CHINO BASIN WATERMASTER

NOTICE OF MEETINGS

Thursday, November 18, 2021

9:00 a.m. – Advisory Committee Meeting
11:00 a.m. – Watermaster Board Meeting

MEETING AVAILABLE BY REMOTE ACCESS ONLY
(SEE AGENDA FOR DETAILS)

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

Thursday, November 18, 2021

9:00 a.m. – Advisory Committee Meeting
11:00 a.m. – Watermaster Board Meeting

AGENDAS

CHINO BASIN WATERMASTER
ADVISORY COMMITTEE MEETING
9:00 a.m. – November 18, 2021
Mr. Jeff Pierson, Chair
Mr. Chris Diggs, Vice-Chair
Meeting Available by Remote Access Only*
Click on this link to access by PC/Smart Device
OR
Conference Call: (253) 215-8782
Meeting ID: 864 9949 3854
Passcode: 314474

AGENDA

CALL TO ORDER

ROLL CALL

AGENDA – ADDITIONS/REORDER

I. CONSENT CALENDAR

Note: 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 Advisory Committee Meeting held on October 21, 2021 *(Page 8)*

B. FINANCIAL REPORTS

Receive and file as presented:

1. Cash Disbursements for the month of September 2021 *(Page 24)*
2. Watermaster VISA Check Detail for the month of September 2021 *(Page 37)*
3. Combining Schedule for the Period July 1, 2021 through September 30, 2021 *(Page 40)*
4. Treasurer's Report of Financial Affairs for the Period September 1, 2021 through September 30, 2021 *(Page 43)*
5. Budget vs. Actual Report for the Period July 1, 2021 through September 30, 2021 *(Page 47)*
6. Cash Disbursements for October 2021 (Information Only) *(Page 71)*

C. APPLICATION: WATER TRANSACTION *(Page 82)*

Recommend to the Watermaster Board to approve the proposed transaction:
The transfer of 1,000.0 acre-feet of water from Santa Ana River Water Company to BlueTriton Brands, Inc. This transfer is made from Santa Ana River Water Company's Excess Carryover Account.

D. ANNUAL FINDING OF SUBSTANTIAL COMPLIANCE WITH THE RECHARGE MASTER PLAN

Recommend to the Watermaster Board to adopt the finding that Watermaster is in substantial compliance with the Recharge Master Plan. *(Page 90)*

E. 2020/21 ANNUAL REPORT OF THE GROUND-LEVEL MONITORING COMMITTEE *(Page 99)*

Recommend to the Watermaster Board to approve the 2020/21 Annual Report of the Ground-Level Monitoring Committee, along with filing a copy with the Court.

F. CALENDAR YEAR 2022 ADVISORY COMMITTEE VOLUME VOTE *(Page 201)*
Approve the Calendar Year 2022 Advisory Committee Volume Vote as presented, subject to Board approval of the Fiscal Year 2021/22 Assessment Package.

II. BUSINESS ITEMS

A. FISCAL YEAR 2021/22 SCOPE AND BUDGET FOR THE SAFE YIELD RESET METHODOLOGY UPDATE (DISCUSSION ONLY) *(Page 211)*

B. FISCAL YEAR 2021/22 BUDGET AMENDMENT (FORM A-21-11-01) *(Page 227)*
Approve the Fiscal Year 2021/22 Budget Amendment (Form A-21-11-01).

C. DRY YEAR YIELD PROGRAM (DISCUSSION ONLY)

D. FISCAL YEAR 2021/22 ASSESSMENT PACKAGE *(Page 232)*
Review Fiscal Year 2021/22 Assessment Package as presented and offer advice to Watermaster.

E. RESOLUTION TO LEVY REPLENISHMENT AND ADMINISTRATIVE ASSESSMENTS FOR FISCAL YEAR 2021/22 *(Page 280)*
Recommend to the Watermaster Board to adopt Resolution 2021-05 as presented.

III. REPORTS/UPDATES

A. LEGAL COUNSEL
1. San Bernardino County Superior Court Emergency Order
2. November 5, 2021 Hearing
3. Rules & Regulations Update
4. Evergreen Storage Agreements
5. Kaiser Permanente Lawsuit

B. ENGINEER
1. Data Collection and Evaluation Workshop #1
2. Plan to Mitigate for Loss of Hydraulic Control
3. Responses to Storage Questions

C. CHIEF FINANCIAL OFFICER
1. Fiscal Year 2021/22 Assessment Invoicing

D. GENERAL MANAGER
1. Personnel and Compensation Items
2. Chino Basin Sustainability
3. Watermaster's Holiday Charity Event
4. December Meetings
5. Grant Funding Opportunities
6. Other

E. INLAND EMPIRE UTILITIES AGENCY *(Page 288)*
1. MWD Update (Written)
2. State and Federal Legislative Reports (Written)
3. Community Outreach/Public Relations Report (Written)

F. METROPOLITAN MEMBER AGENCY REPORTS

IV. COMMITTEE MEMBER COMMENTS

V. OTHER BUSINESS

VI. CONFIDENTIAL SESSION - POSSIBLE ACTION

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

VII. FUTURE MEETINGS AT WATERMASTER*

11/16/21	Tue	1:30 p.m.	Data Collection & Evaluation Workshop No. 1 (Safe Yield)
11/18/21	Thu	9:00 a.m.	Advisory Committee Meeting
11/18/21	Thu	11:00 a.m.	Watermaster Board**
12/07/21	Tue	9:00 a.m.	Groundwater Recharge Coordinating Committee

* Watermaster meetings are being held remotely at this time. We are continuing to assess pandemic conditions and may resume in-person meetings in January 2022.

** Advanced to November 18, 2021 due to the Thanksgiving Holiday

ADJOURNMENT

CHINO BASIN WATERMASTER
WATERMASTER BOARD MEETING
11:00 a.m. – November 18, 2021
Mr. Jim Curatalo – Chair
Mr. Jeff Pierson – Vice-Chair
Meeting Available by Remote Access Only*
Click on this link to access by PC/Smart Device
OR
Conference Call: (720) 707-2699
Meeting ID: 842 0696 6398
Passcode: 213141

AGENDA

CALL TO ORDER

FLAG SALUTE

ROLL CALL

PUBLIC COMMENTS

RECOGNITION OF OUTGOING MEMBER'S SERVICE ON WATERMASTER BOARD

AGENDA - ADDITIONS/REORDER

I. CONSENT CALENDAR

Note: 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 October 28, 2021 *(Page 16)*

B. FINANCIAL REPORTS

Receive and file as presented:

1. Cash Disbursements for the month of September 2021 *(Page 24)*
2. Watermaster VISA Check Detail for the month of September 2021 *(Page 37)*
3. Combining Schedule for the Period July 1, 2021 through September 30, 2021 *(Page 40)*
4. Treasurer's Report of Financial Affairs for the Period September 1, 2021 through September 30, 2021 *(Page 43)*
5. Budget vs. Actual Report for the Period July 1, 2021 through September 30, 2021 *(Page 47)*
6. Cash Disbursements for October 2021 (Information Only) *(Page 71)*

C. APPLICATION: WATER TRANSACTION *(Page 82)*
Approve the proposed transaction:
The transfer of 1,000.0 acre-feet of water from Santa Ana River Water Company to BlueTriton Brands, Inc. This transfer is made from Santa Ana River Water Company's Excess Carryover Account.

D. ANNUAL FINDING OF SUBSTANTIAL COMPLIANCE WITH THE RECHARGE MASTER PLAN *(Page 90)*
Adopt the finding that Watermaster is in substantial compliance with the Recharge Master Plan.

E. 2020/21 ANNUAL REPORT OF THE GROUND-LEVEL MONITORING COMMITTEE *(Page 99)*
Approve the 2020/21 Annual Report of the Ground-Level Monitoring Committee, along with filing a copy with the Court.

F. FISCAL YEAR 2021/22 REVISED PAY SCHEDULE *(Page 206)*
Adopt the revised Pay Schedule, effective January 1, 2022.

II. BUSINESS ITEMS

A. FISCAL YEAR 2021/22 SCOPE AND BUDGET FOR THE SAFE YIELD RESET METHODOLOGY UPDATE (DISCUSSION ONLY) *(Page 211)*

B. FISCAL YEAR 2021/22 BUDGET AMENDMENT (FORM A-21-11-01) *(Page 227)*
Adopt the Fiscal Year 2021/22 Budget Amendment (Form A-21-11-01).

C. DRY YEAR YIELD PROGRAM
Staff report will be distributed separately.

D. FISCAL YEAR 2021/22 ASSESSMENT PACKAGE *(Page 232)*
Approve the Fiscal Year 2021/22 Assessment Package as presented.

E. RESOLUTION TO LEVY REPLENISHMENT AND ADMINISTRATIVE ASSESSMENTS FOR FISCAL YEAR 2021/22 *(Page 280)*
Adopt Resolution 2021-05 as presented.

F. SANTA ANA RIVER WATERSHED WEATHER MODIFICATION PILOT PROGRAM (DISCUSSION ONLY)

III. REPORTS/UPDATES

A. LEGAL COUNSEL
1. San Bernardino County Superior Court Emergency Order
2. November 5, 2021 Hearing
3. Rules & Regulations Update
4. Evergreen Storage Agreements
5. Kaiser Permanente Lawsuit

B. ENGINEER
1. Data Collection and Evaluation Workshop #1
2. Plan to Mitigate for Loss of Hydraulic Control
3. Responses to Storage Questions

C. CHIEF FINANCIAL OFFICER

1. Fiscal Year 2021/22 Assessment Invoicing

CI. GENERAL MANAGER

1. Personnel and Compensation Items
2. Chino Basin Sustainability
3. Watermaster's Holiday Charity Event
4. December Meetings
5. ACWA Election of Officers *(Page 286)*
6. Grant Funding Opportunities
7. Other

IV. BOARD MEMBER COMMENTS

V. OTHER BUSINESS

VI. 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.

VII. FUTURE MEETINGS AT WATERMASTER*

11/16/21	Tue	1:30 p.m.	Data Collection & Evaluation Workshop No. 1 (Safe Yield)
11/18/21	Thu	9:00 a.m.	Advisory Committee Meeting
11/18/21	Thu	11:00 a.m.	Watermaster Board**
12/07/21	Tue	9:00 a.m.	Groundwater Recharge Coordinating Committee

* Watermaster meetings are being held remotely at this time. We are continuing to assess pandemic conditions and may resume in-person meetings in January 2022.

** Advanced to November 18, 2021 due to the Thanksgiving Holiday

ADJOURNMENT

I. CONSENT CALENDAR (Advisory Committee Only)

A. MINUTES

1. Advisory Committee Meeting held October 21, 2021

DRAFT MINUTES
CHINO BASIN WATERMASTER
ADVISORY COMMITTEE MEETING
October 21, 2021

The Advisory Committee meeting was held via Zoom (conference call and web meeting) on October 21, 2021.

ADVISORY COMMITTEE MEMBERS PRESENT ON CALL

AGRICULTURAL POOL COMMITTEE

Jeff Pierson, Chair	Crops
Pete Hall	State of California – CIM
Marilyn Levin for Carol Boyd	State of California – DOJ

APPROPRIATIVE POOL COMMITTEE

Chris Diggs, Vice-Chair	City of Pomona
Dave Crosley	City of Chino
Ron Craig	City of Chino Hills
Scott Burton	City of Ontario
Braden Yu	City of Upland
Eduardo Espinoza for John Bosler	Cucamonga Valley Water District
Josh Swift	Fontana Union Water Company
Cris Fealy	Fontana Water Company
Chris Berch	Jurupa Community Services District
Justin Scott-Coe	Monte Vista Irrigation Company
Justin Scott-Coe	Monte Vista Water District
Brian Lee	San Antonio Water Company

NON-AGRICULTURAL POOL COMMITTEE

Brian Geye, 2nd Vice-Chair	California Speedway Corporation
Bob Bowcock	CalMat Co.

WATERMASTER BOARD MEMBERS PRESENT ON CALL

Bob Kuhn	Three Valleys Municipal Water District
Mike Gardner	Western Municipal Water District

WATERMASTER STAFF PRESENT ON CALL

Peter Kavounas	General Manager
Joseph Joswiak	Chief Financial Officer
Edgar Tellez Foster	Water Resources Mgmt. and Planning Dir.
Anna Nelson	Executive Services Director
Justin Nakano	Water Resources Technical Manager
Frank Yoo	Data Services and Judgment Reporting Mgr.
Janine Wilson	Senior Accountant
Vanessa Aldaz	Administrative Assistant

WATERMASTER CONSULTANTS PRESENT ON CALL

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

OTHERS PRESENT ON CALL

Gino Filippi	Agricultural Pool – Crops
Amanda Coker	City of Chino
Courtney Jones	City of Ontario
Chris Quach	City of Ontario

Nicole deMoet	City of Upland
Gidti Ludesirishoti	Cucamonga Valley Water District
Jiwon Seung	Cucamonga Valley Water District
Tarren Torres	Egoscue Law Group, Inc.
Ben Lewis	Golden State Water Company
Joshua Aguilar	Inland Empire Utilities Agency
Christiana Daisy	Inland Empire Utilities Agency
Jeff Davis	Provost & Pritchard Consulting Group
Matthew Litchfield	Three Valleys Municipal Water District
Laura Roughton	Western Municipal Water District
Richard Rees	Wood plc

CALL TO ORDER
Chair Pierson called the Advisory Committee meeting to order at 9:00 a.m.

ROLL CALL
(0:00:51) Ms. Aldaz conducted the roll call and announced that a quorum was present.

AGENDA – ADDITIONS/REORDER
Chair Pierson requested Consent Calendar Item I.E. be pulled for separate discussion.

I. CONSENT CALENDAR

Note: 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 Advisory Committee Meeting held on September 16, 2021

B. FINANCIAL REPORTS

Receive and file as presented:

1. Cash Disbursements for the month of August 2021
2. Watermaster VISA Check Detail for the month of August 2021
3. Combining Schedule for the Period July 1, 2021 through August 31, 2021
4. Treasurer's Report of Financial Affairs for the Period August 1, 2021 through August 31, 2021
5. Budget vs. Actual Report for the Period July 1, 2021 through August 31, 2021
6. Cash Disbursements for the month of September 2021

C. APPLICATION: WATER TRANSACTION

Provide advice and assistance to the Watermaster Board on the proposed transaction:
The purchase of 140 acre-feet of water from City of Upland by Golden State Water Company. This purchase is made from City of Upland's Annual Production Right.

D. APPLICATION: WATER TRANSACTION

Provide advice and assistance to the Watermaster Board on the proposed transaction:
The purchase of 66.4 acre-feet of water from West End Consolidated Water Company by Golden State Water Company. This purchase is made from West End Consolidated Water Company's Annual Production Right. Golden State Water Company is utilizing this transaction to produce its West End Consolidated Water Company shares.

E. APPLICATION: WATER TRANSACTION

Provide advice and assistance to the Watermaster Board on the proposed transaction:
The purchase of 708.3 acre-feet of water from West End Consolidated Water Company by City of Upland. This purchase is made from West End Consolidated Water Company's Excess Carry Over Storage Account. City of Upland is utilizing this transaction to produce its West End Consolidated Water Company shares.

(0:05:06) A voice vote was taken, and the results are attached to these minutes.
Motion by Vice-Chair Chris Diggs, seconded by Mr. Brian Geye, and passed unanimously.
Moved to approve the Consent Calendar I.A. – I.D. as presented.

(0:09:06) Mr. Kavounas gave a report on Consent Calendar Item I.E. A discussion ensued.

(0:15:13) A voice vote was taken, and the results are attached to these minutes.
Motion by Mr. Chris Berch, seconded by Mr. Justin Scott-Coe, and passed by majority vote.
Moved to approve the Consent Calendar I.E. as presented.

A no vote was cast by Chair Pierson representing the Overlying (Agricultural) Pool Committee.

II. BUSINESS ITEMS

A. TASK ORDER NO. 6 UNDER MASTER AGREEMENT FOR COLLABORATIVE PROJECTS: LOSS OF HYDRAULIC CONTROL MITIGATION PLAN UPDATE

Approve the Task Order No. 6 as presented.

(0:17:30) Mr. Kavounas introduced Mr. Tellez Foster who gave a report.

(0:19:17) A voice vote was taken, and the results are attached to these minutes.
Motion by Vice-Chair Chris Diggs, seconded by Mr. Cris Fealy, and passed unanimously.
Moved to approve Business Item II.A. as presented.

B. FISCAL YEAR 2021/22 BUDGET AMENDMENT (FORM A-21-10-01)

Approve the Fiscal Year 2021/22 Budget Amendment (Form A-21-10-01).

(0:20:54) Mr. Kavounas gave a report.

(0:22:02) A voice vote was taken, and the results are attached to these minutes.
Motion by Vice-Chair Chris Diggs, seconded by Chair Jeff Pierson, and passed unanimously.
Moved to approve Business Item II.B. as presented.

III. REPORTS/UPDATES

A. LEGAL COUNSEL

1. San Bernardino County Superior Court Emergency Order
2. October 8, 2021 Hearing
3. Rules & Regulations Update
4. Evergreen Storage Agreements
5. Kaiser Permanente Lawsuit

(0:23:48) Mr. Herrema stated that his report remains unchanged from what was provided at the Pool Committee meetings last week and announced the October 8, 2021 Hearing was continued to November 5, 2021. The Committee declined to receive the reports again.

B. ENGINEER

1. Ground-Level Monitoring Committee Update
2. Annual Streamflow Monitoring Report
3. Safe Yield Reset Methodology Workshop

(0:24:33) Mr. Malone gave a report.

C. CHIEF FINANCIAL OFFICER

None

D. GENERAL MANAGER

1. Chino Basin Management – Board Discussion (Workshop)
2. Storage Q&A
3. Drinking Water Well Principles and Strategies
4. November Meeting Schedule
5. Other

(0:32:04) Mr. Kavounas gave a report and added that staff held the first 2021/22 Assessment Package Workshop on October 19, 2021 and that the draft Assessment Package is available on Watermaster's website should parties need to refer to it. He also indicated that a second workshop will be held on November 2, 2021 to allow parties another opportunity to ask any questions. A discussion ensued.

E. INLAND EMPIRE UTILITIES AGENCY

1. MWD Update (Written)
2. State and Federal Legislative Reports (Written)
3. Community Outreach/Public Relations Report (Written)

(0:44:18) Ms. Christiana Daisy of the Inland Empire Utilities Agency gave a report on the Governor's Drought Proclamation. Mr. Matt Litchfield of Three Valleys Municipal Water District gave a report indicating that the recent storm events in Northern California should provide some drought relief. A discussion ensued.

F. METROPOLITAN MEMBER AGENCY REPORTS

IV. INFORMATION

1. Recharge Investigations and Projects Committee
2. Plumes Status Reports
3. Ground-Level Monitoring Status Report

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.

None

ADJOURNMENT
Chair Pierson adjourned the Advisory Committee meeting at 9:53 a.m.

Secretary: _____

Approved: _____

Attachments:
1. 20211021 Advisory Committee Vote Outcome for Consent Calendar
2. 20211021 Advisory Committee Vote Outcome for Business Items

Attachment 1 to 20211021 Advisory Committee Meeting Minutes

October 21, 2021 Advisory Committee Meeting Roll Call Vote Outcome (Consent Calendar)

Agency	Member	Alternate	I.A. - I.D.	I.E.
City of Chino	Crosley, Dave		yes	yes
		Coker, Amanda		
		Jakher, Amer		
		Castro, Vivian		
City of Chino Hills	Craig, Ron		yes	yes
		Wiley, Mark		
Cucamonga Valley Water District	Bosler, John			
		Espinoza, Eduardo	yes	yes
		Krishnan, Praseetha		
Fontana Union Water Company	Swift, Josh		yes	yes
		Tarango, Eric		
		Zielke, Seth		
Fontana Water Company	Fealy, Cris		yes	yes
		Tarango, Eric		
Jurupa Community Services District	Berch, Chris		yes	yes
		Letulle, Chander		
		Popelar, Steven		
Monte Vista Water District	Scott-Coe, Justin		yes	yes
		Reimer, Stephanie		
City of Ontario	Burton, Scott			
		Jones, Courtney	yes	yes
City of Pomona	Diggs, Chris, Vice-Chair		yes	yes
City of Upland	Yu, Braden		yes	yes
		Ledbetter, Steven		
		deMoet, Nicole		
Minor 1 - Monte Vista Irrigation Company	Scott-Coe, Justin		yes	yes
		Reimer, Stephanie		
Minor 2 - San Antonio Water Company	Lee, Brian		yes	yes
		Layton, Teri		
Agricultural Pool	deBoom, Nathan			
	DeHaan, Henry			
	Feenstra, Robert			
	Huitsing, John			
	LaBrucherie, Jr., Ron			
	Pierson, Jeff, Chair		yes	no
	Pietersma, Ron			
	Vanden Heuvel, Geoffrey			
		Filippi, Gino		
		Hofer, Paul		
		Llamas, Ruben		
	Boyd, Carol			
	Hall, Pete			
		Ahmed, Tamer		
		Bettencourt, Miles Terry		
		Cain, Larry		
		Golden-Krasner, Noah		
		Larabee, Gregor		
		Levin, Marilyn		
Non- Agricultural Pool	Geye, Brian, Second Vice-Chair		yes	yes
		Bowcock, Bob		
	Brundage, Kathleen			
		Heustis, Alma		
	Quach, Christopher			
		Jones, Courtney		
		OUTCOME:	**Passed Unanimously**	**Passed by Majority**

Attachment 2 to 20211021 Advisory Committee Meeting Minutes

October 21, 2021 Advisory Committee Meeting Roll Call Vote Outcome (Business Items)

Agency	Member	Alternate	II.A.	II.B.
City of Chino	Crosley, Dave		yes	yes
		Coker, Amanda		
		Jakher, Amer		
		Castro, Vivian		
City of Chino Hills	Craig, Ron		yes	yes
		Wiley, Mark		
Cucamonga Valley Water District	Bosler, John			
		Espinoza, Eduardo	yes	yes
		Krishnan, Praseetha		
Fontana Union Water Company	Swift, Josh		yes	yes
		Tarango, Eric		
		Zielke, Seth		
Fontana Water Company	Fealy, Cris		yes	yes
		Tarango, Eric		
Jurupa Community Services District	Berch, Chris		yes	yes
		Letulle, Chander		
		Popelar, Steven		
Monte Vista Water District	Scott-Coe, Justin		yes	yes
		Reimer, Stephanie		
City of Ontario	Burton, Scott			
		Jones, Courtney	yes	yes
City of Pomona	Diggs, Chris, Vice-Chair		yes	yes
City of Upland	Yu, Braden		yes	yes
		Ledbetter, Steven		
		deMoet, Nicole		
Minor 1 - Monte Vista Irrigation Company	Scott-Coe, Justin		yes	yes
		Reimer, Stephanie		
Minor 2 - San Antonio Water Company	Lee, Brian		yes	yes
		Layton, Teri		
Agricultural Pool	deBoom, Nathan			
	DeHaan, Henry			
	Feenstra, Robert			
	Huitsing, John			
	LaBrucherie, Jr., Ron			
	Pierson, Jeff, Chair		yes	yes
	Pietersma, Ron			
	Vanden Heuvel, Geoffrey			
		Filippi, Gino		
		Hofer, Paul		
		Llamas, Ruben		
	Boyd, Carol			
	Hall, Pete			
		Ahmed, Tamer		
		Bettencourt, Miles Terry		
		Cain, Larry		
		Golden-Krasner, Noah		
		Larabee, Gregor		
		Levin, Marilyn		
Non- Agricultural Pool	Geye, Brian, Second Vice-Chair		yes	yes
		Bowcock, Bob		
	Brundage, Kathleen			
		Heustis, Alma		
	Quach, Christopher			
		Jones, Courtney		
		OUTCOME:	**Passed Unanimously**	**Passed Unanimously**

I. CONSENT CALENDAR (Watermaster Board Only)

A. MINUTES

1. Watermaster Board Meeting held on October 28, 2021

DRAFT MINUTES
CHINO BASIN WATERMASTER
WATERMASTER BOARD MEETING
October 28, 2021

The Watermaster Board meeting was held via Zoom (conference call and web meeting) on October 28, 2021.

WATERMASTER BOARD MEMBERS PRESENT ON CALL

James Curatalo, Chair	Fontana Union Water Company
Jeff Pierson, Vice-Chair	Agricultural Pool – Crops
Bob Kuhn, Secretary/Treasurer	Three Valleys Municipal Water District
Bob Bowcock	CalMat Co.
Steve Elie	Inland Empire Utilities Agency
Betty Folsom	Jurupa Community Services District
Mike Gardner	Western Municipal Water District
Paul Hofer	Agricultural Pool – Crops
Peter Rogers	City of Chino Hills

WATERMASTER STAFF PRESENT ON CALL

Peter Kavounas	General Manager
Edgar Tellez Foster	Water Resources Mgmt. & Planning Dir.
Anna Nelson	Executive Services Director/Board Clerk
Justin Nakano	Water Resources Technical Manager
Frank Yoo	Data Services and Judgment Reporting Mgr.
Janine Wilson	Senior Accountant
Ruby Favela	Administrative Assistant

WATERMASTER CONSULTANTS PRESENT ON CALL

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

OTHERS PRESENT ON CALL

Gino Filippi	Agricultural Pool – Crops
Pete Hall	Agricultural Pool – State of CA – CIM
Marilyn Levin	Agricultural Pool – State of CA – DOJ
Amanda Coker	City of Chino
Dave Crosley	City of Chino
Eunice Ulloa	City of Chino
Daniel Bobadilla	City of Chino Hills
Ron Craig	City of Chino Hills
Debra Porada	City of Ontario
Chris Quach	City of Ontario
Chris Diggs	City of Pomona
Nicole deMoet	City of Upland
Braden Yu	City of Upland
John Bosler	Cucamonga Valley Water District
Eduardo Espinoza	Cucamonga Valley Water District
Mark Gibboney	Cucamonga Valley Water District
Rob Hills	Cucamonga Valley Water District
Gidti Ludesirishoti	Cucamonga Valley Water District
Jiwon Seung	Cucamonga Valley Water District
Tarren Torres	Egoscue Law Group, Inc.
Chris Brown	Fedak & Brown, LLP
Ben Lewis	Golden State Water Company
Joshua Aguilar	Inland Empire Utilities Agency
Christiana Daisy	Inland Empire Utilities Agency
Marco Tule	Inland Empire Utilities Agency

Justin Scott-Coe	Monte Vista Irrigation Company
Justin Scott-Coe	Monte Vista Water District
Kevin O'Toole	Orange County Water District
Jeff Davis	Provost & Pritchard Consulting Group
Brian Lee	San Antonio Water Company
Bob DiPrimio	San Gabriel Valley Water Company
John Lopez	Santa Ana River Water Company
Todd Minten	Santa Ana River Water Company
David De Jesus	Three Valleys Municipal Water District
Laura Roughton	Western Municipal Water District
Richard Rees	Wood plc

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

FLAG SALUTE

ROLL CALL
(0:00:55) Ms. Nelson conducted the roll call and announced that a quorum was present.

PUBLIC COMMENTS

AGENDA - ADDITIONS/REORDER

I. CONSENT CALENDAR

Note: 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 September 23, 2021

B. FINANCIAL REPORTS

Receive and file as presented:

1. Cash Disbursements for the month of August 2021
2. Watermaster VISA Check Detail for the month of August 2021
3. Combining Schedule for the Period July 1, 2021 through August 31, 2021
4. Treasurer's Report of Financial Affairs for the Period August 1, 2021 through August 31, 2021
5. Budget vs. Actual Report for the Period July 1, 2021 through August 31, 2021
6. Cash Disbursements for the month of September 2021

C. APPLICATION: WATER TRANSACTION

Approve the proposed transaction:
The purchase of 140 acre-feet of water from City of Upland by Golden State Water Company. This purchase is made from City of Upland's Annual Production Right.

D. APPLICATION: WATER TRANSACTION

Approve the proposed transaction:
The purchase of 66.4 acre-feet of water from West End Consolidated Water Company by Golden State Water Company. This purchase is made from West End Consolidated Water Company's Annual Production Right. Golden State Water Company is utilizing this transaction to produce its West End Consolidated Water Company shares.

E. APPLICATION: WATER TRANSACTION

Approve the proposed transaction:
The purchase of 708.3 acre-feet of water from West End Consolidated Water Company by City of Upland. This purchase is made from West End Consolidated Water Company's Excess Carry Over Storage Account. City of Upland is utilizing this transaction to produce its West End Consolidated Water Company shares.

F. TASK ORDER NO. 6 UNDER MASTER AGREEMENT FOR COLLABORATIVE PROJECTS: LOSS OF HYDRAULIC CONTROL MITIGATION PLAN UPDATE

Approve the Task Order No. 6 as presented and authorize the General Manager to execute the agreement on behalf of Watermaster subject to any necessary non-substantive changes.

G. FISCAL YEAR 2021/22 BUDGET AMENDMENT (FORM A-21-10-01)

Adopt the Fiscal Year 2021/22 Budget Amendment (Form A-21-10-01).

H. RESOLUTION 2021-04 AUTHORIZING REMOTE TELECONFERENCE MEETINGS UNDER BROWN ACT

Adopt Resolution 2021-04 Authorizing Remote Teleconference Meetings under the Ralph M. Brown Act.

(0:04:24) Mr. Kavounas suggested that Consent Calendar Item I.E. be pulled for separate action.

(0:05:44) A roll call vote was taken.
Motion by Mr. Mike Gardner, seconded by Vice-Chair Jeff Pierson, and passed by unanimous roll call vote as attached to these minutes.

Moved to approve the Consent Calendar with the exception of Item I.E. as presented.

(0:07:24) A roll call vote was taken.
Motion by Chair Jim Curatalo, seconded by Mr. Bob Kuhn, and passed by majority roll call vote as attached to these minutes.

Moved to approve Consent Calendar Item I.E. as presented.

No votes were cast by Messrs. Hofer and Pierson on Consent Calendar Item I.E.

II. BUSINESS ITEMS

A. CHINO BASIN WATERMASTER ANNUAL FINANCIAL REPORT FOR THE FISCAL YEARS ENDED JUNE 30, 2021 AND 2020; AND THE CHINO BASIN WATERMASTER MANAGEMENT REPORT FOR JUNE 30, 2021

Receive and file (1) the Chino Basin Watermaster Annual Financial Report for the Fiscal Years Ended June 30, 2021 and 2020 dated October 28, 2021; and (2) the Chino Basin Watermaster Management Report for June 30, 2021 dated October 28, 2021.

(0:08:41) Mr. Joswiak introduced Mr. Brown of Fedak & Brown, LLP who gave a presentation. A discussion ensued.

(0:18:10) A roll call vote was taken.
Motion by Mr. Bob Bowcock, seconded by Mr. Peter Rogers, and passed by unanimous roll call vote as attached to these minutes.

Moved to approve Business Item II.A. as presented.

III. REPORTS/UPDATES

A. LEGAL COUNSEL

1. San Bernardino County Superior Court Emergency Order
2. November 5, 2021 Hearing
3. Rules & Regulations Update
4. Evergreen Storage Agreements
5. Kaiser Permanente Lawsuit

(0:19:21) Mr. Slater gave a report. A discussion ensued.

B. ENGINEER

1. Ground-Level Monitoring Committee Update
2. Annual Streamflow Monitoring Report
3. Safe Yield Reset Methodology Workshop

(0:24:25) Mr. Malone gave a report. A discussion ensued.

C. CHIEF FINANCIAL OFFICER

None

D. GENERAL MANAGER

1. Chino Basin Management – Board Discussion (Workshop)
2. Storage Q&A
3. Drinking Water Well Principles and Strategies
4. First Organization Performance Status Report FY 2021/22 (Oct. 2021)
5. New Employee Introduction
6. November Meeting Schedule
7. Other

(0:41:53) Mr. Kavounas gave a report; the Board requested that the General Manager and Legal Counsel consider the possibility to file the Chino Basin Sustainability Report with the Court as an informational item and advise the Board in the future. Director Elie requested that Program Element 9 (Storage and Recovery) that are not being addressed should be brought to the Pools during their next meeting. Ms. Nelson introduced Watermaster's newest employee, Ms. Ruby Favela, who recently joined the team as administrative assistant. Mr. Kavounas described the November meeting schedule, and commented on the first 2021/22 Assessment Package Workshop that was held on October 19, 2021 and indicated that the second workshop will be held on November 2, 2021 and that the draft assessment package has been uploaded on Watermaster's website to allow parties access to review it. Mr. Kavounas also asked Mr. Tellez Foster to give a report on grant funding opportunities indicating that Watermaster is working in collaboration with SAWPA and IEUA to identify regional water management efforts that could perhaps help parties to advance initiatives from the 2020 OBMP. A discussion ensued and the Board gave direction to Watermaster staff to work with IEUA and SAWPA to explore funding opportunities for any OBMP activities.

(0:44:44) Mr. Elie raised the question of whether the Chino Basin Sustainability report should be presented to the Judge as an informational item. He requested the unaddressed items from this report be placed on the agendas for discussion during next month's Watermaster Committees and Board meeting. A discussion ensued.

IV. INFORMATION

1. Recharge Investigations and Projects Committee
2. Plumes Status Reports
3. Ground-Level Monitoring Status Report

V. BOARD MEMBER COMMENTS

(1:14:11) Mr. Hofer complimented staff on another successful audit.

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.

None

ADJOURNMENT

Chair Curatalo adjourned the Watermaster Board meeting 12:19 p.m.

Secretary: _____

Approved: _____

Attachments:

1. 20211028 Roll Call Vote Outcome for Consent Calendar
2. 20211028 Roll Call Vote Outcome for Business Item

October 28, 2021 Watermaster Board Meeting Roll Call Vote Outcome

Member	Alternate	Consent Calendar Items (Without I.E.)	Consent Calendar Item I.E.
Bowcock, Bob		yes	yes
Elie, Steve		yes	yes
Folsom, Betty		yes	yes
Gardner, Mike		yes	no
Hofer, Paul		yes	yes
Kuhn, Bob, Secretary/Treasurer		yes	yes
Pierson, Jeff, Vice-Chair		yes	no
Rogers, Peter		yes	yes
Curatalo, James, Chair		yes	yes
	OUTCOME:	**Passed Unanimously**	**Passed by Majority**

Attachment 2 to 20211028 Watermaster Board Meeting Minutes

October 28, 2021 Watermaster Board Meeting Roll Call Vote Outcome

Member	Alternate	Business Item II.A.
Bowcock, Bob		yes
Elie, Steve		yes
Folsom, Betty		yes
Gardner, Mike		yes
Hofer, Paul		yes
Kuhn, Bob, Secretary/Treasurer		yes
Pierson, Jeff, Vice-Chair		yes
Rogers, Peter		yes
Curatalo, James, Chair		yes
	OUTCOME:	**Passed Unanimously**

I. CONSENT CALENDAR

B. FINANCIAL REPORTS

1. Cash Disbursements for the month of September 2021
2. Watermaster VISA Check Detail for the month of September 2021
3. Combining Schedule for the Period July 1, 2021 through September 30, 2021
4. Treasurer's Report of Financial Affairs for the Period September 1, 2021 through September 30, 2021
5. Budget vs. Actual Report for the Period July 1, 2021 through September 30, 2021
6. Cash Disbursements for October 2021 (Information Only)

CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, CA 91730
Tel: 909.484.3888 Fax: 909.484.3890 www.cbwm.org

PETER KAVOUNAS, P.E.
General Manager

STAFF REPORT

DATE: November 18, 2021

TO: Advisory Committee and Board Members

SUBJECT: Cash Disbursement Report - Financial Report B1 (September 30, 2021)
(Consent Calendar Item I.B.1.)

SUMMARY

Issue: Record of Cash Disbursements for the month of September 2021.

Recommendation: Receive and file Cash Disbursements for September 2021 as presented.

Financial Impact: Funds disbursed were included in the FY 2021/22 "Amended" Watermaster Budget.

Future Consideration
Advisory Committee – November 18, 2021: Receive and File
Watermaster Board – November 18, 2021: Receive and File (Normal Course of Business)

ACTIONS:
Appropriative Pool – November 10, 2021: Received and filed
Non-Agricultural Pool – November 10, 2021: Moved unanimously to receive and file, without approval
Agricultural Pool – November 10, 2021: Received and filed
Advisory Committee – November 18, 2021:
Watermaster Board – November 18, 2021:

BACKGROUND

A monthly cash disbursement report is provided to keep all members apprised of Watermaster expenditures.

DISCUSSION

Total cash disbursements during the month of September 2021 were $655,708.87.

The most significant expenditures during the month were to West Yost Associates in the amount of $183,192.83 (check number 23036 dated September 2, 2021); and Inland Empire Utilities Agency in the amount of $110,564.75 (check number 23050 dated September 3, 2021).

ATTACHMENTS

1. Financial Report – B1

CHINO BASIN WATERMASTER
Cash Disbursements For The Month of
September 2021

	Type	Date	Num	Name	Memo	Account	Paid Amount
	Bill Pmt -Check	**09/02/2021**	**23028**	**ACCENT COMPUTER SOLUTIONS, INC.**	**146289**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/01/2021	146289		Monthly Services - September 2021	6052.4 · IT Managed Services	3,969.21
					Overwatch - September 2021	6052.5 · IT Data Backup/Storage	699.00
					OmniCloud - September 2021	6052.5 · IT Data Backup/Storage	170.00
					Office 365 Subscriptions/Business Premier - Septe	6052.4 · IT Managed Services	204.75
					Image office storage (per GB, per month)	6052.5 · IT Data Backup/Storage	546.00
TOTAL							5,588.96
	Bill Pmt -Check	**09/02/2021**	**23029**	**APPLEONE**	**01-6021045**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/27/2021	01-6021045		Temporary Services - Brian Summers	6017.2 · Office Specialist Services	1,245.04
TOTAL							1,245.04
	Bill Pmt -Check	**09/02/2021**	**23030**	**JOHN J. SCHATZ**	**Appropriative Pool Legal Services**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/31/2021			July 2021	8367 · Legal Service	14,035.00
TOTAL							14,035.00
	Bill Pmt -Check	**09/02/2021**	**23031**	**EASTVALE DEVELOPMENT COMPANY-PIERSC**	**Ag Pool and Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	02/05/2021	2/05 Call w/Chair		2/05/21 Call w/Ag Pool Chair	8411 · Ag Pool Member Compensation	25.00
					2/05/21 Call w/Ag Pool Chair	8470 · Ag Meeting Attend -Special	100.00
	Bill	02/09/2021	2/09 call w/Bd Offcr		2/09/21 Call w/Board Officers	6311 · Board Member Compensation	125.00
	Bill	02/11/2021	2/11 Call w/Chair		2/11/21 Call w/Ag Pool Chair	8411 · Ag Pool Member Compensation	25.00
					2/11/21 Call w/Ag Pool Chair	8470 · Ag Meeting Attend -Special	100.00
	Bill	02/11/2021	2/11 Ag Pool Mtg		2/11/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
	Bill	02/16/2021	2/16 Call w/Chair		2/16/21 Call w/Ag Pool Chair	8470 · Ag Meeting Attend -Special	125.00
	Bill	02/16/2021	2/16 Call w/Bd Sec		2/16/21 Call w/Board Secretary	6311 · Board Member Compensation	125.00
	Bill	02/18/2021	2/18 Call w/Chair		2/18/21 Call w/Ag Pool Chair	8470 · Ag Meeting Attend -Special	125.00
	Bill	02/18/2021	2/18 Advisory Comm		2/18/21 Advisory Committee Meeting	8470 · Ag Meeting Attend -Special	125.00
	Bill	02/18/2021	2/18 Call w/Bd Offcr		2/18/21 Call w/Board Officers and Pool Chairs	6311 · Board Member Compensation	125.00
	Bill	02/23/2021	2/23 Call w/Chair		2/23/21 Call w/Ag Pool Chair	8470 · Ag Meeting Attend -Special	125.00
	Bill	02/23/2021	2/23 Bd Offcrs Coord		2/23/21 Board Officers Coordination w/GM	6311 · Board Member Compensation	125.00
	Bill	02/25/2021	2/25 Board Mtg		2/25/21 Board Meeting	6311 · Board Member Compensation	125.00
	Bill	02/26/2021	2/26 Call w/Chair		2/26/21Call w/Ag Pool Chair	8470 · Ag Meeting Attend -Special	125.00
TOTAL							1,625.00
	Bill Pmt -Check	**09/02/2021**	**23032**	**PIETERSMA, RONALD**	**Ag Pool Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/12/2021	8/12 Ag Pool Mtg		8/12/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
TOTAL							125.00
	Bill Pmt -Check	**09/02/2021**	**23033**	**STANDARD INSURANCE CO.**	**Policy # 00-649299-0009**	**1012 · Bank of America Gen'l Ckg**	

CHINO BASIN WATERMASTER
Cash Disbursements For The Month of
September 2021

	Type	Date	Num	Name	Memo	Account	Paid Amount
	Bill	08/26/2021	006492990009		Policy # 00-649299-0009	60191 · Life & Disab.Ins Benefits	942.71
TOTAL							942.71
	Bill Pmt -Check	**09/02/2021**	**23034**	**UNITED HEALTHCARE**	**052586388611**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/26/2021	052586388611		Dental Insurance Premium - September 2021	60182.2 · Dental & Vision Ins	732.28
TOTAL							732.28
	Bill Pmt -Check	**09/02/2021**	**23035**	**VISION SERVICE PLAN**	**00-101789-0001**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/26/2021	00101789		Vision Insurance Premium - September 2021	60182.2 · Dental & Vision Ins	93.83
TOTAL							93.83
	Bill Pmt -Check	**09/02/2021**	**23036**	**WEST YOST**		**1012 · Bank of America Gen'l Ckg**	
	Bill	07/31/2021	2046081		2046081	6906.31 · OBMP-Pool, Adv. Board Mtgs	5,058.75
	Bill	07/31/2021	2046082		2046082	6906.32 · OBMP-Other General Meetings	7,394.75
	Bill	07/31/2021	2046083		2046083	6906.74 · OBMP-Mat'l Phy. Injury Requests	156.00
	Bill	07/31/2021	2046084		2046084	6906.71 · OBMP-Data Req.-CBWM Staff	6,842.75
	Bill	07/31/2021	2046085		2046085	6906.72 · OBMP-Data Req.-Non CBWM Staff	1,019.75
	Bill	07/31/2021	2046086		2046086	6906 · OBMP Engineering Services	2,386.25
	Bill	07/31/2021	2046087		2046087	6906.81 · Prepare Annual Reports	1,475.50
	Bill	07/31/2021	2046088		2046088	6906.15 · Integrated Model Mtgs-IEUA Cost	7,352.25
	Bill	07/31/2021	2046089		2046089	7103.3 · Grdwtr Qual-Engineering	22,525.24
	Bill	07/31/2021	2046090		2046090	7104.3 · Grdwtr Level-Engineering	13,352.72
	Bill	07/31/2021	2046091		2046091	7107.2 · Grd Level-Engineering	2,277.32
	Bill	07/31/2021	2046092		2046092	7107.2 · Grd Level-Engineering	2,939.05
	Bill	07/31/2021	2046093		2046093	7107.3 · Grd Level-SAR Imagery	2,194.50
	Bill	07/31/2021	2046094		2046094	7110.3 · Ag Prod. & Estimation-Eng. Serv	1,619.25
	Bill	07/31/2021	2046095		2046095	7202.2 · Engineering Svc	12,232.25
	Bill	07/31/2021	2046096		2046096	7303 · PE3&5-Engineering	712.00
	Bill	07/31/2021	2046097		2046097	7402 · PE4-Engineering	14,417.75
	Bill	07/31/2021	2046098		2046098	7402 · PE4-Engineering	2,925.50
	Bill	07/31/2021	2046099		2046099	7502 · PE6&7-Engineering	3,656.00
	Bill	07/31/2021	2046100		2046100	7510 · PE6&7-IEUA Salinity Mgmt. Plan	31,468.50
	Bill	07/31/2021	2046101		2046101	6906.14 · Modeling for WSIP-100% IEUA	41,186.75
TOTAL							183,192.83
	Bill Pmt -Check	**09/02/2021**	**23037**	**APPLIED COMPUTER TECHNOLOGIES**	**3430**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/31/2021	3430		Database Consulting Services - August 2021	6052.2 · Applied Computer Technol	3,850.00
TOTAL							3,850.00
	Bill Pmt -Check	**09/02/2021**	**23038**	**DE HAAN, HENRY**	**Ag Pool Member Compensation**	**1012 · Bank of America Gen'l Ckg**	

CHINO BASIN WATERMASTER
Cash Disbursements For The Month of
September 2021

	Type	Date	Num	Name	Memo	Account	Paid Amount
	Bill	07/08/2021	7/08 Ag Pool Mtg		7/08/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
TOTAL							125.00
	Bill Pmt -Check	**09/02/2021**	**23039**	**EMPOWER LAB**	**1965**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/31/2021	1965		Empower Lab - August 2021	6193 · Employee Training	1,075.00
TOTAL							1,075.00
	Bill Pmt -Check	**09/02/2021**	**23040**	**EUROFINS EATON ANALYTICAL**		**1012 · Bank of America Gen'l Ckg**	
	Bill	08/12/2021	L0585374		L0585374	7108.4 · Hydraulic Control-Lab Svcs	440.00
	Bill	08/17/2021	L0586058		L0586058	7103.5 · Grdwtr Qual-Lab Svcs	1,592.00
	Bill	08/31/2021	L0588685		L0588685	7103.5 · Grdwtr Qual-Lab Svcs	628.00
TOTAL							2,660.00
	Bill Pmt -Check	**09/02/2021**	**23041**	**FEDAK & BROWN LLP**	**Ongoing Audit Services**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/31/2021			August 2021	6062 · Audit Services	1,095.00
TOTAL							1,095.00
	Bill Pmt -Check	**09/02/2021**	**23042**	**FLOOR COVERINGS INTERNATIONAL**	**Flooring and carpeting installation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/27/2021			Balance due at job completion	1840 · Capital Assets	23,435.65
TOTAL							23,435.65
	Bill Pmt -Check	**09/02/2021**	**23043**	**PETTY CASH**	**2892-2899**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/31/2021	2892-2899		Tile, grout and outlet covers for kitchen remodel	6031.7 · Other Office Supplies	126.41
					8/20 and 8/26 staff mtg supplies	6141.3 · Admin Meetings	79.49
					Miscellaneous office supplies	6031.7 · Other Office Supplies	183.36
TOTAL							389.26
	Bill Pmt -Check	**09/02/2021**	**23044**	**PREMIERE GLOBAL SERVICES**	**30703390**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/26/2021	30703390		Service fee	6022 · Telephone	4.25
					Fee - General	6022 · Telephone	39.00
					Fee - Confidential	6022 · Telephone	39.00
					Service fee	6022 · Telephone	4.25
					Shortfall	6022 · Telephone	78.00
TOTAL							164.50
	Bill Pmt -Check	**09/02/2021**	**23045**	**RR FRANCHISING, INC.**	**102905**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/02/2021	102905		Monthly service for office & annex - Sep. 2021	6024 · Building Repair & Maintenance	915.00
TOTAL							915.00
	Bill Pmt -Check	**09/02/2021**	**23046**	**SPECTRUM BUSINESS**	**2031978082321**	**1012 · Bank of America Gen'l Ckg**	

CHINO BASIN WATERMASTER
Cash Disbursements For The Month of
September 2021

	Type	Date	Num	Name	Memo	Account	Paid Amount
	Bill	08/26/2021	2031978082321		8/23/21-9/22/21	6053 · Internet Expense	804.52
TOTAL							804.52
	Bill Pmt -Check	**09/02/2021**	**23047**	**STATE COMPENSATION INSURANCE FUND**	**1000293042**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/01/2021	100029342		Policy # 1970970 - Premium charge 8/26/21-9/26/2	60183 · Worker's Comp Insurance	702.33
TOTAL							702.33
	Bill Pmt -Check	**09/02/2021**	**23048**	**THE KITCHEN POST**	**Kitchen Remodel & Renovation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/27/2021			Balance due on kitchen remodel	1840 · Capital Assets	7,304.89
TOTAL							7,304.89
	Bill Pmt -Check	**09/02/2021**	**ACH 090221**	**CALPERS**	**1394905143**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/01/2021	1394905143		Medical Insurance Premiums - September 2021	60182.1 · Medical Insurance	11,327.95
TOTAL							11,327.95
	Bill Pmt -Check	**09/02/2021**	**23049**	**UNION 76**	**7076-2245-3035-5049**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/31/2021	7076224530355049		August 2021	6175 · Vehicle Fuel	179.29
TOTAL							179.29
	Bill Pmt -Check	**09/03/2021**	**23050**	**INLAND EMPIRE UTILITIES AGENCY**	**90029796**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/03/2021	90029796		O&M Cost reimbursement - FY 2021/2022 1st qtr.	7206 · Comp Recharge-O&M	110,564.75
TOTAL							110,564.75
	Bill Pmt -Check	**09/03/2021**	**23051**	**JOHN DIAZ PAINTING**	**Office Painting Project**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/03/2021	10% deposit		First payment - 10% deposit	1840 · Capital Assets	1,500.00
TOTAL							1,500.00
	Bill Pmt -Check	**09/03/2021**	**23052**	**JOHN DIAZ PAINTING**	**Office Painting Project**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/03/2021	2nd payment		2nd payment	1840 · Capital Assets	1,500.00
TOTAL							1,500.00
	Bill Pmt -Check	**09/03/2021**	**23053**	**LOPEZ, NICHOLAS**	**VOID:**	**1012 · Bank of America Gen'l Ckg**	0.00
TOTAL							0.00
	Bill Pmt -Check	**09/03/2021**	**23054**	**LOPEZ, NICHOLAS**	**Handman Services - Door installtion**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/03/2021			Cost to replace doors in office	1840 · Capital Assets	1,100.00
TOTAL							1,100.00
	Bill Pmt -Check	**09/08/2021**	**ACH 090821**	**PUBLIC EMPLOYEES' RETIREMENT SYSTEM**	**Payor #3493**	**1012 · Bank of America Gen'l Ckg**	
	General Journal	09/04/2021	09/04/2021	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	CalPERS Retirement for 08/22/21-09/04/21	2000 · Accounts Payable	9,186.50

CHINO BASIN WATERMASTER
Cash Disbursements For The Month of
September 2021

	Type	Date	Num	Name	Memo	Account	Paid Amount
TOTAL							9,186.50
	General Journal	**09/08/2021**	**09/08/2021**	**HEALTH EQUITY**	**Health Equity Invoice 3025143**	**1012 · Bank of America Gen'l Ckg**	
				HEALTH EQUITY	Health Equity Invoice 3025143	1012 · Bank of America Gen'l Ckg	15.00
TOTAL							15.00
	General Journal	**09/09/2021**	**09/09/2021**	**Payroll and Taxes for 08/22/21-09/04/21**	**Payroll and Taxes for 08/22/21-09/04/21**	**1012 · Bank of America Gen'l Ckg**	
				ADP, LLC	Direct Deposits for 08/22/21-09/04/21	1012 · Bank of America Gen'l Ckg	31,475.56
				ADP, LLC	Payroll and Taxes for 08/22/21-09/04/21	1012 · Bank of America Gen'l Ckg	12,138.62
				MISSIONSQUARE RETIREMENT	457(b) EE Deductions for 08/22/21-09/04/21	1012 · Bank of America Gen'l Ckg	5,765.46
				MISSIONSQUARE RETIREMENT	401(a) EE Deductions for 08/22/21-09/04/21	1012 · Bank of America Gen'l Ckg	1,694.48
TOTAL							51,074.12
	Bill Pmt -Check	**09/09/2021**	**23055**	**ACWA JOINT POWERS INSURANCE AUTHORI**	**0673492**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/08/2021	0673492		Prepayment - October 2021	1409 · Prepaid Life, BAD&D & LTD	271.60
					September 2021	60191 · Life & Disab.Ins Benefits	254.74
TOTAL							526.34
	Bill Pmt -Check	**09/09/2021**	**23056**	**APPLEONE**	**01-6028453**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/01/2021	01-6028453		Temporary Services - Brian Summers	6017.2 · Office Specialist Services	1,260.80
TOTAL							1,260.80
	Bill Pmt -Check	**09/09/2021**	**23057**	**DE BOOM, NATHAN**	**Ag Pool Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/12/2021	8/12 Special Ag Mtg		8/12/21 Special Ag Pool Mtg	8470 · Ag Meeting Attend -Special	125.00
TOTAL							125.00
	Bill Pmt -Check	**09/09/2021**	**23058**	**FILIPPI, GINO**	**Ag Pool Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/12/2021	8/12 Special Ag		8/12/21 Special Ag Pool mtg	8470 · Ag Meeting Attend -Special	125.00
	Bill	08/19/2021	8/19 Special Advis		8/19/21 Special Advisory Committee mtg	8470 · Ag Meeting Attend -Special	125.00
TOTAL							250.00
	Bill Pmt -Check	**09/09/2021**	**23059**	**INLAND VALLEY DAILY BULLETIN**	**900421820**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/08/2021	900421820		26 weeks renewal	6112 · Subscriptions/Publications	605.87
TOTAL							605.87
	Bill Pmt -Check	**09/09/2021**	**23060**	**JOHN DIAZ PAINTING**	**Office Painting Project**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/08/2021	3rd payment due		3rd payment due at end of fifth business day	1840 · Capital Assets	6,000.00
TOTAL							6,000.00
	Bill Pmt -Check	**09/09/2021**	**23061**	**R&D PEST SERVICES**	**0277858**	**1012 · Bank of America Gen'l Ckg**	

CHINO BASIN WATERMASTER
Cash Disbursements For The Month of
September 2021

	Type	Date	Num	Name	Memo	Account	Paid Amount
	Bill	09/08/2021	0277858		Treat office and annex for pest control	6024 · Building Repair & Maintenance	100.00
TOTAL							100.00
	Bill Pmt -Check	**09/09/2021**	**23062**	**TELLEZ-FOSTER, EDGAR**	**Employee Reimbursement**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/06/2021			Ops staff meeting on 9/21/21	6141.3 · Admin Meetings	101.41
					Courthouse parking	6173 · Airfare/Mileage	6.50
TOTAL							107.91
	Bill Pmt -Check	**09/09/2021**	**23063**	**ULINE**	**55585495**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/20/2021	55585495		Chair mat - PK	6031.7 · Other Office Supplies	199.52
TOTAL							199.52
	Bill Pmt -Check	**09/09/2021**	**23064**	**WESTERN MUNICIPAL WATER DISTRICT**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/19/2021	8/19 Special Advis		8/19/21 Special Advisory Comm. Mtg. - Gardner	6311 · Board Member Compensation	125.00
	Bill	08/24/2021	8/24 GRCC Mtg		8/24/21 GRCC meeting - Gardner	6311 · Board Member Compensation	125.00
TOTAL							250.00
	Bill Pmt -Check	**09/10/2021**	**23065**	**CORELOGIC INFORMATION SOLUTIONS**	**82097745**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/31/2021	82097745		August 2021	7103.7 · Grdwtr Qual-Computer Svc	62.50
					82097745	7101.4 · Prod Monitor-Computer	62.50
TOTAL							125.00
	Bill Pmt -Check	**09/10/2021**	**23066**	**EUROFINS EATON ANALYTICAL**	**L0589035**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/01/2021	L0589035		L0589035	7103.5 · Grdwtr Qual-Lab Svcs	1,386.00
TOTAL							1,386.00
	Bill Pmt -Check	**09/10/2021**	**23067**	**INLAND EMPIRE UTILITIES AGENCY**	**1800004716**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/10/2021	1800004716		RTS charges for FY 2021/2022	5018 · RTS Charges - IEUA	35,030.19
TOTAL							35,030.19
	Bill Pmt -Check	**09/10/2021**	**23068**	**EASTVALE DEVELOPMENT COMPANY-PIERSC**	**Ag Pool and Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/08/2021	8/08 call w/Chair		8/08/21 call with Ag Pool Chair	8470 · Ag Meeting Attend -Special	125.00
	Bill	08/09/2021	8/09 Call w/Chair		8/09/21 call with Ag Pool Chair	8470 · Ag Meeting Attend -Special	125.00
	Bill	08/12/2021	8/12 Special Ag Mtg		8/12/21 Special Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
	Bill	08/12/2021	8/12 call w/Chair		8/12/21 call w/Ag Pool Chair	8470 · Ag Meeting Attend -Special	125.00
	Bill	08/17/2021	8/17 Admin Mtg		8/17/21 Administrative Mtg w/GM	8470 · Ag Meeting Attend -Special	125.00
	Bill	08/19/2021	8/19 Special Advis		8/19/21 Special Advisory Committee meeting	8470 · Ag Meeting Attend -Special	125.00
	Bill	08/19/2021	8/19 call w/Chair		8/19/21 call w/Ag Pool Chair	8470 · Ag Meeting Attend -Special	125.00
	Bill	08/20/2021	8/20 call w/Chair		8/20/21 call w/Ag Pool Chair	8470 · Ag Meeting Attend -Special	125.00
	Bill	08/24/2021	8/24 GRCC Mtg		8/24/21 GRCC Meeting	8470 · Ag Meeting Attend -Special	125.00

CHINO BASIN WATERMASTER
Cash Disbursements For The Month of
September 2021

Type	Date	Num	Name	Memo	Account	Paid Amount
Bill	08/27/2021	8/27 call w/Chair		8/27/21 call w/Ag Pool Chair	8470 · Ag Meeting Attend -Special	125.00
Bill	08/30/2021	8/30 call w/Chair		8/30/21 call w/Ag Pool Chair	8470 · Ag Meeting Attend -Special	125.00
Bill	08/31/2021	8/31 call w/Chair		8/31/21 call w/Ag Pool Chair	8470 · Ag Meeting Attend -Special	125.00
TOTAL						1,500.00
Check	**09/15/2021**	**09/15/2021**	**Service Charge**	**Service Charge**	**1012 · Bank of America Gen'l Ckg**	
				Service Charge	6039.1 · Banking Service Charges	1,220.14
TOTAL						1,220.14
Bill Pmt -Check	**09/16/2021**	**23069**	**APPLEONE**	**01-6034463**	**1012 · Bank of America Gen'l Ckg**	
Bill	09/08/2021	01-6034463		Temporary Services - Brian Summers	6017.2 · Office Specialist Services	1,245.04
TOTAL						1,245.04
Bill Pmt -Check	**09/16/2021**	**23070**	**BANK OF AMERICA**	**XXXX-XXXX-XXXX-4026**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/31/2021	XXXX-XXXX-XXXX-4026		Reg.-PK-4th Annual Western Groundwater Congre	6193.2 · Conference - Registration Fee	305.00
				Wireless mouse	6031.7 · Other Office Supplies	35.55
				Subscription for Adobe Acrobat Pro DC-JJ	6054 · Computer Software	179.88
				Monthly cost for Zoom	6022 · Telephone	40.00
				Miscellaneous office supplies	6031.7 · Other Office Supplies	7.53
				Miscellaneous office supplies	6031.7 · Other Office Supplies	11.84
				Miscellaneous office supplies	6031.7 · Other Office Supplies	28.40
				Subscription for Doodle online scheduling tool	6111 · Membership Dues	86.50
				Miscellaneous office supplies	6031.7 · Other Office Supplies	43.09
				Plexiglass sheets-San Sevaine Mtg room	6025 · Building Interior Renovations	1,360.57
				Miscellaneous office supplies	6031.7 · Other Office Supplies	20.14
				Cost to extend rental of packing totes for office	6038 · Other Office Equipment	205.03
				Cost to extend rental of packing totes for office	6038 · Other Office Equipment	244.72
				Miscellaneous office supplies	6031.7 · Other Office Supplies	131.40
				(5) new doors for office	1840 · Capital Assets	1,498.81
				Cost to print miscellaneous printing jobs	6045 · Printing	310.04
				Miscellaneous office supplies	6031.7 · Other Office Supplies	7.75
				Miscellaneous office supplies	6031.7 · Other Office Supplies	19.38
				Transcript for 5/28/21 court hearing	6046 · Legal Publications/Services	50.00
				Transcript for 6/25/21 court hearing	6046 · Legal Publications/Services	214.00
				PK mtg w/M. Gardner, C. Miller	6312 · Meeting Expenses	58.18
				PK mtg w/C. Berch	8312 · Meeting Expenses	29.01
				PK mtg w/Jeff Mosher	6909.1 · OBMP Meetings	33.06
				PK mtg w/J. Curatalo, B. Kuhn	6312 · Meeting Expenses	73.42
TOTAL						4,993.30

CHINO BASIN WATERMASTER
Cash Disbursements For The Month of
September 2021

	Type	Date	Num	Name	Memo	Account	Paid Amount
	Bill Pmt -Check	**09/16/2021**	**23071**	**BROWNSTEIN HYATT FARBER SCHRECK**		**1012 · Bank of America Gen'l Ckg**	
	Bill	08/31/2021	858245		858245	6078 · BHFS Legal - Miscellaneous	25,890.30
	Bill	08/31/2021	858246		Remote Work Memo	6073 · BHFS Legal - Personnel Matters	148.50
	Bill	08/31/2021	858247		858247	6078 · BHFS Legal - Miscellaneous	105.30
	Bill	08/31/2021	858248		858248	6907.36 · Santa Ana River Habitat	1,188.00
	Bill	08/31/2021	858249		858249	6275 · BHFS Legal - Advisory Committee	396.00
	Bill	08/31/2021	858250		858250	8375 · BHFS Legal - Appropriative Pool	99.00
	Bill	08/31/2021	858251		858251	8475 · BHFS Legal - Agricultural Pool	148.50
	Bill	08/31/2021	858252		858252	8575 · BHFS Legal - Non-Ag Pool	148.50
	Bill	08/31/2021	858253		858253	6071 · BHFS Legal - Court Coordination	597.15
	Bill	08/31/2021	858254		858254	6072 · BHFS Legal - Rules & Regs	3,762.00
	Bill	08/31/2021	858255		858255	6077 · BHFS Legal - Party Status Maint	891.00
	Bill	08/31/2021	858256		858256	6907.47 · 2020 Safe Yield Reset	1,138.50
	Bill	08/31/2021	858257		858257	6078.25 · Ely 3 Basin Investigation	1,366.20
					Filing Fee	6078.25 · Ely 3 Basin Investigation	90.74
TOTAL							35,969.69
	Bill Pmt -Check	**09/16/2021**	**23072**	**BURRTEC WASTE INDUSTRIES, INC.**	**N2112209650**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/14/2021	N2112209650		September 2021	6024 · Building Repair & Maintenance	142.50
TOTAL							142.50
	Bill Pmt -Check	**09/16/2021**	**23073**	**CUCAMONGA VALLEY WATER DISTRICT**	**Office Lease**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/15/2021			Lease due on October 1, 2021	1422 · Prepaid Rent	7,588.83
TOTAL							7,588.83
	Bill Pmt -Check	**09/16/2021**	**23074**	**EGOSCUE LAW GROUP, INC.**	**August 2021**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/31/2021			Ag Pool Legal Services - August 2021	8467 · Ag Legal & Technical Services	7,675.00
TOTAL							7,675.00
	Bill Pmt -Check	**09/16/2021**	**23075**	**GRAINGER**	**9094040791**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/25/2021	9034040791		Miscellanous water quality monitoring supplies	7103.6 · Grdwtr Qual-Supplies	127.60
TOTAL							127.60
	Bill Pmt -Check	**09/16/2021**	**23076**	**JOHN DIAZ PAINTING**	**Office Painting Project**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/15/2021			Final payment due at job completion	1840 · Capital Assets	6,595.00
TOTAL							6,595.00
	Bill Pmt -Check	**09/16/2021**	**23077**	**LEGAL SHIELD**	**111802**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/14/2021	111802		Employee deductions - September 2021	60194 · Other Employee Insurance	161.40
TOTAL							161.40

CHINO BASIN WATERMASTER
Cash Disbursements For The Month of
September 2021

	Type	Date	Num	Name	Memo	Account	Paid Amount
	Bill Pmt -Check	**09/16/2021**	**23078**	**LOEB & LOEB LLP**	**1968190**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/31/2021	1968190		Non-Ag Pool Legal Services - August 2021	8567 · Non-Ag Legal Service	1,308.15
TOTAL							1,308.15
	Bill Pmt -Check	**09/16/2021**	**23079**	**STAULA, MARY L**	**Retiree Medical Reimbursement**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/30/2021			Retiree Medical Reimbursement	60182.4 · Retiree Medical	19.24
TOTAL							19.24
	Bill Pmt -Check	**09/16/2021**	**23080**	**VERIZON WIRELESS**	**9887708998**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/31/2021	9887708998		Acct #470810953-00002	6022 · Telephone	375.77
TOTAL							375.77
	Bill Pmt -Check	**09/17/2021**	**23081**	**OFFICE & ERGONOMIC SOLUTIONS, INC.**	**32894**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/17/2021	32894		50% down payment on office furniture	1840 · Capital Assets	2,914.03
TOTAL							2,914.03
	General Journal	**09/17/2021**	**09/17/2021**	**ADP, LLC**	**ADP Tax Service for 08/07/21-588143012**	**1012 · Bank of America Gen'l Ckg**	
					ADP Tax Service for 08/07/21-588143012	1012 · Bank of America Gen'l Ckg	155.50
					ADP Tax Service for 08/21/21-588143012	1012 · Bank of America Gen'l Ckg	161.55
					ADP Tax Service for 09/04/21-588143012	1012 · Bank of America Gen'l Ckg	155.50
TOTAL							472.55
	Bill Pmt -Check	**09/22/2021**	**23082**	**APPLEONE**	**01-6043311**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/17/2021	01-6043311		Brian Summers	6017.2 · Office Specialist Services	1,256.48
TOTAL							1,256.48
	General Journal	**09/21/2021**	**09/21/2021**	**HEALTH EQUITY**	**Health Equity Invoice 3056286**	**1012 · Bank of America Gen'l Ckg**	
				HEALTH EQUITY	Health Equity Invoice 3056286	1012 · Bank of America Gen'l Ckg	53.55
TOTAL							53.55
	Bill Pmt -Check	**09/22/2021**	**ACH 092221**	**PUBLIC EMPLOYEES' RETIREMENT SYSTEM**	**Payor #3493**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/01/2021	16538390		Annual Unfunded Accrued Liability-Plan 3299	60180 · Employers PERS Expense	8,989.42
TOTAL							8,989.42
	Bill Pmt -Check	**09/22/2021**	**23083**	**BLUERIDGE SOFTWARE, INC.**	**10694**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/15/2021	10694		Annual support/maintenance 10/25/21-10/24/22	6054 · Computer Software	629.82
TOTAL							629.82
	Bill Pmt -Check	**09/22/2021**	**23084**	**FRONTIER COMMUNICATIONS**	**909-484-3890-050914-5**	**1012 · Bank of America Gen'l Ckg**	

CHINO BASIN WATERMASTER
Cash Disbursements For The Month of
September 2021

	Type	Date	Num	Name	Memo	Account	Paid Amount
	Bill	09/22/2021	90948438900509145		Office fax	6022 · Telephone	167.64
TOTAL							167.64
	Bill Pmt -Check	**09/22/2021**	**23085**	**GREAT AMERICA LEASING CORP.**	**30098879**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/16/2021	30098879		Invoice for September 2021	6043.1 · Ricoh Lease Fee	1,481.41
					Supply freight fee	6043.2 · Ricoh Usage & Maintenance Fee	8.57
					2021 San Bernardino County Property Tax	6043.3 · Ricoh Property Tax Fees	230.96
TOTAL							1,720.94
	Bill Pmt -Check	**09/22/2021**	**23086**	**JOHN J. SCHATZ**	**Appropriative Pool Legal Services**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/31/2021			August 2021	8367 · Legal Service	15,791.00
TOTAL							15,791.00
	Bill Pmt -Check	**09/22/2021**	**23087**	**PITNEY BOWES GLOBAL FINANCIAL SERVICE**	**3104962786**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/17/2021	3104962786		Property tax	6044 · Postage Meter Lease	25.53
TOTAL							25.53
	Bill Pmt -Check	**09/22/2021**	**23088**	**READY REFRESH**	**0023230253**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/31/2021	0023230253		Office Water Bottle - August 2021	6031.7 · Other Office Supplies	80.44
TOTAL							80.44
	Bill Pmt -Check	**09/22/2021**	**23089**	**SANTA ANA WATERSHED PROJECT AUTHORI**	**MSAR 2022-01**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/22/2021	MSAR 2022-01		FY 2021-22 SA River Pathogen TMDL Task Force	8471 · Ag Pool Expense	10,643.00
TOTAL							10,643.00
	Bill Pmt -Check	**09/22/2021**	**23090**	**STANDARD INSURANCE CO.**	**Policy # 00-649299-0009**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/22/2021	006492990009		Policy # 00-649299-0009	60191 · Life & Disab.Ins Benefits	942.71
TOTAL							942.71
	Bill Pmt -Check	**09/22/2021**	**23091**	**UNITED HEALTHCARE**	**052588403837**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/17/2021	052588403837		Dental Insurance Premium - October 2021	60182.2 · Dental & Vision Ins	732.28
TOTAL							732.28
	Bill Pmt -Check	**09/22/2021**	**23092**	**VERIZON WIRELESS**	**9888328567**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/22/2021	9888328567		Acct #642073270-00002	7103.7 · Grdwtr Qual-Computer Svc	58.03
TOTAL							58.03
	General Journal	**09/23/2021**	**09/23/2021**	**Payroll and Taxes for 09/05/21-09/18/21**	**Payroll and Taxes for 09/05/21-09/18/21**	**1012 · Bank of America Gen'l Ckg**	
				ADP, LLC	Direct Deposits for 09/05/21-09/18/21	1012 · Bank of America Gen'l Ckg	31,080.84
				ADP, LLC	Payroll Taxes for 09/05/21-09/18/21	1012 · Bank of America Gen'l Ckg	11,975.33

CHINO BASIN WATERMASTER
Cash Disbursements For The Month of
September 2021

	Type	Date	Num	Name	Memo	Account	Paid Amount
				MISSIONSQUARE RETIREMENT	457(b) EE Deductions for 09/05/21-09/18/21	1012 · Bank of America Gen'l Ckg	5,765.46
				MISSIONSQUARE RETIREMENT	401(a) EE Deductions for 09/05/21-09/18/21	1012 · Bank of America Gen'l Ckg	1,694.48
TOTAL							50,516.11
	Bill Pmt -Check	**09/23/2021**	**ACH092321**	**PUBLIC EMPLOYEES' RETIREMENT SYSTEM**	**Payor #3493**	**1012 · Bank of America Gen'l Ckg**	
	General Journal	09/22/2021	09/23/2021	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	CalPERS Retirement for 09/05/21-09/18/21	2000 · Accounts Payable	9,186.50
TOTAL							9,186.50
	General Journal	**09/28/2021**	**09/28/2021**	**HEALTH EQUITY**	**Health Equity Invoice 3078054**	**1012 · Bank of America Gen'l Ckg**	
				HEALTH EQUITY	Health Equity Invoice 3078054	1012 · Bank of America Gen'l Ckg	14.89
TOTAL							14.89
	General Journal	**09/28/2021**	**09/28/2021**	**HEALTH EQUITY**	**Health Equity Invoice 2999985**	**1012 · Bank of America Gen'l Ckg**	
				HEALTH EQUITY	Health Equity Invoice 2999985	1012 · Bank of America Gen'l Ckg	76.25
TOTAL							76.25
						Total Disbursements:	**655,708.87**

CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, CA 91730
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PETER KAVOUNAS, P.E.
General Manager

STAFF REPORT

DATE: November 18, 2021

TO: Advisory Committee and Board Members

SUBJECT: VISA Check Detail Report - Financial Report B2 (September 30, 2021)
(Consent Calendar Item I.B.2.)

SUMMARY

Issue: Record of VISA credit card payment disbursed for the month of September 2021.

Recommendation: Receive and file VISA Check Detail Report for September 2021 as presented.

Financial Impact: Funds disbursed were included in the FY 2021/22 "Amended" Watermaster Budget.

Future Consideration
Advisory Committee – November 18, 2021: Receive and File
Watermaster Board – November 18, 2021: Receive and File (Normal Course of Business)

ACTIONS:
Appropriative Pool – November 10, 2021: Received and filed
Non-Agricultural Pool – November 10, 2021: Moved unanimously to receive and file, without approval
Agricultural Pool – November 10, 2021: Received and filed
Advisory Committee – November 18, 2021:
Watermaster Board – November 18, 2021:

BACKGROUND

A monthly VISA Check Detail report is provided to keep all members apprised of Watermaster expenditures charged against the General Manager and Chief Financial Officer's Bank of America VISA card.

DISCUSSION

The total cash disbursements during the month of September 2021 was $4,993.30. The payment was processed in the amount of $4,993.30 (by check number 23070 dated September 16, 2021). The monthly charges for September 2021 of $4,993.30 were for routine and customary expenditures and properly documented with receipts.

ATTACHMENTS

1. Financial Report – B2

CHINO BASIN WATERMASTER
VISA Check Detail Report
September 2021

Type	Num	Date	Name	Memo	Account	Paid Amount
Bill Pmt -Check	**09/16/2021**	**23070**	**BANK OF AMERICA**	**XXXX-XXXX-XXXX-4026**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/31/2021	XXXX-XXXX-XXXX-4026		Reg.-PK-4th Annual Western Groundwater Congress	6193.2 · Conference - Registration Fee	305.00
				Wireless mouse	6031.7 · Other Office Supplies	35.55
				Subscription for Adobe Acrobat Pro DC-JJ	6054 · Computer Software	179.88
				Monthly cost for Zoom	6022 · Telephone	40.00
				Miscellaneous office supplies	6031.7 · Other Office Supplies	7.53
				Miscellaneous office supplies	6031.7 · Other Office Supplies	11.84
				Miscellaneous office supplies	6031.7 · Other Office Supplies	28.40
				Subscription for Doodle online scheduling tool	6111 · Membership Dues	86.50
				Miscellaneous office supplies	6031.7 · Other Office Supplies	43.09
				Plexiglass sheets-San Sevaine Mtg room	6025 · Building Interior Renovations	1,360.57
				Miscellaneous office supplies	6031.7 · Other Office Supplies	20.14
				Cost to extend rental of packing totes for office	6038 · Other Office Equipment	205.03
				Cost to extend rental of packing totes for office	6038 · Other Office Equipment	244.72
				Miscellaneous office supplies	6031.7 · Other Office Supplies	131.40
				(5) new doors for office	1840 · Capital Assets	1,498.81
				Cost to print miscellaneous printing jobs	6045 · Printing	310.04
				Miscellaneous office supplies	6031.7 · Other Office Supplies	7.75
				Miscellaneous office supplies	6031.7 · Other Office Supplies	19.38
				Transcript for 5/28/21 court hearing	6046 · Legal Publications/Services	50.00
				Transcript for 6/25/21 court hearing	6046 · Legal Publications/Services	214.00
				PK mtg w/M. Gardner, C. Miller	6312 · Meeting Expenses	58.18
				PK mtg w/C. Berch	8312 · Meeting Expenses	29.01
				PK mtg w/Jeff Mosher	6909.1 · OBMP Meetings	33.06
				PK mtg w/J. Curatalo, B. Kuhn	6312 · Meeting Expenses	73.42
TOTAL					**Total Disbursements:**	**$4,993.30**

CHINO BASIN WATERMASTER

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PETER KAVOUNAS, P.E.
General Manager

STAFF REPORT

DATE: November 18, 2021

TO: Advisory Committee and Board Members

SUBJECT: Combining Schedule of Revenue, Expenses and Changes in Net Assets for the Period July 1, 2021 through September 30, 2021 - Financial Report B3 (September 30, 2021) (Consent Calendar Item I.B.3.)

SUMMARY

Issue: Record of Revenue, Expenses and Changes in Net Assets for the Period July 1, 2021 through September 30, 2021.

Recommendation: Receive and file Combining Schedule of Revenue, Expenses and Changes in Net Assets for the Period July 1, 2021 through September 30, 2021 as presented.

Financial Impact: Funds disbursed were included in the FY 2021/22 "Amended" Watermaster Budget.

Future Consideration
Advisory Committee – November 18, 2021: Receive and File
Watermaster Board – November 18, 2021: Receive and File (Normal Course of Business)

ACTIONS:
Appropriative Pool – November 10, 2021: Received and filed
Non-Agricultural Pool – November 10, 2021: Moved unanimously to receive and file, without approval
Agricultural Pool – November 10, 2021: Received and filed
Advisory Committee – November 18, 2021:
Watermaster Board – November 18, 2021:

BACKGROUND

A Combining Schedule of Revenue, Expenses and Changes in Net Assets for the period July 1, 2021 through September 30, 2021 is provided to keep all members apprised of the FY 2021/22 cumulative Watermaster revenues, expenditures and changes in net assets for the period listed.

DISCUSSION

The Combining Schedule of Revenue, Expenses and Changes in Net Assets has been created from various financial reports and statements created from Intuit QuickBooks Enterprise Solutions 22.0, the Watermaster accounting system. The Combining Schedule provided balances to the supporting documentation in the Watermaster accounting system as presented.

ATTACHMENTS:

1. Financial Report – B3

CHINO BASIN WATERMASTER
COMBINING SCHEDULE OF REVENUE, EXPENSES AND CHANGES IN NET ASSETS
FOR THE PERIOD JULY 1, 2021 THROUGH SEPTEMBER 30, 2021

	WATERMASTER ADMINISTRATION	OPTIMUM BASIN MANAGEMENT	POOL ADMINISTRATION & SPECIAL PROJECTS: APPROPRIATIVE POOL	AG POOL	NON-AG POOL	AP ESCROW ACCOUNT	GROUNDWATER REPLENISHMENT	LAIF VALUE ADJ.	GASB 75 BEG. NET POSITION	GRAND TOTALS	AMENDED BUDGET 2021-2022
Administrative Revenues:											
Administrative Assessments			-	200,000	-					200,000	7,652,877
Interest Revenue			5,285	60	63					5,408	106,125
Mutual Agency Project Revenue	177,430									177,430	177,430
Miscellaneous Income	9									9	0
Total Revenues	177,439	-	5,285	200,060	63	-	-	-	-	382,847	7,936,432
Administrative & Project Expenditures:											
Watermaster Administration	538,081									538,081	1,846,194
Watermaster Board-Advisory Committee	38,679									38,679	245,485
Ag Pool Legal Services - Ag Fund [1]				57,925						57,925	-
Pool Administration			59,943	25,077	12,248					97,268	567,698
Optimum Basin Mgmt Administration		225,444								225,444	1,480,696
OBMP Project Costs		847,800								847,800	4,517,867
Debt Service		529,029								529,029	529,029
Basin Recharge Improvements		-								-	1,693,292
Total Administrative/OBMP Expenses	576,759	1,602,273	59,943	25,077	12,248	-	-	-	-	2,334,225	10,880,261
Net Administrative/OBMP Expenses	(399,320)	(1,602,273)									
Allocate Net Admin Expenses To Pools	399,320		296,739	86,830	15,751					-	
Allocate Net OBMP Expenses To Pools		1,073,244	797,539	233,371	42,334					-	
Allocate Debt Service to App Pool		529,029	529,029							-	
Allocate Basin Recharge to App Pool		-	-							-	
Agricultural Expense Transfer*			345,277	(345,277)						-	
Total Expenses			2,028,528	57,925	70,332	-	-	-	-	2,334,225	10,880,261
Net Administrative Income			(2,023,243)	142,135	(70,270)		-	-	-	(1,951,378)	(2,943,829)
Other Income/(Expense)											
Replenishment Water Assessments							-			-	0
Desalter Replenishment Obligation							-			-	0
Exhibit "G" Non-Ag Pool Water			-							-	0
RTS Charges from IEUA							(35,030)			(35,030)	0
Interest Revenue			-	-	-		-			-	0
MWD Water Purchases										-	0
Non-Ag Stored Water Purchases										-	0
Exhibit "G" Non-Ag Pool Water			-							-	0
Groundwater Replenishment							-			-	0
LAIF - Fair Market Value Adjustment								-		-	0
Gain on Sale of Assets			-		-			-		-	0
Other Post-Employment Benefits (OPEB)			-		-				-	-	0
Ag Pool Assessments Outstanding [2]			-	(200,000)						(200,000)	0
AP Special Assessment - Ag Pool Exp.			-	-		-				-	0
AP Escrow Account - Interest Earned						73				73	0
Refund-Basin O&M Expenses			-		-					-	0
Refund-Recharge Debt Service			-							-	0
Funding To/(From) Reserves										-	0
Net Other Income/(Expense)			-	(200,000)	-	73	(35,030)	-	-	(234,957)	0
Net Transfers To/(From) Reserves		(2,186,335)	(2,023,243)	(57,865)	(70,270)	73	(35,030)	-	-	(2,186,335)	(2,943,829)
		0									
Net Assets, July 1, 2021			8,924,389	127,547	128,927	161,296	(19,272)	829	(443,445)	8,880,272	
Net Assets, End of Period			6,901,146	69,681	58,658	161,369	(54,302)	829	(443,445)	6,693,937	6,693,937
20/21 Assessable Production			73,423.920	21,484.815	3,897.385					98,806.120	
20/21 Production Percentages			74.311%	21.744%	3.944%					100.000%	

*Fund balance transfer as agreed to in the Peace Agreement.

Note [1] - Agricultural Pool Legal Services for Jul. 2021 through Sep. 2021

Note [2] - Outstanding balance of Agricultural Pool Special Assessments issued in September 2021 for $200,000

CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, CA 91730
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PETER KAVOUNAS, P.E.
General Manager

STAFF REPORT

DATE: November 18, 2021

TO: Advisory Committee and Board Members

SUBJECT: Treasurer's Report of Financial Affairs for the Period September 1, 2021 through September 30, 2021 - Financial Report B4 (September 30, 2021) (Consent Calendar Item I.B.4.)

SUMMARY

Issue: Record of increases or decreases in the cash position, assets and liabilities of Watermaster for the Period of September 1, 2021 through September 30, 2021.

Recommendation: Receive and file Treasurer's Report of Financial Affairs for the Period September 1, 2021 through September 30, 2021 as presented.

Financial Impact: Funds disbursed were included in the FY 2021/22 "Amended" Watermaster Budget.

Future Consideration
Advisory Committee – November 18, 2021: Receive and File
Watermaster Board – November 18, 2021: Receive and File (Normal Course of Business)

ACTIONS:
Appropriative Pool – November 10, 2021: Received and filed
Non-Agricultural Pool – November 10, 2021: Moved unanimously to receive and file, without approval
Agricultural Pool – November 10, 2021: Received and filed
Advisory Committee – November 18, 2021:
Watermaster Board – November 18, 2021:

BACKGROUND

A Treasurer's Report of Financial Affairs for the Period September 1, 2021 through September 30, 2021 is provided to keep all members apprised of the total cash in banks (Bank of America, LAIF, and CalTRUST); cash on deposit in trust with the County of San Bernardino as a result of the Cooperation and Reimbursement Agreement between Chino Basin Watermaster and County of San Bernardino dated May 25, 2017; and cash on hand at the Watermaster office (petty cash) at the end of the period stated. The Treasurer's Report details the change (increase or decrease) in the overall cash position of Watermaster, as well as the changes (increase or decrease) to the assets and liabilities section of the balance sheet. The report also provides a detailed listing of all deposits and/or withdrawals in the California State Treasurer's Local Agency Investment Fund (LAIF) and/or CalTRUST, the most current effective yield as of the last quarter, and the ending balance in LAIF as of the reporting date.

DISCUSSION

The Treasurer's Report of Financial Affairs has been created from various financial reports and statements created from Intuit QuickBooks Enterprise Solutions 22.0, the Watermaster accounting system. The Treasurer's Report provided, balances to the supporting documentation in the Watermaster accounting system, as well as the supporting bank statements.

ATTACHMENTS

1. Financial Report – B4

CHINO BASIN WATERMASTER
TREASURER'S REPORT OF FINANCIAL AFFAIRS FOR THE PERIOD
SEPTEMBER 1, 2021 THROUGH SEPTEMBER 30, 2021

DEPOSITORIES:				
Cash on Hand - Petty Cash				$ 500
Bank of America				
Governmental Checking-Demand Deposits		$ 356,167		
Zero Balance Account - Payroll		-		356,167
Restricted Funds - AP Escrow				161,369
Trust Account - County of San Bernardino				845
Local Agency Investment Fund - Sacramento				8,145,898
TOTAL CASH IN BANKS AND ON HAND	9/30/2021			**$ 8,664,779**
TOTAL CASH IN BANKS AND ON HAND	8/31/2021			9,315,090
PERIOD INCREASE (DECREASE)				**$ (650,310)**

CHANGE IN CASH POSITION DUE TO:

Decrease/(Increase) in Assets:	Accounts Receivable	$ (29,961)
	Assessments Receivable	(200,000)
	Prepaid Expenses, Deposits & Other Current Assets	(22,885)
(Decrease)/Increase in Liabilities	Accounts Payable	1,596
	Accrued Payroll, Payroll Taxes & Other Current Liabilities	11,598
	Long Term Liabilities	8,523
	Transfer to/(from) Reserves	(419,180)
	PERIOD INCREASE (DECREASE)	**$ (650,310)**

SUMMARY OF FINANCIAL TRANSACTIONS:

	Petty Cash	Govt'l Checking Demand	Zero Balance Account Payroll	Restricted Funds AP Escrow	Trust Account County of San Bernardino	Local Agency Investment Funds	Totals
Balances as of 8/31/2021	$ 500	$ 431,501	$ -	$ 161,345	$ 845	$ 8,720,898	$ 9,315,090
Deposits	-	580,375	-	24	-	-	580,399
Transfers	-	(142,133)	(87,143)	-	-	(575,000)	(804,276)
Withdrawals/Checks	-	(513,576)	87,143	-	-	-	(426,433)
Balances as of 9/30/2021	$ 500	$ 356,167	$ -	$ 161,369	$ 845	$ 8,145,898	$ 8,664,779
PERIOD INCREASE OR (DECREASE)	**$ -**	**$ (75,334)**	**$ -**	**$ 24**	**$ -**	**$ (575,000)**	**$ (650,310)**

CHINO BASIN WATERMASTER
TREASURER'S REPORT OF FINANCIAL AFFAIRS FOR THE PERIOD
SEPTEMBER 1, 2021 THROUGH SEPTEMBER 30, 2021

INVESTMENT TRANSACTIONS

Effective Date	Transaction	Depository	Activity	Redeemed	Days to Maturity	Interest Rate(*)	Maturity Yield
9/9/2021	Withdrawal		(575,000)				
TOTAL INVESTMENT TRANSACTIONS			**$ (575,000)**	**$0**			

* The earnings rate for L.A.I.F. is a daily variable rate; 0.24% was the effective yield rate at the Quarter ended September 30, 2021.

INVESTMENT STATUS
September 30, 2021

Financial Institution	**Principal Amount**	**Number of Days**	**Interest Rate**	**Maturity Date**
Local Agency Investment Fund	$ 8,145,898			
TOTAL INVESTMENTS	**$ 8,145,898**			

Funds on hand are sufficient to meet all foreseen and planned Administrative and project expenditures during the next six months.

All investment transactions have been executed in accordance with the criteria stated in Chino Basin Watermaster's Investment Policy.

Respectfully submitted,

Joseph S. Joswiak
Chief Financial Officer
Chino Basin Watermaster

CHINO BASIN WATERMASTER

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PETER KAVOUNAS, P.E.
General Manager

STAFF REPORT

DATE: November 18, 2021

TO: Advisory Committee and Board Members

SUBJECT: Budget vs. Actual Report for the Period July 1, 2021 through September 30, 2021 - Financial Report B5 (September 30, 2021) (Consent Calendar Item I.B.5.)

SUMMARY

Issue: Record of revenues and expenses of Watermaster for the Period of July 1, 2021 through September 30, 2021.

Recommendation: Receive and file Budget vs. Actual Report for the Period July 1, 2021 through September 30, 2021 as presented.

Financial Impact: Funds disbursed were included in the FY 2021/22 "Amended" Watermaster Budget.

Future Consideration
Advisory Committee – November 18, 2021: Receive and File
Watermaster Board – November 18, 2021: Receive and File (Normal Course of Business)

ACTIONS:
Appropriative Pool – November 10, 2021: Received and filed
Non-Agricultural Pool – November 10, 2021: Moved unanimously to receive and file, without approval
Agricultural Pool – November 10, 2021: Received and filed
Advisory Committee – November 18, 2021:
Watermaster Board – November 18, 2021:

BACKGROUND

A Budget vs. Actual Report for the period July 1, 2021 through September 30, 2021 is provided to keep all members apprised of the total revenues and expenses for the current fiscal year. The expense section is categorized into four distinct sections. Those sections are: General and Administrative Expenses; Optimum Basin Management Program Expenses; Project Expenses; and Other Income/Expenses. The Budget vs. Actual report has been created from Intuit QuickBooks Enterprise Solutions 22.0, the Watermaster accounting system. The Budget vs. Actual report provided, balances to the supporting documentation in the Watermaster accounting system, as well as the supporting bank statements.

DISCUSSION

CURRENT MONTH – SEPTEMBER 2021

Year-To-Date (YTD) for the three months ending September 30, 2021, all but two categories were at or below the projected budget.

The categories over budget were: (1) the Administration Salary/Benefits expenses (6010's) which were over budget by $4,545 or 1.3% as a result of increased staff time and activities in the administrative functions. Please note that the overage is only in the administrative section, not with the entire consolidated staffing budget; and (2) Watermaster Legal Services (6070s) were over budget by $10,045 or 12.1% as a result of increased activities in the areas of Rules and Regulations; the unbudgeted expenses for the Ely 3 Basin Investigation; and miscellaneous legal expenses during the last three months. Please note that the overage is only in the administrative section, not the entire consolidated BHFS budget.

Overall, the Watermaster (YTD) Actual Expenses were $3,134,978 or 57.3% below the (YTD) Budgeted Expenses of $5,469,203.

PREVIOUSLY REPORTED ACTIONS (Descending Order)

July 2021:
The "Original" Approved budget for FY 2021/22 of $7,276,213 was adopted by the Watermaster Board on May 27, 2021. Budget Amendment A-21-07-01 in the amount of $147,031 and Budget Amendment A-21-07-02 in the amount of $276,761 was adopted by the Watermaster Board on July 22, 2021. Budget Amendment A-21-08-01 in the amount of $8,427 was approved by the Advisory Committee on August 19, 2021. The accounts increased with the Budget Amendments were the OBMP-Northwest MZ-1 Area Project (7402.1) increased by $147,031; and the Safe Yield Reset Methodology Evaluation (7614) increased by $285,188.

During the month of July 2021, the "Carry Over" funding was calculated. The Total "Carry Over" funding amount of $2,943,828.87 has been posted to the general ledger accounts. The total amount of $2,943,828.87 consisted of $1,693,292.20 from Capital Improvement Projects, $573,765.00 from Engineering Services, $374,114.56 from OBMP Activities, $207,566.95 from Pool Funding Accounts, and $95,090.16 from Administration Services. More detailed information is provided regarding this issue under the "Carry Over" Funding section.

The "Amended" Budget for FY 2021/22 is $10,652,260.87 which includes $2,943,828.87 for the prior years "Carry Over" funding.

SALARIES EXPENSE

CURRENT MONTH – SEPTEMBER 2021

As of September 30, 2021, the total (YTD) Watermaster salary expenses were $4,137 or 0.7% below the (YTD) budgeted amount of $585,410. The overall staffing budget was developed with a staffing level of ten Full-Time Equivalents (FTE's), and staffing is currently at ten Full-Time Equivalents (FTE's).

Watermaster utilizes an in-house database time and attendance system to track and record staff's actual hours worked and records those hours to a specific project or activity. This time and attendance database of captured staff hours and activities is the basis for the bi-weekly payrolls which are processed using an external payroll processing service. Watermaster staff can record time to a large number of activities but the five most used categories are as follows (1) General Administrative activities; (2) Paid Leaves of vacation, sick or holiday; (3) Pools, Advisory or Board Meeting attendance; (4) OBMP activities; and (5) OBMP Implementation Program Elements 1 through 9 activities.

When the FY 2021/22 budget was developed, basic assumptions were used in allocating how staff's time would be spent and on which of the projects or activities. The staffing dollars were then allocated into those specific areas and budgeted on a 1/12 monthly budget. When actual staffing activities vary from the budgeted assumptions, a positive or negative variance can be created.

Currently the following actual allocations are tracking above the projected allocations due to Watermaster staff spending more time in these activities as follows: WM Staff Salaries for Administration (account 6011) above budget by $15,676 or 5.6%; Watermaster Staff Overtime (account 6011.1) above budget by $1,921 or 64.0%; WM Staff Salaries for Advisory Committee (account 6201) above budget by $19 or 0.2%; Groundwater Quality-WM Staff Salaries (account 7103.1) above budget by $3,833 or 22.5%; Comprehensive Recharge-WM Staff Salaries (account 7201) above budget by $1,811 or 13.0%; and PE 6&7 (account 7501) above budget by $2,510 or 152.7%.

On October 8, 2021, Vanessa Aldaz (Administrative Assistant) who has been with Watermaster since February 10, 2020, submitted her official notice of resignation effective Friday, October 22, 2021. On Monday, October 25, 2021, Ruby Favela started her employment with Watermaster as the new Administrative Assistant.

The table summarizes the Year-To-Date (YTD) Actual Watermaster salary costs compared to the Year-To-Date (YTD) Budget as of September 30, 2021. Please be advised that the "$ Over Budget" and the "% of Budget" columns are a comparison of the (YTD) Actual to the (YTD) Budget, not the 12-month Annual Budget. The 12-month Annual Budget column is presented only to provide the data in a full and complete format. The following details are provided:

	Jul '21 - Sep '21 Actual	Jul '21 - Sep '21 Budget	$ Over Budget	% of Budget	FY 2021/22 Annual Budget
WM Salary Expense					
6011 · WM Staff Salaries	297,786.80	282,111.00	15,675.80	105.56%	1,128,445.00
6011.1 · WM Staff Salaries - Overtime	4,921.17	3,000.00	1,921.17	164.04%	12,000.00
6011.4 · 457(f) NQDC Plan	8,225.65	8,828.00	-602.35	93.18%	35,312.00
6017· Temporary Services	13,785.68	30,000.00	-16,214.32	45.95%	42,000.00
6201 · Advisory Committee - WM Staff Salaries	7,679.21	7,660.00	19.21	100.25%	30,636.00
6301 · Watermaster Board - WM Staff Salaries	7,748.47	12,189.00	-4,440.53	63.57%	48,754.00
8301 · Appropriative Pool - WM Staff Salaries	10,252.77	11,291.00	-1,038.23	90.81%	45,164.00
8401 · Agricultural Pool - WM Staff Salaries	6,222.98	9,616.00	-3,393.02	64.72%	38,461.00
8501 · Non-Agricultural Pool - WM Staff Salaries	3,996.10	6,649.00	-2,652.90	60.1%	26,596.00
6901 · OBMP - WM Staff Salaries	55,040.31	55,544.00	-503.69	99.09%	222,176.00
7101.1 · Production Monitor - WM Staff Salaries	23,354.72	25,490.00	-2,135.28	91.62%	101,960.00
7102.1 · In-line Meter - WM Staff Salaries	0.00	3,042.00	-3,042.00	0.0%	12,167.00
7103.1 · Grdwater Quality - WM Staff Salaries	20,890.10	17,057.00	3,833.10	122.47%	68,225.00
7104.1 · Grdwater Level - WM Staff Salaries	16,208.11	17,803.00	-1,594.89	91.04%	71,210.00
7107.1 · GrdLevel Monitoring - WM Staff Salarie	0.00	1,833.00	-1,833.00	0.0%	7,332.00
7108.1 · Hydraulic Control - WM Staff Salaries	810.86	1,168.00	-357.14	69.42%	4,671.00
7108.11 · Prado Basin - WM Staff Salaries	719.88	1,739.00	-1,019.12	41.4%	6,954.00
7201 · Comp Recharge - WM Staff Salaries	15,822.29	14,011.00	1,811.29	112.93%	56,041.00
7301 · PE3&5 - WM Staff Salaries	2,569.82	4,628.00	-2,058.18	55.53%	18,509.00
7401 · PE4 - WM Staff Salaries	0.00	2,825.00	-2,825.00	0.0%	11,306.00
7501 · PE6&7 - WM Staff Salaries	4,152.62	1,643.00	2,509.62	252.75%	6,575.00
7501.1 · PE 6&7 - WM Staff Salaries (Plume)	0.00	1,624.00	-1,624.00	0.0%	6,493.00
7601 · PE8&9 - WM Staff Salaries	4,941.16	6,177.00	-1,235.84	79.99%	24,705.00
Subtotal WM Staff Costs	**505,128.70**	**525,928.00**	**-20,799.30**	**96.05%**	**2,025,692.00**
60185 · Vacation	42,918.05	33,482.00	9,436.05	128.18%	93,925.00
60186 · Sick Leave	25,756.01	15,600.00	10,156.01	165.1%	62,400.00
60187 · Holidays	7,469.81	10,400.00	-2,930.19	71.83%	78,002.00
Subtotal WM Paid Leaves	**76,143.87**	**59,482.00**	**16,661.87**	**128.01%**	**234,327.00**
Total WM Salary Costs	**581,272.57**	**585,410.00**	**-4,137.43**	**99.29%**	**2,260,019.00**

PREVIOUSLY REPORTED ACTIONS (Descending Order)

July 2021:
For FY 2021/22 the amount of $21,000 was “Carried-Over” from the previous fiscal year’s budget under the category of Temporary Services (6017). This expense is currently being used to fund one temporary employee who is scanning documents into the SharePoint system for the ongoing records management project.

