groundwater Recharge OIT and PLC Upgrades

This Task Order is made and entered into as of the ____ day of October, 2025 by and between the Chino Basin Watermaster, hereinafter referred to as "Watermaster," and the Inland Empire Utilities Agency, hereinafter referred to as "IEUA" (each a "Party" and collectively, the "Parties").

In consideration of the mutual promises, covenants, and conditions as addressed in the Master Agreement dated July 24, 2014, as amended thereafter, and as specifically hereinafter set forth, the Parties do hereby agree as follows:

1. PURPOSE

The purpose of this Task Order is to replace aging Programmable Logic Controller (PLC) and Operator Interface Terminal (OIT) display screens at groundwater recharge locations. The current equipment will become obsolete and unsupported by the manufacturer, and a newer model is needed to ensure that groundwater recharge staff have continued and reliable access to the controls at the local level.

2. SCOPE

The activities to be undertaken pursuant to this Task Order include the cost to purchase the required PLC and OIT replacements. IEUA staff will install new PLCs and OITs once a year for two years to address the groundwater recharge basins.

The OIT and PLC replacements covered under the scope of work are identified below. The locations identified for immediate replacement under this task order are listed first, with additional locations listed in the following table to be replaced at a future fiscal year.

OIT and PLC Upgrades Covered Under Scope of Work	
Cost Share	**Location Name**
50/50 IEUA and Chino Basin Water Master	8th Street Basin
	Banana Basin
	Brooks Basin
	Declez Basin
	Hickory Basin
	Hickory FMM Recycled Water Turnout
	RP-3 Basin
	Turner Basin 1 & 2
	Turner Basin 3 & 4
	San Sevaine Recycled Water Turnout
	Victoria Basin
Total	**11**
100% Chino Basin Water Master	College Heights Basin
	Jurupa Basin
	Lower Day Basin
	Montclair Basin
Total	**4**
Grand Total	**15**

3. IEUA RESPONSIBILITIES

IEUA agrees to provide project management and contract administration services that include, but are not limited to:

- Engagement of consulting services as needed for:
  - Preliminary design and design engineering services;
  - CEQA compliance and permitting;
  - Bid and award efforts; and,
  - Engineering support during construction
- Management of consultants for the above;
- Approval of progress payments for consultants;
- Recommendations as to change orders for consultants; and,
- Payment of consultant invoices

During construction, IEUA agrees to provide construction management and contract administration services that include, but are not limited to:

- Engagement of construction contract services for:
    - Construction work to implement the upgrades
- Management of contractors for the above;
- Approval of progress payments for contractors;
- Recommendations as to change orders for contractors; and,
- Payment of contractor invoices

IEUA will supply all personnel and equipment required to perform the assigned services.

4. WATERMASTER RESPONSIBILITIES

Watermaster agrees that it and its employees and consultants will cooperate with IEUA and its contractors in the performance of services under this Task Order and will provide any necessary documentation and information in Watermaster's possession.

5. BUDGET AND COST ALLOCATION

Unless the scope of work is changed and an increase is authorized by the Parties, the budget for the activities to be undertaken pursuant to this Task Order is one million and one hundred thousand dollars ($1,100,000) ("Budget"), covering a two year project duration. The Budget includes expenses for OIT and PLC unit costs and associated labor as follows:

Expense	Unit	Cost Per Unit	Total Cost
OIT + PLC	15 (Units)	$20,000	$300,000
Labor	3,200 (Hours)	$250	$800,000
		Total Project Cost	**$1,100,000**

The Parties agree that these costs are shared consistent with the methodology described in Peace II Agreement Section 8.1(b), and that IEUA's share of the costs is based on a 50% allocation of the costs of those portions of the project for which there is a recycled water component. The Budget includes IEUA capital, administrative, and overhead expenses associated with IEUA's provision of the services described in Section 3 above. The Parties shall budget, pursuant to their own budget mechanism, such that each is able to expend the amounts shown in the Fiscal Years shown in the table below.

OIT and PLC Upgrades	Fiscal Year 2025/26	Fiscal Year 2026/27	Total
Watermaster	$275,000	$421,666	$696,666
IEUA	$275,000	$128,334	$403,334
Grant Funding	-	-	-
Total	**$550,000**	**$550,000**	**$1,100,000**

6. TOTAL BUDGETED COST

The Parties agree to pay their respective portion of the Budget. The Parties shall not be required to pay more than $1,100,000 ("Total Budgeted Cost").

7. MAXIMUM COSTS TO WATERMASTER

The costs to be required of Watermaster shall not exceed its share of the Total Budgeted Cost, as shown in Section 5 above, or $696,666.

8. MAXIMUM COSTS TO IEUA

The costs to be required of IEUA shall not exceed its share of the Total Budgeted Cost, as shown in Section 5 above, or $403,334.

9. TERM

Work to be undertaken pursuant to this Task Order shall be initiated upon the Effective Date, as described in Section 11 below. The terms of this Task Order shall remain effective until IEUA's receipt of Watermaster's share of costs expended pursuant to the Budget shown above, so that IEUA may close out the activities.

10. REIMBURSEMENT

Watermaster's reimbursement of IEUA for work performed under this Task Order shall be as provided in Article 3 of the July 24, 2014 Master Agreement and as amended thereafter.

11. EFFECTIVE DATE

This Task Order No. 15 will be deemed effective as of _____, 2025. The Task Order will apply retroactively and govern all work undertaken on the Project from July 1, 2025, until the Project is completed and this Task Order expires.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the day and year and at the place first above written.

CHINO BASIN WATERMASTER

By _____
TODD M. CORBIN
General Manager

INLAND EMPIRE UTILITIES AGENCY

By _____
SHIVAJI DESHMUKH
General Manager

CHINO BASIN WATERMASTER

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STAFF REPORT

DATE: November 20, 2025

TO: Advisory Committee and Board Members

SUBJECT: Task Order 16 for Collaborative Recharge Projects Under the Master Agreement Between Watermaster and IEUA (Consent Calendar Item I.G.)

Issue: Approval is required for Task Orders 16 under the Master Agreement between Watermaster and IEUA Regarding the Management of Collaborative Recharge Projects. [Advisory Committee Approval Required]

Recommendation:
Advisory Committee: Approve and recommend the Watermaster Board to approve Task Order 16 GWR Actuator Upgrades.

Board Members: Approve Task Order 16 GWR Actuator Upgrades and authorize the General Manager to execute the agreement on behalf of Watermaster.

Financial Impact: The grand total cost of the Task Order to Watermaster is $150,000 over four fiscal years. The current year's cost of $37,500 has been included in the 2025/26 budget approved in May of this year.

ACTIONS:
Appropriative Pool – October 9, 2025 [Final]: Provided Advice and Assistance
Non-Agricultural Pool – October 9, 2025 [Final]: Provided Advice and Assistance
Agricultural Pool – November 13,2025 [Final]: Provided Advice and Assistance
Advisory Committee – November 20, 2025 [Recommended]: Approval
Watermaster Board – November 20, 2025 [Recommended]: Approval

BACKGROUND

Since the adoption of the initial Recharge Master Plan in 2003, Chino Basin Watermaster (CBWM) stakeholders have made substantial investments in the Basin's Recharge Program. Basin infrastructure enhancements have included the automation of control gates, installation of hydraulic control structures, construction of retention berms, development of pump stations with associated conveyance systems, and deployment of monitoring and instrumentation equipment. While routine maintenance and minor repairs have been coordinated through the Groundwater Recharge Coordinating Committee (GRCC), the scope and financial magnitude of certain rehabilitation and replacement needs are more appropriately classified as Capital Improvement Projects (CIPs). Many of these projects were formally identified in the Asset Management section of the 2023 Recharge Master Plan Update. To facilitate the implementation and cost-sharing of these CIPs, Watermaster has, since 2014, executed Task Order Agreements under the "Master Agreement Between CBWM and IEUA Regarding the Management of Collaborative Recharge Projects" with the Inland Empire Utilities Agency (IEUA), designating them to provide project management and oversight.

DISCUSSION

The purpose of this Task Order is to replace Motor Operated Valves (MOVs) in the recycled water and groundwater recharge program. When these items fail, staff spend many days trying to repair the units with little success, parts are hard to acquire and are no longer supported by manufacturers which force staff to buy new components. The total project cost is $300,000 over four fiscal years, which is cost shared with IEUA as presented in the Fiscal Year 2025/26 budget and approved in May 2025.

On October 9, 2025 the Appropriative Pool unanimously recommended Advisory Committee approval of Task Order 16, GWR Actuator Upgrades and the Non-Agricultural Pool unanimously moved to support Task Order 16 as presented and directed its Pool representatives to support at the Advisory Committee and Watermaster Board meetings subject to changes they deem appropriate. On November 13, 2025 the Agricultural Pool unanimously recommended to the Advisory Committee approval of Task Order 16.

ATTACHMENTS
1. Task Order 16 Under the Master Agreement between Chino Basin Watermaster and Inland Empire Utilities Agency Regarding the Management of Collaborative Recharge Projects

MASTER AGREEMENT BETWEEN CHINO BASIN WATERMASTER AND INLAND EMPIRE UTILITIES AGENCY REGARDING THE MANAGEMENT OF COLLABORATIVE RECHARGE PROJECTS

TASK ORDER NO. 16
Groundwater Recharge Actuator Upgrades

This Task Order is made and entered into as of the ____ day of October, 2025 by and between the Chino Basin Watermaster, hereinafter referred to as "Watermaster," and the Inland Empire Utilities Agency, hereinafter referred to as "IEUA" (each a "Party" and collectively, the "Parties").

In consideration of the mutual promises, covenants, and conditions as addressed in the Master Agreement dated July 24, 2014, as amended thereafter, and as specifically hereinafter set forth, the Parties do hereby agree as follows:

1. PURPOSE

This Task Order addresses the replacement of failing Motor Operated Valves (MOVs) that are essential to the operation of the recycled water (RW) and groundwater recharge (GWR) program. Many existing MOVs are outdated, difficult to repair, and are no longer supported by manufacturers. As a result, failures often require extensive troubleshooting by Electrical and Instrumentation (E&I) staff leading to prolonged down time and results in emergency responses from both the GWR/RW staff and E&I staff. Replacing these MOVs will improve system reliability and reduce operational disruptions.

2. SCOPE

The activities to be undertaken pursuant to this Task Order include:

- Replacing critical MOV actuators as designated by the GWR/RW staff.
- Replacing non-critical MOVs on a run-to-failure basis as designated by the GWR/RW staff.
- Upgrading control systems to support 4-20mA signal operation.
- Eliminating 24V control MOVs, replacing them with compatible units.