LEGAL SERVICES
BROWNSTEIN HYATT FARBER SCHRECK EXPENSES

CURRENT MONTH – SEPTEMBER 2021

As of September 30, 2021, the total (YTD) Watermaster Legal Services expenses (consolidating the three categories of Watermaster Administrative Legal Services, Pool/Advisory/Board Meeting legal expenses, and OBMP legal expenses) were $122,021 or 49.6% below the (YTD) budgeted amount of $245,920.

The Watermaster Legal Services budget was developed jointly by the Watermaster staff and Brownstein Hyatt Farber Schreck staff with specific assumptions regarding the tasks and legal activities that would occur during FY 2021/22. The total legal services budget was developed by multiplying the number of hours that would be required to complete the specific tasks by the hourly rate. The “Approved” budget was adopted for the original amount of $972,845.

WATERMASTER ADMINISTRATIVE LEGAL SERVICES:

Overall, the Watermaster Administrative Legal Services expense (6070s) as of September 30, 2021 was $10,045 or 12.1% above the budgeted amount of $83,265. The specific items within the Administrative Legal Services expenses (6070s) which were over budget were the Rules & Regulations expenses (6072) over budget by $6,008 or 201.7%; Miscellaneous (6078) which were over budget by $14,116 or 26.6%; and the Ely Basin Investigation (6078.25) which were over budget by $4,897 or 100%. Please see Note 1 on the following page for a more detailed explanation of the miscellaneous types of expenses (6078).

The specific items within the Administrative Legal Services expenses (6070s) which were under budget were the expenses for Court Coordination (6071) under budget by $3,304 or 32.2%; Personnel Matters (6073) which were under budget by $1,248 or 31.2%; Interagency Issues (6074) under budget by $9,900 or 100.0%; and Party Status Maintenance expenses (6077) under budget by $524 or 16.8%.

WATERMASTER POOLS, ADVISORY AND BOARD LEGAL SERVICES:

The Pools, Advisory Committee and the Board meeting legal expenses from BHFS are captured by month within the accounts (6275, 6375, 6375.1, 8375, 8475 and 8575). The legal service costs associated with the Board Workshop(s) are also included as part of this group. Overall, this category of legal expenses as of September 30, 2021 was $33,614 or 64.1% below the budgeted amount of $52,410. Normal Brownstein Hyatt Farber Schreck meeting attendance during any given month includes attendance at all three pool meetings, one Advisory Committee meeting and one Board meeting.

There were no meetings held during the month of August 2021. The legal services budget was developed with the assumption of having eleven months of meetings, intentionally excluding the month of December 2021.

OBMP LEGAL SERVICES:

The OBMP legal expenses (accounts 6907.31 through 6907.90) were below the budget for the month. As of September 30, 2021, the category of OBMP legal expenses were $98,451 or 89.3% below the budgeted amount of $110,245. Within this category, there were no expenses over budget.

The table listed below summarizes the Brownstein Hyatt Farber Schreck (BHFS) expenses as of September 30, 2021 compared to the Year-To-Date (YTD) budget. Please be advised that the “$ Over Budget” and the “% of Budget” columns are a comparison of the (YTD) Actual to the (YTD) Budget, not the 12-month Annual Budget. The 12-month Annual Budget column is presented only to provide the data in a full and complete format. The following details are provided:

	Jul '21 - Sep '21 Actual	Jul '21 - Sep '21 Budget	$ Over Budget	% of Budget	FY 2021/22 Annual Budget
6070 · Watermaster Legal Services					
6071 · BHFS Legal - Court Coordination	6,957.00	10,261.00	-3,304.00	67.8%	41,050.00
6072 · BHFS Legal - Rules & Regulations	8,986.50	2,979.00	6,007.50	301.66%	11,925.00
6073 · BHFS Legal - Personnel Matters	2,752.20	4,000.00	-1,247.80	68.81%	9,900.00
6074 · BHFS Legal - Interagency Issues	0.00	9,900.00	-9,900.00	0.0%	39,600.00
6076 · BHFS Legal - Storage Issues	0.00	0.00	0.00	0.0%	0.00
6077 · BHFS Legal - Party Status Maintenance	2,601.00	3,125.00	-524.00	83.23%	12,500.00
6078 · BHFS Legal - Miscellaneous (Note 1)	67,115.70	53,000.00	14,115.70	126.63%	212,000.00
6078.25 · BHFS - Ely # Basin Investigation	4,897.20	0.00	4,897.20	100.0%	0.00
Total 6070 · Watermaster Legal Services	93,309.60	83,265.00	10,044.60	112.06%	326,975.00
6275 · BHFS Legal - Advisory Committee	2,227.50	6,600.00	-4,372.50	33.75%	24,200.00
6375 · BHFS Legal - Board Meeting	11,110.05	21,060.00	-9,949.95	52.75%	77,220.00
6375.1 · BHFS Legal - Board Workshop(s)	0.00	0.00	0.00	0.0%	12,725.00
8375 · BHFS Legal - Appropriative Pool	1,786.50	8,250.00	-6,463.50	21.66%	30,250.00
8475 · BHFS Legal - Agricultural Pool	1,836.00	8,250.00	-6,414.00	22.26%	30,250.00
8575 · BHFS Legal - Non-Ag Pool	1,836.00	8,250.00	-6,414.00	22.26%	30,250.00
Total BHFS Legal Services	18,796.05	52,410.00	-33,613.95	35.86%	204,895.00
6907.3 · WM Legal Counsel					
6907.31 · Archibald South Plume	0.00	2,745.00	-2,745.00	0.0%	10,975.00
6907.32 · Chino Airport Plume	0.00	2,745.00	-2,745.00	0.0%	10,975.00
6907.33 · Desalter/Hydraulic Control	0.00	8,426.00	-8,426.00	0.0%	33,700.00
6907.34 · Santa Ana River Water Rights	247.50	4,687.00	-4,439.50	5.28%	18,750.00
6907.36 · Santa Ana River Habitat	2,227.50	6,838.00	-4,610.50	32.58%	27,350.00
6907.38 · Reg. Water Quality Cntrl Board	0.00	12,212.00	-12,212.00	0.0%	48,850.00
6907.39 · Recharge Master Plan	580.50	3,125.00	-2,544.50	18.58%	12,500.00
6907.40 · Storage Agreements	0.00	12,887.00	-12,887.00	0.0%	51,550.00
6907.41 · Prado Basin Habitat Sustainability	0.00	3,125.00	-3,125.00	0.0%	12,500.00
6907.42 · Safe Yield Recalculation	0.00	0.00	0.00	0.0%	0.00
6907.44 · SGMA Compliance	0.00	2,250.00	-2,250.00	0.0%	9,000.00
6907.45 · OBMP Update	0.00	20,475.00	-20,475.00	0.0%	81,900.00
6907.46 · Upper SAR Integrated Model	0.00	0.00	0.00	0.0%	0.00
6907.47 · 2020 Safe Yield Reset	8,738.10	10,050.00	-1,311.90	86.95%	40,200.00
6907.48 · Ely Basin Investigation	0.00	12,212.00	-12,212.00	0.0%	48,850.00
6907.90 · WM Legal Counsel - Unanticipated	0.00	8,468.00	-8,468.00	0.0%	33,875.00
Total 6907 · WM Legal Counsel	11,793.60	110,245.00	-98,451.40	10.7%	440,975.00
Total Brownstein, Hyatt, Farber, Schreck Costs	**123,899.25**	**245,920.00**	**-122,020.75**	**50.38%**	**972,845.00**

Note 1: The types of legal activities that have been charged against the “Miscellaneous” legal category account 6078 are as follows: (1) Correspondence and discussions with Watermaster staff regarding current issues/topics; (2) Correspondence with Watermaster staff regarding special projects (assessment package, replenishment obligations, annual report, audit report, business plan, etc.); (3) Brownstein’s status review of ongoing Watermaster projects and issues; (4) Brownstein’s update of the outstanding issues list; (5) Coordination of ongoing Watermaster projects; (6) Review of draft documents and contracts; (7) Review transfer documents; (8) Ground-Level Monitoring Committee reports/meetings; (9) Review process and criteria for SGMA reporting; (10) MVWD SCADA Agreement and installation; (11) Angelica Corporation Bankruptcy matter; (12) NRG/GENON Bankruptcy matter; (13) Pomona extensometer project, CEQA review and compliance; (14) Desalter Replenishment obligations, assessment methodologies, and ongoing issues; (15) Master Cost Sharing Agreement with IEUA; (16) Estimation and adoption of an evaporative loss policy for Recharge; (17) CalMat intervention; (18) Angelica’s water rights transfer; (19) Exhibit “G” rate issues; (20) Right of Entry Agreements for various locations; (21) Assessment Packages-Updates and Review; (22) Ag Pool Contest; (23) Payment of Ag Legal Fees; (24) Ag Invoices; and (25) Miscellaneous legal research on current and pending issues.

PREVIOUSLY REPORTED ACTIONS (Descending Order)
None

OBMP ENGINEERING SERVICES AND LEGAL COSTS

CURRENT MONTH – SEPTEMBER 2021

Reviewing in total the OBMP Engineering Services and Legal Costs (consolidating the five categories of OBMP Watermaster Staff and SAWPA, OBMP Engineering Services, OBMP Legal Costs, OBMP Update Costs, and OBMP Other Expenses) for the three months ending September 30, 2021, the actual expenses of $207,752 were below the budgeted amount of $370,133 by $162,381 or 43.9%. For a detailed discussion, the following is provided.

For September 30, 2021, the accounts 6901-6903 (Optimum Basin Mgmt. Program) section was above the Year-To-Date (YTD) budget by $4,622 or 6.5%. Watermaster utilizes an in-house database time and attendance system to record and document staff's actual hours worked and also allocates those hours to a specific project or activity. Watermaster staff time could be charged to Administrative, OBMP, or Implementation Project categories. Recently, Watermaster staff spent less time on specific OBMP related areas as budgeted. As a result, Watermaster staff allocated less actual time to the OBMP project as budgeted, which resulted in an under-budget variance of $504 or 0.9%. The remaining expense was the Santa Ana Watershed Project Authority (SAWPA) FY 2020/21 Basin Monitoring Program Task Force Contribution which was budgeted at $15,032 and actual expenses were $20,158 or $5,126 or 34.1% above budget as of September 30, 2021.

For September 30, 2021, the accounts 6906 (Optimum Basin Mgmt. Program Engineering Services) section was below the Year-To-Date (YTD) budget by $49,308 or 29.0%. The majority of expenses within this OBMP category were under budget (YTD), however, the accounts over budget were the OBMP-Watermaster Model Update (6906.1) which were over budget by $976 or 9.3%; Water Rights Compliance Reporting expenses (6906.22) which were over budget by $13,477 or 299.8%; OBMP-Other General Meetings expenses (6906.32) which were over budget by $590 or 3.1%; Prepare Annual Report expenses (6906.81) which were over budget by $1,086 or 29.7%; and the OBMP-Engineering Services-Other expenses (6906) which were over budget by $1,685 or 16.1%. Within the 6906 categories, two accounts had funding "Carried-Over" from the previous fiscal year. The OBMP-Watermaster Model Update expenses (6906.1) had $9,000 brought forward from the previous year and the Integrated Model Meetings-IEUA Costs expenses (6906.15) had $14,594 brought forward from the previous year. These two amounts are included in the FY 2021/22 budget.

Within the category 6907 (Optimum Basin Mgmt. Program Legal Fees) are the remaining Brownstein Hyatt Farber Schreck (BHFS) Watermaster's legal expenses. Within the legal expense category, there were no line item activities above the budget. The individual legal projects/activities that were below budget for the Year-To-Date (YTD) period were the Archibald South Plume of $2,745; the Chino Airport Plume of $2,745; the Desalter/Hydraulic Control of $8,426; Santa Ana River Water Rights of $4,439; the Santa Ana River Habitat of $4,611; the Regional Water Quality Control Board of $12,212; the Recharge Master Plan expenses of $2,545; Storage Agreements of $12,887; the Prado Basin Habitat Sustainability of $3,125; SGMA Compliance of $2,250; the OBMP Update of $20,475; the 2020 Safe Yield Reset of $1,312: the Ely Basin Investigation expenses of $12,212; and the WM Unanticipated legal expenses of $8,468. For the three months ended September 30, 2021, the overall cumulative (YTD) budget was $110,245 and the actual (BHFS) legal expenses totaled $11,794 which resulted in an under-budget variance of $98,451 or 89.3%.

The OBMP Update Costs (6908.1) were below the budget for the month. These expenses relate to the OBMP Update costs for the contract between Tom Dodson and Associates and CBWM to procure environmental review services for the 2020 OBMP Update. The contract had a remaining amount available of $17,065 as of the year-ended June 30, 2021 and that amount was "Carried-Over" into the FY 2021/22 budget. The budget has a remaining balance as of September 30, 2021 of $17,065.

The OBMP Other Expenses (6909's) were below the budget for the month. These expenses are typically conference calls, meeting expenses, supplies, annual inspection fees, and other miscellaneous type expenses. As of September 30, 2021, this category of expenses was $2,179 or 94.5% below the budgeted amount of $2,306.

Overall, the Optimum Basin Management Program (OBMP) category was $207,752 actual (YTD) compared to a budget (YTD) of $370,133 for an under budget of $162,381 or 43.9% as of September 30, 2021.

The table listed below summarizes the Optimum Basin Management Program (OBMP) expenses as of September 30, 2021 compared to the Year-To-Date (YTD) budget. Please be advised that the "$ Over Budget" and the "% of Budget" columns are a comparison of the (YTD) Actual to the (YTD) Budget, not the 12-month Annual Budget. The 12-month Annual Budget column is presented only to provide the data in a full and complete format. The following details are provided:

	Jul '21 - Sep '21 Actual	Jul '21 - Sep '21 Budget	$ Over Budget	% of Budget	FY 2021/22 Annual Budget
6900 · Optimum Basin Mgmt Plan					
6901 · WM Staff Salaries	55,040.31	55,544.00	-503.69	99.09%	222,176.00
6903 · OBMP SAWPA Group	20,158.00	15,032.00	5,126.00	134.1%	15,032.00
Total 6901-6903 · OBMP WM Staff/SAWPA	75,198.31	70,576.00	4,622.31	106.55%	237,208.00
6906 · OBMP Engineering Services					
6906.1 · OBMP - Watermaster Model Update	11,506.75	10,531.00	975.75	109.27%	15,112.00
6906.15 · Integrated Model Mtgs. - IEUA Costs	9,057.49	22,411.00	-13,353.51	40.42%	45,874.00
6906.21 · State of the Basin Report	0.00	0.00	0.00	0.0%	0.00
6906.22 · Water Rights Compliance Reporting	17,973.25	4,496.00	13,477.25	399.76%	17,984.00
6906.23 · SGMA Reporting Requirements	0.00	3,899.00	-3,899.00	0.0%	15,598.00
6906.24 · Compliance - SB88 and SWRCB	0.00	3,051.00	-3,051.00	0.0%	12,204.00
6906.26 · 2020 OBMP Update	0.00	0.00	0.00	0.0%	0.00
6906.31 · OBMP - Pool, Advisory, Board Mtgs.	12,184.00	27,000.00	-14,816.00	45.13%	108,000.00
6906.32 · OBMP - Other General Meetings	19,871.50	19,282.00	589.50	103.06%	77,134.00
6906.71 · OBMP - Data Requests - CBWM Staff	26,568.34	33,267.00	-6,698.66	79.86%	133,068.00
6906.72 · OBMP - Data Requests - Non CBWM	6,412.50	12,522.00	-6,109.50	51.21%	50,088.00
6906.73 · OBMP - Safe Yield Recalculation	0.00	0.00	0.00	0.0%	0.00
6906.74 · OBMP - Mat'l Phy. Injury Requests	156.00	19,349.00	-19,193.00	0.81%	77,398.00
6906.81 · Prepare Annual Reports	4,741.50	3,656.00	1,085.50	129.69%	14,626.00
6906 · OBMP Engineering Services - Other	12,161.50	10,477.00	1,684.50	116.08%	41,896.00
Total 6906 · OBMP Engineering Services	120,632.83	169,941.00	-49,308.17	70.99%	608,982.00
6907 · OBMP Legal Fees					
6907.3 · WM Legal Counsel					
6907.31 · Archibald South Plume	0.00	2,745.00	-2,745.00	0.0%	10,975.00
6907.32 · Chino Airport Plume	0.00	2,745.00	-2,745.00	0.0%	10,975.00
6907.33 · Desalter/Hydraulic Control	0.00	8,426.00	-8,426.00	0.0%	33,700.00
6907.34 · Santa Ana River Water Rights	247.50	4,687.00	-4,439.50	5.28%	18,750.00
6907.36 · Santa Ana River Habitat	2,227.50	6,838.00	-4,610.50	32.58%	27,350.00
6907.38 · Reg. Water Quality Cntrl Board	0.00	12,212.00	-12,212.00	0.0%	48,850.00
6907.39 · Recharge Master Plan	580.50	3,125.00	-2,544.50	18.58%	12,500.00
6907.40 · Storage Agreements	0.00	12,887.00	-12,887.00	0.0%	51,550.00
6907.41 · Prado Basin Habitat Sustainability	0.00	3,125.00	-3,125.00	0.0%	12,500.00
6907.44 · SGMA Compliance	0.00	2,250.00	-2,250.00	0.0%	9,000.00
6907.45 · OBMP Update	0.00	20,475.00	-20,475.00	0.0%	81,900.00
6907.46 · Upper SAR Integrated Model	0.00	0.00	0.00	0.0%	0.00
6907.47 · 2020 Safe Yield Reset	8,738.10	10,050.00	-1,311.90	86.95%	40,200.00
6907.48 · Ely Basin Investigation	0.00	12,212.00	-12,212.00	0.0%	48,850.00
6907.90 · WM Legal Counsel - Unanticipated	0.00	8,468.00	-8,468.00	0.0%	33,875.00
Total 6907 · WM Legal Counsel	11,793.60	110,245.00	-98,451.40	10.7%	440,975.00
Total 6907 · OBMP Legal Fees	11,793.60	110,245.00	-98,451.40	10.7%	440,975.00
6908 · OBMP Updates					
6908.1 · 2020 OBMP Update-Dodson & Assoc.	0.00	17,064.56	-17,064.56	0.0%	17,064.56
Total 6908 · OBMP Updates	0.00	17,064.56	-17,064.56	0.0%	17,064.56
6909 · OBMP Other Expenses					
6909.1 · OBMP Meetings	126.81	375.00	-248.19	33.82%	1,500.00
6909.3 · Other OBMP Expenses	0.00	681.00	-681.00	0.0%	2,724.00
6909.6 · OBMP Expenses - Miscellaneous	0.00	1,250.00	-1,250.00	0.0%	5,000.00
6909 · OBMP Other Expenses - Other	0.00	0.00	0.00	0.0%	0.00
Total 6909 · OBMP Other Expenses	126.81	2,306.00	-2,179.19	5.5%	9,224.00
Total 6900 · Optimum Basin Mgmt Plan	**207,751.55**	**370,132.56**	**-162,381.01**	**56.13%**	**1,313,453.56**

PREVIOUSLY REPORTED ACTIONS (Descending Order)
None

ENGINEERING SERVICES - OBMP IMPLEMENTATION PROJECTS COSTS
WEST YOST ASSOCIATES (formerly Wildermuth Environmental, Inc.)

CURRENT MONTH – SEPTEMBER 2021

As of September 30, 2021, the total (YTD) Engineering Services expenses were $636,597 or 53.0% below the (YTD) budget amount of $1,201,695. The OBMP Implementation Projects (consolidated accounts 7100s – 7700s) were all under budget of as of September 30, 2021 except for the Groundwater Level-Engineering expenses (7107.2) which were over budget by $230 or 1.4%; the Hydraulic Control-Lab Services expenses (7108.4) which were over budget by $440 or 100%; the PE4-Engineering expenses (7402) which were over budget by $9,221 or 26.4%; and PE 6&7-Engineering Services expenses (7502) which were over budget by $13,281 or 47.5%.

West Yost Associates provides Watermaster a Progress and Estimated Cost at Completion (ECAC) report each quarter. The purpose of this (ECAC) report is to update Watermaster on whether or not the Engineering Services budget will be above or below budget at the end of the fiscal year. If the Engineering Services budget is expected to be above budget at fiscal year-end, a Budget Amendment or Budget Transfer Form would need to be approved to ensure funding.

The first ECAC report for the current fiscal year has been provided for the period ending September 30, 2021 and shows a projected under budget at fiscal year-end June 30, 2022 of $80,942.

The Fiscal Year 2020/21 Progress and Estimated Cost at Completion for the Period July 1, 2021 through September 30, 2021 report from West Yost Associates is provided. Please access this link:

https://cbwm.syncedtool.com/shares/file/us8be8WNibj/?modal=1

Watermaster does not plan to present any Budget Transfers or Budget Amendments at this time.

The table listed below summarized the Year-To-Date (YTD) Actual West Yost Associates and other Engineering costs compared to the Year-To-Date (YTD) Budget as of September 30, 2021. Please be advised that the "$ Over Budge" and the "% of Budget" columns are a comparison of the (YTD) Actual to the (YTD) Budget, not the 12-month Annual Budget. The 12-month Annual Budget column is presented only to provide the data in a full and complete format. The following details are provided:

	Jul '21 - Sep '21 Actual	Jul '21 - Sep '21 Budget	$ Over Budget	% of Budget	FY 2021/22 Annual Budget
6906 · OBMP Engineering Services - Other	12,161.50	10,477.00	1,684.50	116.08%	41,896.00
6906.1 · OBMP - Watermaster Model Update	11,506.75	10,531.00	975.75	109.27%	15,112.00
6906.15 · Integrated Model Mtgs-IEUA Cost	9,057.49	22,411.00	-13,353.51	40.42%	45,874.00
6906.21 · State of the Basin Report	0.00	0.00	0.00	0.0%	0.00
6906.22 · Water Rights Compliance Reporting	17,973.25	4,496.00	13,477.25	399.76%	17,984.00
6906.23 · SGMA Reporting Requirements	0.00	3,899.00	-3,899.00	0.0%	15,598.00
6906.24 · Compliance - SB88 and SWRCB	0.00	3,051.00	-3,051.00	0.0%	12,204.00
6906.26 · 2019 OBMP Update	0.00	0.00	0.00	0.0%	0.00
6906.31 · OBMP - Pool, Advisory, Board Mtgs.	12,184.00	27,000.00	-14,816.00	45.13%	108,000.00
6906.32 · OBMP - Other General Meetings	19,871.50	19,282.00	589.50	103.06%	77,135.00
6906.71 · OBMP - Data Requests - CBWM Staff	26,568.34	33,267.00	-6,698.66	79.86%	133,068.00
6906.72 · OBMP - Data Requests - Non CBWM	6,412.50	12,522.00	-6,109.50	51.21%	50,088.00
6906.73 · OBMP - Safe Yield Recalculation	0.00	0.00	0.00	0.0%	0.00
6906.74 · OBMP - Mat'l Physical Injury Requests	156.00	19,349.00	-19,193.00	0.81%	77,398.00
6906.81 · Prepare Annual Reports	4,741.50	3,656.00	1,085.50	129.69%	14,626.00
7103.3 · Grdwtr Qual-Engineering	76,085.18	78,523.00	-2,437.82	96.9%	206,089.00
7103.5 · Grdwtr Qual-Lab Svcs	33,807.00	36,816.00	-3,009.00	91.83%	63,261.00
7104.3 · Grdwtr Level-Engineering	31,639.06	50,699.00	-19,059.94	62.41%	202,793.00
7104.8 · Grdwtr Level-Contracted Services	0.00	2,500.00	-2,500.00	0.0%	10,000.00
7104.9 · Grdwtr Level-Capital Equipment	0.00	2,000.00	-2,000.00	0.0%	8,000.00
7107.2 · Grd Level-Engineering	16,615.10	16,385.00	230.10	101.4%	65,542.00
7107.3 · Grd Level-SAR Imagery	79,817.50	106,250.00	-26,432.50	75.12%	170,000.00
7107.6 · Grd Level-Contract Svcs	0.00	21,563.00	-21,563.00	0.0%	86,254.00
7107.8 · Grd Level-Capital Equipment	0.00	6,851.00	-6,851.00	0.0%	16,086.00
7108.3 · Hydraulic Control-Engineering	0.00	0.00	0.00	0.0%	0.00
7108.31 · Hydraulic Control-PBHSP	202.12	16,814.00	-16,611.88	1.2%	67,254.00
7108.4 · Hydraulic Control-Lab Svcs	440.00	0.00	440.00	100.0%	0.00
7108.41 · Hydraulic Control-PBHSP	0.00	0.00	0.00	0.0%	0.00
7108.6 · Hydraulic Control-Outside Professionals	4,500.00	4,500.00	0.00	100.0%	4,500.00
7109.3 · Recharge & Well - Engineering	1,706.25	8,302.00	-6,595.75	0.0%	33,208.00
7110.3 · Ag Production & Estimation - Eng. Serv.	5,080.50	46,239.00	-41,158.50	0.0%	56,910.00
7111.3 · Data Collection & Mgmt. - Eng. Services	1,157.25	5,039.00	-3,881.75	0.0%	20,158.00
7202.2 · Comp Recharge-Engineering Services	22,760.85	133,691.00	-110,930.15	17.03%	174,764.00
7206.1 · SB88 Specs-Compliance-50% IEUA	681.62	68,402.00	-67,720.38	1.0%	54,694.00
7210 · OBMP - 2023 RMPU	461.50	37,732.00	-37,270.50	1.22%	37,732.00
7303 · PE3&5-Engineering - Other	712.00	5,571.00	-4,859.00	12.78%	22,284.00
7402 · PE4-Engineering	44,172.50	34,952.00	9,220.50	126.38%	139,806.00
7402.10 · PE4-MZ1 Pomona Project	43,126.50	125,853.00	-82,726.50	34.27%	236,127.00
7502 · PE6&7-Engineering	41,260.00	27,979.00	13,281.00	147.47%	111,916.00
7510 · PE6&7-IEUA Salinity Mgmt. Plan	16,646.37	73,975.00	-57,328.63	22.5%	73,975.00
7511 · PE6&7-SAWBMP Task Force-50% IEUA	0.00	6,602.00	-6,602.00	0.0%	26,405.00
7602 · PE8&9-Engineering	0.00	0.00	0.00	0.0%	0.00
7610 · PE8&9-Support 2020 Mgmt. Plan	0.00	43,220.00	-43,220.00	0.0%	43,220.00
7614 · OBMP-Support Imp. Safe Yield Court Order	23,593.50	71,296.00	-47,702.50	33.09%	285,188.00
Total Engineering Services Costs	**565,097.63**	**1,201,695.00**	**-636,597.37**	**47.03%**	**2,825,149.00** *

*** West Yost and Subcontractor Engineering Budget of $2,251,384 plus Carryover Funds from FY 2020/21 of $573,765.00**
Carryover Funds from FY 2020/21 of $573,765.00 = $9,000 (6906.1); $14,594 (6906.15); $85,000 (7107.3); $3,772 (7107.8); $42,682 (7110.3); $120,000 (7202.2); $54,694 (7206.1); $37,732 (7210); $89,096 (7402.10); $73,975 (7510); and $43,220 (7610)

PREVIOUSLY REPORTED ACTIONS (Descending Order)

July 2021:
The "Original" Approved budget for FY 2021/22 for Engineering Services was $1,819,165. Budget Amendment A-21-07-01 in the amount of $147,031 and Budget Amendment A-21-07-02 in the amount of $276,761 were adopted by the Watermaster Board on July 22, 2021. Budget Amendment A-21-08-01 in

the amount of $8,427 was approved by the Advisory Committee on August 19, 2021. The accounts increased with the Budget Amendments were the OBMP-Northwest MZ-1 Area Project (7402.1) increased by $147,031 and the Safe Yield Reset Methodology Evaluation (7614) increased by $285,188. The "Amended" Engineering Services Budget after inclusion of the Budget Amendments was $2,251,384. The Engineering Services budget was Amended with the addition of "Carry-Over" funding totaling $573,765 which brought the Amended Budget amount to $2,825,149.

The explanations regarding the Carry-Over amount of $573,765 from FY 2020/21 to the FY 2021/22 budget is provided as follows:

1. Watermaster Model Update and Required Demonstrations (Account 6906.1): $9,000. The requested Carry-Over is necessary to finalize the report on Model Update and Required Demonstrations, which was scheduled for completion in FY 2020/21.

2. IEUA - Integrated Model Meetings and Technical Review (Account 6906.15): $29,188 (Watermaster's portion is $14,594). The requested Carry-Over is necessary because this effort was planned for completion in FY 2020/21but is now scheduled to be completed by December 2021.

3. Ground Level – SAR Imagery (Account 7107.3): $85,000. The requested Carry-Over is necessary for the purchase and processing of satellite data by a subconsultant to estimate vertical ground motion. The work was completed in FY 2020/21, but the invoice has not yet been received from the subcontractor.

4. Ground Level – Capital Equipment (Account 7107.8): $3,772. The requested Carry-Over is necessary for the of purchase materials and equipment for the Pomona Extensometer Facility. The work was started in FY 2020/21 but wasn't completed until August 2021.

5. Agriculture Production and Estimation (Account 7110.3): $42,682. The requested Carry-Over is necessary to complete the Agriculture Production and Estimation work that was originally scheduled to be performed in FY 2019/20 and FY 2020/21 but was delayed to FY 2021/22.

6. PE2: Engineering Services for Other Recharge Improvement Projects (Account 7202.2): $120,000. The requested Carry-Over is necessary to finalize this work in FY 2021/22. The work includes conducting a life-cycle analysis at the San Sevaine 1 and Etiwanda Debris conservation berms, and finalizing a technical memorandum describing the analysis and conclusions. The scope and schedule for this work was fine-tuned with input from IEUA and Watermaster Staff in FY 2020/21. The work is to be completed in FY 2021/22.

7. 2023 RMPU Recharge Master Plan Scoping (Account 7210): $37,732. The requested Carry-Over is necessary to complete the scope, budget and report outline the 2023 RMPU. In June, the Parties determined that they were not interested in pursuing capital improvement projects was part of the 2023 RMPU. A scope, budget and report outline the 2023 RMPU still needs to be developed based on the input from the Parties.
8. Management Zone Strategies – Northwest MZ-1 (Account 7402.10): $89,096. The requested Carry-Over is necessary because this is a multi-year project to develop a subsidence management plan for the Northwest MZ-1, and not all tasks planned/budgeted in FY 2020/21 were completed in FY 2020/21.

9. IEUA – Update Recycled Water Permit – Salinity (Account 7510): $189,341 (Watermaster's portion is $73,975). The requested Carry-Over is necessary to complete the technical and regulatory compliance support work to update the Chino Basin Maximum Benefit Salt and Nutrient Management Plan. This multiyear project began FY 2017/18 and is scheduled to be completed by June 2022.

10. PE 8/9: Support Implementation of the 2020 Storage Management Plan (Account 7610): $43,220. The requested Carry-Over is for as-requested technical support to Watermaster staff, updating the

information required for a complete Storage and Recovery Program application, updating the Storage and Recovery Program application forms, and updating the process to evaluate an application. No implementation activities occurred in FY 2020/21. The entire budget is requested to be brought forward into FY 2021/22.

11. SB88 Specification to Ensure Compliance with Regulations (Account 7206.1) - GRCC and 50% IEUA Cost Share: $54,694. The requested Carry-Over is necessary to (1) complete the technical memorandum evaluating the existing methodology to estimate stormwater diversions in the Chino Basin, and (2) provide as needed support to IEUA and Watermaster in implementing the recommendations describes in the technical memorandum. The administrative draft technical memorandum was completed in June 2021 and comments were received on August 11, 2021.

PRADO BASIN HABITAT SUSTAINABILITY PROGRAM

Ongoing Costs

Program costs that are ongoing (Ongoing Costs) will be cost-shared between Watermaster and IEUA, split on a 50/50 basis, subject to the following limitation: in each fiscal year, neither Watermaster nor IEUA shall be obligated to reimburse the other for Ongoing Costs that exceed the amount that the reimbursing party has budgeted for Ongoing Costs in that fiscal year, except as agreed upon by both parties in writing or as amended during the fiscal year. The first year expenses (FY 2016/17) to be cost shared were approximately $300,000, with projected future years (FY 2017/18 and forward) estimated at approximately $150,000. For the purposes of the agreement, Ongoing Costs are defined as the costs associated with the following Program activities:

1. A Riparian Habitat Monitoring Program, including, but not limited to, the following sub-tasks:
    a. Design and implement a site–specific vegetation monitoring program with the United States Bureau of Reclamation (USBR) and Orange County Water District, pursuant to which USBR will perform site-specific vegetation surveys.
    b. Manage and perform custom flight to collect a high resolution air photo of the Prado Basin Region.
    c. Collect, check, and upload historical air photos and vegetation survey data in the Prado Basin region.
    d. Collect, check, and upload historical Landsat data in the Prado Basin region.

2. A Climate Monitoring Program, including, but not limited to, the following sub-task:
    a. Collect, check, and upload climatic data on an annual basis

3. Preparation of the AMP Annual Report (Annual Report), including, but not limited to, the following sub-tasks:
    a. Water level monitoring, vegetation survey, photo monitoring, landsat data, climate data and analysis of the components.
    b. Analyze data and prepare an administrative draft of the Annual Report for Watermaster/IEUA.
    c. Incorporate the Watermaster and IEUA comments and prepare a draft Annual Report for review by the PBHSC.
    d. Meet with PBHSC to review draft Annual Report.
    e. Incorporate PBHSC comments and finalize the Annual Report.

4. Annual license fees for monitoring wells.

5. Project management and administration activities associated with the Program undertaken by a Party's consultant, including, but not limited to, the following sub-tasks:
    a. Ad-Hoc Meetings
    b. Preparation of scope and budget for the Program
    c. Project administration and financial reporting

6. Other costs required to fulfill the requirements of Peace II Subsequent EIR mitigation measure 4.4-3. Watermaster shall be responsible for the costs associated with the Groundwater Level Monitoring Program, Groundwater Quality Monitoring Program, and Surface Water Monitoring Program.

Watermaster and IEUA shall each have responsibility for its own administrative costs, excluding the tasks and expenses included under Set-Up Costs and Ongoing Costs. Watermaster and IEUA will meet to review the cost-sharing structure under this agreement and negotiate necessary adjustments in good faith on at least an annual basis.

The Peace II SEIR does not explicitly state a duration for the monitoring and mitigation program. It is logical to assume that the program will last until the drawdown impacts, if any, on the riparian habitat from Peace II activities are fully manifested and not predicated to worsen, and that mitigation measures, if any are required, are fully implemented. This is not a perpetual agreement. Upon termination of the monitoring and any necessary mitigation obligations, the parties may elect to terminate the cost share agreement.

	West Yost Associates	50% Billing **"TO"** IEUA	50% Billing **"FROM"** IEUA	Costs For Watermaster
Jul. 2021 - Sep. 2021	$ 404.25	$ (202.13)	$ -	$ 202.13
Totals	**$ 404.25**	**$ (202.13)**	**$ -**	**$ 202.13**
	7108.31	7108.31	7108.31	
Maximum Costs	**$ 143,508.00**	**$ 71,754.00**	**$ 71,754.00**	**$ 71,754.00**

PREVIOUSLY REPORTED ACTIONS (Descending Order)
None

OTHER INCOME AND EXPENSE

On September 20, 2021, the Agricultural Pool unanimously passed an action to request that Watermaster staff immediately issue the Agricultural Pool Wellhead Production Assessment of Agricultural Pool wells. The Agricultural Pool further requested that the total amount to be assessed is equal to $200,000 as apportioned among all wells based upon amount of water produced. Watermaster staff started to issue the invoices on September 20, 2021 and completed on September 21, 2021.

There were no other significant items to report within the category of Other Income and Expenses for the month ending September 30, 2021.

PREVIOUSLY REPORTED ACTIONS (Descending Order)

July 2021:
Per section VI.D.3 of the Groundwater Storage Program Funding Agreement No. 49960 in the Chino Basin with The Metropolitan Water District of Southern California, the FY 2021/22 annual administrative fee invoice was issued on July 6, 2021 in the amount of $177,430.03 under invoice number 2021-07-CUP. Payment in the amount of $177,430.03 was received and deposited on August 10, 2021.

The FY 2021/22 annual debt service expense (account 7690.1) of $529,029 was paid directly to IEUA on July 8, 2021.

POOL LEGAL 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 OAP, 8567 for the ONAP, and 8367 for the AP). 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.

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). These Fund accounts are also shown in the charts listed below.

Normally, the Watermaster Admin Reserve would not be used to fund any of the Pool's legal services invoices. However, for the Agricultural Pool, the amount of $102,557.12 was used from the Watermaster Admin Reserve to fund the shortfall created when the November 19, 2020 Assessment invoices totaling $500,000 were not paid in full. In fact, $115,263.88 was paid, leaving a balance due of $384,736.12 ($115,263.88 + $384,736.12 = $500,000) which still remains unpaid. Through November 2020, invoices totaling $217,821.00 had been paid for the Agricultural Pool.

Please note the Assessment invoices issued on November 19, 2020 were due on December 21, 2020. The available cash of $115,263.88 and payments issued of $217,821.00 left a Fund balance shortfall of $102,557.12 which was temporarily funded through Admin Reserves ($217,821.00 - $115,263.88 = $102,557.12). The Admin Reserve amount of $102,557.12 will need to be refunded back to Watermaster.

Fund Balance for Agricultural Pool **Account 8467 - Legal Services**	
Beginning Balance July 1, 2020:	$ -
Additions:	
Assessment issued November 19, 2020 for $500,000 with outstanding balance of $384,736.12	$ 115,263.88
Admin Reserve used to cover shortfall *	$ 102,557.12
Subtotal Additions:	$ 217,821.00
From Agricultural Pool Reserve Funds	$ 278,290.00
Total Additions:	$ 496,111.00
Reductions:	
Invoices paid July 2020 - November 2020	$ (217,821.00)
Invoices paid December 2020 - June 2021	$ (220,365.00)
Invoices paid July 2021 - September 2021	$ (57,925.00)
Subtotal Reductions:	$ (496,111.00)
Ending Fund Balance as of September 30, 2021	**$ -**

* The Admin Reserve amount of $102,557.12 will need to be refunded back to Watermaster.

Agricultural Pool Reserve Funds **As shown the B-3 Financial Report**	
Agricultural Pool Reserve Funds Balance as of June 30, 2020:	$ 515,498.06
Additions:	
AP payments w/o Escrow instructions ($165,694.75 - $161,070.09)	$ 4,624.66
Y-T-D Interest earned on Ag Pool Funds FY 2020/21, FY 2021/22	$ 1,993.48
Payments rec'd on Wellhead Production invoices issued Sep. 2021	$ -
Subtotal Additions:	$ 6,618.14
Reductions:	
Actual vs. Budget Shortfall from FY 2019/20	$ (165,694.75)
Mediation invoice paid	$ (8,450.00)
Subtotal Reductions:	$ (174,144.75)
Invoices paid December 2020 - June 2021	$ (220,365.00)
Invoices paid July 2021 - September 2021	$ (57,925.00)
Total Reductions	$ (452,434.75)
Agricultural Pool Reserve Funds Balance as of September 30, 2021:	**$ 69,681.45**

Note: Balance of $69,681.45 as shown on B-3 Financial Report

Fund Balance For Agricultural Pool **Account 8470 - Meeting Compensation**	
Beginning Balance July 1, 2021:	$ 19,525.00
Additions:	
Assessment issued and paid	$ -
Budget Transfers	$ -
Subtotal Additions:	$ -
Reductions:	
Compensation paid July 2021 - September 2021	$ (6,375.00)
Subtotal Reductions:	$ (6,375.00)
Ending Fund Balance as of September 30, 2021	**$ 13,150.00**

Fund Balance For Agricultural Pool **Account 8471 - Special Projects**	
Beginning Balance July 1, 2021:	$ 31,516.00
Additions:	
Assessment issued and paid	$ -
Subtotal Additions:	$ -
Reductions:	
Invoices paid July 2021 - September 2021	$ (10,643.00)
Budget Transfers	$ -
Subtotal Reductions:	$ (10,643.00)
Ending Fund Balance as of September 30, 2021	**$ 20,873.00**

Fund Balance For Non-Agricultural Pool **Account 8567 - Legal Services**		
Beginning Balance July 1, 2021:	$	32,320.70
Additions:		
Assessment issued and paid	$	-
Reductions:		
Invoices paid July 2021 - September 2021	$	(5,540.40)
Ending Fund Balance as of September 30, 2021	**$**	**26,780.30**

Fund Balance For Appropriative Pool **Account 8367 - Legal Services**		
Beginning Balance July 1, 2021:	$	62,391.25
Additions:		
Assessment issued and paid	$	-
Subtotal Additions:	$	-
Reductions:		
Invoices paid July 2021 - September 2021	$	(47,800.00)
Accrued (not paid)	$	-
Subtotal Reductions:	$	(47,800.00)
Ending Fund Balance as of September 30, 2021	**$**	**14,591.25**

PREVIOUSLY REPORTED ACTIONS (Descending Order)
None

"CARRY OVER" FUNDING
BACKGROUND OF "CARRY OVER" FUNDING

CURRENT MONTH – SEPTEMBER 2021

As of September 30, 2021, the total (YTD) amount remaining of the "Carried Over" funding is $2,613,654.37 ($2,943,828.87 - $330,174.50 = $2,613,654.37).

The following details are provided:

"Carried Over" Expenses At June 30, 2021

Human Resources Services	$	6,000.00	A	6013	FY 2020/21	ADMIN
Temporary Services	$	21,000.00	B	6017	FY 2020/21	ADMIN
Other Office Equipment - Boardroom Upgrades	$	26,794.71	C	6038	FY 2019/20	ADMIN
Other Office Equipment - Boardroom Upgrades	$	41,295.45	C	6038	FY 2020/21	ADMIN
2020 OBMP Update - Tom Dodson & Associates	$	17,064.56	D	6908.1	FY 2020/21	OBMP
Meter Installation - New Meter Installation	$	175,400.00	E	7102.65	FY 2018/19	OBMP
Meter Installation - Calibration and Testing	$	181,650.00	F	7102.8	FY 2018/19	OBMP
OBMP - Watermaster Model Update	$	9,000.00	G	6906.1	FY 2020/21	ENG
Integrated Model - Meetings - 50% IEUA Costs	$	14,594.00	H	6906.15	FY 2020/21	ENG
Ground Level Monitoring - SAR Imagery	$	85,000.00	I	7107.3	FY 2020/21	ENG
Ground Level Monitoring - Capital Equipment	$	3,772.00	J	7107.8	FY 2020/21	ENG
Agriculture Production and Estimation	$	42,682.00	K	7110.3	FY 2020/21	ENG
PE2 - Comprehensive Recharge - Eng. Services	$	120,000.00	L	7202.2	FY 2020/21	ENG
SB88-Specs-Ensure Compliance-50% IEUA	$	54,694.00	M	7206.1	FY 2020/21	ENG
OBMP - 2023 RMPU	$	37,732.00	N	7210	FY 2020/21	ENG
PE4 - Northwest MZ-1 Area Project	$	89,096.00	O	7402.1	FY 2020/21	ENG
IEUA - Update Recycle Water Permit - Salinity	$	73,975.00	P	7510	FY 2020/21	ENG
PE8&9 - Support Imp. 2020 Storage Mgmt. Plan	$	43,220.00	Q	7610	FY 2020/21	ENG
Upper Santa Ana River HCP (TO #7)	$	15,062.88	R	7690.7	FY 2014/15	PROJ
Upper Santa Ana River HCP (TO #7)	$	5,000.00	R	7690.7	FY 2015/16	PROJ
Lower Day Basin RMPU (TO #2)	$	238,646.90	S	7690.8	FY 2016/17	PROJ
Funds on Hold for Projects/Refund	$	1,434,582.42	T	7690.9	FY 2017/18	PROJ
Appropriative Pool - Legal Services	$	62,391.25	U	8367	FY 2020/21	AP
Agricultural Pool - Legal & Technical Services	$	61,814.00	V	8467	FY 2020/21	OAP
Agricultural Pool - Mtg. Attendance Compensation	$	19,525.00	W	8470	FY 2020/21	OAP
Agricultural Pool - Special Project Funding	$	31,516.00	X	8471	FY 2020/21	OAP
Non-Agricultural Pool - Legal Services	$	32,320.70	Y	8567	FY 2020/21	ONAP
Total Balance, July 1, 2021	**$**	**2,943,828.87**				

"Carried Over" Balance, July 1, 2021	$	2,943,828.87				
Less: (Invoices Received To Date FY 2021/22)						
Human Resources Services	$	-	A	6013	FY 2020/21	ADMIN
Temporary Services	$	(13,785.68)	B	6017	FY 2020/21	ADMIN
Other Office Equipment - Boardroom Upgrades	$	(1,473.08)	C	6038	FY 2019/20	ADMIN
Other Office Equipment - Boardroom Upgrades	$	-	C	6038	FY 2020/21	ADMIN
2020 OBMP Update - Tom Dodson & Associates	$	-	D	6908.1	FY 2020/21	OBMP
Meter Installation - New Meter Installation	$	-	E	7102.65	FY 2018/19	OBMP
Meter Installation - Calibration and Testing	$	-	F	7102.8	FY 2018/19	OBMP
OBMP - Watermaster Model Update	$	(9,000.00)	G	6906.1	FY 2020/21	ENG
Integrated Model - Meetings - 50% IEUA Costs	$	(9,057.50)	H	6906.15	FY 2020/21	ENG
Ground Level Monitoring - SAR Imagery	$	(79,817.50)	I	7107.3	FY 2020/21	ENG
Ground Level Monitoring - Capital Equipment	$	-	J	7107.8	FY 2020/21	ENG
Agriculture Production and Estimation	$	(5,080.50)	K	7110.3	FY 2020/21	ENG
PE2 - Comprehensive Recharge - Eng. Services	$	(22,760.85)	L	7202.2	FY 2020/21	ENG
SB88-Specs-Ensure Compliance-50% IEUA	$	(681.62)	M	7206.1	FY 2020/21	ENG
OBMP - 2023 RMPU	$	(461.50)	N	7210	FY 2020/21	ENG
PE4 - Northwest MZ-1 Area Project	$	(43,126.50)	O	7402.1	FY 2020/21	ENG
IEUA - Update Recycle Water Permit - Salinity	$	(16,646.37)	P	7510	FY 2020/21	ENG
PE8&9 - Support Imp. 2020 Storage Mgmt. Plan	$	-	Q	7610	FY 2020/21	ENG
Upper Santa Ana River HCP (TO #7)	$	-	R	7690.7	FY 2014/15	PROJ
Upper Santa Ana River HCP (TO #7)	$	-	R	7690.7	FY 2015/16	PROJ
Lower Day Basin RMPU (TO #2)	$	-	S	7690.8	FY 2016/17	PROJ
Funds on Hold for Projects/Refund	$	-	T	7690.9	FY 2017/18	PROJ
Appropriative Pool - Legal Services	$	(47,800.00)	U	8367	FY 2020/21	AP
Agricultural Pool - Legal & Technical Services	$	(57,925.00)	V	8467	FY 2020/21	OAP
Agricultural Pool - Mtg. Attendance Compensation	$	(6,375.00)	W	8470	FY 2020/21	OAP
Agricultural Pool - Special Project Funding	$	(10,643.00)	X	8471	FY 2020/21	OAP
Non-Agricultural Pool - Legal Services	$	(5,540.40)	Y	8567	FY 2020/21	ONAP
Updated Balance as of September 30, 2021	**$**	**2,613,654.37**				

Updated Balance as of September 30, 2021						
Human Resources Services	$	6,000.00	A	6013	FY 2020/21	ADMIN
Temporary Services	$	7,214.32	B	6017	FY 2020/21	ADMIN
Other Office Equipment - Boardroom Upgrades	$	25,321.63	C	6038	FY 2019/20	ADMIN
Other Office Equipment - Boardroom Upgrades	$	41,295.45	C	6038	FY 2020/21	ADMIN
2020 OBMP Update - Tom Dodson & Associates	$	17,064.56	D	6908.1	FY 2020/21	OBMP
Meter Installation - New Meter Installation	$	175,400.00	E	7102.65	FY 2018/19	OBMP
Meter Installation - Calibration and Testing	$	181,650.00	F	7102.8	FY 2018/19	OBMP
OBMP - Watermaster Model Update	$	-	G	6906.1	FY 2020/21	ENG
Integrated Model - Meetings - 50% IEUA Costs	$	5,536.50	H	6906.15	FY 2020/21	ENG
Ground Level Monitoring - SAR Imagery	$	5,182.50	I	7107.3	FY 2020/21	ENG
Ground Level Monitoring - Capital Equipment	$	3,772.00	J	7107.8	FY 2020/21	ENG
Agriculture Production and Estimation	$	37,601.50	K	7110.3	FY 2020/21	ENG
PE2 - Comprehensive Recharge - Eng. Services	$	97,239.15	L	7202.2	FY 2020/21	ENG
SB88-Specs-Ensure Compliance-50% IEUA	$	54,012.38	M	7206.1	FY 2020/21	ENG
OBMP - 2023 RMPU	$	37,270.50	N	7210	FY 2020/21	ENG
PE4 - Northwest MZ-1 Area Project	$	45,969.50	O	7402.1	FY 2020/21	ENG
IEUA - Update Recycle Water Permit - Salinity	$	57,328.63	P	7510	FY 2020/21	ENG
PE8&9 - Support Imp. 2020 Storage Mgmt. Plan	$	43,220.00	Q	7610	FY 2020/21	ENG
Upper Santa Ana River HCP (TO #7)	$	15,062.88	R	7690.7	FY 2014/15	PROJ
Upper Santa Ana River HCP (TO #7)	$	5,000.00	R	7690.7	FY 2015/16	PROJ
Lower Day Basin RMPU (TO #2)	$	238,646.90	S	7690.8	FY 2016/17	PROJ
Funds on Hold for Projects/Refund	$	1,434,582.42	T	7690.9	FY 2017/18	PROJ
Appropriative Pool - Legal Services	$	14,591.25	U	8367	FY 2020/21	AP
Agricultural Pool - Legal & Technical Services	$	3,889.00	V	8467	FY 2020/21	OAP
Agricultural Pool - Mtg. Attendance Compensation	$	13,150.00	W	8470	FY 2020/21	OAP
Agricultural Pool - Special Project Funding	$	20,873.00	X	8471	FY 2020/21	OAP
Non-Agricultural Pool - Legal Services	$	26,780.30	Y	8567	FY 2020/21	ONAP
Updated Balance as of September 30, 2021	**$**	**2,613,654.37**				

ADMINISTRATION SERVICES:
Unspent funds related to ongoing projects and associated activities from the Administration Services budget from FY 2020/21 totaling $95,090.16 were “Carried Over” into the current FY 2021/22 budget. These funds were from the Human Resources Services [A] in the amount of $6,000 in account (6013); Temporary Services [B] in the amount of $21,000 in account (6017); and Other Office Equipment-Boardroom Upgrades [C] in the amount of $68,090.16 in account (6038). The total funds available are $95,090.16.

OBMP ACTIVITIES:
The OBMP Update costs relate to the contract between Tom Dodson and Associates and CBWM to procure environmental review services for the 2020 OBMP Update. The original budget was $225,500 and was approved during FY 2019/20. At the end of June 30, 2021 a remaining balance in the fund of $17,064.56 was “Carried Over” into the current FY 2021/22 budget. The 2020 OBMP Update - Tom Dodson & Associates [D] in the amount of $17,064.56 in account (6908.1).

Unspent funds related to ongoing projects and associated activities from the Agricultural area metering installation efforts budget from FY 2018/19 in several accounts totaling $357,050 were “Carried Over” into the current FY 2021/22 budget. These funds were from the Meter Installation - New Meter Installation [E] in the amount of $175,400 in account (7102.65); and Meter Installation - Calibration and Testing [F] in the amount of $181,650 in account (7102.8). The total funds available are $374,114.56.

ENGINEERING SERVICES:
Unspent funds related to ongoing projects and associated activities from the Engineering Services budget from FY 2020/21 in several accounts totaling $573,765 were “Carried Over” into the current FY 2021/22 budget. These funds were from the OBMP - Watermaster Model Update [G] in the amount of $9,000 in account (6906.1); Integrated Model-Meetings-50% IEUA Costs [H] in the amount of $14,594 in account (6906.15); Ground Level Monitoring-SAR Imagery [I] in the amount of $85,000 in account (7107.3); Ground Level Monitoring-Capital Equipment [J] in the amount of $3,772 in account (7107.8); Agriculture Production and Estimation [K] in the amount of $42,682 in account (7110.3); PE2 - Comprehensive Recharge-Engineering Services [L] in the amount of $120,000 in account (7202.2); SB88 Specs-Ensure Compliance-50% IEUA [M] in the amount of $54,694 in account (7206.1); OBMP-2023 RMPU [N] in the amount of $37,732 in account (7210); PE4 - Northwest MZ-1 Area Project [O] in the amount of $89,096 in account (7402.1); PE6&7 - IEUA Salinity Management Plan [P] in the amount of $73,975 in account (7510); and PE8&9 - Support Implementation 2020 Storage Management Plan [Q] in the amount of $43,220 in account (7610). The total funds available are $573,765.

ONGOING RECHARGE IMPROVEMENT PROJECTS:
The Upper Santa Ana River HCP-Task Order #7 [R] has a remaining funded balance of $20,062.88 in account (7690.7); and the Lower Day Basin RMPU-Task Order #2 [S] has a remaining funded budget balance of $238,646.90 in account (7690.8). The total funds available are $258,709.78.

FUNDS ON HOLD FOR PROJECTS/REFUND:
The “Funds on Hold for Projects/Refund” [T] has a remaining budget from FY 2017/18 of $1,434,582.42 in account (7690.9). By unanimous action of the Watermaster Board on June 24, 2021 the amount of $1,234,582.42 is to be refunded to the Appropriative Pool with the upcoming November 2021 Assessment Package. The amount of $200,000 will be kept on hold until the warranty period for the San Sevaine Project has expired, and no warranty issues are noted.

POOL RELATED FUNDING;
The remaining funding items are strictly Pool related and are added to the FY 2021/22 budget to ensure proper funding is recorded and tracked. The Appropriative Pool Legal Services [U] in the amount of $62,391.25 in account (8367); the Agricultural Pool Legal and Technical Services [V] in the amount of $61,814 in account (8467); the Agricultural Pool Meeting Attendance Compensation [W] in the amount of $19,525 in account (8470); the Agricultural Pool Special Project Funding [X] in the amount of $31,516 in account (8471); and the Non-Agricultural Pool Legal Services [Y] in the amount of $32,320.70 in account (8567). The total funds available are $207,566.95.

As invoices are received from the vendors and booked against these items listed above, the “Carried Over” balance will be reduced throughout the current fiscal year. At June 30, 2022, any remaining balances of the FY 2020/21 and prior years funding (if any), along with any new FY 2021/22 expenses, will then be “Carried Over” into the FY 2022/23 budget.

PREVIOUSLY REPORTED ACTIONS (Descending Order)
None

AUDIT FIELD WORK

CURRENT MONTH – SEPTEMBER 2021

The Annual Financial and Audit Reports were presented to the Watermaster Board by Fedak & Brown LLP at the October 28, 2021 Board meeting. The Annual Financial and Audit Reports for FY 2020/21 will be posted to the Watermaster website after the audit firm has signed the documents. This is expected to occur no later than November 30, 2021.

PREVIOUSLY REPORTED ACTIONS (Descending Order)
July 2021:
The auditors from the audit firm of Fedak & Brown LLP started the interim field work on June 8, 2021 through June 9, 2021. The plan was for the auditors not to be onsite at the Watermaster office for the interim field audit. Instead, all of the audit schedules, accounts payable selections, accounts receivable selections, bank reconciliations, payroll and timesheet selections, and any other reports and information were provided to the auditors electronically via Dropbox software. This was the start of the interim field work for the period of July 1, 2020 through March 31, 2021.

The final field work for the period of April 1, 2021 through June 30, 2021 was started on September 1, 2021 and continued through September 3, 2021.

FY 2021/22 EXHIBIT "G" NON-AGRICULTURAL POOL SALE OF WATER

CURRENT MONTH – SEPTEMBER 2021

No Exhibit "G" activity for the month to report.

PREVIOUSLY REPORTED ACTIONS (Descending Order)
None

ASSESSMENTS AND OTHER INVOICING

CURRENT MONTH – SEPTEMBER 2021

FY 2021/22 Assessment Package

No new current activity to report.

PREVIOUSLY REPORTED ACTIONS (Descending Order)
None

ATTACHMENTS
1. Financial Report – B5

CHINO BASIN WATERMASTER
Budget vs. Actual
Current Month, Year-To-Date and Fiscal Year-End

	1/12th (8.33%) of the Total Budget				3/12th (25.00%) of the Total Budget				100% of the Total Budget			
	For The Month of September 2021				Year-To-Date as of September 30, 2021				Fiscal Year End as of June 30, 2022			
	Actual	Budget	$ Over(Under)	% of Budget	Actual	Budget	$ Over(Under)	% of Budget	Projected	Budget	$ Over(Under)	% of Budget
Income												
4010 · Local Agency Subsidies	0.00	0.00	0.00	0.0%	177,430.03	177,430.00	0.03	100.0%	177,430.03	177,430.00	0.03	100.0%
4110 · Admin Asmnts-Approp Pool	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	7,322,032.00	7,322,032.00	0.00	100.0%
4120 · Admin Asmnts-Non-Agri Pool	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	330,845.00	330,845.00	0.00	100.0%
4130 · Admin Asmnts-Agricultural Pool	200,000.00	0.00	200,000.00	100.0%	200,000.00	0.00	200,000.00	100.0%	200,000.00	0.00	200,000.00	100.0%
4700 · Non Operating Revenues	5,410.92	26,532.00	-21,121.08	20.39%	5,417.25	26,532.00	-21,114.75	20.42%	37,143.75	106,125.00	-68,981.25	35.0%
4900 · Miscellaneous Income	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	500.00	0.00	500.00	100.0%
Total Income	205,410.92	26,532.00	178,878.92	774.2%	382,847.28	203,962.00	178,885.28	187.71%	8,067,950.78	7,936,432.00	131,518.78	101.66%
Gross Profit	205,410.92	26,532.00	178,878.92	774.2%	382,847.28	203,962.00	178,885.28	187.71%	8,067,950.78	7,936,432.00	131,518.78	101.66%
Expense												
6010 · Admin. Salary/Benefit Costs	96,967.12	94,146.00	2,821.12	103.0%	345,684.12	341,139.00	4,545.12	101.33%	1,233,255.84	1,235,557.00	-2,301.16	99.81%
6020 · Office Building Expense	13,689.67	35,319.00	-21,629.33	38.76%	34,931.24	86,582.00	-51,650.76	40.35%	217,517.80	223,929.00	-6,411.20	97.14%
6030 · Office Supplies & Equip.	3,694.91	2,925.00	769.91	126.32%	10,455.51	75,990.16	-65,534.65	13.76%	93,903.32	99,690.16	-5,786.84	94.2%
6040 · Postage & Printing Costs	2,237.42	2,908.00	-670.58	76.94%	6,766.51	8,503.00	-1,736.49	79.58%	34,853.96	37,460.00	-2,606.04	93.04%
6050 · Information Services	11,691.82	14,040.00	-2,348.18	83.28%	34,893.70	44,350.00	-9,456.30	78.68%	172,344.00	173,398.00	-1,054.00	99.39%
6060 · Contract Services	5,025.94	10,600.00	-5,574.06	47.42%	9,708.10	28,800.00	-19,091.90	33.71%	52,832.40	56,545.00	-3,712.60	93.43%
6070 · Watermaster Legal Services	30,025.59	27,924.00	2,101.59	107.53%	93,309.60	83,265.00	10,044.60	112.06%	373,238.40	326,975.00	46,263.40	114.15%
6080 · Insurance	0.00	0.00	0.00	0.0%	40,581.57	44,470.00	-3,888.43	91.26%	45,081.57	46,797.00	-1,715.43	96.33%
6110 · Dues and Subscriptions	522.73	2,995.00	-2,472.27	17.45%	16,646.67	20,315.00	-3,668.33	81.94%	37,420.40	38,815.00	-1,394.60	96.41%
6140 · WM Admin Expenses	263.86	338.00	-74.14	78.07%	513.12	1,013.00	-499.88	50.65%	3,054.20	4,750.00	-1,695.80	64.3%
6150 · Field Supplies	0.00	500.00	-500.00	0.0%	0.00	813.00	-813.00	0.0%	2,750.00	2,750.00	0.00	100.0%
6170 · Travel & Transportation	1,883.44	1,675.00	208.44	112.44%	4,867.88	5,930.00	-1,062.12	82.09%	23,231.16	24,170.00	-938.84	96.12%
6190 · Training, Conferences, Seminars	1,075.00	3,400.00	-2,325.00	31.62%	4,558.16	10,200.00	-5,641.84	44.69%	37,532.64	40,800.00	-3,267.36	91.99%
6200 · Advisory Committee Expenses	3,147.88	4,599.00	-1,451.12	68.45%	9,906.71	14,386.00	-4,479.29	68.86%	51,325.64	55,336.00	-4,010.36	92.75%
6300 · Watermaster Board Expenses	10,284.50	13,890.00	-3,605.50	74.04%	28,771.82	42,614.00	-13,842.18	67.52%	175,021.20	190,149.00	-15,127.80	92.04%
8300 · Appr Pl-WM & Pool Admin	22,700.26	14,687.00	8,013.26	154.56%	59,943.23	107,322.25	-47,379.02	55.85%	239,365.25	239,365.25	0.00	100.0%
8400 · Agri Pool-WM & Pool Admin	3,907.68	5,734.00	-1,826.32	68.15%	8,058.98	17,941.00	-9,882.02	44.92%	69,011.00	69,011.00	0.00	100.0%
8467 · Ag Legal & Technical Services	20,262.50	0.00	20,262.50	100.0%	57,925.00	61,814.00	-3,889.00	93.71%	61,814.00	61,814.00	0.00	100.0%
8470 · Ag Meeting Attend -Special	2,375.00	0.00	2,375.00	100.0%	6,375.00	19,525.00	-13,150.00	32.65%	19,525.00	19,525.00	0.00	100.0%
8471 · Ag Pool Expense	10,643.00	0.00	10,643.00	100.0%	10,643.00	31,516.00	-20,873.00	33.77%	31,516.00	31,516.00	0.00	100.0%
8485 · Ag Pool - Misc. Exp. - Ag Fund	0.00	0.00	0.00	0.0%	0.00	100.00	-100.00	0.0%	400.00	400.00	0.00	100.0%
8500 · Non-Ag Pl-WM & Pool Admin	5,058.90	9,537.00	-4,478.10	53.05%	12,247.50	61,444.70	-49,197.20	19.93%	90,066.70	90,066.70	0.00	100.0%
9400 · Depreciation Expense	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
9500 · Allocated G&A Expenditures	-22,134.45	-38,787.00	16,652.55	57.07%	-64,835.35	-116,359.00	51,523.65	55.72%	-314,462.04	-465,442.00	150,979.96	67.56%
6900 · Optimum Basin Mgmt Plan	50,657.09	103,392.00	-52,734.91	49.0%	207,751.55	370,132.56	-162,381.01	56.13%	1,305,404.12	1,313,453.56	-8,049.44	99.39%
9501 · G&A Expenses Allocated-OBMP	7,198.42	13,937.00	-6,738.58	51.65%	17,692.22	41,809.00	-24,116.78	42.32%	88,007.24	167,242.00	-79,234.76	52.62%
7101 · Production Monitoring	3,846.24	7,908.00	-4,061.76	48.64%	23,542.22	25,685.00	-2,142.78	91.66%	102,435.08	102,740.00	-304.92	99.7%
7102 · In-line Meter Installation	0.00	1,303.00	-1,303.00	0.0%	0.00	361,192.00	-361,192.00	0.0%	0.00	373,617.00	-373,617.00	0.0%
7103 · Grdwtr Quality Monitoring	51,905.77	35,900.00	16,005.77	144.58%	131,213.44	136,012.00	-4,798.56	96.47%	350,862.92	352,035.00	-1,172.08	99.67%
7104 · Gdwtr Level Monitoring	14,541.15	24,857.00	-10,315.85	58.5%	47,847.17	75,939.00	-28,091.83	63.01%	301,701.00	303,753.00	-2,052.00	99.32%
7105 · Sur Wtr Qual Monitoring	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
7106 · Wtr Level Sensors Installation	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%

CHINO BASIN WATERMASTER
Budget vs. Actual
Current Month, Year-To-Date and Fiscal Year-End

	1/12th (8.33%) of the Total Budget				3/12th (25.00%) of the Total Budget				100% of the Total Budget			
	For The Month of September 2021				Year-To-Date as of September 30, 2021				Fiscal Year End as of June 30, 2022			
	Actual	Budget	$ Over(Under)	% of Budget	Actual	Budget	$ Over(Under)	% of Budget	Projected	Budget	$ Over(Under)	% of Budget
7107 · Ground Level Monitoring	4,191.12	21,456.00	-17,264.88	19.53%	96,432.60	153,281.00	-56,848.40	62.91%	345,730.40	346,810.00	-1,079.60	99.69%
7108 · Hydraulic Control Monitoring	1,012.98	6,499.00	-5,486.02	15.59%	5,952.98	24,221.00	-18,268.02	24.58%	79,008.48	83,379.00	-4,370.52	94.76%
7109 · Recharge & Well Monitoring Prog	0.00	2,767.00	-2,767.00	0.0%	1,706.25	8,302.00	-6,595.75	20.55%	31,325.00	33,208.00	-1,883.00	94.33%
7110 · Ag Production & Estimation	2,535.00	1,186.00	1,349.00	213.74%	5,080.50	46,239.00	-41,158.50	10.99%	54,322.00	56,910.00	-2,588.00	95.45%
7111 · Improved Data Collection & Mgmt	0.00	1,680.00	-1,680.00	0.0%	1,157.25	5,039.00	-3,881.75	22.97%	18,129.00	20,158.00	-2,029.00	89.94%
7200 · PE2- Comp Recharge Pgm	279,543.17	14,514.00	265,029.17	1,926.02%	306,550.01	523,869.00	-217,318.99	58.52%	1,449,208.48	1,458,198.00	-8,989.52	99.38%
7300 · PE3&5-Water Supply/Desalte	2,569.82	3,864.00	-1,294.18	66.51%	3,281.82	11,952.00	-8,670.18	27.46%	45,127.28	47,793.00	-2,665.72	94.42%
7400 · PE4- Mgmt Plan	40,982.00	24,981.00	16,001.00	164.05%	87,299.00	164,256.00	-76,957.00	53.15%	387,196.00	389,739.00	-2,543.00	99.35%
7500 · PE6&7-CoopEfforts/SaltMgmt	29,607.41	12,533.00	17,074.41	236.24%	62,058.99	111,823.00	-49,764.01	55.5%	225,214.40	225,364.00	-149.60	99.93%
7600 · PE8&9-StorageMgmt/Conj Use	18,995.12	25,695.00	-6,699.88	73.93%	28,534.66	120,781.00	-92,246.34	23.63%	350,890.72	353,463.00	-2,572.28	99.27%
7690 · Recharge Improvements	-156,259.00	0.00	-156,259.00	100.0%	529,029.00	2,222,321.20	-1,693,292.20	23.81%	1,888,029.00	2,222,321.20	-334,292.20	84.96%
7700 · Inactive Well Protection Prgm	0.00	42.00	-42.00	0.0%	0.00	125.00	-125.00	0.0%	500.00	500.00	0.00	100.0%
9502 · G&A Expenses Allocated-Projects	14,936.03	24,850.00	-9,913.97	60.11%	47,143.13	74,550.00	-27,406.87	63.24%	226,454.80	298,200.00	-71,745.20	75.94%
Total Expense	589,585.09	533,794.00	55,791.09	110.45%	2,334,224.86	5,469,202.87	-3,134,978.01	42.68%	10,000,144.36	10,752,260.87	-752,116.51	93.01%
Net Ordinary Income	-384,174.17	-507,262.00	123,087.83	75.74%	-1,951,377.58	-5,265,240.87	3,313,863.29	37.06%	-1,932,193.58	-2,815,828.87	883,635.29	68.62%
Other Income												
4210 · Approp Pool-Replenishment	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
4220 · Non-Ag Pool-Replenishment	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
4225 · Interest Income	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
4226 · LAIF Fair Market Value	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
4227 · AP Escrow Interest	23.87	0.00	23.87	100.0%	73.19	0.00	73.19	100.0%	292.76	0.00	292.76	100.0%
4600 · Groundwater Sales	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
4715 · Gain on Sale of Assets	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
Total Other Income	23.87	0.00	23.87	100.0%	73.19	0.00	73.19	100.0%	292.76	0.00	292.76	100.0%
Other Expense												
5010 · Groundwater Replenishment	35,030.19	0.00	35,030.19	100.0%	35,030.19	0.00	35,030.19	100.0%	35,030.19	0.00	35,030.19	100.0%
5100 · Other Water Purchases	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
9200 · Interest Expense	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
9251 · Other Post Employment Benefits	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
9996 · Refund-Excess Reserves-Approp.	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
9996.5 · Refund-Basin O&M-Approp.	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
9997 · Refund-Excess Reserves-NonAg	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
9997.5 · Refund-Basin O&M-NonAg	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
9998 · Refund-Recharge Debt-Approp.	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
9999 · To/(From) Reserves	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
Total Other Expense	35,030.19	0.00	35,030.19	100.0%	35,030.19	0.00	35,030.19	100.0%	35,030.19	0.00	35,030.19	100.0%
Net Other Income	-35,006.32	0.00	-35,006.32	100.0%	-34,957.00	0.00	-34,957.00	100.0%	-34,737.43	0.00	-34,737.43	100.0%
Net Income	**-419,180.49**	**-507,262.00**	**88,081.51**	**82.64%**	**-1,986,334.58**	**-5,265,240.87**	**3,278,906.29**	**37.73%**	**-1,966,931.01**	**-2,815,828.87**	**848,897.86**	**69.85%**

Note: Please see the staff report (Financial Report-B10) for additional detailed information on the account categories.

	Type	Date	Num	Name	Memo	Account	Paid Amount
	General Journal	**10/02/2021**	**10/02/2021**	**Payroll and Taxes for 09/19/21-10/02/21**	**Payroll and Taxes for 09/19/21-10/02/21**	**1012 · Bank of America Gen'l Ckg**	
				ADP, LLC	Direct Deposits for 09/19/21-10/02/21	1012 · Bank of America Gen'l Ckg	31,114.86
				ADP, LLC	Payroll Taxes for 09/19/21-10/02/21	1012 · Bank of America Gen'l Ckg	11,994.39
				MISSIONSQUARE RETIREMENT	457(b) EE Deductions for 09/19/21-10/02/21	1012 · Bank of America Gen'l Ckg	5,765.46
				MISSIONSQUARE RETIREMENT	401(a) EE Deductions for 09/19/21-10/02/21	1012 · Bank of America Gen'l Ckg	1,694.48
TOTAL							50,569.19
	Bill Pmt -Check	**10/05/2021**	**ACH 100521**	**CALPERS**	**1394905143**	**1012 · Bank of America Gen'l Ckg**	
	Bill	10/01/2021	1394905143		Medical Insurance Premiums - October 2021	60182.1 · Medical Insurance	11,327.95
TOTAL							11,327.95
	Bill Pmt -Check	**10/06/2021**	**23093**	**ACCENT COMPUTER SOLUTIONS, INC.**	**147163**	**1012 · Bank of America Gen'l Ckg**	
	Bill	10/01/2021	147163		Monthly Services - October 2021	6052.4 · IT Managed Services	4,040.63
					Overwatch - October 2021	6052.5 · IT Data Backup/Storage	699.00
					OmniCloud - October 2021	6052.5 · IT Data Backup/Storage	170.00
					Office 365 Subscriptions/Business Premier - Octob	6052.4 · IT Managed Services	204.75
					Image office storage (per GB, per month)	6052.5 · IT Data Backup/Storage	546.00
TOTAL							5,660.38
	Bill Pmt -Check	**10/06/2021**	**23094**	**ACWA JOINT POWERS INSURANCE AUTHORI**	**0675100**	**1012 · Bank of America Gen'l Ckg**	
	Bill	10/01/2021	0675100		Prepayment - November 2021	1409 · Prepaid Life, BAD&D & LTD	244.93
					October 2021	60191 · Life & Disab.Ins Benefits	256.90
TOTAL							501.83
	Bill Pmt -Check	**10/06/2021**	**23095**	**APPLEONE**	**01-6048935**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/22/2021	01-6048935		Brian Summers	6017.2 · Office Specialist Services	1,245.04
TOTAL							1,245.04
	Bill Pmt -Check	**10/06/2021**	**23096**	**APPLIED COMPUTER TECHNOLOGIES**	**3461**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/30/2021	3461		Database Consulting - September 2021	6052.2 · Applied Computer Technol	3,850.00
TOTAL							3,850.00
	Bill Pmt -Check	**10/06/2021**	**23097**	**BANALES D.C.**	**02417**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/29/2021	02417		Installation of plumbing equipment & items	1840 · Capital Assets	2,910.00
TOTAL							2,910.00
	Bill Pmt -Check	**10/06/2021**	**23098**	**BURRTEC WASTE INDUSTRIES, INC.**	**N2112282821**	**1012 · Bank of America Gen'l Ckg**	
	Bill	10/05/2021	N2112282821		October 2021 - customer #21136525395	6024 · Building Repair & Maintenance	142.50
TOTAL							142.50

	Type	Date	Num	Name	Memo	Account	Paid Amount
	Bill Pmt -Check	**10/06/2021**	**23099**	**DE BOOM, NATHAN**	**Ag Pool Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/09/2021	9/09 Ag Pool Mtg		9/09/21 Ag Pool Mtg	8470 · Ag Meeting Attend -Special	125.00
	Bill	09/20/2021	9/20 Special Ag Mtg		9/20/21 Special Ag Pool Mtg	8470 · Ag Meeting Attend -Special	125.00
TOTAL							250.00
	Bill Pmt -Check	**10/06/2021**	**23100**	**ELIE, STEVEN**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/02/2021	9/02 Admin Mtg		9/02/21 Administrative meeting w/PK	6311 · Board Member Compensation	125.00
	Bill	09/23/2021	9/23 Board Mtg		9/23/21 Board Meeting	6311 · Board Member Compensation	125.00
TOTAL							250.00
	Bill Pmt -Check	**10/06/2021**	**23101**	**EMPOWER LAB**	**1999**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/30/2021	1999		Empower Lab - September 2021	6193 · Employee Training	1,075.00
TOTAL							1,075.00
	Bill Pmt -Check	**10/06/2021**	**23102**	**FEDAK & BROWN LLP**	**Auditing Progess Billing**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/30/2021			September 2021	6062 · Audit Services	4,850.00
TOTAL							4,850.00
	Bill Pmt -Check	**10/06/2021**	**23103**	**FILIPPI, GINO**	**Ag Pool Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/16/2021	9/16 Advisory Comm		9/16/21 Advisory Committee mtg	8470 · Ag Meeting Attend -Special	125.00
	Bill	09/20/2021	9/20 Special Ag Mtg		9/20/21 Special Ag Pool mtg	8470 · Ag Meeting Attend -Special	125.00
	Bill	09/23/2021	9/23 Board Mtg		9/23/21 Board Mtg	8470 · Ag Meeting Attend -Special	125.00
TOTAL							375.00
	Bill Pmt -Check	**10/06/2021**	**23104**	**FOLSOM, BETTY**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/20/2021	9/20 Board Mtg Prep		9/20/21 Board prep call w/Curatalo & Rogers	6311 · Board Member Compensation	125.00
	Bill	09/23/2021	9/23 Board Mtg		9/23/21 Board Meeting	6311 · Board Member Compensation	125.00
TOTAL							250.00
	Bill Pmt -Check	**10/06/2021**	**23105**	**FONTANA UNION WATER COMPANY'**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/12/2021	8/12 AP Confidential		8/12/21 AP confidential session - Curatalo	6311 · Board Member Compensation	125.00
	Bill	08/17/2021	8/17 Budget/Comp Mtg		8/17/21 Budget/Staff Comp. mtg. - Curatalo	6311 · Board Member Compensation	125.00
	Bill	08/19/2021	8/19 AP and Advisory		8/19/21 AP confidential session - Curatalo	6311 · Board Member Compensation	125.00
	Bill	08/24/2021	8/24 Mtg w/PK		8/24/21 Meeting w/PK - Curatalo	6311 · Board Member Compensation	125.00
	Bill	08/26/2021	8/26 AP Confidential		8/26/21 AP confidential session - Curatalo	6311 · Board Member Compensation	125.00
	Bill	08/31/2021	8/30 Mtg w/PK		8/31/21 Meetng w/PK - Curatalo	6311 · Board Member Compensation	125.00
	Bill	09/02/2021	9/02 Admin Mtg		9/02/21 Meetng w/PK - Curatalo	6311 · Board Member Compensation	125.00
	Bill	09/03/2021	9/03 Legal Counsel		9/03/21 Mtg. w/AP Legal Counsel - Curatalo	6311 · Board Member Compensation	125.00
	Bill	09/07/2021	9/07 Admin Mtg		9/07/21 Mtg. w/Kavounas/ Kuhn - Curatalo	6311 · Board Member Compensation	125.00

	Type	Date	Num	Name	Memo	Account	Paid Amount
	Bill	09/09/2021	9/09 Appro Pool Mtg		9/09/21 AP Meeting - Curatalo	6311 · Board Member Compensation	125.00
	Bill	09/13/2021	9/13 Legal Counsel		9/13/21 Mtg. w/Legal Counsel - Curatalo	6311 · Board Member Compensation	125.00
	Bill	09/14/2021	9/14 Legal Counsel		9/14/21 Mtg. w/Legal Counsel - Curatalo	6311 · Board Member Compensation	125.00
	Bill	09/15/2021	9/15 Admin Mtg		9/15/21 Mtg. w/P. Kavounas - Curatalo	6311 · Board Member Compensation	125.00
	Bill	09/16/2021	9/16 Appro Pool Conf		9/16/21 AP Confidential Session - Curatalo	6311 · Board Member Compensation	125.00
	Bill	09/17/2021	9/17 Legal Counsel		9/17/21 Mtg. w/WM Legal Counsel - Curatalo	6311 · Board Member Compensation	125.00
	Bill	09/21/2021	9/21 Board Agenda		9/21/21 Board Agenda preview mtg. - Curatalo	6311 · Board Member Compensation	125.00
	Bill	09/23/2021	9/23 Board Mtg		9/23/21 Board meeting - Curatalo	6311 · Board Member Compensation	125.00
	Bill	09/24/2021	9/24 Legal Counsel		9/24/21 Mtg. w/WM Legal Counsel - Curatalo	6311 · Board Member Compensation	125.00
	Bill	09/27/2021	9/27 Board Members		9/27/21 Mtgs.w/WM Board Members - Curatalo	6311 · Board Member Compensation	125.00
TOTAL							2,375.00
	Bill Pmt -Check	**10/06/2021**	**23106**	**JOHN DIAZ PAINTING**	**Office Painting**	**1012 · Bank of America Gen'l Ckg**	
	Bill	10/01/2021			Painting and remodel of women's restroom	1840 · Capital Assets	250.00
TOTAL							250.00
	Bill Pmt -Check	**10/06/2021**	**23107**	**NELSON, ANNA**	**Employee Expense Reimbursement**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/29/2021	Emp Reimbursement		Reimbursement for adimin mtg. expenses	6141.3 · Admin Meetings	162.45
TOTAL							162.45
	Bill Pmt -Check	**10/06/2021**	**23108**	**PIETERSMA, RONALD**	**Ag Pool Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/09/2021	9/09 Ag Pool Mtg		9/09/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
	Bill	09/20/2021	9/20 Special Ag Pool		9/20/21 Special Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
TOTAL							250.00
	Bill Pmt -Check	**10/06/2021**	**23109**	**PITNEY BOWES GLOBAL FINANCIAL SERVICE**	**3105040076**	**1012 · Bank of America Gen'l Ckg**	
	Bill	10/01/2021	3105040076		Account #0011526621	6044 · Postage Meter Lease	430.63
TOTAL							430.63
	Bill Pmt -Check	**10/06/2021**	**23110**	**PREMIERE GLOBAL SERVICES**	**30724506**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/29/2021	30724506		Fee - General	6022 · Telephone	39.00
					Service fee	6022 · Telephone	4.25
					Fee - Confidential	6022 · Telephone	39.00
					Service fee	6022 · Telephone	4.25
					Shortfall	6022 · Telephone	78.00
					Minimum commitment	6022 · Telephone	186.50
TOTAL							351.00
	Bill Pmt -Check	**10/06/2021**	**23111**	**PURCHASE POWER**	**8000-9090-0016-8851**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/17/2021	8000909000168851		Postage refill - 9/17/21	6042 · Postage - General	499.50

	Type	Date	Num	Name	Memo	Account	Paid Amount
TOTAL							499.50
	Bill Pmt -Check	**10/06/2021**	**23112**	**ROGERS, PETER**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/20/2021	9/20 Mtg w/AP Chair		9/20/21 Meeting w/AP Chair	6311 · Board Member Compensation	125.00
	Bill	09/23/2021	9/23 Board Mtg		9/23/21 Board Meeting	6311 · Board Member Compensation	125.00
TOTAL							250.00
	Bill Pmt -Check	**10/06/2021**	**23113**	**RR FRANCHISING, INC.**	**Janitorial Services**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/23/2021	103643		Electrostatic spraying-office-Sep. 18, 2021	6024 · Building Repair & Maintenance	222.50
	Bill	10/01/2021	103876		Monthly service - October 2021	6024 · Building Repair & Maintenance	915.00
TOTAL							1,137.50
	Bill Pmt -Check	**10/06/2021**	**23114**	**STAPLES BUSINESS ADVANTAGE**	**8056333427**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/29/2021	8056333427		Invoice from 11/28/19 - copy paper	6031.1 · Copy Paper	188.51
TOTAL							188.51
	Bill Pmt -Check	**10/06/2021**	**23115**	**STATE COMPENSATION INSURANCE FUND**	**1000293043**	**1012 · Bank of America Gen'l Ckg**	
	Bill	10/01/2021	1970970		Policy # 1970970 - Premium 9/26/21-1026/21	60183 · Worker's Comp Insurance	702.33
TOTAL							702.33
	Bill Pmt -Check	**10/06/2021**	**23116**	**ULINE**	**Miscellaneous Office Supplies**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/16/2021	61263639		Trash cans and mats for office	6031.7 · Other Office Supplies	123.51
	Bill	09/20/2021	61376028		Floor mat for office	6031.7 · Other Office Supplies	30.01
TOTAL							153.52
	Bill Pmt -Check	**10/06/2021**	**23117**	**UNION 76**	**7076-2245-3035-5049**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/29/2021	7076224530355049		September 2021	6175 · Vehicle Fuel	336.94
TOTAL							336.94
	Bill Pmt -Check	**10/06/2021**	**23118**	**VISION SERVICE PLAN**	**00-101789-0001**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/29/2021	813286689		Vision Insurance Premium - October 2021	60182.2 · Dental & Vision Ins	93.83
TOTAL							93.83
	Bill Pmt -Check	**10/06/2021**	**23119**	**APPLEONE**	**01-6055168**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/29/2021	01-6055168		Brian Summers	6017.2 · Office Specialist Services	1,260.80
TOTAL							1,260.80
	Bill Pmt -Check	**10/06/2021**	**23120**	**BOWCOCK, ROBERT**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/09/2021	9/09 Non Ag Pool Mtg		9/09/21 Non-Ag Pool Meeting	6311 · Board Member Compensation	125.00
	Bill	09/16/2021	9/16 Advisory Comm		9/16/21 Advisory Committee Meeting	6311 · Board Member Compensation	125.00

	Type	Date	Num	Name	Memo	Account	Paid Amount
	Bill	09/23/2021	9/23 Board Mtg		9/23/21 Board Meeting	6311 · Board Member Compensation	125.00
TOTAL							375.00
	Bill Pmt -Check	**10/06/2021**	**23121**	**GEYE, BRIAN**	**Non-Ag Pool Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/09/2021	9/09 Non Ag Pool Mtg		9/09/21 Non-Ag Pool Meeting	8511 · Non-Ag Pool Member Compensation	125.00
	Bill	09/16/2021	9/16 Advisory Comm		9/16/21 Advisory Committee Meeting	8511 · Non-Ag Pool Member Compensation	125.00
	Bill	09/23/2021	9/23 Board Mtg		9/23/21 Board Meeting	8511 · Non-Ag Pool Member Compensation	125.00
TOTAL							375.00
	Bill Pmt -Check	**10/06/2021**	**23122**	**WEST YOST**		**1012 · Bank of America Gen'l Ckg**	
	Bill	08/31/2021	2046564		2046564	6906.31 · OBMP-Pool, Adv. Board Mtgs	1,538.25
	Bill	08/31/2021	2046565		2046565	6906.32 · OBMP-Other General Meetings	11,989.25
	Bill	08/31/2021	2046566		2046566	6906.71 · OBMP-Data Req.-CBWM Staff	14,770.75
	Bill	08/31/2021	2046567		2046567	6906.72 · OBMP-Data Req.-Non CBWM Staff	1,159.75
	Bill	08/31/2021	2046568		2046568	6906.22 · Water Rights Compliance Rprting	10,752.25
	Bill	08/31/2021	2046569		2046569	6906 · OBMP Engineering Services	5,701.25
	Bill	08/31/2021	2046570		2046570	6906.1 · OBMP-Watermaster Model Update	11,506.75
	Bill	08/31/2021	2046571		2046571	6906.81 · Prepare Annual Reports	920.50
	Bill	08/31/2021	2046572		2046572	6906.15 · Integrated Model Mtgs-IEUA Cost	8,818.50
	Bill	08/31/2021	2046573		2046573	7103.3 · Grdwtr Qual-Engineering	39,581.03
	Bill	08/31/2021	2046574		2046574	7104.3 · Grdwtr Level-Engineering	8,475.89
	Bill	08/31/2021	2046575		2046575	7107.2 · Grd Level-Engineering	6,283.61
	Bill	08/31/2021	2046576		2046576	7107.2 · Grd Level-Engineering	519.75
	Bill	08/31/2021	2046577		2046577	7107.2 · Grd Level-Engineering	404.25
					General Atomics	7107.3 · Grd Level-SAR Imagery	77,623.00
	Bill	08/31/2021	2046578		2046578	7109.3 · Recharge & Well - Engineering	1,706.25
	Bill	08/31/2021	2046579		2046579	7110.3 · Ag Prod. & Estimation-Eng. Serv	926.25
	Bill	08/31/2021	2046580		2046580	7111.3 · Data Collection & Mgmt-Eng. Ser	1,157.25
	Bill	08/31/2021	2046581		2046581	7202.2 · Engineering Svc	4,552.00
	Bill	08/31/2021	2046582		2046582	7402 · PE4-Engineering	7,311.50
	Bill	08/31/2021	2046583		2046583	7402.10 · PE4 - Northwest MZ1 Area Proj.	19,929.75
	Bill	08/31/2021	2046584		2046584	7402 · PE4-Engineering	1,732.50
	Bill	08/31/2021	2046585		2046585	7502 · PE6&7-Engineering	10,557.00
	Bill	08/31/2021	2046586		2046586	7510 · PE6&7-IEUA Salinity Mgmt. Plan	12,776.25
	Bill	08/31/2021	2046587		2046587	7614 · PE8&9-Develop S&R Master Plan	8,753.25
	Bill	08/31/2021	2046588		2046588	6906.14 · Modeling for WSIP-100% IEUA	26,682.64
	Bill	08/31/2021	2046589		2046589	7206.1 · SB88 Specs-Ensure Compliance	1,363.25
TOTAL							297,492.67
	Bill Pmt -Check	**10/06/2021**	**23123**	**WESTERN MUNICIPAL WATER DISTRICT**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	

	Type	Date	Num	Name	Memo	Account	Paid Amount
	Bill	09/09/2021	9/09 Appro Pool Mtg		9/09/21 AP meeting - Gardner	6311 · Board Member Compensation	125.00
	Bill	09/16/2021	9/16 Advisory Comm		9/16/21 Advisory Comm. meeting - Gardner	6311 · Board Member Compensation	125.00
	Bill	09/23/2021	9/23 Board Mtg		9/23/21 Board meeting - Gardner	6311 · Board Member Compensation	125.00
TOTAL							375.00
	General Journal	**10/15/2021**	**10/15/2021**	**ADP, LLC**	**ADP Tax Service for 09/18/21-590005889**	**1012 · Bank of America Gen'l Ckg**	
				ADP, LLC	ADP Tax Service for 09/18/21-590005889	1012 · Bank of America Gen'l Ckg	155.50
				ADP, LLC	ADP Tax Service for 09/18/21-590005889	1012 · Bank of America Gen'l Ckg	155.50
TOTAL							311.00
	General Journal	**10/21/2021**	**10/21/2021**	**Payroll and Taxes for 10/03/21-10/16/21**	**Payroll and Taxes for 10/03/21-10/16/21**	**1012 · Bank of America Gen'l Ckg**	
				ADP, LLC	Direct Deposits for 10/03/21-10/16/21	1012 · Bank of America Gen'l Ckg	35,755.53
				ADP, LLC	Payroll and Taxes for 10/03/21-10/16/21	1012 · Bank of America Gen'l Ckg	12,859.34
				MISSIONSQUARE RETIREMENT	457(b) EE Deductions for 10/03/21-10/16/21	1012 · Bank of America Gen'l Ckg	5,765.46
				MISSIONSQUARE RETIREMENT	401(a) EE Deductions for 10/03/21-10/16/21	1012 · Bank of America Gen'l Ckg	1,694.48
TOTAL							56,074.81
	General Journal	**10/19/2021**	**10/19/2021**	**HEALTH EQUITY**	**Health Equity Invoice 3115501**	**1012 · Bank of America Gen'l Ckg**	
				HEALTH EQUITY	Health Equity Invoice 3115501	1012 · Bank of America Gen'l Ckg	747.35
TOTAL							747.35
	Bill Pmt -Check	**10/07/2021**	**ACH 100721**	**PUBLIC EMPLOYEES' RETIREMENT SYSTEM**	**Payor #3493**	**1012 · Bank of America Gen'l Ckg**	
	General Journal	10/02/2021	10/07/2021	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	CalPERS Retirement for 09/19/21-10/02/21	2000 · Accounts Payable	9,186.50
TOTAL							9,186.50
	Bill Pmt -Check	**10/22/2021**	**23124**	**APPLEONE**	**Temporary Services**	**1012 · Bank of America Gen'l Ckg**	
	Bill	10/06/2021	01-6062812		Brian Summers	6017.2 · Office Specialist Services	1,245.04
	Bill	10/13/2021	01-6072228		Brian Summers	6017.2 · Office Specialist Services	1,260.80
TOTAL							2,505.84
	Bill Pmt -Check	**10/22/2021**	**23125**	**BANK OF AMERICA**	**XXXX-XXXX-XXXX-4026**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/30/2021	XXXX-XXXX-XXXX-4026		Panels for PK office walls	6025 · Building Interior Renovations	2,793.91
					Miscellaneous office supplies	6031.7 · Other Office Supplies	25.71
					Miscellaneous office supplies	6031.7 · Other Office Supplies	270.95
					Monthly amount due for Zoom Webinar	6022 · Telephone	35.59
					Adhesive for PK wall panels	6025 · Building Interior Renovations	50.47
					Miscellaneous office supplies	6031.7 · Other Office Supplies	347.79
					Miscellaneous office supplies	6031.7 · Other Office Supplies	24.92
					Miscellaneous office supplies	6025 · Building Interior Renovations	180.24
					Routers for office	6055 · Computer Hardware	86.29

Type	Date	Num	Name	Memo	Account	Paid Amount
				Miscellaneous office supplies	6031.7 · Other Office Supplies	6.68
				Miscellaneous office supplies	6031.7 · Other Office Supplies	59.08
				Miscellaneous office supplies	6031.7 · Other Office Supplies	13.41
				Miscellaneous office supplies	6031.7 · Other Office Supplies	112.09
				Miscellaneous office supplies	6031.7 · Other Office Supplies	39.83
				Copy paper	6031.1 · Copy Paper	453.84
				Miscellaneous office supplies	6031.7 · Other Office Supplies	42.29
				AN replacement monitor	6055 · Computer Hardware	234.60
				AN replacement monitor	6055 · Computer Hardware	234.60
				Mirror for men's restroom	6025 · Building Interior Renovations	242.28
				Miscellaneous office supplies	6031.7 · Other Office Supplies	114.62
				50% deposit on desktop and laptop	6055 · Computer Hardware	836.50
				Miscellaneous office supplies	6031.7 · Other Office Supplies	21.67
				Miscellaneous office supplies	6025 · Building Interior Renovations	152.44
				Miscellaneous office supplies	6025 · Building Interior Renovations	678.91
				Miscellaneous office supplies	6031.7 · Other Office Supplies	114.11
				Miscellaneous office supplies	6031.7 · Other Office Supplies	11.40
				Miscellaneous office supplies	6031.7 · Other Office Supplies	63.11
				Software license	6054 · Computer Software	52.51
				Miscellaneous office supplies	6031.7 · Other Office Supplies	36.44
				Miscellaneous office supplies	6031.7 · Other Office Supplies	35.85
				PK mtg w/Celeste Cantu	8312 · Meeting Expenses	16.20
				PK mtg w/John Bosler	8312 · Meeting Expenses	29.69
TOTAL						7,418.02
Bill Pmt -Check	**10/22/2021**	**23126**	**CORELOGIC INFORMATION SOLUTIONS**	**821021869**	**1012 · Bank of America Gen'l Ckg**	
Bill	09/30/2021	82101863		September 2021	7103.7 · Grdwtr Qual-Computer Svc	62.50
				821021869	7101.4 · Prod Monitor-Computer	62.50
TOTAL						125.00
Bill Pmt -Check	**10/22/2021**	**23127**	**CUCAMONGA VALLEY WATER DISTRICT**	**Office Lease**	**1012 · Bank of America Gen'l Ckg**	
Bill	10/19/2021			Lease due on November 1, 2021	1422 · Prepaid Rent	7,588.83
TOTAL						7,588.83
Bill Pmt -Check	**10/22/2021**	**23128**	**EGOSCUE LAW GROUP, INC.**	**September 2021**	**1012 · Bank of America Gen'l Ckg**	
Bill	09/30/2021			Ag Pool Legal Services - September 2021	8467 · Ag Legal & Technical Services	20,262.50
TOTAL						20,262.50
Bill Pmt -Check	**10/22/2021**	**23129**	**FIRST LEGAL NETWORK LLC**	**40053469**	**1012 · Bank of America Gen'l Ckg**	
Bill	09/30/2021	40053469		Court filings for September 2021	6061.5 · Court Filing Services	175.94

	Type	Date	Num	Name	Memo	Account	Paid Amount
TOTAL							175.94
	Bill Pmt -Check	**10/22/2021**	**23130**	**FRONTIER COMMUNICATIONS**	**909-484-3890-050914-5**	**1012 · Bank of America Gen'l Ckg**	
	Bill	10/20/2021	90948438900509145		Office fax	6022 · Telephone	166.38
TOTAL							166.38
	Bill Pmt -Check	**10/22/2021**	**23131**	**GREAT AMERICA LEASING CORP.**	**30293478**	**1012 · Bank of America Gen'l Ckg**	
	Bill	10/20/2021	30293478		Invoice for October 2021	6043.1 · Ricoh Lease Fee	1,481.41
					Supply freight fee	6043.2 · Ricoh Usage & Maintenance Fee	8.57
TOTAL							1,489.98
	Bill Pmt -Check	**10/22/2021**	**23132**	**JOHN J. SCHATZ**	**AP Legal Services**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/30/2021			September 2021	8367 · Legal Service	17,974.00
TOTAL							17,974.00
	Bill Pmt -Check	**10/22/2021**	**23133**	**KUHN, BOB**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/03/2021	9/03 Admin Mtg		9/03/21 Administrative Meeting	6311 · Board Member Compensation	125.00
	Bill	09/07/2021	9/07 mtg w/Bd Chair		9/07/21 Meeting w/Board Chair and GM	6311 · Board Member Compensation	125.00
	Bill	09/09/2021	9/09 Ag Pool Mtg		9/09/21 Ag Pool Meeting	6311 · Board Member Compensation	125.00
	Bill	09/16/2021	9/16 Advisory Comm		9/16/21 Advisory Committee Meeting	6311 · Board Member Compensation	125.00
	Bill	09/17/2021	9/17 Admin Mtg		9/17/21 Administrative Meeting	6311 · Board Member Compensation	125.00
	Bill	09/21/2021	9/21 Exec Comm		9/21/21 Executive Committee Meeting	6311 · Board Member Compensation	125.00
	Bill	09/23/2021	9/23 Board Mtg		9/23/21 Board Meeting	6311 · Board Member Compensation	125.00
TOTAL							875.00
	Bill Pmt -Check	**10/22/2021**	**23134**	**LOEB & LOEB LLP**	**1975400**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/30/2021	1975400		Non-Ag Pool Legal Services - Sept. 2021	8567 · Non-Ag Legal Service	2,154.60
TOTAL							2,154.60
	Bill Pmt -Check	**10/22/2021**	**23135**	**EASTVALE DEVELOPMENT - PIERSON**	**Ag Pool and Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/07/2021	9/07 Board Officers		9/07/21 Board Officers Check-in	6311 · Board Member Compensation	125.00
	Bill	09/08/2021	9/08 Call w/Chair		9/08/21 Call w/Ag Pool Chair	8470 · Ag Meeting Attend -Special	125.00
	Bill	09/09/2021	9/09 Ag Pool Mtg		9/09/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
	Bill	09/15/2021	9/15 Call w/Chair		9/15/21 Call w/Ag Pool Chair	8470 · Ag Meeting Attend -Special	125.00
	Bill	09/16/2021	9/16 Advisory Comm		9/16/21 Advisory Committee Meeting	8470 · Ag Meeting Attend -Special	125.00
	Bill	09/17/2021	9/17 Call w/Chair		9/17/21 Call w/Ag Pool Chair	8470 · Ag Meeting Attend -Special	125.00
	Bill	09/20/2021	9/20 Special Ag Mtg		9/20/21 Special Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
	Bill	09/21/2021	9/21 Board Agenda		9/21/21 Board agenda preview	6311 · Board Member Compensation	125.00
	Bill	09/23/2021	9/23 Board Mtg		9/23/21 Board Meeting	6311 · Board Member Compensation	125.00
	Bill	09/27/2021	9/27 Call w/Bd Chair		9/27/21 Call w/Board Chair	6311 · Board Member Compensation	125.00

	Type	Date	Num	Name	Memo	Account	Paid Amount
	Bill	09/30/2021	9/30 Call w/Chair		9/30/21 Call w/Ag Pool Chair & legal counsel	8470 · Ag Meeting Attend -Special	125.00
	Bill	09/30/2021	9/30 GLMC Mtg		9/30/21 GLMC Meeting	6311 · Board Member Compensation	125.00
TOTAL							1,500.00
	Bill Pmt -Check	**10/22/2021**	**23136**	**READY REFRESH**	**0023230253**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/30/2021	0023230253		Office Water Bottle - September 2021	6031.7 · Other Office Supplies	118.24
TOTAL							118.24
	Bill Pmt -Check	**10/22/2021**	**23137**	**RR FRANCHISING, INC.**	**104604**	**1012 · Bank of America Gen'l Ckg**	
	Bill	10/21/2021	104604		Deep cleaning of offices & meeting rooms	6024 · Building Repair & Maintenance	240.00
TOTAL							240.00
	Bill Pmt -Check	**10/22/2021**	**23138**	**STAULA, MARY L**	**Retiree Medical**	**1012 · Bank of America Gen'l Ckg**	
	Bill	10/31/2021			Retiree Medical	60182.4 · Retiree Medical	19.24
TOTAL							19.24
	Bill Pmt -Check	**10/22/2021**	**23139**	**TELLEZ-FOSTER, EDGAR**	**Employee Expense Reimbursement**	**1012 · Bank of America Gen'l Ckg**	
	Bill	10/07/2021	10/07 Ops Staff Mtg		Ops staff meeting on10/07/21	6141.3 · Admin Meetings	98.89
TOTAL							98.89
	Bill Pmt -Check	**10/22/2021**	**23140**	**VANDEN HEUVEL, GEOFFREY**	**Ag Pool Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/09/2021	9/09 Ag Pool Mtg		9/09/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
	Bill	09/20/2021	9/20 Special Ag Pool		9/20/21 Special Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
	Bill	09/30/2021	6/10 Ag Pool Mtg		6/10/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
	Bill	09/30/2021	7/08 Ag Pool Mtg		7/08/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
	Bill	09/30/2021	8/12 Special Ag Pool		8/12/21 Special Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
	Bill	10/14/2021	10/14 Ag Pool Mtg		10/14/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
TOTAL							750.00
	Bill Pmt -Check	**10/22/2021**	**23141**	**VERIZON WIRELESS**	**9889893184**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/30/2021	9889893184		Acct #470810953-00002	6022 · Telephone	387.40
TOTAL							387.40
	Bill Pmt -Check	**10/22/2021**	**23142**	**WAXIE SANITARY SUPPLY**	**80367578**	**1012 · Bank of America Gen'l Ckg**	
	Bill	10/20/2021	80367578		Air purifier with stand	6038 · Other Office Equipment	396.25
TOTAL							396.25
	Bill Pmt -Check	**10/22/2021**	**ACH 102221**	**PUBLIC EMPLOYEES' RETIREMENT SYSTEM**	**Payor #3493**	**1012 · Bank of America Gen'l Ckg**	
	General Journal	10/16/2021	10/16/2021	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	CalPERS Retirement for 10/03/21-10/16/21	2000 · Accounts Payable	9,186.50
TOTAL							9,186.50

Type	Date	Num	Name	Memo	Account	Paid Amount
General Journal	**10/25/2021**	**10/25/2021**	**HEALTH EQUITY**	**Health Equity Invoice 3063261**	**1012 · Bank of America Gen'l Ckg**	
			HEALTH EQUITY	Health Equity Invoice 3063261	1012 · Bank of America Gen'l Ckg	76.25
TOTAL						76.25
Bill Pmt -Check	**10/26/2021**	**23143**	**BROWNSTEIN HYATT FARBER SCHRECK**		**1012 · Bank of America Gen'l Ckg**	
Bill	09/30/2021	862329		862329	6078 · BHFS Legal - Miscellaneous	19,488.60
Bill	09/30/2021	862330		Personnel matters	6073 · BHFS Legal - Personnel Matters	499.95
Bill	09/30/2021	862331		Audit Response	6078 · BHFS Legal - Miscellaneous	738.45
Bill	09/30/2021	862332		862332	6907.34 · Santa Ana River Water Rights	247.50
Bill	09/30/2021	862333		862333	6907.36 · Santa Ana River Habitat	247.50
Bill	09/30/2021	862334		862334	6275 · BHFS Legal - Advisory Committee	594.00
Bill	09/30/2021	862335		862335	6375 · BHFS Legal - Board Meeting	2,603.25
Bill	09/30/2021	862336		862336	8375 · BHFS Legal - Appropriative Pool	891.00
Bill	09/30/2021	862337		862337	8475 · BHFS Legal - Agricultural Pool	891.00
Bill	09/30/2021	862338		862338	8575 · BHFS Legal - Non-Ag Pool	891.00
Bill	09/30/2021	862339		862339	6071 · BHFS Legal - Court Coordination	1,352.25
Bill	09/30/2021	862340		862340	6072 · BHFS Legal - Rules & Regs	4,914.00
Bill	09/30/2021	862341		862341	6077 · BHFS Legal - Party Status Maint	1,237.50
Bill	09/30/2021	862342		862342	6907.47 · 2020 Safe Yield Reset	99.00
Bill	09/30/2021	862343		862343	6078.25 · Ely 3 Basin Investigation	1,610.10
				CourtCall - Sandler	6078.25 · Ely 3 Basin Investigation	94.00
				Filing Fee	6078.25 · Ely 3 Basin Investigation	90.74
TOTAL						36,489.84
General Journal	**10/26/2021**	**10/26/2021**	**HEALTH EQUITY**	**Health Equity Invoice 3130433**	**1012 · Bank of America Gen'l Ckg**	
			HEALTH EQUITY	Health Equity Invoice 3130433	1012 · Bank of America Gen'l Ckg	27.24
TOTAL						27.24
Bill Pmt -Check	**10/26/2021**	**ACH 102621**	**PUBLIC EMPLOYEES' RETIREMENT SYSTEM**	**Payor #3493**	**1012 · Bank of America Gen'l Ckg**	
Bill	10/01/2021	16570286		Annual Unfunded Accrued Liability-Plan 3299	60180 · Employers PERS Expense	8,989.42
TOTAL						8,989.42
					Total Disbursements:	**575,651.59**

I. CONSENT CALENDAR

C. APPLICATION: WATER TRANSACTION

CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, CA 91730
Tel: 909.484.3888 Fax: 909.484.3890 www.cbwm.org

PETER KAVOUNAS, P.E.
General Manager

STAFF REPORT

DATE: November 18, 2021

TO: Advisory Committee and Board Members

SUBJECT: Application: Water Transaction – Santa Ana River Water Company to BlueTriton Brands, Inc. (Consent Calendar I.C.)

SUMMARY:

Issue: The purchase of 1,000 acre-feet of water from Santa Ana River Water Company by BlueTriton Brands, Inc. This purchase is made from Santa Ana River Water Company's Excess Carry Over Storage Account.

Recommendation:

Advisory Committee: Recommend to the Watermaster Board to approve the proposed transaction.

Board Members: Approve the proposed transaction.

Financial Impact: None

Future Consideration
Advisory Committee – November 18, 2021: Advice and assistance.
Watermaster Board – November 18, 2021: Approval [Within WM Duties and Powers]

ACTIONS:
Appropriative Pool – October 14, 2021: Unanimously recommended Advisory Committee to recommend to the Watermaster Board to approve.
Non-Agricultural Pool – October 14, 2021: Unanimously recommended its representatives to support at Advisory Committee and Watermaster Board subject to changes they deem appropriate.
Agricultural Pool – October 14, 2021: Unanimously moved to oppose as presented.
Advisory Committee – November 18, 2021:
Watermaster Board – November 18, 2021:

BACKGROUND

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

Where there is no material physical injury, Watermaster must approve the transaction. Where the request for Watermaster approval is submitted by a Party to the Judgment, there is a rebuttable presumption that most of the transactions do not result in material physical injury to a Party to the Judgment or the Basin (Storage and Recovery Programs do not have this presumption).

The date of this application is September 27, 2021. Notice of the transaction along with the materials submitted by the requestors were transmitted electronically on October 8, 2021.

DISCUSSION

Beyond confirmation of the source of the water to be transferred (Supplemental Water or Excess Carryover), Watermaster will evaluate the eventual disposition of the transferred water (e.g., production, storage, etc.) at the end of the production year and account for the same consistent with the Watermaster Guidance Documents.

Water transactions occur each year and are included as production by the respective entity (if produced) in any relevant analyses conducted by West Yost pursuant to the Peace Agreement and the Rules & Regulations. There is no indication that additional analysis regarding this transaction is necessary at this time. As part of the OBMP Implementation Plan, measurement of groundwater levels and ground level changes are ongoing. Based on no real change in the available data, we cannot conclude that the proposed water transaction will cause material physical injury to a Party to the Judgment or to the Basin.

On October 14, 2021, the Appropriative Pool unanimously recommended Advisory Committee to recommend to the Watermaster Board to approve the proposed transaction; the Overlying (Non-Agricultural) Pool unanimously recommended its representatives to support at Advisory Committee and Watermaster Board subject to changes they deem appropriate. The Overlying (Agricultural) Pool unanimously moved to oppose the proposed transaction as presented.

ATTACHMENTS

1. Consolidated Forms 3, 4, & 5
2. Notice Forms

CONSOLIDATED WATER TRANSFER FORMS:
FORM 3: APPLICATION FOR SALE OR TRANSFER OF RIGHT TO PRODUCE WATER FROM STORAGE
FORM 4: APPLICATION OR AMENDMENT TO APPLICATION TO RECAPTURE WATER IN STORAGE
FORM 5: APPLICATION TO TRANSFER ANNUAL PRODUCTION RIGHT OR SAFE YIELD

FISCAL YEAR 2021 - 2022

DATE REQUESTED: September 27, 2021 **AMOUNT REQUESTED:** 1,000 Acre-Feet

TRANSFER FROM (SELLER / TRANSFEROR):	**TRANSFER TO (BUYER / TRANSFEREE):**
Santa Ana River Water Company Name of Party	BlueTriton Brands, Inc. Name of Party
10530 54th Street Street Address	405 North Indian Hill Boulevard Street Address
Jurupa Valley / CA / 91752 City / State / Zip Code	Claremont / CA / 91711 City / State / Zip Code
(951) 685-6503 Telephone	(909) 621-1266 Telephone
Facsimile	Facsimile

Have any other transfers been approved by Watermaster between these parties covering the same fiscal year? Yes ☐ No ☒

PURPOSE OF TRANSFER:

- ☐ Pump when other sources of supply are curtailed
- ☒ Pump to meet current or future demand over and above production right
- ☐ Pump as necessary to stabilize future assessment amounts
- ☐ Other, explain _____

WATER IS TO BE TRANSFERRED FROM:

- ☐ Annual Production Right (Appropriative Pool) or Operating Safe Yield (Non-Agricultural Pool)
- ☒ Storage
- ☐ Annual Production Right / Operating Safe Yield first, then any additional from Storage
- ☐ Other, explain _____

WATER IS TO BE TRANSFERRED TO:

- ☒ Annual Production Right / Operating Safe Yield (common)
- ☐ Storage (rare)
- ☐ Other, explain _____

IS THE 85/15 RULE EXPECTED TO APPLY? (If yes, all answers below must be "yes.")	**Yes** ☐	**No** ☒
Is the Buyer an 85/15 Party?	Yes ☐	No ☐
Is the purpose of the transfer to meet a current demand over and above production right?	Yes ☐	No ☐
Is the water being placed into the Buyer's Annual Account?	Yes ☐	No ☐

IF WATER IS TO BE TRANSFERRED FROM STORAGE:

300 AFY
Projected Rate of Recapture

January to December
Projected Duration of Recapture

METHOD OF RECAPTURE (e.g. pumping, exchange, etc.):

Pumping

PLACE OF USE OF WATER TO BE RECAPTURED:

Ontario facility

LOCATION OF RECAPTURE FACILITIES (IF DIFFERENT FROM REGULAR PRODUCTION FACILITIES):

WATER QUALITY AND WATER LEVELS

Are the Parties aware of any water quality issues that exist in the area? Yes ☐ No ☒

If yes, please explain:

What are the existing water levels In the areas that are likely to be affected?

MATERIAL PHYSICAL INJURY

Are any of the recapture wells located within Management Zone 1? Yes ☐ No ☒

Is the Applicant aware of any potential Material Physical Injury to a party to the Judgment or the Basin that may be caused by the action covered by the application? Yes ☐ No ☒

If yes, what are the proposed mitigation measures, if any, that might reasonably be Imposed to ensure that the action does not result in Material Physical Injury to a party to the Judgment or the Basin?

SAID TRANSFER SHALL BE CONDITIONED UPON:

(1) Transferee shall exercise said right on behalf of Transferor under the terms of the Judgment, the Peace Agreement, the Peace II Agreement, and the Management Zone 1 Subsidence Management Plan for the period described above. The first water produced in any year shall be that produced pursuant to carry-over rights defined in the Judgment. After production of its carry-over rights, if any, the next (or first if no carry-over rights) water produced by Transferee from the Chino Basin shall be that produced hereunder.

(2) Transferee shall put all waters utilized pursuant to said Transfer to reasonable beneficial use.

(3) Transferee shall pay all Watermaster assessments on account of the water production hereby Transferred.

(4) Any Transferee not already a party must intervene and become a party to the Judgment.

ADDITIONAL INFORMATION ATTACHED Yes ☐ No ☒

Seller / Transferor Representative Signature

John Lopez
Seller / Transferor Representative Name (Printed)

Buyer / Transferee Representative Signature

Kevin Sage
Buyer / Transferee Representative Name (Printed)

TO BE COMPLETED BY WATERMASTER STAFF:

DATE OF WATERMASTER NOTICE: **10/08/2021**

DATE OF APPROVAL FROM APPROPRIATIVE POOL: _____

DATE OF APPROVAL FROM NON-AGRICULTURAL POOL: _____

DATE OF APPROVAL FROM AGRICULTURAL POOL: _____

HEARING DATE, IF ANY: _____

DATE OF ADVISORY COMMITTEE APPROVAL: _____

DATE OF BOARD APPROVAL: _____

CHINO BASIN WATERMASTER

NOTICE

OF

APPLICATION(S)

RECEIVED FOR

WATER TRANSACTIONS – ACTIVITIES

Date of Notice:

October 8, 2021

This notice is to advise interested persons that the attached application(s) will come before the Watermaster Board on or after 30 days from the date of this notice.

TRANSFER OF WATER

A party to the Judgment has submitted a proposed transfer of water for Watermaster approval. Unless contrary evidence is presented to Watermaster that overcomes the rebuttable presumption provided in Section 5.3(b)(iii) of the Peace Agreement, Watermaster must find that there is "no material physical injury" and approve the transfer. Watermaster staff is not aware of any evidence to suggest that this transfer would cause material physical injury and hereby provides this notice to advise interested persons that this transfer will come before the Watermaster Board on or after 30 days from the date of this notice. The attached staff report will be included in the meeting package at the time the transfer begins the Watermaster process (comes before Watermaster).

NOTICE OF APPLICATION(S) RECEIVED

Date of Application: **September 27, 2021** Date of this notice: **October 8, 2021**

Please take notice that the following Application has been received by Watermaster:

- Notice of Sale or Transfer –The transfer of 1,000.0 acre-feet of water from Santa Ana River Water Company to Blue Triton Brands, Inc. This transfer is made from Santa Ana River Water Company's Excess Carryover Account.

This ***Application*** will first be considered by each of the respective pool committees on the following dates:

Appropriative Pool:	October 14, 2021
Non-Agricultural Pool:	October 14, 2021
Agricultural Pool:	October 14, 2021

This ***Application*** will be scheduled for consideration by the Advisory Committee ***no earlier than thirty days from the date of this notice and a minimum of twenty-one calendar days*** after the last pool committee reviews it**.**

After consideration by the Advisory Committee, the ***Application*** will be considered by the Board.

Unless the ***Application*** *is* amended, parties to the Judgment may file ***Contests*** to the ***Application*** with Watermaster ***within seven calendar days*** of when the last pool committee considers it. Any ***Contest*** must be in writing and state the basis of the ***Contest***.

Watermaster address:

Chino Basin Watermaster
9641 San Bernardino Road
Rancho Cucamonga, CA 91730

Tel: (909) 484-3888
Fax: (909) 484-3890

I. CONSENT CALENDAR

D. ANNUAL FINDING OF SUBSTANTIAL COMPLIANCE WITH THE RECHARGE MASTER PLAN

CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, CA 91730
Tel: 909.484.3888 Fax: 909.484.3890 www.cbwm.org

PETER KAVOUNAS, P.E.
General Manager

STAFF REPORT

DATE: November 18, 2021

TO: Advisory Committee and Board Members

SUBJECT: Annual Finding of Substantial Compliance with the Recharge Master Plan (Consent Calendar Item I.D.)

SUMMARY:

Issue: The Finding is required on an annual basis according to Section 8.3 of the Peace II Agreement.

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

Board: Adopt the finding that Watermaster is in substantial compliance with the Recharge Master Plan.

Financial Impact: There is no financial impact associated with this action.

Future Consideration
Advisory Committee – November 18, 2021: Advice and Assistance
Watermaster Board – November 18, 2021: Adoption [Normal Course of Business]

ACTIONS:
Appropriative Pool – November 10, 2021: Unanimously recommended AC to recommend Board approval.
Non-Agricultural Pool – November 10, 2021: Unanimously recommended their representatives to support at AC and Board subject to any changes they deem necessary.
Agricultural Pool – November 10, 2021: Unanimously recommended AC to recommend Board approval.
Advisory Committee – November 18, 2021:
Watermaster Board – November 18, 2021:

BACKGROUND

During the period of 2008-2010, Watermaster, in collaboration with the Inland Empire Utilities Agency (IEUA) and Chino Basin Water Conservation District (CBWCD), completed the 2010 Recharge Master Plan Update (RMPU). The RMPU was submitted to the Court in June 2010, and the Court subsequently approved the 2010 RMPU in October 2010. Watermaster has completed the amendment of the 2010 RMPU, pursuant to the Court's order, which the Board adopted in September 2013. The IEUA and Watermaster completed the most recent version RMPU in 2018 and will complete the next RMPU before the end of 2023.

Pursuant to Section 8.3 of the Peace II Agreement, Watermaster is obligated to make an annual finding that it is in substantial compliance with the Recharge Master Plan, as it is revised. This requirement exists to ameliorate any long-term risk attributable to reliance upon un-replenished groundwater production by the Desalters and is a condition on the annual availability of any portion of the 400,000 acre-feet set aside as controlled overdraft (Re-Operation). Recently, pursuant to Section 6.2(b) of the Peace Agreement, as the amendment is shown in the March 15, 2019 Court Order, the Desalter Replenishment Obligation is now being replenished by the Appropriative Pool through wet or stored water. West Yost (WY) has prepared the attached opinion regarding the adequacy of replenishment capacity, which includes the information that Watermaster needs to make this finding for Fiscal Year 2021-2022.

DISCUSSION

WY's analysis finds that current projections indicate that Watermaster has sufficient recharge capacity to meet the future replenishment obligations based on the knowledge of the basin's conditions in FY 2020-21 and future water management projections provided by the Watermaster Stakeholders. Current analysis indicates that even if Re-Operation were terminated at any time through 2030, Watermaster would be able to immediately increase its replenishment activity and replenish any overproduction in the Basin as required by the Judgment.

The item was presented to the three Pool Committees and was unanimously recommended for Advisory Committee to recommend Board adoption.

ATTACHMENTS

1. October 29, 2021 Letter from West Yost to Watermaster: *Annual Finding of Substantial Compliance with the Revised Watermaster Recharge Master Plan – Fiscal Year 2021-22*

October 29, 2021

Project No.: 941-80-21-45
SENT VIA: EMAIL

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

SUBJECT: Annual Finding of Substantial Compliance with the Recharge Master Plan – Fiscal Year 2021-22

Mr. Kavounas:

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

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

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

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

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

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

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

METHODOLOGY

The methodology used to determine if sufficient supplemental wet-water recharge capacity is available to meet projected replenishment obligations is to compare projected replenishment obligations to available supplemental wet-water recharge capacity over the period 2020 through 2050.

The most recent projections of replenishment obligations were developed in 2020 as part of the 2020 Safe Yield Recalculation (2020 SYR) for the period of 2020 through 2050.[1] These replenishment obligation projections are based on the Watermaster Parties' (Parties) best estimates of how future water supplies will be used to meet their water demands.

The most recent estimates of supplemental water recharge capacity were developed in 2018 as part of the 2018 RMPU.[2] As of this writing, the supplemental water recharge capacity in the Chino Basin is assumed to be constant through 2050.

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

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

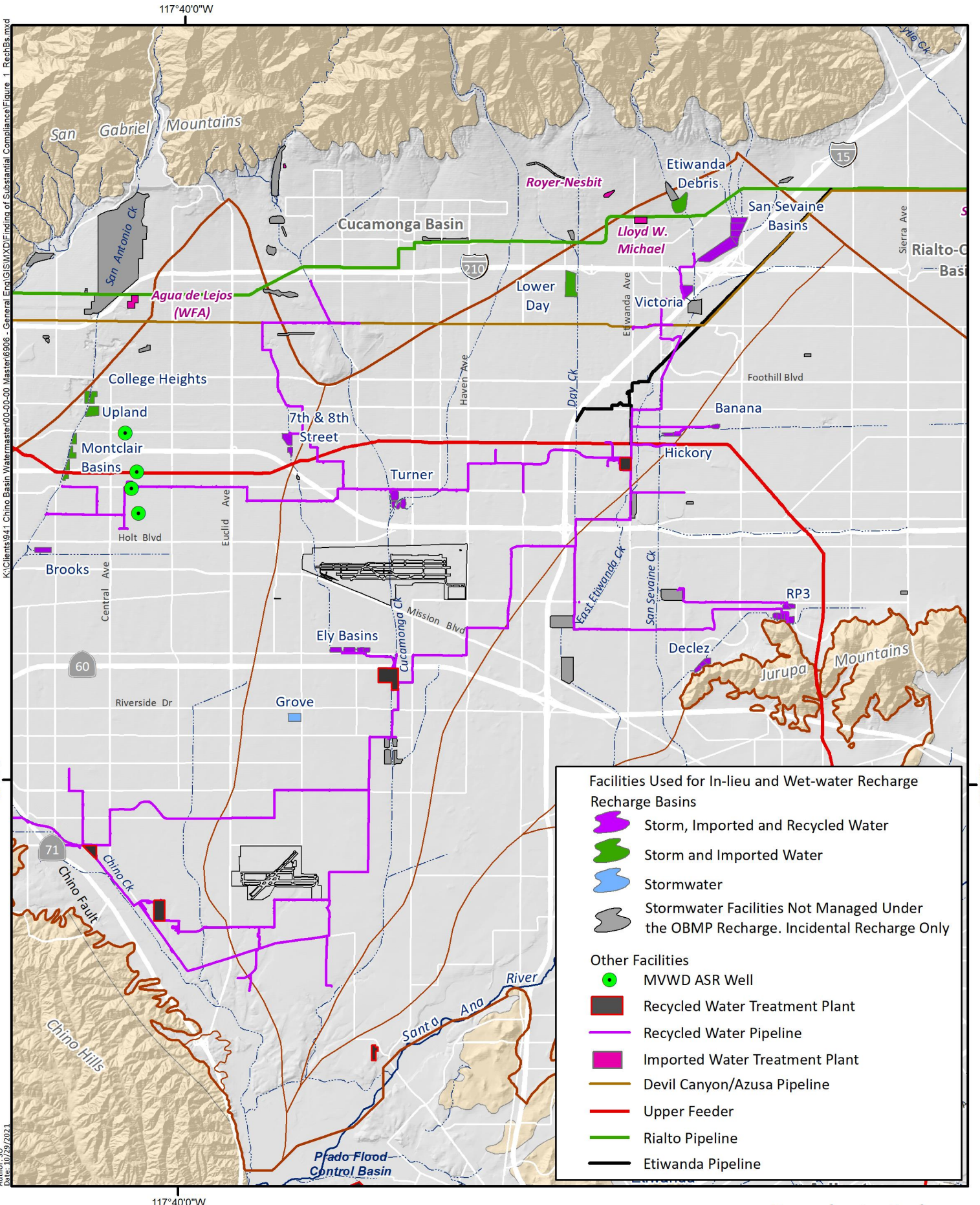
RESULTS

Supplemental wet-water recharge capacity includes the capacity of spreading basins available for supplemental water recharge and the capacity to inject supplemental water at aquifer storage and recovery (ASR) wells. Figure 1 shows the locations of spreading basins and ASR wells in the Chino Basin. The supplemental water recharge capacity in the Chino Basin is listed in Table 1 by the type of recharge facility.[3]

[1] WEI. (2020). *2020 Safe Yield Recalculation*. Prepared for the Chino Basin Watermaster. April 2020. https://cbwm.syncedtool.com/shares/folder/Cdw2ChSpH9O/?folder_id=2512

[2] WEI. (2018). *2018 Recharge Master Plan Update*. October 2018. http://www.cbwm.org/docs/engdocs/2018%20RMPU/20180914_2018_RMPU_final.pdf

[3] For additional technical documentation on the development of wet-water recharge capacity estimates, refer to Section 4 of the *2018 Recharge Master Plan Update*.



Prepared by:
WEST YOST
Water. Engineered.

0 1 2 Miles
0 1 2 Km

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

Groundwater Recharge in the Chino Basin

Figure 1

Table 1. Supplemental wet-water recharge capacity in the Chino Basin	
Recharge Facility	**Recharge Capacity** acre-feet per year (afy)
Spreading basins[4]	56,600
ASR wells	5,480
Total	**61,480**

Table 2 shows the supplemental wet-water recharge capacity [Column *(b)*] and the projected annual replenishment obligation from 2021 to 2050 [Column *(c)*].[5] Comparing Columns *(b)* and *(c)* in Table 2 indicates there is sufficient supplemental wet-water recharge capacity (61,480 afy) to meet the projected wet-water replenishment obligations (up to 3,800 afy).

Reduced Availability of Imported Water

The Metropolitan Water District of Southern California (Metropolitan) provides imported water to the Chino Basin area through the Inland Empire Utilities Agency (IEUA). The imported water supplies are not guaranteed to Watermaster because during periods of shortages (when Metropolitan's demands exceed available supplies) Metropolitan may not deliver imported water to the Chino Basin for replenishment.

In January 2016, Metropolitan completed its 2015 Integrated Resources Plan (IRP) Update.[6] Metropolitan reported that if its IRP is fully implemented, shortages in Metropolitan supplies will occur approximately 9 percent of the time under 2020 conditions, 4 percent of the time under 2025 conditions, and 0 percent under 2030 conditions. However, as Metropolitan implements the 2015 IRP, modifications to the proposed projects in the IRP may cause additional shortages than previously projected. For instance, in 2019, one of the main projects recommended in the 2015 IRP – the California WaterFix tunnel project (now called the Delta Conveyance Project) – was downsized. As of this writing, construction of this project is not certain. If Metropolitan does not fully implement its 2015 IRP, shortages in Metropolitan supplies are projected to occur about 12 percent of the time under 2020 conditions and up to 80 percent under 2040 conditions.

This uncertainty in imported water availability was accounted for in the 2018 RMPU and in this analysis by assuming that if Metropolitan does not fully implement its 2015 IRP, Watermaster will only be able to purchase water from Metropolitan for replenishment purposes in one out of five years (*i.e.,* shortages will occur 80 percent of the time). Table 2 [Column *(d)*] shows the projected recharge capacity required to meet replenishment obligation if imported water is available one out of five years. Comparing Columns *(b)* and *(d)* in Table 2 indicates there is sufficient supplemental wet-water recharge capacity (61,480 afy) to meet the maximum projected wet-water replenishment obligation if imported water is available one out of five years (up to 15,494 afy).

[4] This estimate includes the use of spreading basins for stormwater recharge (*i.e.*, excludes the recharge capacity used for stormwater recharge).
[5] The 2020 SYR assumes 80 percent of a replenishment obligation is satisfied from storage and 20 percent is satisfied by wet-water recharge via spreading and injection (see Table 7-3 of the 2020 SYR).
[6] Metropolitan Water District of Southern California (2016). Integrated Water Resources Plan: 2015 Update. Report No. 1518. http://www.mwdh2o.com/

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

FY 2020-2050; acre-feet per year

Fiscal Year (a)	Supplemental wet-water recharge capacity (b)	Projected annual replenishment obligation assumed to be satisfied by wet-water recharge in the 2020 Safe Yield Reset (c)	Recharge capacity required to meet replenishment obligation under cumulative adverse conditions			Excess supplemental wet-water recharge capacity under worst-case scenario (g) = (f) - (b)
			If imported water is available one out of five years (d)	If reoperation were discontinued (e) = (d) + reoperation offset	If DYYP recharge occurs on the same year (f) = (e) + 25,000	
2021	61,480	0				
2022		0				
2023		0				
2024		0				
2025		0	0	0	25,000	36,480
2026		0				
2027		0				
2028		0				
2029		0				
2030		0	0	12,680	37,680	23,800
2031		0				
2032		459				
2033		971				
2034		1,482				
2035		1,994	4,906	4,906	29,906	31,574
2036		2,362				
2037		2,731				
2038		3,099				
2039		3,467				
2040		3,835	15,494	15,494	40,494	20,986
2041		3,022				
2042		3,022				
2043		3,022				
2044		3,022				
2045		3,022	15,110	15,110	40,110	21,370
2046		3,022				
2047		3,022				
2048		3,022				
2049		3,022				
2050		3,022	15,110	15,110	40,110	21,370

Suspension of Basin Reoperation

The annual maximum amount of Basin Reoperation water used to meet the replenishment obligation of the Desalters is 12,500 afy through 2030. If Basin Reoperation was discontinued at any time through 2030, the annual maximum replenishment obligation could increase. Table 2 [Column *(e)*] shows the projected recharge capacity required to meet replenishment obligations if Basin Reoperation were discontinued at any point before 2030. Comparing Columns *(b)* and *(e)* in Table 2 indicates there is sufficient supplemental wet-water recharge capacity (61,480 afy) to meet the maximum projected wet-water replenishment obligation if Basin Reoperation were discontinued at any point before 2030 (up to 15,494 afy).

Contractual Requirements of the Dry-Year Yield Program

The IEUA and Watermaster have a contractual requirement with Metropolitan to recharge up to 25,000 afy under the Dry-Year Yield Program (DYYP). The DYYP contract terminates in 2028. Table 2 [Column *(f)*] shows the projected recharge capacity required to meet replenishment obligations and to recharge 25,000 afy for DYYP, assuming DYYP continues after 2028. Comparing Columns *(b)* and *(f)* in Table 2 indicates there is sufficient supplemental wet-water recharge capacity (61,480 afy) to meet the maximum projected wet-water replenishment obligation and recharge up to 25,000 afy for DYYP (up to 40,494 afy).

Other Recharge and Excess Capacity

Some Parties want to utilize wet-water recharge capacity to store supplemental water in the Chino Basin. Table 2 [Column *(g)*] shows the excess supplemental wet-water recharge capacity under the worst-case scenario (*i.e.,* reduced imported water availability, suspension of Basin Reoperation, and DYYP recharge). The minimum excess supplemental wet-water recharge capacity under the worst-case scenario from 2021 to 2050 is projected to be about 21,000 afy. Therefore, this analysis indicates that at least 21,000 afy of wet-water recharge capacity will be available for the Parties to recharge and store supplemental water in the Chino Basin through 2050.

CONCLUSIONS

Watermaster's ability to recharge the Chino Basin with supplemental water is sufficient to meet its projected replenishment obligations, even under conditions of reduced availability of imported water, increased replenishment obligations (*i.e.,* suspension of Basin Reoperation), and/or decreased recharge capacity (*i.e.,* the need to recharge for the DYYP). Additionally, there is about 17,700 afy of in-lieu recharge capacity available that can be used to meet future replenishment obligations.

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

Sincerely,
WEST YOST

Carolina Sanchez

Carolina Sanchez, PE
Senior Engineer
RCE #85598

I. CONSENT CALENDAR

E. 2020/21 ANNUAL REPORT OF THE GROUND-LEVEL MONITORING COMMITTEE

CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, CA 91730
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PETER KAVOUNAS, P.E.
General Manager

STAFF REPORT

DATE: November 18, 2021

TO: Advisory Committee and Board Members

SUBJECT: 2020/21 Annual Report of the Ground-Level Monitoring Committee (Consent Calendar Item I.E.)

SUMMARY:

Issue: Watermaster is required annually to file a Ground-Level Monitoring report with the Court. The 2020/21 Annual Report has been drafted and reviewed by the Ground-Level Monitoring Committee.

Recommendation:
Advisory Committee: Recommend to the Watermaster Board to approve the 2020/21 Annual Report of the Ground-Level Monitoring Committee, along with filing a copy with the Court.

Board: Approve the 2020/21 Annual Report of the Ground-Level Monitoring Committee, along with filing a copy with the Court.

Financial Impact: Approval of the report does not result in additional expenses. All the recommendations in the 2021/22 Annual Report for the ongoing monitoring program are included in the approved FY 2020/21 budget.

Future Consideration
Advisory Committee – November 18, 2021: Advice and Assistance
Watermaster Board – November 18, 2021: Approve and file with the Court [Discretionary Function]

ACTIONS:
Appropriative Pool – November 10, 2021: Unanimously recommended AC to recommend Board approval.
Non-Agricultural Pool – November 10, 2021: Unanimously recommended their representatives to support at AC and Board subject to any changes they deem necessary.
Agricultural Pool – November 10, 2021: Unanimously recommended AC to recommend Board approval.
Advisory Committee – November 18, 2021:
Watermaster Board – November 18, 2021:

BACKGROUND

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

From 2001 to 2005, Watermaster developed, coordinated, and conducted a comprehensive investigation under the guidance of the MZ-1 Technical Committee (now called the Ground-Level Monitoring Committee or GLMC) to understand the causes of the subsidence and fissuring in the southwestern portion of MZ-1. The investigation provided enough information for Watermaster to develop Guidance Criteria for the producers in the investigation area that, if followed, would minimize the potential for subsidence and fissuring during the completion of the Subsidence Management Plan. The Guidance Criteria formed the basis for the Subsidence Management Plan, which was developed by the GLMC and approved by Watermaster in October 2007. By a November 15, 2007 Order, the Watermaster Court 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 2020/21 Annual Report of the GLMC (Attachment 1) includes results and interpretations for data that were collected during FY 2020/21 and includes recommendations for Watermaster's Ground-Level Monitoring Program for FY 2021/22.

The GLMC met on March 4, 2021 to review and discuss the recent monitoring results and to develop a scope-of-work and budget for FY 2021/22. Subsequently, an overview of the monitoring results and the proposed scope-of-work and budget for FY 2021/22 were presented to the Pool Committees in April 2021 and at Watermaster's budget workshops.

The GLMC was provided with the draft annual report on September 24, 2021 for review and comment. The GLMC met on September 30, 2021 to review and discuss the draft annual report with Watermaster Staff and Engineer. The GLMC submitted comments during the comment window and were addressed in the final report attached.

The item was presented to the three Pool Committees and was unanimously recommended for Advisory Committee to recommend Board approval and filing with the Court.

ATTACHMENTS

1. 2020/21 Annual Report of the Ground-Level Monitoring Committee

FINAL REPORT | NOVEMBER 2021

2020/21 Annual Report of the Ground-Level Monitoring Committee

PREPARED FOR

Ground-Level Monitoring Committee

PREPARED BY

WEST YOST
Water. Engineered.

2020/21 Annual Report of the Ground-Level Monitoring Committee

Prepared for

Ground-Level Monitoring Committee

Project No. 941-80-21-61

Project Manager: Michael Blazevic	November 3, 2021 Date
QA/QC Review: Andy Malone	November 3, 2021 Date

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LIST OF ACRONYMS, ABBREVIATIONS, AND INITIALISMS

af	Acre-feet
Ayala Park	Rubin S. Ayala Park
Ayala Park Extensometer	Extensometer at Ayala Park
BMA	Baseline Management Alternative
CCX	Chino Creek Extensometer Facility
DHX	Daniels Horizontal Extensometer
EDM	Electronic distance measurement
ft	Feet
ft-amsl	Feet above mean sea level
ft-btoc	Feet below top of casing
ft-bgs	Feet below ground surface
ft/yr	Feet per year
FY	Fiscal Year
GLMC	Ground-Level Monitoring Committee
GLMP	Ground-Level Monitoring Program
IMP	Management Zone 1 Interim Monitoring Program
InSAR	Interferometric synthetic aperture radar
ISMA	Initial Subsidence Management Alternative
MVWD	Monte Vista Water District
MZ-1	Chino Basin Optimum Basin Management Plan Management Zone 1
MZ-1 Plan	Management Zone 1 Subsidence Management Plan
OBMP	Optimum Basin Management Plan
PA	Piezometer A (Ayala Park extensometer facility)
PC	Piezometer C (Ayala Park extensometer facility)
PFAS	Per – and polyfluoroalkyl substances
PX	Pomona Extensometer Facility
SAR	Synthetic Aperture Radar
SCADA	Supervisory Control and Data Acquisition
SMA-2	Second Subsidence-Management Alternative
Subsidence Management Plan	2015 Chino Basin Subsidence Management Plan
TCP	1,2,3-trichloropropane
USGS	United States Geological Survey
Watermaster	Chino Basin Watermaster
WEI	Wildermuth Environmental, Inc.
Work Plan	Work Plan to Develop a Subsidence Management Plan for the Northwest MZ-1

1.0 INTRODUCTION

This section describes background information on the history of land subsidence and ground fissuring in the Chino Basin, information on the formation of the Ground-Level Monitoring Committee (GLMC) and its responsibilities, and a description of the development and implementation of the Management Zone 1 Subsidence Management Plan (MZ-1 Plan) and the 2015 Chino Basin Subsidence Management Plan (Subsidence Management Plan).

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. Figures 1-1 and 1-2 show the locations of these fissures. Scientific studies of the area have 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 initial collection of basin-wide data to characterize land subsidence, including ground-level surveys and remote-sensing (specifically, interferometric synthetic aperture radar or 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 for use in analyzing 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 aquifer-system deformation.

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. 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

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

and lateral extent than the hydraulic head decline caused by pumping of the shallow aquifer-system.

- Hydraulic head decline due to pumping from the deep aquifer-system can cause inelastic compaction of the aquifer-system sediments, which results in land subsidence. The initiation of inelastic compaction within the aquifer-system was identified during the investigation when hydraulic heads in the deep aquifer-system at the Ayala Park PA-7 piezometer fell below a depth of about 250 feet (ft).
- The state of aquifer-system deformation in southern MZ-1 was essentially elastic during the Reconnaissance Phase of the IMP. Very little inelastic compaction was occurring in this area, which contrasted with the recent past when about 2.2 ft of land subsidence occurred from about 1987 to 1995 and resulted in ground fissuring. Figure 1-1 shows the land surface deformation that was measured in the western Chino Basin and the wells that pumped during that period.
- During the development of the IMP, a previously unknown barrier to groundwater flow was identified, shown in Figures 1-1 and 1-2. The barrier was named the "Riley Barrier" after Francis S. Riley, a retired USGS geologist who first detected the barrier during the IMP. This barrier is located within the deep aquifer-system and is aligned with the historical zone of ground fissuring. Pumping from the deep aquifer-system was limited to the area west of the barrier, and the resulting hydraulic head decline did not propagate eastward across the barrier. Thus, compaction occurred within the deep aquifer-system on the west side of the barrier but not on the east side, which caused concentrated differential subsidence across the barrier and created the potential for ground fissuring.
- The InSAR and ground-level surveys indicated that subsidence in Central MZ-1 had occurred in the past and was continuing to occur. InSAR also suggested that the groundwater barrier (Riley Barrier) extends northward into Central MZ-1, as shown in Figure 1-1. These observations suggested that the conditions that very likely caused ground fissuring near Ayala Park in the 1990s were also present in Central MZ-1. However, there was not enough historical hydraulic head data in this area to confirm this relationship. The IMP recommended that, if subsidence continued or increased in Central MZ-1, the mechanisms causing land subsidence should be studied in more detail.

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

The Guidance Criteria were:

- The Managed Wells subject to the Guidance Criteria. Table 1-1 shows the list of Managed Wells with screens completed into the deep aquifer-system that are subject to the Guidance Criteria.

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

Well Name	CBWM ID	Owner	2021 Status	Well Screen 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		Inactive[e]	270-400; 626-820
CH-1B	600487	City of Chino Hills	Inactive	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		Inactive	360-440; 480-900
CH-16	600489		Inactive	430-940
CH-17	600499		Active	300-460; 500-680
CH-19	600500		Abandoned	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 level 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 level in PA-7 falls below the Guidance Level, Watermaster recommends that the MZ-1 Parties curtail their pumping from designated Managed Wells as required.
- Real-time monitoring/reporting of head levels in PA-7. Watermaster was to provide the MZ-1 Parties with real-time hydraulic head level 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 level in 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 head levels 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 level 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 head level in PA-7 remains 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: 1) more intensive monitoring of horizontal strain across the zone of historical ground fissuring to assist in developing management strategies related to fissuring, 2) injection feasibility studies within the Managed Area, 3) additional pumping tests to refine the Guidance Criteria, 4) computer-simulation modeling of groundwater flow and subsidence, and 5) the development of alternative pumping plans for the MZ-1 Parties affected by the MZ-1 Plan. The MZ-1

[2] Source: http://www.cbwm.org/rep_legal.htm.

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.

1.1.5 2015 Chino Basin Subsidence Management Plan

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

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

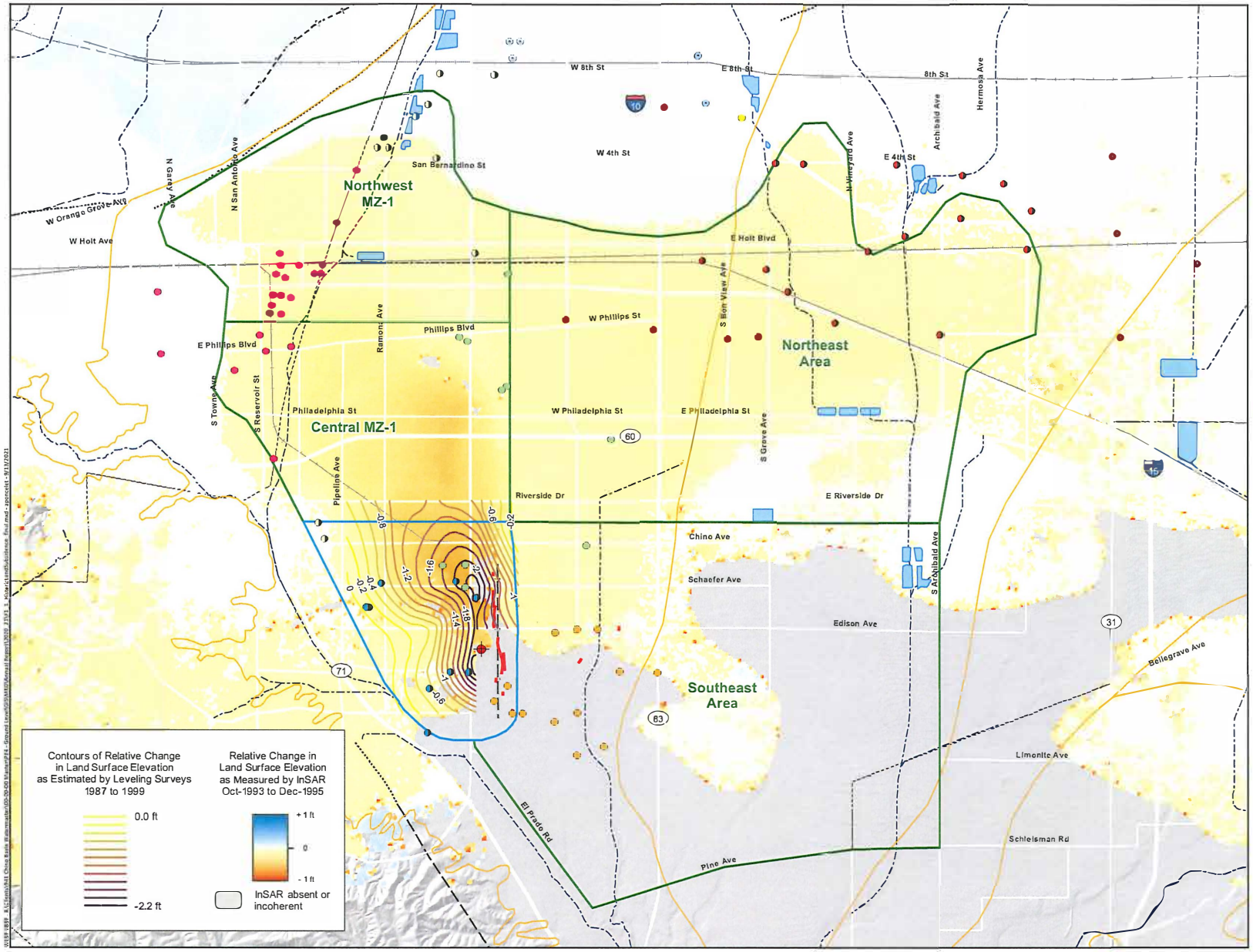
1.1.6 Annual Report of the Ground-Level Monitoring Committee

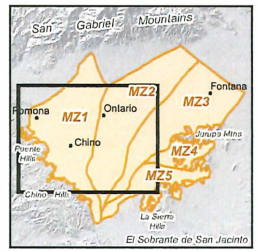
Pursuant to the Subsidence Management Plan, Watermaster will produce an annual report, containing the results of ongoing monitoring efforts, interpretations of the data, and recommended adjustments to the Subsidence Management Plan, if any. This annual report of the GLMC includes the results and interpretations for the data collected between March 2020 through March 2021, as well as recommendations for Watermaster's GLMP for FY 2021/22.

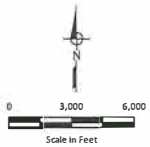
1.2 Report Organization

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 2020 and March 2021.
- **Section 3.0 – Results and Interpretations.** This section discusses and interprets the monitoring data collected between March 2020 and March 2021, 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 2020 and March 2021 and describes recommended activities for the GLMP for FY 2021/22.
- **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.







Ayala Park Extensometer Facility
Managed Area
Areas of Subsidence Concern
Flood Control and Conservation Basins

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

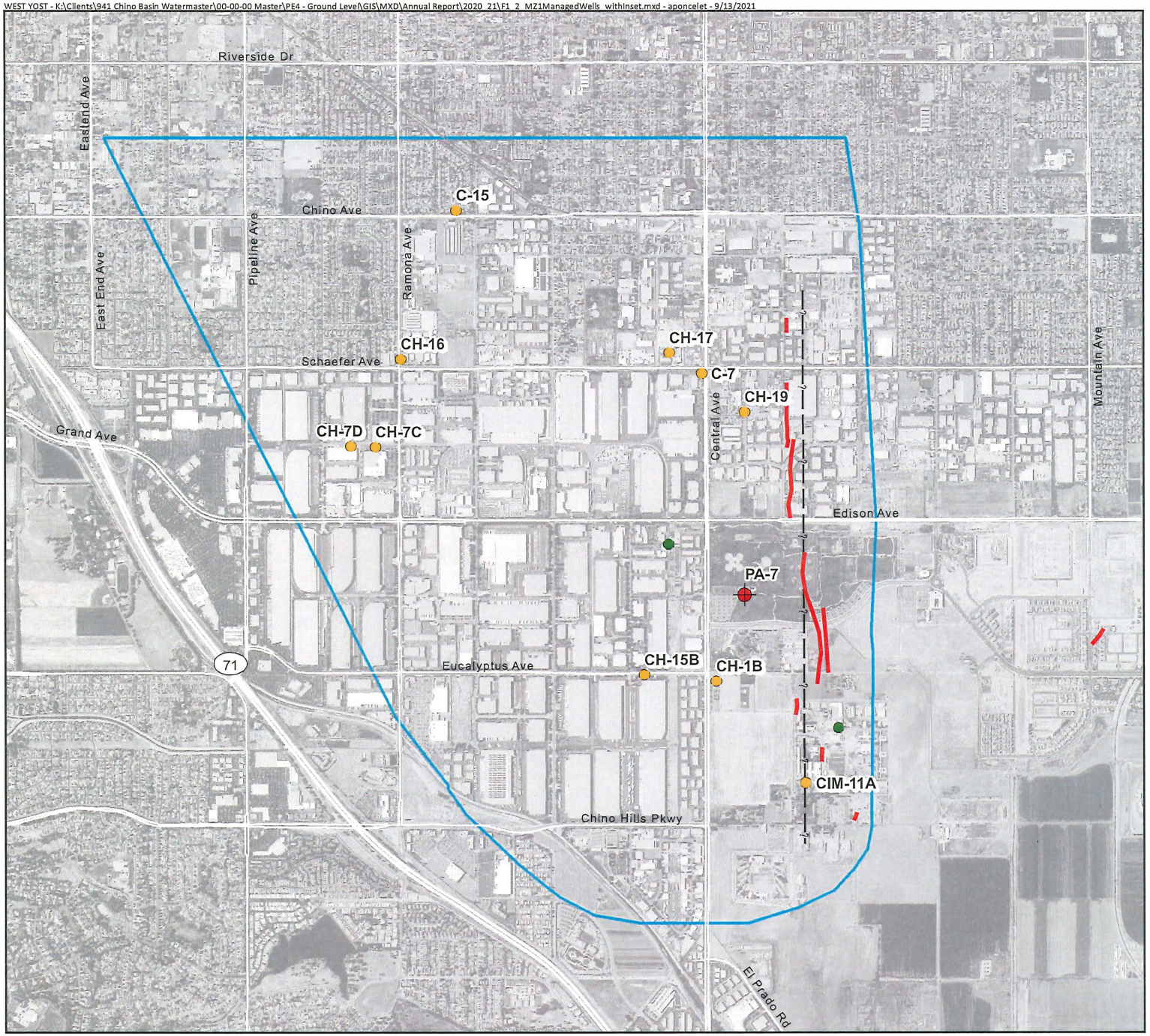
Fault (solid where accurately located; dashed where approximately located or inferred; dotted where concealed)

WEST YOST

Figure 1-1

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

Chino Basin Watermaster
Ground-Level Monitoring Committee
2020/21 Annual Report



WEST YOST

Figure 1-2

MZ-1 Managed Area and the Managed Wells

Chino Basin Watermaster
Ground-Level Monitoring Committee
2020/21 Annual Report

2.0 GROUND-LEVEL MONITORING PROGRAM

This section describes the activities performed by Watermaster for the GLMP between March 2020 and March 2021.

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 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 2020 and March 2021 are described below.

2.1.1 Setup and Maintenance of the Monitoring Facilities 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. During the reporting period, the following activities were performed at the Chino Basin extensometer facilities:

- Performed routine monthly maintenance at the Ayala Park, Chino Creek, and Pomona Extensometer (PX) Facilities.
- Purchased and installed a new sump pump for the Piezometer A (PA) vault (Ayala Park Extensometer Facility). The sump pump automatically pumps water from the vault when water (rain or sprinklers) enters and accumulates in the vault.
- Replaced the 12 volt deep-cycle battery at the Piezometer C (PC) vault at the Ayala Park Extensometer Facility to ensure power to the datalogger and continuous data collection.
- Replaced the PA-7 dedicated transducer at the Ayala Park Extensometer Facility.
- Adjusted the deep extensometer rocker arm at the Ayala Park Extensometer Facility.
- At the PX Facility, all devices used to monitor piezometric (transducers) and aquifer-system deformation (linear potentiometers and vibrating wireline transducers) and data loggers were installed between April and September 2020. Data collection from the PX Facility commenced in December 2020.
- At the PX Facility, dead-band testing at each cable extensometer was conducted on July 1, 2020 to quantify the frictional properties of the extensometers, characterize performance and accuracy, and to refine the ideal counter-weight balance (Riley, 1986).
- Installed a new 12-volt deep-cycle batteries at the PX Facility to ensure continuous power to the dataloggers and continuous data collection.

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. The following sub-sections (2.1.2.1 through 2.1.2.4) describe Watermaster's monitoring activities between March 2020 and March 2021, as called for by the Subsidence Management Plan and in accordance with the recommendations of the GLMC.

2.1.2.1 Monitoring of Pumping, Recharge, and Piezometric Levels

The Watermaster collects and compiles groundwater pumping data on a quarterly basis from well owners in the Managed Area and Areas of Subsidence Concern. The well locations that pumped groundwater between March 2020 and March 2021 are shown in Figure 2-1.

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

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

2.1.2.2 Monitoring Vertical Aquifer-System Deformation

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

2.1.2.3 Monitoring Vertical Ground Motion

The Watermaster monitored vertical ground motion via ground-level surveys using InSAR and traditional leveling techniques.

For InSAR, the Watermaster retained General Atomics (formerly Neva Ridge Technologies, Inc.) to acquire and post-process land-surface displacement data from the TerraSAR-X satellite operated by the German Aerospace Center. The width of the TerraSAR-X data frame covers the western half of the Chino Basin only.[3] Six synthetic aperture radar (SAR) scenes were collected between March 2020 and March 2021. The

[3] All historical InSAR data that were collected and analyzed by Watermaster from 1993 to 2010 indicate that very little vertical ground motion occurred in the eastern half of the Chino Basin. In 2012, the GLMC decided to acquire and analyze InSAR only in the western portion of the Chino Basin as a cost-saving strategy.

scenes were used to create 10 interferograms[4] to estimate short- and long-term vertical ground motion[5] over the following periods (Table 2-1):

Table 2-1. 2020/21 Interferograms Short- and Long-Term Time-Periods

2020/21 Interferograms	Long-Term Interferograms
March 2020 to June 2020	March 2011 to March 2021
June 2020 to August 2020	March 2020 to March 2021
August 2020 to October 2020	March 2020 August 2020
October 2020 to December 2020	March 2020 October 2020
December 2020 to March 2021	March 2020 December 2020

This year's InSAR results were again generated using General Atomics new processing method to allow for estimates of vertical ground motion in areas that were previously incoherent. These areas include portions of the Southeast Area and the southeastern portions of the Northeast Area. A brief description of the processing techniques and the impact the processing techniques have on estimates of vertical ground motion across the western Chino Basin between 2011 and 2021 has been provided by General Atomics and is summarized below (Sean Yarborough, personal communication, September 3, 2020):

1. Tight filters[6] were applied to portions of the interferograms with higher overall coherence to preserve the shape and depth of smaller ground motion signals. Broad filters were used to retain and enhance ground motion trends in less coherent interferograms.
2. Intermittent coherence within agricultural and/or wildland (or open space) areas often result in a widespread loss of ground motion estimates, despite visible trends. Intermittently coherent points were interpolated in each interferogram.

The primary areas where the filters were applied (see No. 1 above) were agriculture and/or open-space areas in portions of the Southeast Area and the southeastern portions of the Northeast Area. The trade-off with using tight or broad filter sizes is that tight filters preserve the fine spatial detail of the ground motion in an area but creates noise in low coherence areas; and broad filters preserve overall ground motion trends but obscure the fine spatial details in the shape and displacement of the ground motion. Prior processing methods heavily favored one or the other approach. This year's InSAR delivery is an evolution,

[4] Two or more SAR scenes are used to generate grids of surface deformation (interferograms) over a given period. Typically, surfaces within a pixel will move up or down together as would be expected in recovery/subsidence scenarios. However, surfaces within the area of a pixel can move randomly and cause decorrelation in the radar signal. Examples of random motion within a pixel area are vegetation growing, urbanization, erosion of the ground surface, harvesting crops, plowing fields, and others. The magnitude of this decorrelation in the signal is measured mathematically and called incoherence. Based on the magnitude of decorrelation in an area, pixels will be rejected as "incoherent."

[5] Several factors can influence the accuracy of ground motion results as estimated by InSAR, such as satellite orbital uncertainties and atmospheric interference. On average, accuracy of ground motion results as estimated by InSAR are +/- 0.02 ft.

[6] Filters are used to smooth the ground motion measurements by reducing the standard deviation of the pixels in a given area. Filters can differ in overall size (areal extent), smoothing shape (flat, triangle, Gaussian, etc.) and strength (enforcement).

selecting an appropriate filter based on the coherence of specific agricultural and/or open-space areas in each frame.

The intermittent coherence described in No. 2 above appeared in certain areas in western Chino Basin with coherent points that had a clear spatial trend and a small handful of randomly incoherent points. With previous processing methods, once a point becomes incoherent and if no further spatial processing is performed, ground motion estimates at that location are lost moving forward in time, even if the point becomes coherent in the next interferogram and remains coherent indefinitely thereafter. A region with widespread intermittent coherence becomes completely masked over time as each point experiences a brief period of incoherence, even if its neighbors continue showing a clear trend. With the new processing techniques, these neighboring points are used to interpolate across intermittently incoherent points in order to preserve the overall ground motion estimate through time.

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 number of benchmark monuments that were surveyed within each 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	Number of Benchmarks Surveyed
Managed Area[(a)]	January 2018	22
Central Area[a]	January 2018	14
Northwest Area	May 2021	25
San Jose Fault Zone Area	May 2021	10
Southeast Area[a]	January 2018	77
Northeast Area	April 2020	68

(a) The entire benchmark monument survey network for the ground-level survey area was not surveyed in 2021 based on the GLMC scope and budget recommendations for FY 2020/21.

2.1.2.4 Monitoring of Horizontal Ground Motion

Watermaster measures horizontal ground motion between benchmarks across areas that are susceptible to ground fissuring via EDMs. The EDMs were performed between the benchmarks located within the San Jose Fault Zone Area (Figure 2-2). The number of benchmarks surveyed are shown in Table 2-3.

Table 2-3. Number of Benchmark Surveyed

Ground-Level Survey Area	Date of Most Recent Survey	Number of Benchmarks Surveyed
Fissure Zone Area[(a)]	February 2018	66
San Jose Fault Zone Area	May 2021	9

(a) EDMs across the Fissure Zone Area were not conducted in 2021 based on GLMC scope and budget recommendations for FY 2020/21.

2.2 Land-Subsidence Investigations

The Watermaster performs land subsidence investigations pursuant to the Subsidence Management Plan, the recommendations of the GLMC for the GLMP, and the annually approved Watermaster budget. Investigations can include aquifer-stress tests (e.g. pumping and injection) and the simultaneous monitoring of hydraulic heads, aquifer-system deformation, and deformation of the ground surface. The goals of these investigations are to refine the Guidance Criteria and 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 2020 and March 2021 that are called for in the Subsidence Management Plan.

2.2.1 Long-Term Pumping Test in the Managed Area

The GLMC developed the Long-Term Pumping Test in the Managed Area in response to the directives in the Subsidence Management Plan. The goal of the Long-Term Pumping Test is to develop a strategy for the prudent extraction of groundwater from the Managed Area. In this case, "prudent" is defined as extracting the maximum volume of groundwater possible without causing damage to the ground surface or the area's infrastructure. As of February 2021, the City of Chino Hills (M. Wiley, personal communication, February 1, 2021) reported the Long-Term Pumping test will not be completed in FY 2020/21 due to mechanical issues at CH-15B and 1,2,3-trichloropropane (TCP) and per- and polyfluoroalkyl substances (PFAS) contamination in CH-15B and CH-17. Injection at CH-16 will also likely not occur in FY 2020/21.

2.2.2 Analysis of EDM Measurements Across the Fissure Zone and San Jose Fault Zone

The Subsidence Management Plan calls for the Watermaster to monitor horizontal ground motion across areas that are susceptible to ground fissuring. Historically, this monitoring has occurred via EDMs and with the Daniels Horizontal Extensometer (DHX). The DHX was decommissioned and removed in 2015 because the site was developed. The GLMC annually recommends the scope and frequency of EDM surveys. The 2016 Annual Report of the GLMC included an in-depth review of horizontal strain that had occurred over time and measured from EDM data across the Fissure Zone to assess if the EDM data can be used in-lieu of the horizontal extensometer data collected at the DHX. Based on the review of EDM data between closely spaced benchmarks in the Fissure Zone Area, the EDM method appears to be a suitable monitoring technique to detect the occurrence of tensile strain within shallow soils and the potential threat of ground fissuring. Additionally, the 2016 Annual Report recommended that if permanent subsidence is absent in the Managed Area, the GLMC should consider performing EDM surveys across the Fissure Zone at a frequency greater than annual and performing EDM surveys in coordination with the Long-Term Pumping Test in the Managed Area. In 2021, the EDM survey across the Fissure Zone in the Managed Area was not conducted based on the GLMC scope and budget recommendations for FY 2020/21.

Like the benchmark network in the Fissure Zone in the Managed Area, a series of closely spaced benchmarks were installed across the San Jose Fault Zone in Northwest MZ-1. These benchmarks were installed along San Bernardino and San Antonio Avenues to measure horizontal strain across the fault zone. EDM surveys have been performed in this area each year since 2014.

2.2.3 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.[7] The background and objectives of the Work Plan are described in Section 1.1.5. The Watermaster began implementation of the Work Plan in July 2015. The Work Plan has evolved over time as new data and information has been collected and evaluated by the GLMC. The following describes the Work Plan tasks and status of each task:

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

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

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 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 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.

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's Engineer has not yet identified specific questions that need to be answered with the controlled aquifer-system stress tests.

[7] Source: http://www.cbwm.org/rep_engineering.htm

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. Update the Hydrogeologic Conceptual Model – The objective of this task is 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. A numerical one-dimensional aquifer-system compaction model at PX was constructed and calibrated to refine the hydraulic and mechanical property estimates of the aquifer-system and the pre-consolidation stress. This task was completed in FY 2020/21.

Task 8. Document the One-Dimensional Compaction Models at the MVWD-28 and PX Locations – This task will help answer the question: What are the pre-consolidation stresses within the compacting intervals of the aquifer-system? The pre-consolidation stress is a piezometric "threshold." When piezometric levels are above the threshold, subsidence is abated. When piezometric levels are below the threshold, subsidence is caused. The determination of pre-consolidation stress by aquifer-system layer can provide "guidance" for the Chino Basin parties to manage pumping and recharge to avoid the future occurrence of land subsidence in Northwest MZ-1.

The model calibration results for two 1D compaction models located within the area of maximum subsidence in Northwest MZ-1 (at the MVWD-28 and PX locations) will be used, in combination with other monitoring data, to estimate the current (2018) pre-consolidation stresses by aquifer-system layer for Northwest MZ-1. The 1D compaction models, calibration results, and preliminary estimates of the pre-consolidation stress by aquifer-system layer will be presented by the Watermaster Engineer at a GLMC meeting. The Watermaster Engineer will accept verbal feedback and written comments from the GLMC, and then prepare a draft technical memorandum to document the 1D compaction models, the calibration results, and the preliminary estimates of the pre-consolidation stress. Another GLMC meeting will be held to review the draft technical memorandum. The GLMC will submit written comments and suggested revisions to the Watermaster Engineer. A final technical memorandum will be prepared that incorporates the feedback and comments from the GLMC. This task is anticipated to be completed in FY 2021/22.

Task 9. Refine and Evaluate Subsidence-Management Alternatives – This task will help 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 will be used to characterize the mechanical response of the aquifer-system to a BMA. A draft technical memorandum will be prepared that summarizes the evaluation of the BMA, particularly, the ability of the BMA to raise and hold piezometric levels above the estimated pre-consolidation stresses. The draft technical memorandum may also include a recommendation for the Initial Subsidence Management Alternative (ISMA) if the BMA is not successful at raising and holding hydraulic heads above the estimated pre-consolidation stresses. The assumptions of the ISMA, including the groundwater production and replenishment plans of the Chino Basin parties, will be described, and must be agreed upon by the GLMC. A GLMC meeting will be held to review the model results and evaluation of the BMA, review the recommended ISMA, and to receive feedback on the draft technical memorandum.

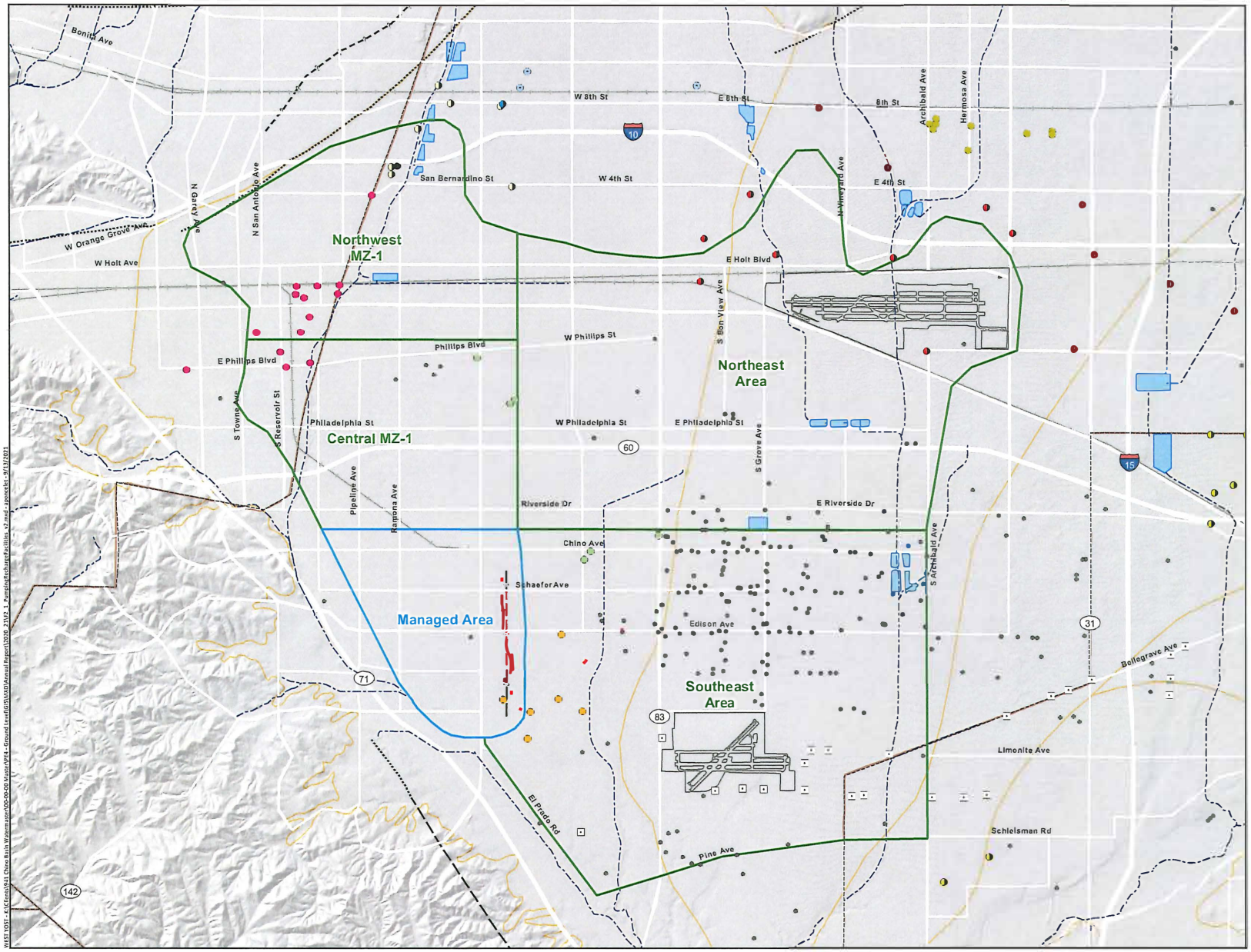
After the recommended ISMA is agreed upon by the GLMC, the Watermaster's MODFLOW model will be updated to run the ISMA and will be used to estimate the hydraulic head response to the ISMA at the MVWD-28 and PX locations. The projected hydraulic heads generated from the MODFLOW model using the ISMA will be extracted from the MODFLOW model results at the MVWD-28 and PX locations and will be used

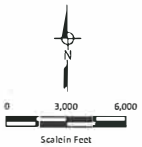
as input files for both 1D compaction models. The 1D compaction models will then be run to characterize the mechanical response of the aquifer-system to the ISMA at both the MVWD-28 and PX locations.

A draft technical memorandum will be prepared that summarizes the evaluation of the ISMA, particularly, the ability of the ISMA to raise and hold piezometric levels above the estimated pre-consolidation stresses. The draft technical memorandum may also include a recommendation for a second Subsidence-Management Alternative (SMA-2), if the ISMA is not successful at raising and holding hydraulic heads above the estimated pre-consolidation stresses. The assumptions of the SMA-2, including the groundwater production and replenishment plans of the Chino Basin parties, will be described, and must be agreed upon by the GLMC. A GLMC meeting will be held to review the model results and evaluation of the ISMA, review the recommended SMA-2, and to receive feedback on the technical memorandum. This task is anticipated to be completed in FY 2021/22.

If necessary and recommended by the GLMC, additional subsidence management alternative scenarios may be run in FY 2022/23. It is currently envisioned by the GLMC that, based on the results of the 1D compaction model results, the GLMC may recommend an update to the Watermaster's Subsidence Management Plan in FY 2022/23 to minimize or abate the future occurrence of land subsidence in Northwest MZ-1.

Task 10. Update the Chino Basin Subsidence Management Plan – The objective of this task is to incorporate the preferred subsidence-management alternative for Northwest MZ-1 into the Chino Basin Subsidence Management Plan. An implementation plan will be prepared as part of this effort. The implementation plan will require review and approval by the GLMC and the Watermaster Pools, Advisory Committee, and Board. The Watermaster will apprise the Court of revisions to the 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 2023/24.





Active Groundwater Pumping Wells
April 1, 2020 to March 31, 2021

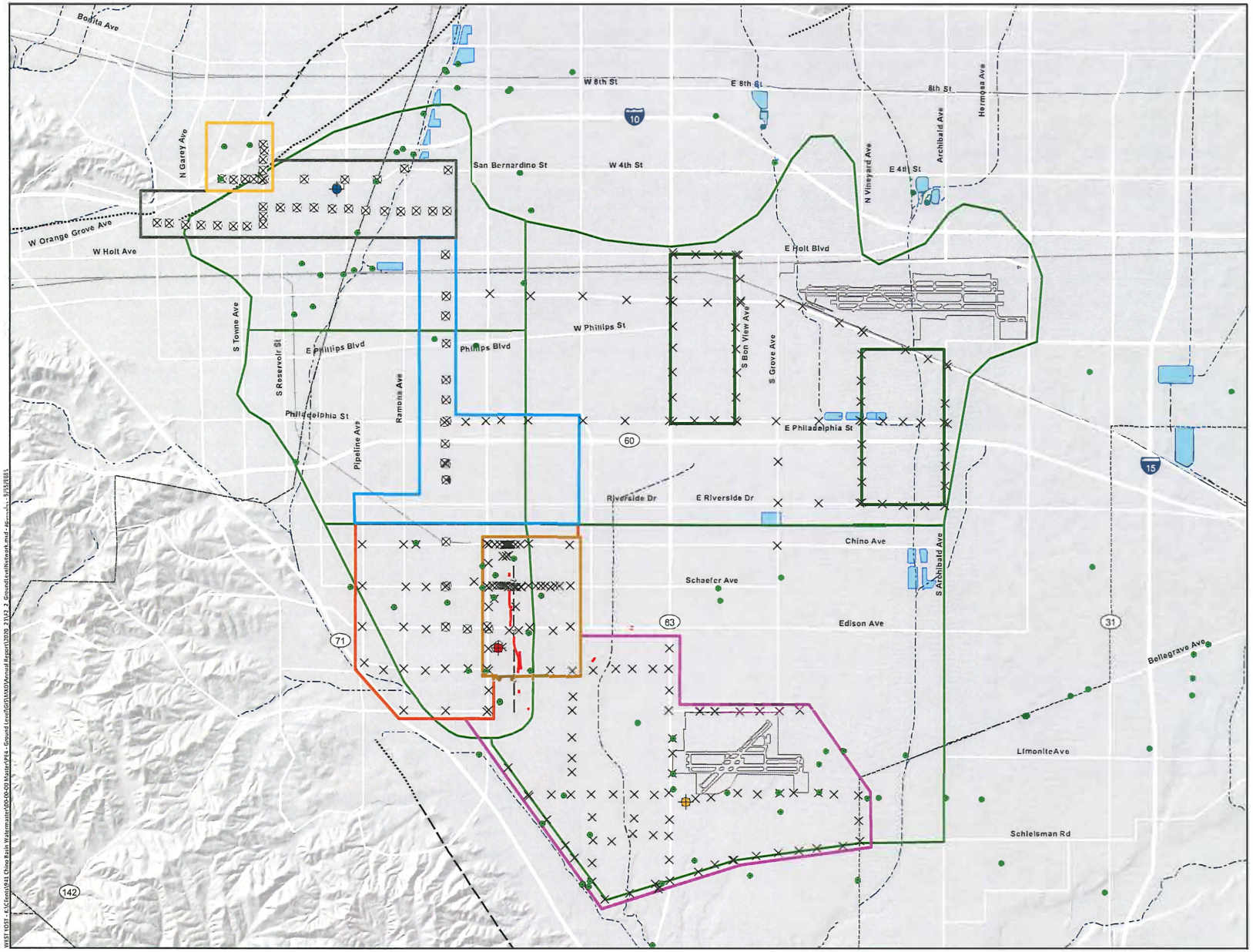
- Private
- California Institution for Men
- Chino Basin Desalter Authority
- City of Chino
- City of Chino Hills
- Cucamonga Valley Water District
- Jurupa Community Services District
- City of Ontario
- City of Pomona
- City of Upland
- Golden State Water Company
- Monte Vista Water District
- Managed Area
- Areas of Subsidence Concern

WEST YOST

Figure 2-1

Pumping and Recharge Facilities
Western Chino Basin: 2020/21

Chino Basin Watermaster
Ground-Level Monitoring Committee
2020/21 Annual Report



N

0 3,000 6,000

Scale in Feet

Ground-Level Monitoring Network Facilities

- Pomona Extensometer
- Ayala Park Extensometer
- Chino Creek Extensometer
- All Program Transducer Wells
- Ground-Level Survey Benchmark
- Ground-Level Survey Benchmark (Measured May 4, 2021)

Ground-Level Survey Areas

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

- Areas of Subsidence Concern

WEST YOST

Figure 2-2

Ground-Level Monitoring Network Western Chino Basin

Chino Basin Watermaster
Ground-Level Monitoring Committee
2020/21 Annual Report

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 2020 and March 2021 reporting period. Figures 3-1a and 3-1b display vertical ground motion as measured by InSAR across the western portion of the Chino Basin between the periods of March 2011 and March 2021 and between March 2020 and March 2021, 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. The data shown in these and subsequent figures are described and interpreted in this section.

3.1 Managed Area

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

3.1.1 History of Stress and Strain in the Aquifer-System

Figure 3-2 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.

3.1.2 Recent Stress and Strain in the Aquifer-System

This section discusses the last nine 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 2021. A total of about 25 acre-feet (af) of groundwater pumping occurred in the Managed Area from July 1, 2020 to March 31, 2021—88 percent of the groundwater pumping was from wells screened in the shallow aquifer-system. Groundwater pumping in the Managed Area has declined from about 5,680 af in fiscal year 2012 to almost negligible volumes in 2021.

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 2021. 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:

- Historically, there has been a seasonal pattern of pumping in the Managed Area – increased pumping during the spring to fall and decreased pumping during the winter.
- 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 occurs 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 57 ft-btoc in January 2021 and has not declined below the Guidance Level of 245 ft-btoc.
- The recovery of the hydraulic head in the deep aquifer-system to above 90 ft-btoc in February 2019 and November 2019 represented "full recovery" of hydraulic head at PA-7 as defined in the Subsidence Management Plan, and the hydraulic head at PA-7 has remained above 90 ft-btoc.
- 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 and 2019, which complies with the recommendation in the Subsidence Management Plan for full recovery within the deep aquifer-system at least once every five years.[8]
- As a result of very little to almost zero pumping from the shallow and deep aquifer-systems since April 2018, hydraulic heads at PA-10 and PA-7 have increased to their highest levels since implementation of the GLMP in 2003: about 56 ft-btoc in PA-10 (March 2021) and about 57 ft-btoc in PA-7 (March 2021).

[8] 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."

Table 3-1. Groundwater Pumping in the Managed Area for Fiscal Year 2012 Through 2021, acre-ft

Well Name	Aquifer Layer	Fiscal Year									Fiscal Year 2021				
		2012	2013	2014	2015	2016	2017	2018	2019	2020	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	-	22.2
C-6		1049	594	0	0	0	0	0	0	0	0	0	0	-	
CH-1A		1137	909	738	861	649	637	369	0	0	0	0	0	-	
CH-7A		530	380	170	286	156	66	0	0	0	0	0	0	-	
CH-7B		712	264	200	616	261	232	350	0	0	0	0	0	-	
CIM-1		724	1,109	1,127	878	911	908	586	0	0	0	0	0	-	
XRef 8730[b]		3	5	5	4	3	35	29	29	29	7.4	7.4	7.4	-	
	Subtotals	4,679	3,260	2,240	2,644	1,980	1,879	1,334	29	29	7.4	7.4	7.4	-	22.2
CH-17	Deep[c]	758	1,444	937	1,142	567	624	571	0	0	0	0	0	-	3
CH-15B		0	28	105	0	0	0	0	0	0	0	0	0	-	
CIM-11A		243	239	195	92	94	222	0	0	0	1	1	1.2	-	
	Subtotals	1,001	1,711	1,237	1,234	662	846	571	0	0	1	1	1	-	3
	Totals	**5,680**	**4,971**	**3,477**	**3,878**	**2,642**	**2,725**	**1,905**	**29**	**29**	**8.4**	**8.1**	**8.6**	-	**25.2**

"C" = City of Chino

"CH" = City of Chino Hills

"CIM" = California Institution for Men

"XRef" = Private

(a) Data only available through March 2021.

(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.

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 2021. 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 June 27, 2016 (dates of full recovery at PA-7 to 90 ft-btoc), the Ayala Park Deep Extensometer recorded about 0.029 ft of aquifer-system compression, which indicates that this compression is permanent compaction that occurred within the depth interval of 30-1,400 ft-bgs.[9]
- From June 27, 2016 to February 1, 2019 (dates of full recovery at PA-7), the Deep Extensometer recorded an extended cycle of aquifer-system compression and expansion in response to the extended decline and recovery cycle of hydraulic heads at PA-7. By February 1, 2019, the Deep Extensometer recorded a slight amount of expansion, indicating that the vertical deformation of the deep aquifer-system was mainly elastic during this period.
- Since February 2019, the Deep Extensometer has continued to record purely elastic aquifer-system deformation – a total of about 0.056 ft of aquifer-system expansion was recorded at the Deep Extensometer between February 1, 2019 and March 31, 2021.

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 compaction within the depth interval of the aquifer-system that is penetrated by the Deep Extensometer. Hydraulic head decline is shown as increasing from bottom to top on the y-axis, and aquifer-system compression 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 February 2019, the hydraulic heads at PA-7 fluctuated between 70-120 ft-btoc. 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.

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

- Since February 2019, the hydraulic heads at PA-7 have remained at or above 90 ft-btoc and by March 2021 increased to their highest levels since 2003. During this period, the hysteresis loops shifted to the left, indicating that the vertical deformation of the aquifer-system was purely elastic expansion of the aquifer-system sediments.

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. For FY 2020/21, the benchmark monument network in the Managed Area was not surveyed per the GLMC's scope and budget recommendations. Figures 3-1a and 3-1b illustrate vertical ground motion[10] as estimated by InSAR for the period from March 2011 to March 2021 and from March 2020 to March 2021, respectively.

Where coherent, the InSAR estimates of vertical ground motion from 2011 to 2021 shown in Figure 3-1a range from about zero ft to -0.04 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 2020 to 2021 indicate very little vertical ground motion occurred across most of the Managed Area.

As described above, Figure 3-1a shows that maximum downward ground motion during 2011-2021 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 data 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 2021. 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 2016, InSAR indicates a long-term trend of downward ground motion at C-15. However, hydraulic heads at C-15 during this same time-period increased, indicating that about 0.19 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.
3. Since 2016, 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 2016 (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

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

equilibration with hydraulic heads in the aquitards and the cessation of aquitard drainage and compaction. These monitoring data may be providing information on hydraulic head "thresholds" that could be used as management criteria to protect against the future occurrence of land subsidence. At C-15, when groundwater elevations remain above 580 ft-above mean sea level (amsl), InSAR indicates that no permanent land subsidence occurs.

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 and 3-1b) are somewhat incoherent across much of this area because the overlying agricultural land uses are not hard, consistent reflectors of radar waves. Where InSAR results are incoherent, the history of subsidence is best characterized by ground-level surveys and the CCX.

Figure 3-6 is a time-series chart that displays and describes the history of groundwater pumping, the direct reuse of recycled water, hydraulic heads, and vertical ground motion in the Southeast Area from 1930 to 2021. The main observations and interpretations from these figures 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 20 ft from 2010 to 2021 (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 5 to 12 ft between 2005 and March 2021 (see wells HCMP-1/1 and HCMP-1/2).
- For the current period March 2020 and March 2021, Figure 3-1b shows that the occurrence of downward vertical ground motion has been relatively minor – about -0.02 ft across most of the Southeast Area. Hydraulic heads remained relatively stable or increased across most of the area during this period, which indicates that the downward ground motion is, at least in part, permanent subsidence due to delayed aquitard drainage in response to the historical declines in hydraulic heads that occurred from the 1940s to about 1978.

Figure 3-7 displays the time series of hydraulic and vertical aquifer-system deformation recorded at the CCX, which began collecting data in July 2012. Groundwater pumping began at the Chino Creek Well Field in 2014, but appears to have had little, if any, effect on hydraulic heads or aquifer-system deformation at the CCX through March 2021. In general, hydraulic heads at the CCX vary seasonally and have gradually increased since 2012, and a small amount of expansion of the aquifer-system has been measured by the CCX extensometers. This observation is consistent with the ground-levels surveys at BM 157/71 near the CCX through 2018.

3.3 Central MZ-1

Vertical ground motion is measured across Central MZ-1 via InSAR and traditional ground-level surveys. Figures 3-1a and 3-1b illustrate vertical ground motion as estimated by InSAR across Central MZ-1 for 2011-2021 and 2020-2021, respectively. The InSAR results are generally coherent across this area because the overlying land uses are urban and serve as hard and consistent reflectors of radar waves. Ground-level surveys are performed periodically along the eastern portion of the area. Figure 3-8 is a time-series chart

that displays and describes the long-term history of pumping, recharge, hydraulic heads, and vertical ground motion in Central MZ-1. The following observations and interpretations are derived from these figures:

- Hydraulic head data are absent in the southern portion of Central MZ-1. In the northern portion of Central MZ-1, hydraulic heads declined by about 200 ft from 1930 to about 1978. From 1978 to 1986, hydraulic heads increased by about 80 ft and remained relatively stable or have slightly increased from 1986 to 2021. Recent hydraulic heads (1986 to 2021) in the northern portion of Central MZ-1 are about 120 ft lower than the hydraulic heads in the 1930s.
- About 1.9 ft of subsidence occurred near Walnut and Monte Vista Avenue from 1988 to 2000, as measured by ground-level surveys at BM 125/49 (about 0.16 feet per year [ft/yr]). 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 (about 0.016 ft/yr). 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 2021 are in the western portion of Central MZ-1, where up to about -0.18 ft of vertical ground motion has occurred (about -0.03 ft/yr). Hydraulic heads remained relatively stable in this area from 2011 to 2021, which indicates that the downward vertical ground motion is, at least in part, permanent subsidence due to delayed aquitard drainage in response to the historical declines in hydraulic heads that occurred from 1930 to 1978.
- The ground motion measured by InSAR in Figure 3-1a also shows that the groundwater barrier (Riley Barrier) may extend from the Managed Area northward into Central MZ-1 to at least Mission Boulevard. This observation is evidenced by a steep subsidence gradient located just east of Central Avenue.
- Figure 3-1b shows that between March 2020 and 2021, vertical ground motion across most of Central MZ-1 was very minor.

3.4 Northwest MZ-1

3.4.1 Vertical Ground Motion

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

Figure 3-1a illustrates vertical ground motion as estimated by InSAR across Northwest MZ-1 during 2011-2021. Figure 3-9 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. Figures 3-10a and 3-10b are maps of the most recent data and illustrate vertical ground motion as estimated by InSAR and ground-level surveys across Northwest MZ-1 from January 2014 to March 2021 and from March 2020 to March 2021, respectively. Spring 2021 was the first year that the PX was used as the starting benchmark for the

Northwest MZ-1 ground-level survey. Starting the ground-level survey from PX increases the accuracy of the ground-level surveys in this area.

The following observations and interpretations are derived from Figures 3-1a, 3-1b, 3-9, and 3-10:

- 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 2020 hydraulic heads fluctuated but remained relatively stable. Between March 2020 and 2021, hydraulic heads in some wells (MVWD-10, MVWD-28, and P-27) declined up to about 15 ft, where heads in the other wells [P-05 (old), P-18, P-30] remained fairly stable.
- A maximum of about 1.3 ft of subsidence occurred in this area from 1992 through March 2021—an average rate of about 0.04 ft/yr—while hydraulic heads remained relatively stable. The persistent subsidence that occurred from 1992 to 2021 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 2021, the InSAR results indicate a maximum of about -0.35 ft (0.04 ft/yr) of vertical ground motion occurred in Northwest MZ-1 near the intersection of Indian Hill Boulevard and San Bernardino Avenue. From 2014 to 2021, the rate vertical ground motion slowed to about -0.03 ft/yr at this location.
- Figure 3-10 shows that the ground-level survey results from 2014 to 2021 indicate a similar spatial pattern of downward ground motion as estimated by InSAR but with slightly different magnitudes. Both methods indicate the maximum downward ground motion from December 2013 to March 2021 occurred near the intersection of Indian Hill Boulevard and San Bernardino Avenue. There is a minor difference in the magnitudes of vertical ground motion between InSAR and ground-level survey results, but these differences are most likely related to the different timing of the ground-level surveys and the SAR acquisition and/or relative errors associated with each monitoring technique.
- Figure 3-1b shows that most of Northwest MZ-1 experienced some downward ground motion between March 2020 and March 2021.

As described above, Figure 3-1a shows that maximum downward ground motion during 2011-2021 occurred near the intersection of Indian Hill Boulevard and San Bernardino Avenue. The City of Pomona Well 30 (P-30) is located just south of this area. P-30 is a non-pumping well, is screened across the shallow aquifer and upper portion of the deep aquifer and has been equipped with a transducer that measures and records hydraulic heads once every 15 minutes since September 2006. These data can provide information on the nature of the aquifer-system deformation that occurred in this area (i.e., elastic versus inelastic deformation). Figure 3-11 is a time-series chart that compares the hydraulic heads at P-30 to vertical ground motion as estimated by InSAR between 2006 and 2021. The main observations from this chart are:

- The InSAR record at P-30 is measuring seasonal elastic vertical ground motion that is caused by seasonal fluctuations in hydraulic head and the resultant seasonal elastic deformation in the aquifer-system(s). The seasonal fluctuations of hydraulic head at P-30 are coincident with the seasonal fluctuations of vertical ground motion measured by InSAR, but the long-term trend of subsidence remains persistent between 2005 and 2021 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 time-period increased, indicating that at least about 0.35 ft of subsidence was caused by inelastic compaction of the aquifer-system. The inelastic compaction that occurred during this period of increasing hydraulic heads most likely represents the delayed drainage and compaction of aquitards due to historical head declines.
- Between mid-2017 and 2021, the long-term subsidence trend appeared to have slowed down, indicating that inelastic compaction of the aquitards had also slowed down. The recent slowing of subsidence observed at P-30 was likely a result of increasing hydraulic heads in the aquifers, which had led to equilibration with hydraulic heads in the aquitards and the slowing of aquitard drainage and compaction.
- Between late 2018 and early 2021, the hydraulic head at P-30 experienced two cycles of head decline and recovery. The head decline and recovery at P-30 is contemporaneous with the downward and upward vertical ground motion measured by InSAR at P-30 during this same time period. These observations suggest that in Northwest MZ-1: (i) changes in hydraulic heads, which are controlled by the pumping and recharge stresses in the area, have at least some control on the pattern and rate of subsidence and (ii) these monitoring data may be providing information on hydraulic head "thresholds" that could be used as management criteria to protect against the future occurrence of land subsidence.

3.4.2 Horizontal Ground Motion

Figure 3-1a shows a steep gradient of subsidence across the San Jose Fault in Northwest MZ-1—the same pattern of "differential subsidence" that occurred in the Managed Area during the time of ground fissuring. Differential subsidence can cause an accumulation of horizontal strain in the shallow sediments and the potential for ground fissuring.[11]

To identify potential areas of accumulation of tensile horizontal strain in the shallow soils in this area, annual EDM surveys between closely spaced benchmark monuments that cross the San Jose Fault have been performed annually since December 2013. Figure 3-12 displays the time series of east/west-oriented and north/south-oriented strain between the pairs of closely spaced benchmarks (see the inset map on Figure 3-12) between 2013 and 2021. For reference, the top left chart on Figure 3-12 shows the downward vertical ground motion in Northwest MZ-1 as estimated by InSAR at Point C on Figure 3-9. The horizontal strain between most pairs of benchmarks appears to behave elastically – alternating between compressive and tensile deformation between EDM surveys. Tensile strain has been calculated between benchmarks (B-409 to B-408). Future EDM surveys that cross the San Jose Fault will continue to be conducted at a frequency determined by the GLMC during the scope and budget planning process for FY 2022/23.

[11] Ground fissuring is the main subsidence-related threat to overlying infrastructure. Watermaster, consistent with the recommendation of the GLMC, has determined that the Subsidence Management Plan needs to be updated to include a *Subsidence Management Plan for the Northwest MZ-1* with the long-term objective to minimize or abate the occurrence of the differential land subsidence. Development of this subsidence management plan is an ongoing, multi-year effort of the Watermaster.

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 not surveyed in spring 2021.

Figures 3-1a and 3-1b illustrate vertical ground motion, as measured by InSAR, across the Northeast Area from March 2011 to March 2021 and from March 2020 to March 2021, respectively. Figure 3-13 is a time-series chart that displays and describes the long-term history of pumping, recharge, hydraulic, and vertical ground motion in the Northeast Area. The following observations and interpretations are derived from these figures:

- From about 1930 to 1978, hydraulic heads in the Northeast Area declined by about 125 ft. From 1978 to about 1985, hydraulic heads increased by about 25 ft. From 1985 to 2020 hydraulic heads fluctuated but generally remained relatively stable or show a recovery trend since 2011. Between March 2020 and 2021, hydraulic heads in some wells (O-25, O-34, and O-36) showed a declining trend. For example, hydraulic heads at City of Ontario well O-34 declined about 10 ft since March 2020.
- About one foot of subsidence occurred in the Northeast Area near the intersection of Euclid Avenue and Phillips Street (see Point D on the inset map on Figure 3-13) from 1992 to 2021. From 1992 to 2011, the subsidence occurred at a gradual and persistent rate of about 0.04 ft/yr. From 2011 to 2021, the subsidence rate declined to about 0.02 ft/yr. Hydraulic heads have remained relatively stable in this area from 1992-2021, which indicates that the downward vertical ground motion is, at least in part, permanent subsidence due to delayed aquitard drainage in response to the historical declines in hydraulic heads that occurred from 1930 to 1978. The recent decline in the rate of subsidence may be due to recent decreases in pumping, increases in recharge, and increases in hydraulic heads.
- The InSAR estimates in Figures 3-1a also indicate that downward ground motion has occurred in a concentrated area between Vineyard Avenue and Archibald Avenue south of the Ontario International Airport, where a maximum of about -0.24 ft of vertical ground motion occurred from March 2011 to March 2021. Between 2020 and 2021, the same area experienced about -0.02 ft of vertical ground motion. The western edge of this subsiding area exhibits a steep subsidence gradient, or "differential subsidence." Differential subsidence is thought to have led to episodes of ground fissuring in the Managed Area during the early 1990s. The causes of the downward ground motion in the Northeast Area are not known at this time, but a probable mechanism may be aquifer-system compaction. The differential subsidence shown in Figure 3-1a is a feature now more visible in the current InSAR long-term map for the time-period between 2011 and 2021 compared to previous long-term InSAR maps. One reason this feature is now more visible is the result of better and new processing and interpolation techniques used by General Atomics in the post-processing the SAR data and preparation of interferograms (see Section 2.1.2.3).

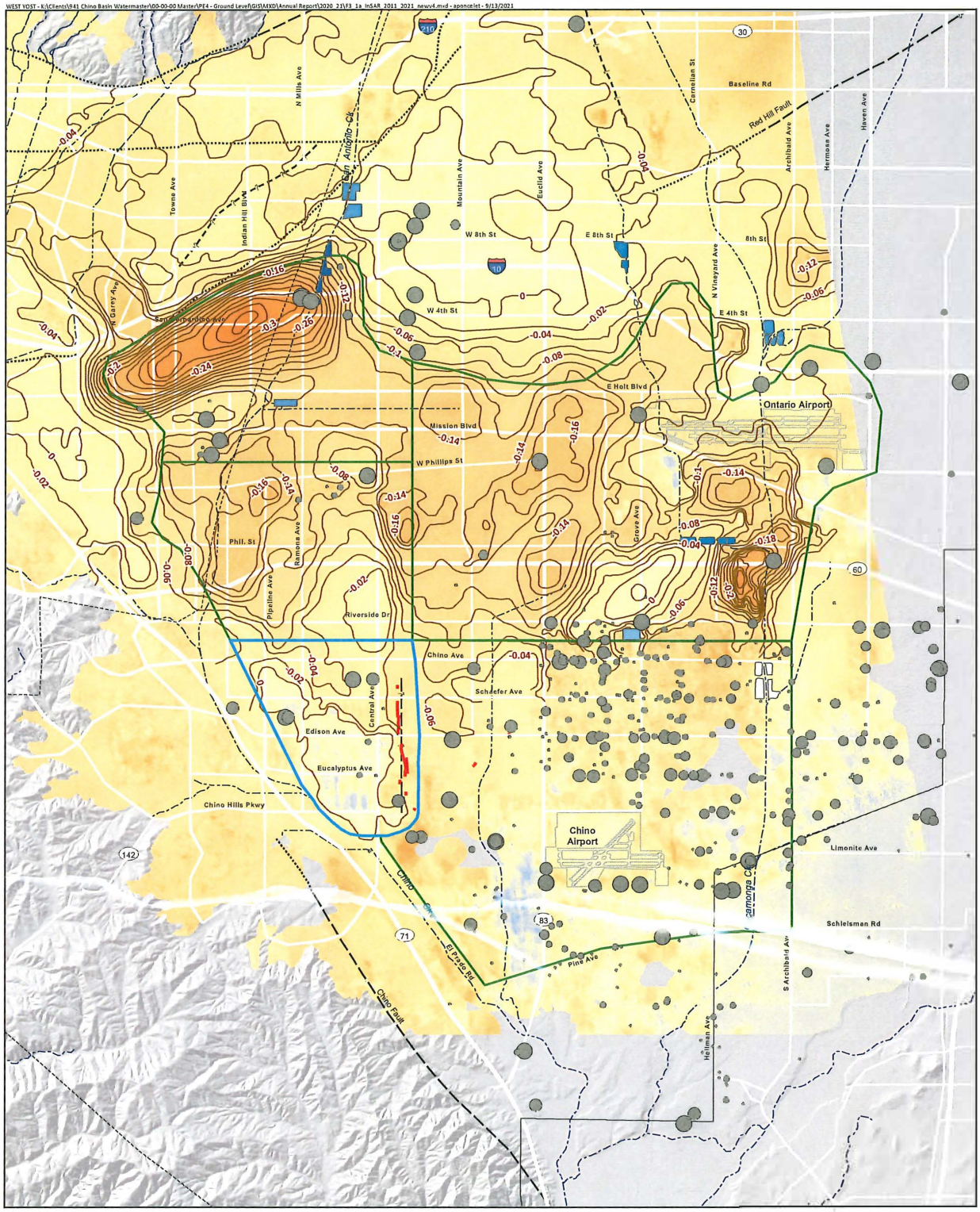
3.6 Seismicity

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 3-14 displays the location and magnitude of earthquake epicenters relative to vertical ground motion from March 2011 to March 2021.