Replacement Strategy	MOV Location
Urgent	7-8th Street Basins
	Jurupa Basin
	Turner Basin 1-2

	Turner Basin 3-4
	Hickory Basins
	Victoria Basins
Total	**6**
Like to Change to CLA-VAL	RP-3 Basins
	RP-3 Basins
Total	**2**
Actuator Stock	Brooks Basin
	Hickory Basins
	Hickory FMM
	Hickory FMM
	Lower Day Basins
	RP-3 Basins
	RP3-Basins
	RP-3 Basins
	RP3-Basins
	RP-3 Basins
	Turner 1-2 Basins
	Turner 3-4 Basins
	Victoria Basins
Total	**13**
Grand Total	**21**

3. IEUA RESPONSIBILITIES

IEUA agrees to provide project management and contract administration services that include, but are not limited to:

- Engagement of consulting services as needed for:
  - Preliminary design and design engineering services;
  - CEQA compliance and permitting;
  - Bid and award efforts; and,
  - Engineering support during construction
- Management of consultants for the above;
- Approval of progress payments for consultants;
- Recommendations as to change orders for consultants; and,
- Payment of consultant invoices

During construction, IEUA agrees to provide construction management and contract administration services that include, but are not limited to:

- Engagement of construction contract services for:
    - Construction work to implement the upgrades
- Management of contractors for the above;
- Approval of progress payments for contractors;
- Recommendations as to change orders for contractors; and,
- Payment of contractor invoices

IEUA will supply all personnel and equipment required to perform the assigned services.

4. WATERMASTER RESPONSIBILITIES

Watermaster agrees that it and its employees and consultants will cooperate with IEUA and its contractors in the performance of services under this Task Order and will provide any necessary documentation and information in Watermaster's possession.

5. BUDGET AND COST ALLOCATION

Unless the scope of work is changed and an increase is authorized by the Parties, the budget for the activities to be undertaken pursuant to this Task Order is three hundred thousand dollars ($300,000) ("Budget"), covering a four (4) year project duration. The $300,000 Budget is approximately allocated as follows:

- $35,000 for project development activities
- $250,000 for construction costs
- $15,000 for warranty costs

The Parties agree that these costs are shared consistent with the methodology described in Peace II Agreement Section 8.1(b), and that IEUA's share of the costs is based on a 50% allocation of the costs of those portions of the project for which there is a recycled water component. The Budget includes IEUA capital, administrative, and overhead expenses associated with IEUA's provision of the services described in Section 3 above. The Parties shall budget, pursuant to their own budget mechanism, such that each is able to expend the amounts shown in the Fiscal Years shown in the table below.

Valve Actuator Replacement	Fiscal Year 2025/26	Fiscal Year 2026/27	Fiscal Year 2027/28	Fiscal Year 2028/29	Total
Watermaster	$37,500	$37,500	$37,500	$37,500	$150,000
IEUA	$37,500	$37,500	$37,500	$37,500	$150,000
Grant Funding	-	-	-	-	-
Total	**$75,000**	**$75,000**	**$75,000**	**$75,000**	**$300,000**

6. TOTAL BUDGETED COST

The Parties agree to pay their respective portion of the Budget. The Parties shall not be required to pay more than $300,000 ("Total Budgeted Cost").

7. MAXIMUM COSTS TO WATERMASTER

The costs to be required of Watermaster shall not exceed its share of the Total Budgeted Cost, as shown in Section 5 above, or $150,000.

8. MAXIMUM COSTS TO IEUA

The costs to be required of IEUA shall not exceed its share of the Total Budgeted Cost, as shown in Section 5 above, or $150,000.

9. TERM

Work to be undertaken pursuant to this Task Order shall be initiated upon the Effective Date, as described in Section 11 below. The terms of this Task Order shall remain effective until IEUA's receipt of Watermaster's share of costs expended pursuant to the Budget shown above, so that IEUA may close out the activities.

10. REIMBURSEMENT

Watermaster's reimbursement of IEUA for work performed under this Task Order shall be as provided in Article 3 of the July 24, 2014 Master Agreement and as amended thereafter.

11. EFFECTIVE DATE

This Task Order No. 16 will be deemed effective as of _____, 2025. The Task Order will apply retroactively and govern all work undertaken on the Project from July 1, 2025 until the Project is completed and this Task Order expires.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the day and year and at the place first above written.

CHINO BASIN WATERMASTER

By _____

TODD M. CORBIN
General Manager

INLAND EMPIRE UTILITIES AGENCY

By _____
SHIVAJI DESHMUKH
General Manager

CHINO BASIN WATERMASTER

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

STAFF REPORT

DATE: November 20, 2025

TO: Advisory Committee and Board Members

SUBJECT: Task Order 17 for Collaborative Recharge Projects Under the Master Agreement Between Watermaster and IEUA (Consent Calendar Item I.H.)

Issue: Approval is required for Task Order 17 under the Master Agreement between Watermaster and IEUA Regarding the Management of Collaborative Recharge Projects. [Advisory Committee Approval Required]

Recommendation:
Advisory Committee: Approve and recommend the Watermaster Board to approve Task Order 17 RW GWR SCADA Infrastructure Replacement.

Board Members: Approve Task Order 17 RW GWR SCADA Infrastructure Replacement and authorize the General Manager to execute the agreement on behalf of Watermaster.

Financial Impact: The grand total cost of the Task Order to Watermaster is $340,000 over ten fiscal years. The current year's cost of $21,600 has been included in the 2025/26 budget approved in May of this year

ACTIONS:
Appropriative Pool – October 9, 2025 [Final]: Provided Advice and Assistance
Non-Agricultural Pool – October 9, 2025 [Final]: Provided Advice and Assistance
Agricultural Pool – November 13,2025 [Final]: Provided Advice and Assistance
Advisory Committee – November 20, 2025 [Recommended]: Approval
Watermaster Board – November 20, 2025 [Recommended]: Approval

BACKGROUND

Since the adoption of the initial Recharge Master Plan in 2003, Chino Basin Watermaster (CBWM) stakeholders have made substantial investments in the Basin's Recharge Program. Basin infrastructure enhancements have included the automation of control gates, installation of hydraulic control structures, construction of retention berms, development of pump stations with associated conveyance systems, and deployment of monitoring and instrumentation equipment. While routine maintenance and minor repairs have been coordinated through the Groundwater Recharge Coordinating Committee (GRCC), the scope and financial magnitude of certain rehabilitation and replacement needs are more appropriately classified as Capital Improvement Projects (CIPs). Many of these projects were formally identified in the Asset Management section of the 2023 Recharge Master Plan Update. To facilitate the implementation and cost-sharing of these CIPs, Watermaster has, since 2014, executed Task Order Agreements under the "Master Agreement Between CBWM and IEUA Regarding the Management of Collaborative Recharge Projects" with the Inland Empire Utilities Agency (IEUA), designating them to provide project management and oversight.

DISCUSSION

The purpose of this Task Order is to replace end of life SCADA infrastructure for groundwater and recycle water systems. IEUA has a Board resolution to replace servers every five years, and network switches every eight years to maintain performance and reliability. Since this is a reoccurring project, a new project number will be assigned for subsequent fiscal years. The project cost $680,000 over ten fiscal years, which is cost shared with IEUA as presented in the Fiscal Year 2025/26 budget and approved in May 2025.

On October 09, 2025 Appropriative Pool unanimously recommended Advisory Committee approval of Task Order 17, RW GWR SCADA Infrastructure Replacement and the Non-Agricultural Pool unanimously moved to support Task Order 17 as presented and directed its Pool representatives to support at the Advisory Committee and Watermaster Board meetings subject to changes they deem appropriate. On November 13, 2025 the Agricultural Pool unanimously recommended to the Advisory Committee approval of Task Order 17.

ATTACHMENTS
1. Task Order 17 Under the Master Agreement between Chino Basin Watermaster and Inland Empire Utilities Agency Regarding the Management of Collaborative Recharge Projects

MASTER AGREEMENT BETWEEN CHINO BASIN WATERMASTER AND INLAND EMPIRE UTILITIES AGENCY REGARDING THE MANAGEMENT OF COLLABORATIVE RECHARGE PROJECTS

TASK ORDER NO. 17
Groundwater Recharge/ Recycled Water SCADA Infrastructure Replacement

This Task Order is made and entered into as of the ____ day of October, 2025 by and between the Chino Basin Watermaster, hereinafter referred to as "Watermaster," and the Inland Empire Utilities Agency, hereinafter referred to as "IEUA" (each a "Party" and collectively, the "Parties").

In consideration of the mutual promises, covenants, and conditions as addressed in the Master Agreement dated July 24, 2014, as amended thereafter, and as specifically hereinafter set forth, the Parties do hereby agree as follows:

1. PURPOSE

The purpose of this Task Order is to replace end-of-life Supervisory Control and Data Acquisition (SCADA) infrastructure for groundwater and recycled water systems. Servers are replaced every five years and network switches every eight years to ensure system performance and reliability.

2. SCOPE

The activities to be undertaken pursuant to this Task Order include the purchase and replacement of the following components that have reached the end of their lifecycle: two (2) servers, microwave radio communication technology, and other network switch infrastructure.

3. IEUA RESPONSIBILITIES

IEUA agrees to provide Project management and contract administration services that include, but are not limited to:

- Engagement of consulting services as needed for:
  - Preliminary design and design engineering services;
  - CEQA compliance and permitting;
  - Bid and award efforts; and,
  - Engineering support during construction
- Management of consultants for the above;
- Approval of progress payments for consultants;
- Recommendations as to change orders for consultants; and,

- Payment of consultant invoices

During construction, IEUA agrees to provide construction management and contract administration services that include, but are not limited to:

- Engagement of construction contract services for:
    - Construction work to implement the upgrades
- Management of contractors for the above;
- Approval of progress payments for contractors;
- Recommendations as to change orders for contractors; and,
- Payment of contractor invoices

IEUA will supply all personnel and equipment required to perform the assigned services.

4. WATERMASTER RESPONSIBILITIES

Watermaster agrees that it and its employees and consultants will cooperate with IEUA and its contractors in the performance of services under this Task Order and will provide any necessary documentation and information in Watermaster's possession.

5. BUDGET AND COST ALLOCATION

Unless the scope of work is changed and an increase is authorized by the Parties, the budget for the activities to be undertaken pursuant to this Task Order is six hundred and eighty thousand dollars ($680,000) ("Budget"), covering a ten-year project duration.

Annual costs begin at $43,200 in Fiscal Year 2025/26 and increase incrementally to $75,000 in Fiscal Year 2034/35, reflecting anticipated growth in infrastructure needs and associated expenses. Each year, approximately:

- 30% of the total cost is allocated to project development, including planning, procurement coordination, and administrative support.
- 70% of the total cost is allocated to construction, including hardware acquisition, installation, and integration of SCADA components.

The Parties agree that these costs are shared consistent with the methodology described in Peace II Agreement Section 8.1(b), and that IEUA's share of the costs is based on a 50% allocation of the costs of those portions of the project for which there is a recycled water component. The Budget includes IEUA capital, administrative, and overhead expenses associated with IEUA's provision of the services described in Section 3 above. The Parties shall budget, pursuant to their own budget mechanism, such that each is able to expend the amounts shown in the Fiscal Years shown in the table below.

SCADA Infrastructure Replacement	Prior Fiscal Years (FY)	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
IEUA	$34,218	$21,600	$23,500	$25,250	$27,382	$29,500
Grant Funding	-	-	-	-	-	-
Total	**$68,436**	**$43,200**	**$47,000**	**$50,500**	**$54,764**	**$59,000**

SCADA Infrastructure Replacement	FY 30/31	FY 31/32	FY 32/33	FY 33/34	FY 34/35	Total
Watermaster	$32,000	$34,500	$37,050	$37,500	$37,500	$340,000
IEUA	$32,000	$34,500	$37,050	$37,500	$37,500	$340,000
Grant Funding	-	-	-	-	-	-
Total	**$64,000**	**$69,000**	**$74,100**	**$75,000**	**$75,000**	**$680,000**

6. TOTAL BUDGETED COST

The Parties agree to pay their respective portion of the Budget. The Parties shall not be required to pay more than $680,000. ("Total Budgeted Cost").

7. MAXIMUM COSTS TO WATERMASTER

The costs to be required of Watermaster shall not exceed its share of the Total Budgeted Cost, as shown in Section 5 above, or $340,000.

8. MAXIMUM COSTS TO IEUA

The costs to be required of IEUA shall not exceed its share of the Total Budgeted Cost, as shown in Section 5 above, or $340,000.

9. TERM

The project that is the subject of this Task Order has been underway since FY21/22. This Task Order shall not create any new responsibilities or obligations for either party for phases of the project completed prior to the entrance into this Task Order. The terms of this Task Order shall remain effective until IEUA's receipt of Watermaster's share of costs expended pursuant to the budget shown above, so that IEUA may close out the activities.

10. REIMBURSEMENT

Watermaster's reimbursement of IEUA for work performed under this Task Order shall be as provided in Article 3 of the July 24, 2014 Master Agreement and as amended thereafter.

11. EFFECTIVE DATE

This Task Order No. 17 will be deemed effective as of _____, 2025. The Task Order will apply retroactively and govern all work undertaken on the Project from July 1, 2025 until the Project is completed and this Task Order expires.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the day and year and at the place first above written.

CHINO BASIN WATERMASTER

By _____
TODD M. CORBIN
General Manager

INLAND EMPIRE UTILITIES AGENCY

By _____
SHIVAJI DESHMUKH
General Manager

CHINO BASIN WATERMASTER

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

STAFF REPORT

DATE: November 20, 2025

TO: Advisory Committee Members

SUBJECT: Calendar Year 2026 Advisory Committee Volume Vote
(Consent Calendar Item I.I.)

Issue: Volume Vote calculations for the new calendar year are performed annually, and Parties are allocated a voting percentage.

Recommendation: Approve the Calendar Year 2026 Advisory Committee Volume Vote as presented, subject to Watermaster Board approval of the Fiscal Year 2025/26 Assessment Package at the November 20, 2025 meeting.

Financial Impact: None.

ACTIONS:
Advisory Committee – November 20, 2025 [Recommended]: Approval.

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 Fiscal Year 2025/26 Assessment Package is scheduled for Watermaster Board approval on November 20, 2025, and thus the Calendar Year 2026 Advisory Committee Volume Vote is predicated on that approval.

The total voting power on the Advisory Committee is 100 votes according to the Committee's Rules and Regulations Section 2.09, allocated among the three Pools in proportion to the total assessments paid to Watermaster during the preceding production year. The minimum voting power of each pool shall never be less that 20 votes for the Overlying (Agricultural) Pool, five (5) votes for the Overlying (Non-Agricultural) Pool, and 20 votes for the Appropriative Pool. Within the Appropriative Pool, the voting power is apportioned between the Major Appropriator representatives in proportion to their respective voting power in the Appropriative Pool Committee, the remaining two (Minor) representatives exercise equally the voting power proportion to the Appropriative Pool Committee voting power of all remaining Appropriators.

DISCUSSION

Water Activity Reports have now been received by all except for six, and the Advisory Committee's Calendar Year 2026 Volume Vote has been calculated. Attempts were made to collect the missing Water Activity Reports from one Appropriative Pool party and five Overlying (Non-Agricultural) Pool parties to no avail. Watermaster tracks submissions of the Water Activity Reports and publishes it on Watermaster's website at the following URL: https://www.cbwm.org/pages/reports/finance/tracker/. Those who have not responded either did not produce more than two acre-feet during the production year or have received their water through an Assignment from an Appropriator who has submitted their Water Activity Report. Since we have not received responses from these six parties, the input data as prepared has been deemed to be final. The Fiscal Year 2025/26 Assessment Package is scheduled for approval on November 20, 2025, and the Calendar Year 2026 Volume Vote has been finalized for approval.

The Advisory Committee Volume Vote for Calendar Year 2026 allocation is shown in Attachment 1. The prior (Calendar Year 2025) Volume Vote is also attached for reference in Attachment 2.

ATTACHMENTS
1. 2026 Advisory Committee Volume Vote
2. 2025 Advisory Committee Volume Vote

Chino Basin Watermaster
2026 Advisory Committee Voting Power

Assessment Year 2025-2026 (Production Year 2024-2025)

	Pool 3 Vote	% Vote	Advisory Vote
Minor 1	42.635	4.264%	3.198
Minor 2	42.635	4.264%	3.198
Chino Hills, City Of	28.861	2.886%	2.165
Chino, City Of	65.790	6.579%	4.934
Cucamonga Valley Water District	137.458	13.746%	10.309
Fontana Union Water Company		5.828%	4.371
Fontana Water Company	55.661	5.566%	4.175
Jurupa Community Services District	89.973	8.997%	6.748
Monte Vista Water District	92.336	9.234%	6.925
Ontario, City Of	183.946	18.395%	13.796
Pomona, City Of	167.788	16.779%	12.584
Upland, City Of	34.632	3.463%	2.597
			75.000
AGRICULTURAL POOL			20.000
NON-AGRICULTURAL POOL			5.000
			25.000
TOTAL			**100.000**

Chino Basin Watermaster
2025 Advisory Committee Voting Power

Assessment Year 2024-2025 (Production Year 2023-2024)

	Pool 3 Vote	% Vote	Advisory Vote
Minor 1	42.947	4.295%	3.221
Minor 2	42.947	4.295%	3.221
Chino Hills, City Of	32.957	3.296%	2.472
Chino, City Of	66.439	6.644%	4.983
Cucamonga Valley Water District	144.070	14.407%	10.805
Fontana Union Water Company	58.285	5.828%	4.371
Fontana Water Company	25.193	2.519%	1.889
Jurupa Community Services District	83.825	8.383%	6.287
Monte Vista Water District	89.146	8.915%	6.686
Ontario, City Of	183.853	18.385%	13.789
Pomona, City Of	194.260	19.426%	14.570
Upland, City Of	36.078	3.608%	2.706
			75.000
AGRICULTURAL POOL			20.000
NON-AGRICULTURAL POOL			5.000
			25.000
TOTAL			**100.000**

CHINO BASIN WATERMASTER

ADVISORY COMMITTEE

November 20, 2025

INLAND EMPIRE UTILITIES AGENCY REPORTS

The following items are provided for receive and file.

- Metropolitan Water District Activities Report
- Water Supply Conditions
- State and Federal Legislative Reports

IEUA's Summary on Metropolitan Water District of Southern California (MWD) Board Activities

Submitted November 2025

For More Information Contact:

Eddie Lin

elin@ieua.org

909.993.1740

See www.MWDh2o.com for the latest information from MWD and tune into livestream broadcasts of meetings.

MWD Appoints New General Manager

On October 14th, the MWD Board of Directors unanimously voted to appoint Shivaji Deshmukh as General Manager. Shivaji joined MWD on November 3rd as General Manager - Designate and will assume the role of General Manager on January 1, 2026. Shivaji brings over two decades of experience in water to MWD, including his dedicated service and leadership as the General Manager of IEUA since April 2019.

MWD Reviews Near-term Budget Drivers and Long-term Resource Planning

On October 14th, the MWD Finance, Affordability, Asset Management, and Efficiency Committee reviewed early estimates of the approximate rate increases expected for the next budget cycle. MWD shared that substantial rate increases are needed to maintain the current MWD system, including addressing organizational-wide staffing needs, operating equipment, and investing in refurbishment and replacement capital improvement projects. The potential loss of Colorado supplies from post-2026 guidelines may also increase supply program costs. While various two-year rate increase scenarios were reviewed, a two-year 2027 and 2028, 18% rate increase was identified as necessary to maintain system integrity while a two-year 2027 and 2028, 23% rate increase was needed to cover all major projects.

Next steps include using the Climate Adaptation Master Plan for Water (CAMP4W) process to determine how much supply development MWD wants to pursue, the timing of that development, and what is the most cost-effective strategy to achieve the desired level of supply. The MWD Biennial Budget and rates will be further refined by the staff and Board until April 2026, when the MWD Board is scheduled to take action.

MWD Approves $30 Million Increase to Capital Investment Plan

On October 13th, the MWD Engineering, Operations, & Technology Committee approved a $30 million increase to the Capital Investment Plan (CIP) for fiscal year 2024/25 and 2025/26. The additional $30 million will be used to address known vulnerabilities to MWD's conveyance, distribution, and treatment system and equates to roughly 5% of the CIP. Projects ready to utilize these additional funds include the Colorado River Aqueduct Pumping Plants Sump Rehabilitation, Eagle & Hinds Pumping Plants Utilities Replacement, Jensen Security Upgrades, Weymouth Admin Building Seismic Upgrade, Garvey Reservoir Rehabilitation, and Sepulveda Feeder Prestressed Concrete Cylinder Pipe Reach 2.