Tectonic movement along the San Jose Fault Zone, including aseismic creep, is a plausible mechanism for the differential land subsidence that has occurred in Northwest MZ-1. While the earthquake epicenters shown on Figure 3-14 do not show a spatial relationship to the differential subsidence in Northwest MZ-1, without direct measurement of aquifer-system deformation, as will be provided by PX, tectonic deformation cannot be ruled-out as a mechanism for the observed subsidence in Northwest MZ-1.

Between March 2011 and March 2021, several earthquake epicenters, varying in magnitude (local magnitude) from zero to four, occurred south of the Ontario International Airport. Figure 3-14 shows that the seismicity observed along the eastern edge of the Northeast Area extends northeast towards the San Jacinto Fault. 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).

Currently, there is not enough data and information to determine whether tectonic movement, aquifer-system deformation, or both are the mechanisms of the observed subsidence in the eastern portion of the Northeast Area. Additional monitoring and investigation are necessary to assist in this determination.



Relative Change in Land Surface Elevation
as Estimated by InSAR
(March 2011 to March 2021)

+0.45 ft
0 ft
-0.25 ft
-0.45 ft
InSAR absent or incoherent

Average Annual Groundwater Pumping
April 1, 2011 to March 31, 2021
(afy)

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

Average Annual Basin Recharge
FY 2011 to FY 2021
(afy)

0
1 - 1,000
1,000 - 2,000
2,000 - 3,000
> 3,000

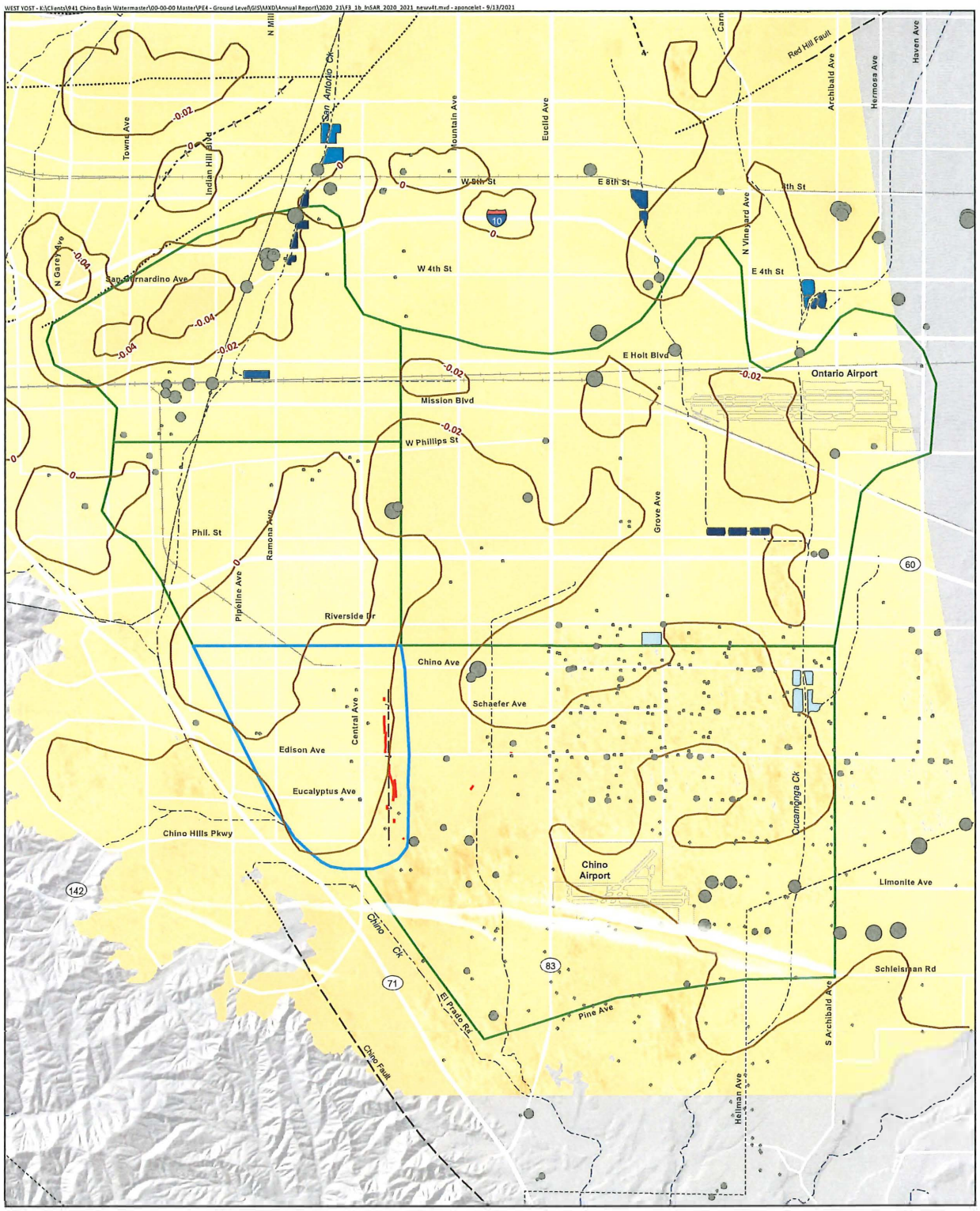
Managed Area
Areas of Subsidence Concern
Historical Ground Fissures
Approximate Location of the Riley Barrier
Fault (solid where accurately located; dashed where approximately located or inferred; dotted where concealed)

N

0 1,500 3,000
Scale in Feet

Figure 3-1a

Vertical Ground Motion across the Western Chino Basin: 2011-2021



Relative Change in Land Surface Elevation as Estimated by InSAR (March 2020 to March 2021)

+0.45ft

0 ft

-0.45 ft

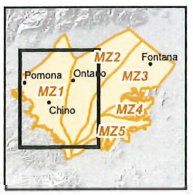
InSAR absent or incoherent

Average Annual Groundwater Pumping April 1, 2020 to March 31, 2021 (afy)

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

Average Annual Basin Recharge FY 2020 to FY 2021 (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)

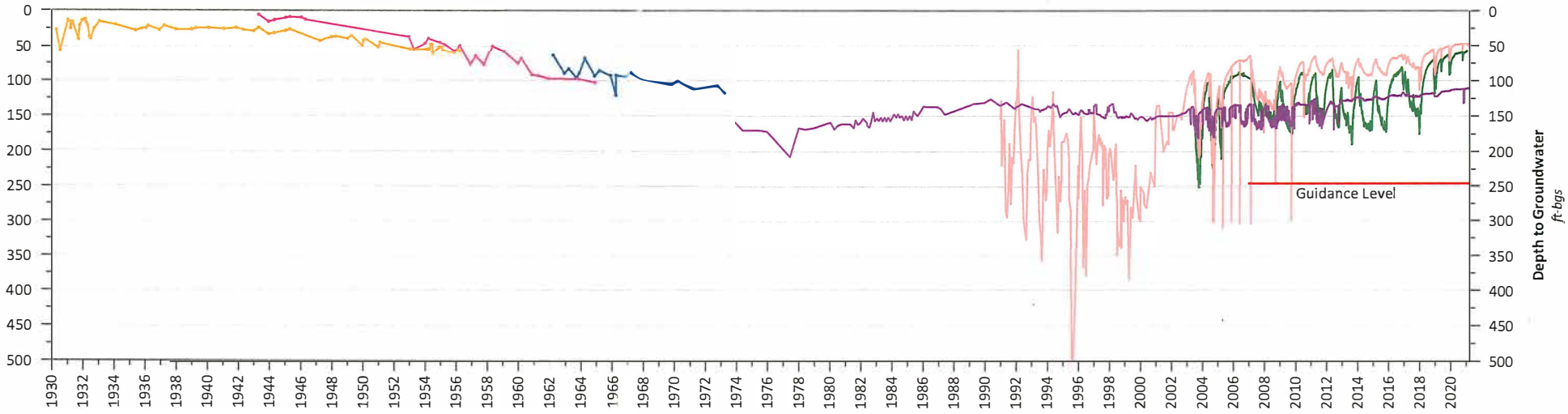
N

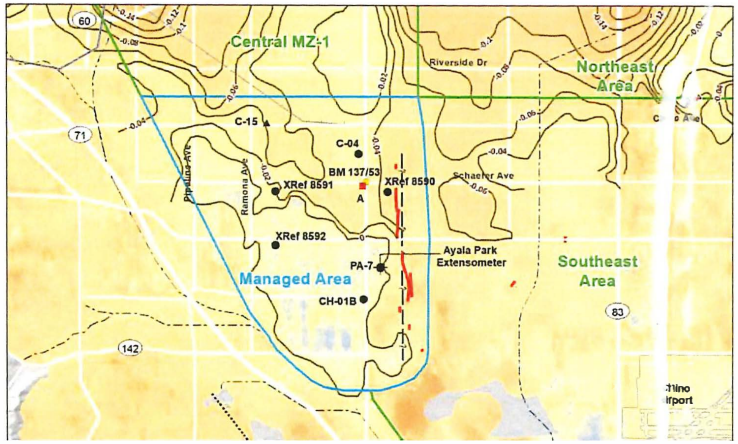
0 1,500 3,000

Scale in Feet

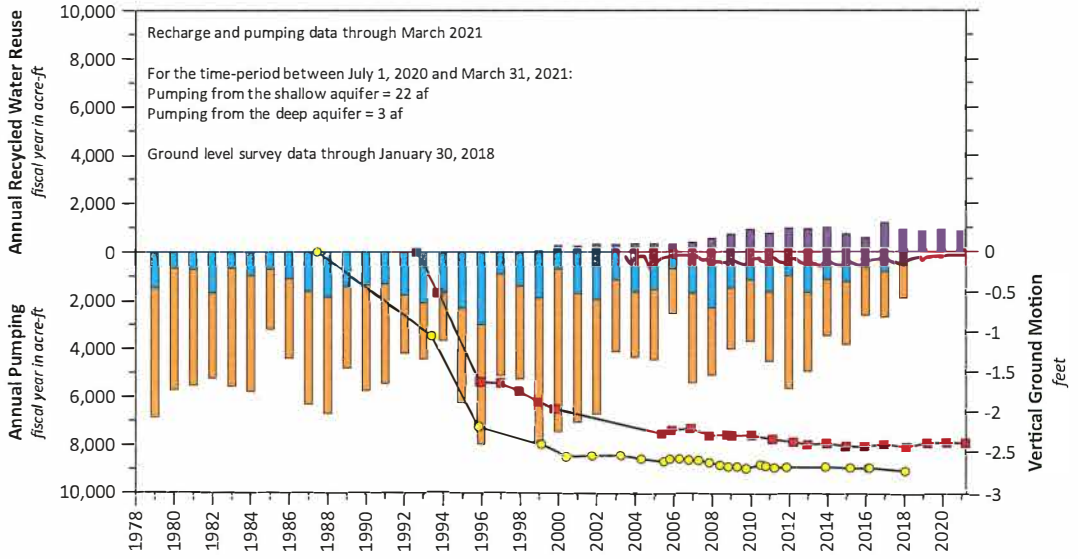
Figure 3-1b

Vertical Ground Motion across the Western Chino Basin: 2020-2021





InSAR from March 2011 to March 2021 (see Figure 3-1a)



Hydraulic Heads at Wells (Top-Bottom of Screen Interval)

Shallow Aquifer-System
- C-04 (160-275 ft-bgs)
- XRef 8590 (80-225 ft-bgs)
- XRef 8591 (unknown)
- XRef 8592 (90-230 ft-bgs)

Deep Aquifer-Sytem
- CH-01B (440-1,180 ft-bgs)
- PA-7 (438-448 ft-bgs)

Vertical Ground-Motion (Cumulative Displacement)
- InSAR Point A
- BM 137/53
- Ayala Park Deep Extensometer
  Measures between: 30 and 1,440 ft-bgs

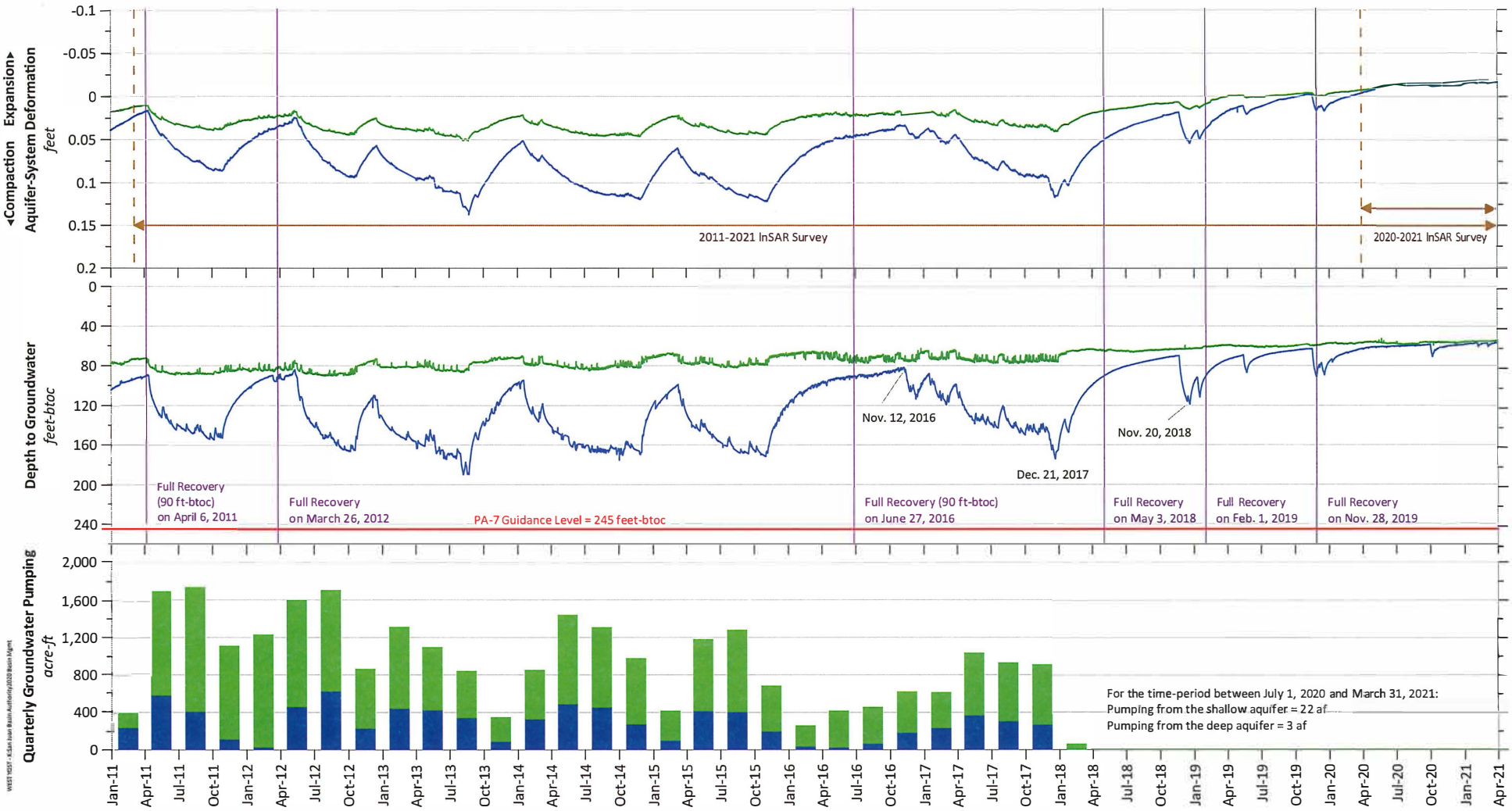
Recylced Water Reuse and Pumping
- Recycled Water Direct Reuse

Groundwater Pumping
- Shallow Aquifer
- Deep Aquifer or Both Aquifers

Figure 3-2

History of Land Subsidence in the Managed Area

Ground-Level Monitoring Committe
2020/21 Annual Report



Aquifer-System Deformation at Ayala Park (Extensometer Depth Interval)

- Shallow Extensometer (30-550 ft-bgs)
- Deep Extensometer (30-1,400 ft-bgs)

Hydraulic Heads at Ayala Park (Screened Interval)

- Shallow Piezometer PA-10 (213-233 ft-bgs)
- Deep Piezometer PA-7 (438-448 ft-bgs)

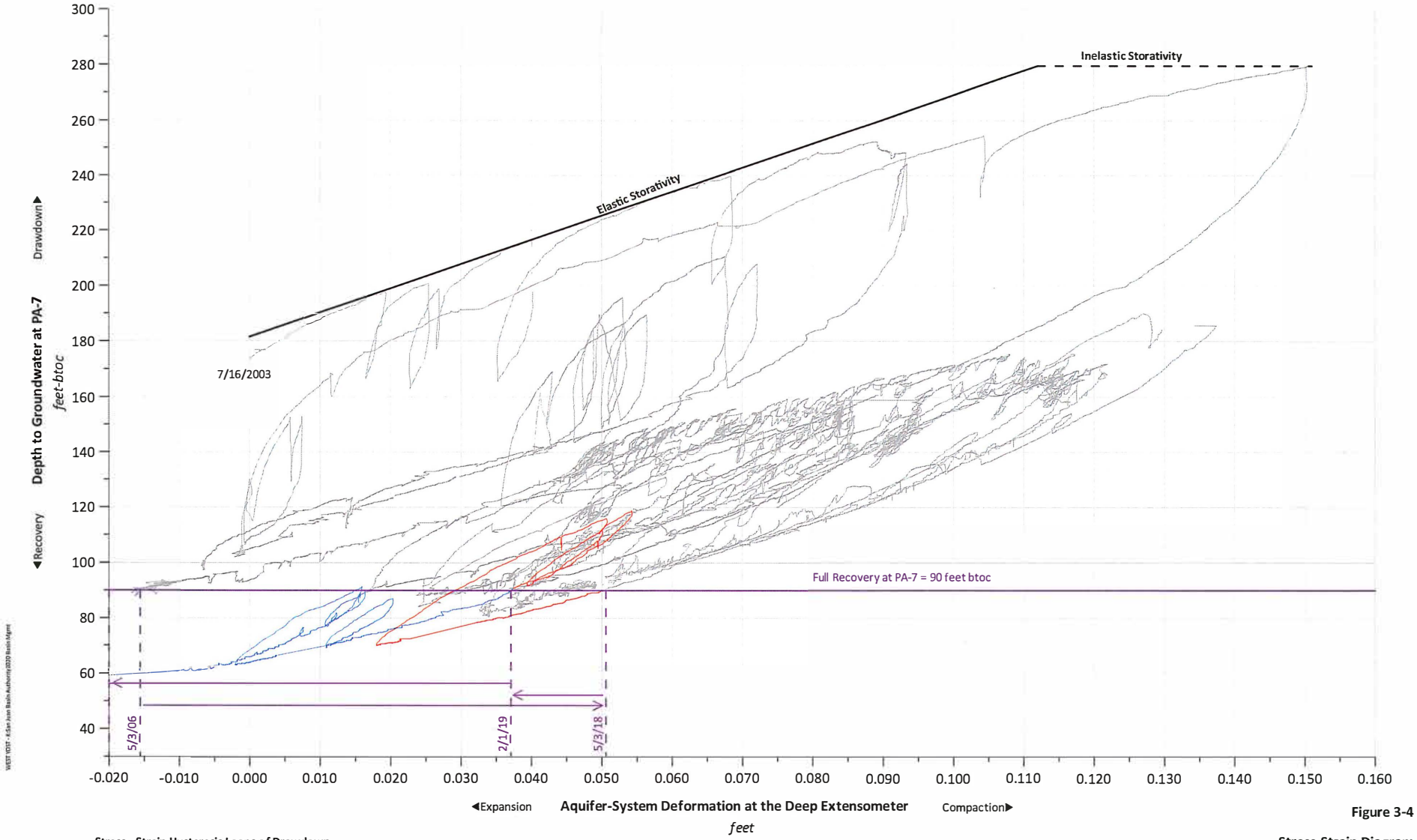
Quarterly Groundwater Pumping (see Table 3-1 for groundwater pumping by well)

- Shallow Aquifer
- Deep Aquifer

Figure 3-3

Stress and Strain within the Managed Area

Ground-Level Monitoring Committe
2020/21 Annual Report



Stress - Strain Hysteresis Loops of Drawdown

- Drawdown and recovery between July 16, 2003 and May 3, 2018
- Drawdown and recovery between May 4, 2018 and January 31, 2019
- Drawdown and recovery between February 1, 2019 and April 1, 2021

*PA-7 well-screen interval: 438-448 ft-bgs
Depth interval of the Deep Extensometer: 30-1,400 feet-bgs

Figure 3-4

Stress-Strain Diagram
Ayala Park Extensometer

Ground-Level Monitoring Committe
2020/21 Annual Report

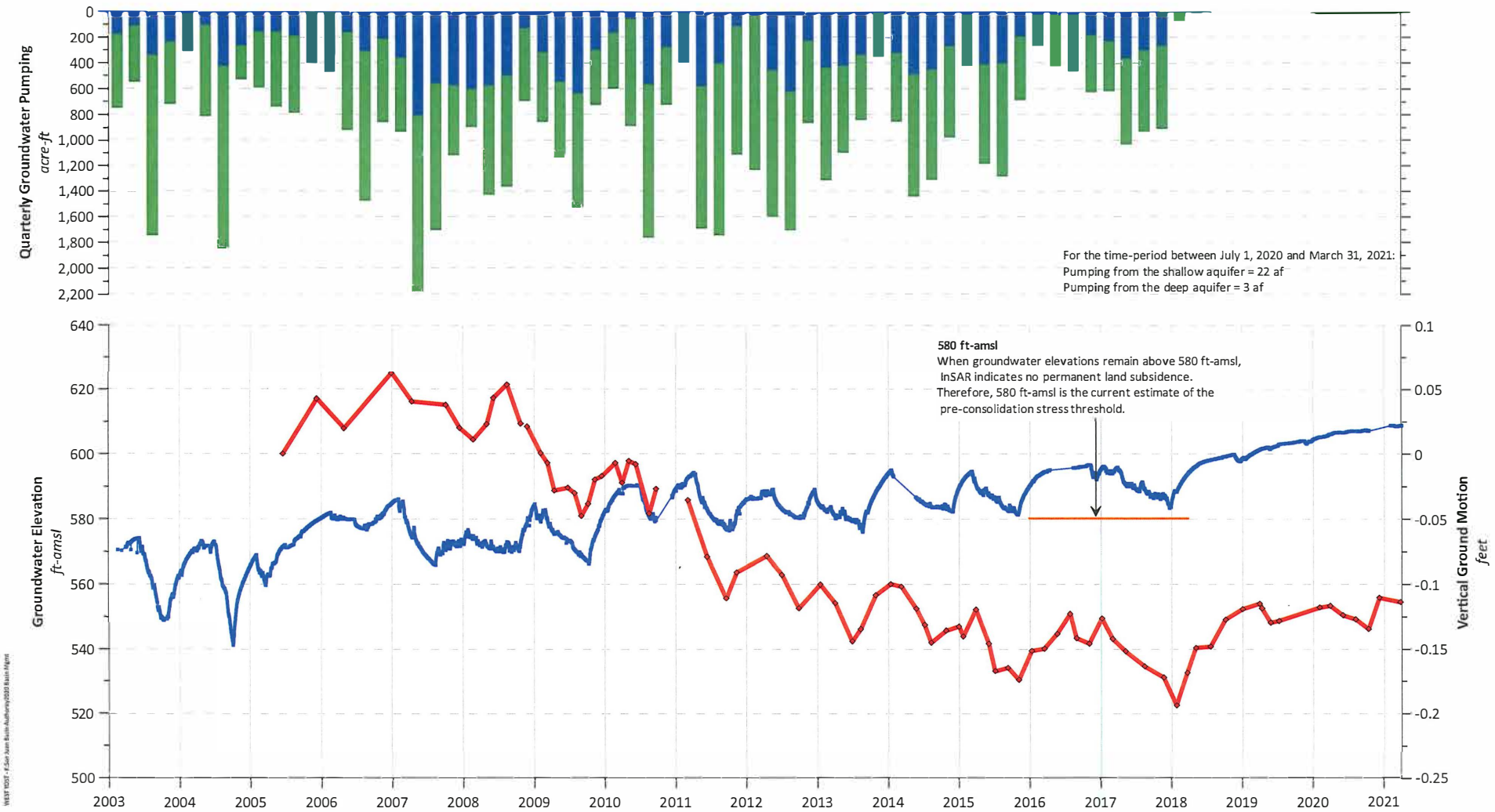
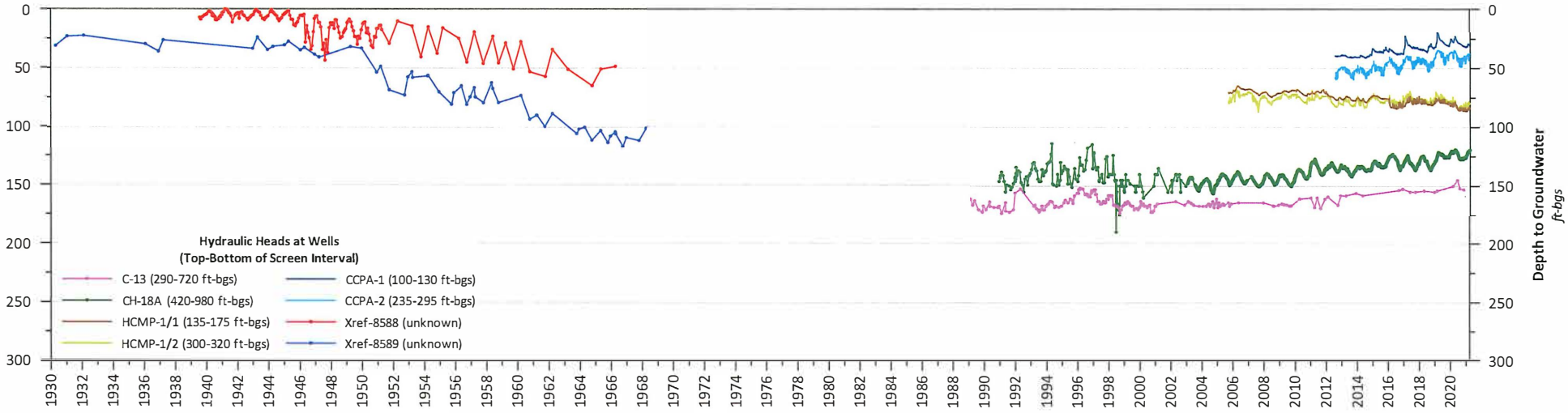
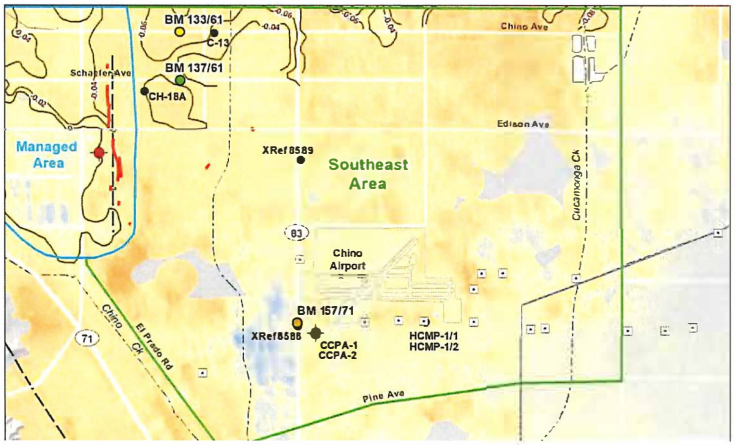


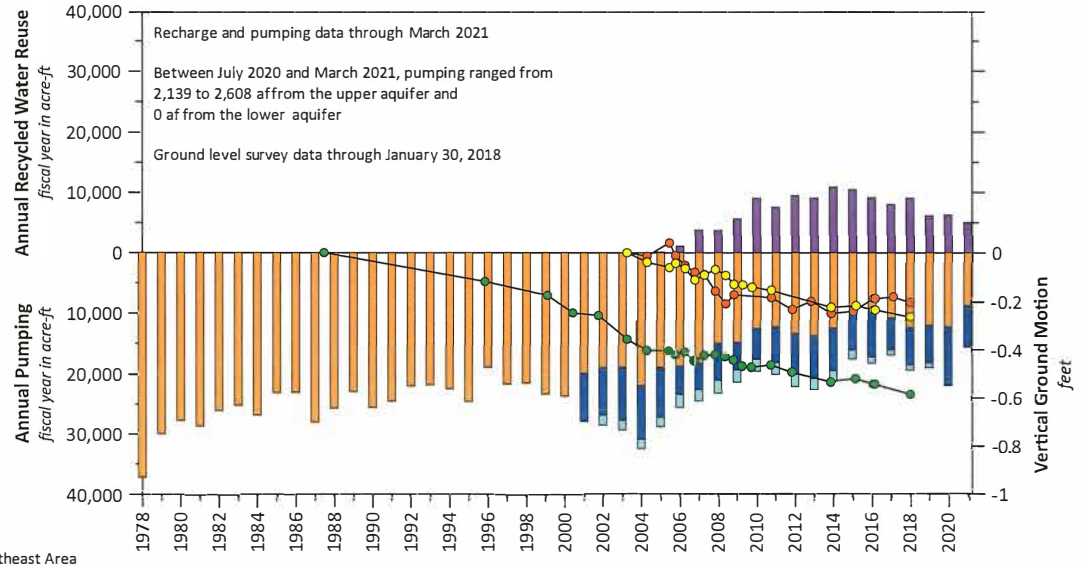
Figure 3-5

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





InSAR from March 2011 to April 2021 (see Figure 3-1a)



Vertical Ground-Motion (Cumulative Displacement)

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

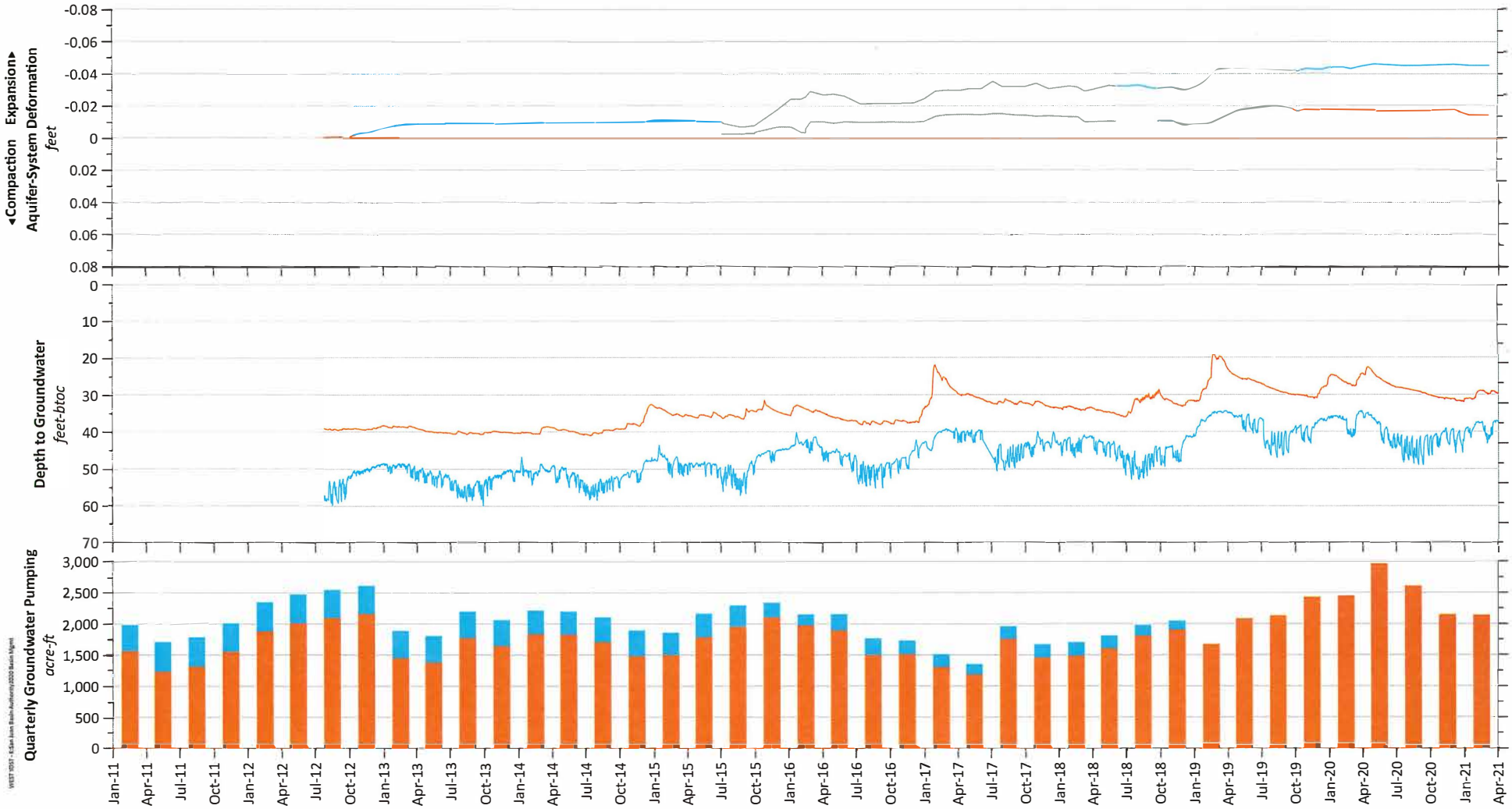
Recharge and Pumping

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

Figure 3-6

History of Land Subsidence in the Southeast Area

Ground-Level Monitoring Committe
2020/21 Annual Report



Aquifer-System Deformation (Extensometer Depth Interval)

- CCX-1 (50-140 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)

Between January 2019 and March 2021:
CDA pumping from the deep aquifer was less than 2 af

Figure 3-7

Stress and Strain within the Southeast Area

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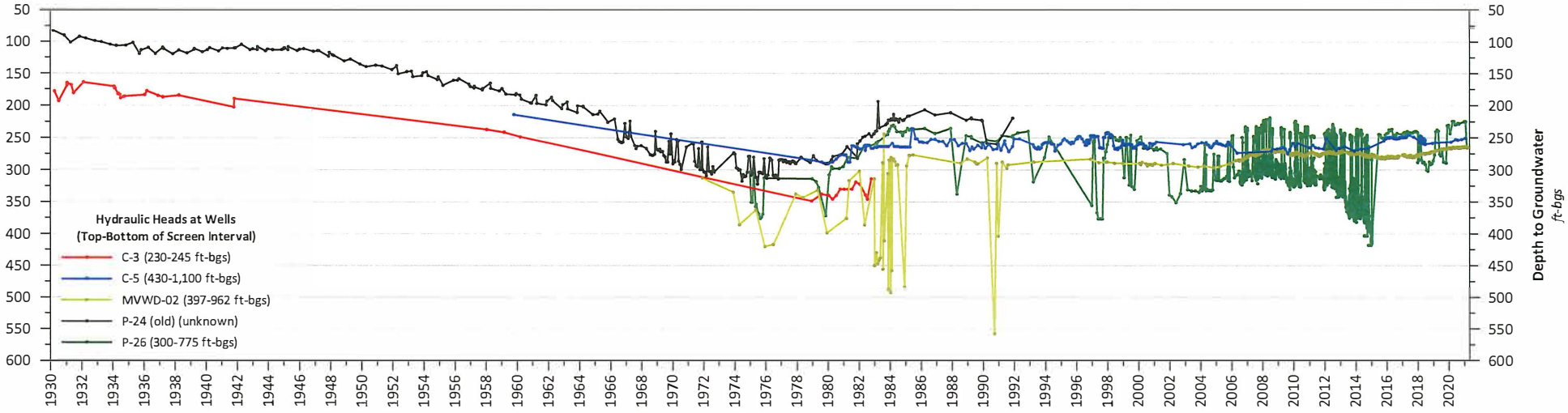
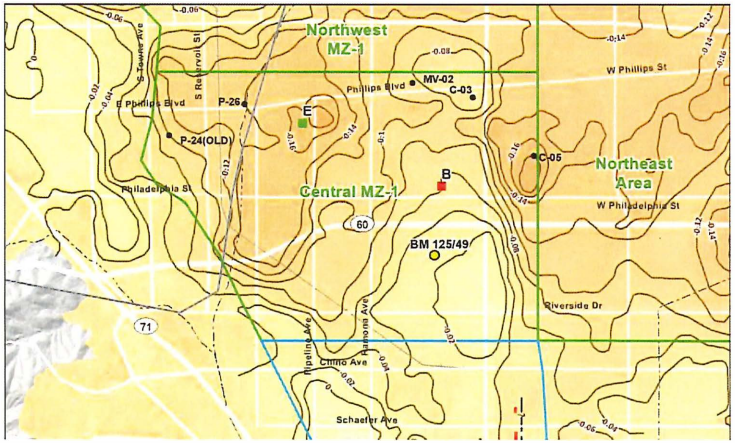
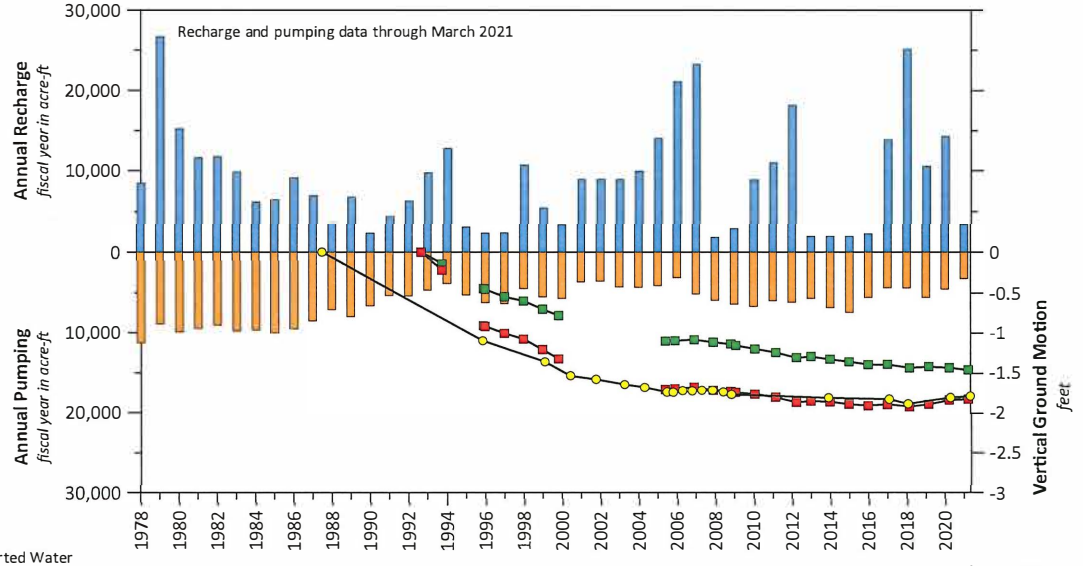




InSAR from March 2011 to March 2021 (see Figure 3-1a)



Vertical Ground-Motion (Cumulative Displacement)

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

Recharge and Pumping

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

Groundwater Pumping from Wells in Central MZ-1

Figure 3-8

History of Land Subsidence in Central MZ-1

Ground-Level Monitoring Committe
2020/21 Annual Report

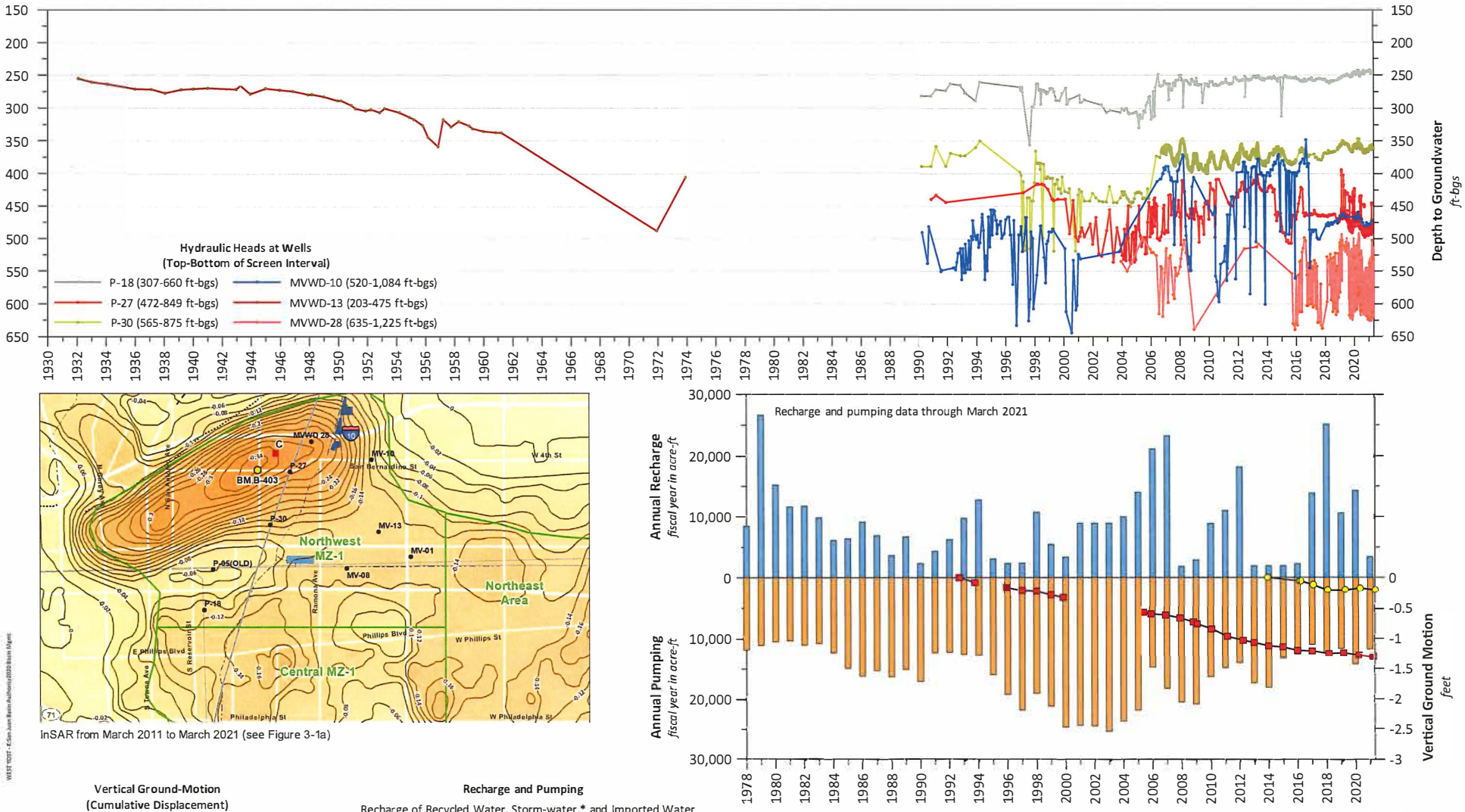


Figure 3-9

History of Land Subsidence in Northwest MZ-1

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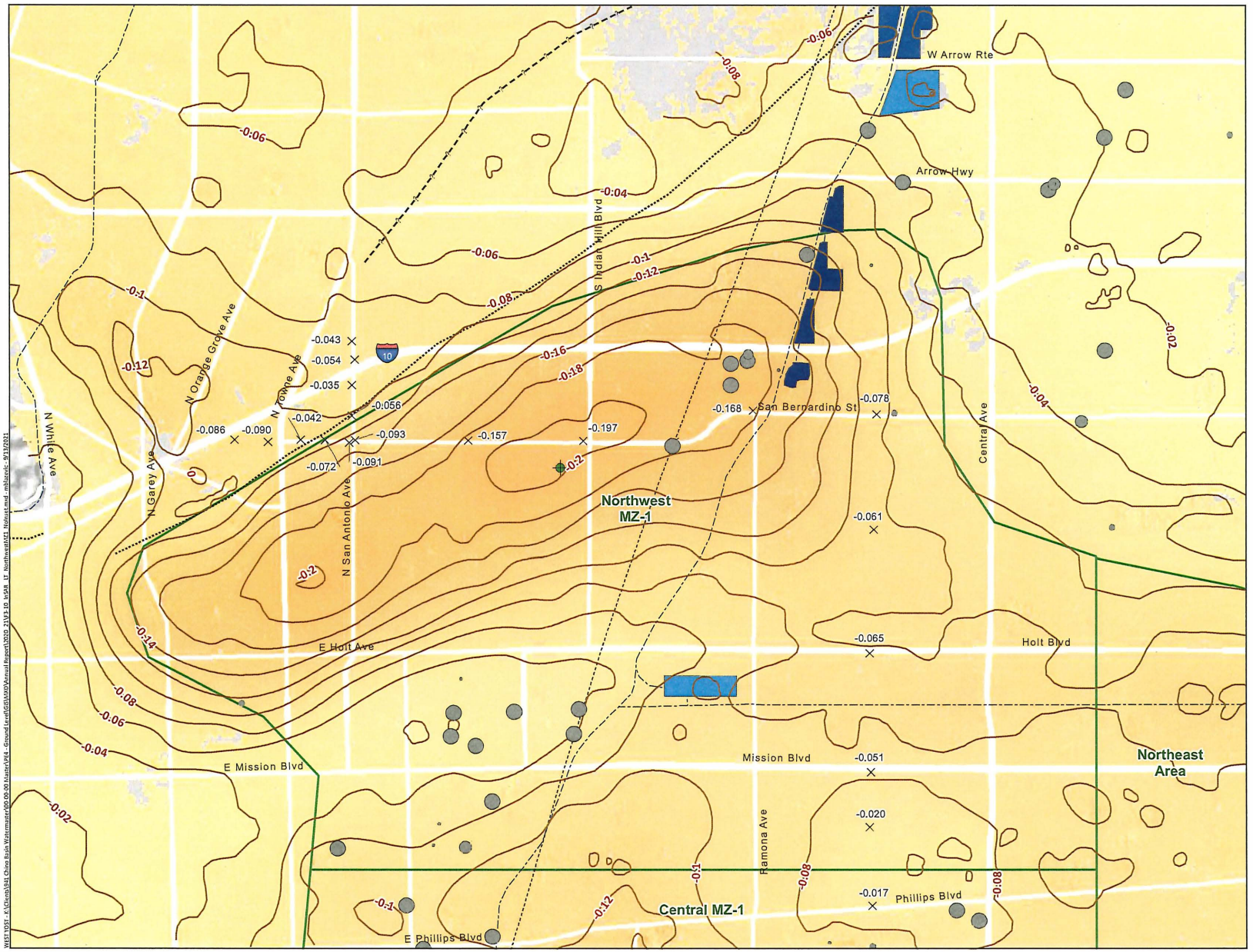

Active Groundwater Pumping Wells
April 1, 2014 to March 31, 2021
(afy)

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

Average Annual Basin Recharge
April 1, 2014 to March 31, 2021
(afy)

- 0 - 500
- 500 - 1,000
- 1,000 - 1,500
- 1,500 - 2,000
- 2,000 - 3,000
- > 3,000

Relative Change in Land Surface Elevation
as Estimated by InSAR
(April 2014 to March 2021)

- +0.45 ft
- 0 ft
- -0.25ft
- -0.45 ft
- InSAR absent or incoherent

- Pomona Extensometer Facility
- Ground-Level Survey Benchmark (Measured May 4, 2021) Labeled by Vertical Ground Motion (in feet from December 2013 to May 2021)
- Areas of Subsidence Concern
- Fault (solid where accurately located; dashed where approximately located or inferred; dotted where concealed)

WEST YOST

Figure 3-10

Vertical Ground Motion across Northwest MZ-1: 2014-2021

Chino Basin Watermaster
Ground-Level Monitoring Committee
2020/21 Annual Report

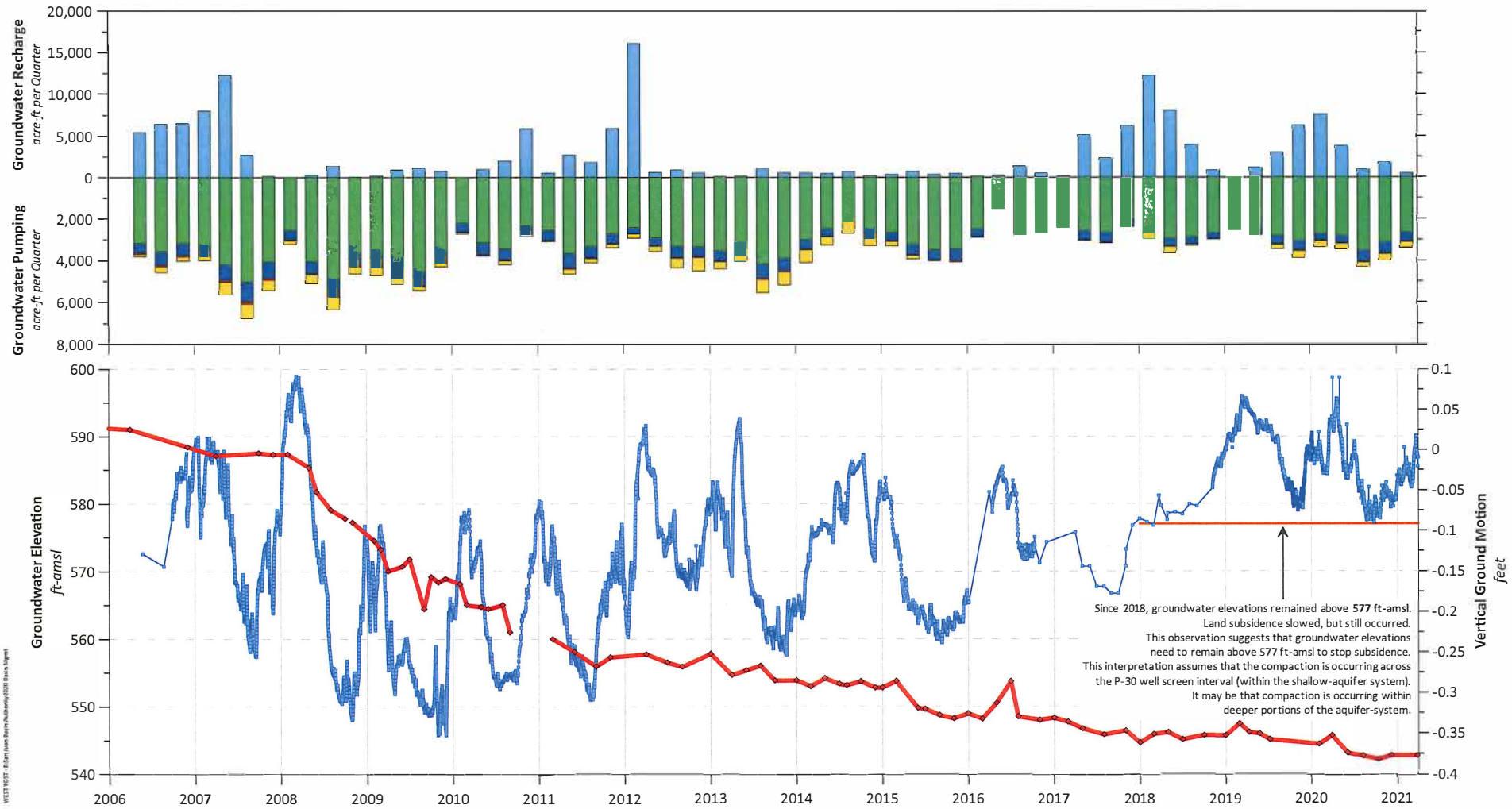

Figure 3-11

Hydraulic Heads at P-30 Versus Vertical Ground Motion

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2020/21 Annual Report

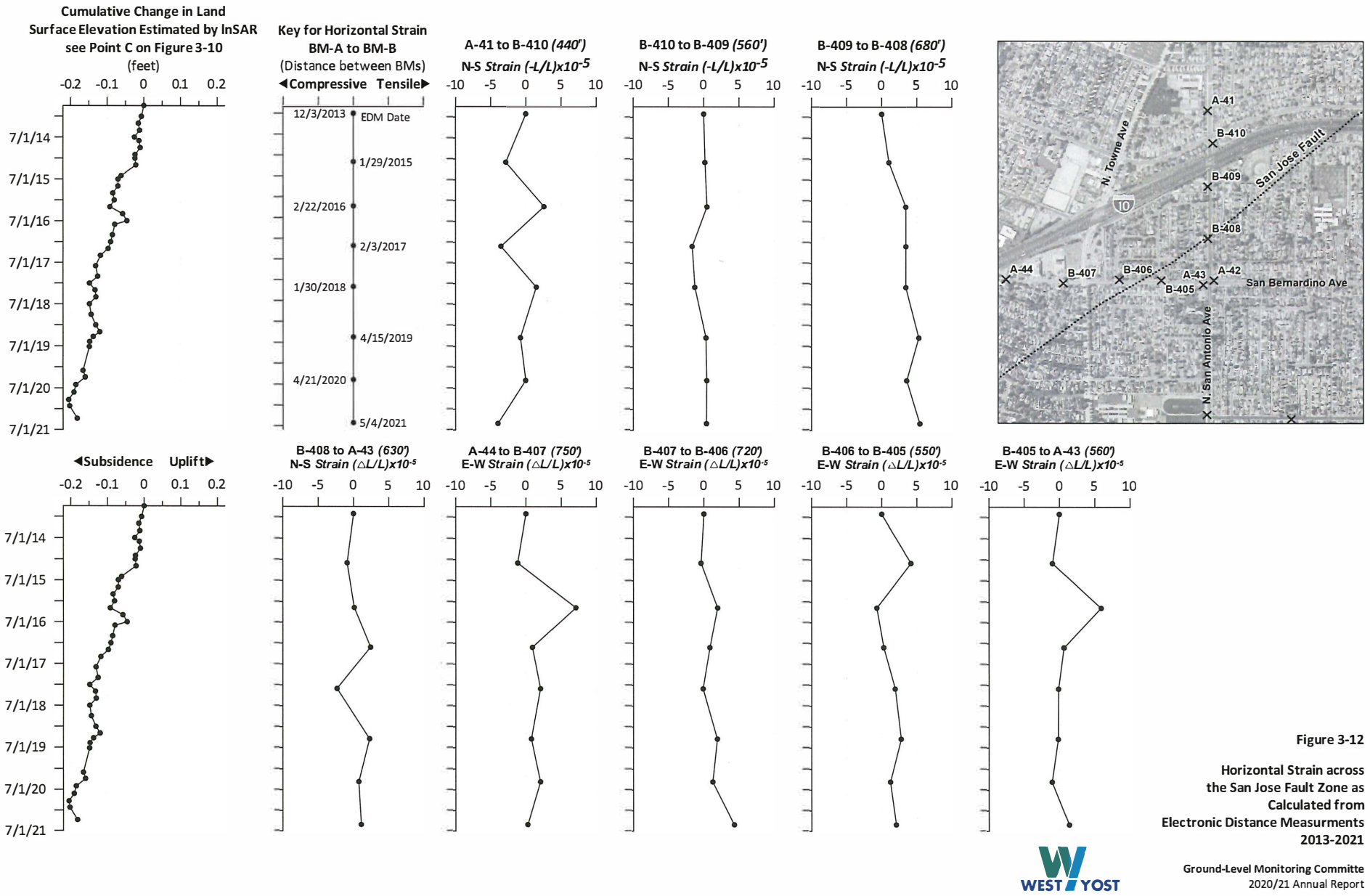

Figure 3-12

Horizontal Strain across the San Jose Fault Zone as Calculated from Electronic Distance Measurments 2013-2021

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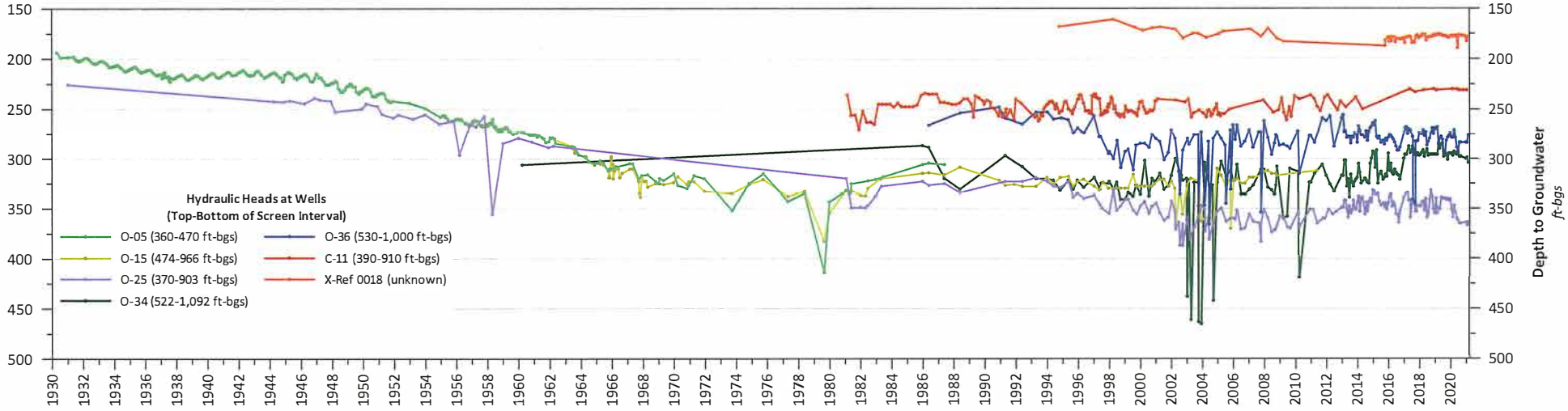
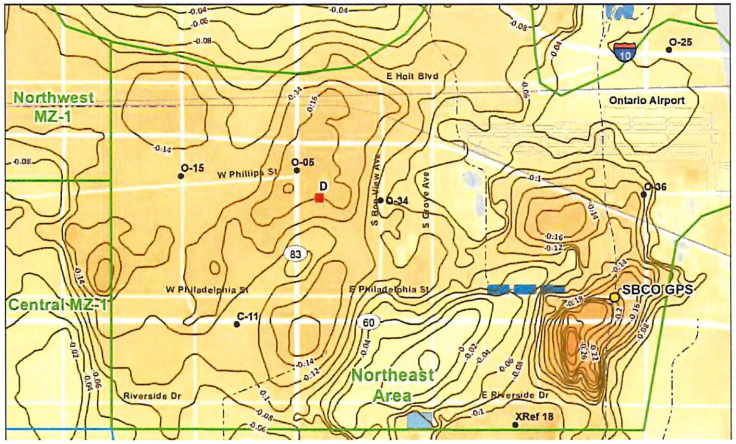
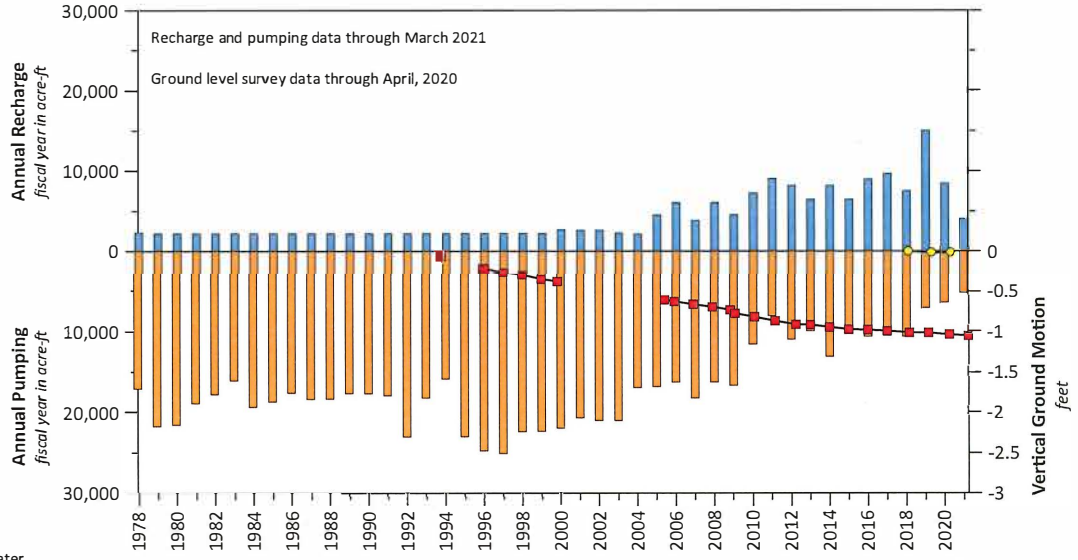




InSAR from March 2011 to March 2021 (see Figure 3-1a)



Vertical Ground-Motion (Cumulative Displacement)

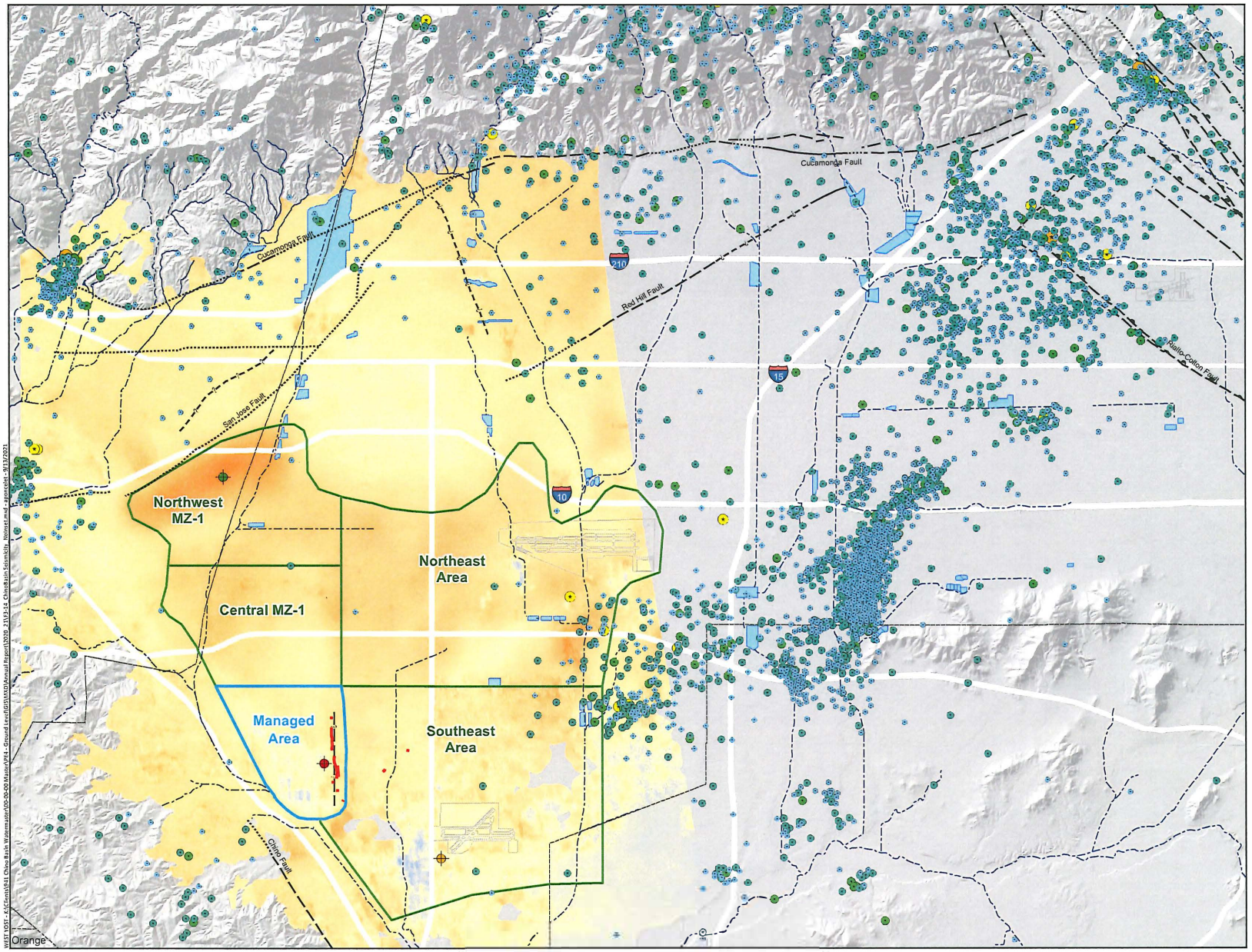
- BM SBCO_GPS
- InSAR at Point D

Recharge and Pumping

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

Figure 3-13

History of Land Subsidence in the Northeast Area



N

0 1 2

Miles

Seismicity in the Chino Basin
April 1, 2011 to April 31, 2021
(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 April 2021)

- +0.45 ft
- 0 ft
- -0.45 ft
- InSAR absent or incoherent
- Pomona Extensometer
- Ayala Park Extensometer
- Chino Creek Extensometer
- Managed Area
- Areas of Subsidence Concern
- Flood Control and Conservation Basins
- Historical Ground Fissures
- Approximate Location of the Riley Barrier
- Fault (solid where accurately located; dashed where approximately located or inferred; dotted where concealed)

WEST YOST

Figure 3-14

Seismicity across the Chino Basin: 2011-2021

Chino Basin Watermaster
Ground-Level Monitoring Committee
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4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions and Recommendations

The major conclusions and recommendations of this 2020/21 Annual Report of the GLMC are:

- At the Ayala Park Extensometer in the Managed Area, hydraulic heads within the shallow and deep aquifer-systems increased to their highest levels since the inception of the GLMP in 2003, and the Ayala Park Extensometers recorded elastic expansion of the aquifer-system during the current reporting period of March 2020 to March 2021. The increases in hydraulic head were due to the virtual cessation of pumping in the Managed Area during the reporting period. The reduced pumping is largely due to the presence of water-quality contaminants in groundwater that constrain its use as drinking water. Hydraulic heads in the deep aquifer-system remain well above the Guidance Level, and the Ayala Park Extensometers recorded no inelastic compaction of the aquifer-system during the current reporting period.
- Across most of the other Areas of Subsidence Concern, prior annual reports have noted long-term trends of gradual land subsidence since 1992, even during periods of stable or increasing heads. The long-term trends in downward vertical ground motion have been of particular concern in Northwest MZ-1, where subsidence occurs differentially across the San Jose Fault and differential subsidence poses a threat for ground fissuring. The long-term trends of land subsidence have been attributed to the delayed drainage and compaction of aquitards as they slowly equilibrate with lower heads in the aquifers that were caused by historical pumping. Over the past several years, pumping has decreased across much of the western Chino Basin due to the presence of contaminants in groundwater that constrain its use as drinking water. Also, artificial recharge of imported water in Northwest MZ-1 (Upland, College Heights, Montclair, and Brooks basins) has increased mainly due to a "put" cycle in the Dry-Year Yield Program. The decreases in pumping and increases in recharge have caused heads to stabilize or increase, and InSAR estimates of ground motion across most of the Areas of Subsidence Concern have shown that the long-term trends of land subsidence have slowed. These observations suggest:
  - The reductions in pumping, increases in recharge, and increases in hydraulic head may be causing equilibration of hydraulic heads in the aquitards and aquifers, which is slowing the drainage and compaction of the aquitards.
  - Hydraulic heads may be nearing "threshold levels" that, if achieved and maintained, could abate the future occurrence of permanent land subsidence. These hydraulic head thresholds, and various pumping and recharge strategies to maintain heads above these thresholds, were explored by the GLMC in 2017 using a numerical, one-dimensional aquifer-system compaction model in Northwest MZ-1 (WEI, 2017b). The past few years of reduced pumping and increased recharge in Northwest MZ-1 functioned as an empirical test of the model simulations performed in 2017 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 will likely increase pumping in the future by implementing strategies to remove groundwater contaminants through treatment, and the "put" cycles for the Dry-Year Yield Program will occur only periodically, if at all. The future occurrence of subsidence remains possible in the event of future head declines.

RECOMMENDATION: 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. In FY 2021/22, this will include:

- Continuing aquifer-system monitoring and data analysis in Northwest MZ-1, including hydraulic head data and aquifer-system deformation data from the PX and hydraulic head data from Pomona and MVWD wells equipped with transducers.
- Updating the Northwest MZ-1 hydrogeologic conceptual model by constructing, calibrating, and documenting the one-dimensional compaction models at the MVWD-28 and PX locations.
- Using the one-dimensional compaction models at the MVWD-28 and PX locations to characterize the effectiveness of the BMA and the ISMA to minimize or abate the future occurrence of subsidence in Northwest MZ-1.[12,13]
- Developing additional subsidence-management alternatives for evaluation in FY 2022/23 if the prior alternatives are unsuccessful at minimizing or abating the future occurrence of subsidence in Northwest MZ-1.

- 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.
  - General Atomics (formerly Neva Ridge Technologies, Inc.), a long-time subconsultant to the Watermaster, has been able to stay abreast of the newest InSAR products and processing techniques which in turn provides InSAR deliverables to the GLMC with high accuracy, resolution, and coherence.
  - Where and when the extensometer, InSAR, and traditional ground-leveling datasets overlap, InSAR shows a similar spatial pattern and magnitude of ground motion compared to the ground-level surveys. Research performed by the GLMC has shown that the errors inherent in InSAR and traditional ground-level methods are similar.

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[12] The development and evaluation of the BMA and ISMA were reported on here:

https://cbwm.syncedtool.com/shares/folder/e83081106c3072/?folder_id=1126

[13] Characterizing the Baseline Management Alternative, Initial Subsidence Management Alternative, and developing and evaluating additional subsidence-management alternatives is contingent on the successful completion, calibration, and GLMC review of the updated Watermaster's MODFLOW model that simulates subsidence across the Chino Basin. The completion dates for these tasks may need to be adjusted.

- 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 GLMC should preferentially rely on InSAR over traditional ground-leveling techniques to monitor ground motion as a cost-saving strategy. However, the GLMC should consider employing methods to verify the InSAR estimates of vertical ground motions via techniques such as GPS, extensometers, and less-frequent ground-leveling surveys.

- In the Northeast Area, the long- and short-term InSAR estimates indicate that persistent downward ground motion has occurred in a concentrated area south of the Ontario Airport between Vineyard Avenue and Archibald Avenue. The western edge of this subsiding area exhibits a steep subsidence gradient, or "differential subsidence." Subsidence may have occurred in this area in response to declining hydraulic heads, but there is not enough historical hydraulic head data in this area to confirm this relationship. In FY 2021/22, the GLMC will conduct a reconnaissance-level subsidence investigation of the Northeast Area. As part of the investigation, available borehole and lithologic data, pumping and recharge data, and high-frequency hydraulic head data will be collected, reviewed, analyzed and compared against InSAR estimates of vertical ground motion in the southeast part of the Northeast Area. Figures and charts will be prepared to support the data analysis and interpretations, and recommendations will be developed for future investigations and monitoring.

4.2 Recommended Scope and Budget for Fiscal Year 2021/22

The scope-of-work for the GLMP for FY 2021/22 was recommended by the GLMC in April 2021 and approved by Watermaster on July 22, 2021. Appendix A is the technical memorandum prepared by the GLMC, titled *Recommended Scope and Budget of the Ground-Level Monitoring Committee for FY 2021/22*.

In March 2022, Watermaster staff and the Watermaster Engineer will present the preliminary results of the GLMP through 2021 and a recommended FY 2022/23 scope and budget to the GLMC for consideration. As is typically done, the GLMC will recommend changes to the then-current scope of work for the GLMP.

4.3 Changes to the Subsidence Management Plan

The Subsidence Management Plan calls for ongoing monitoring, data analysis, annual reporting, and adjustments to the MZ-1 Plan, as warranted by the data. The Subsidence Management Plan states that if data from existing monitoring efforts 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. The recommendations described above to continue implementation of the *Work Plan to Develop a Subsidence-Management Plan for the Northwest MZ-1 Area* and to conduct a reconnaissance-level subsidence investigation of the Northeast Area are consistent with the requirements of the OBMP Program Elements 1 and 4 and its implementation plan contained in the Peace Agreement.

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. Areally, extensive aquitards may function regionally as confining units within aquifer-systems.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Rebound – Elastic rising of the land surface.

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

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

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

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

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

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

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Appendix A

Recommended Scope and Budget of the Ground-Level Monitoring Committee for FY 2021/22

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TECHNICAL MEMORANDUM

DATE: July 8, 2021

Project No.: 941-80-20-22
SENT VIA: EMAIL

TO: Ground-Level Monitoring Committee

FROM: Michael Blazevic

REVIEWED BY: Andy Malone

SUBJECT: Recommended Scope of Services and Budget of the Ground-Level Monitoring Committee for Fiscal Year 2021/22 (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 the 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 2021/22 in the form of a proposed scope of services and budget.

Members of the GLMC are asked to:

- Review this TM prior to March 4, 2021
- Attend a meeting of the GLMC at 9:00 am on March 4, 2021 to discuss the proposed scope of services and budget for FY 2021/22
- Submit comments and suggested revisions on the proposed scope of services and budget for FY 2021/22 to the Watermaster by March 19, 2021
- Attend a meeting of the GLMC at 9:00 am on April 1, 2021 to discuss comments and revisions to the proposed scope of services and budget for FY 2021/22

- Submit additional comments and suggested revisions on the proposed scope of services and budget for FY 2021/22 to the Watermaster by May 21, 2020.

The final scope of services and budget that is recommended by the GLMC will be included in the Watermaster's FY 2021/22 budget. The final scope of services, budget, and schedule for FY 2021/22 will be included in Section 4 of the *2020/21 Annual Report of the GLMC*.

RECOMMENDED SCOPE OF SERVICES AND BUDGET – FY 2021/22

A proposed scope of services for the GLMP for FY 2021/22 is shown in Table 1 as a line-item cost estimate. The proposed scope of services is summarized below.

Task 1. Setup and Maintenance of the Monitoring Network

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

Task 1.1. Maintain Extensometer Facilities

This subtask includes performing monthly visits to the Ayala Park, Chino Creek, and Pomona extensometer facilities to ensure functionality and calibration of the monitoring equipment and data loggers.

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 and compilation of hydraulic head and aquifer-system deformation data from the Ayala Park, Chino Creek, and Pomona extensometer facilities.

Task 2.1. Conduct Quarterly Data Collection from Extensometers; Data Checking and Management

This subtask involves the routine quarterly collection and checking of data from the extensometer facilities. 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 records from the Ayala Park, Chino Creek, and Pomona extensometer facilities will be loaded to HydroDaVE^{SM} (Hydrologic Database and Visual Explanations) and checked. Both hydraulic head and aquifer-system data from the extensometer facilities will be loaded and checked to HydroDaVE on a quarterly basis.

Table 1. Work Breakdown Structure and Cost Estimates Ground-Level Monitoring Program: FY 2021/22

	Task Description	Notes	Labor (days)		Other Direct Costs						Totals by Task	Recommended Budget FY 2021/22 a	Totals Approved Budget FY 2020/21 b	Totals Net Change FY 2020/21 to 2021/22 a - b	Potential Carry-Over FY 2021/22 c	Budget with Carry Over FY 2021/22 a - c
			Person Days	Total	Travel	New Equip.	Equip. Rental	Outside Pro	Misc.	Total						
Task 1. Setup and Maintenance of the Monitoring Network				**$26,208**						**$7,388**	**$33,596**	**$33,596**	**$32,988**	**$608**	**$0**	**$33,596**
1.1	Maintain Extensometer Facilities															
1.1.1	Routine maintenance of Ayala Park, Chino Creek, and Pomona extensometer facilities		14	$19,824	$1,056	$250	$152			$1,458	$21,282	$21,282	$20,818	$464	$0	$21,282
1.1.2	Replacement/repair of equipment at extensometer facilities		4	$6,384	$264	$2,000	$70	$2,000		$4,334	$10,718	$10,718	$10,574	$144	$0	$10,718
1.2	Annual Lease Fees for the Chino Creek extensometer site		0	$0					$1,596	$1,596	$1,596	$1,596	$1,596	$0	$0	$1,596
Task 2. MZ-1: Aquifer-System Monitoring and Testing				**$30,736**						**$680**	**$31,416**	**$31,416**	**$27,392**	**$4,024**	**$0**	**$31,416**
2.1	Conduct Quarterly Data Collection from Extensometers; Data Checking and Management															
2.1.1	Download data from the Ayala Park extensometer facility		2	$2,687	$230		$76			$306	$2,993	$2,993	$2,930	$63	$0	$2,993
2.1.2	Download data from the Chino Creek extensometer facility		2	$2,687	$26					$26	$2,713	$2,713	$2,650	$63	$0	$2,713
2.1.3	Download data from Pomona extensometer facility		4	$5,374	$272		$76			$348	$5,722	$5,722	$5,596	$126	$0	$5,722
2.1.4	Process, check, and upload data to database		13	$19,988						$0	$19,988	$19,988	$16,216	$3,772	$0	$19,988
Task 3. Basin Wide Ground-Level Monitoring Program (InSAR)				**$5,116**						**$85,000**	**$90,116**	**$90,116**	**$90,002**	**$114**	**$0**	**$90,116**
3.1	Acquire TerraSAR-X Data and Prepare Interferograms for 2021/22		1	$1,845				$85,000		$85,000	$86,845	$86,845	$86,808	$37	$0	$86,845
3.2	Check and Review InSAR Results		2	$3,271						$0	$3,271	$3,271	$3,194	$77	$0	$3,271
Task 4. Perform Ground-Level Surveys				**$7,728**						**$192,203**	**$199,931**	**$93,982**	**$51,828**	**$42,154**	**$0**	**$93,982**
4.1	Conduct Spring-2022 Elevation surveys in Northwest MZ-1		0.5	$926				$25,157		$25,157	$26,083	$26,083	$34,784	-$8,701	$0	$26,083
4.2	Conduct Spring-2022 Elevation Survey in the Northeast Area		0	$0				$47,069		$47,069	$47,069	$0	$0	$0	$0	$0
4.3	Conduct Spring-2022 Elevation Survey in the Southeast Area		0.5	$926				$49,797		$49,797	$50,723	$50,723	$0	$50,723	$0	$50,723
4.4	Conduct Spring-2022 Elevation and EDM Surveys in the Managed Area/Fissure Zone Area		0	$0				$52,270		$52,270	$52,270	$0	$0	$0	$0	$0
4.5	Replace Destroyed Benchmarks (If needed)		0	$0				$17,910		$17,910	$17,910	$11,300	$11,300	$0	$0	$11,300
4.6	Process, Check, and Update Database		4	$5,877						$0	$5,877	$5,877	$5,744	$133	$0	$5,877
Task 5. Data Analysis and Reporting				**$85,586**						**$0**	**$85,586**	**$85,586**	**$74,932**	**$10,654**	**$0**	**$85,586**
5.1	Prepare Draft 2020/21 Annual Report of the Ground-Level Monitoring Committee		20.5	$33,286						$0	$33,286	$33,286	$35,196	-$1,910	$0	$33,286
5.2	Prepare Final 2020/21 Annual Report of the Ground-Level Monitoring Committee		10.5	$19,546						$0	$19,546	$19,546	$19,088	$458	$0	$19,546
5.3	Compile and Analyze Data from the 2021/22 Ground-Level Monitoring Program		14	$21,144						$0	$21,144	$21,144	$20,648	$496	$0	$21,144
5.4	Conduct Reconnaissance-Level Subsidence Investigation of the Northeast Area (southeast part)															
5.4.1	Collect and compile available InSAR, ground-level survey, lithologic, piezometric level, and pumping and recharge data		2.75	$4,442						$0	$4,442	$4,442	$0	$4,442	$0	$4,442
5.4.2	Prepare lithologic cross-sections and data graphics of pumping, piezometric levels, and InSAR time-histories; share with the GLMC		4.25	$7,168						$0	$7,168	$7,168	$0	$7,168	$0	$7,168
Task 6. Develop a Subsidence-Management Plan for Northwest MZ-1				**$238,164**						**$480**	**$238,644**	**$238,644**	**$99,189**	**$139,455**	**$91,691**	**$146,953**
6.1	Aquifer-System Monitoring															
6.1.1	Collect pumping and piezometric level data from agencies every two months; check and upload data to HDX		9.75	$12,669						$0	$12,669	$12,669	$10,599	$2,070	$0	$12,669
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		8.25	$11,913						$0	$11,913	$11,913	$11,634	$279	$0	$11,913
6.2	Update the One-Dimensional (1D) Compaction Models at the MVWD-28 and PX Locations															
6.2.1	Construct a 1D compaction model at the PX location		0	$0						$0	$0	$0				
6.2.2	Calibrate 1D compaction model to derive hydraulic and mechanical properties of aquifers/aquitards and estimate the pre-consolidation stress(es)		0	$0						$0	$0	$0	$0	$0	$0	$0
6.2.3	Update the 1D compaction model at the MVWD-28 location from a three to a five layer model and re-calibrate		0	$0						$0	$0	$0				
6.3	Document the One-Dimensional (1D) Compaction Models at the MVWD-28 and PX Locations															
6.3.1	Prepare for and conduct a meeting to review the results of the 1D compaction models	a	4.25	$8,722	$120					$120	$8,842	$8,842	$0	$8,842	$0	$8,842
6.3.2	Review and respond to the GLMC comments on the 1D compaction models		3	$6,140						$0	$6,140	$6,140	$0	$6,140	$0	$6,140
6.3.3	Prepare a draft TM summarizing the construction and calibration of the PX 1D compaction model and updates to the MVWD-28 1D compaction model and distribute to the GLMC		25.5	$46,664						$0	$46,664	$46,664	$0	$61,813	$14,735	$47,078
6.3.4	Prepare for and conduct a GLMC meeting to receive feedback and comments on the draft TM	a	4.75	$9,299						$0	$9,299	$9,299				
6.3.5	Incorporate the GLMC comments and prepare a final technical memorandum		3.0	$5,730	$120					$120	$5,850	$5,850				
6.4	Refine and Evaluate Subsidence-Management Alternatives															
6.4.1	Run the Baseline Management Alternative (BMA)		19	$33,176						$0	$33,176	$33,176				
6.4.2	Prepare a TM that summarizes the evaluation of the BMA and a recommended ISMA		10.75	$19,425						$0	$19,425	$19,425				
6.4.4	Meet with the GLMC to receive feedback on the TM		4.5	$8,757	$120					$120	$8,877	$8,877				
6.4.5	Run the Initial Subsidence Management Alternative (ISMA)		25.75	$46,945						$0	$46,945	$46,945	$76,956	$60,311	$76,956	$60,311
6.4.6	Prepare a technical memorandum that summarizes the evaluation of the ISMA and a recommended Subsidence Management Alternative (SMA-2)		10.75	$19,425						$0	$19,425	$19,425				
6.4.7	Prepare for and conduct a meeting to receive feedback and comments on the draft technical memorandum		4.75	$9,299	$120					$120	$9,419	$9,419				
Task 7. Meetings and Administration				**$53,813**						**$407**	**$54,220**	**$54,220**	**$51,250**	**$2,971**	**$0**	**$54,220**
7.1	Prepare for and Conduct Four Meetings of the Ground-Level Monitoring Committee	a	14	$27,877	$240					$240	$28,117	$28,117	$25,838	$2,279	$0	$28,117
7.2	Prepare for and Conduct One As-Requested Ad-Hoc Meeting	a	3	$5,857	$167					$167	$6,024	$6,024	$5,804	$221	$0	$6,024
7.3	Perform Monthly Project Management		6	$11,108						$0	$11,108	$11,108	$10,848	$260	$0	$11,108
7.4	Prepare a Recommended Scope and Budget for the GLMC for FY 2022/23		4.75	$8,970						$0	$8,970	$8,970	$8,760	$210	$0	$8,970
Totals												$627,560	**$427,581**	**$199,979**	**$91,691**	**$535,869**

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 2021 to March 2022.

As part of the approved scope of services and budget of the GLMC for FY 2020/21, the GLMC directed the Watermaster Engineer to perform a pilot study of the Sentinel-1A InSAR data. The TM documenting the objectives, methods, results, and conclusions and recommendations of the pilot study is included in Attachment A. The conclusions from the pilot study were relied upon in recommending Tasks 3.1 and 3.2 for FY 2021/22.

Task 3.1. Acquire TerraSAR-X SAR Data and Prepare Interferograms for 2021/22

In this subtask, five SAR scenes that will be acquired by the TerraSAR-X satellite from March 2021 to March 2022 are purchased from the German Aerospace Center. General Atomics (formerly Neva Ridge Technologies) will use the SAR scenes to prepare 12 interferograms that describe the incremental and cumulative vertical ground motion that occurred from March 2021 to March 2022 and since 2011. The associated costs for General Atomics to task, acquire, purchase, and process the InSAR data is as follows:

- Task TerraSAR-X for five acquisitions for the western Chino Basin ($12,000)
- Purchase all TerraSAR-X data ($17,000)
- Process the purchased TerraSAR-X data ($56,000)

Task 3.2. Check and Review InSAR Results

In this subtask, the Watermaster Engineer reviews the InSAR results with General Atomics and performs checks for reasonableness and accuracy of the InSAR estimates of vertical ground motion across the western Chino Basin.

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 between benchmark monuments to estimate horizontal ground motion in areas where ground fissuring due to differential land subsidence is a concern.

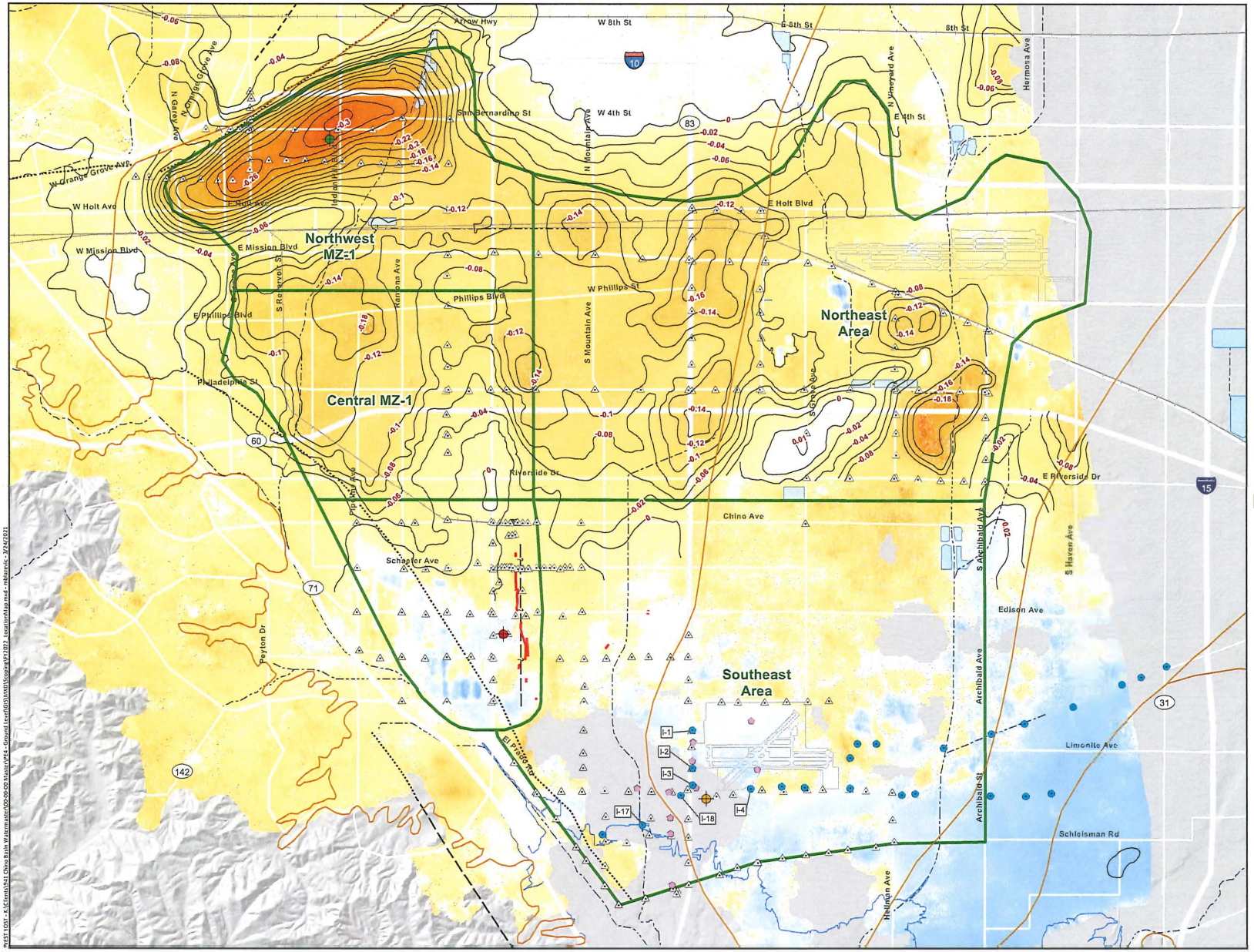

Figure 1

Ground-Level Monitoring Program
Fiscal Year 2021/22

Chino Basin Watermaster
Ground-Level Monitoring Committee

Table 2 documents the areas surveyed over the last five years as part of the GLMP.

Table 2. Ground Level Monitoring Program Ground-Level Survey History Over the Last Six Years

Ground-Level Survey Area	Ground-Level Survey Completed (Y/N)?					
	2016	2017	2018	2019	2020	2021[b]
Managed Area	Y	N	Y	N	N	N
Fissure Zone Area[a]	Y	N	Y	N	N	N
Central Area	N	N	N	N	N	N
Northwest Area	Y	Y	Y	Y	Y	Y
San Jose Fault Zone Area[a]	Y	Y	Y	Y	Y	Y
Southeast Area	Y	Y	Y	N	N	N
Northeast Area	N	N	Y	Y	Y	N

(a) Denotes EDM survey area.
(b) The 2021 ground-level surveys are scheduled to begin in early March 2021.

The ground-level survey efforts recommended for FY 2021/22 include the following Tasks.

Task 4.1. Conduct Spring-2022 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 2022. The elevation survey will begin at the Pomona Extensometer Facility and includes benchmarks across Northwest MZ-1. The elevation survey will be referenced to a newly established elevation datum at the Pomona Extensometer.

The vertical elevation survey is recommended in FY 2021/22 because of the recent subsidence that has occurred in Northwest MZ-1 and 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 the surveys have demonstrated since 2013 that the horizontal strain measured between benchmark pairs appears to behave elastically.*

Task 4.3. Conduct Spring-2022 Elevation in the Southeast Area

In this subtask, the surveyor conducts elevation surveys at the established benchmarks in the Southeast Area in Spring 2022. The elevation survey will begin at the Ayala Park Extensometer Facility and will include benchmarks throughout the Southeast Area.

The elevation survey in the Southeast Area is recommended because six Chino Creek Desalter wells (I-1 to I-4, I-17, and I-18) are expected to begin pumping in Summer/Fall 2023 and the InSAR data is largely incoherent across this area (see Figure 1).

Task 4.5. Replace Destroyed Benchmarks (if needed)

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

Task 4.6. Process, Check, and Update Database

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

The ground-level surveys efforts **not** recommended for FY 2021/22 include the following Tasks.

Task 4.2. Conduct Spring-2021 Elevation Survey in the Northeast Area

This survey is not recommended for FY 2021/22 because heads have been relatively stable or increasing across most of this area and recent ground motion as measured by InSAR and ground-level surveys has been minor in this area.

Task 4.4. Conduct Spring-2021 Elevation and EDM Surveys in the Managed Area/Fissure Zone Area

This survey is not recommended for FY 2021/22 because over the past several years hydraulic heads at PA-10 and PA-7 have increased to their highest levels since implementation of the GLMP in 2003; and, recent ground motion as measured by InSAR, ground-level surveys, and the Ayala Park Extensometer has been minor in this area.

Task 5. Data Analysis and Reporting

Task 5.1. Prepare Draft 2020/21 Annual Report of the Ground-Level Monitoring Committee

Prepare the text, tables, and figures for a draft 2020/21 Annual Report of the GLMC and submit the report to the GLMC by September 24, 2021 for review and comment.

Task 5.2. Prepare Final 2020/21 Annual Report of the Ground-Level Monitoring Committee

Update the text, tables, and figures based on the comments received from the GLMC and prepare a final *2020/21* Annual Report of the GLMC by October 29, 2021. Responses to comments will be included as an appendix to the final report. The report will be included in the agenda packet for the November 2021 Watermaster meetings for approval.

Also, as part of Task 5, Watermaster's Engineer will work with the GLMC to develop concepts for streamlining the Annual Report of the Ground-Level Monitoring Committee and the reporting process for future years. Watermaster's Engineer will present a recommended approach to streamline the report and reporting process to the GLMC, Watermaster's staff, and Watermaster's legal counsel during the scheduled meetings of the GLMC in FY 2021/22.

Task 5.3. Compile and Analyze Data from the 2021/22 Ground-Level Monitoring Program

In this subtask, monitoring data generated from the GLMP during 2021/22 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 2022 during the development of a recommended scope of services and budget for FY 2022/23.

Task 5.4. Conduct Reconnaissance-Level Subsidence Investigation of the Northeast Area

In the Northeast Area, the long- 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. The western edge of this subsiding area exhibits a steep subsidence gradient or "differential subsidence." Subsidence may have occurred in this area in response to declining hydraulic heads, but there is not enough historical hydraulic head data in this area to confirm this relationship. This task will include data collection, review, and analysis of available borehole and lithologic data, pumping and recharge data, high-frequency hydraulic head measurements, and InSAR estimates of vertical ground motion at up to four locations in the southeast part of the Northeast Area. Figures and charts will be prepared to support the data analysis, interpretations, and any recommendations for future investigations and monitoring.

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.[1]

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

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

[1] http://www.cbwm.org/rep_legal.htm.

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).[2] The Work Plan is characterized as an ongoing Watermaster effort and includes a description of a multi-year scope-of-work, a cost estimate, and an implementation schedule. The Work Plan was included in the 2015 SMP as Appendix B. Implementation of the Work Plan began in July 2015. On an annual basis, the GLMC analyzes the data and information generated by the implementation of the Work Plan. The results and interpretations generated from the analysis are documented in the annual report of the GLMC and used to prepare recommendations for future activities.

The following tasks are recommended for in FY 2021/22 to implement the Work Plan:

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: 1) SCADA-based monitoring by the Monte Vista Water District; 2) monitoring of piezometric levels via sonar[3]; 3) monitoring of piezometric levels via pressure transducers at City of Pomona production wells; and 4) 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 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.

Task 6.3. Document the One-Dimensional (1D) Compaction Models at the MVWD-28 and PX Locations

This task will help answer the question: What are the *pre-consolidation stresses* within the compacting intervals of the aquifer-system?

The *pre-consolidation stress* is a piezometric "threshold." When piezometric levels are above the threshold, subsidence is abated. When piezometric levels are below the threshold, subsidence is caused. The determination of *pre-consolidation stress* by aquifer-system layer can provide "guidance" for the Chino Basin parties to manage pumping and recharge to avoid the future occurrence of land subsidence in Northwest MZ-1.

The model calibration results for two 1D compaction models located within the area of maximum subsidence in Northwest MZ-1 (at the MVWD-28 and PX sites) will be used, in combination with other monitoring data, to estimate the current (2018) pre-consolidation stresses by aquifer-system layer for Northwest MZ-1. The 1D compaction models, the calibration results, and the preliminary estimates of the pre-consolidation stress by aquifer-system layer will be presented by the Watermaster Engineer at a GLMC meeting. The Watermaster Engineer will accept verbal feedback and written comments from the GLMC, and then prepare a draft technical memorandum (TM) to document 1D compaction models, the calibration results, and the preliminary estimates of the pre-consolidation stress. Another GLMC meeting will be held to review the draft TM. The GLMC will submit written comments and suggested revisions to the

[2] Work Plan to Develop a Subsidence-Management Plan for Northwest MZ-1

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

Watermaster Engineer. A final TM will be prepared that incorporates the feedback and comments from the GLMC.