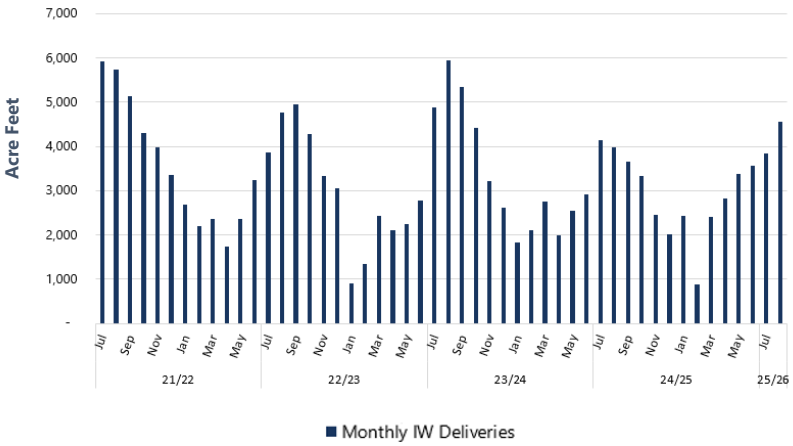
MWD Weymouth Admin Building, – MWD October 13, 2025

GENERAL MANAGER'S REPORT

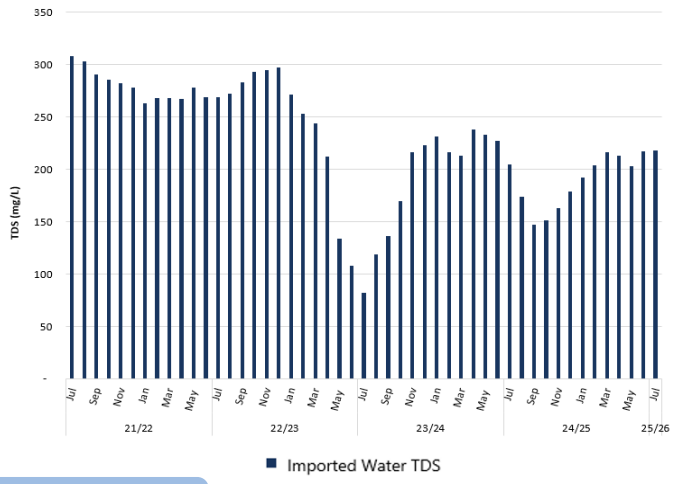
OCTOBER 2025

Imported Water

Full Service Imported Water Deliveries Summary (FY 2020/21 to 2025/26)

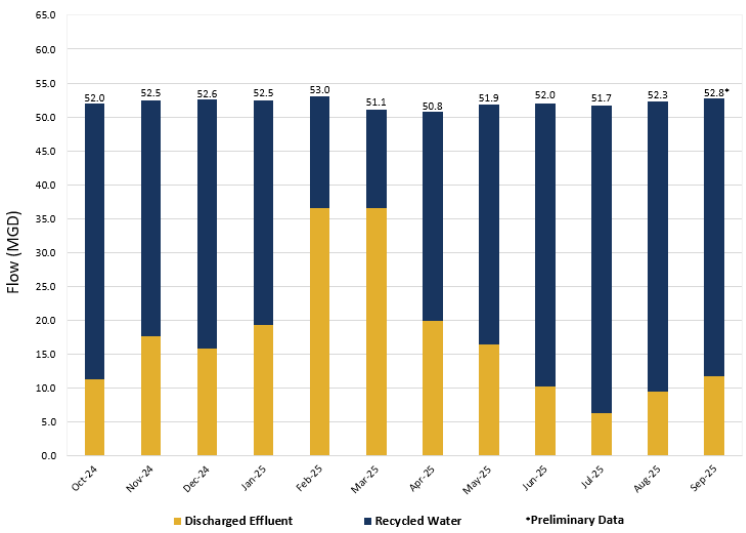


Imported Water TDS Summary (FY 2020/21 to 2024/25)

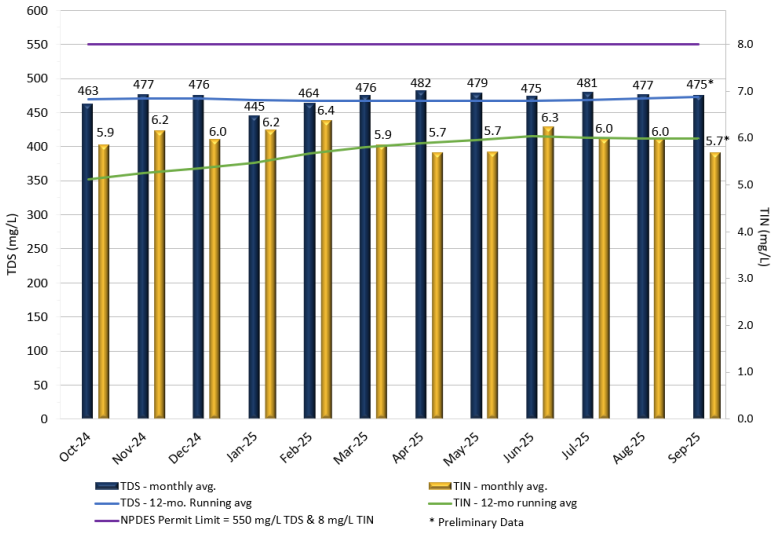


Recycled Water

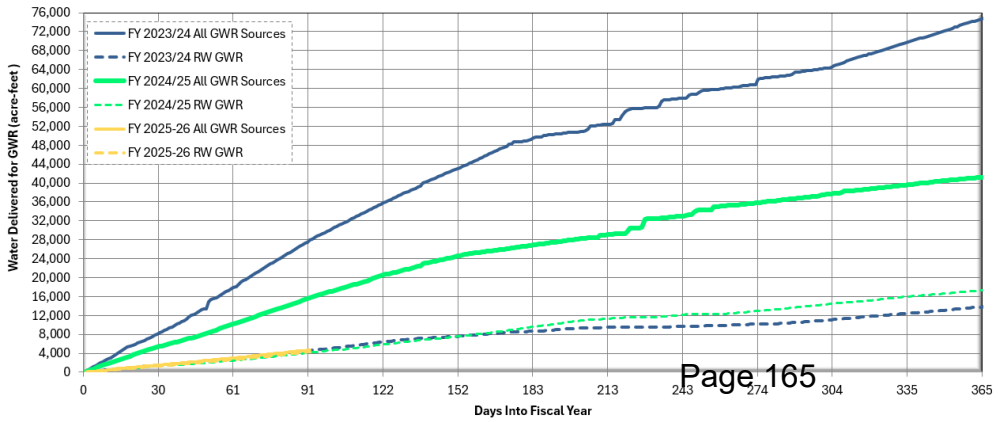
Discharged Effluent & Recycled



Agencywide Effluent TDS & TIN



Groundwater Recharge



SEPTEMBER 2025 NOTES:

- Total stormwater and dry weather flow recharged is preliminarily estimated at 87.4 acre-feet.
- Recycled water delivered for recharge totaled 1,535.5 acre-feet.
- There was no imported water recharged in the Chino Basin from MWD.
- Chino Basin Watermaster will remove 4.2% for evaporation losses from delivered supplemental water sources (imported water and recycled water).
- Considering evaporation losses, total recharge is preliminarily estimated at 1,558.5 acre-feet.