Task 6.4. Refine and Evaluate the Subsidence-Management Alternatives

This task will help 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 will be used to characterize the mechanical response of the aquifer-system to a Baseline Management Alternative (BMA). A draft TM will be prepared that summarizes the evaluation of the BMA, particularly, the ability of the BMA to raise and hold piezometric levels above the estimated pre-consolidation stresses. The draft TM may also include a recommendation for the Initial Subsidence Management Alternative (ISMA) if the BMA is not successful at raising and holding hydraulic heads above the estimated pre-consolidation stresses. The assumptions of the ISMA, including the groundwater production and replenishment plans of the Chino Basin parties, will be described and must be agreed upon by the GLMC. A GLMC meeting will be held to review the model results and evaluation of the BMA, review the recommended ISMA, and to receive feedback on the draft TM.

After the recommended ISMA is agreed upon by the GLMC, the Watermaster's MODFLOW model will be updated to run the ISMA and will be used to estimate the hydraulic head response to the ISMA at the MVWD-28 and PX locations. The projected hydraulic heads generated from the MODFLOW model using the ISMA will be extracted from the MODFLOW model results at the MVWD-28 and PX locations and will be used as input files for both 1D compaction models. The 1D compaction models will then be run to characterize the mechanical response of the aquifer-system to the ISMA at both the MVWD-28 and PX locations.

A draft TM will be prepared that summarizes the evaluation of the ISMA, particularly, the ability of the ISMA to raise and hold piezometric levels above the estimated pre-consolidation stresses. The draft TM may also include a recommendation for a second Subsidence-Management Alternative (SMA-2), if the ISMA is not successful at raising and holding hydraulic heads above the estimated pre-consolidation stresses. The assumptions of the SMA-2, including the groundwater production and replenishment plans of the Chino Basin parties, will be described, and must be agreed upon by the GLMC. A GLMC meeting will be held to review the model results and evaluation of the ISMA, review the recommended SMA-2, and to receive feedback on the TM.

If necessary and recommended by the GLMC, additional subsidence management alternative scenarios may be run in FY 2022/23. It is currently envisioned by the GLMC that, based on the results of the 1D compaction model results, the GLMC may recommend an update to the Watermaster's Subsidence Management Plan in FY 2022/23 to minimize or abate the future occurrence of land subsidence in Northwest MZ-1.

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:

- July 2021 – Implementation of the GLMP for FY 2021/22
- September 2021 – Review the draft 2020/21 Annual Report of the Ground-Level Monitoring Committee

- February 2022 – Review the draft recommended scope and budget for FY 2022/23
- March 2022 – Review the final recommended scope and budget for FY 2022/23 (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 2022/23

This subtask includes preparing a draft and final recommended scope of services and budget for FY 2022/23 for the GLMC to support the Watermaster's budgeting process.

Response to GLMC Comments

The comments received from the GLMC as of April 19, 2021 on the, "Recommended Scope of Services and Budget of the Ground-Level Monitoring Committee for Fiscal Year 2021/22" and the Watermaster Engineer's response to comments is documented below.

City of Ontario by Christopher T. Quach

Comment 1 – Scope and Services and Budget (Task 5, Sub-task 5.4)

Ontario is in support of Task 5.4 to begin the subsidence investigation. We agree this seems like the correct initial approach to get ahead of it in relation to the proposed cost and nature of the investigatory work.

Response:

No change has been made to the scope of services or budget.

Comment 2 – Overall Scope and Services and Budget

We currently don't have any other comments on the rest of the proposed budget.

Response:

No change has been made to the scope of services or budget.

City of Chino by Dave Crosley

Comment 1 – Scope and Services and Budget (Tasks 1 through 5 and Task 7)

Chino concurs with recommendations in the GLMP scope and budget for items identified as Tasks 1 through 5 and Task 7. For Task 3, Chino supports acquiring and processing the TerraSAR-X data to continue with the higher level of accuracy these data provide. As Watermaster continues to prove the value of InSAR data for evaluating ground movements, we recommend further evaluation of potential cost savings as certain ground level surveys can be reliably replaced in the future by InSAR. The accuracy of InSAR compared to ground level surveys and the offset in costs should be documented to further support the use of InSAR.

Response:

No change has been made to the scope of services or budget.

Comment 2 –Scope and Services and Budget (Task 6, Sub-task 6.3)

For Task 6, Subtask 6.3, Chino recommends proceeding with use of 1D compaction models at the PX facility and MVWD-28 along with the Chino Basin MODFLOW model for use in developing the subsidence management plan for Northwest MZ-1. It is our opinion that the higher vertical resolution that can be simulated by the 1D compaction models will provide added benefit in the hydrogeologic understanding between aquifer and aquitard responses to changes in groundwater levels within the various aquifers compared to a 3D model where these zones would be averaged over greater aquifer thicknesses. The 1D model simulating the PX facility location will be the most reliable for subsidence management based on the detailed hydrogeologic data that has been collected at this location along with the facility's ongoing ground level monitoring. Establishing a guidance level at this location, where greatest subsidence has been measured by InSAR, should be representative for Northwest MZ-1 just as the guidance level that was developed for the Ayala Park extensometer facility has proven successful for the Managed Area. The extrapolation of hydrogeologic data and associated uncertainties that would be associated with the construction and use of a 3D model has the potential to lose the accuracy needed to successfully simulate aquitard compaction across the entire soil column for groundwater level management planning. It is our opinion that the added cost to develop a 3D subsidence model for Northwest MZ-1 is not warranted at this time.

Response:

The recommended scope of services and budget for sub-task 6.3 has been updated based on the City of Chino's comments and feedback received from the April 1, 2021 meeting GLMC.

Comment 3 – Overall Scope and Services and Budget (Task 6, Sub-task 6.4)

We understand that the scope of Subtask 6.4 is to refine and evaluate possible subsidence management alternatives. There are 20 identified tasks for this scope. While it is not clear how many of these 20 identified tasks can be completed or will be necessary in the next fiscal year, Chino recommends only budgeting through Subtask 6.4.10 at this time. This will bring the evaluation through the development of Subsidence Management Alternative 2 (SMA-2). Evaluation of additional alternatives may be pre-mature at this time as the PX continues to operate and our knowledge of the ground response to groundwater levels continues to improve. Following completion of SMA-2 activities and evaluation by the GLMC, future possible alternatives could be devised for modeling and implementation for future fiscal years.

Response:

The recommended scope of services and budget for sub-task 6.4 has been updated based on the City of Chino's comments.

City of Pomona and Monte Vista Water District by Christopher Coppinger

Comment 1 – Task 1.1. Maintain Extensometer Facilities

Geoscience agrees that site visits for downloads and maintenance should be performed monthly. However, future reports should include fieldnotes or "run sheets" as an appendix to the annual report. It is not clear what maintenance is expected or has been performed in the past. Maintenance requirements may provide data on inherent error in the method and instruments.

Response:

Section 2.1.1 in the Annual Reports of the GLMC list specific maintenance activities performed at the Ayala Park, Chino Creek, and Pomona Extensometer facilities for the reporting year.

Inclusion of field notes as an appendix to the Annual Report should be discussed and recommended by the GLMC.

Comment 2 – Task 2.1. Conduct Quarterly Data Collection from Extensometers; Data Checking and Management

The data download task should overlap with monthly maintenance. Downloads should be occurring with planned site visits.

The cost for task 2.1.4 has increased from the previous year. During the GLMC meetings, WY indicated these increases represented the effort to import extensometer data into the WM database. Access to raw data would allow full review of cost and allow determination of inherent error. Stakeholders should be provided access to the database if they are funding collection of the data and construction of the database.

Response:

Site visits for data download and routine maintenance are performed together. Every effort is made to make field work efficient.

Consistent with the long-standing policy of the Watermaster and the GLMC, all data collected for the GLMP are available to any Party via a Request for Information to the Watermaster.[4]

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

During the GLMC meetings, Geoscience indicated the review of TerraSAR-X and Sentinel-1A datasets did not support the additional cost of TerraSAR-X data collection. The free TRE Altamira data set showed similar trends as the TerraSAR-X, had better spatial coverage of the Chino Basin than TerraSAR-X, and includes monthly data collection. Additionally, DWR processing and review of the Tre Altamira data set provides additional quality control for the InSAR data.

Since the March GLMC meetings, DWR has modified the SGMA data portal. These modifications have made the Sentinel-1A dataset less accessible. If the Sentinel-1A dataset cannot be reliably obtained, Geoscience recommends continuing InSAR collection as proposed by WY. General Atomic's deliverables should be included in the annual reports as appendices.

Data accessibility should be reviewed next fiscal year and the Sentinel-1A/Tre Altamira dataset adopted once DWR has finalized the data distribution platform.

Response:

Comments noted. The recommendation in this memorandum for the GLMP in FY 2021/22 is to acquire and utilize the TerraSAR-X InSAR estimates of vertical ground motion as provided by General Atomics. The

[4] http://www.cbwm.org/docs/forms/20120229%20Request%20For%20Information%20Form--PDF%20Form%20Version.pdf

acquisition and use of alternative InSAR datasets in the future can be discussed and recommended by the GLMC in FY 2021/22.

Inclusion of General Atomic's InSAR deliverables as an appendix to the Annual Report should be discussed and recommended by the GLMC. Consistent with the long-standing policy of the Watermaster and the GLMC, all data collected for the GLMP are available to any Party via a Request for Information to the Watermaster.

Comment 4 – Task 4. Perform Ground-Level Surveys

Geoscience recommends that all survey deliverables are included as attachments to provide measurement errors and access to data that stakeholders are paying for.

Geoscience agrees with the recommendations in Tasks 4.1 through 4.5. Task 4.6 includes data processing of the survey deliverables.

Response:

Inclusion of survey deliverables as an appendix to the Annual Report should be discussed and recommended by the GLMC. Consistent with the long-standing policy of the Watermaster and the GLMC, all data collected for the GLMP are available to any Party via a Request for Information to the Watermaster.

Comment 5 – Task 4.6. Process, Check, and Update Database

The person days and subsequent cost seem high for this task. Are surveyors able to provide deliverables in a format that would reduce the level of effort? What data processing is required once the survey deliverables are received?

Response:

The level of effort to conduct the GLMP and the associated cost estimates for time and materials are based on several years of experience in conducting the GLMP. The cost estimates represent conservative, best estimates for time and materials to complete each task.

The surveyors provide the survey deliverables in industry-standard electronic formats.

Once the survey deliverables are received, the following activities are executed to process, check, and update the database:

- Reviewing the surveyor's summary report and results.
- Updating and reviewing the time-series of ground-level elevations by benchmark.
- Corresponding with the surveyor to discuss the results, questions, and other information related to the ground-level survey results.
- Preparing GIS shapefiles showing the benchmark location and ground-level elevation change for various time-periods.
- Comparing the benchmark ground-level elevation change for various time-periods against the InSAR results for the same time-periods to check for reasonableness.

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Comment 6 – Task 5.3. Compile and Analyze Data from the 2021/22 Ground-Level Monitoring Program

Data compilation is included in each of the data collection tasks. What additional effort is included with this task?

Response:

In this task, the data is exported from the databases and is mapped, charted, reviewed, and analyzed. The information is used to prepare the figures and tables included in the Annual Report. The level of effort and the associated costs are based on several years of experience. The cost estimates represent conservative, best estimates for time and materials to complete the task.

Comment 7 – Task 5.4. Conduct Reconnaissance-Level Subsidence Investigation of the Northeast Area

The data presented does not yet rise to the level of requiring an additional investigation. In prior years, InSAR was incoherent in large parts of the eastern half of the basin. We recommend an additional year of monitoring InSAR data to confirm the trend before committing to further investigation.

Response:

Comment noted. Please see the comments received from the City of Ontario and City of Chino and the responses regarding Task 5.4.

This task has been approved by the Watermaster Board for completion in FY 2021/22.

Comment 8 – Task 6.1. Aquifer System Monitoring

Task 6.1 appears to overlap with data collection efforts in Task 5. The prior year budget should cover data collection and analysis in FY 2020/21, the current proposal should cover FY 2021/22. What additional scope would be included in Task 6.1? Data collection from PX has been included in new maintenance and download tasks.

Response:

There are no "data collection" efforts in Task 5. The data collection efforts proposed in Task 6.1 are specific to wells in the Northwest MZ-1 area. In addition, the data collection efforts proposed in Task 6.1 do not include data collection at the PX, which is included in Task 2.1.

We have revised the text for Task 6.1 for clarity.

Comment 9 – Task 6.3. Document the One-Dimensional (1D) Compaction Models at the MVWD-28 and PX Locations

Geoscience has previously expressed concern with use of 1D models to simulate delayed subsidence (See November 2017 TM entitled *Review of "Task 3 and Task 4 of the Work Plan to Develop a Subsidence Management Plan for the Northwest MZ-1 Area: Development and Evaluation of Baseline and Initial Subsidence – Management Alternatives" Draft Technical Memorandum by Wildermuth Environmental,*

Inc., Dated October 19, 2017). The 1D model of PX utilizes groundwater elevations exported from the five-layer Chino Basin model and subsidence estimated from InSAR data.

Based on the data provided in the March and April meetings, Geoscience recommends limiting the scope of Task 6.3 to documenting the 1D models that have been already prepared. The 1D models should not be utilized for further efforts until documentation has been provided to stakeholders.

Response:

The intent of Task 6.3 is to document the construction and calibration of the 1D compaction models in a technical memorandum. The model calibration results also include estimates of the *pre-consolidation stress* for each model cell. It is appropriate and efficient to describe these model calibration results, in their entirety, to facilitate understanding and discussion within the GLMC on the pre-consolidation stresses in Northwest MZ-1. The technical memorandum for Task 6.3 will go through the standard review and comment process of the GLMC before starting Task 6.4.

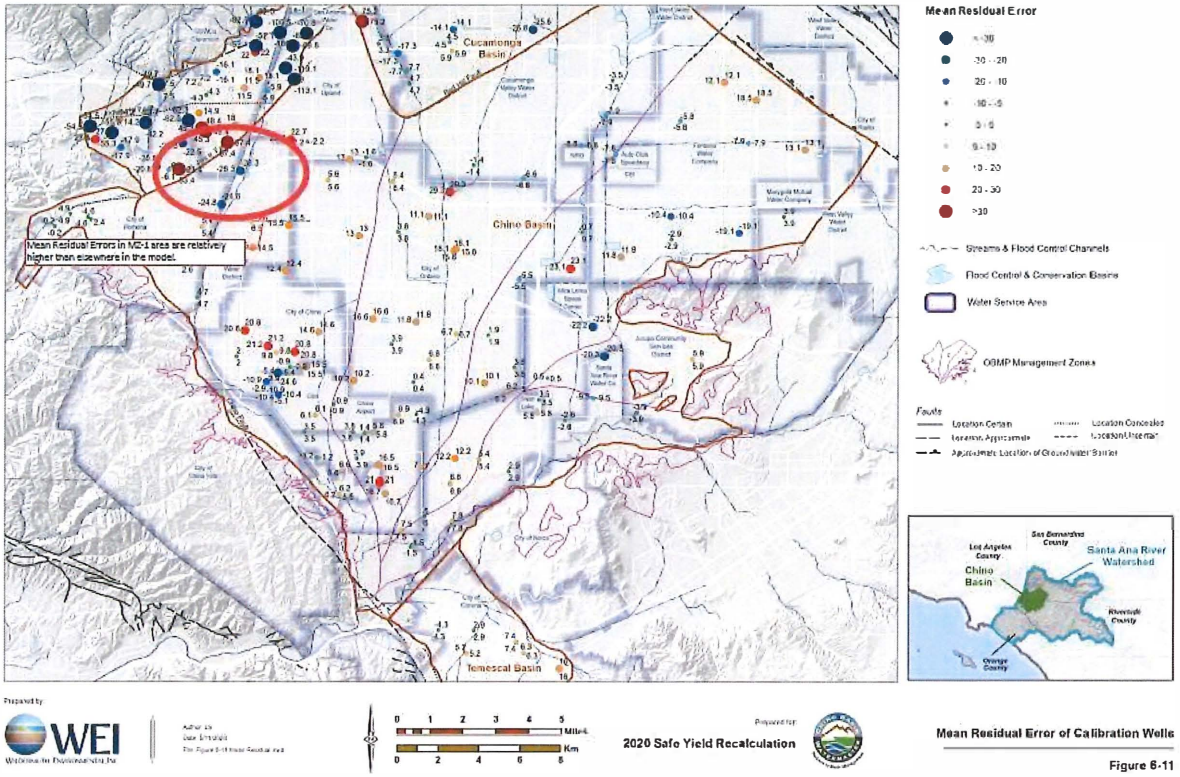
Comment 10 – Groundwater Elevation

Comments to the 2020 Safe Yield update identified a spatial bias in calibration at the Six Basins/Chino Basin Boundary. At the time, WEI indicated that wells in the area are perforated across multiple layers and that estimated water level would be influenced by head in all layers.

Figure 6-11 "Mean Residual Error of Calibration Wells" from the 2020 Safe Yield Recalculation is reproduced below. The Northwest MZ-1 area shows a high mean residual error relative to other parts of the basin.

The PX facility and the planned extended pumping test will provide layer specific groundwater elevation data. Additional calibration efforts or updates to the conceptual model may be required if predicted water levels in the deep PX completions are not consistent with MODFLOW model predicted water level and model predicted changes in water level.

The TM should provide data on the sensitivity of estimated pre-consolidation stress and other model based subsidence estimates to variation in layer specific model-simulated heads.



Response:

In our professional opinion, the Chino Valley Model (CVM) is sufficiently calibrated to be used as input data for the calibration of the 1D models. The CVM exhibits "very good" calibration across the Chino Basin and reproduces the behavior of historical groundwater levels. In Northwest MZ-1, the mean residual errors at wells are higher compared to some other areas of the basin, but are the same as in other areas, and have been deemed acceptable in model calibration and for the use of the model in the Safe Yield Reset. We recently performed an exercise of model validation in Northwest MZ-1 by comparing recently measured heads at the depth-specific PX piezometers (2019-2020) versus model-generated heads by model layer at the PX site at the end of the calibration period (2018).

The head data that is being collected at the PX piezometers will be valuable data for the future recalibrations of the CVM and the 1D model. However, we advise that those recalibration efforts and expenses are best planned for 5-10 years from now, when the data set is long enough to justify the recalibrations.

Sensitivity analyses for the 1D compaction models should be discussed by the GLMC and added to the scope of work if agreed upon by the GLMC.

Comment 11 – InSAR-Estimated subsidence and Model-Simulated Aquifer System Deformation

During the March 4 meeting, WY presented InSAR-Estimated subsidence and Model-Simulated Aquifer System Deformation for the PX 1D model. InSAR data gaps were shown, with the InSAR-Estimated Subsidence projected through the data gaps. WY did not provide the method used to estimate subsidence

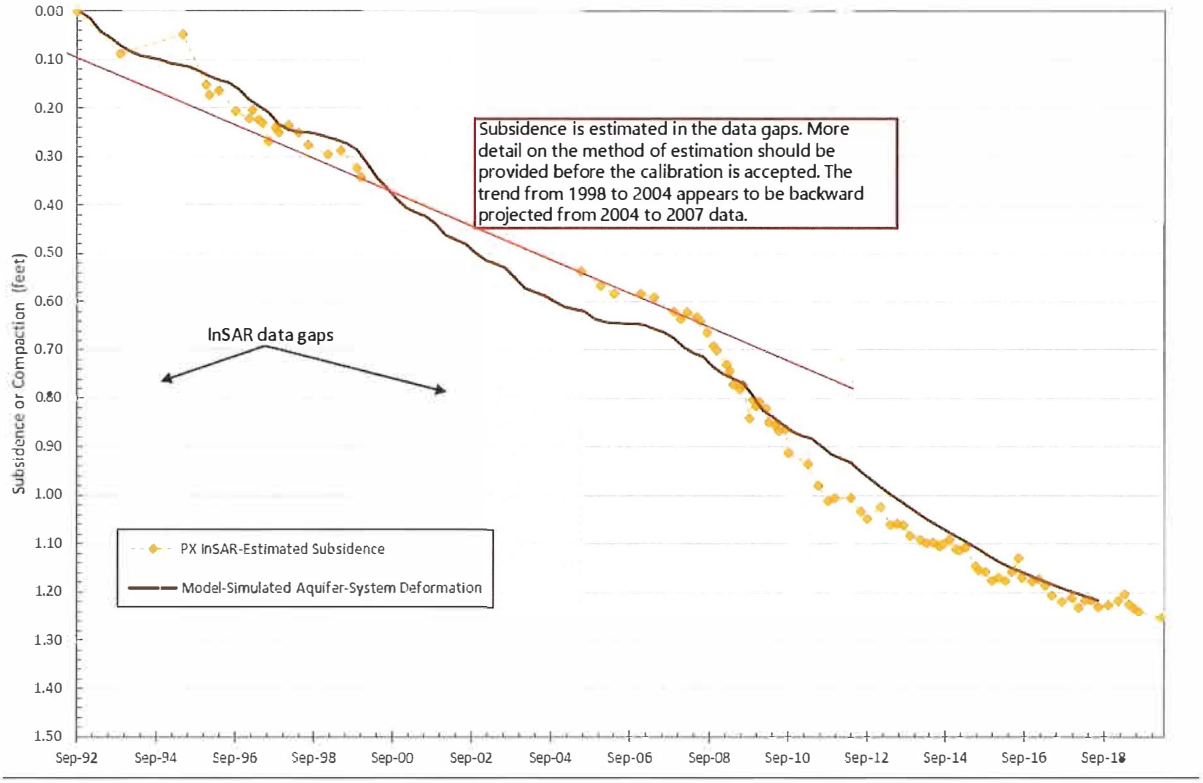
in the data gap. Additional detail on the method should be provided before the calibration is accepted. The prediction trend appears to be backward projected from September 2004 to late 2007 levels.

If possible, the InSAR data should be compared to land level survey data. GLMC was not conducting ground level surveys in Northwest MZ-1 throughout the 1992 through 2018 period. However, there are Los Angeles County Department of Public Works Survey Division (LADPW) leveling circuits near the PX facility, with the closest benchmark approximately 700 ft away. The LADPW surveys are not conducted to the same accuracy as the GLMC leveling surveys, but the historical data may provide an additional check to InSAR estimated subsidence.

The Model-Simulated deformation vs InSAR-Estimated ground motion figure is reproduced below.

The Model-Simulated deformation vs InSAR-Estimated ground motion figure is reproduced

Model-Simulated Aquifer-System Deformation versus InSAR-Estimated Ground Motion at the Pomona Extensometer Facility for the Final Calibrated 1D Model



Response:

The GSSI comments and questions are not related to the recommended scope of work, but are intended for consideration in constructing, calibrating, and documenting the 1D compaction models at the MVWD-28 and PX locations. The comments are noted.

A description of the methods used to account for gaps in the InSAR record will be included in the technical memorandum for Task 6.3.

The *Task 3 and Task 4 of the Work Plan to Develop a Subsidence Management Plan for the Northwest MZ-1 Area: Development and Evaluation of Baseline and Initial Subsidence – Management Alternatives,* describes the effort by WSP USA (former surveyor for the GLMP) to validate the InSAR-derived estimates of vertical ground motion in Northwest MZ-1 using historical ground-elevation data from repeated leveling surveys performed by the National Geodetic Survey (NGS) and the Metropolitan Water District of Southern California (MWD). At the time of the investigation, the NGS and MWD survey data were the most accurate and best available historical estimates of vertical ground motion in Northwest MZ-1. These estimates were also used to check the reasonableness of the 1D compaction model at MVWD-28, which utilized the InSAR-derived estimates of vertical ground motion at one specific location as calibration targets.

The use of the LADPW survey data referenced by Geoscience should be discussed by the GLMC and added to the scope of work if agreed upon by the GLMC.

Comment 12 – Task 6.4. Refine and Evaluate the Subsidence-Management Alternatives

WY proposes using the 1D compaction models to update the Baseline Management Alternative (BMA) and Initial Subsidence Management Alternatives developed in Task 3 and Task 4 of the 2015 work plan.

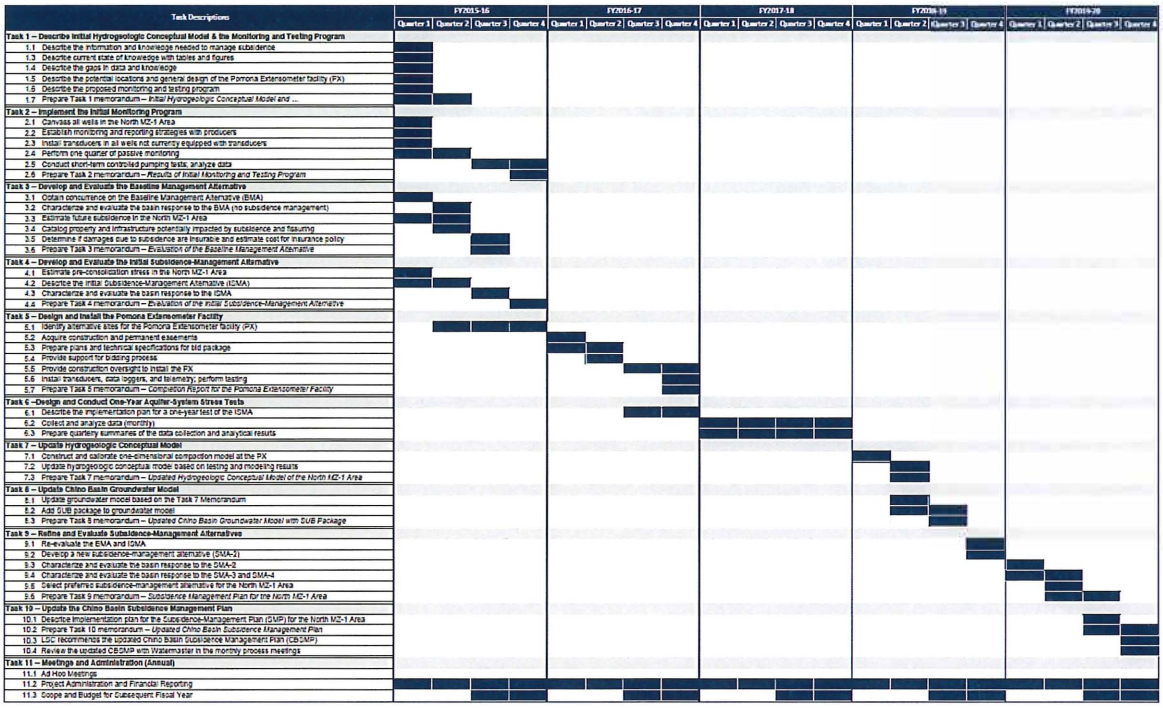
The 2015 workplan anticipated construction of the PX-1 Facility in FY 2016-17, updates to the conceptual model, and updates to the groundwater model before BMA is revaluated.

Construction of PX-1 was significantly delayed. Development of the deep completions took place in February and March of 2019 according to the Draft Well Completion report (WEI 2020). At the time of this memo, details of the installation of instruments and final completion of the extensometer facility are not available on Watermaster's website. Data presented during the March 4 meeting suggests transducer data has been loaded into Watermaster's database since at least December 2020.

Geoscience recommends that the committee consider the planned data collection and long-term pumping test before the conceptual model is revisited. Significant effort was expended to install a monitoring system in Northwest MZ-1. Data should be collected from the monitoring system to inform the modeling effort.

The 2015 schedule is reproduced below.

Table 4-1
Schedule
Work Plan to Develop a Subsidence-Management Plan for the North MZ-1 Area



Schedule x1x –North MZ-1 Work Plan_Schedule
5/3/2015

Land Subsidence Committee

Response:

The 2015 workplan is a planning document that described a step-wise plan to develop subsidence management criteria for Northwest MZ-1. However, the workplan and the Subsidence Management Plan also envisioned that the GLMC would analyze the data generated by the monitoring program each year and recommend the logical next steps for the subsequent year(s). For example, the GLMC is now recommending the use of 1D compaction models instead of the SUB package in MODFLOW to develop and test subsidence management strategies.

In our opinion, the CVM and the 1D compaction models are calibrated and ready to be used to estimate the pre-consolidation stress and provide guidance to the Stakeholders on pumping and recharge strategies to avoid the future occurrence of land subsidence in Northwest MZ-1. Continued data collection is also recommended to support future updates and improvements to the CVM and 1D compaction models.

The most prudent path forward is to:

1. Utilize the 1D models to develop estimates of the pre-consolidation stress in Northwest MZ-1.
2. Utilize the 1D models to test the future pumping and recharge plans of the Parties and estimate the potential for the future occurrence of land subsidence.
3. Develop Guidance Criteria to assist all Stakeholders in their groundwater management and water-supply planning efforts, basin-wide.
4. Update the Chino Basin Subsidence Management Plan based on the above.
5. Continue the monitoring program, including the collection of head and extensometer data at the PX.

6. Utilize the monitoring data in 5-10 years to update the CVM and the 1D models and, potentially, adapt the Guidance Criteria and the Subsidence Management Plan if appropriate.

Comment 13 – Task 7. Meetings and Administration

Geoscience recommends documentation in Task 6.3 be released to allow one of the scheduled meetings to include discussion of the 1D model.

Response:

A draft of the TM for Task 6.3 will be released for review and comment by the GLMC. A GLMC meeting will be held to review the draft TM. A final TM will be prepared that addresses the comments received by the GLMC members. Please see Task 6.3.2 in Table 1 – Work Breakdown Structure and Cost Estimates Ground-Level Monitoring Program: FY 2021/22 (Draft 3).

Comment 14 – Comparison of the Sentinel-1A and TerraSAR-X InSAR datasets across the Chino Basin

WY's review of the Sentinel-1A and TerraSAR-X datasets was provided as an attachment to the FY2021/22 budget. Geoscience has the following comments:

1) In prior versions of the SGMA Data Viewer, it appeared that monthly ground motion displacement was provided by DWR. Was WY able to download these data? Are they consistent with WY calculations?
2) It appears Sentinel-1A data is collected at twice the frequency as TerraSAR-X data. Is this the case? If so, is there benefit to the more frequent data collection? In 2017 communication regarding other basins, NevaRidge staff indicated more frequent data collection reduced error caused by crop growth and other seasonal activity. Is this still the case?
3) The Sentinel-1A data undergoes QC and calibration review by DWR. These efforts are documented and available to stakeholders through the DWR web portal. Is the TerraSAR data subject to the same reviews? Are the reviews available to stakeholders?
4) Sentinel-1A data has significantly higher coherence. Is there benefit to InSAR data at the Chino Creek facility?
5) Direct subtraction of the displacement rasters would allow a more precise comparison than the side-by-side graphic comparisons.
6) Without specifying the accuracies of other sources of data used in this analysis, it is unclear that increased accuracy is necessary. More information is needed to define what accuracy is acceptable and determine if the higher resolution/accuracy of the TerraSAR-X dataset is imperative to identifying risk to infrastructure and calculating better calibration targets for a model.

Geoscience's initial recommendation was to utilize the DWR provided Sentinel-1A data. However, recent changes to the SGMA Data Viewer made the data inaccessible. DWR indicates that the functionality will return shortly. Due to these changes, Geoscience now recommends proceeding with TerraSAR-X data as proposed by WY and reviewing the SGMA data viewer platform in fiscal year 2022/23.

Response:

These comments are noted and can be re-evaluated during the preparation of the *Recommended Scope of Services and Budget of the Ground-Level Monitoring Committee for Fiscal Year 2022/23,* at future GLMC meetings, or at requested ad-hoc meetings with the technical members of the GLMC.

No change has been made to the scope of services or budget (Task 3).

Attachment A

Comparison of the Sentinel-1A and TerraSAR-X InSAR Datasets Across the Chino Basin

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TECHNICAL MEMORANDUM

DATE: February 26, 2021

Project No.: 941-80-20-21
SENT VIA: EMAIL

TO: Ground-Level Monitoring Committee

FROM: Michael Blazevic, PG, CHG

REVIEWED BY: Andy Malone, PG

SUBJECT: Comparison of the Sentinel-1A and TerraSAR-X InSAR Datasets Across the Chino Basin

BACKGROUND AND OBJECTIVES

Since the inception of the Ground Level Monitoring Program (GLMP), the Chino Basin Watermaster (Watermaster) has employed various methods to monitor vertical ground motion via extensometers, traditional ground-level surveys, and the remote-sensing technique of Interferometric Synthetic Aperture Radar (InSAR). Analysis of these data over time has shown that InSAR is increasingly a reliable and accurate method for monitoring vertical ground motion across most of the areas of subsidence concern in the Chino Basin for the following reasons:

- Improvements in satellite technology over time have increased the spatial resolution, temporal resolution, and accuracy of InSAR; and
- Land-use changes from agricultural to urban have added hard, consistent radar wave reflectors to the ground surface over time. As such, InSAR results are now coherent and useful across most of the areas of subsidence concern.

For the GLMP, the InSAR-derived estimates of vertical ground motion across the areas of subsidence concern are used by the GLMC to:

- Provide an aerially continuous estimation of the occurrence and magnitude of vertical ground motion across the western Chino Basin over time. Monitoring of vertical ground motion via InSAR since 2006 across the Chino Basin helped identify land subsidence and the pattern of concentrated differential subsidence across the San Jose Fault in Northwest MZ-1.
- Identify areas of differential subsidence. Differential subsidence is sometimes indicative of the existence of groundwater barriers (i.e., the Riley Barrier in the Managed Area and the San Jose Fault in Northwest MZ-1); hence, the information derived from InSAR has improved the hydrogeologic understanding of the groundwater basin.
- Provide calibration data for the computer-simulation modeling of aquifer-system deformation and land subsidence across the Chino Basin. Specifically, Watermaster's Engineer is updating the Chino Valley Model (CVM) by adding a subsidence package (SUB) to

the MODFLOW model so that it can be used to simulate historical and potential future land subsidence across Northwest MZ-1. The SUB package will be calibrated across Northwest MZ-1 using the InSAR estimates of historical vertical ground motion.

Since 2011, the GLMC has chosen to acquire and use a single Synthetic Aperture Radar (SAR) scene from the TerraSAR-X satellite that covers only the western portion of the Chino Basin. This decision was based on:

- Observations that InSAR-derived estimates of ground motion from 1992-2005 indicated that little if any subsidence had occurred within the eastern portion of the basin; and
- The desire to manage costs for the GLMP. However, it has been shown in the Watermaster's State of the Basin Reports (WEI, 2019)[1] that hydraulic heads have decreased across the central and eastern portions of the Chino Basin since about 2005. Subsidence may have occurred in these areas in response to the declining heads, yet these areas have not been monitored for vertical ground motion since 2009.

There is a new satellite that was launched in 2014 by the European Space Agency, Sentinel-1A, that provides InSAR estimates of vertical ground motion across the state of California, including the entire Chino Basin. InSAR estimates of vertical ground motion from Sentinel-1A are freely available from the California's Department of Water Resources (DWR).[2] As part of the approved scope and budget of the GLMC for FY 2020/21, the GLMC directed the Watermaster Engineer to perform a study comparing the Sentinel-1A and TerraSAR-X InSAR datasets across the Chino Basin. The questions to be answered by the study are:

- Has land subsidence occurred in the eastern portion of Chino Basin during the period 2015 to 2018 as hydraulic heads have declined over this period? If so, what is its magnitude and spatial distribution? Does the GLMC see a concern for land subsidence that would warrant ongoing monitoring of eastern Chino Basin via InSAR?
- Across the western portion of the Chino Basin, how do the estimates of vertical ground motion derived from Sentinel-1A compare with those derived from TerraSAR-X in terms of spatial distribution, magnitude, coherence, and accuracy?
- If the GLMC were to switch to using Sentinel-1A, would the monitoring program be compromised? If so, how?

The purpose of this technical memorandum is to answer these questions and develop recommendations for the GLMC on the potential future uses of the Sentinel-1A and TerraSAR-X InSAR datasets for the GLMP.

METHODS

To answer the questions above, the following methods were used:

[1] West Yost, formerly Wildermuth Environmental, Inc. (2019). Chino Basin Optimum Basin Management Program, 2018 State of the Basin Report.

[2] SGMA Data Viewer (ca.gov)

- Identify, download, and compile the Sentinel-1A moving annual cumulative displacement InSAR rasters for the entire Chino Basin from the DWR over a three-year period between 2015 and 2018.
- Utilize ArcMap's Spatial Analyst extension to extract monthly vertical ground motion displacements from the moving annual cumulative displacement InSAR rasters.
- Compare various aspects of the Sentinel-1A and TerraSAR-X[3] estimates of vertical ground motion – namely the magnitude of vertical ground motion, coherence, and the spatial resolution of ground motion across the Chino Basin.

RESULTS

Sentinel-1A and TerraSAR-X InSAR Processing Procedures

A brief summary of the InSAR processing procedures used by TRE ALTAMIRA and General Atomics (GA) for the Sentinel-1A and TerraSAR-X InSAR data, respectively, was provided by GA (S. Yarborough, personal communication, January 19, 2021):

Sentinel-1A

- SAR data is processed in large polygons across California. One processing polygon covers the entire Chino Basin.
- Ascending and descending satellite track data are combined to estimate differential vertical ground motion from radar line-of-sight (RLoS) measurements for a given time period.
- Differential vertical ground motion estimates are compared with observations from GPS stations located across California using 100 m radius of motion estimates around each station to derive absolute vertical measurements. For reference, one station is located in the Chino Basin near Rancho Cucamonga.
- Absolute vertical ground motion measurements are projected to 100 m x 100 m grids across each processing polygon and interpolated to regular time intervals (1st day of each month). Any voids are filled by spatial interpolation in each processing polygon. Each grid is an average of all measurements within a single 100 m x 100 m grid, located at the grid center.

For a more detailed description of these processes, see TRE ALTAMIRA (2020).[4]

TerraSAR-X

- The approximate InSAR processing footprint extends from Falling Springs (north) to Villa Park (south) and from La Puente (west) to the Ontario International Airport (east).
- Differential vertical ground motion is measured along the RLoS between each radar collection.
- Vertical ground motion offsets resulting from RLoS errors are removed with a combination of interferometric processing, and a reference patch in an observed stable location in the Chino Basin. The current reference patch is a 750 m x 750 m area, centered approximately

[3] The TerraSAR-X InSAR rasters between the time-period 2015 and 2018 were readily available for this study as part of the long-term ground motion monitoring conducted for the GLMP.
[4] TRE ALTAMIRA (2020). *InSAR land surveying and mapping services in support of the DWR SGMA program.*

at the intersection of W. Phillips Blvd and S. White Avenue in Pomona, CA. Any vertical motion in the reference patch is assumed to show the constant offset resulting from RLoS errors, and the average value measured across the patch in each differential vertical motion height map is then removed from the vertical motion height map. The normalized differential height maps are then summed to provide a total displacement over the desired time-period.

- Small voids are filled by spatial interpolation in each InSAR frame, providing continuous high-resolution measurements over areas with intermittent signal loss.
- Sequential measurements are summed, providing a normalized total vertical ground motion estimate for a given time period.
- Normalized RLoS measurements are projected to 15 m x 15 m grids. Each grid is an average of all measurements within a single 15 m x 15 m grid, located at the grid center.

Sentinel-1A and TerraSAR-X InSAR Dataset Information

Table 1 lists the basic dataset description and information for the Sentinel-1A and TerraSAR-X InSAR datasets.

Table 1. Sentinel-1A and TerraSAR-X InSAR Dataset Information

Dataset Description	Sentinel-1A	TerraSAR-X
Processor	TRE ALTAMIRA	General Atomics
Current Availability	June 2015 – September 2019	March 2011 – March 2020
Current Coverage	Entire Chino Basin	Western Chino Basin
Current Acquisition Frequency	Monthly	Every Two Months
Spatial Resolution	100 m	15 m
Accuracy	+/- 1.6 cm	+/- 0.8 cm
Cost	Free	$87,000

Sentinel-1A and TerraSAR-X InSAR Observations

It has been shown in the Watermaster's State of the Basin Reports (WEI, 2019) that hydraulic heads have decreased across the central and eastern portions of the Chino Basin since about 2005. Subsidence may have occurred in these areas in response to the declining heads, yet these areas have not been monitored for vertical ground motion since 2009. For reference, Figure 1 shows the change in groundwater levels for the two-year period between spring 2016 and spring 2018 across the Chino Basin. Groundwater levels have generally remained stable across most of the areas of subsidence concern but have declined up to 10 ft across parts of Northwest MZ-1. East of the areas of subsidence concern, groundwater levels have decreased in the central and northern portions of the basin by about 10 ft.

Figure 2 shows the total vertical ground motion estimated by the Sentinel-1A between June 2015 and May 2018 across the entire Chino Basin. The main observations from Figure 2 are:

- The InSAR coherence is good across the entire Chino Basin.

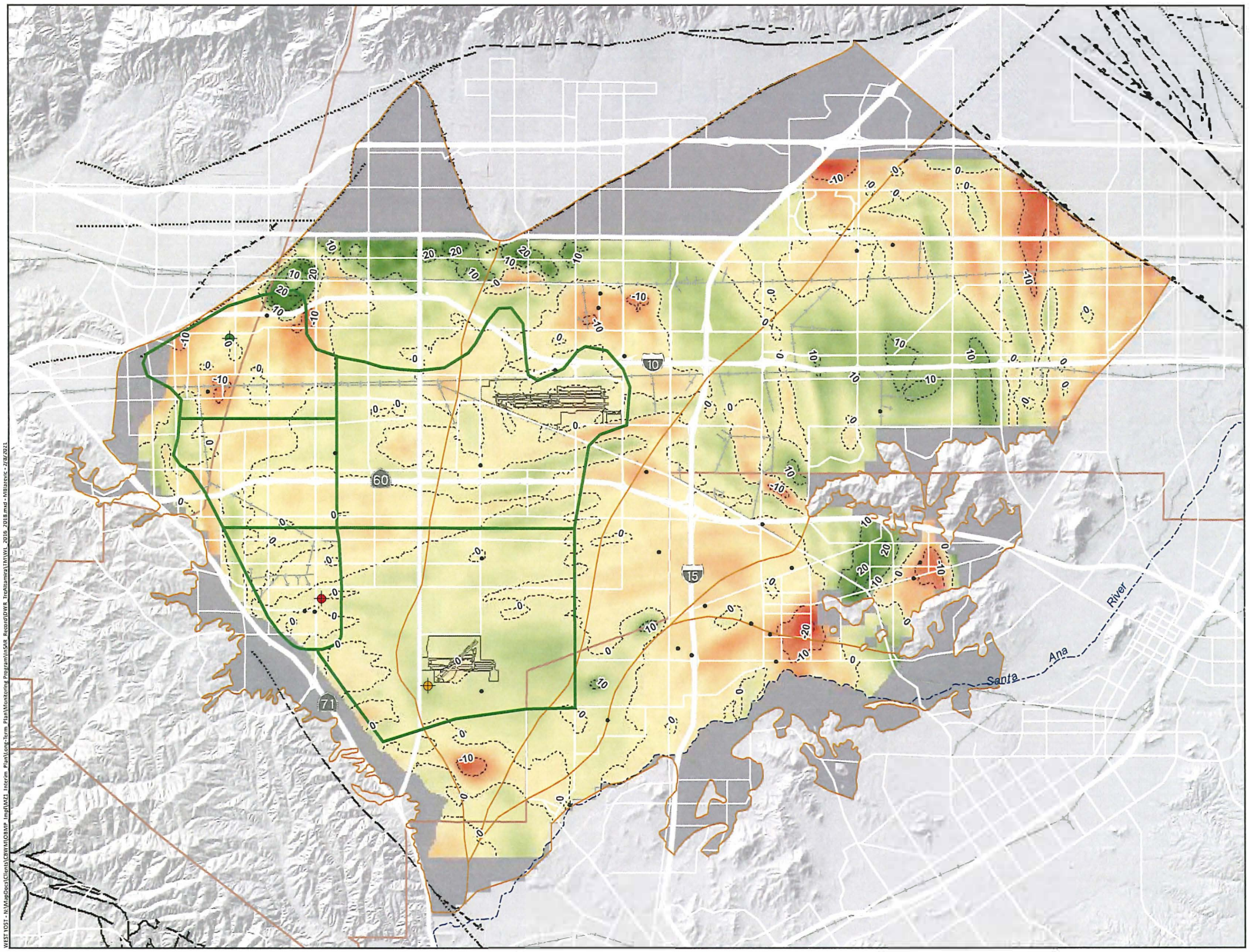
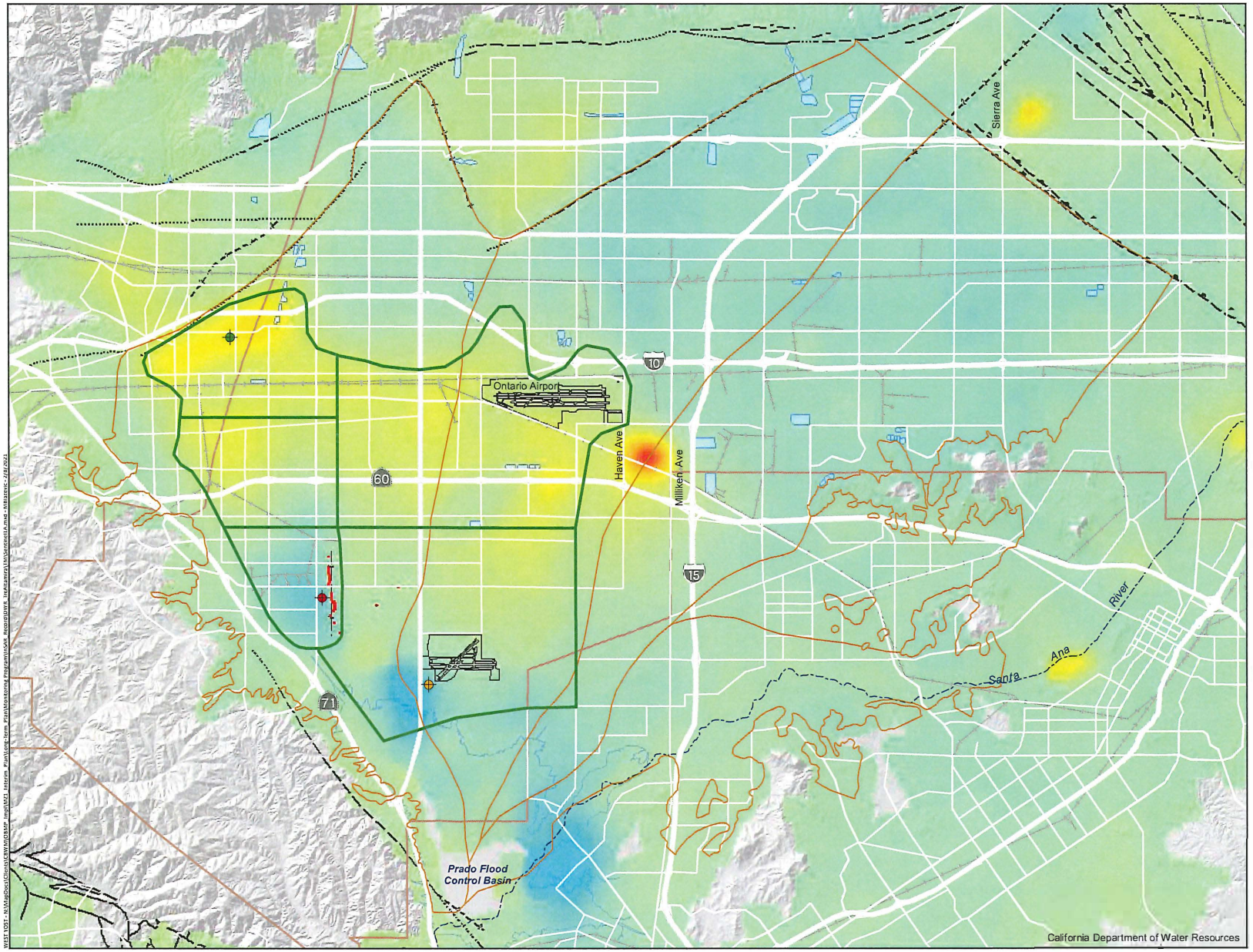


Figure 1

Groundwater Level Change
Spring 2016 to Spring 2018

Chino Basin Watermaster
Ground-Level Monitoring Committee



N

0 1 2
Miles

Relative Change in Land Surface Altitude
as Estimated by InSAR
(June 2015 to May 2018)

0.16 ft
0 ft
-0.16 ft

InSAR absent or incoherent

- OBMP Management Zones
- Areas of Subsidence Concern
- Pomona Extensometer Facility
- Ayala Park Extensometer Facility
- Chino Creek Extensometer Facility
- Ground Fissures
- Approximate Location of the Riley Barrier
- Flood Control and Conservation Basins

WEST YOST

Figure 2

Vertical Ground Motion Estimated by Sentinel-1A June 2015 to May 2018

Chino Basin Watermaster
Ground-Level Monitoring Committee

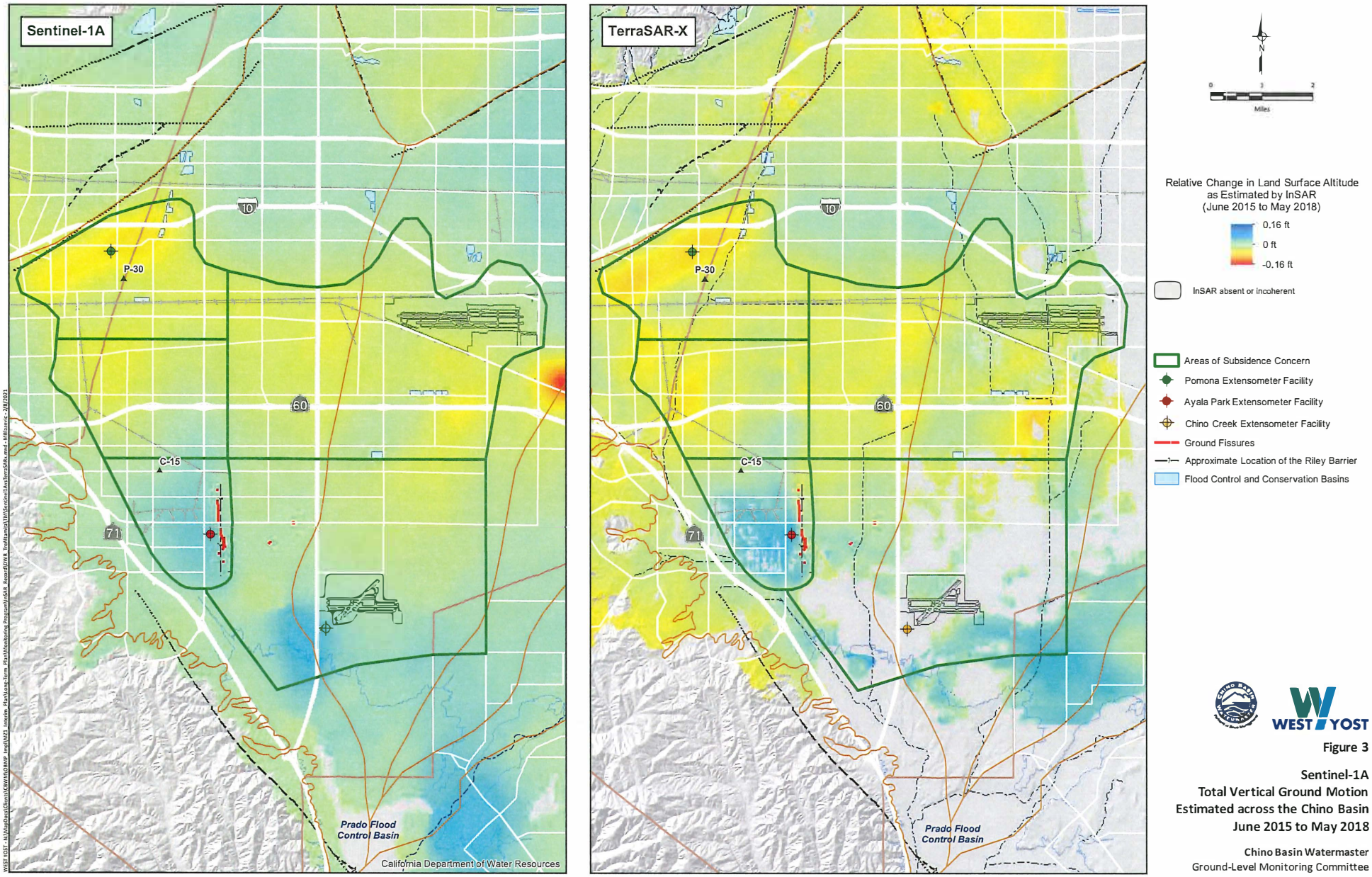
- Estimates of vertical ground motion are mostly downward across the areas of subsidence concern. The spatial pattern of vertical ground motion estimated by the Sentinel-1A is consistent with the long-term ground motion trends measured by the TerraSAR-X and is consistent with the spatial pattern and groundwater level change shown in Figure 1 between 2016 and 2018.
- Estimates of vertical ground motion are mostly upward across the eastern portion of the basin. The spatial pattern of vertical ground motion estimated by Sentinel-1A is not consistent with the spatial pattern and groundwater level change shown in Figure 1 between 2016 and 2018.
- There are focused patterns of vertical ground motion that are not explained by changes in groundwater levels shown in Figure 1. These areas are located just southeast of the Ontario Airport between Haven Avenue and Milliken Avenue, along the Santa Ana River, and just northeast of the intersection of the 210 Fwy and Sierra Avenue. Examination of these areas in Google Earth shows they correspond to recent earthwork construction activities and/or excavation activities.

Figures 3 and 4 show total vertical ground motion estimated across the western Chino Basin between June 2015 and May 2018 from Sentinel-1A and TerraSAR-X. Across the areas of subsidence concern, the main observations are:

- The spatial pattern of vertical ground motion is generally consistent between the two InSAR datasets.
- Between the two InSAR data sets, the spatial resolution of TerraSAR-X is noticeably better and the spatial details of subsidence are better delineated with TerraSAR-X.
- The magnitudes and directions of ground motion are not always consistent between the Sentinel-1A and TerraSAR-X InSAR datasets. InSAR data from TerraSAR-X across the western portion of Central MZ-1, Northwest MZ-1, and Northeast Area show greater magnitudes of downward vertical ground motion compared to the Sentinel-1A InSAR data. Where TerraSAR-X InSAR data is coherent across the southern part of the Managed Area (near Ayala Park), it shows slightly greater upward ground motion compared to the Sentinel-1A InSAR data. Across other parts of the western Chino Basin, the vertical ground motion magnitude and direction estimated by the two satellites is variable and not consistent.

Figures 5 and 6 are time-series charts that compare the hydraulic heads at C-15 and P-30 to vertical ground motion as measured by Sentinel-1A and TerraSAR-X between 2015 and 2018. For reference, the point locations are shown on Figure 3. The main observations and interpretations from Figures 5 and 6 are:

- The Sentinel-1A InSAR data are plotted on a monthly time-step, whereas the TerraSAR-X InSAR data are plotted on a two-month time-step. Because of this, Sentinel-1A InSAR data shows slightly more variability month to month compared to TerraSAR-X InSAR data. Both Sentinel-1A and TerraSAR-X InSAR data generally show a similar pattern of vertical ground motion annually.
- Both Sentinel-1A and TerraSAR-X InSAR data show a persistent downward vertical ground motion trend between 2015 and 2018.
- Sentinel-1A InSAR data shows a consistent pattern of upward ground motion in the fall of each year. This pattern of upward ground motion in the fall of each year is not observed in the TerraSAR-X InSAR data.



WEST YOST

Figure 3

Sentinel-1A
Total Vertical Ground Motion
Estimated across the Chino Basin
June 2015 to May 2018

Chino Basin Watermaster
Ground-Level Monitoring Committee

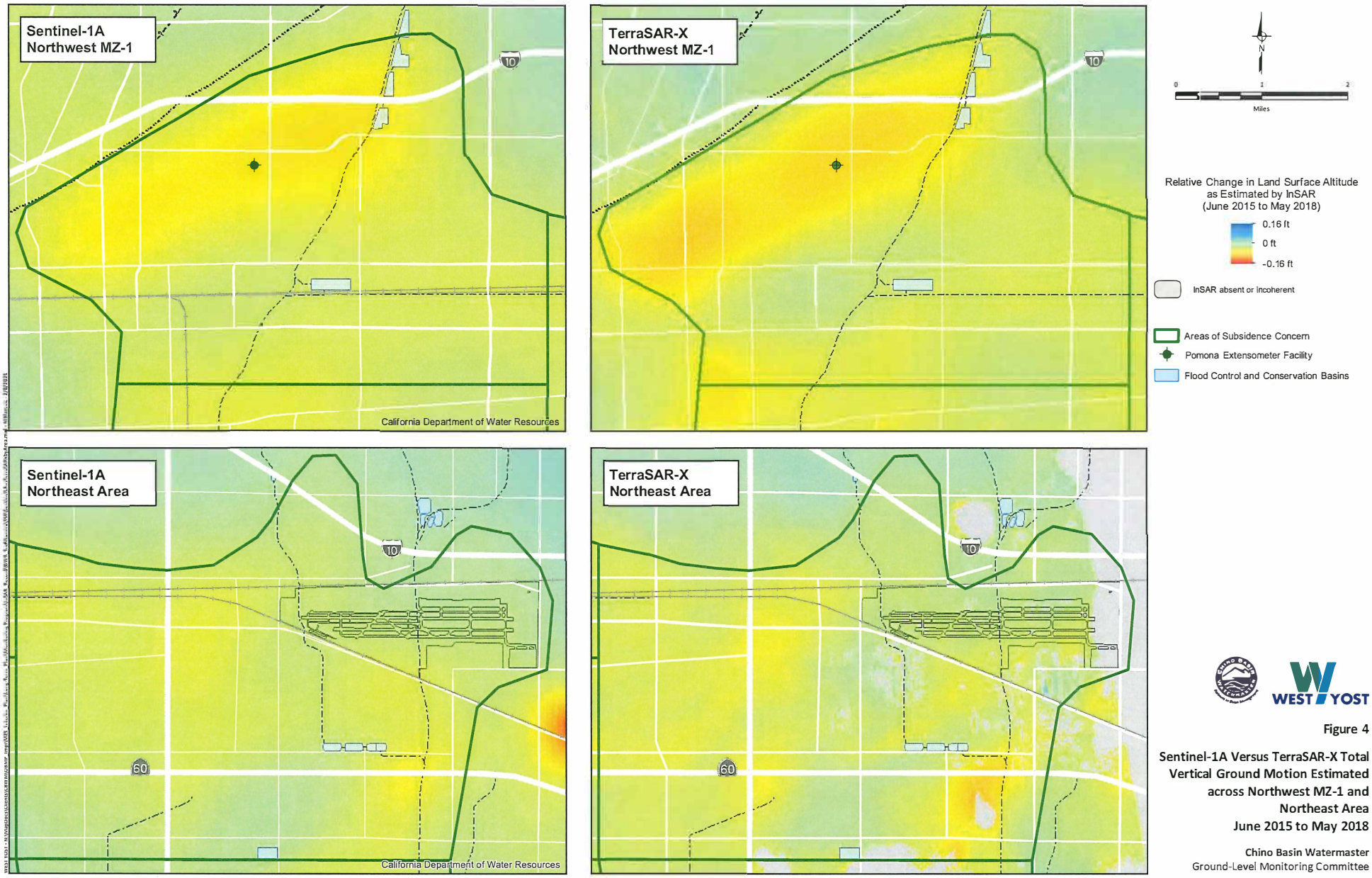


Figure 4

Sentinel-1A Versus TerraSAR-X Total Vertical Ground Motion Estimated across Northwest MZ-1 and Northeast Area June 2015 to May 2018

Chino Basin Watermaster
Ground-Level Monitoring Committee

Figure 5. Cumulative Vertical Ground Motion Displacement Measured by the Sentinel-1A and TerraSAR-X Satellites at City of Chino 15
August 2015 to May 2018

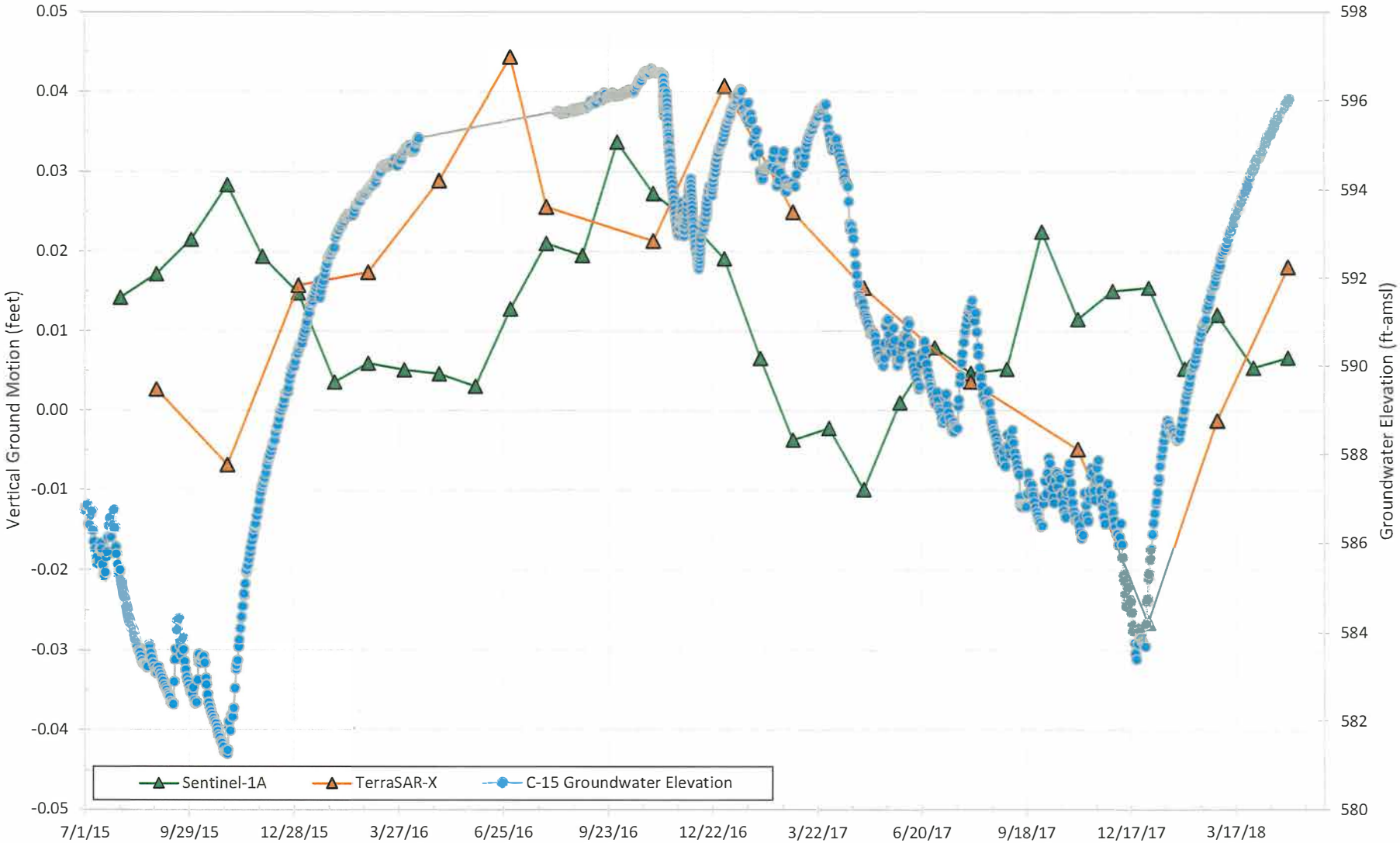
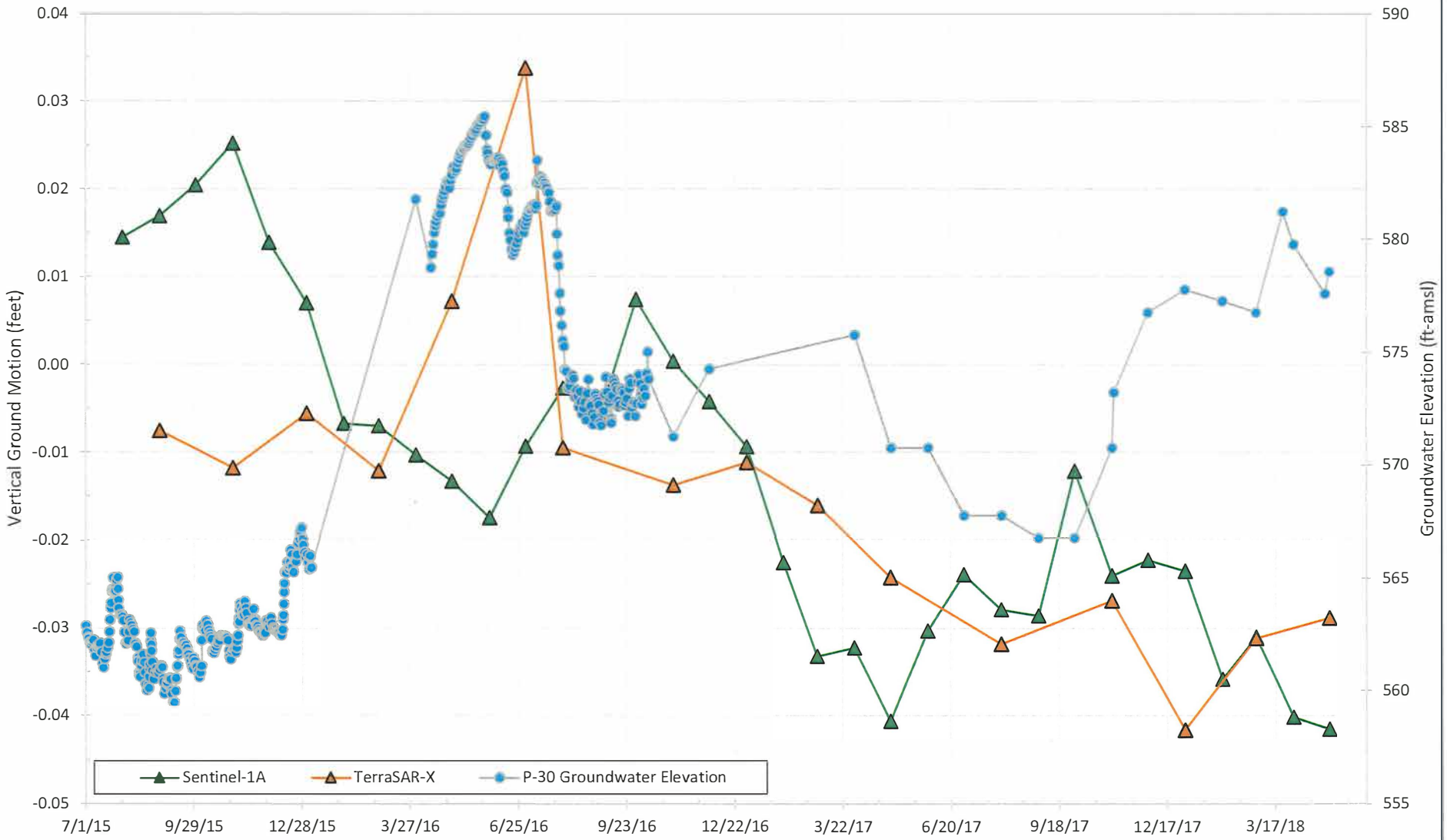


Figure 6. Cumulative Vertical Ground Motion Displacement Measured by the Sentinel-1A and TerraSAR-X Satellites at City of Pomona 30
August 2015 to May 2018



- The vertical ground motion magnitudes measured by the two InSAR data sets at each point location is inconsistent.
- The seasonal fluctuations of hydraulic head at C-15 and P-30 are coincident with the seasonal fluctuations of vertical ground motion measured by the TerraSAR-X InSAR data.
- The seasonal fluctuations of hydraulic head at C-15 and P-30 are not coincident with the seasonal fluctuations of vertical ground motion measured by the Sentinel-1A InSAR data. For example, in Figure 5, there are instances where Sentinel-1A estimates upward vertical ground motion but hydraulic head at C-15 is declining or stable.

One explanation for the limited relationship between the hydraulic head at C-15 and P-30 and the vertical ground motion observed with the Sentinel-1A InSAR data is that the Sentinel-1A grid size (100 m) is much larger compared to the TerraSAR-X grid size (15 m). Likewise, the TerraSAR-X accuracy (+/- 8 mm) is twice that of the Sentinel-1A accuracy (+/- 16 mm). A larger grid size and decreased accuracy will smooth-out the ground displacement magnitude over a larger area and produce less accurate ground motion results at specific point locations.

CONCLUSIONS AND RECOMMENDATIONS

Based on the figures, information, and observations discussed above, we summarize the advantages and limitations of both the Sentinel-1A and TerraSAR-X InSAR data sets in Table 2.

The recommendations from this study are:

- The GLMC should continue using TerraSAR-X for the following reasons:
  - TerraSAR-X InSAR data is available at a higher spatial resolution compared to the freely available Sentinel-1A InSAR data. Higher spatial resolution InSAR can better delineate areas of subsidence and better identify areas of differential subsidence. High-resolution InSAR is more appropriate over urban areas, such as the Chino Basin, where the finer detail can identify risk to infrastructure, characterize rapidly developing small features which may lead to ground fissures, and more accurately depict the depth and spatial extent of broad subsidence features.
  - TerraSAR-X InSAR data is purchased at higher vertical accuracy compared to the feely available Sentinel-1A InSAR data. For subsidence model calibration purposes, the TerraSAR-X InSAR data will provide more accurate calibration targets for vertical ground motion compared to the Sentinel-1A InSAR data. The vertical ground motion estimated by TerraSAR-X has shown to be coincidental with changes to hydraulic heads (see Figures 5 and 6). For the areas of subsidence concern, this relationship indicates hydraulic heads, which are controlled by the pumping and recharge stresses in the area, have at least some control on the pattern and rate of subsidence and that the information could be used as management criteria to protect against the future occurrence of land subsidence.
  - TerraSAR-X InSAR data has been collected for the GLMP since 2011. The GLMC is also in the process of developing a Subsidence Management Plan for Northwest MZ-1. To maintain continuity of the InSAR record during development and completion of the Northwest MZ-1 Subsidence Management Plan, it is recommended the GLMC continue

to use TerraSAR-X InSAR data, at least until the Northwest MZ-1 Subsidence Management Plan is completed.

- Based on the spatial pattern of vertical ground motion estimated by Sentinel-1A between 2015 and 2018 across the eastern Chino Basin, there is no immediate need to monitor vertical ground motion across the eastern Chino Basin. The GLMC could evaluate using the freely available Sentinel-1A InSAR data about once every five years to check for vertical ground motion trends across the eastern Chino Basin.

Table 2. Sentinel-1A and TerraSAR-X Advantages and Limitations

Criteria	Sentinel-1A	TerraSAR-X
Spatial Coverage	Coverage for the entire Chino Basin.	The GLMP only purchases InSAR for the western Chino Basin.
Spatial Resolution	Published to the DWR SGMA Data Viewer at a spatial resolution of 100 m.	Processed by GA at a spatial resolution of 15 m.
Vertical Accuracy	Published to the DWR SGMA Data Viewer at an accuracy of +/- 16 mm.	Processed by GA at an accuracy of +/- 8 mm.
Acquisition Frequency	Monthly.	Bimonthly (every two months).
Period of Record	As of December 2020, the InSAR is available for the time-period between June 2015 and September 2020.	The InSAR has been used by the GLMP since 2011 and is currently available through March 2020.
Continuity	The frequency at which new InSAR scenes will be available through the DWR SGMA Data Viewer is unknown.	The GLMP collects InSAR on a year-round basis in order to maintain continuity in the InSAR record from year-to-year.
Cost	The InSAR is freely available through the DWR SGMA Data Viewer website. There would be associated costs to download, re-project, and load the rasters to ArcMap for viewing and analysis.	The InSAR is ordered, purchased, and processed by GA each fiscal year. The cost is $87,000 and includes time by the Watermaster Engineer to review the InSAR deliverables with GA and load the InSAR rasters to ArcMap for viewing and analysis.

Appendix B

Response to GLMC Comments

STATE OF CALIFORNIA DEPARTMENT/JOHN WOOD GROUP PLC (RICHARD REES, PG, CHG)

Comment 1 – Northeast Area and InSAR

Regarding the InSAR estimated persistent downward ground motion concentrated area south of the Ontario Airport between Vineyard Avenue and Archibald Avenue, this area appears to be in the general vicinity of the Whispering Lakes Golf Course. We suggest reviewing historical aerial photographs of this area for borrow pits that may have been filled in the last five to seven years. Settlement of backfill materials could be interpreted as subsidence.

Response:

Thank you for your comment. In FY 2021/22, we plan to conduct a reconnaissance-level subsidence investigation of the Northeast Area (see Task 5.4 in the technical memorandum, *Recommended Scope of Services and Budget of the Ground-Level Monitoring Committee for Fiscal Year 2021/22)*. As part of the investigation, we will include a review of historical aerial photographs and land use changes for the area south of the Ontario Airport between Vineyard Avenue and Archibald Avenue.

CITY OF CHINO/GEOPENTECH (ERIC FORDHAM, PG, CEG, CHG)

Comment 1 – Section 3.1 Managed Area and Figure 3-2

The influence of recycled water use in the Managed area is referenced several times in this section and on the associated figure as it relates to the possible contribution to observed increases in groundwater levels. Though, it is not clear if the influence of recycled water use on increasing groundwater levels is being attributed to its in-lieu use of pumping from the shallow and deep aquifer or due to actual infiltration recharge to the aquifer. Actual wet water recharge would only directly influence groundwater levels in the shallow aquifer. Some additional discussion should be added to clarify this observation.

Response:

Thank you for your comments and suggestions. The text was updated, where appropriate, to address this comment.

Comment 2 – Section 3.4.2 Horizontal Ground Motion

The charts for B-409 to B-408 (N-S Strain), B-407 to B-406 (E-W Strain) and B-406 to B-405 (E-W Strain) show a slight trend with deviations away from 0 of up to about 5x10-5 (L/L) that could be expressing horizontal movement over the monitored time period. While the text explains the deviations as tensile strain that are within the range observed between other benchmarks, some additional explanation for the apparent recorded trends suggesting ongoing movement should be provided.

Response:

Thank you for your comments and suggestions. As stated in the report and comment, tensile strain has been calculated between benchmarks (B-409 to B-408). Its recognized the observed tensile strain may

be real or may be the result of EDM survey noise. Future EDM surveys that cross the San Jose Fault will continue to be conducted at a frequency determined by the GLMC during the scope and budget planning process for FY 2022/23.

Recognize its real tensile strain, or noise.

Comment 3 – Section 4.0 Conclusions and Recommendations

This section should include concluding statements on the adequacy of the current monitoring program to address Program Elements 1 and 4 of the OBMP Implementation Plan that have been implemented within the different management zones. This should be followed with the recommendations for additional studies and planning to further characterize, monitor and plan land subsidence in the various management zones of the Chino Basin.

Response:

Thank you for your comments and suggestions. The text was updated, where appropriate, to address this comment.

MONTE VISTA WATER DISTRICT (JUSTIN SCOTT-COE, GENERAL MANAGER)

Comment 1 – Figure 3-11

During the September 30, 2021 meeting of the GLMC to discuss the draft 2020/21 Annual Report, Mr. Scott-Coe verbally recommended revisions to Figure 3-11. The recommended revisions included adding clarification to the figure's legend items and adding quarterly recharge from Northwest MZ-1 to the figure.

Response:

Figure 3-11 was updated in the final report.

Concord

1001 Galaxy Way, Suite 310
Concord CA 95420
925-949-5800

Davis

2020 Research Park Drive, Suite 100
Davis CA 95618
530-756-5905

Eugene

1650 W 11th Avenue, Suite 1-A
Eugene OR 97402
541-431-1280

Lake Forest

23692 Birtcher Drive
Lake Forest CA 92630
949-420-3030

Lake Oswego

5 Centerpointe Drive, Suite 130
Lake Oswego OR 97035
503-451-4500

Oceanside

804 Pier View Way, Suite 100
Oceanside CA 92054
760-795-0365

Olympia

825 Legion Way SE, Suite A6
Olympia WA 98501
360-350-4523

Phoenix

4505 E Chandler Boulevard, Suite 230
Phoenix AZ 85048
602-337-6110

Pleasanton

6800 Koll Center Parkway, Suite 150
Pleasanton CA 94566
925-426-2580

Sacramento

8950 Cal Center Drive, Bldg. 1, Suite 363
Sacramento CA 95826
916-306-2250

San Diego

11939 Rancho Bernardo Road, Suite 100
San Diego CA 92128
858-505-0075

Santa Rosa

2235 Mercury Way, Suite 105
Santa Rosa CA 95407
707-543-8506

I. CONSENT CALENDAR (Advisory Committee Only)

F. CALENDAR YEAR 2022 ADVISORY COMMITTEE VOLUME VOTE

CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, CA 91730
Tel: 909.484.3888 Fax: 909.484.3890 www.cbwm.org

PETER KAVOUNAS, P.E.
General Manager

STAFF REPORT

DATE: November 18, 2021

TO: Advisory Committee Members

SUBJECT: Calendar Year 2022 Advisory Committee Volume Vote (Consent Calendar I.F.)

SUMMARY:

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

Recommendation: Approve the Calendar Year 2022 Advisory Committee Volume Vote as presented, subject to Board approval of the Fiscal Year 2021/22 Assessment Package.

Financial Impact: None.

Future Consideration
Advisory Committee – November 18, 2021: Approval

ACTIONS:
Advisory Committee – November 18, 2021:

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 2021/2022 Assessment Package is scheduled for approval at the November 18, 2021 Board meeting.

The total voting power on the Advisory Committee is 100 votes, 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 than 20 votes for the Overlying (Agricultural) Pool, five 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 two, and the Advisory Committee's Calendar Year 2022 Volume Vote has been calculated. Several attempts were made to collect the missing Water Activity Reports from two Overlying (Non-Agricultural) Pool parties, Hamner Park Associates and San Antonio Winery, Inc., to no avail. Since we have not received responses from the two Parties, the numbers as prepared have been deemed to be final. The Fiscal Year 2021/22 Assessment Package is scheduled for approval on November 18, 2021 and the Calendar Year 2022 Volume Vote has been finalized for approval.

The Advisory Committee Volume Vote for Calendar Year 2022 allocation is attached (Attachment 1). The prior (Calendar Year 2021) Volume Vote is also attached for reference (Attachment 2).

ATTACHMENTS

1. Calendar Year 2022 Advisory Committee Volume Vote Basis
2. Calendar Year 2021 Advisory Committee Volume Vote Basis

ATTACHMENT 1

Chino Basin Watermaster
2022 Advisory Committee Voting Power

Assessment Year 2021-2022 (Production Year 2020-2021)

	Pool 3 Vote	% Vote	Advisory Vote
Minor 1	45.314	4.531%	3.399
Minor 2	45.314	4.531%	3.399
Chino Hills, City Of	36.004	3.600%	2.700
Chino, City Of	55.596	5.560%	4.170
Cucamonga Valley Water District	71.996	7.200%	5.400
Fontana Union Water Company	58.285	5.828%	4.371
Fontana Water Company	75.362	7.536%	5.652
Jurupa Community Services District	91.046	9.105%	6.828
Monte Vista Water District	95.217	9.522%	7.141
Ontario, City Of	220.641	22.064%	16.548
Pomona, City Of	164.866	16.487%	12.365
Upland, City Of	40.358	4.036%	3.027
			75.000
AGRICULTURAL POOL			20.000
NON-AGRICULTURAL POOL			5.000
			25.000
TOTAL			**100.000**

ATTACHMENT 2

Chino Basin Watermaster
2021 Advisory Committee Voting Power

Assessment Year 2020-2021 (Production Year 2019-2020)

	Pool 3 Vote	% Vote	Advisory Vote
Minor 1	44.333	4.433%	3.325
Minor 2	44.333	4.433%	3.325
Chino Hills, City Of	29.331	2.933%	2.200
Chino, City Of	52.490	5.249%	3.937
Cucamonga Valley Water District	75.344	7.534%	5.651
Fontana Union Water Company	58.285	5.828%	4.371
Fontana Water Company	74.573	7.457%	5.593
Jurupa Community Services District	106.336	10.634%	7.975
Monte Vista Water District	90.955	9.095%	6.822
Ontario, City Of	203.257	20.326%	15.244
Pomona, City Of	177.723	17.772%	13.329
Upland, City Of	43.038	4.304%	3.228
			75.000
AGRICULTURAL POOL			20.000
NON-AGRICULTURAL POOL			5.000
			25.000
TOTAL			**100.000**

I. CONSENT CALENDAR (Watermaster Board Only)

F. FISCAL YEAR 2021/22 REVISED PAY SCHEDULE

CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, CA 91730
Tel: 909.484.3888 Fax: 909.484.3890 www.cbwm.org

PETER KAVOUNAS, P.E.
General Manager

STAFF REPORT

DATE: November 18, 2021

TO: Board Members

SUBJECT: FY 2021/22 Revised Pay Schedule (Consent Calendar I.F.)

SUMMARY:

Issue: A revised Pay Schedule for FY 2021/22 needs to be adopted.

Recommendation: Adopt the revised Pay Schedule, effective January 1, 2022.

Financial Impact: The Approved FY 2021/22 budget of $7,276,213 was adopted by the Watermaster Board on May 27, 2021 and included funding of ten budgeted Watermaster positions (salary + burden) at $2,170,707. The "Original" Pay Schedule for Watermaster employees was adopted by the Watermaster Board on June 24, 2021. Funding of eleven Watermaster positions (salary + burden) is estimated at $2,275,707, an additional cost of $105,000 which will be funded with a Budget Amendment Form using the Administrative Reserves. The "Revised" FY 2021/22 Pay Schedule would go in effect on January 1, 2022.

Future Consideration
Watermaster Board – November 18, 2021: Approval [Within WM Duties and Powers]

ACTIONS:
Watermaster Board – November 18, 2021:

BACKGROUND

To ensure compliance with CalPERS regulations, Chino Basin Watermaster developed a Pay Schedule which must be adopted by the Watermaster Board in open session and provide the required information (as provided in CCR 570.5) for current employees and potential positions which could be filled as approved.

On June 24, 2021, the Watermaster Board approved the FY 2021/22 Pay Schedule and it became effective on July 1, 2021. The FY 2021/22 Pay Schedule is posted on the Watermaster website at the following link:

http://www.cbwm.org/docs/financdocs/paysched/20210323%20-%20CBWM-Pay%20Schedule-FY2021-2022-2.4pt%20CPI%20Increase.pdf

DISCUSSION

For FY 2021/22, the approved Pay Schedule was used to develop the Watermaster salary and burden expenses of $2,170,707. The fiscal year salary/burden budget of $2,170,707 was developed with ten full time employees and currently Watermaster employs ten full time employees. Please note the labor budget for FY 2021/22 does not include every position on the Pay Schedule, only those that are currently or projected to be filled in the upcoming fiscal year.

As a result of the additional and ongoing requirements to support Judgment Administration, OBMP and Program Elements 1-9 activities, Watermaster needs to increase its staffing levels. Watermaster plans to increase staff from ten to eleven full time employees. The addition will be an Administrative Assistant, anticipated to start in December 2021, and transferred into the newly authorized position of Executive Assistant II – Board Clerk on January 1, 2022. A twelfth position is likely to be recommended during the next budget cycle.

The attached FY 2021/22 Revised Pay Schedule includes an interim cost-of-living adjustment based on recent CPI data and the elimination of an incentive program with a one-time adjustment of the Pay Schedule.

The FY 2021/22 Revised Pay Schedule includes a 2.4% CPI increase effective January 1, 2022. The 2021 CPI percentage change increases for the Riverside-San Bernardino-Ontario area are shown below:

Download: xlsx

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	HALF1	HALF2
2019	3.1		2.8		3.0		2.6		3.3		3.0		3.0	3.0	2.9
2020	3.4		2.5		1.3		2.1		2.1		2.1		2.2	2.3	2.1
2021	2.4		4.1		5.8		6.5		7.0					4.4	

When projecting the above to determine the FY 2022/23 CPI percentage increase for the budget development (based upon January 2021 to January 2022 data), it appears likely that the percentage could be in the range of 5% to 7%, or higher. By offering an interim cost-of-living adjustment in January 2022, Watermaster will be able to reduce the potentially large increase in FY 2022/23. The process of using the CPI increase each year for salary increases is consistent with the Personnel Committee policy for the last nine years, since 2013.

In addition, a one-time salary adjustment of 2.5% is proposed to be factored into the Revised Pay Schedule effective January 1, 2022 for all positions except the General Manager's. The one-time adjustment is intended to eliminate an incentive program which was established by Watermaster management in 2004. The program was later tied to successfully achieving individual goals and objectives and based upon each employee's annual review which is completed during the November - December time frame. Under the

program, each employee (except the General Manager) annually, is eligible to earn a one-time compensation payment of up to 3% of their base salary. The payment would be reduced to less than 3% if goals and objectives were not met. Current Watermaster management is of the opinion that incentive payments are not well-suited for the public agency environment that Watermaster operates in and would prefer to eliminate the program; naturally, a long-standing benefit cannot be eliminated without negatively impacting employees. In addition, the incentive payment is considered part of the CalPERS retirement formula for "Classic" employees, while for the "PEPRA" employees the incentive payment is not considered part of the CalPERS retirement formula, creating an unnecessary inequity among employees. It is recommended that the annual 3% incentive pay program is phased out at the end of 2021 and instead a one-time 2.5% salary adjustment is implemented effective January 1, 2022.

Once adopted by the Watermaster Board, the Revised FY 2021/22 Pay Schedule will supersede the previously adopted FY 2021/22 Pay Schedule and will become effective on January 1, 2022. Chino Basin Watermaster will make the Revised FY 2021/22 Pay Schedule publicly available by posting it to the Chino Basin Watermaster website www.cbwm.org under the Careers/Salary and Benefits section at the following link: http://www.cbwm.org/pages/careers/salary_and_benefits/

ATTACHMENT:
1. FY 2021-22 Revised Pay Schedule – Effective January 1, 2022

CHINO BASIN WATERMASTER			FY 2021/22 (Revised)								Effective Date: January 1, 2022				
PAY SCHEDULE											Approved by Board:				
Revision Date: November 18, 2021															
												MONTHLY			
POSITION	TYPE								LOW			MEDIAN			HIGH
General Manager	1								$20,084.56	$21,088.79	$22,143.23	$23,250.39	$24,412.91	$25,633.55	$26,916.67
Chief Financial Officer	1								$12,858.07	$13,500.97	$14,176.02	$14,884.82	$15,629.06	$16,410.52	$17,231.04
					HOURLY							*MONTHLY*			
		STEP A	STEP B	STEP C	STEP D	STEP E	STEP F	STEP G	STEP A	STEP B	STEP C	STEP D	STEP E	STEP F	STEP G
Water Resources Management and Planning Director	2	$73.69	$77.38	$81.25	$85.31	$89.57	$94.05	$98.76	$12,773.46	$13,412.14	$14,082.74	$14,786.88	$15,526.23	$16,302.54	$17,117.66
Director of Administration	2	$70.65	$74.18	$77.89	$81.78	$85.87	$90.16	$94.67	$12,245.33	$12,857.60	$13,500.48	$14,175.50	$14,884.28	$15,628.49	$16,409.92
Sr. Environmental Engineer	2	$55.58	$58.35	$61.27	$64.34	$67.55	$70.93	$74.48	$9,633.07	$10,114.73	$10,620.46	$11,151.49	$11,709.06	$12,294.51	$12,909.24
Water Resources Technical Manager	3	$56.15	$58.95	$61.90	$65.00	$68.25	$71.66	$75.24	$9,732.17	$10,218.78	$10,729.72	$11,266.20	$11,829.51	$12,420.99	$13,042.04
Data Services and Judgment Reporting Manager	3	$56.15	$58.95	$61.90	$65.00	$68.25	$71.66	$75.24	$9,732.17	$10,218.78	$10,729.72	$11,266.20	$11,829.51	$12,420.99	$13,042.04
Water Resources Sr. Associate	3	$43.19	$45.35	$47.62	$50.00	$52.50	$55.12	$57.88	$7,486.29	$7,860.60	$8,253.63	$8,666.31	$9,099.63	$9,554.61	$10,032.34
Water Resources Associate	3	$32.65	$34.28	$35.99	$37.79	$39.68	$41.66	$43.75	$5,658.57	$5,941.50	$6,238.57	$6,550.50	$6,878.03	$7,221.93	$7,583.02
Sr. Field Operations Specialist	3	$30.20	$31.71	$33.29	$34.96	$36.71	$38.54	$40.47	$5,234.26	$5,495.97	$5,770.77	$6,059.31	$6,362.27	$6,680.38	$7,014.40
Field Operations Specialist	3	$26.18	$27.49	$28.86	$30.31	$31.82	$33.41	$35.09	$4,538.10	$4,765.00	$5,003.25	$5,253.42	$5,516.09	$5,791.89	$6,081.49
Executive Services Director	3	$54.60	$57.33	$60.20	$63.21	$66.37	$69.69	$73.17	$9,464.22	$9,937.43	$10,434.30	$10,956.02	$11,503.82	$12,079.01	$12,682.96
Executive Assistant II - Board Clerk	3	$38.23	$40.14	$42.15	$44.26	$46.47	$48.79	$51.23	$6,626.50	$6,957.82	$7,305.71	$7,671.00	$8,054.55	$8,457.28	$8,880.14
Executive Assistant I - Board Clerk	3	$29.95	$31.45	$33.02	$34.68	$36.41	$38.23	$40.14	$5,192.02	$5,451.62	$5,724.20	$6,010.41	$6,310.93	$6,626.47	$6,957.80
Sr. Accountant	3	$34.95	$36.70	$38.53	$40.46	$42.48	$44.61	$46.84	$6,058.19	$6,361.10	$6,679.15	$7,013.11	$7,363.77	$7,731.95	$8,118.55
Accountant	3	$29.13	$30.58	$32.11	$33.72	$35.40	$37.17	$39.03	$5,048.49	$5,300.91	$5,565.96	$5,844.26	$6,136.47	$6,443.29	$6,765.46
Administrative Assistant	3	$26.08	$27.38	$28.75	$30.19	$31.70	$33.29	$34.95	$4,520.64	$4,746.67	$4,984.01	$5,233.21	$5,494.87	$5,769.61	$6,058.09
Office Specialist/Receptionist	3	$21.75	$22.84	$23.98	$25.18	$26.44	$27.76	$29.14	$3,769.73	$3,958.22	$4,156.13	$4,363.93	$4,582.13	$4,811.24	$5,051.80

Classifications:

Type 1: Exempt - Executive Management

Type 2: Exempt - Mid-Management/Supervisor

Type 3: Non-Exempt (Operations)

Type 3: Non-Exempt (Administration)

II. BUSINESS ITEMS

A. FISCAL YEAR 2021/22 SCOPE AND BUDGET FOR THE SAFE YIELD RESET METHODOLOGY UPDATE (DICUSSION ONLY)

CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, CA 91730
Tel: 909.484.3888 Fax: 909.484.3890 www.cbwm.org

PETER KAVOUNAS, P.E.
General Manager

STAFF REPORT

DATE: November 18, 2021

TO: Advisory Committee and Board Members

SUBJECT: Fiscal Year 2021/22 Scope and Budget for The Safe Yield Reset Methodology Update (Business Item II.A.)

SUMMARY:

Issue: A scope and budget to perform the Safe Yield Reset Methodology Update needs to be approved.

Recommendation: Discussion only

Financial Impact: A budget amendment for $86,504 is required and will be brought for consideration as a separate item.

Future Consideration
Advisory Committee – November 18, 2021: Discussion only
Watermaster Board – November 18, 2021: Discussion only

ACTIONS:
Appropriative Pool – July 8, 2021: No Action – Discussion only
Non-Agricultural Pool – July 8, 2021: No Action – Discussion only
Agricultural Pool – July 8, 2021: No Action – Discussion only
Advisory Committee – July 15, 2021: Approved FY 2021/22 Budget Amendment for the Safe Yield Reset Methodology as amended by Mr. Harder's letter dated 7/13/21 with the understanding that further dialogue will continue between the Pool Committees and Watermaster to potentially refine scope/budget as needed and brought back through the Watermaster process in September 2021. The motion was passed with 80 votes in favor.
Watermaster Board – July 22, 2021: Adopt the $276,761 budget amendment (Form A-21-07-02) approved by the Advisory Committee; direct staff to work with the Advisory Committee members toward resolution by the Advisory Committee within four weeks, or August 19, 2021; and provide direction to Legal Counsel to prepare a filing seeking the Court's direction as to the propriety of the inclusion of items [1] – [4] in the FY 2021/22 budget and to file a such a motion with the Court seeking the Court's direction if items [1] – [3] are not resolved and item [4] is not clarified and agreed to by August 19, 2021.
Advisory Committee – August 19, 2021: Approved Fiscal Year 2021/22 Budget Amendment (Form A-21-08-01)
Watermaster Board – September 23, 2021: Unanimously adopted Fiscal Year 2021/22 Budget Amendment (Form A-21-08-01)
Appropriative Pool – November 10, 2021: Discussion only
Non-Agricultural Pool – November 10, 2021: Gave their representatives discretionary authority to vote at Advisory Committee and Board meetings.
Agricultural Pool – November 10, 2021: Discussion only
Advisory Committee – November 18, 2021:
Watermaster Board – November 18, 2021:

BACKGROUND

Administration, enforcement, and implementation of the Judgment are within the Watermaster Board's duties and powers and include making recommendations to the Court regarding the Safe Yield of the Chino Basin. Watermaster maintains its model (Chino Valley Model, or CVM) for the purpose of evaluation of basin Safe Yield, among other studies.

The April 28, 2017 Court Order provides in part (pages 15-18, incorporated into the Watermaster Rules & Regulations as Section 6.5) the methodology to be used for future resets of the Safe Yield and that Watermaster may supplement the Safe Yield Reset methodology to incorporate future advances in best management practices and hydrologic science with the recommendation and advice of the Pool Committees and Advisory Committee; additionally the Order provides for annual data collection and evaluation, an update of the CVM, and peer review of the same.

Comments have been received from parties that the Safe Yield Reset methodology should incorporate advances in hydrologic science by characterizing and addressing uncertainty in the CVM (April 23, 2020 Comment Letter from the Appropriative Pool; June 15, 2020 City of Chino Opposition to Watermaster's Motion regarding 2020 Safe Yield Reset).

Watermaster adhered to the Court-ordered Safe Yield Reset methodology during the 2020 Safe Yield Reset. At the same time Watermaster's Engineer agreed that it would be beneficial to consider methods to characterize and quantify model uncertainty in a potential update the Safe Yield Reset methodology. Watermaster proposes to proceed with developing these methods to update the Safe Yield Reset methodology in advance of the upcoming Safe Yield Reset evaluation which is to be completed by June 30, 2025 (April 28, 2017 Court Order, page 17; Watermaster Rules & Regulations, § 6.5(f)).

Watermaster staff presented the approach to update the Safe Yield Reset methodology, supported by a review process by the Parties, in August 2020, and informed the Watermaster Board. Watermaster staff included the effort in the proposed FY 2021/22 Watermaster budget, and presented the budget and schedule on March 23, 2021, and again during budget workshops in April and May.

Watermaster's proposed Engineering budget to perform the work (Task 7614) had an overall budget of $378,811 split between three subtasks:[1]

1. Update Safe Yield methodology (pursuant to Watermaster Rules & Regulations, § 6.5(d))
2. Annual data collection and evaluation (pursuant to Watermaster Rules & Regulations, § 6.5(e))
3. Support the peer review process (pursuant to Watermaster Rules & Regulations, § 6.5(g))

The Advisory Committee approved the overall Watermaster budget in May 2021 as presented, without two items, including Task 7614. The Advisory Committee action requested that those two items be brought back through the Watermaster process within two months. In May, the Watermaster Board adopted the budget as approved by the Advisory Committee and directed staff to take amendments for the two excluded items back to Advisory Committee in June.

In June, the Appropriative Pool hired Mr. Thomas Harder of Thomas Harder & Company to review the proposed scope and budget for Task 7614 and provide feedback to the Watermaster Engineer (West Yost). On July 13, 2021, the Appropriative Pool legal counsel transmitted to Watermaster the written comments from Mr. Harder.

After carefully reviewing the written comments from the Appropriative Pool's consultant, Watermaster concluded that no changes to the scope and budget ($378,811) of Task 7614 were advisable. Watermaster

[1] A more detailed description of Task 7614 and the subtask descriptions can be found in Watermaster's latest Engineering budget narrative.

responses to comments were prepared, distributed, and discussed with the Advisory Committee on July 15, 2021.

Since Task 7614 was not approved as part of the overall budget approved by the Advisory Committee in May 2021, a budget amendment was necessary for the work to be funded. The Advisory Committee voted to approve the FY 2021/22 Budget Amendment for Task 7614 as amended by the comments in Mr. Harder's letter dated 7/13/21, with the understanding that the approval is an incremental approval so some of the work can begin. The Advisory Committee committed to further dialogue to refine the scope/budget as needed and the disputed subtasks be brought back through the Watermaster process in September 2021. The budget amendment approved by the Advisory Committee was $276,761.

At the Watermaster Board meeting on July 22, 2021, staff was directed to work with the Advisory Committee towards a resolution by August 19, 2021. The Advisory Committee approved a budget amendment for $8,247.