The Metropolitan Water District of Southern California

Water Supply Conditions Report - https://www.mwdh2o.com/WSCR

Questions? Reach out via the form: https://forms.office.com/g/Gj3aReAuCm

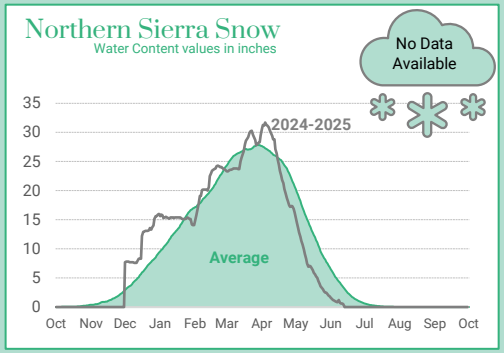
Water Year 2025-2026

As of: 11/09/2025

State Water Project

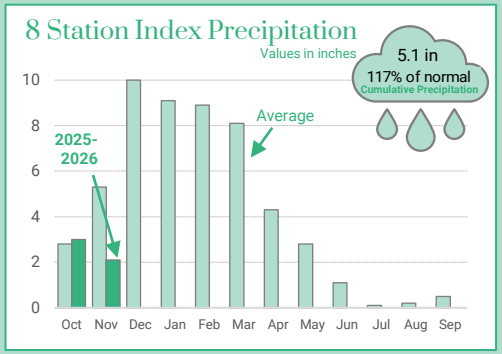
Northern Sierra Snow

Water Content values in inches



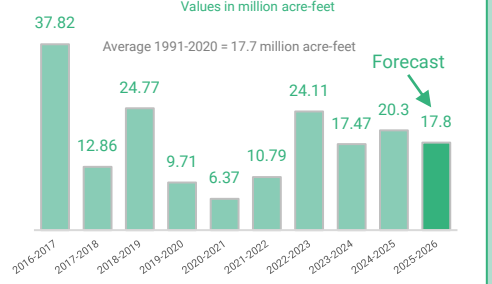
8 Station Index Precipitation

Values in inches

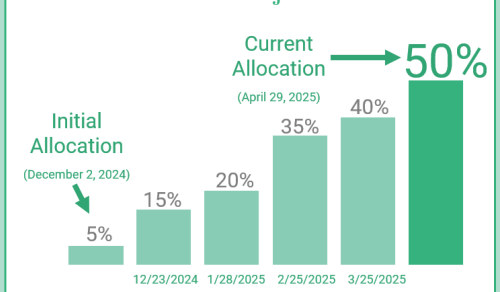


Sacramento River Runoff

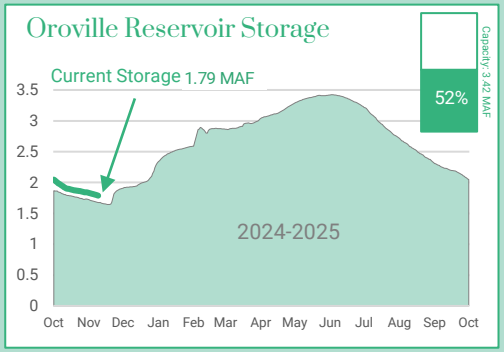
Values in million acre-feet



2025 State Water Project Allocation

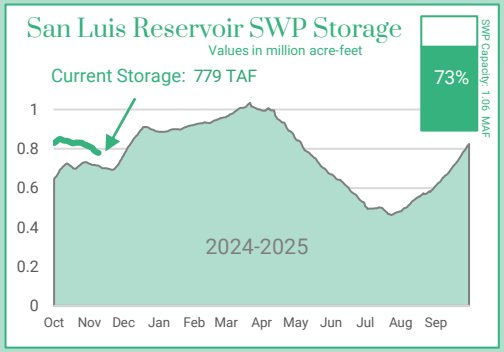


Oroville Reservoir Storage



San Luis Reservoir SWP Storage

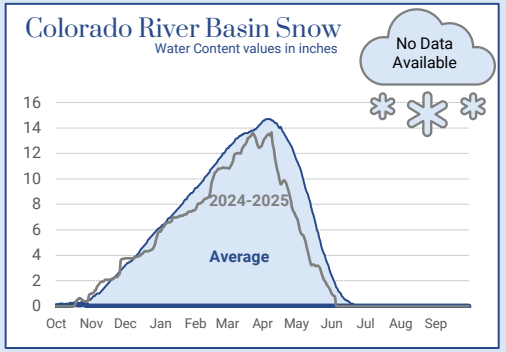
Values in million acre-feet



Colorado River

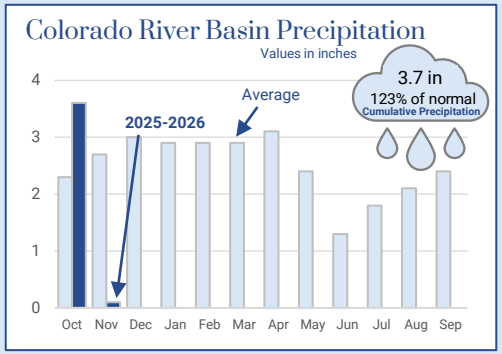
Colorado River Basin Snow

Water Content values in inches



Colorado River Basin Precipitation

Values in inches



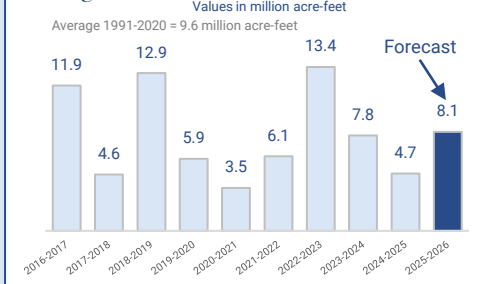
Lake Mead Chance of Operating Condition

		2026	2027*	2028*	2029*
	Surplus (above 1,145 ft)	0%	0%	0%	0%
	Normal Year (between 1,075 and 1,145 ft)	0%	7%	3%	10%
Shortage	1st Level (between 1,050 and 1,075 ft)	100%	50%	30%	20%
Shortage	2nd Level (between 1,025 and 1,050 ft)	0%	40%	53%	43%
Shortage	3rd Level (below 1,025 ft)	0%	3%	13%	27%

* Years beyond 2026 assume continuation of current operating guidelines

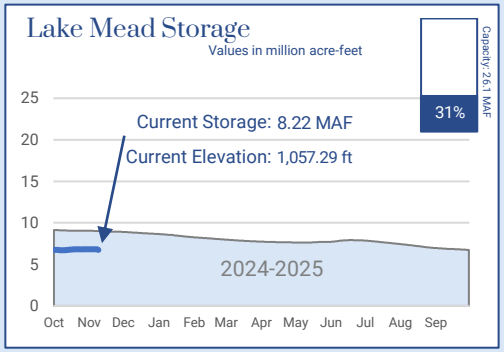
Unregulated Inflow into Lake Powell

Values in million acre-feet



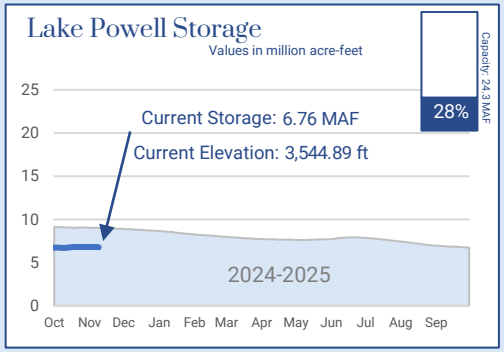
Lake Mead Storage

Values in million acre-feet



Lake Powell Storage

Values in million acre-feet



Explore Metropolitan's Water System: https://www.mwdh2o.com/how-we-get-our-water/

October 29, 2025

To: Inland Empire Utilities Agency

From: Michael Boccadoro
Beth Olhasso

RE: October Report

Overview:
The new water year started October 1 with storage in state and federal reservoirs hovering right above average for this time of the year. A cold Canadian storm brought rain and snow to northern California, but most of that precipitation soaked in to the parched earth, with limited impact on storage. A high-pressure system will likely keep the state warm and dry over the first part of November. Lake Oroville is sitting at 54 percent capacity, 101 percent of normal; Lake Shasta is sitting at 56 percent of capacity, 105 percent of average; while San Luis Reservoir is at just 53 percent of capacity, 119 percent average for this time of year. Now water managers hold their breath and hope for strong winter precipitation and abundant snowpack.

The Delta Conveyance Project (DCP) had several victories recently. First, an appeals court overturned an injunction on the start of the geotechnical work needed for the project. Additionally, the Department of Water Resources submitted to the Delta Stewardship Council, a petition for consistency with the Delta Plan supported by evidence. While procedural in nature, this is an important step for DCP.

The State Water Resources Control Board has launched a new tool to track surface water diversions. The tool will aid in all water rights holders reporting diversions. It will also help modernize the water rights system by digitizing paper records that have been utilized for decades. Illegal diversions are particularly harmful to State Water Project customers, so appropriate accounting can only benefit south of Delta interests.

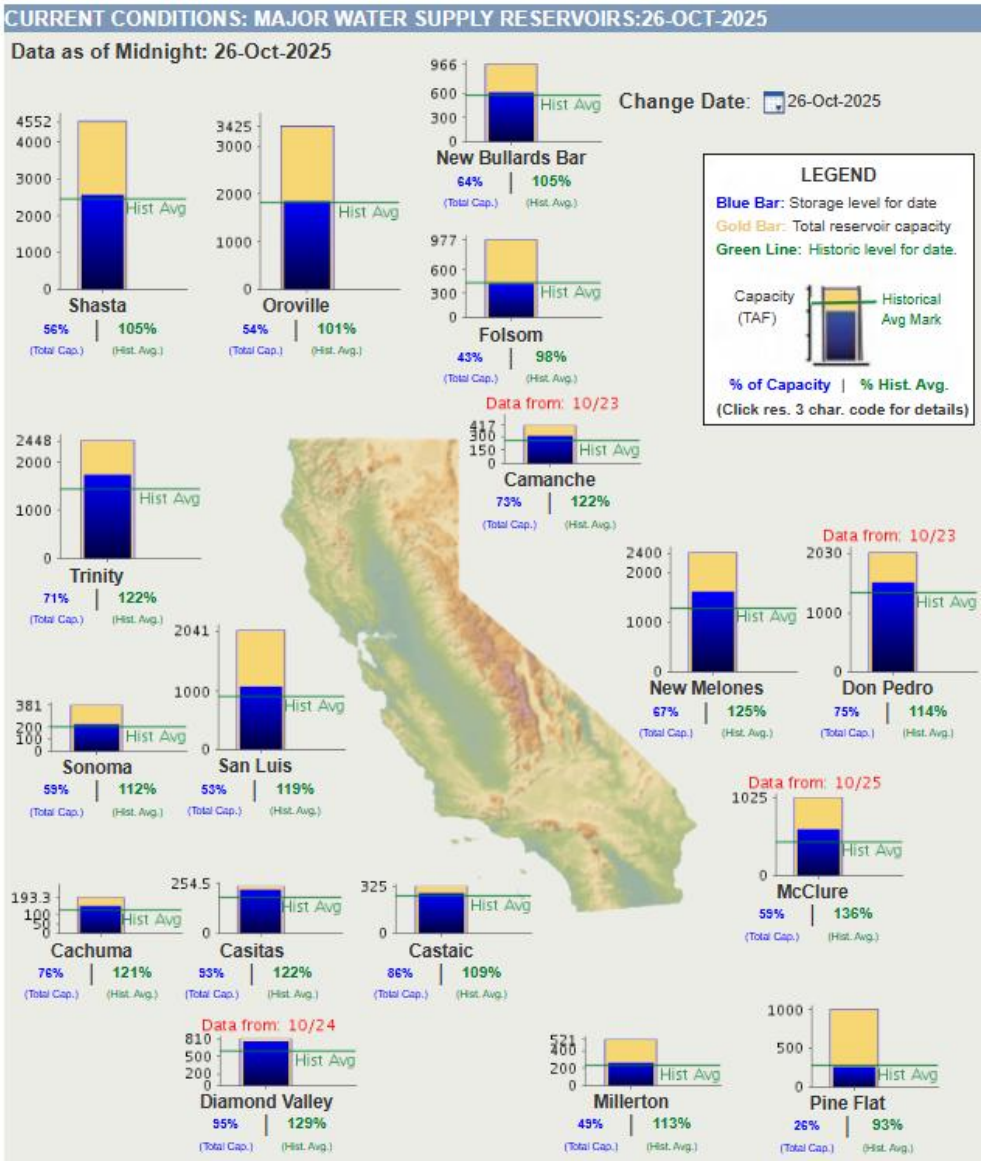
The California Chamber of Commerce has submitted a voter initiative to modernize and streamline the CA Environmental Quality Act (CEQA) review process for building the state's most essential projects. The cornerstone of the initiative would give government officials 365 days to approve or deny applications. After that, applicants could ask for a public hearing and a final vote within 60 days.

October 13 marked the end of the first year of the two-year session with the Governor taking final action on the 913 bills sent to his desk. CASA's Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) control bill, SB 862 (Allen) was unable to overcome fierce opposition from the Teflon industry and was vetoed. WateReuse's SB 31, and Western Municipal Water District's Senate Bill 72 (Caballero) were both signed by the Governor. The Legislature will return to Sacramento in January for the second year of the session.

Inland Empire Utilities Agency
Status Report – October 2025

Water Supply Conditions

An early, cold, northern California storm brought rain and snow, it wasn't enough to add to storage levels. The first part of November looks to remain dry, which will result in Lake Oroville and Lake Shasta getting drawn down further. San Luis reservoir is at 119 percent of historical average and 53 percent capacity. Lake Oroville has been drawn down to 54 percent capacity, 101 percent of normal; Lake Shasta is sitting at 56 percent of capacity, 105 percent of average for this time of the year.



Delta Updates

Court Clears Path for Delta Conveyance Project Geotechnical Work
California's Third District Court of Appeals has overturned a lower court's injunction blocking preconstruction geotechnical work for the Delta Conveyance Project (DCP) — a major win for supporters of the state's long-term water security efforts.

The ruling allows the Department of Water Resources and State Water Contractors to proceed with soil sampling and analysis, key steps that will inform the DCP's engineering design and cost estimates. The court agreed that this data-gathering work is not a "covered action" under the Delta Reform Act, meaning it does not require prior certification under the Delta Plan.
Jennifer Pierre, General Manager of the State Water Contractors, welcomed the decision, calling it a "common-sense" move that prevents project opponents from using legal challenges to delay critical infrastructure work.

DWR Submits a Certification of Consistency to the Delta Stewardship Council
DWR has submitted the Delta Conveyance Project (DCP) to the Delta Stewardship Council (DSC) for certification of consistency. The Delta Stewardship Council's role is not to approve the project itself — it's to assess whether the certification of consistency is supported by evidence.
Key Aspects:

- A "covered action" (one requiring consistency certification) is defined by five criteria under the Delta Reform Act — e.g., being located in the Delta/Suisun Marsh, being state/local funded or approved, and significantly impacting the coequal goals of ecosystem restoration and water-supply reliability.
- Once the certification is posted, a 30-day appeal window opens during which individuals or organizations may challenge the consistency statement if they believe it conflicts with a Delta Plan policy and would adversely affect the coequal goals or flood-control programs.
- If an appeal is filed:
    - The Council publishes notice within 5 days.
    - The agency must submit its full record.
    - A public hearing must be scheduled (typically within 60 days).
    -

- Outcomes of the appeal can be:
    - Appeal dismissed for non-jurisdiction or improper filing.
    - Appeal denied (certification upheld).
    - Matter remanded back to the agency for reconsideration of the certification.
- Since 2013, 58 certifications have been filed; only six have been appealed (21 total appeals) — indicating appeals are relatively rare.