DISCUSSION

Watermaster staff's opinion is that the methods to characterize and quantify model uncertainty need to be evaluated to potentially update the Safe Yield Reset methodology, and this work should be done in advance of the required 2025 Safe Yield evaluation. The original schedule to complete the update of the Safe Yield Reset methodology indicated that the work needed to begin in July 2021 to have the updated methodology approved by the Court to facilitate the timely undertaking of the 2025 Safe Yield recalculation effort. As the current scope and budget were not approved until August 2021, the work to update the Safe Yield methodology was not initiated until September 2021.

In accordance with the scope and budget amendment that the Advisory Committee approved on August 19, 2021 Watermaster hosted a technical workshop with Watermaster's Engineer on October 26 to discuss conceptual approaches to characterize and address uncertainty in the recalculation of the Safe Yield. Watermaster's Engineer collected the feedback received at the meeting, prepared responses, and developed a supplemental scope of work and budget to continue the process to update the Safe Yield Reset methodology. Attachment 1 includes the proposed supplemental scope and budget and the Engineer's responses to the feedback from the peer review meeting.

The item was presented to the three Pool Committees and they offered advice and assistance.

ATTACHMENTS

1. Supplemental Scope and Budget for Fiscal Year 2021/22 Task 7614: Support Implementation of the Safe Yield Court Order

October 29, 2021

Project No.: 941-80-21-68
SENT VIA: EMAIL

Peter Kavounas, PE
General Manager
Chino Basin Watermaster
Rancho Cucamonga, CA 91730

SUBJECT: Supplemental Scope and Budget for Fiscal Year 2021/2022 Task 7614: Support Implementation of the Safe Yield Court Order

Dear Mr. Kavounas:

On September 23, 2021, the Board of the Chino Basin Watermaster (Watermaster) approved a budget amendment for Task 7614 (Support Implementation of the Safe Yield Court Order) for the 2021/2022 fiscal year Engineering Budget. Watermaster's Engineer (West Yost) wrote a letter describing the budget amendment approved on September 23, 2021.[1] This budget amendment was prepared following a meeting on August 3, 2021 between Watermaster, West Yost, and representatives of the Appropriative Pool (Thomas Harder and Ron Craig). The Appropriative Pool hired Mr. Harder to review the proposed scope and budget for Task 7614 and provide feedback to the Watermaster Engineer and the Appropriative Pool. The August 3rd meeting resulted in agreement on the following regarding certain subtasks of Task 7614 to update the update the Safe Yield (SY) Reset methodology:

- A peer review meeting should be conducted following the effort to define the initial conceptual approaches to address the various sources of modeling uncertainty. This peer review meeting will allow the technical representatives of the Parties to provide feedback on the sources of uncertainty that should be addressed and the nature of the effort necessary to address them.

- Following the initial peer review meeting, West Yost will prepare responses to the comments in the peer review meeting and conduct a brief follow-up meeting if necessary.

- Once the peer review comments have been addressed, West Yost will develop a supplemental scope and budget for the process to define and document the proposed approaches to address model uncertainty. The supplemental scope will be outside of the approved scope and budget (i.e., the current budget as of September 23, 2021) for the task to update the Safe Yield Reset

[1] This letter is Attachment 1 to Watermaster's Staff Report for Agenda item I.A. of the August 19, 2021 Advisory Committee meeting's package: link

methodology. Watermaster will introduce this supplemental scope and budget as a budget amendment to be approved through the Watermaster process.

- The timely review and approval of the supplemental scope and budget is vital to meeting the deadline to recalculate the Safe Yield as set by the Court.

The current budget reflects the above points. On October 26, 2021, Watermaster hosted a peer review meeting where West Yost and technical representatives of the Parties discussed initial conceptual approaches to address various sources of modeling uncertainty which were documented in an initial technical memorandum (TM1).[2] The feedback from the peer review meeting is summarized and discussed below.

COMMENTS AND RESPONSES FROM THE OCTOBER 26, 2021 PEER REVIEW MEETING

The peer review meeting was attended in person by four technical representatives of the Parties,[3] as well as staff from Watermaster and West Yost. There were over 20 virtual attendees. The following is a summary of the major feedback from the peer review committee and our responses:

1) **Comment**: Ensure that the process to develop and implement the updated SY Reset methodology be cost-effective. Quantifying and addressing uncertainty in the updated SY Reset methodology should remain focused on adding value to the SY calculation to inform better management and understanding of risks.

   Response*: We agree. A comparison of costs and benefits of several potential SY Reset methodologies will be presented in a technical memorandum (see Task 1.16 in Exhibit A) that will be circulated for peer review.*

2) **Comment**: Uncertainty in historical data does not need to be considered in the update of the SY Reset methodology

   Response*: We agree. We will not include tasks to characterize or quantify the uncertainty in historical data in the updated SY Reset methodology.*

3) **Comment**: In the uncertainty analysis, indicate which sources of uncertainty are related to one another.

   Response*: This comment was covered to the extent possible in the peer review meeting presentation. Beyond the general relationships between uncertainties discussed in the peer review meeting, a detailed quantification of the relationships between sources of uncertainty can be described in the ultimate implementation of the updated SY Reset methodology.*

[2] TM1 can be found on the Watermaster website: link

[3] Technical representatives were the following: Thomas Harder (Thomas Harder and Company), Jim Van de Water (Thomas Harder and Company), Richard Rees (State of California), and Bill Schwartz (Monte Vista Water District)

4) **Comment**: Instead of a Monte Carlo analysis to quantify the uncertainty of Chino Valley Model (CVM) model parameters, consider using PESTPP-IES[4] to improve the efficiency of this process.

   Response*: Thank you for the suggestion. We will consider the use of PESTPP-IES in the development of the updated SY Reset methodology.*

5) **Comment**: If West Yost chooses a subset of parameter values with which to conduct an uncertainty analysis (using either Monte Carlo or PESTPP-IES), then justification for choosing the parameters and the boundaries that are applied to the chosen parameters should be provided.

   Response*: We agree. Parameters will be chosen following the sensitivity analysis in the future recalibration of the model necessary to implement the updated SY Reset methodology. We will provide thorough detail and references in the documentation of any of the choices of parameters and/or parameter boundaries we choose in the uncertainty analysis. This documentation will be presented for peer review.*

6) **Comment**: If practical and depending on the process and method chosen to quantify the uncertainty of model parameters, develop a unit cost for addressing each parameter to aid in the understanding of the costs and benefits of a more detailed uncertainty analysis.

   Response*: A transparent comparison of costs and benefits of several potential updated SY Reset methodologies will be presented in a technical memorandum that will be circulated for peer review. This comment will be considered when developing this cost analysis for the methods to quantify the uncertainty of model parameters. This comment will also be considered in more detail when developing a scope and budget for the implementation of the updated methodology.*

7) Multiple comments regarding how to handle future climate projections:
   a) **Comment**: Recommend using the California Department of Water Resources (DWR) change factors for future climate. These are already implemented in the CVM and are the standard practice across the State. The range of change factors that the DWR provided should be used to simulate the range of future climate scenarios. Using alternative gridded climate datasets from the updated climate models should only be considered if the added cost is minimal.

      Response*: Noted. The supplemental scope and budget will include efforts to perform a high-level comparison of the costs and benefits of various approaches using the climate data sets that are currently available.*

   b) **Comment**: Recommend using the latest climate projection data in the SY Reset methodology. Not using the latest climate projections risks missing updates that may be important to the SY Reset.

      Response*: See response above.*

8) **Comment**: Consider the uncertainty of losses from municipal water supply systems in the uncertainty analysis.

[4] White, J.T. (2018). *A model-independent iterative ensemble smoother for efficient history-matching and uncertainty quantification in very high dimensions*. Environmental Modelling & Software (109): 191-201.

Response*: Noted. In 2018, at the request of Watermaster, Wildermuth Environmental investigated the feasibility of quantifying the magnitude and location of municipal supply system losses (system losses) and potential applications in the Chino Basin groundwater model. Wildermuth Environmental concluded that it was not practical to include system losses in the Chino Basin groundwater model due to the lack of information available to quantify the magnitude and location of the system losses that reach the groundwater table. That said, the CVM is a well-calibrated model, hence, system losses are implicitly included in the calibrated estimates of total recharge to the Chino Basin. Since system losses are not a specific recharge component in the CVM, it is not appropriate to include them in the uncertainty analysis.*

9) **Comment**: West Yost should compare actual water supply and demands to past projections to determine how they compare and use this comparison to quantify the uncertainty in these projections.

Response*: As part of Task 2 and 3 of Task 7614, West Yost is beginning an annual process to collect and evaluate historical data. This effort includes a comparison of historical data to the projections used in the 2020 Safe Yield Recalculation Report. West Yost will consider these comparisons in the uncertainty analysis of water supply and demand projections. Beginning on November 16, 2021, Watermaster will be facilitating several workshops to present and discuss the findings of this effort. These workshops are open to all, and we invite your input.*

REVISED NARRATIVE AND SECOND BUDGET AMENDMENT

The technical representatives at the peer review meeting did not request a follow-up meeting. West Yost has developed a supplemental scope and budget to augment Task 1 to include the steps necessary to propose an updated SY Reset methodology, incorporating the feedback from the peer review meeting. A breakdown of the revised subtasks and budget for Task 7614 with the supplemental scope and budget, including a comparison to the original and adopted budgets, is included as Exhibit A. The supplemental scope comprises the following subtasks:

- Subtask 1.07: West Yost will complete a survey of the state-of-the-art approaches to address the sources of uncertainty identified in TM1 (i.e., model parameters, water supply/demand projections, and climate projections). This will include the alternative approaches and datasets suggested in the peer review meeting (comments 4 and 7 above). West Yost will determine the applicability and value of these approaches to the SY Reset. West Yost will choose up to three approaches for each source of uncertainty to define in the next step.

- Subtask 1.10: West Yost will define a method for each of the approaches selected in the prior subtask. Each method will consist of detailed steps for implementation and application of the models for the SY Reset.

- Subtask 1.13: West Yost will quantify the feasibility of the methods defined in the previous subtask. This will involve the following steps: 1) testing out the chosen methods and amending them as needed; 2) determining the necessary computational capabilities to implement the methods (e.g., parallel computing); 3) developing a general analysis of costs (e.g., staff time, computational resources) and /benefits for each of the proposed methods. Steps 1 and 2 pertain to parameter uncertainty only. These estimates will aid in a comparison and selection of a preferred updated SY Reset methodology.

- Subtasks 1.14 and 1.15: West Yost will document the findings in subtasks 1.07, 1.10, and 1.13 in a technical memorandum, which will be reviewed with Watermaster staff. This technical memorandum will serve as a foundation for the initial technical memorandum presenting the proposed SY Reset methodologies in Subtask 1.16.

- The cost estimate for this supplemental scope is $86,504.

In addition to the revised scope and budget, we have updated the budget narrative as shown in Exhibit B. Please contact me if you have any questions on the supplemental scope and budget. Thank you for the opportunity to contribute to this important work.

Sincerely,
WEST YOST

Garrett Rapp, PE
Associate Engineer
RCE #86007

Eric Chiang, PhD
Principal Engineer

Lauren Sather, PhD
Staff Scientist

Andy Malone, PG
Principal Geologist

Exhibit A: Comparison of Subtasks and Budgets for Task 7614

Exhibit B: Revised Engineering Budget Narrative for Task 7614

Exhibit A

Comparison of Subtasks and Budgets for Task 7614

Exhibit A. Comparison of Subtasks and Budgets for Task 7614: Support Implementation of the Safe Yield Court Order

Subtask Number	Subtask Description	Estimated Fee				
		Original Budget Proposal	July 22, 2021 Adopted Budget	September 23, 2021 Adopted Budget	Proposed Second Budget Amendment	Total Budget with Proposed Second Budget Amendment
1.01	Define initial conceptual approaches to address modeling uncertainty	$ 16,136	$ 16,136	$ 19,040		$ 19,040
1.02	Prepare internal TM based on findings in previous subtask	$ 7,038	$ 7,038	$ 7,818		$ 7,818
1.03	Review TM with WM staff	$ 1,778	$ 1,778	$ 1,778		$ 1,778
1.04	Revise and finalize TM, send to Watermaster Parties			$ 4,280		$ 4,280
3.01	Prepare powerpoint presentation and agenda for peer review scoping workshop			$ 3,014		$ 3,014
3.02	Review powerpoint with WM staff			$ 1,778		$ 1,778
3.03	Revise and finalize powerpoint			$ 1,507		$ 1,507
3.04	Conduct peer review scoping workshop			$ 3,656		$ 3,656
1.05	Prepare responses to peer review comments and develop supplemental scope and budget			$ 5,594		$ 5,594
3.05	Review responses to peer review comments and proposed supplemental scope and budget with WM staff			$ 1,778		$ 1,778
1.06	Finalize responses to comments and supplemental scope/budget for refining the proposed methodology in a TM			$ 3,280		$ 3,280
1.07	Complete survey of state-of-the-art approaches to address sources of uncertainty identified in TM	$ 26,024			$ 18,792	$ 18,792
1.08	Prepare internal TM documenting survey and comparison of approaches as they relate to the Chino Basin Safe Yield	$ 13,012			$ -	$ -
1.09	Review TM with WM staff	$ 1,778	$ 1,778		$ -	$ -
1.10	Define methods for addressing uncertainty and implementation approaches to recalculate Safe Yield	$ 21,080	$ 21,080		$ 18,012	$ 18,012
1.11	Prepare internal TM documenting alternatives developed in prior subtask	$ 10,218	$ 10,218		$ -	$ -
1.12	Review TM with WM staff	$ 3,556	$ 3,556		$ -	$ -
1.13	Quantify feasibility of proposed approaches	$ 34,204			$ 29,144	$ 29,144
1.14	Prepare internal TM documenting findings from prior subtasks[1]	$ 8,766			$ 17,000	$ 17,000
1.15	Review TM with WM staff[1]	$ 1,778	$ 1,778		$ 3,556	$ 3,556
1.16	Prepare draft methodology TM #1 for peer review	$ 15,408	$ 15,408	$ 15,408		$ 15,408
1.17	Review TM with WM staff	$ 3,556	$ 3,556	$ 3,556		$ 3,556
1.18	Revise and finalize TM, send to Watermaster Parties	$ 4,582	$ 4,582	$ 4,582		$ 4,582
3.06	Prepare powerpoint presentation and agenda for first peer review workshops	$ 6,028	$ 6,028	$ 6,028		$ 6,028
3.07	Review powerpoints with WM staff	$ 1,778	$ 1,778	$ 1,778		$ 1,778
3.08	Revise and finalize powerpoint	$ 2,743	$ 2,743	$ 2,743		$ 2,743
3.09	Conduct peer review workshops #1/2	$ 7,612	$ 7,612	$ 7,612		$ 7,612
1.19	Prepare draft responses to peer review comments	$ 4,034	$ 4,034	$ 4,034		$ 4,034
1.20	Review responses with WM staff[2]	$ 3,556	$ 3,556	$ 1,778		$ 1,778
1.21	Finalize responses to peer review comments	$ 3,014	$ 3,014	$ 3,014		$ 3,014
2.01	Inventory existing data and typical data needs from Parties	$ 1,962	$ 1,962	$ 1,962		$ 1,962
2.02	Collect and tabulate data from AP Parties' 2020 UWMPs	$ 15,016	$ 15,016	$ 15,016		$ 15,016
3.10	Coordinate with WM staff for stakeholder meetings	$ 5,634	$ 5,634	$ 5,634		$ 5,634
3.11	Prepare materials for stakeholder meetings	$ 14,643	$ 14,643	$ 14,643		$ 14,643
3.12	Conduct stakeholder meetings/workshops	$ 16,216	$ 16,216	$ 16,216		$ 16,216
3.13	Debrief with WM staff after stakeholder meetings	$ 4,487	$ 4,487	$ 4,487		$ 4,487
2.03	Coordinate with WM to develop documentation on groundwater pumping records and estimates					
2.04	Collect current land use data and associated supporting data and information	$ 11,960	$ 11,960	$ 11,960		$ 11,960
2.05	Compare current land use data to projections from 2020 SYR	$ 11,008		$ 11,008		$ 11,008
2.06	Prepare technical memorandum characterizing land use data	$ 10,816	$ 10,816	$ 10,816		$ 10,816
2.07	Collect data on water use practices	$ 9,448	$ 9,448	$ 9,448		$ 9,448
2.08	Prepare exhibits and text characterizing water use data	$ 6,828	$ 6,828	$ 6,828		$ 6,828
2.09	Collect groundwater pumping data					
2.10	Prepare exhibits and text comparing historical groundwater pumping to past projections	$ 9,036		$ 9,036		$ 9,036
2.11	Collect data to update status of regional water infrastructure	$ 6,760	$ 6,760	$ 6,760		$ 6,760
2.12	Prepare exhibits and text to describe regional infrastructure	$ 6,318	$ 6,318	$ 6,318		$ 6,318
2.13	Develop draft report	$ 24,128	$ 24,128	$ 24,128		$ 24,128
3.14	Prepare for and conduct peer review meetings on report	$ 5,782	$ 5,782	$ 5,782		$ 5,782
2.14	Respond to comments on report	$ 3,956	$ 3,956	$ 3,956		$ 3,956
2.15	Complete final report	$ 5,216	$ 5,216	$ 5,216		$ 5,216
4.01	Project management	$ 11,918	$ 11,918	$ 11,918		$ 11,918
Total		**$ 378,811**	**$ 276,761**	**$ 285,188**	**$ 86,504**	**$ 371,692**

[1] In the original budget proposal, the TM and meeting in Subtasks 1.14 and 1.15 only covered the results of Task 1.13. In the second budget amendment, Subtasks 1.14 and 1.15 cover the results of Subtasks 1.07, 1.10, and 1.13.

[2] An arithmetic error in the original budget resulted in an overestimate of the original budget for this subtask. The first budget amendment includes an adjustment for the error.

Exhibit B

Revised Engineering Budget Narrative for Task 7614

7614[32] – PE8/9: Storage Management/Conjunctive Use

Support Implementation of the Safe Yield Court Order

	Cost Estimate
Consultant Labor	$369,492
Other Direct Costs	$2,200
Total	**$371,692**

Rationale

The Safe Yield of the Chino Basin was recalculated in May 2020 pursuant to the methodology approved by the Court on April 28, 2017. The Court adopted a Safe Yield of 131,000 acre-feet per year for the period of fiscal year 2020/21 through 2029/30. The Court-approved methodology was outlined in a Court Order from April 28, 2017. The Court Order also included the following requirements, listed below verbatim:

- 4.4 – Safe Yield Reset Methodology. The Safe Yield has been reset effective July 1, 2010 and shall be subsequently evaluated pursuant to the methodology set forth in the Reset Technical Memorandum [2013 Chino Basin Groundwater Model Update and Recalculation of Safe Yield Pursuant to the Peace Agreement (WEI, 2015)]. […] In furtherance of the goal of maximizing the beneficial use of the waters of the Chino Basin, Watermaster, with the recommendation and advice of the Pools and Advisory Committee, may supplement the Reset Technical Memorandum's methodology to incorporate future advances in best management practices and hydrologic science as they evolve over the term of this order.
- 4.5 – Annual Data Collection and Evaluation. In support of its obligations to undertake the reset in accordance with the Reset Technical Memorandum and this order, Watermaster shall annually undertake the following actions:
    a. Ensure that, unless a Party to the Judgment is excluded from reporting, all production by all Parties to the Judgment is metered, reported, and reflected in Watermaster's approved Assessment Packages;
    b. Collect data concerning cultural conditions annually with cultural conditions including, but not limited to, land use, water use practices, production, and facilities for the production, generation, storage, recharge, treatment, or transmission of water;
    c. Evaluate potential need for prudent management discretion to avoid or mitigate undesirable results including, but not limited to, subsidence, water quality degradation, and unreasonable pump lifts. Where evaluation of available data suggests that there has been or will be a material change from existing and projected conditions or threatened undesirable results, then a more significant evaluation, including modeling, as described in the Reset Technical Memorandum, will be undertaken; and,
    d. As part of its regular budgeting process, develop a budget for the annual data collection, data evaluation, and any scheduled modeling efforts, including the methodology for the allocation of expenses among the Parties to the Judgment. Such budget development shall be consistent with section 5.4(a) of the Peace Agreement.
- 4.6 – Modeling. Watermaster shall use the Basin Model to be updated and a model evaluation of the Safe Yield, in a manner consistent with the Reset Technical Memorandum, to be initiated no later than January 1, 2024, in order to ensure that the same may be completed by June 30, 2025.

[32] New Watermaster account for FY 2021/22.

- 4.7 – Peer Review. The Pools shall be provided with reasonable opportunity, no less frequently than annually, for peer review of the collection of data and the application of data collected in regard to the activities described in Paragraphs 4.4, 4.5, and 4.6 above.

Scope of Work

The Consultant drafted a proposed process to comply with Paragraphs 4.4 through 4.7 of the Court Order, which was presented for comment to the Pools and Advisory Committee in August 2020. Following the tasks and schedule outlined in this process, the following work will be performed in fiscal year 2021/22:

- Task 1 – Update Safe Yield methodology. Pursuant to Paragraph 4.4 of the Court Order, the Consultant will update the methodology based on the state-of-the-art and comments provided during the 2020 SYR and reset process. This is assumed to take place from September 1, 2021 through April 30, 2022. The scope of Task 1 assumes the following:
    - The Consultant will define various sources of modeling uncertainty that should be considered and addressed in the updated Safe Yield methodology. The Consultant will develop a technical memorandum (TM) outlining these sources and related questions necessary to answer when updating the Safe Yield methodology. The Consultant will submit the TM to the Parties for review and comment.
    - The Consultant will conduct a peer review meeting (included in Task 3) to discuss the content of the TM described above. The Consultant will gather feedback from the peer review committee to inform the development of a process to define the proposed approaches to address the sources of model uncertainty in the Safe Yield methodology update. The Consultant will prepare responses to the comments from the peer review meeting and conduct a brief follow-up meeting if necessary.
    - After the comments from the first peer review meeting have been addressed, the Consultant will develop a supplemental scope and budget for the process to define and document the proposed approaches to address model uncertainty. The supplemental scope will be outside of the approved scope and budget for Task 1. Watermaster will introduce this supplemental scope and budget as a budget amendment to be approved through the Watermaster process.
    - The supplemental scope includes the following intermediate steps: 1) completing a survey of the state-of-the-art approaches to address the sources of uncertainty; 2) defining a method to implement each of the selected approaches, and 3) quantifying the feasibility of the defined methods. The Consultant will document the results of these steps in an internal TM, which will be reviewed with Watermaster staff.
    - Pursuant to the findings of the work conducted within the supplemental scope, the Consultant will prepare a draft and final TM describing the proposed methodology and associated technical work, including the steps, cost, and schedule to implement it. It is assumed that responding to comments will not involve additional computational experiments or any significant changes to the initial proposed methodology. The draft TM will be completed by April 30, 2022, and the TM is expected to be finalized in fiscal year 2022/23 after Task 3 is complete.
    - Feedback on the methodology will be obtained through the Peer Review process in Task 3.
- Task 2 – Annual data collection and evaluation. Pursuant to Paragraph 4.5 of the Court Order, Task 2 includes collecting data from the Parties and other sources and analyzing the data in the context of the Consultant's groundwater modeling. Data collection will begin on July 1, 2021 for fiscal year 2020/21. The scope of Task 2 assumes the following:
    - Existing data collection efforts (e.g., groundwater pumping measurements) will be collected via other Watermaster efforts and are not included in this scope.

- The consultant will follow the data collection and evaluation process described in the proposed process to comply with Paragraphs 4.4 through 4.7 of the Court Order that was presented to the Pools and Advisory Committee in August 2020.
- The Consultant will develop exhibits to compare the collected data to previous historical and modeling data as necessary to document the data collection in an annual report and present the data to the Peer Review committee as part of Task 3.
- The Consultant will prepare a draft and final data collection report. The draft report will be reviewed with the Peer Review committee, comments will be incorporated, and the final report will be submitted to the Court no later than June 30, 2022.

- Task 3 – Support Peer Review Process. Pursuant to Paragraph 4.7 of the Court Order, Task 3 includes support to Watermaster staff in conducting peer review meetings. The scope of Task 3 assumes the following:
  - The Safe Yield methodology review will be conducted pursuant to Paragraph 4.7 of the Court Order and the steps outlined in Task 1.
    - One half-day peer review meeting will be conducted within the first several months of fiscal year 2021/22 to gather feedback on the sources of uncertainty that should be considered in the updated Safe Yield methodology. This will assist the developing a scope and budget to refine the proposed updated methodology.
    - The review of the draft updated methodology will be done in multiple half-day technical workshops to present the proposed methodology and receive comments and suggestions, and to respond to the comments and suggestions.
    - The Consultant will coordinate with Watermaster staff to organize the technical workshops.
    - It is assumed that three half-day workshops will take place in fiscal year 2021/22.
  - The Consultant will organize and conduct four meetings with the Parties to present the results of the data collection and interpretation. These meetings are assumed to last one to two hours.

Deliverables

- The Consultant's primary deliverables will be four draft technical memoranda/reports:
  - A draft and final TM defining the initial conceptual approaches to address the sources of modeling uncertainty that should be addressed in the updated Safe Yield methodology. The final TM will be disseminated to the Parties in advance of the first peer review workshop.
  - A draft and final letter documenting the comments provided in the first peer review workshop and the supplemental scope and budget to develop a proposed update of the Safe Yield methodology.
  - A draft TM describing one or more proposed methodologies and associated technical work, including the steps, cost, and schedule to implement it. The draft TM describing the proposed methodology will be refined and finalized in fiscal year 2022/23.
  - A draft and final report documenting the data collection process and the data collected for fiscal year 2020/21.
- The Consultant will prepare other deliverables as needed to support the technical workshops and meetings in Task 3.

II. BUSINESS ITEMS

B. FISCAL YEAR 2021/22 BUDGET AMENDMENT FORM (A-21-11-01)

CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, CA 91730
Tel: 909.484.3888 Fax: 909.484.3890 www.cbwm.org

PETER KAVOUNAS, P.E.
General Manager

STAFF REPORT

DATE: November 18, 2021

TO: Advisory Committee and Board Members

SUBJECT: Fiscal Year 2021/22 Budget Amendment (Form A-21-11-01) (Business Item II.B.)

SUMMARY:

Issue: The Watermaster FY 2021/22 "Amended" budget needs to be increased by an additional amount of $86,504 to include the Scope and Budget for the Safe Yield Reset Methodology Update.

Recommendation:
Advisory Committee: Approve the Fiscal Year 2021/22 Budget Amendment (Form A-21-11-01).

Board Members: Adopt the Fiscal Year 2021/22 Budget Amendment (Form A-21-11-01)

Financial Impact: This action will increase the overall "Amended" FY 2021/22 budget from $7,780,432 to $7,866,936, an increase of $86,504. If the Budget Amendment is approved, the Assessment calculation will be increased by the same amount when the Assessment Package is considered in November 2021.

Future Consideration
Advisory Committee – November 18, 2021: Approval
Watermaster Board – November 18, 2021: Adoption (Advisory Committee approval required)

ACTIONS:
Appropriative Pool – November 10, 2021: Referred to Confidential Session; no action was reported following Confidential Session
Non-Agricultural Pool – November 10, 2021: Offered advice and assistance
Agricultural Pool – November 10, 2021: No advice or assistance provided
Advisory Committee – November 18, 2021:
Watermaster Board – November 18, 2021:

BACKGROUND

Budget Amendment Policy: If there are no budgeted funds available to transfer to the line item, the General Manager will submit a Budget Amendment request to the Pool Committees to request Advisory Committee approval, and then to the Board for formal adoption. The Budget Amendment should indicate the anticipated source of funding for the approved increase. All Budget Amendments are processed and recorded in the accounting system.

On September 23, 2021 the Watermaster Board adopted the September 23, 2021 version of the FY 2021/22 budget for $7,708,432.

On October 28, 2021 the Watermaster Board adopted the Fiscal Year 2021/22 Budget Amendment (Form A-21-10-01) which increased the budget from $7,708,432 to $7,780,432 an increase of $72,000.

DISCUSSION

The need for Budget Amendment (Form A-21-11-01) (Attachment 1) is described in the staff report of the previous item on this agenda titled “Fiscal Year 2021/22 Scope and Budget For The Safe Yield Reset Methodology Update”.

With approval of the Fiscal Year 2021/22 Budget Amendment (Form A-21-11-01), the “Amended” Budget for FY 2021/22 would be $7,866,936.

ATTACHMENTS

1. Fiscal Year 2021/22 Budget Amendment (Form A-21-11-01)

ATTACHMENT 1

CHINO BASIN WATERMASTER

BUDGET AMENDMENT FORM A-21-11-01

To: **All Parties** Fiscal Year 2021/22

From : Joseph S. Joswiak, CFO Date: November 18, 2021

Describe reason for the budget amendment here: The current "Amended" Budget for FY 2021/22 is $7,780,432**.** This "Amended" budget is the October 28, 2021 version adopted by the Board on October 28, 2021. This Budget Amendment Form is proposed to increase the total Watermaster "Amended" budget from $7,780,432 (excluding any Carry-Over funding) to $7,866,936, an increase of $86,504. The additional funding will come from the Assessment Process when the Assessment Package is approved in November 2021, and invoices generated.

Expenditure Amendment

Line Item Description	*Account Number*	*Approved Budget*	*Amended Budget*	*Amendment Amount*
Support Implementation of Safe Yield Court Order	7614	$285,188	$371,692	$86,504
			TOTAL:	**$ 86,504**

Revenue Source

Line Item Description	*Account Number*	*Approved Budget*	*Amended Budget*	*Amendment Amount*
Assessment Package	9999	$7,780,432	$7,866,936	$86,504
			TOTAL:	**$ 86,504**

Amendment Procedure

1. Staff takes amendment requests to the Pools, Advisory Committee & Board for approval.
2. The Chief Financial Officer will prepare and process the budget entry.
4. A log will be maintained by the Finance Department detailing the adjustment.
5. A fiscal year file will also be kept to hold all budget amendment forms for auditor review.

Finance Use Only

Date Board Approved _____

Entered into System By _____

Finance Log # _____

Date Posted _____

Approved By _____

Date Approved _____

II. BUSINESS ITEMS

C. DRY YEAR YIELD PROGRAM (Watermaster Board Only)

Staff report will be distributed separately

II. BUSINESS ITEMS

D. FISCAL YEAR 2021/22 ASSESSMENT PACKAGE

CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, CA 91730
Tel: 909.484.3888 Fax: 909.484.3890 www.cbwm.org

PETER KAVOUNAS, P.E.
General Manager

STAFF REPORT

DATE: November 18, 2021

TO: Advisory Committee and Board Members

SUBJECT: Fiscal Year 2021/22 Assessment Package (Business Item II.D.)

SUMMARY:

Issue: The Chino Basin Watermaster Fiscal Year 2021/22 Assessment Package, based on Production Year 2020/21, needs to be approved.

Recommendation:

Advisory Committee: Review Fiscal Year 2021/22 Assessment Package as presented and offer advice to Watermaster.

Board Members: Approve the Fiscal Year 2021/22 Assessment Package as presented.

Financial Impact: Collection of assessments according to the Assessment Package creates the funds that are used during the current fiscal year for budgeted expenses and the purchase of water (if available) for replenishment obligations.

Future Consideration
Advisory Committee – November 18, 2021: Advice and assistance
Watermaster Board – November 18, 2021: Approval [Within Watermaster Powers and Duties]

ACTIONS:
Appropriative Pool – November 10, 2021: By majority voted to move the FY 2021/22 Assessment Package forward with the understanding that the Assessment Package may be revisited after the City of Ontario's DYY concern is addressed.
Non-Agricultural Pool – November 10, 2021: Gave their representatives discretionary authority to vote at Advisory Committee and Board meetings.
Agricultural Pool – November 10, 2021: No advice or assistance provided.
Advisory Committee – November 18, 2021:
Watermaster Board – November 18, 2021:

BACKGROUND

Watermaster issues an Assessment Package annually based on production during the previous production year (July 1 through June 30). Production information is generally collected quarterly, and other necessary information is collected annually. Assessments create funds that are used during the current fiscal year for budgeted expenses. Assessments are based on the approved budget allocated across the total assessable production in the Basin.

DISCUSSION

The Parties of the Overlying (Non-Agricultural) Pool and the Appropriative Pool were each sent a copy of their Water Activity Report in August 2021 that summarized their water activity for the previous year, including production. Dry Year Yield (DYY), land use conversion, transfers, voluntary agreements, and assignments. Each Party was asked to verify the data gathered and summarized by Watermaster. The Water Activity Reports were received back, and any necessary corrections were made.

Each Appropriative Pool Party's Water Activity Report was accompanied with a "Transfer from Storage to Satisfy Desalter Replenishment Obligation (DRO)" form, and summaries of DRO and Local Storage Accounts' balances. Using the form, the Parties submitted their preference on how they would like their share of DRO to be satisfied with stored water. Those transfers were then executed in September 2021 and the Parties' storage account balances were adjusted accordingly.

Assessments generate funds to cover the current year FY 2021/22 approved amended budget, in addition to reserves according to existing reserve policies. The Assessment Package does not factor in unspent monies, those are returned to Parties as a credit on the assessment invoicing. The FY 2020/21 Reserve excess cash to be refunded is $0; Recharge Basin O&M excess cash to be refunded is $145,384.27; the Debt Payment excess cash to be refunded is $156,259.00; and the Recharge Improvement Projects excess cash to be refunded is $1,234,582.42.

The total Operating Safe Yield (OSY) of the Appropriative Pool is now 40,834 acre-feet beginning with the 2020/21 production year, pursuant to the July 2020 Court Order. And continuing from the previous Assessment Package, Land Use Conversion has priority ahead of Early Transfer in calculating the Agricultural Pool Safe Yield Reallocation.

The Assessment Package is based on the FY 2021/22 Amended Budget totaling $7,780,432, as it was approved on October 21, 2021, and identifies total assessable production for all Pools as 98,806.1 acre-feet, resulting in assessments of $22.27/acre-foot for Judgment Administration and $48.25/acre-foot for OBMP & Program Elements 1-9, excluding recharge debt service, recharge improvement project expenses, "Pomona Credit" assessments, and assessments for replenishment and CURO water.

The current Assessment Package as presented does not include the proposed Fiscal Year 2021/22 Budget Amendment (Form A-21-11-01) in the amount of $86,504, which is presented as Item II.B. of the agenda. If the proposed Fiscal Year 2021/22 Budget Amendment of $86,504 is approved, the revised Assessment for OBMP & Program Elements 1-9 would be increased an additional $0.87, bringing the total from $48.25/acre-foot to $49.12/acre-foot. The Judgment Administration amount of $22.27/acre-foot would not change.

For production year 2020/21, there is a replenishment obligation of 1,823.7 acre-feet for overproduction, and 254.1 acre-feet for DRO. The new replenishment rate is $789 per acre-foot, which is MWD's 2021 Tier 1 Untreated rate at $777 plus OCWD's $2 connection fee plus TVMWD's $10 surcharge.

In September 2021, Watermaster received an RTS invoice from IEUA in the amount of $35,030.19. The RTS is being assessed for water purchased during FY 2016/17 and FY 2017/18 through IEUA. A portion of the RTS is the fourth of ten annual installments for the 5,767.037 acre-feet of water purchased during

FY 2016/17. The other portion is the third of ten annual installments for the 1,145.9 acre-feet of water purchased during FY 2017/18. The 85/15 Rule is applied where applicable for the RTS charges.

The additional assessments approved as part of the budget, allocated amongst the Appropriators based on their percentage of OSY, are Pomona Credit assessment of $66,667.00, recharge debt payment assessment of $529,029.00, and recharge improvement project assessment of $0. Other approved assessments will be invoiced based on formulas separate from the Assessment Package.

The total DRO for production year 2020/21 is 26,879.4 acre-feet. This includes the 10,000 acre-feet of DRO Contribution and 16,879.4 acre-feet of Remaining DRO. In August and September 2021, the Appropriative Pool Parties were given an opportunity to transfer water and satisfy their share of DRO. The Parties have submitted their requests and the DRO was satisfied with a combination of stored water, annual water rights, and Exhibit “G” Form A transfers. In the end, the residual DRO to be assessed is 254.1 acre-feet.

The loss rate applied to water held in storage accounts continues to be 0.07%. This rate is reflected in the Assessment Package and has been applied to the beginning balances of locally stored water accounts.

In cases where the ending balance of a storage account has increased from the beginning balance on July 1, 2021, a new storage agreement will be required. Parties with increased storage balances as of the approval of the Assessment Package have already submitted storage applications to Watermaster and were approved by the Water Board on June 24,2021 for the Overlying (Non-Agricultural) Pool, and September 23, 2021 for the Appropriative Pool. Following the approval of the Assessment Package, a new storage agreement will be sent for signature to those Parties with increased balances.

Watermaster has entered into storage agreements for all local water storage accounts based on last year’s Assessment Package, except for water held in the Excess Carry Over (ECO) Storage account by the Appropriative Pool. The Appropriative Pool storage agreements for additional ECO water stored during production year 2019/20 have been suspended due to the Overlying (Agricultural) Pool (OAP) contest to the Storage Management Plan. For the purposes of allocating assessments among the members of the Appropriative Pool, this Assessment Package assumes that the contest has been resolved where the ECO storage agreements and any water transaction of ECO water have been approved. If the actual result from the contest differs from what is currently recorded in the Assessment Package, Watermaster will revise the FY 2020/21 and FY 2021/22 Assessment Packages accordingly.

Watermaster held two Assessment Package Workshops: one on October 19, 2021 and the other on November 2, 2021. The purpose of the workshops was to provide the parties with information pertaining to the Assessment Package and opportunities to raise questions, concerns, and feedback.

The FY 2021/22 Assessment Package is being presented to the Pool Committees for advice and assistance. It will then be presented to the Advisory Committee for advice and assistance, and Watermaster Board on November 18, 2021 for approval. If approved by the Board, invoices will be emailed to the Parties immediately following the Board’s approval.

In addition to the line items detailed within the FY 2021/22 Assessment Package, additional credits and charges will be added to assessment invoices as directed by specific action of the Pool(s), or by action of Watermaster per past practice; these items are not dependent on the Board’s approval of the Assessment Package. The following additional items will be added to this year’s assessment invoicing:

1. Refund of previously assessed and collected Recharge Improvement Projects funding to the Appropriative Pool (authorized by the AP on 06/10/21): $1,234,582.42
2. Refund of the FY 2020/21 Debt Service Payments in excess to the Appropriative Pool: $156,259.00
3. Refund of FY 2020/21 Recharge Basin O&M Payments in excess to the Appropriative Pool: $145,384.27
4. Charge the Appropriative Pool for expenses paid by the Non-Agricultural Pool (authorized by the AP on 06/10/21): $107,544.38

5. Refund to the Non-Agricultural Pool for expenses paid (authorized by the AP on 06/10/21): $107,544.38 [this refund may result in an accounts payable check to be issued by Watermaster]

In addition to the items listed above, charges for Pool Administration/Legal Services will be included on the FY 2021/22 Assessment invoices as approved by each Pool Committee.

At their November 10, 2021 meetings the Appropriative Pool, by majority, voted to move the Fiscal Year 2021/2022 Assessment Package forward with the understanding that the Assessment Package may be revisited after the City of Ontario's DYY concern is addressed; the Overlying (Non-Agricultural) Pool gave their representatives discretionary authority to vote at Advisory Committee and Board meetings; and the Overlying (Agricultural) Pool did not provide any advice or assistance. The $86,504 budget amendment has not been included in the Assessment Package and will be addressed separately.

ATTACHMENTS
1. Fiscal Year 2021/22 Assessment Package (DRAFT)

CHINO BASIN WATERMASTER

DRAFT

2021/2022 ASSESSMENT PACKAGE
(PRODUCTION YEAR 2020/2021)

PRINTED NOVEMBER 2, 2021

Table of Contents

Assessment Year 2021-2022 (Production Year 2020-2021)

POOL 1

Assessment Year 2021-2022 (Production Year 2020-2021)

Water Production Overview

AGRICULTURAL POOL SUMMARY IN ACRE FEET

Agricultural Pool Safe Yield	82,800.0
Agricultural Total Pool Production	(21,484.8)
	61,315.2
Safe Yield Reduction (Backfill)	(9,000.0)
Total Conversions	(31,716.6)
	(40,716.6)
Early Transfer:	**20,598.6**

Well County	Physical Production	Voluntary Agreements	Total Ag Pool Production
Los Angeles County	165.1	0.0	165.1
Riverside County	1,987.6	0.0	1,987.6
San Bernardino County	12,869.4	6,462.7	19,332.1
	15,022.1	**6,462.7**	**21,484.8**

POOL 2

Assessment Year 2021-2022 (Production Year 2020-2021)

Assessment Fee Summary

		Non-Agricultural Pool		Replenishment Assessments					
	AF Production	$22.27 AF/Admin	$48.25 AF/OBMP	*AF Over Annual Right*	$789.00 Per AF	CURO Adjmnt	RTS Charges	Other Adjmnts	Total Assmnts Due
9W Halo Western OpCo L.P.	*28.5*	635.05	1,375.90	*11.6*	9,157.13	98.57	384.62	0.00	11,651.27
ANG II (Multi) LLC	*0.0*	0.00	0.00	*0.0*	0.00	0.00	0.00	0.00	0.00
Aqua Capital Management LP	*0.0*	0.00	0.00	*0.0*	0.00	0.00	291.23	0.00	291.23
California Speedway Corporation	*388.3*	8,647.57	18,735.76	*0.0*	0.00	0.00	0.00	0.00	27,383.33
California Steel Industries, Inc.	*1,301.8*	28,991.93	62,813.68	*0.0*	0.00	0.00	0.00	0.00	91,805.61
CalMat Co.	*0.0*	0.00	0.00	*0.0*	0.00	0.00	0.00	0.00	0.00
CCG Ontario, LLC	*0.0*	0.00	0.00	*0.0*	0.00	0.00	0.00	0.00	0.00
City of Ontario (Non-Ag)	*1,608.4*	35,818.24	77,603.51	*0.0*	0.00	0.00	0.00	0.00	113,421.75
County of San Bernardino (Non-Ag)	*72.6*	1,617.18	3,503.77	*0.0*	0.00	0.00	0.00	0.00	5,120.95
General Electric Company	*0.0*	0.00	0.00	*0.0*	0.00	57.15	0.31	0.00	57.46
Hamner Park Associates, a California Limited Partnership	*323.4*	7,202.50	15,604.87	*0.0*	0.00	0.00	0.00	0.00	22,807.37
Linde Inc.	*0.0*	0.00	0.00	*0.0*	0.00	0.00	0.00	0.00	0.00
Monte Vista Water District (Non-Ag)	*22.1*	492.17	1,066.32	*0.0*	0.00	0.00	0.00	0.00	1,558.49
Riboli Family and San Antonio Winery, Inc.	*43.2*	962.84	2,086.09	*43.2*	34,112.42	248.40	192.69	0.00	37,602.44
Space Center Mira Loma, Inc.	*93.7*	2,086.88	4,521.41	*0.0*	0.00	0.00	0.00	0.00	6,608.29
TAMCO	*15.3*	340.40	737.50	*0.0*	0.00	0.00	184.26	0.00	1,262.16
West Venture Development Company	*0.0*	0.00	0.00	*0.0*	0.00	0.00	0.00	0.00	0.00
	3,897.4	**86,794.76**	**188,048.81**	***54.8***	**43,269.55**	**404.12**	**1,053.10**	**0.00**	**319,570.34**
	2A	2B	2C	2D	2E	2F	2G	2H	2I

Notes:
1) In September 2020, Praxair, Inc. changed its name to Linde Inc.
2) ANG II (Multi) LLC temporarily leased their rights to 9W Halo Western OpCo L.P. (as successor to Angelica) beginning on March 2010 through January 2030.

POOL 2

Assessment Year 2021-2022 (Production Year 2020-2021)

Water Production Overview

	Physical Production	Assignments	Other Adjustments	Actual FY Production (Assmnt Pkg Column 4H)
9W Halo Western OpCo L.P.	28.5	0.0	0.0	28.5
ANG II (Multi) LLC	0.0	0.0	0.0	0.0
Aqua Capital Management LP	0.0	0.0	0.0	0.0
California Speedway Corporation	388.3	0.0	0.0	388.3
California Steel Industries, Inc.	1,301.8	0.0	0.0	1,301.8
CalMat Co.	0.0	0.0	0.0	0.0
CCG Ontario, LLC	0.0	0.0	0.0	0.0
City of Ontario (Non-Ag)	0.0	1,608.4	0.0	1,608.4
County of San Bernardino (Non-Ag)	0.0	72.6	0.0	72.6
General Electric Company	1,018.1	0.0	(1,018.1)	0.0
Hamner Park Associates, a California Limited Partnership	0.0	323.4	0.0	323.4
Linde Inc.	0.0	0.0	0.0	0.0
Monte Vista Water District (Non-Ag)	0.0	22.1	0.0	22.1
Riboli Family and San Antonio Winery, Inc.	43.2	0.0	0.0	43.2
Space Center Mira Loma, Inc.	0.0	93.7	0.0	93.7
TAMCO	15.3	0.0	0.0	15.3
West Venture Development Company	0.0	0.0	0.0	0.0
	2,795.3	**2,120.2**	**(1,018.1)**	**3,897.4**
	3A	3B	3C	3D

Notes:
1) In September 2020, Praxair, Inc. changed its name to Linde Inc.
2) ANG II (Multi) LLC temporarily leased their rights to 9W Halo Western OpCo L.P. (as successor to Angelica) beginning on March 2010 through January 2030.

Other Adj:
1) General Electric Company extracted and subsequently injected 1,018.13 AF of water during the fiscal year.

POOL 2

Assessment Year 2021-2022 (Production Year 2020-2021)

Water Production Summary

	Percent of Safe Yield	Carryover Beginning Balance	Prior Year Adjustments	Assigned Share of Safe Yield (AF)	Water Transaction Activity	Other Adjust-ments	Annual Production Right	Actual Fiscal Year Production	Net Over Production	Under Production Balances		
										Total Under-Produced	Carryover: Next Year Begin Bal	To Excess Carryover Account
9W Halo Western OpCo L.P.	*0.256%*	0.0	0.0	18.8	(1.9)	0.0	16.9	28.5	11.6	0.0	0.0	0.0
ANG II (Multi) LLC	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aqua Capital Management LP	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
California Speedway Corporation	*13.605%*	1,000.0	0.0	1,000.0	(100.0)	0.0	1,900.0	388.3	0.0	1,511.7	1,000.0	511.7
California Steel Industries, Inc.	*21.974%*	1,615.1	0.0	1,615.1	(161.5)	0.0	3,068.8	1,301.8	0.0	1,766.9	1,615.1	151.8
CalMat Co.	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CCG Ontario, LLC	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Ontario (Non-Ag)	*53.338%*	3,920.6	0.0	3,920.6	(392.1)	0.0	7,449.1	1,608.4	0.0	5,840.7	3,920.6	1,920.1
County of San Bernardino (Non-Ag)	*1.821%*	133.9	0.0	133.9	(13.4)	0.0	254.4	72.6	0.0	181.7	133.9	47.9
General Electric Company	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hamner Park Associates, a California Limited Partnership	*6.316%*	464.2	0.0	464.2	(46.4)	0.0	882.1	323.4	0.0	558.6	464.2	94.4
Linde Inc.	*0.014%*	1.0	0.0	1.0	(0.1)	0.0	1.9	0.0	0.0	1.9	1.0	0.9
Monte Vista Water District (Non-Ag)	*0.680%*	50.0	0.0	50.0	(5.0)	0.0	95.0	22.1	0.0	72.9	50.0	22.9
Riboli Family and San Antonio Winery, Inc.	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	43.2	43.2	0.0	0.0	0.0
Space Center Mira Loma, Inc.	*1.417%*	0.0	0.0	104.1	(10.4)	0.0	93.7	93.7	0.0	0.0	0.0	0.0
TAMCO	*0.579%*	42.6	0.0	42.6	(4.3)	0.0	81.0	15.3	0.0	65.7	42.6	23.1
West Venture Development Company	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	100.00%	**7,227.4**	**0.0**	**7,350.3**	**(735.0)**	**0.0**	**13,842.7**	**3,897.4**	**54.8**	**10,000.2**	**7,227.4**	**2,772.8**
	4A	4B	4C	4D	4E	4F	4G	4H	4I	4J	4K	4L

Notes:
1) In September 2020, Praxair, Inc. changed its name to Linde Inc.
2) ANG II (Multi) LLC temporarily leased their rights to 9W Halo Western OpCo L.P. (as successor to Angelica) beginning on March 2010 through January 2030.

POOL 2

Assessment Year 2021-2022 (Production Year 2020-2021)

Local Storage Accounts Summary

	Local Excess Carry Over Storage Account (ECO)					Local Supplemental Storage Account				Combined
	Beginning Balance	0.07% Storage Loss	Transfers To / (From)	From Under-Production	Ending Balance	Beginning Balance	0.07% Storage Loss	Transfers To / (From)	Ending Balance	Ending Balance
9W Halo Western OpCo L.P.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANG II (Multi) LLC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aqua Capital Management LP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
California Speedway Corporation	1,419.9	(1.0)	(32.1)	511.7	1,898.5	0.0	0.0	0.0	0.0	1,898.5
California Steel Industries, Inc.	2,361.7	(1.7)	0.0	151.8	2,511.8	0.0	0.0	0.0	0.0	2,511.8
CalMat Co.	5.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	5.0
CCG Ontario, LLC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Ontario (Non-Ag)	3,461.4	(2.4)	(3,461.1)	1,920.1	1,918.0	0.0	0.0	0.0	0.0	1,918.0
County of San Bernardino (Non-Ag)	204.1	(0.1)	0.0	47.9	251.8	0.0	0.0	0.0	0.0	251.8
General Electric Company	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hamner Park Associates, a California Limited Partnership	1,627.6	(1.1)	0.0	94.4	1,720.9	0.0	0.0	0.0	0.0	1,720.9
Linde Inc.	63.5	0.0	0.0	0.9	64.3	0.0	0.0	0.0	0.0	64.3
Monte Vista Water District (Non-Ag)	95.1	(0.1)	0.0	22.9	117.9	0.0	0.0	0.0	0.0	117.9
Riboli Family and San Antonio Winery, Inc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Space Center Mira Loma, Inc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAMCO	235.3	(0.2)	0.0	23.1	258.2	0.0	0.0	0.0	0.0	258.2
West Venture Development Company	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	9,473.5	**(6.6)**	**(3,493.2)**	**2,772.8**	**8,746.4**	**0.0**	**0.0**	**0.0**	**0.0**	**8,746.4**
	5A	5B	5C	5D	5E	5F	5G	5H	5I	5J

Notes:
1) In September 2020, Praxair, Inc. changed its name to Linde Inc.
2) ANG II (Multi) LLC temporarily leased their rights to 9W Halo Western OpCo L.P. (as successor to Angelica) beginning on March 2010 through January 2030.
3) California Speedway Corporation dedicated 32.1 AF to satisfy a portion of BlueTriton Brands, Inc.'s 2021/22 DRO pursuant to an Exhibit "G" Section 10 Form A.
4) City of Ontario (Non-Ag) dedicated 3,461.1 AF to satisfy a portion of City of Ontario's 2021/22 DRO pursuant to an Exhibit "G" Section 10 Form A.

POOL 2

Assessment Year 2021-2022 (Production Year 2020-2021)

Water Transaction Summary

	Percent of Safe Yield	Assigned Share of Safe Yield (AF)	Water Transactions: 10% of Operating Safe Yield ("Haircut")	Water Transactions: Transfers (To) / From ECO Account	Water Transactions: General Transfers / Exhibit G Water Sales	Water Transactions: Total Water Transactions
9W Halo Western OpCo L.P.	0.256%	18.8	(1.9)	0.0	0.0	(1.9)
ANG II (Multi) LLC	0.000%	0.0	0.0	0.0	0.0	0.0
Aqua Capital Management LP	0.000%	0.0	0.0	0.0	0.0	0.0
California Speedway Corporation	13.605%	1,000.0	(100.0)	32.1	(32.1)	(100.0)
California Steel Industries, Inc.	21.974%	1,615.1	(161.5)	0.0	0.0	(161.5)
CalMat Co.	0.000%	0.0	0.0	0.0	0.0	0.0
CCG Ontario, LLC	0.000%	0.0	0.0	0.0	0.0	0.0
City of Ontario (Non-Ag)	53.338%	3,920.6	(392.1)	3,461.1	(3,461.1)	(392.1)
County of San Bernardino (Non-Ag)	1.821%	133.9	(13.4)	0.0	0.0	(13.4)
General Electric Company	0.000%	0.0	0.0	0.0	0.0	0.0
Hamner Park Associates, a California Limited Partnership	6.316%	464.2	(46.4)	0.0	0.0	(46.4)
Linde Inc.	0.014%	1.0	(0.1)	0.0	0.0	(0.1)
Monte Vista Water District (Non-Ag)	0.680%	50.0	(5.0)	0.0	0.0	(5.0)
Riboli Family and San Antonio Winery, Inc.	0.000%	0.0	0.0	0.0	0.0	0.0
Space Center Mira Loma, Inc.	1.417%	104.1	(10.4)	0.0	0.0	(10.4)
TAMCO	0.579%	42.6	(4.3)	0.0	0.0	(4.3)
West Venture Development Company	0.000%	0.0	0.0	0.0	0.0	0.0
	100.000%	**7,350.3**	**(735.0)**	**3,493.2**	**(3,493.2)**	**(735.0)**
	6A	6B	6C	6D	6E	6F

Notes:
1) In September 2020, Praxair, Inc. changed its name to Linde Inc.
2) ANG II (Multi) LLC temporarily leased their rights to 9W Halo Western OpCo L.P. (as successor to Angelica) beginning on March 2010 through January 2030.
3) California Speedway Corporation dedicated 32.1 AF to satisfy a portion of BlueTriton Brands, Inc.'s 2021/22 DRO pursuant to an Exhibit "G" Section 10 Form A.
4) City of Ontario (Non-Ag) dedicated 3,461.1 AF to satisfy a portion of City of Ontario's 2021/22 DRO pursuant to an Exhibit "G" Section 10 Form A.

POOL 2

Assessment Year 2021-2022 (Production Year 2020-2021)

Cumulative Unmet Replenishment Obligation (CURO)

Remaining Replenishment Obligation:	AF
Appropriative - 100	0.0
Appropriative - 15/85	0.0
Non-Agricultural - 100	0.0
	0.0

Replenishment Rates	
2021 Rate	$789.00
2020 Rate	$767.00

Pool 2 Non-Agricultural

Company	Outstanding Obligation (AF)	Fund Balance ($)	Outstanding Obligation ($)
9W Halo Western OpCo L.P.	0.0	($98.57)	$98.57
ANG II (Multi) LLC	0.0	$0.00	$0.00
Aqua Capital Management LP	0.0	$0.00	$0.00
California Speedway Corporation	0.0	$0.00	$0.00
California Steel Industries, Inc.	0.0	$0.00	$0.00
CalMat Co.	0.0	$0.00	$0.00
CCG Ontario, LLC	0.0	$0.00	$0.00
City of Ontario (Non-Ag)	0.0	$0.00	$0.00
County of San Bernardino (Non-Ag)	0.0	$0.00	$0.00
General Electric Company	0.0	($57.15)	$57.15
Hamner Park Associates, a California Limited Partnership	0.0	$0.00	$0.00
Linde Inc.	0.0	$0.00	$0.00
Monte Vista Water District (Non-Ag)	0.0	$0.00	$0.00
Riboli Family and San Antonio Winery, Inc.	0.0	($248.40)	$248.40
Space Center Mira Loma, Inc.	0.0	$0.00	$0.00
TAMCO	0.0	$0.00	$0.00
West Venture Development Company	0.0	$0.00	$0.00
Pool 2 Non-Agricultural Total	**0.0**	**($404.12)**	**$404.12**
	7A	7B	7C

Notes:
1) In September 2020, Praxair, Inc. changed its name to Linde Inc.
2) ANG II (Multi) LLC temporarily leased their rights to 9W Halo Western OpCo L.P. (as successor to Angelica) beginning on March 2010 through January 2030.
3) The 2021 replenishment rate includes MWD's Full Service Untreated Tier 1 volumic cost of $777/AF, a $10/AF surcharge from Three Valleys Municipal Water District, and a $2/AF connection fee from Orange County Water District.

Assessment Year 2021-2022 (Production Year 2020-2021)

Assessment Fee Summary

	AF Production and Exchanges	Appropriative Pool		Ag Pool SY Reallocation			Replenishment Assessments			85/15 Activity		CURO Adjmt	ASSESSMENTS DUE							
		$22.27 AF/Admin	$48.25 AF/OBMP	AF Total Realloc-ation	$478,534 $7.80 AF/Admin	$1,036,584 $16.91 AF/OBMP	$118.35 AF/15%	$670.65 AF/85%	$789.00 AF/100%	15% Producer Credits	15% Pro-rated Debits		Total Production Based	Pomona Credit	Recharge Debt Payment	Recharge Imprvmnt Project	RTS Charges	Other Adjmts	DRO	Total Due
BlueTriton Brands, Inc.	271.3	6,041.21	13,088.83	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(135.86)	18,994.18	0.00	0.00	0.00	7,519.14	0.00	0.00	26,513.32
CalMat Co. (Appropriative)	0.0	0.00	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chino Hills, City Of	2,459.6	54,775.92	118,677.05	2,417.9	18,870.15	40,875.88	81.46	0.00	0.00	0.00	25,247.02	0.40	258,527.88	2,567.35	20,372.91	0.00	1.04	0.00	0.00	281,469.18
Chino, City Of	2,762.4	61,518.20	133,284.84	11,194.4	87,366.39	189,250.10	91.49	0.00	0.00	0.00	28,354.64	0.45	499,866.11	4,904.69	38,920.66	0.00	0.05	0.00	0.00	543,691.51
Cucamonga Valley Water District	5,725.7	127,511.34	276,265.03	2,552.2	19,918.39	43,146.53	189.63	0.00	0.00	0.00	58,771.84	0.92	525,803.68	4,400.69	34,921.20	0.00	12.09	0.00	0.00	565,137.66
Desalter Authority	40,114.5	0.00	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fontana Union Water Company	0.0	0.00	0.00	3,450.3	26,927.93	58,330.36	0.00	0.00	0.00	0.00	0.00	0.00	85,258.29	7,771.37	61,668.91	0.00	0.00	0.00	0.00	154,698.57
Fontana Water Company	11,065.3	246,424.59	533,901.50	834.6	6,513.57	14,109.47	366.47	0.00	0.00	(629,915.45)	113,580.68	1.79	284,982.62	1.33	10.58	0.00	9.15	0.00	0.00	285,003.67
Fontana, City Of	0.0	0.00	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Golden State Water Company	1,074.4	23,926.60	51,839.17	222.0	1,732.52	3,752.92	35.58	0.00	0.00	0.00	11,028.12	0.18	92,315.09	500.00	3,967.72	0.00	0.50	0.00	0.00	96,783.31
Jurupa Community Services District	10,609.9	236,282.61	511,927.96	16,328.0	127,432.12	276,039.11	351.39	0.00	0.00	0.00	108,906.10	1.73	1,260,941.02	2,506.01	19,886.20	0.00	5.81	0.00	0.00	1,283,339.04
Marygold Mutual Water Company	840.9	18,726.49	40,572.65	353.7	2,760.47	5,979.64	0.00	0.00	0.00	0.00	0.00	0.00	68,039.25	796.67	6,321.90	0.00	764.52	0.00	0.00	75,922.34
Monte Vista Irrigation Company	0.0	0.00	0.00	365.2	2,850.57	6,174.80	0.00	0.00	0.00	0.00	0.00	0.00	9,025.37	822.67	6,528.22	0.00	0.00	0.00	0.00	16,376.26
Monte Vista Water District	7,523.3	167,543.69	362,998.79	2,709.4	21,145.54	45,804.75	249.16	0.00	0.00	0.00	77,223.33	1.23	674,966.49	5,864.70	46,538.68	0.00	4.87	0.00	0.00	727,374.74
NCL Co, LLC	0.0	0.00	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Niagara Bottling, LLC	1,751.7	39,009.58	84,517.84	0.0	0.00	0.00	0.00	0.00	1,382,063.69	0.00	0.00	18,212.89	1,523,804.00	0.00	0.00	0.00	23,935.00	723.57	198,558.16	1,747,020.73
Nicholson Family Trust	0.0	0.00	0.00	2.1	16.17	35.03	0.00	0.00	0.00	0.00	0.00	0.00	51.20	4.67	37.03	0.00	0.00	(2.13)	0.00	90.77
Norco, City Of	0.0	0.00	0.00	108.9	850.09	1,841.43	0.00	0.00	0.00	0.00	0.00	0.00	2,691.52	245.33	1,946.83	0.00	0.00	0.00	0.00	4,883.68
Ontario, City Of	17,171.1	382,401.07	828,507.02	10,807.7	84,348.53	182,712.90	568.68	0.00	0.00	0.00	176,254.23	2.79	1,654,795.22	13,828.07	109,731.20	0.00	11.25	0.00	0.00	1,778,365.74
Pomona, City Of	9,192.2	204,709.23	443,521.33	6,054.1	47,249.20	102,349.61	0.00	0.00	0.00	0.00	0.00	0.00	797,829.37	(53,030.93)	108,207.59	0.00	0.00	0.00	0.00	853,006.03
San Antonio Water Company	676.5	15,066.28	32,642.48	813.4	6,347.94	13,750.69	22.41	0.00	0.00	0.00	6,944.27	0.11	74,774.18	1,832.01	14,537.72	0.00	0.57	0.00	0.00	91,144.48
San Bernardino, County of (Shooting Park)	17.2	382.44	828.60	0.0	0.00	0.00	0.57	11,517.07	0.00	0.00	176.27	56.71	12,961.66	0.00	0.00	0.00	270.81	5.01	1,946.46	15,183.94
Santa Ana River Water Company	175.5	3,908.34	8,467.78	702.4	5,481.68	11,874.23	5.81	0.00	0.00	0.00	1,801.41	0.03	31,539.28	1,582.01	12,553.86	0.00	964.56	(1.67)	0.00	46,638.04
Upland, City Of	2,107.0	46,923.13	101,663.28	1,539.7	12,016.74	26,030.24	69.78	0.00	0.00	0.00	21,627.56	0.34	208,331.07	3,468.02	27,520.09	0.00	1.39	0.00	0.00	239,320.57
West End Consolidated Water Co	0.0	0.00	0.00	511.5	3,991.72	8,646.72	0.00	0.00	0.00	0.00	0.00	0.00	12,638.44	1,152.01	9,141.62	0.00	0.00	0.00	0.00	22,932.07
West Valley Water District	0.0	0.00	0.00	347.8	2,714.28	5,879.58	0.00	0.00	0.00	0.00	0.00	0.00	8,593.86	783.34	6,216.09	0.00	476.35	(0.83)	0.00	16,068.81
	113,538.4	**1,635,150.72**	**3,542,704.15**	**61,315.2**	**478,534.00**	**1,036,584.00**	**2,032.43**	**11,517.07**	**1,382,063.69**	**(629,915.45)**	**629,915.47**	**18,143.71**	**8,106,729.77**	**0.01**	**529,029.01**	**0.00**	**33,977.09**	**723.95**	**200,504.62**	**8,870,964.45**
	8A	8B	8C	8D	8E	8F	8G	8H	8I	8J	8K	8L	8M	8N	8O	8P	8Q	8R	8S	8T

Notes:
1) IEUA is collecting the fourth of ten annual RTS charges for water purchased in FY 2016/17, and third of ten annual RTS charges for water purchased in FY 2017/18.
2) "Other Adjustments" (Column [8R]) includes adjustments from replenishment purchase for DRO.
3) In April 2021, Nestle Waters North America Inc., who owns Arrowhead Mountain Spring Water brand, changed its name to BlueTriton Brands, Inc. and requested Watermaster to use the new company name.

POOL 3

Assessment Year 2021-2022 (Production Year 2020-2021)

Water Production Overview

	Physical Production	Voluntary Agreements (w/ Ag)	Assignments (w/ Non-Ag)	Other Adjustments	Actual FY Production (Assmnt Pkg Column 10I)
BlueTriton Brands, Inc.	271.3	0.0	0.0	0.0	271.3
CalMat Co. (Appropriative)	0.0	0.0	0.0	0.0	0.0
Chino Hills, City Of	2,528.6	(69.0)	0.0	0.0	2,459.6
Chino, City Of	6,133.0	(3,298.0)	(72.6)	0.0	2,762.4
Cucamonga Valley Water District	26,225.7	0.0	0.0	0.0	26,225.7
Desalter Authority	40,156.1	0.0	0.0	(41.6)	40,114.5
Fontana Union Water Company	0.0	0.0	0.0	0.0	0.0
Fontana Water Company	13,565.3	0.0	0.0	0.0	13,565.3
Fontana, City Of	0.0	0.0	0.0	0.0	0.0
Golden State Water Company	1,074.4	0.0	0.0	0.0	1,074.4
Jurupa Community Services District	11,160.9	0.0	(417.1)	(133.9)	10,609.9
Marygold Mutual Water Company	840.9	0.0	0.0	0.0	840.9
Monte Vista Irrigation Company	0.0	0.0	0.0	0.0	0.0
Monte Vista Water District	7,674.4	(124.4)	(22.1)	(4.7)	7,523.3
NCL Co, LLC	0.0	0.0	0.0	0.0	0.0
Niagara Bottling, LLC	1,751.7	0.0	0.0	0.0	1,751.7
Nicholson Family Trust	0.0	0.0	0.0	0.0	0.0
Norco, City Of	0.0	0.0	0.0	0.0	0.0
Ontario, City Of	21,750.8	(2,971.3)	(1,608.4)	0.0	17,171.1
Pomona, City Of	9,192.2	0.0	0.0	0.0	9,192.2
San Antonio Water Company	676.5	0.0	0.0	0.0	676.5
San Bernardino, County of (Shooting Park)	17.2	0.0	0.0	0.0	17.2
Santa Ana River Water Company	0.0	0.0	0.0	175.5	175.5
Upland, City Of	2,177.1	0.0	0.0	(70.1)	2,107.0
West End Consolidated Water Co	0.0	0.0	0.0	0.0	0.0
West Valley Water District	0.0	0.0	0.0	0.0	0.0
	145,196.1	**(6,462.7)**	**(2,120.2)**	**(74.8)**	**136,538.4**
Less Desalter Authority Production					**(40,114.5)**
Total Less Desalter Authority Production					**96,423.9**
	9A	9B	9C	9D	9E

Notes:
1) In April 2021, Nestle Waters North America Inc., who owns Arrowhead Mountain Spring Water brand, changed its name to BlueTriton Brands, Inc. and requested Watermaster to use the new company name.

Other Adj:
1) CDA provided 41.645 AF to JCSD for irrigation at Orchard Park.
2) Monte Vista Water District received credit of 4.698 AF after evaporative losses due to Pump-to-Waste activities in which the water was recaptured into a recharge basin.
3) Santa Ana River Water Company exceeded its allotment with JCSD by 175.498 AF.
4) City of Upland received credit of 70.098 AF after evaporative losses due to Pump-to-Waste activities in which the water was recaptured into a recharge basin.

POOL 3

Assessment Year 2021-2022 (Production Year 2020-2021)

Water Production Summary

	Percent of Operating Safe Yield	Carryover Beginning Balance	Prior Year Adjustments	Assigned Share of Operating Safe Yield	Net Ag Pool Reallocation	Water Transaction Activity	Other Adjustments	Annual Production Right	Actual Fiscal Year Production	Storage and Recovery Program(s)	Total Production and Exchanges	Net Over-Production		Under Production Balances		
												85/15%	100%	Total Under-Produced	Carryover: Next Year Begin Bal	To Excess Carryover Account
BlueTriton Brands, Inc.	*0.000%*	0.0	0.0	0.0	0.0	271.3	0.0	271.3	271.3	0.0	271.3	0.0	0.0	0.0	0.0	0.0
CalMat Co. (Appropriative)	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chino Hills, City Of	*3.851%*	1,726.6	0.0	1,572.5	2,417.9	0.0	0.0	5,716.9	2,459.6	0.0	2,459.6	0.0	0.0	3,257.3	1,572.5	1,684.8
Chino, City Of	*7.357%*	3,298.4	0.0	3,004.2	11,194.4	0.0	0.0	17,497.0	2,762.4	0.0	2,762.4	0.0	0.0	14,734.6	3,004.2	11,730.4
Cucamonga Valley Water District	*6.601%*	1,596.4	0.0	2,695.5	2,552.2	35.6	0.0	6,879.7	26,225.7	(20,500.0)	5,725.7	0.0	0.0	1,154.0	1,154.0	0.0
Desalter Authority	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40,114.5	0.0	40,114.5	0.0	40,114.5	0.0	0.0	0.0
Fontana Union Water Company	*11.657%*	0.0	0.0	4,760.0	3,450.3	(8,210.3)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fontana Water Company	*0.002%*	0.9	0.0	0.8	834.6	10,229.0	0.0	11,065.3	13,565.3	(2,500.0)	11,065.3	0.0	0.0	0.0	0.0	0.0
Fontana, City Of	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Golden State Water Company	*0.750%*	323.6	0.0	306.3	222.0	222.5	0.0	1,074.4	1,074.4	0.0	1,074.4	0.0	0.0	0.0	0.0	0.0
Jurupa Community Services District	*3.759%*	1,685.3	0.0	1,535.0	16,328.0	0.0	0.0	19,548.3	10,609.9	0.0	10,609.9	0.0	0.0	8,938.4	1,535.0	7,403.4
Marygold Mutual Water Company	*1.195%*	399.3	0.0	488.0	353.7	0.0	0.0	1,240.9	840.9	0.0	840.9	0.0	0.0	400.0	400.0	0.0
Monte Vista Irrigation Company	*1.234%*	553.3	0.0	503.9	365.2	0.0	0.0	1,422.4	0.0	0.0	0.0	0.0	0.0	1,422.4	503.9	918.5
Monte Vista Water District	*8.797%*	3,944.0	0.0	3,592.2	2,709.4	500.0	0.0	10,745.6	7,523.3	0.0	7,523.3	0.0	0.0	3,222.3	3,222.3	0.0
NCL Co, LLC	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Niagara Bottling, LLC	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,751.7	0.0	1,751.7	0.0	1,751.7	0.0	0.0	0.0
Nicholson Family Trust	*0.007%*	3.1	0.0	2.9	2.1	(6.5)	0.0	1.6	0.0	0.0	0.0	0.0	0.0	1.6	1.6	0.0
Norco, City Of	*0.368%*	165.0	0.0	150.3	108.9	0.0	0.0	424.2	0.0	0.0	0.0	0.0	0.0	424.2	150.3	273.9
Ontario, City Of	*20.742%*	9,299.5	0.0	8,469.8	10,807.7	0.0	0.0	28,576.9	17,171.1	0.0	17,171.1	0.0	0.0	11,405.8	8,469.8	2,936.0
Pomona, City Of	*20.454%*	9,170.3	0.0	8,352.2	6,054.1	0.0	0.0	23,576.6	9,192.2	0.0	9,192.2	0.0	0.0	14,384.5	8,352.2	6,032.3
San Antonio Water Company	*2.748%*	1,232.0	0.0	1,122.1	813.4	0.0	0.0	3,167.5	676.5	0.0	676.5	0.0	0.0	2,491.0	1,122.1	1,368.9
San Bernardino, County of (Shooting P	*0.000%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.2	0.0	17.2	17.2	0.0	0.0	0.0	0.0
Santa Ana River Water Company	*2.373%*	1,063.9	0.0	969.0	702.4	0.0	0.0	2,735.3	175.5	0.0	175.5	0.0	0.0	2,559.8	969.0	1,590.8
Upland, City Of	*5.202%*	2,332.3	0.0	2,124.2	1,539.7	0.0	0.0	5,996.2	2,107.0	0.0	2,107.0	0.0	0.0	3,889.2	2,124.2	1,765.0
West End Consolidated Water Co	*1.728%*	774.7	0.0	705.6	511.5	0.0	0.0	1,991.8	0.0	0.0	0.0	0.0	0.0	1,991.8	705.6	1,286.2
West Valley Water District	*1.175%*	526.8	0.0	479.8	347.8	0.0	0.0	1,354.4	0.0	0.0	0.0	0.0	0.0	1,354.4	479.8	874.6
	100.00%	**38,095.5**	**0.0**	**40,834.0**	**61,315.2**	**3,041.6**	**0.0**	**143,286.3**	**136,538.4**	**(23,000.0)**	**113,538.4**	**17.2**	**41,866.1**	**71,631.2**	**33,766.4**	**37,864.8**
Less Desalter Authority Production									**(40,114.5)**		**(40,114.5)**		**(40,114.5)**			
Total Less Desalter Authority Production									**96,423.9**		**73,423.9**		**1,751.7**			
	10A	10B	10C	10D	10E	10F	10G	10H	10I	10J	10K	10L	10M	10N	10O	10P

Notes:
1) As of July 1, 2020, the total Operating Safe Yield of the Appropriative Pool is 40,834 AF, allocated by percentage of Operating Safe Yield.
2) In April 2021, Nestle Waters North America Inc., who owns Arrowhead Mountain Spring Water brand, changed its name to BlueTriton Brands, Inc. and requested Watermaster to use the new company name.

POOL 3

Assessment Year 2021-2022 (Production Year 2020-2021)

Local Excess Carry Over Storage Account Summary

	Excess Carry Over Account (ECO)					
	Beginning Balance	0.07% Storage Loss	Transfers To / (From)	From Supplemental Storage	From Under-Production	Ending Balance
BlueTriton Brands, Inc.	720.9	(0.5)	(278.1)	0.0	0.0	442.3
CalMat Co. (Appropriative)	0.4	0.0	0.0	0.0	0.0	0.4
Chino Hills, City Of	11,924.2	(8.3)	(369.1)	0.0	1,684.8	13,231.5
Chino, City Of	114,505.8	(80.2)	(2,617.2)	0.0	11,730.4	123,538.9
Cucamonga Valley Water District	16,072.4	(11.3)	(846.7)	0.0	0.0	15,214.4
Desalter Authority	0.0	0.0	0.0	0.0	0.0	0.0
Fontana Union Water Company	0.0	0.0	0.0	0.0	0.0	0.0
Fontana Water Company	5,799.2	(4.1)	(3,883.0)	2,722.5	0.0	4,634.7
Fontana, City Of	0.0	0.0	0.0	0.0	0.0	0.0
Golden State Water Company	424.2	(0.3)	(484.6)	60.8	0.0	0.0
Jurupa Community Services District	31,861.3	(22.3)	(2,783.9)	0.0	7,403.4	36,458.5
Marygold Mutual Water Company	614.0	(0.4)	0.0	0.0	0.0	613.6
Monte Vista Irrigation Company	10,128.4	(7.1)	(177.3)	0.0	918.5	10,862.5
Monte Vista Water District	6,758.6	(4.7)	(1,490.1)	0.0	0.0	5,263.8
NCL Co, LLC	4.0	0.0	0.0	0.0	0.0	4.0
Niagara Bottling, LLC	0.0	0.0	0.0	0.0	0.0	0.0
Nicholson Family Trust	1.7	0.0	(1.0)	0.0	0.0	0.7
Norco, City Of	2,375.1	(1.7)	(52.9)	0.0	273.9	2,594.5
Ontario, City Of	39,260.7	(27.5)	0.0	0.0	2,936.0	42,169.2
Pomona, City Of	25,207.9	(17.6)	(4,259.1)	0.0	6,032.3	26,963.4
San Antonio Water Company	2,873.4	(2.0)	0.0	0.0	1,368.9	4,240.2
San Bernardino, County of (Shooting Park)	0.0	0.0	0.0	0.0	0.0	0.0
Santa Ana River Water Company	6,433.6	(4.5)	(366.1)	0.0	1,590.8	7,653.7
Upland, City Of	19,264.0	(13.5)	(878.8)	0.0	1,765.0	20,136.7
West End Consolidated Water Co	5,204.3	(3.6)	(162.1)	0.0	1,286.2	6,324.8
West Valley Water District	8,322.8	(5.8)	(1,168.8)	0.0	874.6	8,022.8
	307,756.9	**(215.4)**	**(19,819.0)**	**2,783.3**	**37,864.8**	**328,370.5**
	11A	11B	11C	11D	11E	11F

Notes:
1) Fontana Water Company transferred 2,722.510 AF from their Supplemental Storage account to offset their production year 2020/21 over-production obligations.
2) Golden State Water Company transferred 60.754 from their Supplemental Storage account and 161.780 AF from their Excess Carry Over Storage account to offset their production year 2020/21 over-production obligations.
3) In April 2021, Nestle Waters North America Inc., who owns Arrowhead Mountain Spring Water brand, changed its name to BlueTriton Brands, Inc. and requested Watermaster to use the new company name.

POOL 3

Assessment Year 2021-2022 (Production Year 2020-2021)

Local Supplemental Storage Account Summary

	Recharged Recycled Account					Quantified (Pre 7/1/2000) Account					New (Post 7/1/2000) Account					Combined
	Beginning Balance	0.07% Storage Loss	Transfers To / (From)	Transfer to ECO Account	Ending Balance	Beginning Balance	0.07% Storage Loss	Transfers To / (From)	Transfer to ECO Account	Ending Balance	Beginning Balance	0.07% Storage Loss	Transfers To / (From)	Transfer to ECO Account	Ending Balance	Ending Balance
BlueTriton Brands, Inc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CalMat Co. (Appropriative)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chino Hills, City Of	11,105.8	(7.8)	1,416.0	0.0	12,514.0	4,789.4	(3.4)	0.0	0.0	4,786.1	0.0	0.0	0.0	0.0	0.0	17,300.1
Chino, City Of	8,508.6	(6.0)	0.0	0.0	8,502.6	1,051.8	(0.7)	0.0	0.0	1,051.0	1,926.6	(1.3)	0.0	0.0	1,925.3	11,478.9
Cucamonga Valley Water District	31,078.7	(21.8)	9,035.5	0.0	40,092.5	10,693.4	(7.5)	0.0	0.0	10,685.9	637.9	(0.4)	255.2	0.0	892.7	51,671.1
Desalter Authority	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fontana Union Water Company	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fontana Water Company	0.0	0.0	3,082.6	(2,722.5)	360.1	0.0	0.0	0.0	0.0	0.0	310.1	(0.2)	0.0	0.0	309.9	670.0
Fontana, City Of	44.0	0.0	0.0	0.0	44.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.0
Golden State Water Company	0.0	0.0	0.0	0.0	0.0	1,389.0	(1.0)	0.0	(3.6)	1,384.4	57.2	0.0	0.0	(57.2)	0.0	1,384.4
Jurupa Community Services District	4,832.4	(3.4)	0.0	0.0	4,829.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,829.0
Marygold Mutual Water Company	0.0	0.0	0.0	0.0	0.0	305.0	(0.2)	(292.5)	0.0	12.3	0.0	0.0	0.0	0.0	0.0	12.3
Monte Vista Irrigation Company	0.0	0.0	0.0	0.0	0.0	5,450.0	(3.8)	0.0	0.0	5,446.2	0.0	0.0	0.0	0.0	0.0	5,446.2
Monte Vista Water District	0.0	0.0	0.0	0.0	0.0	3,376.5	(2.4)	0.0	0.0	3,374.2	1.6	0.0	(1.6)	0.0	0.0	3,374.2
NCL Co, LLC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Niagara Bottling, LLC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nicholson Family Trust	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Norco, City Of	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	96.4	(0.1)	0.0	0.0	96.3	96.3
Ontario, City Of	49,233.2	(34.5)	(2,420.0)	0.0	46,778.8	8,050.1	(5.6)	0.0	0.0	8,044.5	0.0	0.0	0.0	0.0	0.0	54,823.2
Pomona, City Of	0.0	0.0	0.0	0.0	0.0	10,912.1	(7.6)	0.0	0.0	10,904.4	1,559.9	(1.1)	0.0	0.0	1,558.8	12,463.2
San Antonio Water Company	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,759.5	(3.3)	(104.5)	0.0	4,651.7	4,651.7
San Bernardino, County of (Shooting Park)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Santa Ana River Water Company	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	481.1	(0.3)	0.0	0.0	480.7	480.7
Upland, City Of	12,078.4	(8.5)	1,481.7	0.0	13,551.6	5,803.2	(4.1)	0.0	0.0	5,799.1	0.0	0.0	0.0	0.0	0.0	19,350.7
West End Consolidated Water Co	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	452.5	(0.3)	0.0	0.0	452.2	452.2
West Valley Water District	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	307.7	(0.2)	0.0	0.0	307.5	307.5
	116,881.1	**(81.8)**	**12,595.9**	**(2,722.5)**	**126,672.7**	**51,820.4**	**(36.3)**	**(292.5)**	**(3.6)**	**51,488.1**	**10,590.5**	**(7.4)**	**149.0**	**(57.2)**	**10,675.0**	**188,835.7**
	12A	12B	12C	12D	12E	12F	12G	12H	12I	12J	12K	12L	12M	12N	12O	12P

Notes:
1) City of Ontario elected not to take in their share of Recharged Recycled. Cucamonga Valley Water District subsequently elected to take in City of Ontario's share.
2) City of Ontario elected not to take in the 3,000 AF of City of Fontana's share of Recharged Recycled. Fontana Water Company subsequently elected to take in all of City of Fontana's share, which they then transferred 2,722.510 AF to offset their production year 2020/21 over-production obligations.
3) Golden State Water Company transferred 3.593 AF and 57.161 AF from their Quantified and New Supplemental storage accounts respectively to offset a portion of their production year 2020/21 over-production obligations.
4) In April 2021, Nestle Waters North America Inc., who owns Arrowhead Mountain Spring Water brand, changed its name to BlueTriton Brands, Inc. and requested Watermaster to use the new company name.

POOL 3

Assessment Year 2021-2022 (Production Year 2020-2021)

Other Storage and Replenishment Accounts

DESALTER REPLENISHMENT

	Beginning Balance	Water Purchases	Transfers To	Transfers From	Ending Balance
CONTROLLED OVERDRAFT AND OFFSETS					
Re-Op Offset Pre-Peace II / CDA	1,286.7		0.0	0.0	1,286.7
Re-Op Offset Peace II Expansion	87,500.0		0.0	(12,500.0)	75,000.0
Non-Ag OBMP Special Assessment	0.0		735.0	(735.0)	0.0
Non-Ag Dedication	0.0		0.0	0.0	0.0
	88,786.7		**735.0**	**(13,235.0)**	**76,286.7**
DEDICATED REPLENISHMENT					
BlueTriton Brands, Inc.	0.0	0.0	32.1	(32.1)	0.0
CalMat Co. (Appropriative)	0.0	0.0	0.0	0.0	0.0
Chino Hills, City Of	602.9	0.0	0.0	(602.9)	0.0
Chino, City Of	0.0	0.0	0.0	0.0	0.0
Cucamonga Valley Water District	952.5	0.0	0.0	(952.5)	0.0
Fontana Union Water Company	0.0	0.0	1,674.7	(1,674.7)	0.0
Fontana Water Company	469.0	0.0	0.0	(469.0)	0.0
Fontana, City Of	0.0	0.0	0.0	0.0	0.0
Golden State Water Company	0.0	0.0	0.0	0.0	0.0
Jurupa Community Services District	0.0	0.0	0.0	0.0	0.0
Marygold Mutual Water Company	0.0	0.0	0.0	0.0	0.0
Monte Vista Irrigation Company	0.0	0.0	0.0	0.0	0.0
Monte Vista Water District	0.0	0.0	0.0	0.0	0.0
NCL Co, LLC	0.0	0.0	0.0	0.0	0.0
Niagara Bottling, LLC	0.0	0.0	0.0	0.0	0.0
Nicholson Family Trust	0.0	0.0	0.0	0.0	0.0
Norco, City Of	0.0	0.0	0.0	0.0	0.0
Ontario, City Of	0.0	0.0	3,461.1	(3,461.1)	0.0
Pomona, City Of	0.0	0.0	0.0	0.0	0.0
San Antonio Water Company	281.8	0.0	0.0	(281.8)	0.0
San Bernardino, County of (Shooting Park)	0.0	0.0	0.0	0.0	0.0
Santa Ana River Water Company	0.0	0.0	0.0	0.0	0.0
Upland, City Of	171.2	0.0	0.0	(171.2)	0.0
West End Consolidated Water Co	86.1	0.0	0.0	(86.1)	0.0
West Valley Water District	0.0	0.0	0.0	0.0	0.0
	2,563.5	**0.0**	**5,167.9**	**(7,731.4)**	**0.0**
	13A	13B	13C	13D	13E

STORAGE AND RECOVERY

	Beginning Balance	Storage Loss	Transfers To	Transfers From	Ending Balance
METROPOLITAN WATER DISTRICT					
Dry Year Yield / Conjuctive Use Program	45,961.0	(32.2)	0.0	(23,000.0)	22,928.8
	13F	13G	13H	13I	13J

Notes:
Water in column [13D] goes into column [21D] on page 21.1.

POOL 3

Assessment Year 2021-2022 (Production Year 2020-2021)

Water Transaction Summary

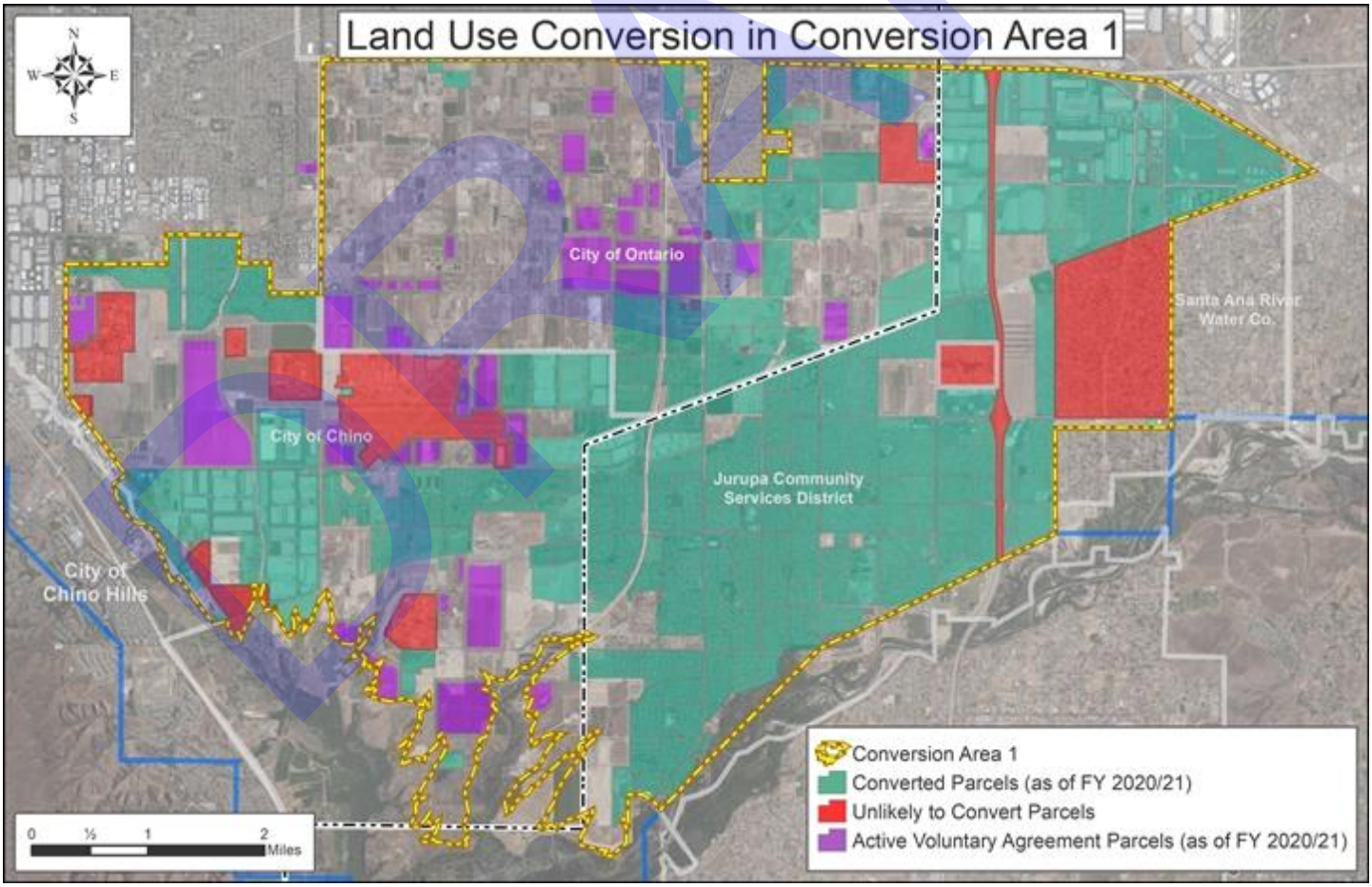
	Water Transactions				
	Assigned Rights	General Transfer	Transfers (To) / From ECO Account	Transfers (To) Desalter Replenishment	Total Water Transactions
BlueTriton Brands, Inc.	0.0	32.1	271.3	(32.1)	271.3
CalMat Co. (Appropriative)	0.0	0.0	0.0	0.0	0.0
Chino Hills, City Of	0.0	0.0	0.0	0.0	0.0
Chino, City Of	(500.0)	0.0	500.0	0.0	0.0
Cucamonga Valley Water District	(6,500.0)	6,535.6	0.0	0.0	35.6
Desalter Authority	0.0	0.0	0.0	0.0	0.0
Fontana Union Water Company	0.0	(6,535.6)	0.0	(1,674.7)	(8,210.3)
Fontana Water Company	7,506.5	0.0	2,722.5	0.0	10,229.0
Fontana, City Of	0.0	0.0	0.0	0.0	0.0
Golden State Water Company	0.0	0.0	222.5	0.0	222.5
Jurupa Community Services District	0.0	0.0	0.0	0.0	0.0
Marygold Mutual Water Company	0.0	0.0	0.0	0.0	0.0
Monte Vista Irrigation Company	0.0	0.0	0.0	0.0	0.0
Monte Vista Water District	500.0	0.0	0.0	0.0	500.0
NCL Co, LLC	0.0	0.0	0.0	0.0	0.0
Niagara Bottling, LLC	0.0	0.0	0.0	0.0	0.0
Nicholson Family Trust	(6.5)	0.0	0.0	0.0	(6.5)
Norco, City Of	0.0	0.0	0.0	0.0	0.0
Ontario, City Of	0.0	3,461.1	0.0	(3,461.1)	0.0
Pomona, City Of	0.0	0.0	0.0	0.0	0.0
San Antonio Water Company	0.0	0.0	0.0	0.0	0.0
San Bernardino, County of (Shooting Park)	0.0	0.0	0.0	0.0	0.0
Santa Ana River Water Company	0.0	0.0	0.0	0.0	0.0
Upland, City Of	0.0	0.0	0.0	0.0	0.0
West End Consolidated Water Co	0.0	0.0	0.0	0.0	0.0
West Valley Water District	(1,000.0)	0.0	1,000.0	0.0	0.0
	0.0	**3,493.2**	**4,716.3**	**(5,167.9)**	**3,041.6**
	14A	14B	14C	14D	14E

Notes:
1) In April 2021, Nestle Waters North America Inc., who owns Arrowhead Mountain Spring Water brand, changed its name to BlueTriton Brands, Inc. and requested Watermaster to use the new company name.

Assessment Year 2021-2022 (Production Year 2020-2021)

Land Use Conversion Summary

	Prior Conversion	Conversion @ 1.3 af/ac		Total Prior to Peace Agrmt Converted AF	Conversion @ 2.0 af/ac		Total Land Use Conversion Acre-Feet
		Acres	Acre-Feet		Acres	Acre-Feet	
Chino Hills, City Of	0.0	670.266	871.3	871.3	203.334	406.7	1,278.0
Chino, City Of	196.2	1,434.750	1,865.2	2,061.4	3,477.695	6,955.4	9,016.8
Cucamonga Valley Water District	0.0	460.280	598.4	598.4	0.000	0.0	598.4
Fontana Water Company	0.0	0.000	0.0	0.0	417.000	834.0	834.0
Jurupa Community Services District	0.0	2,756.920	3,584.0	3,584.0	5,815.718	11,631.4	15,215.4
Monte Vista Water District	0.0	48.150	62.6	62.6	21.510	43.0	105.6
Ontario, City Of	209.4	527.044	685.2	894.6	1,886.892	3,773.8	4,668.3
	405.6	**5,897.410**	**7,666.6**	**8,072.3**	**11,822.149**	**23,644.3**	**31,716.6**
	15A	15B	15C	15D	15E	15F	15G



Notes:
In August 2020, 20 acres of eligible "Outside Conversion Area 1" parcels were transferred from City of Chino to Monte Vista Water District after it was realized that they are within MVWD's service area.This was accounted for in the previous Assessment Package; past years' credit was resolved through a water transaction in this year's Assessment Package (see page 23.1 for details).

POOL 3

Assessment Year 2021-2022 (Production Year 2020-2021)

Agricultural Pool Reallocation Summary

	% Share of Operating Safe Yield	Reallocation of Agricutural Pool Safe Yield			
		Safe Yield Reduction[1]	Land Use Conversions	Early Transfer	Total AG Pool Reallocation
BlueTriton Brands, Inc.	*0.000%*	0.0	0.0	0.0	0.0
CalMat Co. (Appropriative)	*0.000%*	0.0	0.0	0.0	0.0
Chino Hills, City Of	*3.851%*	346.6	1,278.0	793.3	2,417.9
Chino, City Of	*7.357%*	662.1	9,016.8	1,515.4	11,194.4
Cucamonga Valley Water District	*6.601%*	594.1	598.4	1,359.7	2,552.2
Desalter Authority	*0.000%*	0.0	0.0	0.0	0.0
Fontana Union Water Company	*11.657%*	1,049.1	0.0	2,401.2	3,450.3
Fontana Water Company	*0.002%*	0.2	834.0	0.4	834.6
Fontana, City Of	*0.000%*	0.0	0.0	0.0	0.0
Golden State Water Company	*0.750%*	67.5	0.0	154.5	222.0
Jurupa Community Services District	*3.759%*	338.3	15,215.4	774.3	16,328.0
Marygold Mutual Water Company	*1.195%*	107.6	0.0	246.2	353.7
Monte Vista Irrigation Company	*1.234%*	111.1	0.0	254.2	365.2
Monte Vista Water District	*8.797%*	791.7	105.6	1,812.1	2,709.4
NCL Co, LLC	*0.000%*	0.0	0.0	0.0	0.0
Niagara Bottling, LLC	*0.000%*	0.0	0.0	0.0	0.0
Nicholson Family Trust	*0.007%*	0.6	0.0	1.4	2.1
Norco, City Of	*0.368%*	33.1	0.0	75.8	108.9
Ontario, City Of	*20.742%*	1,866.8	4,668.3	4,272.6	10,807.7
Pomona, City Of	*20.454%*	1,840.9	0.0	4,213.2	6,054.1
San Antonio Water Company	*2.748%*	247.3	0.0	566.1	813.4
San Bernardino, County of (Shooting Park)	*0.000%*	0.0	0.0	0.0	0.0
Santa Ana River Water Company	*2.373%*	213.6	0.0	488.8	702.4
Upland, City Of	*5.202%*	468.2	0.0	1,071.5	1,539.7
West End Consolidated Water Co	*1.728%*	155.5	0.0	355.9	511.5
West Valley Water District	*1.175%*	105.8	0.0	242.0	347.8
	100%	**9,000.0**	**31,716.6**	**20,598.6**	**61,315.2**
		16A	16B	16C	16D	16E

Agricultural Pool Safe Yield	82,800.0
Agricultural Pool Production	(21,484.8)
Safe Yield Reduction[1]	(9,000.0)
Land Use Conversions	(31,716.6)
Early Transfer [16D]	20,598.6

Notes:
[1] Paragraph 10, Subdivision (a)(1) of Exhibit "H" of the Judgment states "to supplement, in the particular year, water available from Operating Safe Yield to compensate for any reduction in the Safe Yield by reason of recalculation thereof after the tenth year of operation hereunder."