Why this matters:

- The process clarifies how major infrastructure proposals within the Delta region (like the Delta Conveyance Project) interact with existing regulatory frameworks aimed at balancing water supply reliability, environmental restoration, and land use.

-

- For those following the Delta Conveyance Project specifically, this marks a key regulatory milestone: the certification has been filed, the appeal window is open, and the next procedural steps are underway.

California Chamber of Commerce Submits CEQA Streamlining Ballot Measure
California business leaders, led by the California Chamber of Commerce, are backing a new ballot initiative that seeks to streamline the state's environmental review process under the California Environmental Quality Act (CEQA).

The proposal would impose strict deadlines—generally a one-year cap—on environmental reviews and government approvals for projects considered essential, such as affordable housing, clean energy development, water infrastructure, and wildfire-resilience measures.

Supporters argue that CEQA has become a major obstacle to progress, inflating costs and delaying urgently needed projects tied to housing and climate goals.

Environmental and community groups warn that weakening CEQA could erode environmental safeguards and limit public oversight, particularly in vulnerable communities.

According to Cal Chamber:
"The *Building an Affordable California Act* restores the "productive harmony" that's been cast aside over the past five decades:

- Essential projects would be subject to sensible, firm deadlines for environmental review.
- Government officials would have 365 days to approve or deny applications. After that, applicants could ask for a public hearing and a final vote within 60 days.
- Options to resolve concerns would be limited to either the proposed project, an alternative that reduces environmental impacts, or no project at all.
- There would be new timelines for legal challenges, too. Courts would be required to distinguish between reasonable concerns and those of activists whose "not in my backyard" viewpoints currently are allowed to delay or deny vital projects.
- Communities retain their control over approving local development. This is <u>not</u> a one-size-fits-all approach to meeting California's needs.
- Essential projects must meet the state's strong labor standards and protections.
- Important environmental protections such as mitigation, habitat protection, and public comment periods would remain in place."

To qualify for the 2026 ballot, the Chamber must first obtain title and summary from the state attorney general and gather over half a million valid voter signatures.

Water Rights at the SWRCB
The state of California has launched a new system to track surface-water usage more accurately, responding to longstanding problems around old water rights and murky reporting. Officials say

the previous system was “hard to navigate and riddled with bad information,” making regulation and enforcement difficult during droughts.

The new platform, called CalWATRS (California Water Accounting, Tracking & Reporting System), consolidates thousands of water-rights records and provides a more user-friendly reporting interface. It was completed on schedule in 2025, cost about $61.5 million, and replaced the earlier eWRIMS system.

Despite the progress, there are still challenges. Some records from older water rights remain un-digitized. Some stakeholders—especially in agriculture—are concerned about privacy and the added burden of defending longstanding water claims under tighter tracking. Regulators also caution that CalWATRS may still have bugs and that feedback from water-rights holders will help refine it.

The bigger context: California has around 43,000 surface-water rights holders, many of which date back over a century with unclear documentation. With agriculture consuming about 80% of surface water and longstanding gaps in groundwater tracking, the improved accounting is a major step in better managing scarce water resources amid drought climate pressures.

This is a first step in helping understand how much water is being diverted before it gets to the State Water Project pumps.

State Water Contractors Send Letter to Governor Newsom Outlining Priorities
In conjunction with the start of the water year, the State Water Contractors sent a letter to Governor Newsom outlining SWC priorities for the water year. The priorities include:

1. Veto request for AB 1319 (Schultz): The bill, which was signed after the letter was sent, would give the CA Department of Fish & Wildlife (CDFW) authority to list any species as a “provisional candidate” under the CA Endangered Species Act without any input from the public or determination that the science warrants listing.
2. Urge CDFW to look at the science when considering listing white sturgeon.
3. Request that CDFW be clear about the scientific basis for curtailments and costly mitigation measures. Mitigation measures should be proportional to the magnitude and nature of the effect of the State Water Project (SWP).
4. Adopt Bay-Delta Water Quality Control Plan
5. Resolve SWP water rights permitting issues at DWR and State Water Resources Control Board.
6. Allocate funding for subsidence repair.
7. Addressing the state mandate on SWP to procure renewable energy
8. Address the state not paying their full share of recreational costs in the Delta and other SWP facilities.

The SWC hope the letter will help focus the Governor on important tasks for his final year in office.

Legislative Update
The Legislature adjourned the first year of the two-year session on September 13 (a day later then planned), and will return to Sacramento in January, barring the Governor calling a special session for any reason. The Governor took final action on legislation on October 13.

2025 by the numbers:
Bills introduced: 2,397
Bills sent to the Governor: 913
Bills signed: 794
Bills vetoed: 119

Water Supply: California Municipal Utilities Association and Western Municipal Water District reintroduced legislation to add new requirements into the CA Water Plan to set volumetric targets for new water supply as **SB 72 (Caballero)**. They believe they have removed the concerns of the SWRCB, which was the stated reason the bill was vetoed last session. The was signed by the Governor.

Recycled Water: WateReuse CA's **SB 31 (McNerney)** to make some long-overdue updates to Title 22 of the CA Code of Regulations has moved through the process without a single "no" vote.

IEUA staff were instrumental in helping develop the legislation that would, among other things, codify how an "unauthorized discharge" of recycled water is treated by Regional Boards. Recently, SWRCB staff have indicated they have concerns with the bill, but never articulated any amendments that would make the measure workable to them. The bill was signed by the Governor.

PFAS: As discussed above, the California Association of Sanitation Agencies' reintroduced PFAS source control bill would ban the use of any intentionally added PFAS to products, **SB 682 (Allen)**. The bill hit a roadblock last year with the California Manufacturers and Technology Association who worked to load costs into the bill to get it held in Appropriations Committee. The bill has been significantly narrowed to only ban the use of PFAS when there is a commercially available alternative, but will still go a long way to addressing the source of PFAS in sewage. The bill was vetoed by Governor.

ACWA and the League of California Cities have introduced **SB 454 (McNerney)** that would establish a PFAS mitigation fund. Though the bill does not yet have a funding source, was vetoed by the Governor

SB 394 (Allen) is ACWA and Las Virgenes MWD's bill to increase penalties for water theft from fire hydrants. The bill moved easily through the process and was signed by the Governor.

SB 707 (Durazo) is an update to the Brown Act. The bill would institute significant requirements on large agencies, those with above a $400 million operating budget—which does not include IEUA. Additionally, the bill incorporated the important provisions of AB 259 (Rubio) which was sponsored by Three Valley's Municipal Water District. Those provisions

extend the ability for elected officials to meet remotely in some conditions. The California Special Districts Association was instrumental in working on both SB 707 and AB 259 and lead coalition efforts on both.

Fiscal Year 2026 Appropriations Update

H.R. 5371), which would fund the government through November 21, but each effort has failed to secure the 60 votes needed to advance. Most Democratic lawmakers have opposed the measure, calling for the inclusion of health care funding and other provisions. Meanwhile, senators from both parties have sought to advance standalone bills to pay federal employees during the shutdown, but none have yet advanced. With no agreement yet on short-term or full-year appropriations, the path to reopening the government remains stalled and uncertain.

FY26 Appropriations Bill	House Subcommittee Allocation (in Billions)	Passed House Committee	Passed House	Passed Senate Committee	Passed Senate
Agriculture-Rural Development-FDA	$25.523	June 23 by a 35-27 vote		July 10 by a 27-0 vote	August 1 by an 87-9 vote
Commerce-Justice-Science	$76.824	September 10 by a 34-28 vote		July 17 by a 19-10 vote	
Defense	$831.513	June 12 by a 36-27 vote	July 18 by a 219-202 vote	July 31 by a 26-3 vote	
Energy-Water Development	$57.300	July 10 by a 35-27 vote	September 4 by a 214-213 vote		
Financial Services-General Government	$23.198	September 3 by a 35-28 vote			
Homeland Security	$66.361	June 24 by a 36-27 vote			
Interior-Environment	$37.971	July 22 by a 33-28 vote		July 24 by a 26-2 vote	

Labor-HHS-Education	$184.491	September 2 by a 11-7 vote	September 9 by a 35-28 vote	July 31 by a 26-3 vote	
Legislative Branch	$6.700	June 26 by a 34-28 vote		July 10 by a 26-1 vote	August 1 by an 81-15 vote
MilCon-VA	$152.091	June 10 by a 36-27 vote	June 25 by a 218-206 vote	July 26 by a 26-3 vote	August 1 by an 87-9 vote
State-Foreign Operations	$46.218	July 23 by a 35-27 vote			
Transportation-HUD	$89.910	July 17 by a 35-28 vote		27-1 vote	

LEGISLATIVE ACTIVITY

Senate Confirms Trump Administration Nominees. On October 7, the Senate **approved** the following nominations by an en bloc 51-47 vote:

- Alex Adams to be Assistant Secretary of Health and Human Services for Family Support
- Derek Barrs to be Administrator of the Federal Motor Carrier Safety Administration
- John Busterud to be Assistant Administrator of the Environmental Protection Agency for Solid Waste
- Michael Boren to be Under Secretary of Agriculture for Natural Resources and Environment
- David Fink to be Administrator of the Federal Railroad Administration
- Neil Jacobs to be Under Secretary of Commerce for Oceans and Atmosphere
- Catherine Jereza to be Assistant Secretary of Energy for Electricity
- Audrey Robertson to be Assistant Secretary of Energy for Energy Efficiency and Renewable Energy
- Michael Rutherford to be Assistant Secretary of Transportation for Multimodal Freight and Infrastructure Policy
- Michael Stuart to General Counsel at the Department of Health and Human Services (HHS)
- Craig Trainor to be Assistant Secretary of Housing and Urban Development for Fair Housing and Equal Opportunity
- Gregory Zerzan to be General Counsel at the Department of Transportation

CONGRESSIONAL LETTERS

Senate Democrats Oppose DOE Decision to Cancel $8 Billion in Energy Projects. On October 9, thirty-seven Democratic senators, led by Energy and Natural Resources Ranking Member Martin Heinrich (D-NM) and Appropriations Committee Vice Chair Patty Murray (D-WA), sent a **letter** to Energy Secretary Chris Wright and OMB Director Russell Vought opposing the Department of Energy's cancellation of $8 billion in federal investments across 223 energy projects in 21 states. Lawmakers said the cancellations—many of which affected projects funded under the *Infrastructure Investment and Jobs Act*, the *Inflation Reduction Act*,

and other appropriations—would result in job losses, higher energy costs, and setbacks for domestic manufacturing and research. The senators argued that the cancellations lack legal justification under federal grant rules and urged the reinstatement of these awards.

California Democrats Express Opposition to Cancellation of Hydrogen Hub Agreement. California's Democratic congressional delegation, led by Representatives Dave Min, George Whitesides, and Mike Levin, sent a **letter** to Energy Secretary Chris Wright expressing opposition to the Department of Energy's termination of its $1.2 billion grant agreement with the Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES), California's designated regional hydrogen hub. Lawmakers said the decision violates the finalized agreement and could undermine efforts to expand domestic clean energy production. The members contend the ARCHES project was projected to generate over 200,000 jobs and support U.S. manufacturing and innovation in multiple states. The letter requests the Department of Energy's legal justification for the termination and analysis of the potential economic impact.

FEDERAL AGENCY ACTIONS AND PERSONNEL CHANGES

President Trump Signs Executive Order to Overhaul Federal Hiring Process. On October 15, President Trump **signed** an executive order directing agencies to establish "Strategic Hiring Committees" that include senior political appointees to oversee the creation and filling of federal positions. The order requires agencies to submit annual staffing plans—developed with the Office of Personnel Management (OPM) and Office of Management and Budget (OMB)—to align hiring decisions with agency needs and administration priorities. The order follows the expiration of a federal hiring freeze and maintains restrictions on new or vacant positions unless approved by agency leadership. It exempts certain national security, immigration enforcement, and public safety roles.

OMB Revises Shutdown Guidance, Removes Backpay Reference for Furloughed Federal Workers. On October 3, the Office of Management and Budget (OMB) revised **shutdown guidance** to remove references to the *2019 Government Employee Fair Treatment Act*, which guarantees backpay for federal workers following a lapse in appropriations. The document now specifies that "excepted" employees—those required to work without pay—are entitled to backpay once funding is restored. The update contrasts with Office of Personnel Management (OPM) guidance issued days earlier, which continues to state that furloughed employees will receive retroactive pay after a shutdown ends. The White House has reportedly considered a new legal interpretation limiting the 2019 law's applicability to past shutdowns. Federal employee unions and several key lawmakers have maintained that the law provides backpay to all affected employees following any future lapse in appropriations.

EPA Releases New Cybersecurity Tools for Water Systems. On October 23, the Environmental Protection Agency (EPA) **released** new and updated resources to help public water systems strengthen cybersecurity and emergency response planning. The materials include an updated emergency response plan guide for wastewater utilities, a cybersecurity incident response plan template, new incident action checklists, and a cybersecurity

procurement checklist to help utilities assess vendor practices. EPA said the tools aim to help utilities prevent and respond to cyberattacks that could threaten access to safe drinking water or disrupt wastewater treatment.

##

IEUA Bill List 10.13.2025- FINAL 2025

Note: *bills in italics are not moving in 2025*

Bills With Positions

Measure	Author	Topic	Last Amend	Status	Location	Calendar	Brief Summary	Notes
AB 259	***Rubio, Blanca, D***	*Open meetings: local agencies: teleconferences.*	*04/21/2025*	*Held in Sen Judiciary* *LANGUAGE INCORPORATED INTO SB 707, Signed by Governor*	*05/14/2025 - Senate L. GOV.*		*This bill would extend the alternative teleconferencing procedures until January 1, 2030. (Based on 04/21/2025 text)*	*Three Valleys MWD and CSDA Sponsor* *SUPPORT*
AB 339	**Ortega, D**	Local public employee organizations: notice requirements.	08/29/2025		Signed by Governor		This bill would require the governing body of a public agency, and boards and commissions designated by law or by the governing body of a public agency, to give the recognized employee organization no less than 45 days' written notice before issuing a request for proposals, request for quotes, or renewing or extending an existing contract to perform services that are within the scope of work of the job classifications represented by the recognized employee organization, subject to certain exceptions. The bill would require the notice to include specified information, including the anticipated duration of the contract.	OPPOSE
AB 514	***Petrie-Norris, D***	*Water: emergency water supplies.*	*05/01/2025*	*05/22/2025 - Failed Deadline pursuant to Rule 61(a)(5). (Last location was APPR. SUSPENSE FILE on 5/14/2025)(May be acted upon Jan 2026)*	*05/22/2025 - Assembly 2 YEAR*		*Would declare that it is the established policy of the state to encourage, but not mandate, the development of emergency water supplies by both local and regional water suppliers, as defined, and to support their use during times of drought or unplanned service or supply disruption, as provided. (Based on 05/01/2025 text)*	*IRWD Sponsor* *SUPPORT*

Bills With Positions

Measure	Author	Topic	Last Amend	Status	Location	Calendar	Brief Summary	Notes
AB 523	**Irwin, D**	Metropolitan water districts: proxy vote authorizations.	05/05/2025		Signed by Governor		Under the Metropolitan Water District Act, the board of a metropolitan water district is required to consist of at least one representative from each member public agency, as prescribed. This bill would, until January 1, 2030, authorize a representative of a member public agency that is entitled to designate or appoint only one representative to the board of directors to assign a proxy vote authorization to a representative of another member public agency to be exercised when the assigning representative is unable to attend a meeting or meetings of the board, as provided. (Based on 05/05/2025 text)	Eastern MWD Sponsor SUPPORT
AB 532	***Ransom, D***	*Water rate assistance program.*	*07/17/2025*	*Held on Appr Suspense*			*The Low Income Household Water Assistance Program was only operative until March 31, 2024. This bill would repeal the above-described requirements related to the Low Income Household Water Assistance Program. (Based on 05/23/2025 text)*	*CMUA Sponsor* *SUPPORT*
AB 580	**Wallis, R**	Surface mining: Metropolitan Water District of Southern California.	07/17/2025		Signed by Governor		Current law authorizes the Metropolitan Water District of Southern California (MWD) to prepare a master reclamation plan, as provided, that identifies each individual surface mining operation in specified counties and satisfies all reclamation plan requirements for each individual surface mining site. Existing law repeals the provisions authorizing the preparation and approval of the master reclamation plan for the MWD on January 1, 2026. This bill would extend the operation of those provisions until January 1, 2051. (Based on 03/26/2025 text)	SUPPORT

Bills With Positions

Measure	Author	Topic	Last Amend	Status	Location	Calendar	Brief Summary	Notes
AB 794	***Gabriel, D***	*California Safe Drinking Water Act: emergency regulations.*	*04/10/2025*	*INACTIVE FILE*			*This bill would provide that the authority of the state board to adopt an emergency regulation pursuant to these provisions includes the authority to adopt requirements of a specified federal regulation that was in effect on January 19, 2025, regardless of whether the requirements were repealed or amended to be less stringent. The bill would prohibit an emergency regulation adopted pursuant to these provisions from implementing less stringent drinking water standards, as provided, and would authorize the regulation to include monitoring requirements that are more stringent than the requirements of the federal regulation. The bill would prohibit maximum contaminant levels and compliance dates for maximum contaminant levels adopted as part of an emergency regulation from being more stringent than the maximum contaminant levels and compliance dates of a regulation promulgated pursuant to the federal act. (Based on 04/10/2025 text)*	*OPPOSE UNLESS AMENDED*
AB 810	***Irwin, D***	*Local government: internet websites and email addresses.*	*04/10/2025*	*05/22/2025 - Failed Deadline pursuant to Rule 61(a)(5). (Last location was APPR. SUSPENSE FILE on 5/7/2025)(May be acted upon Jan 2026)*	*05/22/2025 - Assembly 2 YEAR*		*Current law requires that a local agency that maintains an internet website for use by the public to ensure that the internet website uses a ".gov" top-level domain or a ".ca.gov" second-level domain no later than January 1, 2029. The bill would also require a special district, joint powers authority, or other political subdivision to comply with similar domain requirements no later than January 1, 2031. (Based on 04/10/2025 text)*	*OPPOSE*

Bills With Positions

Measure	Author	Topic	Last Amend	Status	Location	Calendar	Brief Summary	Notes
SB 31	**McNerney, D**	Water quality: recycled water.	06/09/2025	Asm Floor	Signed by Governor		This bill would, for the purposes of the above provision, redefine "recycled water" and provide that water discharged from a decorative body of water during storm events is not to be considered an unauthorized discharge if recycled water was used to restore levels due to evaporation. (Based on 05/12/2025 text)	WateReuse Sponsored Bill SUPPORT
SB 72	**Caballero, D**	The California Water Plan: long-term supply targets.	04/10/2025	Asm. Floor	Signed by Governor		The bill would require "The California Water Plan." to include specified components, including a discussion of the estimated costs, benefits, and impacts of any project type or action that is recommended by the department within the plan that could help achieve the water supply targets. (Based on 04/10/2025 text)	CMUA and Western MWD Bill. SUPPORT
SB 239	***Arreguín, D***	*Open meetings: teleconferencing: subsidiary body.*	*04/07/2025*	*INACTIVE FILE.*			*This bill would authorize a subsidiary body, as defined, to use alternative teleconferencing provisions and would impose requirements for notice, agenda, and public participation, as prescribed. The bill would require the subsidiary body to post the agenda at each physical meeting location designated by the subsidiary body, as specified. The bill would require the members of the subsidiary body to visibly appear on camera during the open portion of a meeting that is publicly accessible via the internet or other online platform, as specified. (Based on 04/07/2025 text)*	*SUPPORT*
SB 350	***Durazo, D***	*Water Rate Assistance Program.*	*05/07/2025*	*05/22/2025 - Failed Deadline pursuant to Rule 61(a)(5). (Last location was APPR. SUSPENSE FILE on 5/12/2025)(May be acted upon Jan 2026)*	*05/22/2025 - Senate 2 YEAR*		*Would establish the Water Rate Assistance Program. As part of the program, the bill would establish the Water Rate Assistance Fund in the State Treasury (Based on 05/07/2025 text)*	*Environmental justice community bill.* *OPPOSE UNLESS AMENDED*