POOL 3

Assessment Year 2021-2022 (Production Year 2020-2021)

Cumulative Unmet Replenishment Obligation (CURO)

Remaining Replenishment Obligation:	AF
Appropriative - 100	0.0
Appropriative - 15/85	0.0
Non-Agricultural - 100	0.0
	0.0

Replenishment Rates	
2021 Rate	$789.00
2020 Rate	$767.00

Pool 3 Appropriative

Company	Outstanding Obligation (AF)	Fund Balance ($)	Outstanding Obligation ($)	*AF Production and Exchanges*	85/15 Producers	Percent	15%	85%	100%	Total
BlueTriton Brands, Inc.	0.0	$135.86	($135.86)	*271.3*	xxxxxxxxxx	0.000%	xxxxxxxxxx	xxxxxxxxxx	($135.86)	($135.86)
CalMat Co. (Appropriative)	0.0	$0.00	$0.00	*0.0*	xxxxxxxxxx	0.000%	xxxxxxxxxx	xxxxxxxxxx	$0.00	$0.00
Chino Hills, City Of	0.0	$0.00	$0.00	*2,459.6*	2,459.6	4.008%	$0.40	$0.00	xxxxxxxxxx	$0.40
Chino, City Of	0.0	$0.00	$0.00	*2,762.4*	2,762.4	4.501%	$0.45	$0.00	xxxxxxxxxx	$0.45
Cucamonga Valley Water District	0.0	$0.01	($0.01)	*5,725.7*	5,725.7	9.330%	$0.93	($0.01)	xxxxxxxxxx	$0.92
Desalter Authority	0.0	$0.00	$0.00	*40,114.5*	xxxxxxxxxx	0.000%	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	$0.00
Fontana Union Water Company	0.0	$0.00	$0.00	*0.0*	0.0	0.000%	$0.00	$0.00	xxxxxxxxxx	$0.00
Fontana Water Company	0.0	$0.01	($0.01)	*11,065.3*	11,065.3	18.031%	$1.80	($0.01)	xxxxxxxxxx	$1.79
Fontana, City Of	0.0	$0.00	$0.00	*0.0*	xxxxxxxxxx	0.000%	xxxxxxxxxx	xxxxxxxxxx	$0.00	$0.00
Golden State Water Company	0.0	$0.00	$0.00	*1,074.4*	1,074.4	1.751%	$0.18	$0.00	xxxxxxxxxx	$0.18
Jurupa Community Services District	0.0	$0.00	$0.00	*10,609.9*	10,609.9	17.289%	$1.73	$0.00	xxxxxxxxxx	$1.73
Marygold Mutual Water Company	0.0	$0.00	$0.00	*840.9*	xxxxxxxxxx	0.000%	xxxxxxxxxx	xxxxxxxxxx	$0.00	$0.00
Monte Vista Irrigation Company	0.0	$0.00	$0.00	*0.0*	0.0	0.000%	$0.00	$0.00	xxxxxxxxxx	$0.00
Monte Vista Water District	0.0	$0.00	$0.00	*7,523.3*	7,523.3	12.259%	$1.23	$0.00	xxxxxxxxxx	$1.23
NCL Co, LLC	0.0	$0.00	$0.00	*0.0*	xxxxxxxxxx	0.000%	xxxxxxxxxx	xxxxxxxxxx	$0.00	$0.00
Niagara Bottling, LLC	0.0	($18,212.89)	$18,212.89	*1,751.7*	xxxxxxxxxx	0.000%	xxxxxxxxxx	xxxxxxxxxx	$18,212.89	$18,212.89
Nicholson Family Trust	0.0	$0.00	$0.00	*0.0*	0.0	0.000%	$0.00	$0.00	xxxxxxxxxx	$0.00
Norco, City Of	0.0	$0.00	$0.00	*0.0*	0.0	0.000%	$0.00	$0.00	xxxxxxxxxx	$0.00
Ontario, City Of	0.0	$0.01	($0.01)	*17,171.1*	17,171.1	27.981%	$2.80	($0.01)	xxxxxxxxxx	$2.79
Pomona, City Of	0.0	$0.00	$0.00	*9,192.2*	xxxxxxxxxx	0.000%	xxxxxxxxxx	xxxxxxxxxx	$0.00	$0.00
San Antonio Water Company	0.0	$0.00	$0.00	*676.5*	676.5	1.102%	$0.11	$0.00	xxxxxxxxxx	$0.11
San Bernardino, County of (Shooting Park)	0.0	($66.72)	$66.72	*17.2*	17.2	0.028%	$0.00	$56.71	xxxxxxxxxx	$56.71
Santa Ana River Water Company	0.0	$0.00	$0.00	*175.5*	175.5	0.286%	$0.03	$0.00	xxxxxxxxxx	$0.03
Upland, City Of	0.0	$0.00	$0.00	*2,107.0*	2,107.0	3.433%	$0.34	$0.00	xxxxxxxxxx	$0.34
West End Consolidated Water Co	0.0	$0.00	$0.00	*0.0*	0.0	0.000%	$0.00	$0.00	xxxxxxxxxx	$0.00
West Valley Water District	0.0	$0.00	$0.00	*0.0*	0.0	0.000%	$0.00	$0.00	xxxxxxxxxx	$0.00
Pool 3 Appropriative Total	**0.0**	**($18,143.72)**	**$18,143.72**	***113,538.4***	**61,367.9**	**100.000%**	**$10.00**	**$56.68**	**$18,077.03**	**$18,143.71**
	17A	17B	17C	17D	17E	17F	17G	17H	17I	17J

Notes:
1) The 2021 replenishment rate includes MWD's Full Service Untreated Tier 1 volumic cost of $777/AF, a $10/AF surcharge from Three Valleys Municipal Water District, and a $2/AF connection fee from Orange County Water District.

POOL 3

Assessment Year 2021-2022 (Production Year 2020-2021)

Desalter Replenishment Accounting[1]

Production Year	Desalter Production			Desalter Replenishment										
								Controlled Overdraft / Re-Op, PIIA, 6.2(a)(vi)						
	Pre-Peace II Desalter Production	Peace II Desalter Expansion Production[2]	Total	Desalter (aka Kaiser) Account PIIA, 6.2 (a)(i)	Paragraph 31 Settlement Agreements Dedication[3] PIIA, 6.2(a)(ii)	"Leave Behind" Losses PIIA, 6.2(a)(iv)	Safe Yield Contributed by Parties PIIA, 6.2(a)(v)	Allocation to Pre-Peace II Desalters[4,8]	Allocation to All Desalters[5]	Balance	Appropriative Pool DRO Contribution PIIA, 6.2(b)(ii)	Non-Ag OBMP Assessment (10% Haircut)[6] PIIA, 6.2(b)(i)	Remaining Desalter Replenishment Obligation[4,7] PIIA, 6.2(b)(iii)
2000 / 2001	7,989.0	0.0	7,989.0	3,994.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,994.5
2001 / 2002	9,457.8	0.0	9,457.8	4,728.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,728.9
2002 / 2003	10,438.5	0.0	10,438.5	5,219.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,219.3
2003 / 2004	10,605.0	0.0	10,605.0	5,302.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,302.5
2004 / 2005	9,853.6	0.0	9,853.6	4,926.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,926.8
2005 / 2006	16,475.8	0.0	16,475.8	11,579.1	0.0	0.0	0.0	0.0	0.0	400,000.0	0.0	0.0	0.0	4,896.7
2006 / 2007	26,356.2	0.0	26,356.2	608.4	4,273.1	0.0	0.0	21,474.7	0.0	378,525.3	0.0	0.0	0.0	0.0
2007 / 2008	26,972.1	0.0	26,972.1	0.0	0.0	0.0	0.0	26,972.1	0.0	351,553.2	0.0	0.0	0.0	0.0
2008 / 2009	32,920.5	0.0	32,920.5	0.0	0.0	0.0	0.0	61,989.1	0.0	289,564.1	0.0	0.0	0.0	(29,068.6)
2009 / 2010	28,516.7	0.0	28,516.7	0.0	0.0	0.0	0.0	28,516.7	0.0	261,047.4	0.0	0.0	0.0	0.0
2010 / 2011	29,318.7	0.0	29,318.7	0.0	0.0	0.0	0.0	29,318.7	0.0	231,728.7	0.0	0.0	0.0	0.0
2011 / 2012	28,378.9	0.0	28,378.9	0.0	0.0	0.0	0.0	28,378.9	0.0	203,349.7	0.0	0.0	0.0	0.0
2012 / 2013	27,061.7	0.0	27,061.7	0.0	0.0	0.0	0.0	27,061.7	0.0	176,288.1	0.0	0.0	0.0	0.0
2013 / 2014	29,228.0	14.6	29,242.6	0.0	0.0	0.0	0.0	0.0	12,500.0	163,788.1	10,000.0	0.0	0.0	6,742.6
2014 / 2015	29,541.3	448.7	29,990.0	0.0	0.0	0.0	0.0	0.0	12,500.0	151,288.1	10,000.0	0.0	0.0	7,490.0
2015 / 2016	27,008.8	1,154.1	28,162.9	0.0	0.0	0.0	0.0	0.0	12,500.0	138,788.1	10,000.0	0.0	0.0	5,662.9
2016 / 2017	26,725.6	1,527.2	28,252.8	0.0	0.0	0.0	0.0	0.0	12,500.0	126,288.1	10,000.0	735.0	0.0	5,017.8
2017 / 2018	28,589.8	1,462.5	30,052.3	0.0	0.0	0.0	0.0	0.0	12,500.0	113,788.1	10,000.0	735.0	0.0	6,817.3
2018 / 2019	25,502.9	5,696.3	31,199.2	0.0	0.0	0.0	0.0	0.0	12,500.0	101,288.1	10,000.0	735.0	0.0	7,964.2
2019 / 2020	27,593.6	8,003.4	35,597.1	0.0	0.0	0.0	0.0	0.0	12,500.0	88,788.1	10,000.0	735.0	0.0	12,362.0
2020 / 2021	**31,944.8**	**8,169.7**	**40,114.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**12,500.0**	**76,288.1**	**10,000.0**	**735.0**	**0.0**	**16,879.4**
2021 / 2022	30,000.0	10,000.0	40,000.0	0.0	0.0	0.0	0.0	0.0	12,500.0	63,788.1	10,000.0	735.0	0.0	16,765.0
2022 / 2023	30,000.0	10,000.0	40,000.0	0.0	0.0	0.0	0.0	0.0	12,500.0	51,288.1	10,000.0	735.0	0.0	16,765.0
2023 / 2024	30,000.0	10,000.0	40,000.0	0.0	0.0	0.0	0.0	0.0	12,500.0	38,788.1	10,000.0	735.0	0.0	16,765.0
2024 / 2025	30,000.0	10,000.0	40,000.0	0.0	0.0	0.0	0.0	0.0	12,500.0	26,288.1	10,000.0	735.0	0.0	16,765.0
2025 / 2026	30,000.0	10,000.0	40,000.0	0.0	0.0	0.0	0.0	0.0	5,000.0	21,288.1	10,000.0	735.0	0.0	24,265.0
2026 / 2027	30,000.0	10,000.0	40,000.0	0.0	0.0	0.0	0.0	0.0	5,000.0	16,288.1	10,000.0	735.0	0.0	24,265.0
2027 / 2028	30,000.0	10,000.0	40,000.0	0.0	0.0	0.0	0.0	0.0	5,000.0	11,288.1	10,000.0	735.0	0.0	24,265.0
2028 / 2029	30,000.0	10,000.0	40,000.0	0.0	0.0	0.0	0.0	0.0	5,000.0	6,288.1	10,000.0	735.0	0.0	24,265.0
2029 / 2030	30,000.0	10,000.0	40,000.0	0.0	0.0	0.0	0.0	0.0	5,000.0	1,288.1	10,000.0	735.0	0.0	24,265.0
	760,479.4	**116,476.5**	**876,955.9**	**36,359.6**	**4,273.1**	**0.0**	**0.0**	**223,711.9**	**175,000.0**		**170,000.0**	**10,290.5**	**0.0**	**257,321.1**
	18A	18B	18C	18D	18E	18F	18G	18H	18I	18J	18K	18L	18M	

Notes:
[1] Original table format and content: WEI, Response to Condition Subsequent Number 7, November 2008. Table has since been revised as a result of the March 15, 2019 Court Order.
[2] Peace II Desalter Expansion was anticipated to have an annual production of approximately 10,000 AF.
[3] 3,956.877 acre-feet + 316.177 acre-feet added as Non-Ag dedicated stored water per Paragraph 31 Settlement Agreements. Per Agreements, the water is deemed to have been dedicated as of June 30, 2007.
[4] Six years of Desalter tracking (Production Year 2000-2001 through Production Year 2005/2006) may have incorrectly assumed that a significant portion of Desalter production was being offset by Desalter Induced Recharge. Condition Subsequent 7 included an adjustment of 29,070 AF against Desalter replenishment in Production Year 2008/2009.
[5] Pursuant to section 7.2(e)(ii) of the Peace II Agreement, the initial schedule for the Peace II Desalter Expansion controlled overdraft of 175,000 acre-feet had been amended to be allocated to Desalter replenishment over a 17-year period, beginning in 2013/14 and ending in 2029/30.
[6] For the first 10 years following the Peace II Agreement (2006/2007 through 2015/2016), the Non-Ag "10% Haircut" water is apportioned among the specific seven members of the Appropriative Pool, per PIIA 9.2(a). In the eleventh year and in each year thereafter, it is dedicated to Watermaster to further offset desalter replenishment. However, to the extent there is no remaining desalter replenishment obligation in any year after applying the offsets set forth in 6.2(a), it will be distributed pro rata among the members of the Appropriative Pool based upon each Producer's combined total share of OSY and the previous year's actual production.
[7] Per the Peace II Agreement, Section 6.2(b)(iii) (as amended by the March 15, 2019 Court Order), the Remaining Desalter Replenishment Obligation is to be assessed against the Appropriative Pool, pro-rata based on each Producer's combined total share of OSY and their Adjusted Physical Production.
[8] Due to the Re-Operation Schedule amendments in 2019, the Pre-Peace II Controlled Overdraft is left with a balance of 1,288.054 AF, which may be utilized at a later date to offset a future Desalter Replenishment Obligation.

POOL 3

Assessment Year 2021-2022 (Production Year 2020-2021)

Desalter Replenishment Obligation Contribution

	Percent of Operating Safe Yield	Land Use Conversions	Percent of Land Use Conversions	85% DROC Based on % OSY	15% DROC Based on % of LUC	Total DRO Contribution
BlueTriton Brands, Inc.	0.000%	0.0	0.000%	0.0	0.0	0.0
CalMat Co. (Appropriative)	0.000%	0.0	0.000%	0.0	0.0	0.0
Chino Hills, City Of	3.851%	1,278.0	4.029%	327.3	60.4	387.8
Chino, City Of	7.357%	9,016.8	28.429%	625.3	426.4	1,051.8
Cucamonga Valley Water District	6.601%	598.4	1.887%	561.1	28.3	589.4
Fontana Union Water Company	11.657%	0.0	0.000%	990.8	0.0	990.8
Fontana Water Company	0.002%	834.0	2.630%	0.2	39.4	39.6
Fontana, City Of	0.000%	0.0	0.000%	0.0	0.0	0.0
Golden State Water Company	0.750%	0.0	0.000%	63.8	0.0	63.8
Jurupa Community Services District	3.759%	15,215.4	47.973%	319.5	719.6	1,039.1
Marygold Mutual Water Company	1.195%	0.0	0.000%	101.6	0.0	101.6
Monte Vista Irrigation Company	1.234%	0.0	0.000%	104.9	0.0	104.9
Monte Vista Water District	8.797%	105.6	0.333%	747.7	5.0	752.7
NCL Co, LLC	0.000%	0.0	0.000%	0.0	0.0	0.0
Niagara Bottling, LLC	0.000%	0.0	0.000%	0.0	0.0	0.0
Nicholson Family Trust	0.007%	0.0	0.000%	0.6	0.0	0.6
Norco, City Of	0.368%	0.0	0.000%	31.3	0.0	31.3
Ontario, City Of	20.742%	4,668.3	14.719%	1,763.1	220.8	1,983.9
Pomona, City Of	20.454%	0.0	0.000%	1,738.6	0.0	1,738.6
San Antonio Water Company	2.748%	0.0	0.000%	233.6	0.0	233.6
San Bernardino, County of (Shooting Park)	0.000%	0.0	0.000%	0.0	0.0	0.0
Santa Ana River Water Company	2.373%	0.0	0.000%	201.7	0.0	201.7
Upland, City Of	5.202%	0.0	0.000%	442.2	0.0	442.2
West End Consolidated Water Co	1.728%	0.0	0.000%	146.9	0.0	146.9
West Valley Water District	1.175%	0.0	0.000%	99.9	0.0	99.9
	100.000%	**31,716.6**	**100.000%**	**8,500.0**	**1,500.0**	**10,000.0**
	19A	19B	19C	19D	19E	19F

Notes:
Section 6.2(b)(ii) of the Peace II Agreement as the amendment is shown in the March 15, 2019 Court Order states: "The members of the Appropriative Pool will contribute a total of 10,000 afy toward Desalter replenishment, allocated among the Appropriative Pool members as follows: 1) 85% of the total (8,500 afy) will be allocated according to the Operating Safe Yield percentage of each Appropriative Pool members; and 2) 15% of the total (1,500 afy) will be allocated according to each land use conversion agency's percentage of the total land use conversion claims. The formula is to be adjusted annually based on the actual land use conversion allocations of the year."

POOL 3

Assessment Year 2021-2022 (Production Year 2020-2021)

Remaining Desalter Replenishment Obligation (RDRO)

	Assigned Share of Operating Safe Yield	CALCULATING THE ADJUSTED PHYSICAL PRODUCTION						ALLOCATING THE RDRO		
		Physical Production	50% of Voluntary Agreements with Ag	Assignments with Non-Ag	Storage and Recovery Programs	Other Adjustments	Total Adjusted Physical Production	Total Production and OSY Basis (20A+20G)	Percentage (20H) / Sum(20H)	Total Remaining Desalter Replenishment Obligation
BlueTriton Brands, Inc.	0.0	271.3	0.0	0.0	0.0	0.0	271.3	271.3	0.231%	39.0
CalMat Co. (Appropriative)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.0
Chino Hills, City Of	1,572.5	2,528.6	(34.5)	0.0	0.0	0.0	2,494.1	4,066.6	3.461%	584.2
Chino, City Of	3,004.2	6,133.0	(1,649.0)	(72.6)	0.0	0.0	4,411.4	7,415.5	6.312%	1,065.4
Cucamonga Valley Water District	2,695.5	26,225.7	0.0	0.0	(20,500.0)	0.0	5,725.7	8,421.2	7.168%	1,209.8
Fontana Union Water Company	4,760.0	0.0	0.0	0.0	0.0	0.0	0.0	4,760.0	4.051%	683.9
Fontana Water Company	0.8	13,565.3	0.0	0.0	(2,500.0)	0.0	11,065.3	11,066.1	9.419%	1,589.8
Fontana, City Of	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.0
Golden State Water Company	306.3	1,074.4	0.0	0.0	0.0	0.0	1,074.4	1,380.6	1.175%	198.4
Jurupa Community Services District	1,535.0	11,160.9	0.0	(417.1)	0.0	(133.9)	10,609.9	12,144.9	10.337%	1,744.8
Marygold Mutual Water Company	488.0	840.9	0.0	0.0	0.0	0.0	840.9	1,328.9	1.131%	190.9
Monte Vista Irrigation Company	503.9	0.0	0.0	0.0	0.0	0.0	0.0	503.9	0.429%	72.4
Monte Vista Water District	3,592.2	7,674.4	(62.2)	(22.1)	0.0	(4.7)	7,585.5	11,177.6	9.514%	1,605.9
NCL Co, LLC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.0
Niagara Bottling, LLC	0.0	1,751.7	0.0	0.0	0.0	0.0	1,751.7	1,751.7	1.491%	251.7
Nicholson Family Trust	2.9	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.002%	0.4
Norco, City Of	150.3	0.0	0.0	0.0	0.0	0.0	0.0	150.3	0.128%	21.6
Ontario, City Of	8,469.8	21,750.8	(1,485.7)	(1,608.4)	0.0	0.0	18,656.8	27,126.6	23.089%	3,897.2
Pomona, City Of	8,352.2	9,192.2	0.0	0.0	0.0	0.0	9,192.2	17,544.3	14.933%	2,520.6
San Antonio Water Company	1,122.1	676.5	0.0	0.0	0.0	0.0	676.5	1,798.6	1.531%	258.4
San Bernardino, County of (Shooting Park)	0.0	17.2	0.0	0.0	0.0	0.0	17.2	17.2	0.015%	2.5
Santa Ana River Water Company	969.0	0.0	0.0	0.0	0.0	175.5	175.5	1,144.5	0.974%	164.4
Upland, City Of	2,124.2	2,177.1	0.0	0.0	0.0	(70.1)	2,107.0	4,231.2	3.601%	607.9
West End Consolidated Water Co	705.6	0.0	0.0	0.0	0.0	0.0	0.0	705.6	0.601%	101.4
West Valley Water District	479.8	0.0	0.0	0.0	0.0	0.0	0.0	479.8	0.408%	68.9
	40,834.0	**105,040.0**	**(3,231.3)**	**(2,120.2)**	**(23,000.0)**	**(33.2)**	**76,655.2**	**117,489.3**	**100.000%**	**16,879.4**
	20A	20B	20C	20D	20E	20F	20G	20H	20I	20J

Notes:
Section 6.2(b)(iii) of the Peace II Agreement as the amendment is shown in the March 15, 2019 Court Order states: "A Replenishment Assessment against the Appropriative Pool for any remaining Desalter replenishment obligation after applying both 6(b)(i) and 6(b)(ii), allocated pro-rata to each Appropriative Pool member according to the combined total of the member's share of Operating Safe Yield and the member's Adjusted Physical Production."

POOL 3

Assessment Year 2021-2022 (Production Year 2020-2021)

Desalter Replenishment Summary

	Desalter Replenishment Obligation in AF			Total DRO Fulfillment Activity							Assessments	
	Desalter Replenishment Obligation Contribution	Remaining Desalter Replenishment Obligation	Total Desalter Replenishment Obligation	Transfer from Dedicated Replenishment Account	Transfer from Excess Carry Over Storage Account	Transfer from Recharged Recycled Storage Account	Transfer from Quantified Storage Account	Transfer from Post 7/1/2000 Storage Account	Replenishment Water Purchase	Total Transfers and Water Purchases	Residual DRO (AF)	Assessments Due On Residual DRO ($)
BlueTriton Brands, Inc.	0.0	(39.0)	(39.0)	32.1	6.9	0.0	0.0	0.0	0.0	39.0	0.0	0.00
CalMat Co. (Appropriative)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
Chino Hills, City Of	(387.8)	(584.2)	(972.0)	602.9	369.1	0.0	0.0	0.0	0.0	972.0	0.0	0.00
Chino, City Of	(1,051.8)	(1,065.4)	(2,117.2)	0.0	2,117.2	0.0	0.0	0.0	0.0	2,117.2	0.0	0.00
Cucamonga Valley Water District	(589.4)	(1,209.8)	(1,799.2)	952.5	846.7	0.0	0.0	0.0	0.0	1,799.2	0.0	0.00
Fontana Union Water Company	(990.8)	(683.9)	(1,674.7)	1,674.7	0.0	0.0	0.0	0.0	0.0	1,674.7	0.0	0.00
Fontana Water Company	(39.6)	(1,589.8)	(1,629.5)	469.0	1,160.5	0.0	0.0	0.0	0.0	1,629.5	0.0	0.00
Fontana, City Of	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
Golden State Water Company	(63.8)	(198.4)	(262.1)	0.0	262.1	0.0	0.0	0.0	0.0	262.1	0.0	0.00
Jurupa Community Services District	(1,039.1)	(1,744.8)	(2,783.9)	0.0	2,783.9	0.0	0.0	0.0	0.0	2,783.9	0.0	0.00
Marygold Mutual Water Company	(101.6)	(190.9)	(292.5)	0.0	0.0	0.0	292.5	0.0	0.0	292.5	0.0	0.00
Monte Vista Irrigation Company	(104.9)	(72.4)	(177.3)	0.0	177.3	0.0	0.0	0.0	0.0	177.3	0.0	0.00
Monte Vista Water District	(752.7)	(1,605.9)	(2,358.6)	0.0	1,490.1	713.2	0.0	155.4	0.0	2,358.6	0.0	0.00
NCL Co, LLC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
Niagara Bottling, LLC	0.0	(251.7)	(251.7)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(251.7)	198,558.16
Nicholson Family Trust	(0.6)	(0.4)	(1.0)	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.00
Norco, City Of	(31.3)	(21.6)	(52.9)	0.0	52.9	0.0	0.0	0.0	0.0	52.9	0.0	0.00
Ontario, City Of	(1,983.9)	(3,897.2)	(5,881.1)	3,461.1	0.0	2,420.0	0.0	0.0	0.0	5,881.1	0.0	0.00
Pomona, City Of	(1,738.6)	(2,520.6)	(4,259.1)	0.0	4,259.1	0.0	0.0	0.0	0.0	4,259.1	0.0	0.00
San Antonio Water Company	(233.6)	(258.4)	(492.0)	281.8	0.0	0.0	0.0	210.2	0.0	492.0	0.0	0.00
San Bernardino, County of (Shooting Park)	0.0	(2.5)	(2.5)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(2.5)	1,946.46
Santa Ana River Water Company	(201.7)	(164.4)	(366.1)	0.0	366.1	0.0	0.0	0.0	0.0	366.1	0.0	0.00
Upland, City Of	(442.2)	(607.9)	(1,050.1)	171.2	878.8	0.0	0.0	0.0	0.0	1,050.1	0.0	0.00
West End Consolidated Water Co	(146.9)	(101.4)	(248.3)	86.1	162.1	0.0	0.0	0.0	0.0	248.3	0.0	0.00
West Valley Water District	(99.9)	(68.9)	(168.8)	0.0	168.8	0.0	0.0	0.0	0.0	168.8	0.0	0.00
	(10,000.0)	**(16,879.4)**	**(26,879.4)**	**7,731.4**	**15,102.7**	**3,133.2**	**292.5**	**365.5**	**0.0**	**26,625.3**	**(254.1)**	**200,504.62**
	21A	21B	21C	21D	21E	21F	21G	21H	21I	21J	21K	21L

Notes:
1) California Speedway Corporation dedicated 32.1 AF from their ECO storage account to satisfy a portion of BlueTriton Brands, Inc.'s 2021/22 DRO pursuant to an Exhibit "G" Section 10 Form A.
2) City of Ontario (Non-Ag) dedicated 3,461.1 AF from their ECO storage account to satisfy a portion of City of Ontario's 2021/22 DRO pursuant to an Exhibit "G" Section 10 Form A.

ALL POOLS

Assessment Year 2021-2022 (Production Year 2020-2021)

Assessment Calculation - Projected (Includes "10% Judgment Administration and 15% OBMP & Program Elements 1-9 Operating Reserves")

	FY 2020/21 Budget [5]	FY 2021/22 Budget	ASSESSMENT	APPROPRIATIVE POOL		AGRICULTURAL POOL		NON-AG POOL	
PRODUCTION BASIS									
2019/2020 Production and Exchanges in Acre-Feet (Actuals)			95,348.464	69,918.990	73.330%	21,841.407	22.907%	3,588.067	3.763%
2020/2021 Production and Exchanges in Acre-Feet (Actuals)[1]			98,806.120	73,423.920	74.311%	21,484.815	21.744%	3,897.385	3.944%
BUDGET				**Judgment Administration**	**OBMP & PE 1-9**	**Judgment Administration**	**OBMP & PE 1-9**	**Judgment Administration**	**OBMP & PE 1-9**
Judgment Administration [2,3]	$2,021,670	$2,200,720	$2,200,720	$1,635,379		$478,533		$86,807	
OBMP & Program Elements 1-9 [2]	$6,103,889	$5,050,683	$5,050,683		$3,753,218		$1,098,242		$199,223
Judgment Administration, OBMP & PE 1-9 Assessments	$8,125,559	$7,251,403	$7,251,403	$1,635,379	$3,753,218	$478,533	$1,098,242	$86,807	$199,223
TOTAL BUDGET			$7,251,403	$1,635,379	$3,753,218	$478,533	$1,098,242	$86,807	$199,223
Less: Budgeted Interest Income	($130,813)	($106,125)	($106,125)		($78,863)		($23,076)		($4,186)
Less: Contributions from Outside Agencies	($176,203)	($177,430)	($177,430)		($131,850)		($38,581)		($6,999)
Subtotal: CASH DEMAND	$7,818,543	$6,967,848	$6,967,848	$1,635,379	$3,542,505	$478,533	$1,036,584	$86,807	$188,038
Add: OPERATING RESERVE									
Judgment Administration (10%)	$202,167	$220,072	$220,072	$163,538		$47,853		$8,681	
OBMP & PE 1-9 (15%)	$915,583	$757,602	$757,602		$562,982		$164,736		$29,883
Subtotal: OPERATING RESERVE	$1,117,750	$977,674	$977,674	$163,538	$562,982	$47,853	$164,736	$8,681	$29,883
Less: Cash Balance on Hand Available for Assessments [4]	($1,117,750)	($977,674)	($977,674)	($163,538)	($562,982)	($47,853)	($164,736)	($8,681)	($29,883)
FUNDS REQUIRED TO BE ASSESSED	$7,818,543	$6,967,848	$6,967,848	$1,635,379	$3,542,505	$478,533	$1,036,584	$86,807	$188,038
Proposed Assessments									
Judgment Administration, OBMP & PE 1-9 Assessments (Minimum $5.00 Per Producer)		[A]	Per Acre-Foot	$22.27	$48.25	$22.27	$48.25	$22.27	$48.25
Grand Total					$70.52		$70.52		$70.52
Prior Year Assessments, (Actuals) Information Only		[B]	Per Acre-Foot	$21.20	$60.80	$21.20	$60.80	$21.20	$60.80
Grand Total					$82.00		$82.00		$82.00
Variance Between Proposed Assessments and Prior Year Assessments		[A] - [B]		$1.07	($12.55)	$1.07	($12.55)	$1.07	($12.55)
Grand Total					($11.48)		($11.48)		($11.48)
Estimated Assessment as of "Amended" Budget July 22, 2021, Information Only				$18.56	$39.54	$18.56	$39.54	$18.56	$39.54
Grand Total					$58.10		$58.10		$58.10

Notes:
[1] Due to the timing of when the Budget and the Assessment Package are prepared, actual production numbers on this page may differ from the Budget depending on any last minute corrections during the Assessment Package preparation process.
[2] Total costs are allocated to Pools by actual production percentages. Does not include Recharge Debt Payment, Recharge Improvement Projects, Replenishment Water Purchases, or RTS charges.
[3] Judgment Administration excludes OAP, AP, and ONAP specific legal services, meeting compensation, or Special Funds. These items invoiced separately on the Assessment invoices.
[4] June 30th fund balance (estimated) less funds required for Operating Reserves, Agricultural Pool Reserves, and Carryover replenishment obligations.
[5] The previous fiscal year's budget numbers are from the previously approved Assessment Package and does not reflect numbers from any amended budget that may have followed.

ALL POOLS

Assessment Year 2021-2022 (Production Year 2020-2021)

Water Transaction Detail

Standard Transactions

To:	From:	Date of Submittal	Quantity	$ / Acre Feet	Total $	If 85/15 Rule Applies: 85%	15%	WM Pays
Cucamonga Valley Water District	West Valley Water District Storage Account	11/9/2020	1,000.0	528.50	528,500.00			
Fontana Water Company	Cucamonga Valley Water District Annual Account	2/16/2021	7,500.0	559.44	4,195,800.00	3,566,430.00	629,370.00	Fontana Water Company
	Nicholson Family Trust Annual Account	5/25/2021	6.5	559.44	3,636.36	3,090.91	545.45	Fontana Water Company
Monte Vista Water District	Chino, City Of Storage Account	9/17/2020	500.0	0.00	0.00			
	One time correction for Land Use Conversion error.							
			9,006.5		**4,727,936.36**	**3,569,520.91**	**629,915.45**	

Total 15% Credits from all Transactions: **$629,915.45**

ALL POOLS

Assessment Year 2021-2022 (Production Year 2020-2021)

Water Transaction Detail

Applied Recurring Transactions:

From:	To:	Quantity	$ / Acre Feet	
Fontana Union Water Company Annual Account - Assigned Share of Operating Safe Yield	Cucamonga Valley Water District Annual Account - Transfer (To) / From	All	0.00	*Transfer FUWC Share of Safe Yield to CVWD.*
Fontana Union Water Company Annual Account - Stormwater New Yield	Cucamonga Valley Water District Annual Account - Transfer (To) / From	All	0.00	*Transfer FUWC New Yield to CVWD.*
Fontana Union Water Company Annual Account - Diff - Potential vs. Net	Cucamonga Valley Water District Annual Account - Transfer (To) / From	All	0.00	*Transfer FUWC Ag Pool Reallocation Difference (Potential vs. Net) to CVWD.*
Fontana Union Water Company Annual Account - Transfer (To) / From	Cucamonga Valley Water District Annual Account - Transfer (To) / From	All	0.00	*Transfer FUWC water transfer rights to CVWD.*
Fontana Union Water Company Annual Account - Assigned Rights	Cucamonga Valley Water District Annual Account - Assigned Rights	All	0.00	*Transfer FUWC water transfer rights to CVWD.*
Fontana Union Water Company Annual Account - Total AG SY Reallocation	Cucamonga Valley Water District Annual Account - Transfer (To) / From	All	0.00	*Transfer FUWC Total Ag SY to CVWD.*
Fontana Union Water Company Annual Account - Desalter Replenishment Obligation	Cucamonga Valley Water District Annual Account - Transfer (To) / From	All	0.00	*Transfer of FUWC DRO*

ALL POOLS

Assessment Year 2021-2022 (Production Year 2020-2021)

Analysis of the 85/15 Rule Application to Water Transfers

To	(Over)/Under Production Excluding Water Transfer(s)	From	Date of Submittal	Transfer Quantity	Is Buyer an 85/15 Party?	Is Transfer Being Placed into Annual Account?	Is Purpose of Transfer to Utilize SAWCO or West End Shares?	Amount of Transfer Eligible for 85/15 Rule
Cucamonga Valley Water District	7,654.0	West Valley Water District Storage Account	11/9/2020	1,000.0	Yes	Yes	No	0.0
Fontana Water Company	(10,229.0)	Cucamonga Valley Water District Annual Account	2/16/2021	7,500.0	Yes	Yes	No	7,500.0
		Nicholson Family Trust Annual Account	5/25/2021	6.5	Yes	Yes	No	6.5
Monte Vista Water District	2,722.3	Chino, City Of Storage Account	9/17/2020	500.0	Yes	Yes	No	0.0
One time correction for Land Use Conversion error.								

ALL POOLS

Assessment Year 2021-2022 (Production Year 2020-2021)

Watermaster Replenishment Calculation

Cost of Replenishment Water per acre foot:

Watermaster Replenishment Cost	$777.00
Projected Spreading - OCWD Connection Fee	$2.00
Projected Spreading - Delivery Surcharge	$10.00
Pre-purchased Credit	$0.00
Total Replenishment Cost per acre foot (see footnote)	**$789.00**

Replenishment Obligation:	**AF @ $789.00**	**15%**	**85%**	**Total**
Appropriative - 100	1,751.7			$1,382,063.69
Appropriative - 15/85	17.2	$2,032.42	$11,517.07	$13,549.50
Non-Agricultural - 100	54.8			$43,269.55
	1,823.7			**$1,438,882.73**

Company	**AF Production and Exchanges**	**85/15 Producers**	**Percent of Total 85/15 Producers**	**15% Replenishment Assessment**	**15% Water Transaction Debits**
BlueTriton Brands, Inc.	271.3			-	-
CalMat Co. (Appropriative)	0.0			-	-
Chino Hills, City Of	2,459.6	2,459.6	4.008%	$81.46	$25,247.02
Chino, City Of	2,762.4	2,762.4	4.501%	$91.49	$28,354.64
Cucamonga Valley Water District	5,725.7	5,725.7	9.330%	$189.63	$58,771.84
Desalter Authority	40,114.5			-	-
Fontana Union Water Company	0.0	0.0	0.000%	-	$0.00
Fontana Water Company	11,065.3	11,065.3	18.031%	$366.47	$113,580.68
Fontana, City Of	0.0			-	-
Golden State Water Company	1,074.4	1,074.4	1.751%	$35.58	$11,028.12
Jurupa Community Services District	10,609.9	10,609.9	17.289%	$351.39	$108,906.10
Marygold Mutual Water Company	840.9			-	-
Monte Vista Irrigation Company	0.0	0.0	0.000%	-	$0.00
Monte Vista Water District	7,523.3	7,523.3	12.259%	$249.16	$77,223.33
NCL Co, LLC	0.0			-	-
Niagara Bottling, LLC	1,751.7			-	-
Nicholson Family Trust	0.0	0.0	0.000%	-	$0.00
Norco, City Of	0.0	0.0	0.000%	-	$0.00
Ontario, City Of	17,171.1	17,171.1	27.981%	$568.68	$176,254.23
Pomona, City Of	9,192.2			-	-
San Antonio Water Company	676.5	676.5	1.102%	$22.41	$6,944.27
San Bernardino, County of (Shooting Park)	17.2	17.2	0.028%	$0.57	$176.27
Santa Ana River Water Company	175.5	175.5	0.286%	$5.81	$1,801.41
Upland, City Of	2,107.0	2,107.0	3.433%	$69.78	$21,627.56
West End Consolidated Water Co	0.0	0.0	0.000%	-	$0.00
West Valley Water District	0.0	0.0	0.000%	-	$0.00
*** Fee assessment total is 15% of Appropriative 15/85 replenishment obligation*	**113,538.4**	**61,367.9**	******	**$2,032.43**	**$629,915.47**
				Transfers to **8G**	*Transfers to* **8K**

Notes: The 2021 rate includes a $10 surcharge from Three Valleys Municipal Water District.

ALL POOLS

Assessment Year 2021-2022 (Production Year 2020-2021)

Readiness to Serve (RTS) Charges

Total Water Purchased: 6,912.9 AF **Total RTS Charge: $35,030.19 ($5.07/AF)**

RO = Replenishment Obligation
DRO = Desalter Replenishment Obligation
yyyymmdd = Order #

Appropriative or Non-Agricultural Pool Party	FY 2016/2017 Water Purchases: Purchased Water in AF 20160623 RO	20160623 DRO	20161216 DRO	20170418 RO	85/15 Breakdown AF @ 100%	AF @ 85/15	AF Total	2015/16 Prod & Exch From 85/15 Producers Acre-Feet	Percent	Year 4 RTS Charges 15% $0.76	85% $4.31	100% $5.07	FY 2017/2018 Water Purchase: Purchased Water in AF 20171211 RO	20171211 DRO	2016/17 Prod & Exch From 85/15 Producers Acre-Feet	Percent	Year 3 RTS Charges 15% $0.76	85% $4.31	100% $5.07	TOTAL RTS CHARGES
BlueTriton Brands, Inc.	1,135.3	8.9	4.0	335.7	1,483.8	0.0	1,483.8	0.0	0.000%	0.00	0.00	7,518.68	0.1	0.0	0.0	0.000%	0.00	0.00	0.46	7,519.14
CalMat Co. (Appropriative)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Chino Hills, City Of	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,548.3	2.009%	0.74	0.00	0.00	0.0	0.0	2,152.0	3.002%	0.30	0.00	0.00	1.04
Chino, City Of	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	388.9	0.543%	0.05	0.00	0.00	0.05
Cucamonga Valley Water District	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20,534.7	26.648%	9.77	0.00	0.00	0.0	0.0	16,562.0	23.104%	2.32	0.00	0.00	12.09
Fontana Union Water Company	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Fontana Water Company	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15,317.2	19.877%	7.29	0.00	0.00	0.0	0.0	13,250.5	18.484%	1.86	0.00	0.00	9.15
Fontana, City Of	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Golden State Water Company	0.0	0.0	0.0	0.0	0.0	0.0	0.0	807.4	1.048%	0.38	0.00	0.00	0.0	0.0	850.3	1.186%	0.12	0.00	0.00	0.50
Jurupa Community Services District	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8,952.8	11.618%	4.26	0.00	0.00	0.0	0.0	11,023.2	15.377%	1.55	0.00	0.00	5.81
Marygold Mutual Water Company	78.7	51.9	20.3	0.0	150.9	0.0	150.9	0.0	0.000%	0.00	0.00	764.52	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	764.52
Monte Vista Irrigation Company	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Monte Vista Water District	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8,203.7	10.646%	3.90	0.00	0.00	0.0	0.0	6,865.0	9.577%	0.96	0.00	0.00	4.87
NCL Co, LLC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Niagara Bottling, LLC	2,567.5	35.5	0.0	1,174.3	3,777.3	0.0	3,777.3	0.0	0.000%	0.00	0.00	19,141.00	946.1	0.0	0.0	0.000%	0.00	0.00	4,794.00	23,935.00
Nicholson Family Trust	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Norco, City Of	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Ontario, City Of	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18,053.8	23.429%	8.59	0.00	0.00	0.0	0.0	18,970.2	26.463%	2.66	0.00	0.00	11.25
Pomona, City Of	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
San Antonio Water Company	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,030.8	1.338%	0.49	0.00	0.00	0.0	0.0	537.7	0.750%	0.08	0.00	0.00	0.57
San Bernardino, County of (Shooting Park)	38.8	0.3	0.1	9.4	0.4	48.2	48.6	9.4	0.012%	0.00	207.75	2.02	13.2	0.8	13.0	0.018%	0.00	57.02	4.01	270.81
Santa Ana River Water Company	0.0	48.0	23.7	0.0	71.7	0.0	71.7	0.0	0.000%	0.00	0.00	363.24	0.0	118.7	0.0	0.000%	0.00	0.00	601.32	964.56
Upland, City Of	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,600.7	3.375%	1.24	0.00	0.00	0.0	0.0	1,071.9	1.495%	0.15	0.00	0.00	1.39
West End Consolidated Water Co	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
West Valley Water District	0.0	23.5	11.8	0.0	35.3	0.0	35.3	0.0	0.000%	0.00	0.00	178.63	0.0	58.8	0.0	0.000%	0.00	0.00	297.72	476.35
9W Halo Western OpCo L.P.	62.2	0.0	0.0	10.6	72.9	0.0	72.9	0.0	0.000%	0.00	0.00	369.27	3.0	0.0	0.0	0.000%	0.00	0.00	15.34	384.62
ANG II (Multi) LLC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Aqua Capital Management LP	57.5	0.0	0.0	0.0	57.5	0.0	57.5	0.0	0.000%	0.00	0.00	291.23	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	291.23
California Speedway Corporation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
California Steel Industries, Inc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
CalMat Co.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
CCG Ontario, LLC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
City of Ontario (Non-Ag)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
County of San Bernardino (Non-Ag)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
General Electric Company	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.000%	0.00	0.00	0.31	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.31
Hamner Park Associates, a California Limited Partnershi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Linde Inc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Monte Vista Water District (Non-Ag)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
Riboli Family and San Antonio Winery, Inc.	28.8	0.0	0.0	4.0	32.8	0.0	32.8	0.0	0.000%	0.00	0.00	166.02	5.3	0.0	0.0	0.000%	0.00	0.00	26.67	192.69
Space Center Mira Loma, Inc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
TAMCO	19.8	0.0	0.0	16.5	36.4	0.0	36.4	0.0	0.000%	0.00	0.00	184.24	0.0	0.0	0.0	0.000%	0.00	0.00	0.02	184.26
West Venture Development Company	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.0	0.0	0.0	0.000%	0.00	0.00	0.00	0.00
	3,988.7	**168.0**	**59.9**	**1,550.5**	**5,718.8**	**48.2**	**5,767.0**	**77,058.9**	**100.0%**	**36.66**	**207.75**	**28,979.16**	**967.7**	**178.2**	**71,684.9**	**100.0%**	**10.06**	**57.02**	**5,739.54**	**35,030.21**
	26A	26B	26C	26D	26E	26F	26G	26H	26I	26J	26K	26L	26M	26N	26O	26P	26Q	26R	26S	26T

Notes:
1) This year's RTS includes the fourth of ten annual RTS charges for water purchased in FY 2016/17, and third of ten annual RTS charges for water purchased in FY 2017/18.
2) In April 2021, Nestle Waters North America Inc., who owns Arrowhead Mountain Spring Water brand, changed its name to BlueTriton Brands, Inc. and requested Watermaster to use the new company name.

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Assessment Package Notes

Page	Note
All (a)	A change in a Party's name will be reflected in the Assessment Package for the production year in which the name change occurred. For example, if a Party changed its name on June 30, 2021, it will be reflected in the FY 2021/2022 Assessment Package (for Production Year 2020/2021). Additionally, if a Party changed its name on July 1, 2021, it will be reflected in the FY 2022/2023 Assessment Package (for Production Year 2021/2022).
All (b)	To avoid the possibility of being mistakenly identified as one of other similarly named organizations, the Chino Basin Desalter Authority is referred to as Desalter Authority.
pg01	"Agricultural Total Pool Production" includes Voluntary Agreements between Appropriators and Agricultural Pool Parties.
pg04 (a)	Transfers in Column [4E] include the annual transfer of 10% of the Non-Ag Safe Yield to be utilized to offset the overall Desalter Replenishment Obligation in accordance with the Peace II Agreement Section 6.2, and also the Exhibit "G" physical solution.
pg04 (b)	Column [4H], "Actual Fiscal Year Production," includes physical production and Assignments between Appropriators and Non-Ag Pool Parties.
pg04 (c)	"Net Over Production" does not include evaporative loss. Additional water will be purchased in order to adequately cover evaporative losses. The rates are 1.5% from November through March, 4.2% from April through October.
pg05 (a)	Hydraulic Control was achieved on February 1, 2016. Pursuant to Paragraph 7.4(b) of the Peace II Agreement, Storage Loss is now calculated at 0.07%.
pg05 (b)	When applicable, Column [5C] includes the Exhibit "G" physical solution transfers to the Appropriative Pool.
pg06	Transfers in Column [6C] is the annual transfer of 10 percent of the Non-Ag Safe Yield to be utilized to offset the overall Desalter Replenishment Obligation in accordance with the Peace II Agreement Section 6.2.
pg07 (a)	The financial Outstanding Obligations are reconciled on pages 7.1 and 17.1.
pg07 (b)	Fund Balance is maintained on a spreadsheet by Watermaster.
pg07 (c)	Outstanding Obligation ($) is calculated by multiplying Outstanding Obligation (AF) by the current rate, reduced by the Fund Balance ($).
pg07 (d)	Fund Balance is the money collected by Watermaster, Outstanding Obligation ($) is the money owed by the Parties or credited to the Parties.
pg08 (a)	Recharge Debt Payment expenses [8O] and Recharge Improvement Project expenses [8P] are each allocated on % OSY, based on the approved budget.
pg08 (b)	Pursuant to Paragraph 5.4(b) of the Peace Agreement, the City of Pomona shall be allowed a credit of up to $2 million against OBMP Assessments through 2030. This equates to $66,667 per year. TVMWD elected to discontinue payment of the "Pomona Credit," effective FY 2012/2013. It is now paid by the Appropriative Pool Parties, allocated on % OSY (Column [8N]).
pg09 (a)	Other Adjustments [9D] include water provided to another Appropriator, pump-to-waste that has been captured in a recharge basin (as verified by IEUA), and other miscellaneous recharge / injection of native water.
pg09 (b)	Evaporative Losses will be applied to recharged water from Pump-to-Waste activities beginning in October 2017. (Evaporative Loss Rates: 1.5% Nov - Mar; 4.2% Apr - Oct)
pg10 (a)	The Restated Judgment allowed an accumulated overdraft of 200,000 AF over 40 years. The total Operating Safe Yield is now 40,834 AF, allocated by percentage of Operating Safe Yield.
pg10 (b)	Column [10I], "Actual Fiscal Year Production," includes physical production, Voluntary Agreements, Assignments, and, if applicable, other adjustments. A detailed breakdown can be found on Page 9.1.
pg10 (c)	"Net Over Production" does not include evaporative loss. Additional water will be purchased in order to adequately cover evaporative losses. The rates are 1.5% from November through March, 4.2% from April through October.

ALL POOLS

Assessment Year 2021-2022 (Production Year 2020-2021)

Assessment Package Notes

Page	Note
pg11 (a)	The Assessment Package database is set up so that all water must go through the Party Annual Accounts on the way to or from ECO Storage Accounts, and through the ECO Storage Accounts on the way to or from Supplemental Storage Accounts (does not apply to water dedicated to offset the Desalter Replenishment Obligation).
pg11 (b)	Column [11C] includes transfers to the Desalter Replenishment Obligation.
pg12 (a)	The Assessment Package database is set up so that all water must go through the Party Annual Accounts on the way to or from ECO Storage Accounts, and through the ECO Storage Accounts on the way to or from Supplemental Storage Accounts (does not apply to water dedicated to offset the Desalter Replenishment Obligation).
pg12 (b)	Columns [12C], [12H], and [12M] include transfers to the Desalter Replenishment Obligation.
pg12 (c)	The first 3,000 AF of City of Fontana's recharged recycled water transfers to the City of Ontario, and all of the City of Montclair's recharged recycled water transfers to MVWD.
pg13 (a)	"Re-Operation Offset: Pre-Peace II Desalters" had an original beginning balance of 225,000.000 AF. The 29,070 AF correction required by Condition Subsequent 7 is included. (See Page 18.1)
pg13 (b)	"Re-Operation Offset: Peace II Expansion" had an original beginning balance of 175,000.000 AF. It will now be allocated to Desalter replenishment over a 17-year period, beginning in 2013/14 and ending in 2029/30, according to a schedule. (See Page 18.1)
pg13 (c)	There is no loss assessed on the native Basin water allocated to offset Desalter production as a result of Basin Reoperation as approved in the Peace II Agreement.
pg13 (d)	"Non-Ag Dedication" was used in a prior Assessment Package to indicate the Paragraph 31 Settlement Agreements Dedication.
pg13 (e)	The "Non-Ag" OBMP Special Assessment", also referred to as the "10% Haircut", will indicate the movement of water when it is being utilized to further offset the Desalter Replenishment Obligation. See [18L] on Page 18.1.
pg13 (f)	Columns [13C] and [13D] under "Dedicated Replenishment" include transfers of water from an Annual Account to DRO resulting from Party to Party transfers such as those executed with the Exhibit "G" Form A.
pg14	Transfers in Column [14A] include annual water transfers/leases between Appropriators and/or from Appropriators to Watermaster for replenishment purposes, and also the Exhibit "G" physical solution transfers from the Non-Ag Pool.
pg15 (a)	Most of the remaining eligible parcels for Land Use Conversion are within the Conversion Area 1 boundary.
pg15 (b)	"Unlikely to Convert Parcels" regardless of eligibility are not likely to convert due to pre-existing land use. Eligibility will be determined on a case by case basis.
pg16	Beginning with the 2015/16 Assessment Package, the Agricultural Pool Safe Yield Reallocation is now being calculated with a new formula in accordance with the March 15, 2019 Court Order.
pg17 (a)	The financial Outstanding Obligations are reconciled on pages 7.1 and 17.1.
pg17 (b)	Fund Balance is maintained on a spreadsheet by Watermaster.
pg17 (c)	Outstanding Obligation is calculated by multiplying Outstanding Obligation (AF) by the current rate, reduced by the Fund Balance.
pg17 (d)	Fund Balance is the money collected by Watermaster, Outstanding Obligation ($) is the money owed by the Parties or credited to the Parties.
pg21 (a)	Any balance in a Dedicated Replenishment Account is utilized first to satisfy new or carried over Desalter Replenishment Obligation beginning with the fiscal year such water was made available. The balance, if any, can be found on page 13.1.
pg21 (b)	Due to an agreement between CVWD and FUWC, all of FUWC's rights are automatically tranferred to CVWD. A recurring transaction was created so that a portion of that water gets returned to FUWC to satisfy their DRO.

Assessment Year 2021-2022 (Production Year 2020-2021)

Assessment Package Notes

Page	Note
pg22	The table on this page is a replica of the table found in the Watermaster Budget.
pg24	The column titled "(Over)/Under Production Excluding Water Transfer(s)" excludes Exhibit "G" water sales and water transfers between Appropriators and to Watermaster (if any). ([10B] + [10C] + [10D] + [10E] + [14B] - [10K])
pg25 (a)	The "15% Water Transaction Debits" total is the "Total 15% Credits from all Transaction" from Page 23.1.
pg25 (b)	"Replenishment Obligation" does not include evaporative loss. Additional water will be purchased in order to adequately cover evaporative losses. The rates are 1.5% from November through March, 4.2% from April through October.
pg26 (a)	Beginning with fiscal year 2016/17, water purchased through the IEUA will be charged with an annual RTS fee over a ten year period commencing two years after the initial purchase. This fee will vary year to year based on a ten-year rolling average.
pg26 (b)	RTS will be allocated based on the total RTS charge for the year and not on the calculated cost per acre-foot.

Assessment Year 2021-2022 (Production Year 2020-2021)

Assessment Package References and Definitions

Column	Title Description
2A	**AF Production** Actual fiscal year production by each Party. Copied from [4H].
2B	**Non-Agricultural Pool - AF/Admin** Production [2A] <times> per acre-foot Admin fee.
2C	**Non-Agricultural Pool - AF/OBMP** Production [2A] <times> per acre-foot OBMP fee.
2D	**Replenishment Assessments - AF Exceeding Annual Right** Over-production for each Party beyond their annual production right. Copied from [4I].
2E	**Replenishment Assessments - $767 Per AF** Amount overproduced [2D] <times> the current replenishment rate.
2F	**CURO Adjustment** Monetary amount needed (or to be credited) for each Party's Cumulative Unmet Replenishment Obligation (CURO). Calculated on Page 7.1.
2G	**RTS Charges** Annual Readiness to Serve charges for water purchased in prior years.
2H	**Other Adjustments** Used as necessary for any other monetary adjustments needed to the Assessment Package.
2I	**Total Assessments Due** Total fees assessed based on Party production. [2B] + [2C] + [2E] + [2F] + [2G] + [2H].
3A	**Physical Production** Fiscal year physical production by each Party.
3B	**Assignments** Total of water received from an Appropriator by each Party.
3C	**Other Adjustments** Any other adjustments that result in off-set of the fiscal year's production.
3D	**Actual FY Production (Assmnt Pkg Column 4H)** Total adjusted production for the fiscal year. Also known as Assessable Production. [3A] + [3B] + [3C].
4A	**Percent of Safe Yield** The Party's yearly percentage of Safe Yield.
4B	**Carryover Beginning Balance** The beginning balance in each Annual Account. This number carries forward from the ending balance in the previous period Assessment Package.
4C	**Prior Year Adjustments** This number reflects the adjusted production rights from a previous Assessment Package, in the event that corrections are needed.
4D	**Assigned Share of Safe Yield (AF)** The Party's yearly volume of Safe Yield.
4E	**Water Transaction Activity** Total of one-time water transfers between Parties for this period, including the annual transfer of 10 percent of the Non-Ag Safe Yield to be utilized to offset the overall Desalter Replenishment Obligation, as stated in the Peace II Agreement, and Exhibit G.
4F	**Other Adjustments** This number reflects adjusted production rights, in the event that corrections are needed.
4G	**Annual Production Right** Current Year Production Right. [4B] + [4C] + [4D] + [4E] + [4F].

Assessment Year 2021-2022 (Production Year 2020-2021)

Assessment Package References and Definitions

Column	Title Description
4H	**Actual Fiscal Year Production** Fiscal year production, including Assignments, from CBWM's production system (as verified by each Party on their Water Activity Report). Also known as Assessable Production.
4I	**Net Over Production** Over-production, if any, for each Party beyond their annual production right. [4H] <minus> [4G], equaling more than zero.
4J	**Under Production Balances - Total Under-Produced** Production rights [4G] <minus> production [4H], equaling more than zero.
4K	**Under Production Balances - Carryover: Next Year Begin Bal** Either total under-produced [4J] or share of Safe Yield [4D], whichever is less.
4L	**Under Production Balances - To Excess Carryover Account** Total under-produced [4J] <minus> Carryover to next year [4K], equaling more than zero.
5A	**Local Excess Carry Over Storage Account (ECO) - Beginning Balance** The beginning balance in each ECO account. This number will carry forward from the ending balance in the previous period Assessment Package.
5B	**Local Excess Carry Over Storage Account (ECO) - 0.07% Storage Loss** Beginning balance [5A] <times> -0.0007.
5C	**Local Excess Carry Over Storage Account (ECO) - Transfers To / (From)** Total of water transferred to and from the ECO Account.
5D	**Local Excess Carry Over Storage Account (ECO) - From Under-Production** Total of water transferred from the Annual Account due to under production. Copied from [4L].
5E	**Local Excess Carry Over Storage Account (ECO) - Ending Balance** The current balance in each ECO account. [5A] + [5B] + [5C] + [5D].
5F	**Local Supplemental Storage Account - Beginning Balance** The beginning balance in each Supplemental Account. This number will carry forward from the ending balance in the previous period Assessment Package.
5G	**Local Supplemental Storage Account - 0.07% Storage Loss** Beginning balance [5F] <times> -0.0007.
5H	**Local Supplemental Storage Account - Transfers To / (From)** Total of water transferred to and from the Annual and/or ECO Account.
5I	**Local Supplemental Storage Account - Ending Balance** The current balance in each Supplemental Account. [5F] + [5G] + [5H].
5J	**Combined - Ending Balance** The combined amount in all local storage accounts. [5E] + [5I].
6A	**Percent of Safe Yield** The Party's yearly percentage of Operating Safe Yield.
6B	**Assigned Share of Safe Yield (AF)** The Party's yearly volume of Operating Safe Yield.
6C	**Water Transactions - 10% of Operating Safe Yield ("Haircut")** Operating Safe Yield [6B] <times> -0.1
6D	**Water Transactions - Transfers (To) / From ECO Account** Total of water transferred between the Annual Account and ECO Account.
6E	**Water Transactions - General Transfers / Exhibit G Water Sales** Total of water transfers between Parties for this period including Exhibit G Water Sales.
6F	**Water Transactions - Total Water Transactions** Total water transactions. [6C] + [6D] + [6E]. This column is used to populate [4E].

Assessment Year 2021-2022 (Production Year 2020-2021)

Assessment Package References and Definitions

Column	Title Description
7A	**Outstanding Obligation (AF)** The amount of obligation carried over from prior Assessment Package(s) that were not met due to various reason, including but not limited to MWD not having replenishment water available to purchase.
7B	**Fund Balance ($)** The amount of money collected or owed for replenishment assessments from prior Assessment Package(s).
7C	**Outstanding Obligation ($)** The amount of money that each Party owes or is credited based on current replenishment rate. [7A] <times> [CURRENT RATE] <minus> [7B].
8A	**AF Production and Exchanges** Total production and exchanges. Copied from [10K].
8B	**Appropriative Pool - AF/Admin** Production and Exchanges [8A] <times> per acre-foot Admin fee.
8C	**Appropriative Pool - AF/OBMP** Production and Exchanges [8A] <times> per acre-foot OBMP fee.
8D	**Ag Pool SY Reallocation - AF Total Reallocation** Reallocation of Ag Pool Safe Yield. Copied from [10E] and [16E].
8E	**Ag Pool SY Reallocation - AF/Admin** Party Ag Pool reallocation [8D] <divided by> Total Ag Pool Reallocation [8D Total] <times> total dollar amount needed for Ag Pool Administration.
8F	**Ag Pool SY Reallocation - AF/OBMP** Party Ag Pool reallocation [8D] <divided by> Total Ag Pool Reallocation [8D Total] <times> total dollar amount needed for Ag Pool OBMP.
8G	**Replenishment Assessments - AF/15%** For Parties participating in the 85/15 Rule: Percentage of total 85/15 participant production <times> required credit amount. Copied from Page 25.1.
8H	**Replenishment Assessments - AF/85%** For parties participating in the 85/15 Rule: Total volume overproduced [10L] <times> 85% of the replenishment rate.
8I	**Replenishment Assessments - AF/100%** For parties not participating in the 85/15 Rule: Total volume overproduced [10M] <times> 100% of the replenishment rate.
8J	**85/15 Water Transaction Activity - 15% Producer Credits** For parties participating in the 85/15 Rule: Credit amount equals 15% of the cost of the water purchased. Total to be credited copied from Page 23.1.
8K	**85/15 Water Transaction Activity - 15% Pro-rated Debits** For parties participating in the 85/15 Rule: Percentage of total 85/15 participant production <times> required credit amount. Copied from Page 25.1.
8L	**CURO Adjustment** Monetary amount needed (or to be credited) for each Party's Cumulative Unmet Replenishment Obligation (CURO). Calculated on Page 17.1.
8M	**ASSESSMENTS DUE - Total Production Based** Total fees assessed based on Party production. [8B] + [8C] + [8E] + [8F] + [8G] + [8H] + [8I] + [8J] + [8K] + [8L].
8N	**ASSESSMENTS DUE - Pomona Credit** Debit amount to Pomona <times> -1 <times> percent share of Operating Safe Yield [10A].
8O	**ASSESSMENTS DUE - Recharge Debt Payment** Total recharge debt payment <times> percent share of Operating Safe Yield [10A].
8P	**ASSESSMENTS DUE - Recharge Improvement Project** Total Recharge Improvement Project <times> Percent Share of Operating Safe Yield [10A].

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Assessment Package References and Definitions

Column	Title Description
8Q	**ASSESSMENTS DUE - RTS Charges** Annual Readiness to Serve charges for water purchased in prior years.
8R	**ASSESSMENTS DUE - Other Adjustments** Used as necessary for any other monetary adjustments needed to the Assessment Package.
8S	**ASSESSMENTS DUE - DRO** Total assessments due for Desalter Replenishment. Copied from [21L].
8T	**ASSESSMENTS DUE - Total Due** Total assessments. [8M] + [8N] + [8O] + [8P] + [8Q] + [8R] + [8S].
9A	**Physical Production** Fiscal year physical production by each Party.
9B	**Voluntary Agreements (w/ Ag)** Total of water provided to Agricultural Pool Parties.
9C	**Assignments (w / Non-Ag)** Total of water provided to Non-Agricultural Pool Parties.
9D	**Other Adjustments** Total of water received from, or provided to, another Appropriator. Also includes production off-sets.
9E	**Actual FY Production (Assmnt Pkg Column 10I)** Total adjusted production for the fiscal year. [9A] + [9B] + [9C] + [9D].
10A	**Percent of Operating Safe Yield** The Party's yearly percentage of Operating Safe Yield.
10B	**Carryover Beginning Balance** The beginning balance in each Annual Account. This number carries forward from the ending balance in the previous period Assessment Package.
10C	**Prior Year Adjustments** This number reflects the adjusted production rights from a previous Assessment Package, in the event that corrections are needed.
10D	**Assigned Share of Operating Safe Yield** The Party's yearly volume of Operating Safe Yield.
10E	**Net Ag Pool Reallocation** Reallocation of Ag Pool Safe Yield. Copied from [16E]. The calculations that lead to this are made on Page 16.1.
10F	**Water Transaction Activity** Water transactions. Copied from [14E]. The calculations that lead to this are made on Page 14.1.
10G	**Other Adjustments** This number reflects adjusted production rights, in the event that corrections are needed.
10H	**Annual Production Right** Current Year Production Right. [10B] + [10C] + [10D] + [10E] + [10F] + [10G].
10I	**Actual Fiscal Year Production** Fiscal year production, including Assignments and Voluntary Agreements, from CBWM's production system (as verified by each Party on their Water Activity Report). Includes a sub note subtracting Desalter production.
10J	**Storage and Recover Program(s)** Total exchanges for the period (July 1 - June 30) including MZ1 forbearance and DYY deliveries (as reported to CBWM by IEUA and TVMWD and as verified by each Party on their Water Activity Report). A DYY in-lieu "put" is shown as a positive number and a DYY "take is shown as a negative number.
10K	**Total Production and Exchanges** Actual production [10I] <plus> Storage and Recovery exchanges [10J]. Includes a sub note subtracting Desalter production. Also known as Assessable Production.

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Assessment Package References and Definitions

Column	Title Description
10L	**Net Over-Production - 85/15%** For 85/15 Rule participants: Production rights [10H] <minus> total production and exchanges [10K], equaling less than zero.
10M	**Net Over-Production - 100%** For non-85/15 Rule participants: Production rights [10H] <minus> total production and exchanges [10K], equaling less than zero. Includes a sub note subtracting Desalter production.
10N	**Under Production Balances - Total Under-Produced** Production rights [10H] <minus> total production and exchanges [10K], equaling more than zero.
10O	**Under Production Balances - Carryover: Next Year Begin Bal** Either total under-produced [10N] or share of Operating Safe Yield [10D], whichever is less.
10P	**Under Production Balances - To Excess Carryover Account** Total under produced [10N] <minus> Carryover to next year [10O], equaling more than zero.
11A	**Excess Carry Over Account (ECO) - Beginning Balance** The beginning balance in each ECO account. This carries forward from the ending balance in the previous period Assessment Package.
11B	**Excess Carry Over Account (ECO) - 0.07% Storage Loss** Beginning balance [11A] <times> -0.0007.
11C	**Excess Carry Over Account (ECO) - Transfers To / (From)** Total of water transferred to and from ECO and the Annual Account. Also includes Desalter Replenishment Obligation transfers.
11D	**Excess Carry Over Account (ECO) - From Supplemental Storage** Total of water transferred to and from Local Supplemental Storage accounts, as shown on Page 12.1.
11E	**Excess Carry Over Account (ECO) - From Under-Production** Total of water transferred from the Annual Account due to under production. Copied from [10P].
11F	**Excess Carry Over Account (ECO) - Ending Balance** The current balance in each ECO account. [11A] + [11B] + [11C] + [11D] + [11E].
12A	**Recharged Recycled Account - Beginning Balance** The beginning balance in each Recharged Recycled Account. This number carries forward from the ending balance in the previous period Assessment Package.
12B	**Recharged Recycled Account - 0.07% Storage Loss** Beginning balance [12A] <times> -0.0007.
12C	**Recharged Recycled Account - Transfers To / (From)** Total recharged recycled water credited to each Party for the year, as provided by IEUA. Also includes Desalter Replenishment Obligation transfers.
12D	**Recharged Recycled Account - Transfer to ECO Account** Total of water transferred to the ECO Account, as shown on Page 11.1.
12E	**Recharged Recycled Account - Ending Balance** The current balance in each Recharged Recycled account. [12A] + [12B] + [12C] + [12D].
12F	**Quantified (Pre 7/1/2000) Account - Beginning Balance** The beginning balance in each Quantified Supplemental Account. This number carries forward from the ending balance in the previous period Assessment Package.
12G	**Quantified (Pre 7/1/2000) Account - 0.07% Storage Loss** Beginning balance [12F] <times> -0.0007.
12H	**Quantified (Pre 7/1/2000) Account - Transfers To / (From)** Total of water transferred to and from the Annual Account. Also includes Desalter Replenishment Obligation transfers.
12I	**Quantified (Pre 7/1/2000) Account - Transfer to ECO Account** Total of water transferred to the ECO Account, as shown on Page 11.1.

Assessment Year 2021-2022 (Production Year 2020-2021)

Assessment Package References and Definitions

Column	Title Description
12J	**Quantified (Pre 7/1/2000) Account - Ending Balance** The current balance in each Quantified Supplemental account. [12F] + [12G] + [12H] + [12I].
12K	**New (Post 7/1/2000) Account - Beginning Balance** The beginning balance in each New Supplemental Account. This number carries forward from the ending balance in the previous period Assessment Package.
12L	**New (Post 7/1/2000) Account - 0.07% Storage Loss** Beginning balance [12K] <times> -0.0007.
12M	**New (Post 7/1/2000) Account - Transfers To / (From)** Total of water transferred to and from the Annual Account. Also includes Desalter Replenishment Obligation transfers.
12N	**New (Post 7/1/2000) Account - Transfer to ECO Account** Total of water transferred to the ECO Account, as shown on Page 11.1.
12O	**New (Post 7/1/2000) Account - Ending Balance** The current balance in each New Supplemental Account. [12K] + [12L] + [12M] + [12N].
12P	**Combined - Ending Balance** The combined amount in all supplemental storage accounts [12E] + [12J] + [12O].
13A	**Dedicated Replenishment - Beginning Balance** The beginning balances in each Dedicated Replenishment account. These numbers carry forward from the ending balances in the previous period Assessment Package.
13B	**Dedicated Replenishment - Water Purchases** Where applicable, the total of water purchased by each Dedicated Replenishment account.
13C	**Dedicated Replenishment - Transfers To** Where applicable, the total of water transferred to each Dedicated Replenishment account. Includes transfers from Exhibit "G" Section 10 Form A, and transfers from the Annual Account.
13D	**Dedicated Replenishment - Transfers From** Total of water transferred from each Dedicated Replenishment account. Amounts in this column goes to column [21D] on page 21.1.
13E	**Dedicated Replenishment - Ending Balance** The current balances in each Dedicated Replenishment account. [13A] + [13B] + [13C] + [13D].
13F	**Storage and Recovery - Beginning Balance** The beginning balance in the Storage and Recovery (DYY) Account. This number carries forward from the ending balance in the previous period Assessment Package.
13G	**Storage and Recovery - Storage Loss** Beginning balance [13F] <times> -0.0007.
13H	**Storage and Recovery - Transfers To** Total of water transferred to the Storage and Recovery Account (“puts”).
13I	**Storage and Recovery - Transfers From** Total of water transferred from the Storage and Recovery Account (“takes”).
13J	**Storage and Recovery - Ending Balance** The current balance in the Storage and Recovery Account. [13F] + [13G] + [13H] + [13I].
14A	**Water Transactions - Assigned Rights** Total of assigned transactions for this period, including annual water transfers/leases between Appropriators and/or from Appropriators to Watermaster for replenishment purposes, and also the Exhibit “G” physical solution transfers from the Non-Ag Pool.
14B	**Water Transactions - General Transfer** Total of water transfers between Parties for this period.
14C	**Water Transactions - Transfers (To) / From ECO Account** Total of water transferred between the Annual Account and ECO Account.

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Assessment Package References and Definitions

Column	Title Description
14D	**Water Transactions - Transfers (To) Desalter Replenishment** Total of water transferred from the ECO Account to the Desalter Replenishment Account.
14E	**Water Transactions - Total Water Transactions** Total water transactions. [14A]+ [14B] + [14C] + [14D]. This column is used to populate [10F].
15A	**Prior Conversion** Prior Land Use Conversion in acre-feet.
15B	**Conversion @ 1.3 af/ac - Acres** Converted parcels in acres at 1.3 acre-feet per acre.
15C	**Conversion @ 1.3 af/ac - Acre-Feet** Converted parcels in acre-feet at 1.3 acre-feet per acre. [15B] <times> 1.3.
15D	**Total Prior to Peace Agrmt Converted AF** Total Land Use Conversion in acre-feet prior to the Peace Agreement. [15A] + [15C].
15E	**Conversion @ 2.0 af/ac - Acres** Converted parcels in acres at 2.0 acre-feet per acre.
15F	**Conversion @ 2.0 af/ac - Acre-Feet** Converted parcels in acre-feet at 2.0 acre-feet per acre. [15E] <times> 2.0.
15G	**Total Land Use Conversion Acre-Feet** Total Land Use Conversion in acre-feet for each Party. [15D] + [15F].
16A	**% Share of Operating Safe Yield** The Party's yearly percentage of Operating Safe Yield. Copied from [10A].
16B	**Reallocation of Agricultural Pool Safe Yield - Safe Yield Reduction** The Party's percent share of Operating Safe Yield [16A] multiplied by 5,000.
16C	**Reallocation of Agricultural Pool Safe Yield - Land Use Conversions** Total land use conversions claimed on Page 15.1 (as verified by each Party on their Water Activity Report). Copied from [15G].
16D	**Reallocation of Agricultural Pool Safe Yield - Early Transfer** The remaining Agricultural Pool Safe Yield (82,800 <minus> Agricultural Pool Production <minus> Safe Yield Reduction <minus> Land Use Conversion) multiplied by percent share of Operating Safe Yield [16A].
16E	**Reallocation of Agricultural Pool Safe Yield - Total Ag Pool Reallocation** Each Party's Agricultural Pool Reallocation. [16B] + [16C] + [16D]. This column is used to populate [10E].
17A	**Outstanding Obligation (AF)** The amount of obligation carried over from prior Assessment Package(s) that were not met due to various reasons, including but not limited to MWD not having replenishment water available to purchase.
17B	**Fund Balance ($)** The amount of money collected or owed for replenishment assessments from prior Assessment Package(s).
17C	**Outstanding Obligation ($)** The amount of money that each Party owes or is credited based on current replenishment rate. [17A] <times> [CURRENT RATE] <minus> [17B].
17D	**AF Production and Exchanges** Each Party's total production and exchanges. Copied from [10K].
17E	**85/15 Producers** The total production and exchanges of 85/15 Producers only.
17F	**Percent** The percentage of each 85/15 Producer's total production and exchanges [17E] divided by the sum of [17E].

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Assessment Package References and Definitions

Column	Title Description
17G	**15%** If an 85/15 Producer, then the 85/15 Producers' total Outstanding Obligation ($) at 15%, multiplied by their production and exchanges percentage. [17C] total of 85/15 Producers <times> 15% <times> [17F].
17H	**85%** If an 85/15 Producer, then the Outstanding Obligation ($) at 85%.
17I	**100%** If not an 85/15 Producer, then the Outstanding Obligation ($) at 100%.
17J	**Total** The total CURO for the year. [17G] + [17H] + [17I].
18A	**Desalter Production - Pre-Peace II Desalter Production** Production from the Pre-Peace II Desalter Wells.
18B	**Desalter Production - Peace II Desalter Expansion Production** Production from the Peace II Desalter Expansion Wells.
18C	**Desalter Production - Total** The combined production from all Desalter Wells. [18A] + [18B].
18D	**Desalter Replenishment - Desalter (aka Kaiser) Account PIIA, 6.2 (a)(i)** Credit applied to the total Desalter Production from the Kaiser account.
18E	**Desalter Replenishment - Paragraph 31 Settlement Agreements Dedication PIIA, 6.2(a)(ii)** Credit applied to the total Desalter Production from "dedication of water from the Overlying (Non-Agricultural) Pool Storage Account or from any contribution arising from an annual authorized Physical Solution Transfer in accordance with amended Exhibit G to the Judgment."
18F	**Desalter Replenishment - "Leave Behind" Losses PIIA, 6.2(a)(iv)** Credit applied to the total Desalter Production from "any declared losses from storage in excess of actual losses enforced as a "Leave Behind"".
18G	**Desalter Replenishment - Safe Yield Contributed by Parties PIIA, 6.2(a)(v)** Credit applied to the total Desalter Production from "Safe Yield that may be contributed by the parties."
18H	**Desalter Replenishment - Controlled Overdraft / Re-Op, PIIA, 6.2(a)(vi) - Allocation to Pre-Peace II Desalters** The 225,000 AF portion of the 400,000 AF Controlled Overdraft that was originally allocated to the Pre-Peace II Desalter production.
18I	**Desalter Replenishment - Controlled Overdraft / Re-Op, PIIA, 6.2(a)(vi) - Allocation to All Desalters** The 175,000 AF portion of the 400,000 AF Controlled Overdraft that was originally allocated to the Peace II Desalter Expansion production but is now allocated to all Desalter production per set schedule.
18J	**Desalter Replenishment - Controlled Overdraft / Re-Op, PIIA, 6.2(a)(vi) - Balance** The remaining balance of the 400,000 AF Controlled Overdraft.
18K	**Desalter Replenishment - Appropriative Pool DRO Contribution PIIA, 6.2(b)(ii)** The 10,000 AF contribution to the Desalter Replenishment Obligation by the Appropriative Pool.
18L	**Desalter Replenishment - Non-Ag OBMP Assessment (10% Haircut) PIIA, 6.2(b)(i)** The 10% of the Non-Agricultural Pool Safe Yield used to offset the total Desalter Replenishment Obligation beginning with production year 2016/2017.
18M	**Remaining Desalter Replenishment Obligation PIIA, 6.2(b)(iii)** Total Desalter Production minus Desalter Replenishment. [18C] - [18D] - [18E] - [18F] - [18G] - [18H] - [18I] - [18K] - [18L].
19A	**Percent of Operating Safe Yield** The Party's yearly percentage of Operating Safe Yield. Copied from [10A].
19B	**Land Use Conversions** Total Land Use Conversion in acre-feet for each Party. Copied from [15G].
19C	**Percent of Land Use Conversions** Each Party's pro rata share of Land Use Conversions [19B] from the total of [19B].

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Assessment Package References and Definitions

Column	Title Description
19D	**85% DROC Based on Percent OSY** Each Party's share of the 10,000 AF Desalter Replenishment Obligation based on OSY. 10,000 <times> 0.85 <times> [19A].
19E	**15% DROC Based on Percent of LUC** Each Party's share of the 10,000 AF Desalter Replenishment Obligation based on Percent of Land Use Conversions. 10,000 <times> 0.15 <times> [19C].
19F	**Total Desalter Replenishment** Each Party's share of the 10,000 AF Desalter Replenishment Obligation. [19D] + [19E].
20A	**Assigned Share of Operating Safe Yield** The Party's yearly volume of Operating Safe Yield. Copied from [10D].
20B	**Physical Production Adjustment Calculation - Physical Production** Fiscal year physical production by each Party. Copied from [9A].
20C	**Physical Production Adjustment Calculation - 50% of Voluntary Agreements with Ag** Total of water provided to Agricultural Pool Parties multiplied by 50%. [9B] <times> 0.50.
20D	**Physical Production Adjustment Calculation - Assignments with Non-Ag** Total of water provided to Non-Agricultural Pool Parties. Copied from [9C].
20E	**Physical Production Adjustment Calculation - Storage and Recovery Programs** Total exchanges for the period (July 1 - June 30) including MZ1 forbearance and DYY deliveries (as reported to CBWM by IEUA and TVMWD and as verified by each Party on their Water Activity Report). Copied from [10J].
20F	**Physical Production Adjustment Calculation - Other Adjustments** Total of water received from, or provided to, another Appropriator. Also includes production off-sets. Copied from [9D] but does not include production adjustments to prevent a negative annual production to a Party.
20G	**Physical Production Adjustment Calculation - Total Adjusted Production** Each Party's Adjusted Physical Production. [20B] + [20C] + [20D] + [20E] + [20F].
20H	**RDRO Calculation - Total Production and OSY Basis** The sum of each Party's Adjusted Physical Production and Assigned Share of Operating Safe Yield. [20A] + [20G].
20I	**RDRO Calculation - Percentage** The percentage of each Party's Adjusted Physical Production and Assigned Share of Operating Safe Yield basis. [20H] divided by the sum of [20H].
20J	**RDRO Calculation - Individual Party RDRO** Each Party's pro rata share of the Remaining Desalter Replenishment Obligation. [20I] <times> Total RDRO.
21A	**Desalter Replenishment Obligation in AF - Desalter Replenishment Obligation Contribution (DROC)** Each Party's share of the 10,000 AF Desalter Replenishment Obligation Contribution. Copied from [19F].
21B	**Desalter Replenishment Obligation in AF - Remaining Desalter Replenishment Obligation (RDRO)** Each Party's pro rata share of the Remaining Desalter Replenishment Obligation. Copied from [20J].
21C	**Desalter Replenishment Obligation in AF - Total Desalter Replenishment Obligation** The sum of Desalter Replenishment Obligation Contribution, and Remaining Desalter Replenishment Obligation. [21A] + [21B].
21D	**Total DRO Fulfillment Activity - Transfer from Dedicated Replenishment Account** Total of water transferred from Desalter Dedicated Replenishment Account to satisfy the desalter replenishment obligation.
21E	**Total DRO Fulfillment Activity - Transfer from Excess Carry Over Storage Account** Total of water transferred from Excess Carry Over Storage Account to satisfy the desalter replenishment obligation.
21F	**Total DRO Fulfillment Activity - Transfer from Recharged Recycled Storage Account** Total of water transferred from Recharged Recycle Storage Account to satisfy the desalter replenishment obligation.
21G	**Total DRO Fulfillment Activity - Transfer from Quantified Storage Account** Total of water transferred from Quantified Storage Account to satisfy the desalter replenishment obligation.

Assessment Year 2021-2022 (Production Year 2020-2021)

Assessment Package References and Definitions

Column	Title Description
21H	**Total DRO Fulfillment Activity - Transfer from Post 7/1/2000 Storage Account** Total of water transferred from Post 7/1/2000 Storage Account to satisfy the desalter replenishment obligation.
21I	**Total DRO Fulfillment Activity - Replenishment Water Purchase** Total of water purchased to satisfy the desalter replenishment obligation.
21J	**Total DRO Fulfillment Activity - Total Transfers and Water Purchases** The sum of all transfers and purchases to satisfy the desalter replenishment obligation. [21D] + [21E] + [21F] + [21G] + [21H] + [21I].
21K	**Assessments - Residual DRO (AF)** Total residual Desalter Replenishment Obligation after transfers and purchases. [21C] + [21J].
21L	**Assessments - Assessments Due On Residual DRO ($)** Total assessments due for Desalter Replenishment. [21K] <times> [Current Replenishment Rate]. This column is used to populate [8S].
26A	**FY 2016/2017 Water Purchases - Purchased Water in AF - 20160623 - RO** The amount of water purchased to satisfy the accumulated replenishment obligation through the end of production year 2014/15. Water was delivered in October 2016.
26B	**FY 2016/2017 Water Purchases - Purchased Water in AF - 20160623 - DRO** The amount of water purchased to be used towards the Desalter Replenishment Obligation. Water was delivered in October 2016.
26C	**FY 2016/2017 Water Purchases - Purchased Water in AF - 20161216 - DRO** The amount of water purchased to be used towards the Desalter Replenishment Obligation. Water was delivered in December 2016.
26D	**FY 2016/2017 Water Purchases - Purchased Water in AF - 20170418 - RO** The amount of water purchased to satisfy production year 2015/16 replenishment obligation. Water was delivered in April 2018.
26E	**FY 2016/2017 Water Purchases - Purchased Water in AF - 85/15 Breakdown - AF @ 100%** The amount of water purchased subject to 100% RTS rate. This applies to: DRO water; RO water of non-85/15 Pool 3 producers; and RO water of Pool 2 producers. 1) Pool 3, 85/15 Ineligible: [26A] + [26B] + [26C] + [26D]. 2) Pool 3, 85/15 Eligible: [26B] + [26C]. 3) Pool 2: [26A] + [26D].
26F	**FY 2016/2017 Water Purchases - Purchased Water in AF - 85/15 Breakdown - AF @ 85/15** The amount of water purchased subject to the 85/15 Rule. This applies to RO water of 85/15 Pool 3 producers. 1) Pool 3, 85/15 Eligible: [26A] + [26D].
26G	**FY 2016/2017 Water Purchases - Purchased Water in AF - 85/15 Breakdown - AF Total** Total water purchased by each Appropriative Pool or Non-Agricultural Pool Party. [26E] + [26F].
26H	**FY 2016/2017 Water Purchases - 2015/16 Prod & Exch From 85/15 Producers - Acre-Feet** Total production and exchanges of 85/15 Producers from fiscal year 2015/16. This is the basis of the 85/15 Rule for water purchased in fiscal year 2016/17.
26I	**FY 2016/2017 Water Purchases - 2015/16 Prod & Exch From 85/15 Producers - Percent** The percentage of each 85/15 Producer's total production and exchanges. [26H] divided by the sum of [26H].
26J	**FY 2016/2017 Water Purchases - Year 3 RTS Charges - 15%** If an 85/15 Producer, then each 85/15 Producer's share of the total RTS charge of 85/15 eligible water. "Total RTS Charge" <divided by> "Total Water Purchased" <times> 0.15 <times> [26F] Total <times> [26I].
26K	**FY 2016/2017 Water Purchases - Year 3 RTS Charges - 85%** If an 85/15 Producer, then their RTS charge of 85/15 eligible water at 85%. "Total RTS Charge" <divided by> "Total Water Purchased" <times> [26F] <times> 0.85.
26L	**FY 2016/2017 Water Purchases - Year 3 RTS Charges - 100%** RTS charge on all water not subject to the 85/15 Rule. "Total RTS Charge" <divided by> "Total Water Purchased" <times> [26E].
26M	**FY 2017/2018 Water Purchase - Purchased Water in AF - 20171211 - RO** The amount of water purchased to satisfy replenishment obligations through the end of production year 2014/15. Water was delivered in December 2017.

Assessment Year 2021-2022 (Production Year 2020-2021)

Assessment Package References and Definitions

Column	Title Description
26N	**FY 2017/2018 Water Purchase - Purchased Water in AF - 20171211 - DRO** The amount of water purchased to be used towards the Desalter Replenishment Obligation. Water was delivered in December 2017.
26O	**FY 2017/2018 Water Purchase - 2016/17 Prod & Exch From 85/15 Producers - Acre-Feet** Total production and exchanges of 85/15 Producers from fiscal year 2016/17. This is the basis of the 85/15 Rule for water purchased in fiscal year 2017/18.
26P	**FY 2017/2018 Water Purchase - 2016/17 Prod & Exch From 85/15 Producers - Percent** The percentage of each 85/15 Producer's total production and exchanges. [26O] divided by the sum of [26O].
26Q	**FY 2017/2018 Water Purchase - Year 2 RTS Charges - 15%** If an 85/15 Producer, then each 85/15 Producer's share of the total RTS charge of 85/15 eligible water in [26M].
26R	**FY 2017/2018 Water Purchase - Year 2 RTS Charges - 85%** If an 85/15 Producer, then their RTS charge of 85/15 eligible water in [26M] at 85%.
26S	**FY 2017/2018 Water Purchase - Year 2 RTS Charges - 100%** RTS charge on all water in {26N] and water not subject to the 85/15 Rule in [26M].
26T	**TOTAL RTS CHARGES** Total RTS Charge. [26J] + [26K] + [26L] + [26Q] + [26R] + [26S].

II. BUSINESS ITEMS

E. RESOLUTION TO LEVY REPLENISHMENT AND ADMINISTRATIVE ASSESSMENTS FOR FISCAL YEAR 2021/22

CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, CA 91730
Tel: 909.484.3888 Fax: 909.484.3890 www.cbwm.org

PETER KAVOUNAS, P.E.
General Manager

STAFF REPORT

DATE: November 18, 2021

TO: Advisory Committee and Board Members

SUBJECT: Resolution to Levy Replenishment and Administrative Assessments for Fiscal Year 2021/22 (Based on Production Year 2020/21) – (Business Item II.E.)

SUMMARY

Issue: A resolution is required for the Chino Basin Watermaster to levy administrative, special project, and replenishment assessments for Fiscal Year 2021/22.

Recommendation:
Advisory Committee: Recommend to the Watermaster Board to adopt Resolution 2021-05 as presented.

Board Members: Adopt Resolution 2021-05 as presented.

Financial Impact: Collection of the assessments according to the Assessment Package creates the funds that are used during the current fiscal year for budgeted expenses.

Future Consideration
Advisory Committee – November 18, 2021: Advice and assistance
Watermaster Board – November 18, 2021: Approval [Within WM Duties and Powers]

ACTIONS:
Appropriative Pool – November 10, 2021: Offered advice that the data used in the Resolution should be consistent with the approved Assessment Package.
Non-Agricultural Pool – November 10, 2021: Offered advice and assistance
Agricultural Pool – November 10, 2021: No advice or assistance provided
Advisory Committee – November 18, 2021:
Watermaster Board – November 18, 2021:

BACKGROUND

Watermaster issues an Assessment Package annually based on the previous production year (July 1 through June 30). Production information is generally collected quarterly, and other necessary information is collected annually. The Assessment Package creates funds that are used during the current fiscal year for budgeted expenses. Assessments are based on the approved budget divided by the total assessable production in the Basin. Watermaster is endowed with powers to levy and collect administrative, special project, and replenishment assessments necessary to maintain water levels and to cover the cost of administering the Chino Basin Restated Judgment. A resolution of the Watermaster Board is needed to levy the assessments and issue invoices to parties. Pursuant to the Restated Judgment, each party has thirty days from the date of invoice to remit the amount of payment for assessments due. After that date, interest will accrue on that portion which was due as provided for in Section 55(c) of the Restated Judgment.

DISCUSSION

The draft Fiscal Year 2021/22 Assessment Package is being considered for approval this month under Business Item II.C. and Resolution 2021-05 has been drafted for the Watermaster Board's consideration

If Resolution 2021-05 is approved through the Watermaster process in November 2021, the invoices will be emailed in late November and assessments will be due 30 days later.

ATTACHMENTS

1. Resolution 2021-05: A resolution of the Chino Basin Watermaster levying administrative, replenishment, and special project assessments for Fiscal Year 2021/22.

RESOLUTION 2021-05

A RESOLUTION OF THE CHINO BASIN WATERMASTER LEVYING ADMINISTRATIVE, REPLENISHMENT, AND SPECIAL PROJECT ASSESSMENTS FOR FISCAL YEAR 2021-2022

WHEREAS, the Chino Basin Watermaster was appointed on January 27, 1978, under Case No. RCVRS 51010 (formerly case No. SCV 164327) entitled Chino Basin Municipal Water District v. City of Chino, et al., with powers to levy and collect administrative and replenishment assessments necessary to maintain water levels and to cover the cost of administering the Chino Basin Judgment; and

WHEREAS, the Watermaster Advisory Committee approved and the Watermaster Board adopted the Fiscal Year 2021-2022 Budget on May 27, 2021 and subsequently amended on July 22, 2021, September 23, 2021, and October 28, 2021, to carry out the necessary Watermaster functions under the Judgment; and

WHEREAS, the parties named in this Judgment have pumped 1,823.7 acre-feet of water in excess of the operating safe yield, which is required to be replaced at the expense of the parties in accordance with the assessment formulas for the respective pools.

NOW, THEREFORE, BE IT RESOLVED that the Chino Basin Watermaster levies the respective assessments for each pool effective November 18, 2021 as shown on Exhibit "A" attached hereto.

BE IT FURTHER RESOLVED, that pursuant to the Judgment, each party has thirty (30) days from the date of invoice to remit the amount of payment for assessments due. After that date, interest will accrue on that portion which was due as provided for in Section 55 (c) of the Restated Judgment.

THE FOREGOING RESOLUTION was
ADOPTED by the Watermaster Board on the 18th day of November 2021.

By:_____
Chair – Watermaster Board

ATTEST:

_____
Secretary/Treasurer – Watermaster Board

Exhibit “A”
Resolution 2021-05

Summary of Assessments
Fiscal Year 2021-2022
Production Year 2020-2021

1. OVERLYING (NON-AGRICULTURAL) POOL

a.	2021-2022 Budget	$ 22.27	Per AF - Admin.
		$ 48.25	Per AF - OBMP
b.	Replenishment	$ 789.00	Per AF
c.	CURO	$ 404.12	Total

2. APPROPRIATIVE POOL

a.	Administration		
	1. 2021-2022 Budget	$ 22.27	Per AF - Admin.
		$ 48.25	Per AF - OBMP
	2. Ag Pool Reallocated		
		$ 7.80	Per AF - Admin.
		$ 16.91	Per AF - OBMP
b.	100% Net Replenishment	$ 789.00	Per AF
c.	15/85 Water Activity		
	15% Replenishment Assessments	$ 2,032.43	Total
	15% Water Transaction Activity	$629,915.47	Total
d.	CURO	$ 18,143.71	Total
e.	Pomona Credit	$ 66,667.00	Total
f.	Recharge Debt Payment	$529,029.00	Total
g.	Recharge Improvement Project	$ 0.00	Total

STATE OF CALIFORNIA)
) ss
COUNTY OF SAN BERNARDINO)

I, Bob Kuhn, Secretary/Treasurer of the Chino Basin Watermaster, DO HEREBY CERTIFY that the foregoing Resolution being No. 2021-05, was adopted at a regular meeting of the Chino Basin Watermaster Board on November 18, 2021 by the following vote:

AYES: 0

NOES: 0

ABSENT: 0

ABSTAIN: 0

CHINO BASIN WATERMASTER

Secretary

Date: November 18, 2021

CHINO BASIN WATERMASTER

III. REPORTS/UPDATES (Watermaster Board Only)

D. GENERAL MANAGER

5. ACWA Election of Officers

Members to Elect ACWA President, Vice President at Conference

The election to determine ACWA's President and Vice President for the 2022-'23 term is scheduled for Wednesday, Dec. 1, during ACWA's 2021 Fall Conference & Exhibition.

The ACWA Nominating Committee, headed by Chair Brent Hastey, has announced a slate that recommends current ACWA Vice President Pamela Tobin for ACWA President and current ACWA Region 10 Vice Chair Cathy Green for ACWA Vice President.

At its meeting on Sept. 24, the ACWA Board of Directors approved procedures whereby ACWA members will be able to participate and vote in person or virtually in the upcoming membership meeting and election. The in-person meeting will be held in Ballroom D-H of the Pasadena Convention Center. Virtual voting delegates will participate via Zoom. The session is scheduled to begin at noon.

Nominations from the floor will be accepted prior to the vote. ACWA Bylaws require that floor nominations and seconds be made by a member of the association and be supported by a resolution of the governing body of the member making and seconding such nomination. The member agency on whose board the nominee serves shall submit a resolution of support if they are not the agency making the floor nomination or second. The resolutions to facilitate floor nominations must be submitted to Clerk of the Board Donna Pangborn at donnap@acwa.com by close-of-business Wednesday, Nov. 24, 2021.

About the Candidates

Pamela Tobin has been a member of the San Juan Water District Board of Directors since 2004, including three terms as Board President. She also has served multiple terms as Chair of both the Sacramento Regional Water Authority (RWA) and the Sacramento Groundwater Authority and was the recipient of RWA's 2018 Distinguished Service Award.

She was elected Vice President of ACWA in 2019 after serving as Chair of the Region 4 Board in 2018-'19. Tobin chairs the Leadership to Leadership initiative, a virtual meeting series designed especially for member agency leadership to discuss emerging local issues with ACWA's leadership. She is actively involved in ACWA's regions and committees and currently serves as a member of ACWA JPIA's Executive Committee.

Beyond her water industry involvement, Tobin works as a realtor and property developer with more than 30 years of experience as a business owner.

Cathy Green was elected to the Orange County Water District (OCWD) Board of Directors in 2010 and was re-elected in 2012, 2016 and 2020. She was selected by the Board to serve as its President in 2015 and 2016. She currently serves as 1st Vice President, a position she previously held in 2013, 2014 and 2020.

Green has been actively involved in ACWA's Region 10 and various committee activities for the past nine years. She has served on ACWA's Board of Directors as the Chair or Vice Chair of the Region 10 Board since 2016 and ACWA's Executive Committee since 2020. Green also currently serves on ACWA's Water Quality and Energy Committees.

Beyond her water industry involvement, Green is a registered nurse and holds a degree in law. She has been active in civic leadership, serving on the City of Huntington Beach City Council 2002-2010, serving as mayor in 2003 and 2009. Green is also the recipient of many local, statewide, and national awards.

Voting Procedures

ACWA will be using a voting system called Live-Tally, which will allow voters to vote using a handheld keypad or online keypad (which can be accessed through any modern web browser on a computer, tablet or smart phone). **Voters must be present at the membership meeting, either in person or virtually, to vote.**

Member agencies must indicate their voting representative and alternate on the Voter Designation & Information Form. **The form must be submitted by Wednesday, Nov. 24.**

Members who desire to participate in the membership meeting virtually and vote electronically are required to sign and return the "Consent to Electronic Transmissions, Meetings & Voting Form" by Nov. 24, consistent with the California Corporations Code.

Additional information including candidate backgrounds, further election procedures, and the required voter designation & information form is available for members on the board election webpage at **www.acwa.com/boardelection.**

Questions

Questions about the election should be directed to ACWA Clerk of the Board Donna Pangborn at (916) 441-4545.

III. REPORTS/UPDATES (Advisory Committee Only)

E. INLAND EMPIRE UTILITIES AGENCY

1. MWD Update (Written)
2. State and Federal Legislative Reports (Written)
3. Community Outreach/Public Relations Report (Written)

CHINO BASIN WATERMASTER

ADVISORY COMMITTEE

November 18, 2021

INLAND EMPIRE UTILITIES AGENCY REPORTS

The following items are provided for receive and file.

- MWD Dry Year Yield Program Update
- Metropolitan Water District August Activities Report
- Water Supply Conditions
- State and Federal Legislative Reports
- Community Outreach/Public Relations Report

MWD Dry Year Yield Program Update

For the month of October, there was a 2,000 AF withdraw from the Dry Year Yield account by CVWD. There is a balance of 12,790.12 AF in the account.