Bills With Positions

Measure	Author	Topic	Last Amend	Status	Location	Calendar	Brief Summary	Notes
SB 394	**Allen, D**	Water theft: fire hydrants.	07/03/2025		Signed by Governor		This bill would add to the list of acts for which a utility may bring a civil cause of action under these circumstances to include tampering with a fire hydrant, fire hydrant meter, or fire detector check, or diverting water, or causing water to be diverted, from a fire hydrant with knowledge of, or reason to believe, that the diversion or unauthorized connection existed at the time of use for nonfirefighting purposes or without authorization from the appropriate water system or fire department. (Based on 02/14/2025 text)	Las Virgenes and ACWA sponsored SUPPORT
SB 454	**McNerney, D**	State Water Resources Control Board: PFAS Mitigation Program	5/23/2025		Vetoed by Governor		his bill, which would become operative upon an appropriation by the Legislature, would enact a PFAS mitigation program. As part of that program, the bill would create the PFAS Mitigation Fund in the State Treasury and would authorize certain moneys in the fund to be expended by the state board, upon appropriation by the Legislature, for specified purposes.	Sponsored by ACWA and League of CA Cities SUPPORT
SB 496	***Hurtado, D***	*Advanced Clean Fleets Regulation: appeals advisory committee: exemptions.*	*04/07/2025*	*05/22/2025 - Failed Deadline pursuant to Rule 61(a)(5). (Last location was APPR. SUSPENSE FILE on 5/5/2025)(May be acted upon Jan 2026)*	*05/22/2025 - Senate 2 YEAR*		*This bill would require the state board to establish the Advanced Clean Fleets Regulation Appeals Advisory Committee by an unspecified date for purposes of reviewing appeals of denied requests for exemptions from the requirements of the Advanced Clean Fleets Regulation. (Based on 04/07/2025 text)*	*CSDA and other local gov sponsored bill* *SUPPORT*

Bills With Positions

Measure	Author	Topic	Last Amend	Status	Location	Calendar	Brief Summary	Notes
SB 601	***Allen, D***	*Water: waste discharge.*	*07/10/2025*	*Two-Year Bill*			*This bill would authorize the state board to adopt water quality control plans for nexus waters, which the bill would define as all waters of the state that are not also navigable, except as specified. The bill would require any water quality standard that was submitted to, and approved by, or is awaiting approval by, the United States Environmental Protection Agency or the state board that applied to nexus waters as of May 24, 2023, to remain in effect, as provided.*	*Coastkeeper sponsor* *OPPOSE*
SB 682	**Allen, D**	Environmental health: product safety: perfluoroalkyl and polyfluoroalkyl substances.	07/17/2025				This bill would, on and after January 1, 2028, prohibit a person from distributing, selling, or offering for sale a cleaning product, dental floss, juvenile product, food packaging, or ski wax, as provided, that contains intentionally added PFAS, as defined, except for previously used products and as otherwise preempted by federal law. The bill would, on and after January 1, 2030, prohibit a person from distributing, selling, or offering for sale cookware that contains intentionally added PFAS, except for previously used products and as otherwise preempted by federal law. The bill would authorize the department, on or before January 1, 2029, to adopt regulations to carry out these provisions.	CASA Sponsored SUPPORT

Watch Bills

Measure	Author	Topic	Last Amend	Status	Location	Calendar	Brief Summary	Notes
AB 823	**Boerner, D**	Solid waste: plastic microbeads: plastic glitter.	05/23/2025		Vetoed by Governor		This bill would, on and after January 1, 2029, prohibit a person from selling, offering for sale, distributing, or offering for promotional purposes in this state a personal care product containing plastic glitter, or a personal care product in a non-rinse-off product or a cleaning product containing one ppm or more by weight of plastic microbeads that are used as an abrasive, as specified. The bill would authorize, until January 1, 2030, a person to continue to sell, offer for sale, distribute, or offer for promotional purposes in this state an existing stock of personal care products containing plastic glitter, as specified. By adding these prohibitions to the Plastic Microbeads Nuisance Prevention Law, the bill would impose the civil penalty for violations of these prohibitions. (Based on 05/23/2025 text)	
SB 74	***Seyarto, R***	*Office of Land Use and Climate Innovation: Infrastructure Gap-Fund Program.*	*04/07/2025*	*Held on Suspense*			*The bill would authorize the office to provide funding for up to 20% of a project's additional projected cost, as defined, after the project has started construction, subject to specified conditions, including, among other things, that the local agency has allocated existing local tax revenue for at least 45% of the initially budgeted total cost of the infrastructure project. When applying to the program, the bill would require the local agency to demonstrate challenges with completing the project on time and on budget and how the infrastructure project helps meet state and local goals, as specified. (Based on 04/07/2025 text)*	
SB 224	**Hurtado, D**	Department of Water Resources: water supply forecasting.	07/17/2025		Vetoed by Governor		This bill would require the department, on or before January 1, 2027, to adopt a new water supply forecasting model and procedures that better address the effects of climate change and implement a formal policy and procedures for documenting the department's operational plans and the department's rationale for its operating procedures, including the department's rationale for water releases from reservoirs. (Based on 05/23/2025 text)	

Watch Bills

Measure	Author	Topic	Last Amend	Status	Location	Calendar	Brief Summary	Notes
SB 279	**McNerney, D**	Solid waste: compostable materials.	06/30/2025		Signed by Governor		This bill would require that the total amount of feedstock and compost onsite at any one time not exceed 500 cubic yards instead of the 100 cubic yards and 750 square feet in the regulations. The bill would also require the composting of agricultural materials and residues that are from a large-scale biomass management event at an agricultural facility that does not otherwise operate as a solid waste facility to be an excluded activity, as specified. This bill contains other related provisions and other existing laws. (Based on 05/23/2025 text)	
SB 317	**Hurtado, D**	Wastewater surveillance.	06/18/2025		Vetoed by Governor		Would require the State Department of Public Health, in consultation with participating wastewater treatment facilities, local health departments, and other subject matter experts, to maintain the Cal-SuWers network of monitoring programs to test for pathogens, toxins, and other public health indicators in wastewater. The bill would require participation in the Cal-SuWers network from local health departments and wastewater treatment facilities to be voluntary. (Based on 04/28/2025 text)	
SB 431	***Arreguín, D***	*Assault and battery: public utility employees and essential infrastructure workers.*	*05/23/2025*	*Held on Suspense*			*This bill would make an assault or battery committed against an employee of a public utility or other worker engaged in essential infrastructure work, as defined, punishable by imprisonment in a county jail not exceeding one year, by a fine not exceeding $2,000, or by both that fine and imprisonment. (Based on 05/23/2025 text)*	

Watch Bills

Measure	Author	Topic	Last Amend	Status	Location	Calendar	Brief Summary	Notes
SB 445	***Stern, D***	*Transportation: planning: complete streets facilities: sustainable transportation projects.*	*07/17/2025*	*Held on Suspense*			*This bill would instead require the Department of Transportation to develop and adopt the above-described project intake, evaluation, and encroachment review process on or before February 1, 2027. The bill would also state the intent of the Legislature to amend this bill with legislation that accelerates and makes more reliable third-party permits and approvals for preconstruction and construction activities on sustainable transportation projects.*	
SB 654	***Stern, D***	*California Environmental Protection Agency: contract: registry: greenhouse gas emissions that result from the water-energy nexus.*		*05/22/2025 - Failed Deadline pursuant to Rule 61(a)(5). (Last location was APPR. SUSPENSE FILE on 4/21/2025)(May be acted upon Jan 2026)*	*05/22/2025 - Senate 2 YEAR*		*The California Environmental Protection Agency is required to oversee the development of a registry for greenhouse gas emissions that result from the water-energy nexus using the best available data. Current law provides that participation in the registry is voluntary and open to any entity conducting business in the state. Existing law authorizes the agency to enter into a contract with a qualified nonprofit organization to do specified things, including to recruit broad participation in the registry from all economic sectors and regions of the state. Current law limits the term of the term of the contract to 3 years, except as provided. This bill would instead require the agency to oversee the administration of the above-described registry and would authorize the agency to enter into a new contract, limited to a term of 3 years and with a total budget of $2,000,000, to do specified things, including to recruit broad participation in the registry from all economic sectors and regions of the state to meet the different needs of water users throughout the state by various means, as provided. (Based on 02/20/2025 text)*	

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

Cost Summary:

- Actual Cost as of October 2, 2025: **$ 26,815,424**
- Remaining Budget: **$ 2,030,592**

Progress:

- Construction Contract with MNR is 99% completed
- Overall construction is 90% completed (March 2026)

Completed scope items

- Rubber dam system at Wineville Basin's spillway
- Control slide gates within Wineville Basin
- Basin grading for a new pump station at Wineville
- Power, controls, and communication systems at Wineville
- 2-miles of 30-Inch Pipeline passing through Fontana and Ontario.
- Stormwater diversion to Jurupa Basin.

Remaining scope items with MNR:

- Resolve Rubber Dam Connection and Control Issues

Updates:

- Requesting additional SRF funds
- See updated progress schedule
    - Pump delivery moved to Nov/Dec due to factory backlogs/high demands
    - Issued IFB on Nov. 18, 2025
    - Job Walk for IFB Oct. 2, 2025
    - Close Bids for IFB on Nov. 13, 2025
    - Award Contractor on Nov. 202, 2025

TASK	PROGRESS	START	END
Prepare Solicitation Documents		**06-Jun-24**	**11-Nov-24**
Draft Documents	100%	06-Jun-24	22-Aug-24
Review Documents	100%	23-Aug-24	28-Aug-24
Finalize Documents	100%	29-Aug-24	11-Nov-24
Request for Qualification of Pump Suppliers		**19-Nov-24**	**14-Jan-25**
Enter into PlanetBids	100%	19-Nov-24	19-Nov-24
Solicitation (Q&A Period)	100%	20-Nov-24	12-Dec-24
Final Week of Solicitation for RFQ	100%	16-Dec-24	19-Dec-24
Close Solicitation for RFQ (milestone)	100%	19-Dec-24	19-Dec-24
Review Responses to the RFQ	100%	20-Dec-24	13-Jan-25
Notify Prequalified Suppliers (milestone)	100%	14-Jan-25	14-Jan-25
Request for Proposal of Prequalified Suppliers		**14-Jan-25**	**21-May-25**
Prequalified Supplier Draft Initial Submittal and Pricing	100%	14-Jan-25	13-Feb-25
Receive Initial Submittal (milestone)	100%	13-Feb-25	13-Feb-25
Review Initial Submittal	100%	13-Feb-25	27-Feb-25
Prequalified Supplier Draft Final Submittal	100%	28-Feb-25	21-Mar-25
Receive Final Submittal (milestone)	100%	21-Mar-25	21-Mar-25
IEUA Reviews Final Submittal to Decide Pump Supplier	100%	24-Mar-25	07-Apr-25
Board of Directors' Authorization of Purchase Order (milestone)	100%	21-May-25	21-May-25
Pump Fabrication/Installation/Testing/Close-out		**22-May-25**	**17-Mar-26**
Finalized Pump Submittals	100%	22-May-25	01-Jul-25
Fabrication	92%	22-May-25	18-Nov-25
Delivery	0%	18-Nov-25	02-Dec-25
Installation	0%	02-Dec-25	31-Jan-26
Testing	0%	31-Jan-26	03-Mar-26
Close Out	0%	03-Mar-26	17-Mar-26

Outlet Control Gate/Rubber Dam System

Completed Basin at Wineville