DYY Account Balance (June 2017-Present)	
"PUTS"	
Recharged water	58,449.22
ASR injection	4,935.70
"TAKES"	
CVWD	48,094.80
Fontana Water Co.	2,500.00
TOTAL	*12,790.12*

	Month	Planned			Certified				
		Recharge	ASR	TAKES	Recharge	ASR	Losses	Basin Losses	TAKES***
FY 16/17	June	6,000	-	-	6,318.7	-	3.8	-	-
FY 17/18	July	6532	-	-	7,345.9	-	-	-	-
	August	6532	-	-	7,074.8	-	6.7	-	-
	September	6321	250	-	3,793.8	154.5	-	-	-
	October	2923	250	-	4,538.1	277.6	249.2	-	-
	November	1483	300	-	2,504.4	267.5	61.3	-	-
	December	1222	400	-	3,639.3	276.4	285.8	-	-
	January	1222	400	-	4,195.3	247.5	(86.0)	-	-
	February	1222	400	-	-	316.2	-	-	-
	March	1222	400	-	-	362.7	-	-	-
	April	1696	100	-	-	287.0	-	-	-
	May	4083	-	-	-	305.6	-	-	-
	June	6144	-	-	-	-	-	4.4	-
FY 18/19	May	-	-	-	-	-	-	-	-
	June	5000	350	-	4413.5	389.4	185.4		-
FY 19/20	July	6000	350	2548	4314.0	457.8	181.2	-	2421.1
	August	6000	350	2852	4803.9	434.2	201.8	-	2861.4
	September	5000	350	2206	2218.6	403.3	144.5	-	2695
	October	4000	350	1874	1842.5	277.3	105.8	-	2922.3
	November	2000	350	1280	1223.5	267.6	44.0	-	1995.0
	December	2000	350	971	1176.3	211.1	17.6	-	500
	January	-	-	844	491.7	0	7.4	-	-
	February	-	-	780	-	-	-	-	-
	March	-	-	1204	-	-	-	-	-
	April	-	-	1710	-	-	-	-	-
	May	-	-	1988	-	-	-	-	1500
	June	-	-	1743	-	-	-	32.2	2500
FY 20/21**	July	-	-		-	-	-	-	2700
	August	-	-		-	-	-	-	2500
	September	-	-		-	-	-	-	2500
	October***	-	-		-	-	-	-	5000
	November	-	-		-	-	-	-	0
	December	-	-		-	-	-	-	3500
	January	-	-		-	-	-	-	-
	February	-	-		-	-	-	-	-
	March	-	-		-	-	-	-	-
	April	-	-		-	-	-	-	2000
	May	-	-		-	-	-	-	2600
	June	-	-						2200
FY 21/22	July								2,800.00
	August								2,800.00
	September								2,600.00
	October								2,000.00
	November								
	December								
	January								
	February								
	March								
	April								
	May								
	June								
	Subtotal	*76,602.13*	*4,950.00*	*20,000.00*	*59,894.30*	*4,935.70*	*1,408.50*	*36.58*	*50,594.80*
DYY Account Total									**12,790.12**

*estimated, not currently certified
Note-- losses include ET losses at this time.
January 2018 CB-15 certification corrected to include an additional 213.8 AF for a net credit of 86 AF.
**June 2020 request was sent to all agencies to see if there was interest in voluntary withdrawals from the DYY account. CVWD and Fontana Water Co. responded. Opportunity for additional voluntary withdrawals will be offered to all agencies in March 2021.
*** DYY Takes are for CVWD unless otherwise specified. October 2020 includes 2,500 AF certified Take from Fontana Water Co.

Metropolitan Water District August Activities Report

Purpose:
This report summarizes key discussions held and actions taken at the Metropolitan Water District (MWD) Board committee meetings that occurred on October 11, 12, & 26.

Water Planning and Stewardship Committee:
Update on Water Surplus and Drought Management (Report/Presentation) (6a)

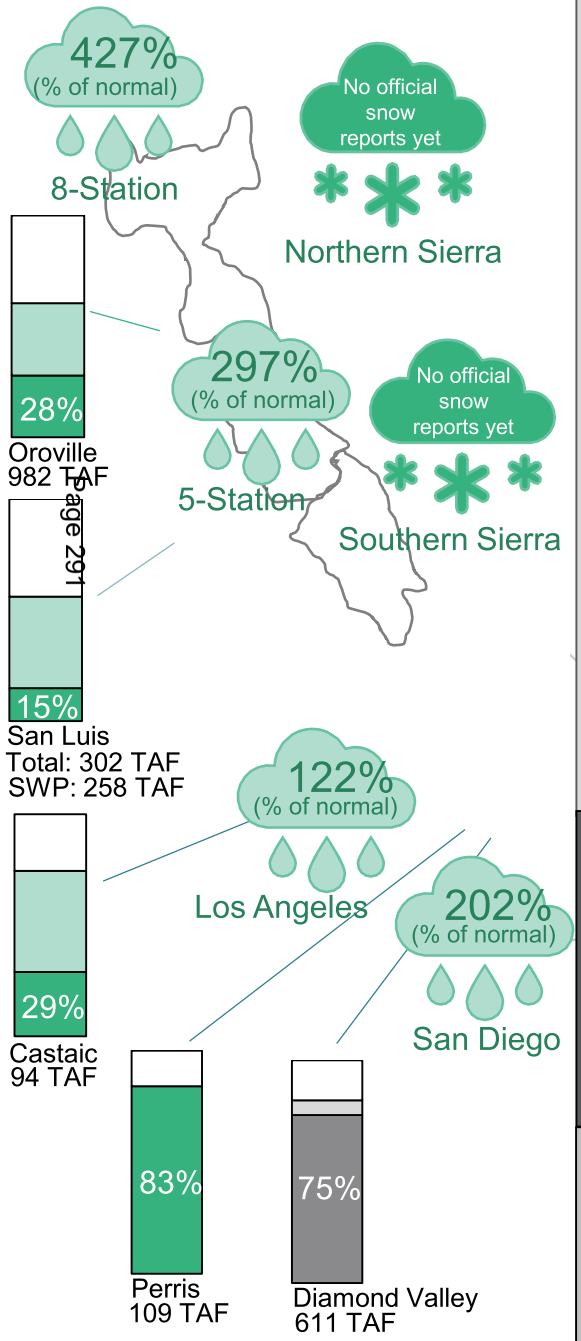
Overview of Allocation Plan (Presentation) (6b)

Colorado River Matters (Report) (7a)

Water Resource Management Manager's Report (Report) (7b) – DEFERRED DUE TO TIME

State Water Project Resources

SWP Table A – 5% - 95,575 AF



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WATER SUPPLY CONDITIONS REPORT

Water Year 2021-2022

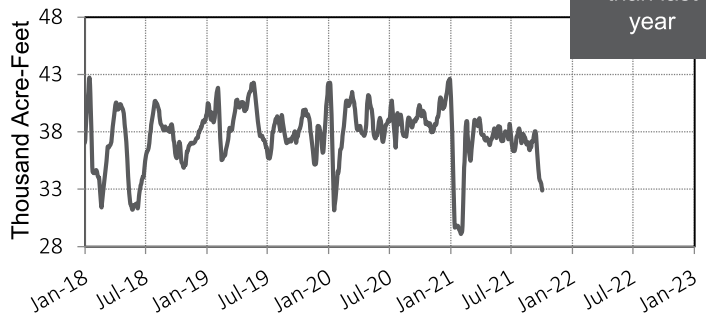
As of: November 01, 2021

Metropolitan Resources

Lake Skinner Storage

Capacity: 43.8 TAF

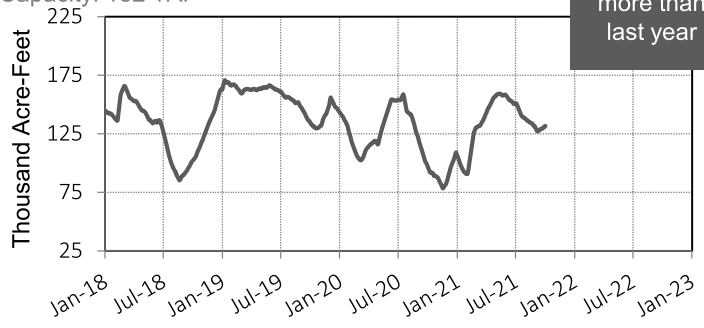
7 TAF less than last year



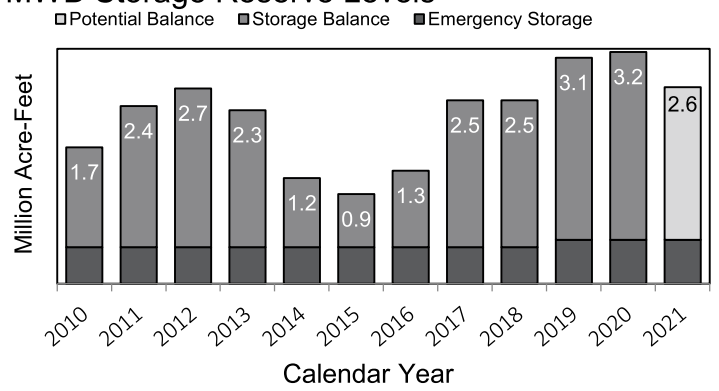
Lake Mathews Storage

Capacity: 182 TAF

36 TAF more than last year



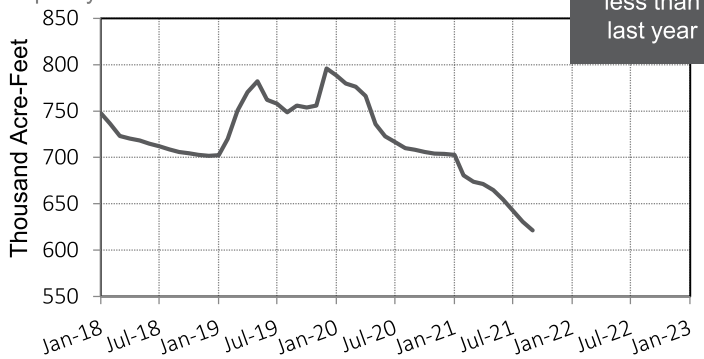
MWD Storage Reserve Levels



Diamond Valley Lake Storage

Capacity: 810 TAF

95 TAF less than last year



Highlights

- Water Year 2021-2022 started on October 1, 2021
- Lake Mead Surplus/Shortage table now includes average Metropolitan DCP expected contribution along with the probability of DCP contribution
- Percentage values for precipitation and snow might look exaggerated this early in the water year
- Period of “normal” is changing to 1991-2020.

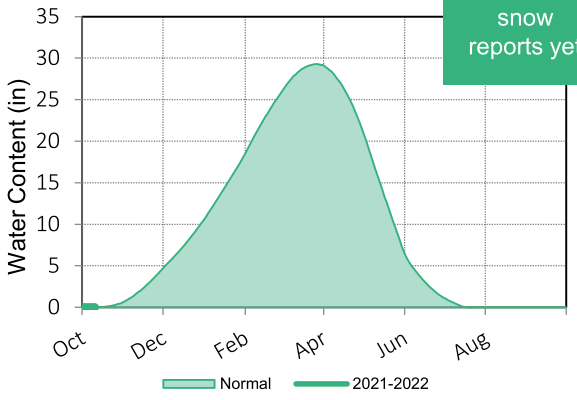
http://www.mwdh2o.com/WSCR

State Water Project Resources

As of: 11/01/2021

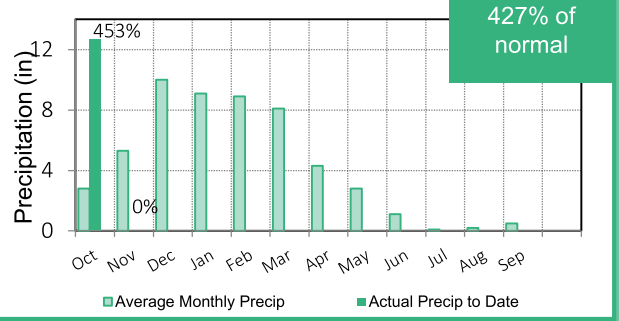
Northern Sierra Snowpack

No official snow reports yet



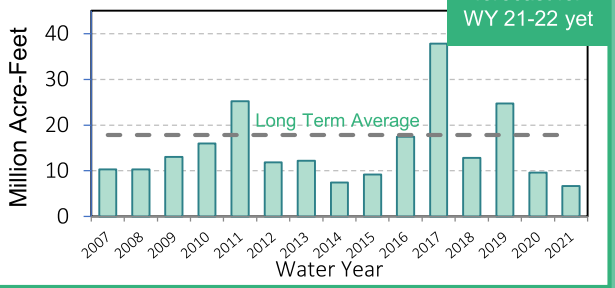
8 Station Index Precipitation

12.7 in 427% of normal



Sacramento River Runoff

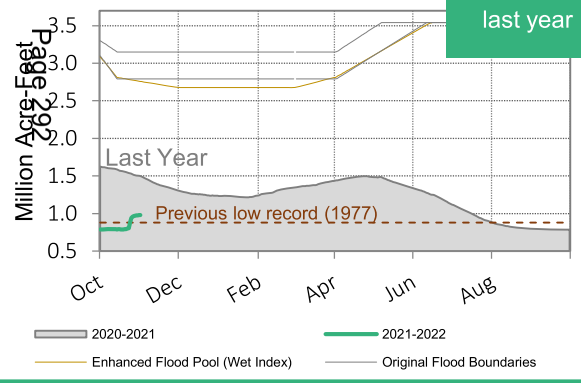
No official forecast for WY 21-22 yet



Oroville Reservoir Storage

Capacity: 3.54 MAF

519 TAF less than last year



Other SWP Supplies

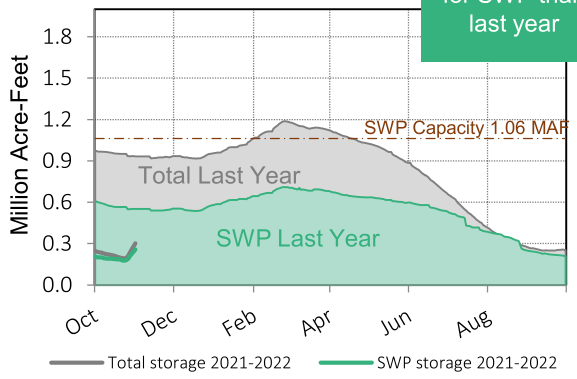
Calendar Year 2021

Carryover	207,000 AF
Transfer	30,000 AF (Est.)

San Luis Reservoir Storage

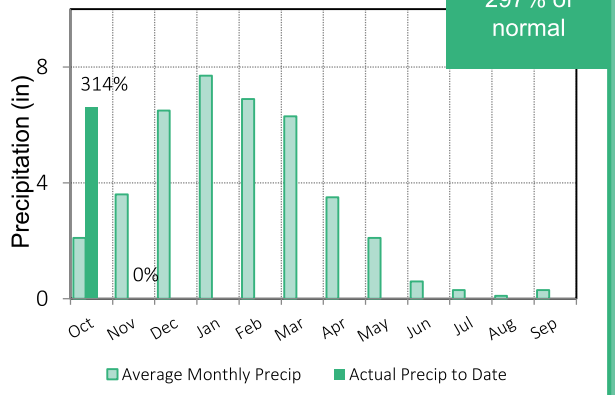
Capacity: 2.04 MAF

294 TAF less for SWP than last year



5 Station Index Precipitation

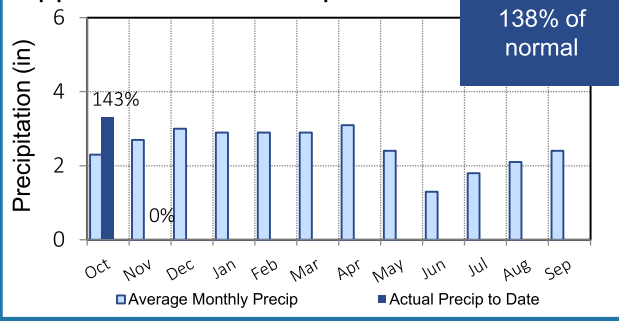
6.6 in 297% of normal



Colorado River Re

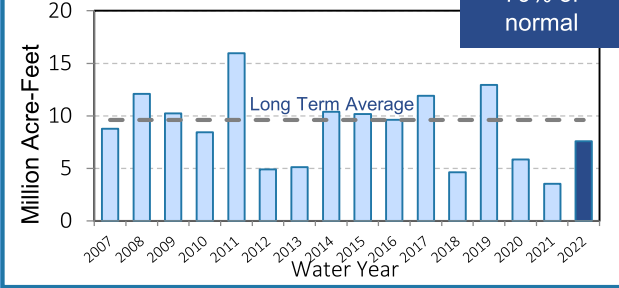
Upper Colorado Precipitation

3.3 in 138% of normal



Powell Unregulated Inflow

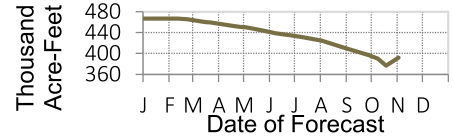
Forecast: 79% of normal



PVID/Yuma Agricultural Use

Annual Forecasted for 2021

Current Annual Forecast: 392 TAF



Projected Lake Mead ICS

Calendar Year 2021

Put (+) / Take (-)
-11,000 AF

Lake Mead Surplus/Shortage Outlook

	2022	2023	2024	2025	2026
Surplus	0%	0%	0%	0%	0%
Shortage	100%	94%	97%	100%	91%
Metropolitan DCP*		3% 180 TAF	66% 259 TAF	72% 282 TAF	63% 308 TAF

Likelihood based on results from the corrected August 2021 CRMMS in Ensemble Mode/CRSS model run. Includes DCP Contributions.

* Chance of required DCP contribution by Metropolitan with average contribution when needed

CALIFORNIA STRATEGIES, LLC

Date: October 29, 2021

To: Inland Empire Utilities Agency

From: John Withers, Jim Brulte

Re: California Strategies, LLC October 2021 Activity Report

1) This month Jim Brulte and John Withers met with senior staff via Microsoft teams on October 04th.

2) Ongoing discussion was held related to issues of interest to IEUA included:

   a) CBP/WSIP
      i) Significant interest from CVWD, FWC, and Pomona.
      ii) IEUA Board vote of 5-0 to move forward with planning with the State

   b) Regional Items
      i) Recent discussion on potential funding for septic to sewer conversions (DWR), JCSD intertie, and ongoing recycled water issues.

   c) IEUA Outreach
      i) Future meetings with member agency city managers will be scheduled.
      ii) City of Fontana staff changes were discussed. Phil Burum acting CM. TKE Engineering hired by city to assist with infrastructure issues.

   d) IEUA Director Reports
      i) Attended Annual Southern California Water Coalition Meeting with several senior staff and Directors.
      ii) IEUA BOD meeting 12/8 for election of officers and representative assignments.

MEMORANDUM

To: **IEUA Community and Legislative Affairs Committee**

From: **Letitia White, Jean Denton, Drew Tatum, and Sarah Persichetti**

Date: **October 29, 2021**

Re: **October Monthly Legislative Update**

Infrastructure Debate Continues as New Framework Proposed, Highway Fund Extended
President Biden presented Democratic lawmakers with a framework on a new $1.75 trillion social spending and climate package on Thursday, October 28 seeking to unify a fractured party behind the plan before he headed to Europe for an international climate conference later in the day.

Officials talked up the framework as including the largest expansion of health care coverage since the passage of the Affordable Care Act and said it would reduce premiums for more than 9 million Americans by an average of $600 per person annually.

It includes $150 billion in investments for affordable housing, extends the earned income tax credit and child tax credit for one year, provides funding for historically Black colleges and universities and raises the maximum Pell Grant.

But the framework does not include several key priorities for progressives that Biden also had advocated for.

Fact sheets and summaries provided by the White House made no mention of paid family leave. Democrats had hoped to include 12 weeks of paid family leave, before Biden last week acknowledged his goal had been trimmed to four weeks. It also omits free community college—another provision championed by progressives.

In the end, both stripped from the package as one of several concessions to Senator Joe Manchin (D-WV), one of two centrists who balked at the cost of a larger bill and a number of specific provisions favored by many House and Senate Democrats.

The bill also does not include the Clean Electricity Performance Program, which had been seen as the best way to reduce U.S. emissions, and it would not allow the government to negotiate with prescription drug companies on prices for Medicare, a high priority for Senator Bernie Sanders (I-VT).

The framework does not include several details, and one official acknowledged Biden was not outlining a final bill but that his framework would inform the legislative text to be written in the coming days.

President Biden sought to assure progressive Democrats that the framework for the social spending package — which includes funding for universal preschool, a child tax credit extension and an expansion of Medicare to include hearing, among other provisions — would get 50 votes in the Senate.

“We badly need a vote on both of these measures,” Biden said. “I don’t think it’s hyperbole to say that the House and Senate majorities and my presidency will be determined by what happens in the next week.”

Progressives remained unconvinced that the framework is enough of an assurance that the two centrist senators who’ve pushed to pare back the legislation — Senators Joe Manchin (D-WV) and Kyrsten Sinema (D-AZ) — won’t renege in some way.

However, Senator Manchin signaled later in the day on Thursday that he could support the $1.75 trillion price tag for Democrats' social spending plan, even as he hasn't said if he supports the overall framework deal.

"We negotiated a good number that we worked off of, and we're all dealing in a good faith," Manchin told reporters.

Asked if $1.75 trillion was too high, Manchin replied: "That was negotiated."

By mid-afternoon Thursday, the House posted the 1,684-page bill containing much of President Joe Biden’s social-spending plan, a hopeful sign that that measure could move quickly.

Earlier in the day on Thursday, Speaker Nancy Pelosi (D-CA) wanted to hold a floor vote on the bipartisan infrastructure bill to give President Biden a legislative victory as he left for the climate conference.

However, House progressives dug in on their threat to oppose the bipartisan infrastructure bill if Speaker Pelosi brings it to a vote before they go through legislative text of the separate, $1.75 trillion tax and spending package and are assured it could pass the Senate.

Congressional Progressive Caucus Chair Pramila Jayapal said members of her group “enthusiastically endorsed” the contours of Biden’s economic agenda unveiled Thursday. But progressives, she said, want to vote on both bills when the larger measure is ready.
“We are also committed to staying through the weekend” to finalize the legislation encompassing Biden’s tax and social-spending agenda, she said.

House Transportation and Infrastructure Chairman Peter DeFazio (D-OR) was among those leading the effort to convince members to vote for the bill. He sent a “Dear Colleague” letter Thursday morning to Democrats urging them to vote for the bipartisan framework which contains funding for the highway trust fund.

In his letter, Chairman DeFazio said that another short-term extension of highway funding -- such as the current one that expires at the end of the month -- is "highly disruptive to transportation project planning and delivery" by departments, and local governments.

At the end of the day when it was clear that there would not be a vote on the bipartisan package, the House passed yet another short-term extension of the highway funding through December 3 in a bipartisan vote of 358-59.

Before adjourning Thursday, the Senate agreed that a highway funding extension would be deemed passed by unanimous consent.

The latest highway extension adds yet another item that Congress has set to accomplish by December 3 – as a reminder, the debt ceiling extension, and government funding also are set to expire by that date.

Highway Trust Fund Cash May Buy Lawmakers Time on Infrastructure
The agency that oversees federal highway aid has enough money on hand to fund road programs through the rest of 2021, it told lawmakers after previously warning of a shortfall.

The announcement means lawmakers won't have to immediately transfer money into the Highway Trust Fund from the general fund of the Treasury as a long-term highway bill, which would provide an infusion into the fund, remains caught up in larger negotiations over Biden's domestic policy agenda.

The Federal Highway Administration is projecting the fund's highway account will end the calendar year with about $9.4 billion, according to a memo the agency sent on Wednesday, October 20 to Congress. The communication came as lawmakers faced an October 31 deadline to take action before a temporary extension of highway funding ran out again, which allowed the House and Senate to easily extend the highway authorities though December 3 without the need for additional funding transfers.

A bipartisan infrastructure bill (H.R. 3684) passed by the Senate in August would reauthorize surface transportation programs for five years and transfer $118 billion to the Highway Trust Fund. A House vote on the bill was delayed after opposition from progressive Democrats pushing to also pass a larger social spending package. The delay caused programs to lapse until President Joe Biden signed a 30-day extension (Public Law 117-44) on October 2.

The agency's update reflects an infusion of cash at the end of the fiscal year from the Treasury to the trust fund, which is the main source of federal financing for surface transportation programs. It receives revenue from the federal motor fuel taxes, which are inadequate to cover its spending, requiring lawmakers to periodically transfer money from the general fund.

Although the FHWA said a general fund transfer "may not be necessary through the end of the calendar year," it clarified that pandemic-related uncertainty and volatility could change the projection.

The agency estimated the Mass Transit Account won't need a general fund transfer in fiscal 2022, while the highway account will need an estimated $5.6 billion transfer through the end of the fiscal year.

Senate Passes American Rescue Plan Infrastructure Flexibility Legislation
On Tuesday, October 19, the Senate passed legislation, the State, Local, Tribal, and Territorial Fiscal Recovery, Infrastructure, and Disaster Relief Flexibility Act, that would make changes to how unspent covid relief funding from the American Rescue Plan (ARP) can be spent by states, local governments, tribes, and territorial governments by unanimous consent.

The legislation, spearheaded by Senators John Cornyn (R-TX) and Alex Padilla (D-CA), would make several categories of infrastructure investments and disaster relief eligible for unspent COVID-19 relief dollars. It also extends the deadline to utilize relief funding if budgeted for eligible infrastructure projects.

"Each region of the country has unique local challenges in responding to the COVID-19 pandemic. This bill will provide state, local, tribal, and territorial governments the flexibility they need to better use federal resources to care for and serve their residents. This will ultimately help strengthen our response to the continued fight against COVID," said Senator Padilla.

Given that the ARP made water, wastewater, and broadband infrastructure eligible for COVID funds, the State, Local, Tribal, and Territorial Fiscal Recovery, Infrastructure, and Disaster Relief Flexibility Act would provide additional flexibility for States, Tribes, and units of local government to spend their allocations of the Coronavirus State and Local Fiscal Recovery Funds.

It gives state and local officials additional flexibility to responsibly spend their own funds. There is a cap—the greater of $10 million or 30% of the funds—on how much of the COVID money can be spent on these new purposes (though the previous ARP set asides for water, wastewater, and broadband remain unrestricted).

The bill also allows these funds to be used to provide emergency relief from natural disasters and creates a process for local officials to decline funds if their jurisdictions did not suffer budget shortfalls during COVID, an option not currently available to them under the ARP.

Senate Releases Fiscal Year 2022 Appropriations Bills
On Monday, October 18, the Senate Appropriations Committee released draft versions of legislation to fund the government in fiscal year 2022.

As a reminder, the government is currently operating under a Continuing Resolution (CR) that expires on December 3. Senate Democrats are proposing $44.6 billion for the Interior Department, Environmental Protection Agency, and related agencies in fiscal 2022, slightly higher than the $43.4 billion measure the House passed this summer.

Nondefense programs in the nine bills would get a 13% increase, while defense programs would get a 5% increase. Republicans criticized the bigger increase for domestic programs compared to military spending, the end of key restrictions on abortion funding, cuts to the Department of Homeland Security, and a boost to Internal Revenue Service funds.

Republicans criticized the bigger increase for domestic programs compared to military spending, the end of key restrictions on abortion funding, cuts to the Department of Homeland Security, and a boost to Internal Revenue Service funds.

Senate Appropriations Vice Chairman Richard Shelby (R-AL) called the top-line numbers "a fantasy land" proposal by Democrats. The nondefense and defense increases will have to be closer together for lawmakers to reach an eventual deal, he said.

The bills can't become law without significant Republican support because they'll need 60 votes to end debate before a vote can be held in the Senate.

The Senate Appropriations Committee proposed $15.7 billion for Interior in fiscal 2022, close to the $15.6 billion the House approved, and $10.5 billion for the EPA. The figure for the EPA is less than the $11.3 billion included in the House legislation.

The Senate bill proposes $2.9 billion for the Drinking Water and Clean Water State Revolving Funds in the EPA portion, less than the $3.2 billion in the House bill.

The funding levels proposed in the Senate bill for Interior's largest agencies—the Bureau of Land Management, National Park Service, and Fish and Wildlife Service—are on par with the House levels.

The Senate bill, like the House bill, would provide $900 million in mandatory spending for the Land and Water Conservation Fund, as well as allocate $1.9 billion for deferred maintenance projects on federal public lands. It recommends funding for a Civilian Climate Corps as well, which is also in the House bill.

Senate appropriators also recommended $3.8 billion for fire suppression, of which $2.4 billion would go to the Wildfire Suppression Operations Reserve Fund.

Now that all bills in the House and Senate have been releases, lawmakers will begin the process of conferencing the bills together to produce the final funding legislation for fiscal year 2022.

House Appropriations Committee Chairwoman Rosa DeLauro (D-CT) has invited her counterparts—House Appropriations Committee Ranking Member Kay Granger (R-TX), Senate Appropriations Committee Chairman Patrick Leahy (D-VT), and Senate Appropriations Committee Vice Chairman Richard Shelby (R-AL)—to meet during the week of November 1 to begin conference negotiations for a fiscal year 2022 omnibus appropriations bill.

According to the House Appropriations Committee, DeLauro "looks forward to productive conversations as all sides work to meet the December 3 funding deadline."

Additionally, Acting OMB Director Shalanda Young wrote to Chairwoman DeLauro urging Congress to start talks on the fiscal year 2022 bills.

"With only just over a month before the December 3rd deadline, now is the time to come together and reach an agreement that will fund core national priorities, address critical gaps, enhance our national security and advance American leadership in the world, as well as provide much needed additional relief to those communities suffering from natural disasters" she wrote.

"And we can do that without unnecessary and damaging brinksmanship that would disrupt critical public services that the American people rely on."

Please see below for a brief summary of each of the spending bills released by the Senate Appropriations Committee last week. Note that the Agriculture, Energy & Water, and Military Construction-VA Appropriations bills were previously released and marked up by the Senate Appropriations Committee.

EPA Releases PFAS Roadmap

The EPA on Monday, October 18 released its strategy for addressing PFAS, including its plans to finish a rule to regulate certain types of PFAS in drinking water in 2023.

The EPA's overall strategy is focused on researching PFAS, restricting their release into the air, land and water and broadening cleanup efforts.

The agency's drinking water limit pertains to certain types of PFAS called PFOA and PFOS, saying it hopes to propose an enforceable drinking water limit for them in fall 2022 and finalize it in fall 2023.

The Trump administration also eyed regulating PFOA and PFOS, proposing its own regulation on the substances last year.

The drinking water standard is a long-awaited milestone for environmental advocates, but some have called for PFAS to be regulated as an entire group instead of on an individual basis because there are hundreds of them and they can occur in mixtures.

The EPA is also developing a new testing strategy for the substances.

As part of that strategy, the agency is expected to require manufacturers to conduct and fund studies and could issue testing orders by the end of this year.

The agency has also said that it will declare PFOA and PFOS as hazardous substances under the country's Superfund hazardous waste cleanup law.

This would require polluters to report discharges of the compounds and give the EPA the ability to recoup costs for their cleanup.

The EPA will propose a regulation to do so in spring 2022 and finalize the decision in summer 2023.

EPA Administrator Michael Regan categorized the plan as a "comprehensive" strategy to protect people.

"For far too long, families across America — especially those in underserved communities — have suffered from PFAS in their water, their air, or in the land their children play on," he said in a statement.

"This comprehensive, national PFAS strategy will deliver protections to people who are hurting, by advancing bold and concrete actions that address the full lifecycle of these chemicals. Let there be no doubt that EPA is listening, we have your back, and we are laser focused on protecting people from pollution and holding polluters accountable," he added.

Biden Signals Support for Senate Filibuster Reform

During a CNN town hall on Thursday, October 21 in Baltimore, President Joe Biden indicated he would support ending the filibuster rule in the Senate to address the debt ceiling and voting-rights legislation -- and possibly other items -- after Republican members of the chamber used that mechanism to block bills on the two issues this month.

The debt-ceiling 60-vote requirement is "absurd", Biden said when asked about the filibuster at the town hall. Senate Minority Leader Mitch McConnell (R-KY) vowed that Republicans won't again deliver the votes needed to allow Democrats to enact a debt-ceiling hike if Democrats do not address the issue through reconciliation, which they can do with a simple majority vote. Eleven Republicans did vote to invoke cloture—or cut off debate—earlier this month for a temporary increase designed to tide the Treasury Department over to early December.

"If this gets pulled again, I think you're going to see an awful lot of Democrats be ready to say, 'Not me, I'm not doing that again, we're going to end the filibuster,'" Biden said. "There's certain things that are just sacred rights. One's a sacred obligation that we're never going to renege on a debt."

President Biden said that along with the government being responsible for its debts, "Voting rights are equally as consequential," speaking a day after Republican Senators blocked a bill with features including creating an automatic voter registration system through each state's motor vehicle agency.

Democrats say the legislation is designed to counter a number of new voting restrictions emerging from Republican-led state legislatures, which they say are intended to curtail participation by minorities and poorer Americans. Republicans counter that the laws are necessary to protect against voter fraud.

The bill, The Freedom to Vote Act, was an attempt at a compromise among Democrats, after a much broader voter access bill was blocked by Republicans in June and again in August.

Asked whether he would entertain killing the filibuster rule on voting rights, Biden added, "And maybe more."

Biden, who served as a Senator from Delaware from 1973 to 2009, has previously resisted calls for changes to the Senate filibuster.

House and Senate Vote to Raise Debt Ceiling

The House on Tuesday, October 12 cleared legislation to raise the debt limit by $480 billion, ensuring that the nation doesn't default on its debts but setting up another fiscal cliff at the end of the year. The debt ceiling legislation was designed with an eye toward lifting the cap through early December.

Lawmakers voted to avert a default in a somewhat indirect fashion. The House adopted a procedural rule along party lines in a 219-206 vote, meaning lawmakers didn't have to take a separate vote on the debt limit bill itself.

President Biden signed the legislation into law on Friday, October 15 providing lawmakers a brief reprieve from the partisan impasse over the country's borrowing limit.

The Senate approved the deal earlier in the month by a vote of 50-48. Though the final vote, which required a simple majority, was along party lines, 11 Republican senators voted with Democrats to get the bill over a procedural hurdle that required 60 votes. Republican Senators Mitch McConnell (KY), John Thune (SD), Lisa Murkowski (AK), Susan Collins (ME), Richard Shelby (AL), John Cornyn (TX), Rob Portman (OH), John Barrasso (WY), Shelly Moore Capito (WV), Mike Rounds (SD) and Roy Blunt (MO) joined Senate Democrats to invoke cloture on the measure.

The Senate's action came a day after Senate GOP Leader Mitch McConnell (KY) said that Republicans would let Democrats pass a short-term debt hike and just hours after Majority Leader Charles Schumer (D-NY) announced they had clinched a deal.

It marked a quick end to a months-long standoff between Majority Leader Schumer and Minority Leader McConnell that had moved the country closer to a historic default. Congress had until October 18 to raise the nation's borrowing limit, or risk plummeting over the fiscal cliff with significant consequences for the world's economy.

Another stopgap measure to fund the government also expires on December 3, meaning Democrats will yet again have to find a way to prevent potential fiscal calamity in the twin threats of a shutdown and a default.

For now, lawmakers have staved off a catastrophic debt default less than a week before the October 18 deadline by which the Treasury Department estimated the U.S. could start failing to meet its borrowing obligations.

The House originally passed bills twice in recent weeks to suspend the debt limit into December 2022, but they stalled in the Senate due to GOP resistance to passing a debt ceiling suspension through regular order. Senate Republicans had been pushing for Democrats to use the budget reconciliation process to address the debt ceiling with only Democratic votes.

The Senate's agreement earlier in the month to pass only a short-term debt limit extension meant the House had to briefly return from a scheduled recess on Tuesday to ensure the legislation made it to Biden's desk before the deadline.

Senate Minority Leader Mitch McConnell (R-KY) has warned that Republicans won't support another short-term extension like this next time around.

"I write to inform you that I will not provide such assistance again if your all-Democrat government drifts into another avoidable crisis," McConnell wrote in a letter to Biden on Friday, October 8.

Republicans are insisting that Democrats use the budget reconciliation process to raise the debt limit on a long-term basis, since it is one of the few things exempt from a Senate filibuster. It's the same process that Democrats are using for their wide-ranging package to expand social safety net programs and mitigate climate change.

Although Democrats had been adamant that they won't use the budget reconciliation process for the debt limit, they appear to be softening that position in recent weeks. Democrats have objected to using the process because it is far more time-consuming and would require specifying a number for raising the debt limit that Republicans could subsequently use in campaign ads. They argue that the debt limit should continue to be raised on a bipartisan basis as it has historically been done in the past.

It's not clear how lawmakers will resolve the coming impasse in December.

New HUD Rule Aimed at Preventing Evictions from Public Housing

The Biden administration is rolling out a new rule aimed at preventing evictions for tenants in public housing after the federal eviction moratorium expired in August.

The rule, published on Thursday, October 7 will prohibit individuals living in housing subsidized by the Department of Housing and Urban Development (HUD) from being evicted from their homes for not paying rent unless the tenants are given a 30-day notice and information regarding federal emergency rental assistance that may be available.

Typically, rules submitted to the register would be enacted 30 days later. Authorities dealing with public housing nationwide, however, will likely implement the regulation right away.

The rule was reportedly changed because of a growing concern regarding a potential spike in evictions as cases start to progress through the court system.

"This rule is a significant step in raising tenant awareness about the availability of funds that can assist them with past due rent and allowing them additional time to access relief that may stave off eviction entirely," HUD Secretary Marcia Fudge stated.

"HUD will continue to review additional actions to help protect individuals through the duration of the pandemic," she added.

The revised regulation, however, is not entirely new. The requirement for a notice 30 days before evictions existed in the original COVID-19 relief package.

Tenants living in project-based rental assistance properties also fall under the authority of the new rule. Those locations are operated by private-for-profit or nonprofit owners that make an agreement with HUD to establish housing units that are affordable to tenants.

The new rule comes after the federal eviction moratorium expired in early August, leaving millions of Americans at risk of being pushed out of their homes amid the pandemic.

HUD said the new rule builds on previous work the department has completed to protect tenants from evictions, including streamlining requirements to allow assisted households to recertify their income if they see a drop in wages, providing eviction prevention resources for public housing authorities and issuing guidance that protects against evictions targeting protected classes, among other efforts.

Biden Takes Big Steps on Rules for Environmental Reviews

The White House on Wednesday, October 6 took a significant first step toward restoring safeguards that the Trump administration cut from its regulations governing environmental reviews.

The move was the first in a two-step process, with advocates and industry leaders expected to keep a close eye on both rules, since what comes next will define exactly where the Biden administration stands on the National Environmental Policy Act (NEPA), which requires the government to consider environmental impacts of major projects like airports, highways and pipelines and carry out environmental reviews before construction begins.

The White House said the measures announced Wednesday constitute "phase 1" of its rulemaking and that it would develop a "phase 2" in the coming months.

The Trump administration scaled back NEPA in 2020 with changes that it said were intended to modernize implementation of the 50-year-old law. The rollback drew cheers from industry leaders, who said they could now get projects done faster, but criticism from advocates who argued that it undermined environmental protections that had been in place for decades.

On Wednesday, the White House Council on Environmental Quality announced that it was making three major changes to the way environmental reviews mandated by NEPA are approached.

The council said it will stipulate that the regulations are "a floor, rather than a ceiling" for what federal agencies can require, give more flexibility to agencies to consider project alternatives and reinstate language that explicitly requires consideration of "indirect" and "cumulative impacts."

Cumulative impacts look at how new projects would combine with nearby existing ones to affect a community overall. The language seeks to prevent communities from being overburdened by pollution and other environmental issues.

The Biden administration's inclusion of that language is expected to restore consideration of climate change in environmental reviews.

But the Trump administration made other significant changes to the NEPA process, many that were not addressed in Wednesday's proposal such as shortening the time limit for rigorous environmental reviews and setting page limits for the analyses.

Environmentalists argue there's much more that needs to be done to undo the Trump rule. Industry groups, meanwhile, have praised many of the provisions instituted by the Trump administration, including the shorter timeline for reviews.

Summary of Senate Appropriations Bills for Fiscal Year 2022

Senate Fiscal 2022 Appropriations Bills
Senate Democrats aim to boost funds for 11 of 12 annual spending bills

Spending bills	Discretionary total	Vs. Fiscal 2021
Agriculture-FDA*	$25.9B	+2.5 ▲
Commerce-Justice-Science	79.7	+8.6 ▲
Defense	725.8	+29.3 ▲
Energy and Water*	53.6	+1.9 ▲
Financial Services	29.4	+4.8 ▲
Homeland Security	71.7	-0.1 ▼
Interior-Environment	44.6	+6.2 ▲
Labor-HHS-Education	220.8	+46.7 ▲
Legislative Branch	5.9	+0.6 ▲
Military Construction-VA*	124.4	+11.2 ▲
State and Foreign Operations	60.6	+5.1 ▲
Transportation-HUD	82.9	+8.3 ▲

Commerce-Justice-Science: The bill would provide $79.7 billion in discretionary funds, an $8.6 billion increase over fiscal 2021.

- NASA would receive $24.8 billion, a $1.5 billion increase.
- The National Science Foundation would receive $9.5 billion, a $1 billion increase, which includes up to $865 million for a new Directorate for Technology, Innovation, and Partnerships.

Defense: The bill would provide $725.8 billion, a $29.3 billion increase.

- The bill does not categorize any money as Overseas Contingency Operations funds, a designation previously used to put money outside statutory spending limits which are no longer in effect.
- The bill would not provide the $3.3 billion requested for the Afghanistan Security Forces Fund, and would rescind $500 million in previously appropriated funds for the program.
- The bill includes $1 billion for Israel's Iron Dome defense system.

Financial Services-General Government: The bill would provide $29.4 billion, a $4.8 billion increase.

- The Internal Revenue Service would receive $13.6 billion, a $1.6 billion increase.

Homeland Security: The bill would provide $71.7 billion, a $65 million decrease from fiscal 2021.

- The bill wouldn't provide any new border wall funding and would rescind $1.9 billion in barrier funds appropriated for the previous year.
- U.S. Customs and Border Protection would receive $14.5 billion, a $501 million cut from fiscal 2021.

- U.S. Immigration and Customs Enforcement would receive $7.9 billion, a $40 million cut.

Interior-Environment: The bill would provide $44.6 billion, a $6.2 billion increase.

- The Environmental Protection Agency would receive $10.5 billion, a $1.3 billion increase.
- The National Park Service would receive $3.5 billion, a $340 million increase as lawmakers aim to support the hiring of more than 1,000 additional employees.

Labor-HHS-Education: The bill would provide $220.8 billion in discretionary funds, a $46.7 billion increase.

- The bill does not include the longstanding Hyde amendment, which for decades has banned federal funds for abortions, except in the case of rape, incest, or to save the life of the pregnant person.
- The Department of Health and Human Services would receive $117.6 billion in discretionary funds, a $20.9 billion increase over fiscal 2021. It includes $2.4 billion for the Advanced Research Projects Agency for Health, a new agency proposed by President Joe Biden. The bill would provide $4.9 billion for HHS's Unaccompanied Children program, a $3.6 billion increase.
- The Department of Education would receive $98.4 billion in discretionary funds, a $24.9 billion increase.
- The Department of Labor would receive $13.8 billion in discretionary funds, a $1.3 billion increase.

Legislative Branch: The bill would provide $5.9 billion in discretionary funds, a $624 million increase

- The bill would block an automatic pay increase for lawmakers.
- The bill would allow immigrants under the Deferred Action for Childhood Arrivals program to work for the Legislative Branch.

State and Foreign Operations: The bill would provide $60.6 billion in discretionary funds, a $5.1 billion increase.

- The bill includes $3.3 billion in military assistance for Israel. It also includes $225 million in development assistance for the West Bank and Gaza and $40 million for the Palestinian security assistance program.
- The bill would bar any funds from going directly to the Taliban. It stipulates that funds should be made available for Afghan students, including "distance learning and scholarships to institutions located outside of Afghanistan."

Transportation-HUD: The bill would provide $82.9 billion in discretionary funds, an $8.3 billion increase.

- The bill includes $53.4 billion in net discretionary budget authority for the Department of Housing and Urban Development, a $3.8 billion increase. It includes $29.1 billion in net discretionary budget authority for the Department of Transportation, also a $3.8 billion increase.

Bill Number	Sponsors	Title and/or Summary	Summary/Status	Latest Action
H.R. 4502	Rep. Rosa DeLauro (D-CT)	Labor, HHS, Education, Agriculture, Rural Development, Energy and Water, Financial Services and General Government, Interior, Environment, Military Construction and VA, Transportation-HUD Appropriations Act, 2022	The legislation combines 7 of the annual spending bills into one package.	The legislation passed the House on Thursday, July 29 by a vote of 219 – 208 on party lines.
S. 1301	Sen. Sherrod Brown (D-OH)	Promoting Physical Activity for Americans Act (Debt Limit Bill)	This bill became the vehicle for passage of the public debt limit increase. On October 7, 2021, the Senate amended the bill to increase the public debt limit by $480 billion. This debt limit extension is expected to allow the government to cover its expenses at least through December 3, 2021.	The legislation passed the House on September 29, 2021, by a vote of 219 – 212 on party lines, and the Senate passed the bill on October 7, 2021 by a vote of 50-48. President Biden signed the bill into law on October 14, 2021, four days before the federal government was forecasted to hit the debt limit.
XX	President Joe Biden / Congressional Democrats	Build Back Better Act	The Build Back Better Act proposed spending roughly $3.5 trillion in its current form. The plan would provide $200 billion program offering universal pre-k; $109 billion for tuition-free community college; $85 billion to increase Pell Grants to benefit low-income and minority students; and more than $4 billion in funding for larger scholarships, certification and support programs for teachers. A new framework released in late October calls for scaling the package back to roughly $1.75 trillion in response to concerns from moderate Democrats.	Congressional Democrats hope to use the budget reconciliation process to pass elements of the administration's American Families Plan due to lack of support from Republicans. S.Con.Res.14, the Concurrent Budget Resolution, set up the ability for the Senate to pass the legislation if all Democrat Senators vote in favor of the legislation. On Saturday, September 25, the House Budget Committee passed the package in a 20-17 vote, piecing together the chunks of legislation approved by 13 House committees

				earlier this month that make up the spending plan. Following moderate lawmakers' hesitation about the legislation, President Biden presented lawmakers with a new $1.75 trillion framework on Thursday, October 28.
Senate Amendment to H.R.3684	President Joe Biden & Bipartisan Group of Senators including Sens. Krysten Sinema (D-AZ) and Rob Portman (R-OH)	Bipartisan Infrastructure Framework ("Infrastructure Investment and Jobs Act")	The framework includes $550 billion in new spending for a total around $1.2 trillion over eight years. Total "new spending" includes: $110 billion for roads, bridges and major projects; $73 billion for electric grid upgrades; $66 billion for rail and Amtrak improvements; $65 billion for broadband expansion; $55 billion for clean drinking water; $39 billion for transit; $17 billion for ports and $25 billion for airports; and $7.5 billion for electric vehicle chargers.	President Biden announced that he'd reached an infrastructure deal with a group of Republican and Democratic Senators on Thursday, June 24. Following a month of negotiations on legislative text, the Senate passed the package on Tuesday, August 10, 2021. The deal faces the challenge of convincing progressives to support the deal - Speaker of the House Nancy Pelosi has expressed that the House would not vote on a bipartisan bill until the Senate passes a larger set of Democratic priorities though budget reconciliation. The House agreed to vote on the legislation by September 27, 2021, in a deal reached between the Democratic leadership and moderate members of the Democratic caucus. However, on September 26, Pelosi pushed back the vote to Thursday, September 30, allowing more time to debate the bill on the floor. However, without a deal reached on the larger reconciliation package by September 30, the vote on the bipartisan framework was delayed once again. Congress passed a one

				month extension of funding for Surface Transportation programs that expires on October 31. Lawmakers again attempted to pass the bill in late October, but instead have opted to pass another short-term extension of highway authorities through December 3.
H.R. 5305	Rep. Rosa DeLauro (D-CT)	Extending Government Funding and Delivering Emergency Assistance Act	Extends government funding through December 3 and provides funding for disaster relief and Afghan refugees. The bill also extends additional measures through December 3 including certain authorities of the Bureau of Reclamation, including for emergency drought relief, for one year.	The Senate amendment to the legislation passed on September 30th by a vote of 65-35, and the House passed the bill shortly after by a vote of 254-175. President Biden signed the legislation in the evening of the 30th.
H.R. 3684	Rep. Peter DeFazio (D-OR)	INVEST in America Act	The legislation addresses provisions related to federal-aid highway, transit, highway safety, motor carrier, research, hazardous materials, and rail programs of the Department of Transportation (DOT). The Legislation has also incorporated the Water Quality Protection and Job Creation Act of 2021 and Assistance, Quality, and Affordability Act of 2021 which reauthorize clean and drinking water provisions.	Chairman of the House Transportation and Infrastructure Committee Peter DeFazio introduced the legislation on June 4, 2021. Markups were held on the legislation on June 9-10th and the legislation passed out of committee on June 10th by a vote of 38-26. The legislation passed the House on July 1, 2021 by a vote of 221-201, and passed the Senate by a vote of 69-30 on August 10, 2021. This legislation and the associated local transportation priorities likely won't move forward since the bipartisan infrastructure proposal also includes the 5-year surface transportation reauthorization bill.

S. 29 / H.R. 2008	Sen. Amy Klobuchar (D-MN) / Rep. Angie Craig (D-MN)	Local Water Protection Act	A bill to amend the Federal Water Pollution Control Act to reauthorize certain programs relating to nonpoint source management, and for other purposes.	The Senate legislation was introduced on January 22, 2021 and referred to the Committee on Environment and Public Works. The legislation in the House was introduced on March 18, 2021 and passed the House under suspension of the rules on June 15.
H.R 1563	Rep. Mike Garcia (R-CA)	To extend the authorities under the Water Infrastructure Improvements for the Nation Act of 2016 providing operational flexibility, drought relief, and other benefits to the State of California	The legislation would extend the authorities under the Water Infrastructure Improvements for the Nation Act of 2016 providing operational flexibility, drought relief, and other benefits to the State of California. The legislation would extend 4007 authorities through January 1, 2028.	The legislation was introduced on March 3, 2021 and was referred to the House Committees on Natural Resources and Science, Space, and Technology.
H.R.1915	Rep. Peter DeFazio (D-OR) / Rep. Grace Napolitano (D-CA)	Water Quality Protection and Job Creation Act of 2021	The legislation would reauthorize the Alternative Water Source Grants Pilot Program, which authorizes the U.S. Environmental Protection Agency to grant up to $200 million per year to state, interstate, and intrastate water resource development agencies to engineer, design, construct, and test water reuse projects throughout the country.	The legislation was introduced on March 16, 2021. The Committee on Transportation and Infrastructure held a mark-up session on June 9-10th and the legislation was passed out of committee on June 10th by a vote of 42-25. The legislation was incorporated into the INVEST in America Act, which passed the House on July 1, 2021.

H.R.2238	Sen. Jeff Merkley (D-OR) / Rep. Alan Lowenthal (D-CA)	Break Free from Plastic Pollutions Act	The comprehensive legislation would require corporations to take responsibility for pollution, incentivize corporations to make reusable products and items that can be recycled, create a nationwide beverage container refund program, and other items to promote recycling and other investments in U.S. domestic recycling.	The legislation was introduced on March 25, 2021 and referred to the House Committees on Energy and Commerce, Ways and Means, Transportation, and Foreign Affairs.
H.R 866	Rep. Ken Calvert (R-CA)	FISH Act	This bill gives the Fish and Wildlife Service (FWS) the sole authority to protect endangered or threatened species that are anadromous species (species of fish that spawn in fresh or estuarine waters and that migrate to ocean waters) or catadromous species (species of fish that spawn in ocean waters and migrate to fresh waters). Currently, the FWS shares this authority with the National Marine Fisheries Service.	The legislation was introduced on February 5, 2021 and referred to the House Committee on Natural Resources.
H.R. 1015	Rep. Grace Napolitano (D-CA)	Water Recycling Investment and Improvement Act	This bill makes permanent, and otherwise revises, the Bureau of Reclamation's grant program for the funding of water recycling and reuse projects. Specifically, the bill removes priority under the program for projects in areas that, in the preceding four-year period, have been (1) identified as experiencing severe, extreme, or exceptional drought; or (2) designated as a disaster area by a state. Additionally, the bill increases through FY2025 the authorization of appropriations for the program and otherwise revises provisions related to program funding.	The legislation was introduced on February 11, 2021 and referred to the House Committee on Natural Resources.

H.R.4099	Rep. Grace Napolitano (D-CA)	Large Scale Water Recycling Project Investment Act	Created a competitive grant program for large-scale water recycling and reuse projects. Large-scale water recycling projects are those estimated to cost $500 million or greater. $750 million would be authorized over 5 fiscal years beginning in FY23.	The legislation was introduced on June 23, 2021 and referred to the Committee on Natural Resources. The Water Subcommittee held a hearing on the legislation on Tuesday, June 29, 2021. The House Natural Resources Subcommittee on Water, Oceans, and Wildlife held a hearing on the legislation on June 29, 2021.
H.R.1881	Rep. John Garamendi (D-CA)	To amend the Federal Water Pollution Control Act with respect to permitting terms, and for other purposes.	The legislation would extend permit terms for publicly owned water infrastructure projects under the National Pollutant Discharge Elimination System (NPDES) from 5 years to a maximum of 10 years.	The legislation was introduced on March 12, 2021 and referred to the Committee on Transportation and Infrastructure.
S.914	Sen. Tammy Duckworth (D-IL)	Drinking Water and Wastewater Infrastructure Act of 2021	Authorizes more than $35 billion for water resource development projects across the country with a focus on upgrading aging infrastructure, addressing the threat of climate change, investing in new technologies, and providing assistance to marginalized communities.	The legislation was introduced on March 23, 2021 and referred to the Senate Environment and Public Works Committee. The legislation passed the Senate on April 29, 2021 by a vote of 89-2. Elements of this legislation were incorporated into the bipartisan infrastructure framework, though with a reduced authorization for the Drinking and Clean Water State Revolving Funds.
H.R. 737	Rep. David Valadao (R-CA)	RENEW WIIN Act	The legislation would extend the authorities under the Water Infrastructure Improvements for the Nation Act of 2016 providing operational flexibility, drought relief, and other benefits to the State of California.	The legislation was introduced on February 2, 2021, and referred the House Committee on Natural Resources. 10 members of the California delegation have cosponsored the legislation.

S.91 / H.R.535	Sen. Krysten Sinema (D-AZ) / Rep. John Garamendi (D-CA)	Special Districts Provide Essential Services Act	The legislation would include special districts in the coronavirus relief fund and direct the Secretary of the Treasury to include special districts as an eligible issuer under the Municipal Liquidity Facility.	The legislation was introduced on January 28, 2021 in both the House and Senate. It has been referred to relevant committees in both chambers.
H.R. 895 / S. 209	Rep. David Rouzer (R-NC) / Sen. Jeanne Shaheen (D-NH)	Emergency Assistance for Rural Water Systems Act	To provide for assistance to rural water, wastewater, and waste disposal systems affected by the COVID-19 pandemic, and for other purposes.	The legislation in the House was introduced on February 5, 2021, and referred to the House Committee on Agriculture. The Senate version of the legislation was introduced on February 3, 2021 and referred to the Senate Committee on Agriculture.
H.R. 2515	Rep. Garret Graves (R-LA)	Building U.S. Infrastructure through Limited Delays and Efficient Reviews (BUILDER) Act	The legislation modernizes the National Environmental Policy Act (NEPA) and aims to make infrastructure project reviews more efficient, reduce project costs, and spur economic recovery.	The legislation was introduced on April 14, 2021 and was referred to the House Committee on Natural Resources. The legislation's 46 cosponsors are all Republican, including members of GOP leadership.
H.R. 939	Rep. Doug LaMalfa (R-CA)	Combustion Avoidance along Rural Roads (CARR) Act	The bill exempts wildfire mitigation activities conducted within 300 feet of a road from all laws governing environmental review of proposed agency actions or protection of endangered or threatened species.	The legislation was introduced on February 8, 2021 and was referred to the House Committees on Natural Resources and Agriculture.
H.R.3267	Rep. Brendan Boyle (D-PA)	Protect Drinking Water from PFAS Act	The bill amends the Safe Drinking Water Act to require the Administrator of the Environmental Protection Agency to publish a maximum contaminant level goal and promulgate a national primary drinking water regulation for total per- and polyfluoroalkyl substances.	The legislation was introduced on May 17, 2021 and referred to the House Committee on Energy and Commerce.

H.R. 1512	Rep. Frank Pallone (D-NJ)	The Climate Leadership and Environmental Action for our Nation's Future (CLEAN) Act	The legislation aims to achieve net zero greenhouse gas pollution, combat the climate crisis, and create jobs. The bill authorizes $565 billion over ten years to enable deep decarbonization.	The legislation was introduced on March 2, 2021, and referred to the relevant committees.
S. 953	Sen. Ron Wyden (D-OR)	Water for Conservation and Farming Act	The legislation would create a Bureau of Reclamation fund of $300 million to support water recycling projects, water-use efficiency projects and dam safety projects; the WaterSMART program to increase water supply reliability by funding infrastructure and conservation projects that conserves water, increases water use efficiency and improves the condition of natural water recharge infrastructure; Establishes a grant program for any Reclamation States, Tribes, nonprofit conservation organizations, irrigation or water districts, and regional and local authorities to complete habitat restoration projects that improve watershed health and mitigate climate change; among other actions.	The legislation was introduced on March 24, 2021, and referred to the Committee on Energy and Natural Resources.
H.R.3293	Rep. Lisa Blunt Rochester (D-DE)	Low-Income Water Customer Assistance Programs Act	The legislation would amend the Safe Drinking Water Act and the Federal Water Pollution Control Act to establish programs to assist low-income households in maintaining access to drinking water and wastewater services.	The legislation was introduced on May 18, 2021, and referred to the relevant committees. The legislation has passed out of the House Energy and Commerce Committee by a vote of 32-24 and now moves on to consideration on the House floor.

H.R.3291	Rep. Paul Tonko (D-NY)	AQUA Act	The legislation would invest $105 billion over 10 years in the nation's water systems including $53 billion for the Drinking Water State Revolving Fund,$45 billion to fully replace every lead service line, and $5 billion to provide assistance to systems with PFAS contamination. Additionally, the legislation would require the EPA to set national standards for PFAS, 1,4-dioxane, and microcystin toxin, and makes it easier for EPA to set standards in the future. The bill would authorize $4 billion emergency relief program to provide forgiveness for utility customers facing debts and unpaid fees since March 1, 2020.	The legislation was introduced on May 18, 2021, and referred to the House Committee on Energy and Commerce. The legislation was included in the INVEST in America Act, which passed the House on July 1, 2021 by a vote of 221-201.
H.R. 3286	Rep. Raul Ruiz (D-CA)	Emergency Order Assurance, Safety, and Inspection of water Systems (Emergency OASIS Act)	The legislation would require the EPA to establish regulations to flush a drinking water system if contaminants were present in the system for longer than six months, or if water stood motionless in the system for longer than six months.	The legislation was introduced on May 17, 2021 and referred to the House Committee on Energy and Commerce.
H.R. 3622 / S. 1907	Rep. Chris Pappas (D-NH) / Sen. Kirsten Gillibrand (D-NY)	Clean Water Standards for PFAS Act	The legislation would require the Administrator of the Environmental Protection Agency to develop effluent limitations guidelines and standards and water quality criteria for PFAS under the Federal Water Pollution Control Act, to provide Federal grants to publicly owned treatment works to implement such guidelines and standards	The legislation was introduced in the House on May 28, 2021, and in the Senate on May 27, 2021. The legislation in the House is bipartisan.
S. 2168	Sen. Mike Braun (R-IN)	Define WOTUS Act	The legislation would amend the Federal Water Pollution Control Act to modify the definition of navigable waters, and to make the definition of the "waters of the United States" permanent.	The legislation was introduced on June 22, 2021, and referred to the Committee on Environment and Public Works. It was introduced in response to the EPA's announcement earlier in June of its intent to rewrite the Navigable Waters Protection rule.

H.R. 3814 / S. 717	Rep. Liz Cheney (R-WY) / Sen. Mike Lee (R-UT)	Undoing NEPA's Substantial Harm by Advancing Concepts that Kickstart the Liberation of the Economy Act (UNSHACKLE Act)	The legislation combines the following five stand-alone NEPA reform bills on agency process, state expansion, legal changes, and data reporting into one comprehensive text. - NEPA Agency Process Accountability Act - NEPA Accountability and Enforcement Act - NEPA State Assignment Expansion Act - NEPA Legal Reform Act - NEPA Data Transparency Act	The Senate legislation was introduced on March 11, 2021, and referred to the Committee on Environment and Public Works. The House legislation was introduced on June 11, 2021, and referred to the House Committees on Natural Resources; Judiciary; Transportation and Infrastructure; and Energy and Commerce.
H.R. 1352	Rep. Brenda Lawrence (D-MI)	Water Affordability, Transparency, Equity, and Reliability Act of 2021	The bill would create a trust fund to support drinking water and clean water infrastructure. Additionally, the bill provides $34.85 billion a year to drinking water and wastewater improvements; creates a water trust fund; creates up to nearly 1 million jobs across the economy and protect American workers; prioritizes disadvantaged communities with grants and additional support; expands funding for technical assistance to small, rural, and indigenous communities; funds projects to address water contamination from PFAS; requires US EPA to study water affordability, shutoffs, discrimination, and civil rights violations by water providers; upgrades household wells and septic systems; helps homeowners replace lead service lines; and provides more than $1 billion a year to update water infrastructure in public schools.	The legislation was introduced on February 25, 2021 and was referred to the relevant committees. The legislation has 86 cosponsors, including 14 members of the California delegation.

H.R. 4647 / S. 2430	Rep. Jared Huffman (D-CA) / Sen. Dianne Feinstein (D-CA)	Water Conservation Rebate Tax Parity Act	The legislation would amend federal tax law so that homeowners wouldn't pay income tax on rebates from water utilities for water conservation and water runoff management improvements	The House legislation was introduced on July 22, 2021 and referred to the House Committee on Ways and Means. The legislation in the Senate was introduced on July 22, 2021, and referred to the Senate Committee on Finance.
S.2454	Sen. Alex Padilla (D-CA)	Water Reuse and Resiliency Act	The legislation would authorize $1 billion over five years for the EPA's Pilot Program for Alternative Water Source Projects grants program. This is an increase from the $125 million over five years authorized for the program in the Drinking Water and Wastewater Infrastructure Act passed by the Senate in April.	The legislation was introduced on July 22, 2021 and referred to the Senate Committee on Environment and Public Works.
S.2567	Sen. Shelley Moore Capito (R-WV)	Navigable Waters Protection Act of 2021	The legislation would enact into law the Navigable Waters Protection Rule: Definition of 'Waters of the United States' as proposed by the EPA/USACE under the Trump administration.	The legislation was introduced on July 29, 2021 and referred to the Senate Committee on Environment and Public Works.
H.R.4915	Rep. Tom McClintock (R-CA)	Water Supply Permitting Coordination Act	The legislation would authorize the Secretary of the Interior to coordinate Federal and State permitting processes related to the construction of new surface water storage projects on lands under the jurisdiction of the Secretary of the Interior and the Secretary of Agriculture and to designate the Bureau of Reclamation as the lead agency for permit processing.	The legislation was introduced on August 3, 2021 and referred to the House Committee on Natural Resources.

H.R.4979 / S.1783	Rep. Rashida Tlaib (D-MI) / Rep. Jeff Merkley (D-OR)	Maintaining Access to Essential Services Act	The legislation provides $13.5 billion in low-interest loans to public and private water utilities, which will be forgiven when the utility forgives household water arrears; and provides $13 billion in low-interest loans to power utilities, which will be forgiven when the utility forgives household arrears. The legislation also provides $13 billion in low-interest loans to broadband utilities, which will be forgiven when the utility forgives household arrears. The bill Requires loan recipients to suspend utility shutoffs and restore any disconnected service, suspend late fees and charges, stop the sale of household debt to debt collectors, stop placing or selling liens on households due to outstanding utility debt, and stop filing adverse reports on households due to unpaid utility bills to credit agencies.	The legislation in the House was introduced on August 6, 2021 and was referred to the House Committees on Financial Services and Ways and Means. The legislation in the Senate was introduced on May 20, 2021 and was referred to the Senate Committee on Finance.
H.R. 4976	Rep. Elissa Slotkin (D-MI)	Ensuring PFAS Cleanup Meets or Exceeds Stringent Standards Act	The legislation directs the Secretary of Defense to ensure that removal and remedial actions relating to PFAS contamination result in levels meeting or exceeding certain standards.	The legislation was introduced in the House on August 6, 2021, and was referred to the House Committees on Armed Services, Transportation and Infrastructure, and Energy and Commerce.
S.2372 / H.R.2773	Sen. Heinrich, Martin (D-NM) / Representatives Debbie Dingell (D-MI) and Jeff Fortenberry (R-NE)	Recovering America's Wildlife Act of 2021	The legislation would fund conservation efforts for more than 12,000 species of wildlife and plants in need of assistance by providing $1.3 billion in dedicated annual funding for proactive, on-the-ground efforts across the country, ensure wildlife recovery efforts will be guided by the Congressionally-mandated State Wildlife Action Plans, which identify specific strategies to restore the populations of species of greatest conservation need, accelerate	The legislation was introduced on July 15, 2021 and referred to the Committee on Environment and Public Works. The House bill was introduced on April 22. The House Natural Resources Subcommittee on Water, Oceans, and Wildlife held a hearing on the legislation on July 29, 2021.

			the recovery of 1,600 U.S. species already listed as threatened or endangered under the Endangered Species Act, and include improvements to ensure funds are appropriately targeted to the areas of greatest need and facilitate additional investments in protecting at-risk plant species. In the Senate, RAWA also directs fees and penalties assessed for environmental violations to help fund RAWA, using fee and penalty amounts that aren't already targeted for existing environmental funds.	
H.R.4602	Rep. Alan Lowenthal (D-CA)	WIPPES Act	The legislation would direct the Federal Trade Commission to issue regulations requiring certain products to have "Do Not Flush" labeling	The legislation was introduced on July 21st and referred to the Committee on Energy and Commerce. Rep. Lowenthal introduced the stand-alone bill after introducing a similar amendment to the House's infrastructure bill.
S. 2806 / H.R. 3534	Sen. Dianne Feinstein (D-CA) / Rep. Jimmy Panetta (D-CA)	Wildfire Emergency Act of 2021	Amongst other things, the legislation authorizes $250 million over 5 years for up to 20 Forest Service projects of 100,000 acres or greater; Establish a new $100 million grant program to assist critical facilities like hospitals and police stations become more energy efficient and better adapted to function during power shutoffs; Establishes one or more Prescribed Fire Centers to coordinate research and training of foresters and forest managers in the western United States in the latest methods and innovations in prescribed fire (controlled burns) practices	The Senate legislation was introduced on September 22 and referred to the Committee on Energy and Natural Resources. The House bill was introduced on May 25, 2021 and was referred to the Subcommittee on Conservation and Forestry.

S. 3011	Sen. John Cornyn (R-TX)	State, Local, Tribal, and Territorial Fiscal Recovery, Infrastructure, and Disaster Relief Flexibility Act	The legislation provides additional flexibility for States, Tribes, and units of local government to spend their allocations of the COVID Relief Funds on certain infrastructure projects; including water, wastewater, and broadband infrastructure projects. The bill also allows these funds to be used to provide emergency relief from natural disasters. There is a cap—the greater of $10 million or 30% of the funds—on how much of the COVID money can be spent on these new purposes.	The legislation was introduced on October 19, 2021, and passed the Senate by unanimous consent that day. Senator Alex Padilla (D-CA) is an original cosponsor of the legislation.

West Coast Advisors
Strategic Public Affairs

October 29, 2021

To: Inland Empire Utilities Agency

From: Michael Boccadoro
Beth Olhasso
Maddie Munson

RE: October Report

Overview:
As widely reported, the bomb cyclone that hit Northern California recently brought some much-needed precipitation, but not enough to make up for the significant deficits facing CA reservoirs. Lake Oroville rose 26 feet in days following the storm but is still only at 53 percent of historical average (27 percent capacity) or 77 feet lower than 2020 levels and 134 feet below 2019 levels. San Luis Reservoir, the main south-of-Delta storage facility for the State Water Project, hasn't seen a bump from the storm, as it is an off-river reservoir. It is at 22 percent of average for this time of the year and 10 percent capacity. The Sierras received two to three feet of snow to start the snowpack.

In response to lack of response on his calls for voluntary water conservation, the Governor declared the entire state to be in drought conditions and authorized the State Water Resources Control Board to take actions to reduce potable water use. The SWRCB hasn't set a timeline for adoption of any further water restrictions.

The continuing struggle to reach agreement on how to manage the Delta has another twist. The Biden Administration has asked that the Biological Opinions (BiOps) for the State Water Project (SWP) and Central valley Project (CVP) be reopened after the Trump Administration made significant changes during the last administration. This hot-button issue has garnered response from Senator Feinstein and a number of Representatives in Washington D.C.

The State Water Resources Control Board (SWRCB) recently posted their "Proposed Standardized Methods for Testing and Reporting Plan for Microplastics in Drinking Water." There will be a workshop in November and written comments are due in December.

Final action in the first year of the two-year session ended on October 10, with the Governor acting on the final legislation on his desk. Ultimately, the Governor signed 1,038 bills and vetoed 66. Importantly, the Governor singed AB 818 (Bloom) requiring non-flushable products to be labeled as "non-flushable" and SB 273 (Hertzberg) allowing all POTWS to capture and reuse stormwater. Members will remain in their districts until January 3 when they will return for the final year of the two-year session. When they come back in January, they will only have a few weeks to move the legislation left over from 2021. Notably, AB 1434 (Friedman) which lowers the gallons per capita daily (GPCD) for indoor residential water use, will likely be resurrected in January.

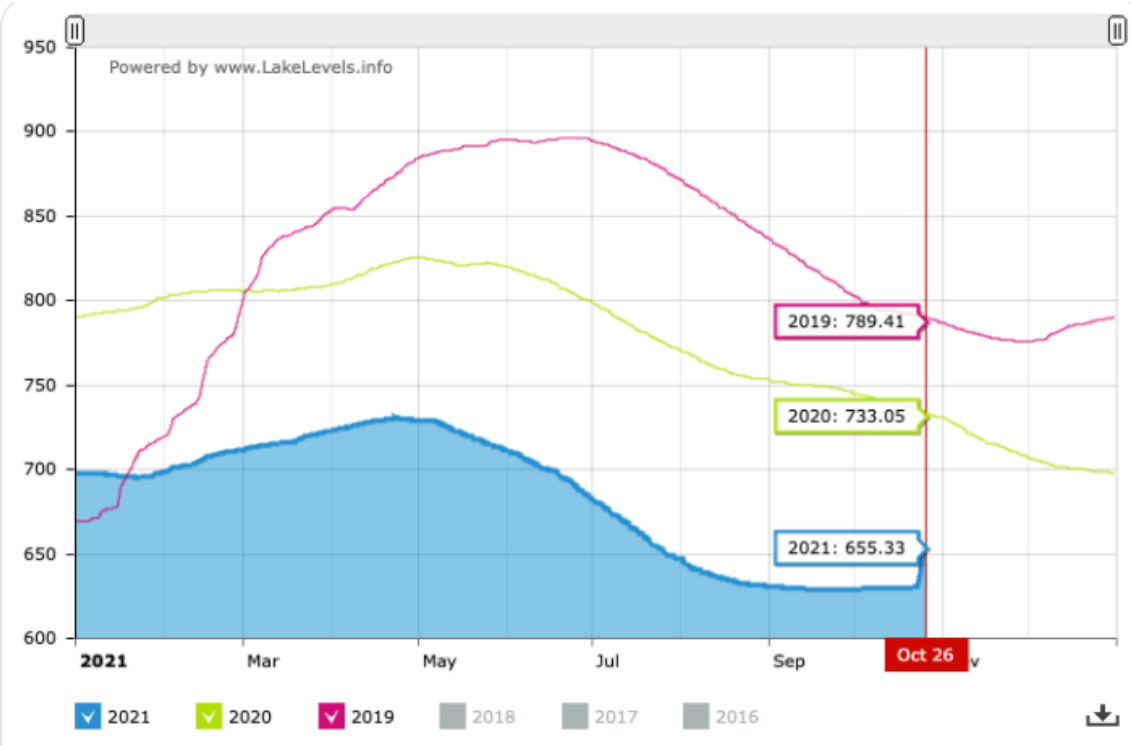
Inland Empire Utilities Agency
Status Report – October 2021

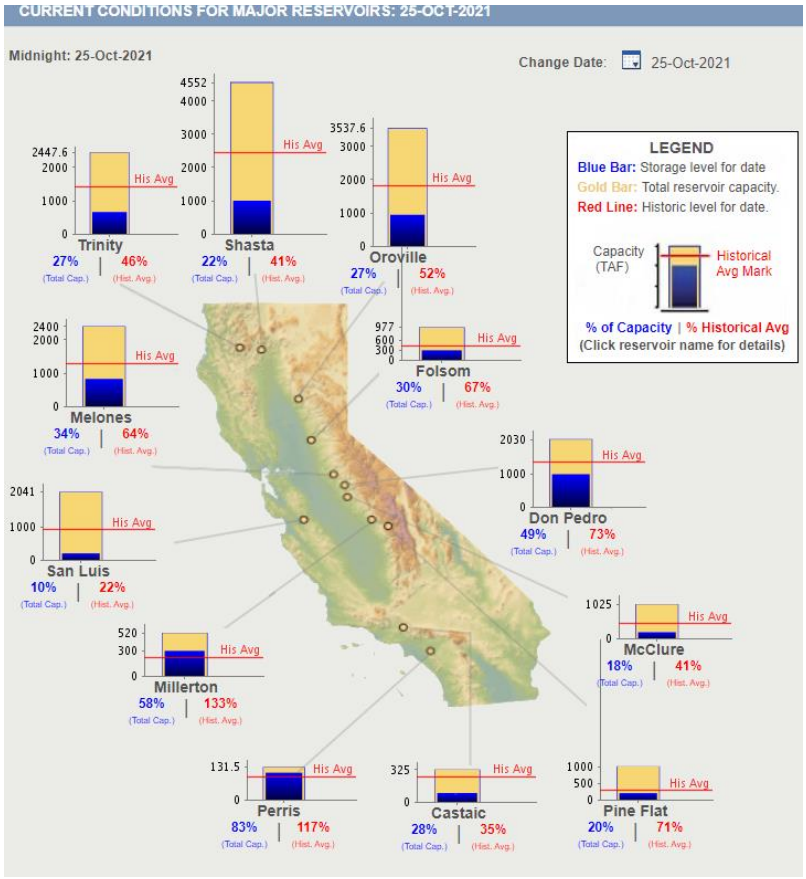
Water Supply Conditions

As widely reported, the bomb cyclone that hit Northern California recently brought some much-needed precipitation, but not enough to make up for the significant deficits facing CA reservoirs. Lake Oroville rose 26 feet in days following the storm but is still only at 53 percent of historical average (27 percent capacity) or 77 feet lower than 2020 levels and 134 feet below 2019 levels. San Luis Reservoir, the main south-of-Delta storage facility for the State Water Project, hasn't seen a bump from the storm, as it is an off-river reservoir. It is at 22 percent of average for this time of the year and 10 percent capacity. The Sierras received two to three feet of snow to initiate the winter snowpack.

While this storm was a historic 150-200 year storm, and importantly ended the Northern California fire season, the National Ocean and Atmospheric Association (NOAA) has warned that the outlook for the next few months isn't terribly positive for any significant precipitation.

Lake Oroville Water Levels:





Governor Declares Statewide Drought

Governor Newsom recently issued an Executive Order declaring drought in the five Southern California counties that had been excluded from earlier proclamations. Additionally, the order requires local water providers to implement their Water Shortage Contingency Plans. Additionally the order authorized the State Water Resources Control Board (SWRCB) to take the following actions to "supplement voluntary conservation by prohibiting certain wasteful water practices" including:

- The use of potable water for washing sidewalks, driveways, buildings, structures, patios, parking lots and other hard-surfaced areas, except in cases where health and safety are at risk.
- The use of potable water that results in flooding or runoff in gutters or streets.
- The use of potable water, except with the use of a positive shut-off nozzle for car washing.
- The use of water to irrigate turf and ornamental landscapes during and within 48 hours after measurable rainfall.
    - Note: this is the only provision that includes recycled water- but this prohibition is already contained in recycled water permits.
- The use of potable water for irrigation of ornamental turf on public streets or medians.
- The use of potable water for street cleaning or construction, unless necessary for public safety.
- The use of potable water for decorative fountains, decorative lakes or ponds.

These potential prohibitions are consistent with the powers given to the SWRCB during the last drought. The Board hasn't yet noticed implementing any of these measures. As noted above, recycled water is generally excluded from these provisions.

Biden Administration begins project operation rules re-write for BiOps

The rules that govern when and how the Central Valley Project and State Water Project can operate are dictated, in large part, by the Endangered Species Act (ESA). A small, but influential, provision of the ESA known as the Biological Opinions (BiOps) analyze the effects that any given project will have on the ESA listed species that inhabit the area a project operates in. The BiOps have been at the center of the power struggle in the Delta for more than a decade.

The Trump Administration rewrote the BiOps using updated science and real time analysis and monitoring of conditions and effects on ESA listed fish in the Delta. The prior version (developed in 2008 and 2009) used a calendar-based approach to predict when conditions might be appropriate to pump more or less water through the CVP and SWP. Environmentalists and the Newsom Administration opposed the Trump-era BiOps, setting off a flurry of lawsuits. In addition, for the first time in the history of the water projects, the State of California refused to operate the SWP by the same rules that the federal government was operating the CVP. Due to the proximity of the projects running through the Delta, this causes uncertainty and a bit of chaos for water contractors.

On his first day in office, January 20, 2021, President Biden issued an *Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis*. In that Order, the President stated that "the Federal Government must be guided by the best science and be protected by processes that ensure the integrity of Federal decision-making." He went on to direct all federal agencies to address federal actions from the Trump Administration that conflict with that objective. Biden identified only two BiOps from the entire federal government jurisdiction that his Administration would review to determine if they were "guided by the best science" and adopted in an appropriate manner. These two BiOps are the BiOps related to the CVP and SWP. More than eight months later, on September 30, the Bureau of Reclamation sent a letter to the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) formally requesting that those two BiOps be reopened.

This could be a several month process, during which the federal wildlife agencies will take a new look at the effects the projects may have on protected species and any measures that could limit adverse effects on those species. Additionally, pursuant to the requirements of the Water Infrastructure Improvements for the Nation Act (WIIN Act), Reclamation is required to engage with water agencies that contract for water from the CVP or SWP during the reconsultation of the BiOps.

However, in one of the many lawsuits aimed at the Trump-era BiOps (*PCFFA v. Raimondo*), the California Department of Water Resources, California Department of Fish and Wildlife, Reclamation, NMFS, and FWS submitted an "interim operations plan" to the court that would govern the CVP and SWP while the Biden Administration works on the new BiOps, if approved by the federal judge overseeing the case. Among other changes, the proposed interim plan goes back to the calendar-based approach for determining when and how much water can be pumped through the projects.

This approach can be problematic because it does not account for real time monitoring of projected species to determine if there is an actual risk. It also is usually not flexible enough to allow for increased pumping during storm events that increase river flow.

In response to Reclamation's September announcement, several elected officials have expressed concern. Senator Dianne Feinstein (D-CA) along with Representatives Jim Costa (D-CA 16), John Garamendi (D-CA 3), and Josh Harder (D-CA 10) sent a letter to Governor Newsom, U.S. Department of Interior Secretary Deb Haaland, and U.S. Department of Commerce Secretary Gina Raimondo asking that implementation of the interim plan be deferred until it can be more thoroughly analyzed.

Specifically, the Feinstein letter calls into question the adequacy of the projections for fish, lack of inclusion of non-flow actions, lack of flexibility to utilize real-time information, and limited availability of water. The California Republican delegation also sent a letter to Secretaries Haaland and Raimondo requesting that the plan be deferred, expressing similar concerns over the interim plan's calendar-based approach and lack of proper vetting.

Despite their drastically different viewpoints, the lawsuit's environmental plaintiffs and the water agency defendant-intervenors are in agreement over their opposition to the interim plan. While the environmentalists believe that it doesn't go far enough and the water agencies believe it goes too far, they both agree that it has not been properly vetted.

It is not immediately clear when the judge might rule on the interim plan. However, it is clear that there will continue to be a slew of legal action surrounding the issue.

Microplastics

The State Water Resources Control Board (SWRCB) recently posted their "Proposed Standardized Methods for Testing and Reporting Plan for Microplastics in Drinking Water." The SWRCB contracted with the Southern California Coastal Water Research Project to conduct an interlaboratory validation of analytical methods for monitoring microplastics in drinking water, convene an expert workshop to develop guidance to aid consumer interpretation of monitoring results, and provide training for ELAP staff and third-party laboratory assessors to accredit qualified laboratories to analyze microplastics. Two methods were validated through the inter-laboratory comparison study involving 22 labs. The participating labs collaborated with SWRCB to determine best practices and develop accreditation criteria for laboratories.

A workshop is scheduled for November 17, comments are due December 22 and the Board will consider adoption at its February 15 meeting.

Legislative Update

Final action in the first year of the two-year session ended on October 10, with the Governor acting on the final legislation on his desk. Ultimately, the Governor signed 1,038 bills and vetoed 66.

Members will remain in their districts until January 3 when they will return for the final year of the two-year session.

Final Updates on Priority Bills

- AB 818 (Bloom)- Solid Waste: premoistened nonwoven disposable wipes: Co-Sponsored by CASA and disposable wipes industry. Would require specific "Do Not Flush" labeling on specific disposable wipes. Signed by Governor.

- SB 273 (Hertzberg) Water Quality: municipal wastewater agencies: This legislation, sponsored by CASA, would authorize a wastewater agency to capture and treat stormwater utilizing ratepayer funds. The bill sailed through the Senate and the Assembly on the Consent Calendar and was signed by the Governor.

- SB 372 (Leyva) medium and heavy-duty fleet purchasing assistance program: zero emission vehicles. The bill, while still a work in progress, seeks to make financing tools available to help transition medium and heavy-duty truck fleets to zero emission vehicles. The Senator took amendments as it came out of the Appropriations Committee to include construction or earth-

moving equipment as eligible under the program. The bill has easily moved through the process in both houses and was signed by the Governor.

- AB 361 (R. Rivas): Sponsored by the California Special Districts Association would allow for public agencies to use teleconferencing without complying with certain Brown Act teleconferencing requirements provide that a teleconference location is accessible to the public, a quorum of members participate at the jurisdiction and the public has access to the legislative body at a specified location. These rules would only apply during a local or state emergency. An urgency clause was added to the bill late in the process to allow it to go into effect upon the Governor's signature (as opposed to on Jan 1 like most legislation). The Governor signed the bill.

IEUA BILLS— BILLS WITH POSITIONS- FINAL 2021 REPORT

Bill Number	Author/Sponsor	Title and/or Summary	Summary	IEUA Position/ Bill Location	Positions Taken by Associations & Regional Agencies
AB 361	Asm R. Rivas	Open Meetings: Local Agencies: Teleconferences	Would authorize a local agency to use teleconferencing without complying with the teleconferencing requirements imposed by the Ralph M. Brown Act when a legislative body of a local agency holds a meeting for the purpose of declaring or ratifying a local emergency, during a declared state or local emergency, as those terms are defined, when state or local health officials have imposed or recommended measures to promote social distancing, and during a declared local emergency provided the legislative body makes certain determinations by majority vote.	Signed by Governor	Sponsored by CSDA
AB 377	Asm. R. Rivas/ CA Coastkeeper	Water quality: impaired waters	Would require all California surface waters to be fishable, swimmable, and drinkable by January 1, 2050, as prescribed. The bill would prohibit the state board and regional boards from authorizing an NPDES discharge, waste discharge requirement, or waiver of a waste discharge requirement that causes or contributes to an exceedance of a water quality standard, or from authorizing a best management practice permit term to authorize a discharge that causes or contributes to an exceedance of a water quality standard in receiving waters. The bill would prohibit, on or after January 1, 2030, a regional water quality control plan from including a schedule for implementation for achieving a water quality standard that was adopted as of January 1, 2021, and would prohibit a regional water quality control plan from including a schedule for implementation of a water quality standard that is adopted after January 1, 2021, unless specified conditions are met.	Oppose Two-Year Bill	Opposed by SAWPA, MWD, CASA, ACWA
AB 703	Rubio/ Three Valleys Municipal Water District	Open Meetings: Local Agencies: Teleconferences	Current law, by Executive Order N-29-20, suspends the Ralph M. Brown Act's requirements for teleconferencing during the COVID-19 pandemic, provided that notice requirements are met, the ability		

			of the public to observe and comment is preserved, as specified, and that a local agency permitting teleconferencing have a procedure for receiving and swiftly resolving requests for reasonable accommodation for individuals with disabilities, as specified. This bill would remove the requirements of the act particular to teleconferencing and allow for teleconferencing subject to existing provisions regarding the posting of notice of an agenda and the ability of the public to observe the meeting and provide public comment. The bill would require that, in each instance in which notice of the time of the teleconferenced meeting is otherwise given or the agenda for the meeting is otherwise posted, the local agency also give notice of the means by which members of the public may observe the meeting and offer public comment and that the legislative body have and implement a procedure for receiving and swiftly resolving requests for reasonable accommodation for individuals with disabilities, consistent with the federal Americans with Disabilities Act, as provided.	Two-Year Bill	
AB 818	Asm. Bloom/ CASA	Solid Waste: premoistened nonwoven disposable wipes	Would require, except as provided, certain premoistened nonwoven disposable wipes manufactured on or after July 1, 2022, to be labeled clearly and conspicuously with the phrase "Do Not Flush" and a related symbol, as specified. The bill would prohibit a covered entity, as defined, from making a representation about the flushable attributes, benefits, performance, or efficacy of those premoistened nonwoven disposable wipes, as provided. The bill would establish enforcement provisions, including authorizing a civil penalty not to exceed $2,500 per day, up to a maximum of $100,000 per violation, to be imposed on a covered entity who violates those provisions.	SUPPORT Signed by Governor	Supported by CASA, ACWA, MWD

AB 1434	Asm. Friedman	Urban water use objectives: Indoor water use	Would establish, beginning January 1, 2023, until January 1, 2025, the standard for indoor residential water use as 48 gallons per capita daily. The bill would establish, beginning January 1, 2025, the standard as 44 gallons per capita daily and, beginning January 1, 2030, 40 gallons per capita daily. The bill would eliminate the requirement that the department, in coordination with the state board, conduct necessary studies and investigations and jointly recommend to the Legislature a standard for indoor residential water use.	OPPOSE Two-Year Bill	OPPOSED by ACWA, CASA, WatReuse, CSDA
AB 1500	Asms. E. Garcia/Mullin	Safe Drinking Water, Wildfire Prevention, Drought Preparation, Flood Protection, Extreme Heat Mitigation, and Workforce Development Bond Act of 2022	Would enact the Safe Drinking Water, Wildfire Prevention, Drought Preparation, Flood Protection, Extreme Heat Mitigation, and Workforce Development Bond Act of 2022, which, if approved by the voters, would authorize the issuance of bonds in the amount of $6,700,000,000 pursuant to the State General Obligation Bond Law to finance projects for safe drinking water, wildfire prevention, drought preparation, flood protection, extreme heat mitigation, and workforce development programs.	SUPPORT IF AMENDED Assembly Rules Committee	
SB 45	Sen. Portantino	Wildfire Prevention, Safe Drinking Water, Drought Preparation, and Flood Protection Bond act of 2022	Would enact the Wildfire Prevention, Safe Drinking Water, Drought Preparation, and Flood Protection Bond Act of 2022, which, if approved by the voters, would authorize the issuance of bonds in the amount of $5,510,000,000 pursuant to the State General Obligation Bond Law to finance projects for a wildfire prevention, safe drinking water, drought preparation, and flood protection program.	SUPPORT IF AMENDED SEN Floor	
SB 222	Sen. Dodd	Water Affordability Assistance Program	Would establish the Water Affordability Assistance Fund in the State Treasury to help provide water affordability assistance, for both drinking water and wastewater services, to low-income ratepayers and ratepayers experiencing economic hardship in California. The bill would make moneys in the fund available upon appropriation by the Legislature to the state board to provide, as part of the Water Affordability Assistance Program established by the	Two-Year Bill	Opposed by ACWA

			bill, direct water bill assistance, water bill credits, water crisis assistance, affordability assistance, and short-term assistance to public water systems to administer program components.		
SB 223	Sen. Dodd	Discontinuation of residential water service	Current law prohibits an urban and community water system, defined as a public water system that supplies water to more than 200 service connections, from discontinuing residential water service for nonpayment until a payment by a customer has been delinquent for at least 60 days. Current law requires an urban and community water system to have a written policy on discontinuation of residential service for nonpayment, including, among other things, specified options for addressing the nonpayment. Current law requires an urban and community water system to provide notice of that policy to customers, as provided. This bill would apply those provisions, on and after July 1, 2022, to a very small community water system, defined as a public water system that supplies water to 200 or fewer service connections used by year-long residents.	Two-Year Bill	Opposed by ACWA
SB 230	Sen. Portantino/ CMUA & MWD	State Water Resources Control Board: Constituents of Emerging Concern	Would require the State Water Resources Control Board to establish, maintain, and direct an ongoing, dedicated program called the Constituents of Emerging Concern Program to assess the state of information and recommend areas for further study on, among other things, the occurrence of constituents of emerging concern (CEC) in drinking water sources and treated drinking water. The bill would require the state board to convene, by an unspecified date, the Science Advisory Panel to review and provide recommendations to the state board on CEC for further action, among other duties. The bill would require the state board to provide an annual report to the Legislature on the ongoing work conducted by the panel.	SUPPORT NOT MOVING IN 2021: TWO-YEAR BILL	

SB 273	Sen. Hertzberg/ CASA	Water quality: municipal wastewater agencies	Would authorize a municipal wastewater agency, as defined, to enter into agreements with entities responsible for stormwater management for the purpose of managing stormwater and dry weather runoff, to acquire, construct, expand, operate, maintain, and provide facilities for specified purposes relating to managing stormwater and dry weather runoff, and to levy taxes, fees, and charges consistent with the municipal wastewater agency's existing authority in order to fund projects undertaken pursuant to the bill. The bill would require the exercise of any new authority granted under the bill to comply with the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000. To the extent this requirement would impose new duties on local agency formation commissions, the bill would impose a state-mandated local program.	SUPPORT Signed by Governor	Supported by CASA, ACWA
SB 372	Sen Leyva/ NRDC	Medium and heavy-duty fleet purchasing assistance program: zero-emission vehicles	Would require an unspecified agency to establish a program to make financing tools and nonfinancial supports available to the operators of medium- and heavy-duty vehicle fleets to enable those operators to transition their fleets to zero-emission vehicles. The bill would require the agency to consult with various state agencies and stakeholders in the development and implementation of the program.	SUPPORT Signed by Governor	

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: November 17, 2021

To: The Honorable Board of Directors **From:** Shivaji Deshmukh, General Manager

Committee: Community & Legislative Affairs *11/10/21*

Executive Contact: Kathy Besser, Executive Manager of Ext. & Government Affairs/AGM

Subject: Public Outreach and Communication

Executive Summary:

Working closely with MWD, regional and member agencies, staff is ensuring a consistent and impactful regional drought message is being communicated to the public. In response to the Governor's proclamation extending the drought emergency statewide, messaging has shifted to the #StepItUp phase. Staff continues to work closely with the Executive Manager of External and Government Affairs/AGM Kathy Besser to incorporate any actions by the Governor into messaging.

Staff published outreach on our social media platforms following the signing of Assembly Bill 818 which requires a "Do Not Flush" symbol and warning on individual wet wipes packages. A toolkit was sent to our Member Agencies and a poll was also published to our Nextdoor platform asking subscribers if they knew "flushable" wipes should not be flushed. The post currently has approximately 10,500 impressions.

Staff facilitated a Virtual Field Trip with Walnut Avenue Elementary School (Chino) where 33 fifth grade students participated.

Staff's Recommendation:

This is an informational item for the Board of Directors to receive and file.

Budget Impact *Budgeted (Y/N):* Y *Amendment (Y/N):* Y *Amount for Requested Approval:*

Account/Project Name:

Fiscal Impact (explain if not budgeted):

Full account coding (internal AP purposes only): - - - - - - Project No.:

Prior Board Action:

N/A

Environmental Determination:

Not Applicable

Business Goal:

IEUA is committed to providing a reliable and cost-effective water supply and promoting sustainable water use throughout the region.

IEUA is committed to enhancing and promoting environmental sustainability and the preservation of the region's heritage.

Attachments:

Attachment 1 - Background

Background

Subject: Public Outreach and Communication

November

- November 8, National STEM/STEAM Day
- November 10, International Accounting Day
- November 11, Veterans Day
- November 15, America Recycles Day
- November 15-19, American Education Week
- November 17, GIS Day
- November 19, World Toilet Day

Media and Outreach

- Working closely with MWD, regional and member agencies, staff is ensuring a consistent and impactful regional drought message is being communicated to the public. In response to the Governor's proclamation extending the drought emergency statewide, messaging has shifted to the #StepItUp phase. Staff continues to work closely with the Executive Manager of External and Government Affairs/AGM Kathy Besser to incorporate any actions by the Governor into messaging.
- Staff published outreach on our social media platforms following the signing of Assembly Bill 818 which requires a "Do Not Flush" symbol and warning on individual wet wipes packages. A toolkit was sent to our Member Agencies and a poll was also published to our Nextdoor platform asking subscribers if they knew "flushable" wipes should not be flushed. The post currently has approximately 10,500 impressions.
- Cal Poly Pomona's American Society of Civil Engineers (ASCE) Student Chapter joined IEUA staff for a tour of the RP-5 Expansion Project. Recognition of this tour was shared on the @IEUAWater social media platforms.
- Staff is in the final stages of developing a *QR code Pledge to Save Water* campaign. Both print and digital ads will feature a QR code that links to an information hub featuring IEUA initiatives. Visitors can take the pledge to save water to be entered into a drawing for water-saving devices.
- Staff recognized October as National Energy Awareness Month. Throughout the month, information on IEUA's renewable energy initiatives were shared on the Agency's social media accounts.
- Imagine A Day Without Water was recognized on October 21. Staff shared a post about the importance of clean water and water-saving techniques to IEUA's social media accounts.
- Staff launched a "Water-saving Hallo*week*" campaign where Halloween-themed posts and polls related to saving water were shared to the @IEUAWater social media accounts and stories.

- Staff recognized the DEA's National Prescription Take Back Day on October 23. A post was shared to the Agency's social media accounts reminding the public of the event and a News Release was also sent to the Agency stakeholders and the community.
- The Agency continues to publish content on LinkedIn and has gained 38 followers since September 2021, with 538 page views in the last 30 days.
- October: 37 posts were published to the IEUA Facebook page, 37 tweets were sent on the @IEUAWater Twitter handle, 37 posts were published to IEUA's Instagram grid, and 21 posts were published to the IEUA LinkedIn page.
    - The top three Facebook posts, based on reach and engagement, in the month of October were:
        - 10/11 AB 818 Recognition
        - 10/15 General Manager Shivaji Deshmukh at OC Water Summit
        - 10/12 Control Systems Analyst, Mechanic IV, Records Specialist (2 Year Limited Term), and Intern (Human Resources) Hiring
    - The top three Twitter tweets, based on reach and engagement, in the month of October were:
        - 10/11 AB 818 Recognition
        - 10/13 Water Word Wednesday
        - 10/5 SARCCUP News Release
    - The top three Instagram posts, based on reach and engagement, in the month of October were:
        - 10/11 AB 818 Recognition
        - 10/7 Harlan Delzer WPAW Recognition
        - 10/15 General Manager Shivaji Deshmukh at OC Water Summit
    - The top three LinkedIn posts, based on impressions and reactions, in the month of October were:
        - 10/4 James Spears WPAW Recognition
        - 10/15 General Manager Shivaji Deshmukh at OC Water Summit
        - 10/21 Board Member Steve Elie, General Manager Shivaji Deshmukh and Members of IEUA's Leadership Team at SCWC Annual Meeting and Dinner

- An education ad ran in the October issue *in IE Magazine*.
- A "Water-Wise Education" ad ran on October 22 in *Fontana Herald News*
- A "Water-Wise Education" banner ad ran on October 22 in *Fontana Herald News*
- A "Water-Wise Education" ad ran on October 24 in *La Opinion*.

For the month of October, there were 976 searches for a park in IEUA's service area on Yelp, where Chino Creek Wetlands and Educational Park was viewed 943 times, with 846 views coming from a mobile device.

Education and Outreach Updates

- Staff is working with Loving Savior School (Chino Hills) and Randall Pepper Elementary School (Fontana) to complete their water-wise garden installation as part of the Agency's Garden in Every School® Program (GIES). This current year's program will feature mini grants for schools that have an existing garden through GIES.

- Staff facilitated a Virtual Field Trip with Walnut Avenue Elementary School (Chino) where 33 fifth grade students participated.
- Staff sent an email to all school Principal contacts within IEUA's service area regarding the Agency's free education programs. Since the email has been sent, multiple inquiries regarding the programs have been received and staff is working closely with the schools to schedule and facilitate programming.

Agency-Wide Membership Updates

- Randy Lee, Executive Manager of Operations/Assistant General Manager, attended the National Water Research Institute (NWRI) Board of Directors Meeting on September 14.
- Richard Lao, Senior Environmental Resources Planner, attended the California Association of Sanitation Agencies (CASA) Regulatory Workgroup Meeting on September 16.
- Randy Lee, Executive Manager of Operations/Assistant General Manager, attended the National Water Research Institute (NWRI) Community of Practice California DPR Regulation Advisory Collaborative.
- Richard Lao, Senior Environmental Resources Planner, attended the Southern California Alliance of Publicly Owned Treatment Works (SCAP) Air Quality Committee Meeting on September 23.
- Richard Lao, Senior Environmental Resources Planner, attended the Southern California Alliance of Publicly Owned Treatment Works (SCAP) Air Quality Committee Meeting on September 28.